



Needham School Committee

February 2, 2021

6:30 p.m.

Broadcast on the Needham Channel municipal and HD channels and live stream at:

<https://needhamchannel.org>

Meeting accessible for Public Comments via Zoom Webinar:

[Click here](#)



SCHOOL COMMITTEE MEETING AGENDA

Tuesday, February 2, 2021 6:30 p.m.

Next School Committee Meeting: Tuesday, February 23, 2021

Broadcast on the Needham Channel municipal and HD channels, live stream at:
<https://needhamchannel.org>

Meeting accessible for **Public Comments** via Zoom Webinar:
<https://us02web.zoom.us/j/87533491321?pwd=U215S2kxLzYyekNYdnVWwDhZemV6UT09>
Webinar ID: 875 3349 1321 Passcode: 032398 Or iPhone one-tap: US: +19292056099

6:30 p.m. Public Comments

6:40 p.m. School Committee Chair and Subcommittee Updates

6:45 p.m. Superintendent's Comments

6:50 p.m. Consent Items

1. Approve Minutes of the Meeting of November 17, 2020 and revised Executive Session Minutes June 16, 2020
2. Accept Donations
3. Disposal of Surplus Items

Discussion Items

6:50 p.m. Pollard Middle School Improvement Plan

7:30p.m. Update on Student Learning

Action Items

8:15 p.m. Approve 2021-22 Middle School and Needham High School Programs of Studies

8:15 p.m. School Committee Comments

Information Item

FY22 Athletics Revolving Fund Budget Request



Needham School Committee

February 2, 2021

Agenda Item: **Public Comments**

Background Information:

- The School Committee Chair will offer the opportunity for the public to speak to the School Committee on issues not on the agenda.



Needham School Committee

February 2, 2021

Agenda Item: **School Committee Chair and Subcommittee Updates**

Background Information:

- The Chair and subcommittee members may offer brief updates on issues not on the agenda.

Members of the School Committee available for comment:

Andrea Longo Carter, Chair

Connie Barr, Vice-Chair

Heidi Black

Michael Greis

Susan Neckes

Aaron Pressman

Matthew Spengler

Aidan Michelow, Student Representative member of School Committee



Needham School Committee

February 2, 2021

Agenda Item: **Superintendent's Comments**

Background Information:

Superintendent Daniel E. Gutekanst will apprise the School Committee of events, information, and matters of interest not on the agenda.



Needham School Committee

February 2, 2021

Agenda Item: **Consent Agenda**

1. Approve Minutes of the Meeting of November 17, 2020 and revised Executive Session Minutes June 16, 2020
2. Accept Donations
3. Disposal of Surplus Items

Chair: “Does anyone wish to remove any item from the consent agenda?”

If none removed:

“There being no objection, these items are adopted by unanimous consent.”

Needham School Committee
Minutes of the Meeting
November 17, 2020

Andrea Longo Carter, Chairman of the Needham School Committee called the meeting to order at 6:30 p.m.

Members of the School Committee present were:

Andrea Longo Carter	Susan Neckes
Connie Barr	Aaron Pressman
Heidi Black	Matthew Spengler
Michael Greis	

Aidan Michelow (non-voting student member)

Members of the Central Administration present were:

Dan Gutekanst	Mary Lammi
Terry Duggan	Alexandra McNeil
Anne Gulati	

Also present were:

Students Catherine Chen and Alexandra Rieser
Principals, Tamatha Bibbo and Jessica Downey
Assistant Principal, Andrea Vargas
Curriculum Coordinator, Brooke Kessel (remotely)
Teachers, Steve Miller, Bethany Crowe, Dan Amato (remotely),
Sarah Burns, and Steven Heldt participating (remotely)

Public Comments

Public Comments

Chairman Longo Carter offered the opportunity for members of the public who are watching the meeting via Zoom to speak to the School Committee on issues, not on the agenda.

There were no comments.

School Committee Chair and Subcommittee Update

School Committee Chair
and Subcommittee
Updates

Susan Neckes congratulated the Needham Diversity Initiative on the 9th Annual Diversity Summit that took place on Sunday, November 15th. Ms. Neckes stated that about three hundred people attended the virtual event. She stated the organizers did a great job. She stated that she thought the speakers were terrific and that the event was educational, empathic, and helpful in building a sense of community.

Matthew Spengler stated that he attended the monthly meeting of the Needham Special Education Parent Advisory Committee (SEPAAC). He stated that Julie Muse-Fisher, Executive Director of Special Education, 9-12, and her team presented various scenario planning options should the district go to a fully remote learning model for special education students.

Chairman Longo Carter expressed her appreciation to community members who attended the School Committee Open House on Saturday, November 14, 2020. She stated that over 100 people attended this virtual Open House. She stated that a lot of issues were raised in terms of what was working well with the hybrid model and some challenges that schools are facing. She added that she appreciated the opportunity to hear from parents and to get a better sense of how the learning models are going for families and students.

Superintendent's CommentsSuperintendent's
Comments

Superintendent Gutekanst echoed Chairman Long Carter's appreciation to the community for their attendance at the School Committee Open House. He stated that there were a lot of great comments and questions. He also stated that Terry Duggan, Assistant Superintendent for Student Learning will talk about some of the questions from parents on the YouTube videos that the students watch in the remote model.

Dr. Duggan stated that there were questions at the Open House about the YouTube videos which had too much content in terms of advertising. Dr. Duggan stated that all videos are run through a cleansing program so that this does not happen, and guidelines are in place as well as apps so that teachers can take any video that they publish and use it in the curriculum. Dr. Duggan stated that the second question that came up was on videos that are provided to teachers. Dr. Duggan stated that math and literacy videos are provided to teachers to use as part of the remote instructional practice. She stated that a video was inadvertently sent out by a teacher for a teacher to a student. Dr. Duggan stated that this was not a pervasive practice, it happened one time and was taken care of. She added that an in-depth examination is being conducted to ensure this does not happen again.

Superintendent Gutekanst shared an update on the Fall Athletic Season, noting that it was an abridged season as were all high schools in Massachusetts. He stated that last week Needham High School wrapped up the fall season with each varsity team competing against teams in the Bay State Conference (BSC). Superintendent Gutekanst expressed his appreciation to, coaches, players, and families for making it a successful season. Superintendent Gutekanst congratulated the girl's field hockey varsity team who ended the season undefeated. He stated that the girls' varsity soccer team had a strong season with two big wins. He stated that the boys' varsity soccer team was 5-2-3 and ended with the top record in the league. He stated that the girls' cross country team finished 4th in the BSC and the boys' cross country team finished 3rd in the same BSC event. He stated the golf team finished 2nd by 1 point with an aggregate score of 105 in the BSC finals. Superintendent Gutekanst stated that the winter season will most likely be an abridged season as well.

Superintendent Gutekanst introduced Catherine Chen and Alexandra Rieser recipients of the 2020-21 Massachusetts Association of School Superintendents Certificates of Academic Excellence. Superintendent Gutekanst stated that Catherine and Alexandra are exceptional students and there is no question in his mind that they will become extraordinary leaders.

Superintendent Gutekanst stated that the Massachusetts Association of School Superintendents Certificates of Academic Excellence Award is presented to students who have distinguished themselves in the pursuit of excellence during their high school careers.

Dr. Gutekanst read an extensive profile on Catherine and Alexandra as presented to him by their teachers and school guidance counselors. Dr. Gutekanst took a moment to present the awards to Catherine and Alexandra and allowed them to share with the Needham School Committee what the award means to them. A brief discussion followed. Students expressed their appreciation to their teachers and their parents.

Consent Items

Consent Items

1. Approve Minutes of the Meetings of September 1, 2020, and September 15, 2020.
2. FY21 Budget Transfer

Chairman Longo Carter asked if members of the School Committee wanted to remove any item from the Consent Agenda. She stated that because there are no objections, the items are adopted by unanimous consent.

DISCUSSION ITEM

Update on Student Learning: Middle SchoolsUpdate on Student
Learning: Middle
Schools

Dr. Gutekanst welcomed High Rock School Principal Jessica Downey and Pollard Middle School Principal Tamatha Bibbo. Dr. Gutekanst stated that this is the third update on teaching and learning in the Needham Public Schools.

Principal Downey introduced Steve Miller, grade six Science Teacher, Bethany Crowe, grade six English Teacher, and Dan Amato, Wellness and Physical Education Teacher. The teachers shared their experiences with the hybrid and remote learning models.

Principal Bibbo introduced Sarah Burns, Math teacher, resident, and parent, and Steven Heldt, the Music teacher. The teachers shared their experiences with the hybrid and remote learning models. Discussion followed.

Aidan Michelow asked about community building and advisory during this school year. Bethany Crowe stated that at High Rock Advisory meets every day, noting that on Wednesdays Advisory is longer. She stated that the students love connecting in person and virtually. She shared some of the activities that students engage in during Advisory. Sarah Burns shared that Advisory meets at Pollard on Monday, Tuesday, Thursday, and Friday. She stated that it is only for five minutes but that it is a great opportunity to check-in. She added that on Wednesday, which is a remote learning day for all students, and Advisory meets longer. She described the activities that take place on Wednesdays. She added that taking time in class away from content toward community building pushes the content forward. Principal Bibbo added that Advisory is typically used as a time to build community but what she is finding is Pollard is not just using Advisory to build community but is using mask breaks and the lunchroom are other opportunities for community building. She described the activities that foster connections and help students make new friends. Discussion followed.

Report on Racial LiteracyReport on Racial
Literacy

Dr. Gutekanst stated that consistent with District priorities and equity goals, the elementary program will implement a new racial literacy curriculum in grades K-5. Dr. Gutekanst welcomed Andrea Vargas, Newman School Assistant Principal, and Brooke Kessel, Middle School Social Studies Curriculum Coordinator, and invited them to present the Elementary Racial Literacy Curriculum.

Ms. Vargas stated that this past summer she and Ms. Kessel led a team of elementary school educators, who are dedicated to the belief that Needhams' goals on equity must actively involve its youngest students. Ms. Vargas stated that the team became known as the Racial Literacy Task Force. Ms.

Vargas stated that the racial literacy curriculum that is appropriate for kindergarten through grade five was reviewed. She added that supports and tools were prepared to implement the curriculum at the start of the school year.

Ms. Vargas stated that the team of educators involved in this initiative brings a diversity of experience to the table. She added that it is a wonderful team, and she admires their quick turnaround and their productivity during a, particularly challenging time.

Ms. Vargas stated that she and Brooke Kessel received resounding support for the racial literacy curriculum. Ms. Vargas summarized the rationale for the racial literacy curriculum, and she shared data on her research.

Brook Kessel thanked Mary Lammi, Assistant Superintendent for Student Support Services, and Terry Duggan, Assistant Superintendent for Student Learning for their tireless leadership and generous support of this project. She added that they have served as exceptional mentors in meeting a complex project in a complex time. Ms. Kessel stated that this is her sixth year as the Middle School Social Studies Department Chair, and this past summer was her first opportunity to work with colleagues in the elementary field on this project.

Ms. Kessel summarized the project's connections to the social studies curriculum. She stated that to be racially literate is to know history. She added that content matters. She stated that the team of nearly twenty educators had the opportunity to analyze a racial literacy curriculum grounded in American History as well as World History that is complimentary with the Massachusetts Frameworks for history. Ms. Kessel noted that research on effective social studies instruction supports the positive impact of a race-conscious history curriculum on all learners. Ms. Kessel summarized project goals: short term and long term.

Ms. Vargas outlined the project's first phase. Ms. Vargas stated that the team developed a full scope and sequence for grades K-5 and produced overviews for each grade level. She also stated that a resource packet of materials was created that includes lessons with materials that can be adapted for in-person or virtual learning as well as training tools, materials from Pollyanna Racial literacy Inc., with a full curriculum and parent guide. Ms. Vargas presented the curriculum overview, K-5. Discussion followed.

Needham Education Foundation 2020 Fall Grant Awards

Dr. Gutekanst welcomed Robert Murphy, Needham Education Foundation Fall Grants Committee Co-Chair. Mr. Murphy presented the Needham Education Foundation 2020 Fall Grant Awards for School Committee consideration. Mr. Murphy described the four grants totaling \$15,980. After a brief discussion, the School Committee voted to accept the 2020 Fall Grant Awards.

Accept the Needham Education Foundation 2020 Fall Grant Awards

Upon the recommendation of the Superintendent that the Needham School Committee accepts with gratitude the Needham Education Foundation 2020 fall grant award of \$15,980. The motion was moved by Michael Greis and seconded by Connie Barr.
The motion carried; the vote was 7-0-0.

Needham Education
Foundation 2020 Fall
Grant Awards

Accept the Needham
Education Foundation
2020 Fall Grant Awards

ACTION ITEM

Approve Superintendent's 2020-2021 Goals

Approve
Superintendent's 2020-
2021 Goals

Upon the recommendation of the Chairman, that the Needham School Committee approves the Superintendent's 2020-2021 Goals as submitted.

A motion
was made:

The motion was moved by Michael Greis and seconded by Connie Barr.

The motion carried; the vote was 7-0-0.

Approve Portrait of a Needham Graduate 2020-2021 Action Steps

Approve Portrait of a
Needham Graduate 2020-
2021 Action Steps

Upon the recommendation of the Superintendent, that the Needham School Committee approves the Portrait of a Needham Graduate 2020-2021 Action Steps as submitted.

A motion
was made:

The motion was moved by Michael Greis and seconded by Connie Barr.

The motion carried; the vote was 7-0-0.

School Committee Comments

School Committee
Comments

Connie Barr stated that several School Committee members have had the opportunity to visit some of the schools and to see our teachers in action, and students engaged in learning, wearing masks, and following health and safety guidelines. She stated that it is heartwarming to see how much is working during this difficult time.

A list of all documents used at this School Committee meeting is available at:

A List of Documents

[http://www.needham.k12.ma.us/district info/school committee/packets2020-2021](http://www.needham.k12.ma.us/district%20info/school%20committee/packets2020-2021)

At approximately 9:00 p.m., a motion was made to adjourn the School Committee meeting of November 17, 2020.

Adjournment

A motion
was made:

The motion was moved by Michael Greis and seconded by Connie Barr.

The motion carried; the vote was 7-0-0.

Respectfully submitted by Cheryl Gosmon, Note Taker

Needham School Committee
Minutes of the Meeting
June 16, 2020
Executive Session

Meeting accessible via Zoom Webinar* and broadcast and streamed live on
The Needham Channel

Broadcast on the Needham Channel municipal and HD channels,

live stream at: <https://needhamchannel.org>

*<https://us02web.zoom.us/j/84239943393?pwd=RHFQeTUwZFppZHRJOHFGR2FHMHNyQT09>

The Chair of the School Committee, Andrea Longo-Carter, called the meeting to order at 5:35 p.m.

Chairman Longo Carter asked for a roll call of members present on Zoom:

Andrea Longo Carter, present	Susan Neckes, present
Connie Barr, present	Aaron Pressman, present
Heidi Black, present	Matthew Spengler, present
Michael Greis, present	

Members of the Central Administration present were:

Dan Gutekanst	Mary Lammi
Terry Duggan	Alexandra McNeil
Anne Gulati	

Also present was Town Manager Kate Fitzpatrick and Assistant Director of Human Resource, Brian Higgins.

A motion was made to adjourn to executive session at 5:30 p.m.
per Open Meeting Law, Exemption #3: for the purpose of discussing
negotiations and to return to open session.

Executive
Session

The motion was moved by Michael Greis and seconded by Susan Neckes.

On a roll call vote, the Committee voted to adjourn to executive session and to return to open session.

Roll Call Vote: Connie Barr, Aye; Michael Greis, Aye; Aaron Pressman, Aye; Matthew Spengler, Aye; Heidi Black, Aye; Susan Neckes, Aye; Andrea Longo Carter, Aye.

The motion carried

The vote was 7-0-0.

The discussion involved negotiations with Units C, D, and E in regards to changes in working conditions resulting from the state of emergency.

The School Committee was very appreciative of the work and commended Anne Gulati, Alexandra McNeil, Michael Greis, Andrea Longo Carter, and Connie Barr.

A motion was

At 5:55 p.m. a motion was made to adjourn executive session and to return to open session.

Adjourn
Executive
Session

The motion was moved by Michael Greis and seconded by Connie Barr.

Roll Call Vote: Connie Barr, Aye; Michael Greis, Aye; Aaron Pressman, Aye; Matthew Spengler, Aye; Heidi Black, Aye; Susan Neckes, Aye; Andrea Longo Carter, Aye.

The motion carried

The vote was 7-0-0.

Respectfully Submitted:
Daniel Gutekanst, Superintendent

NEEDHAM SCHOOL COMMITTEE

Agenda Item#: _____ Date: February 02, 2021

Item Title: Approve School Department Donations

Item Description: The following donations have been made to Needham Public Schools:

	<u>Value:</u>
General Donations:	
• Coffee Pond Photography, Framingham, MA, commission revenue from Student Photos to benefit the Mitchell Elementary School	\$1,500.00
• Coffee Pond Photography, Framingham, MA, commission revenue from Student Photos to benefit the Broadmeadow Elementary School	\$1,500.00
• Lifetouch National School Studios, Eden Prairie, MN, commission revenue from Student Photos	\$1,1130.00
• Jewish Community Foundation of Greater Hartford, West Hartford, CT, donation to the general operating fund at the Eliot Elementary School	\$300.00
• Truly's of Wellesley, Wellesley, MA, donation to the NHS Save a Childs Heart Club	\$155.75
• Ms. Rayna Suckney, Needham, MA, donation to Needham Community Education	\$25.00
• The Indian Community of Needham, Needham, MA, donation of 21 books showcasing Indian culture and celebrating Indian holidays	<u>Est. Value:</u> \$300.00
• Proceeds from the sale of masks to teachers to benefit NHS Student Council At Large	\$1,231.00

Donations to NHS Robotics Club in Memory of Alex Weisenbach:

• Mr. & Mrs. Daniel Savrin, Needham, MA, donation to the NHS Robotics Club	\$150.00
• Mr. & Mrs. Edmund Rom, Garden City, NY, donation to the NHS Robotics Club	\$100.00
• Mr. & Mrs. Lore Kemp, Garden City, NY, donation to the NHS Robotics Club	\$50.00

Issues: M.G.L. Chapter 44, Section 53A and School Committee policy #DFC/KH authorize the School Committee to accept any grant of gifts or funds given for educational purposes by the federal or state government, charitable foundations, private corporations, PTCs or an individual. M.G.L. Chapter 44, Section 53A further stipulates that any monies received and accepted by the School Committee may be expended without further appropriation.

Recommendations/Options: That the School Committee accept with gratitude the aforementioned donations.

School Committee: Consent Calendar

Respectfully Submitted,

Anne Gulati

Assistant Superintendent for Finance and Operations

NEEDHAM SCHOOL COMMITTEE

Agenda Item #: _____

Date: February 2, 2021

Item Title: **Disposal of Surplus: Pollard Middle School**

Item Description: This request seeks approval to dispose of the following items, which are either obsolete, non-functioning, or the repair cost exceeds the value of the equipment

From Pollard Middle School

- 39 Outdated Algebra Textbooks

Issues: Chapter 30B Section 16 of the Massachusetts General Laws permits a governmental body to dispose of a tangible supply no longer useful to the governmental body, but having a resale or salvage value, at less than the fair market value to a charitable organization that has received a tax exemption from the United States by reason of its charitable nature. Transactions between governmental entities also are exempt from Ch30B. Chapter 30B Section 15 and Needham School Policy #DN further authorize the disposal of surplus school property, other than real estate, having a net value of less than \$10,000 through the exercise of sound business practices by the Procurement Officer.

Recommendation/Options: That the Needham School Committee authorize the disposal of the above items, to the Town Transfer Station of the aforementioned surplus equipment in accordance with MGH30B Section 15&16 by the Procurement Officer.

Rationale:

Implementation Implications:

Supporting Data: None.

School Committee (circle one)

Action	Information	Discussion	<u>Consent Calendar</u>
Central Administrator	Town Counsel	Sub-Committee:	_____

Will report back to School Committee (date): _____

Respectfully Submitted,

Anne Gulati

Assistant Superintendent for Finance & Operations



Needham School Committee

February 2, 2021

Agenda Item: **Discussion**

Pollard Middle School Improvement Plan

Background Information:

- The Pollard Middle School Council has worked collaboratively this past year to advise Principal Tamatha Bibbo and develop and maintain the School Improvement Plan.
- In accordance with M.G. L. Chapter 71, Section 59c, the Superintendent has approved the Pollard Middle School Improvement Plan.

Persons Available for Presentation:

Ms. Tamatha Bibbo, Pollard Middle School Principal
Pollard Middle School Council Members



Pollard Middle School

Ms. Megan Bonomolo
Grade 7 Assistant Principal

Ms. Tamatha Bibbo
Principal

Mr. Jeremy Greenwood
Grade 8 Assistant Principal

TO: Dr. Dan Gutekanst

FROM: Tamatha Bibbo

DATE: January 25, 2021

RE: SIP 2018-2021

Enclosed please find the School Improvement Plan update for SY 2020-2021.

In the last year, a year like no other, the Pollard Middle School has made progress despite a pandemic that has impacted all aspects of our lives. In just 12 months, our school community has transitioned from full-in person school, to fully remote, to a hybrid model. Despite the transitions, the delivery of services, curricular updates to reflect a more inclusive community, thoughtful instruction, and care of students have been superb; the very nature of our work has dramatically shifted, yet our commitment to excellent teaching and learning has not.

In short, our students are learning, and our teachers & staff have displayed resilience, creativity, and a vigorous dedication to meeting every student's needs. I am incredibly proud that our students are making progress, and Pollard is dedicated to intervene, problem-solve and support those students and families who may continue to struggle in this challenging year.

As a school, we have achieved goals and made progress on our school improvement plan. Please notice the updates and changes highlighted in yellow.

New Addition:

- Goal 4: **Identify bright spots from Remote Learning/ Hybrid model and replicate**

Adjustments:

- Goal 10. **Implement and evaluate the efficacy** of the new transition program for students in need.
- Goal 12: Explore models to expand family involvement.

Removal:

- Goal 13: LAUNCH a new schedule that provides a highly effective program for **all students** and address the population growth.

All goals that are complete are indicated with a ✓

All goals in progress are indicated with a IP (In Progress) with dates



Pollard Middle School
School Improvement Plan
September 2018 - June 2021
Needham Public Schools

Update to the Needham School Committee: February 2, 2021

School Council Members:

Tamatha Bibbo, Principal and Co-Chair
David Dussault, Teacher
Chris Giancola, Parent
Skylar Helfman, Student
Karen Mullen, Community Representative
Claudia Pape, Parent and Co-Chair
Michael Ryan, Teacher
Maura Lia, Teacher
Lisa Mancino, Teacher
Yasmin Fathaulla, Parent
Caterina Krug, Parent
Charlie Novak, Student

Pollard Middle School Statement of Purpose

We dedicate ourselves to cultivating academic excellence, civic responsibility, and the personal growth of each member of our community.

We Know:

Students enter Pollard Middle School at a critical phase of their development. They experience rapid physiological and emotional changes, an emerging sense of self, and an increased need for self-assertion. Cognitively, middle school students move from concrete toward abstract thinking. Middle school students strive for self-acceptance and a sense of belonging which shapes their behavior and perceptions. Healthy connections with adults and peers are crucial. Adult recognition reinforces students' sense of worth and their ability to balance extreme and competing developmental needs.

We Believe:

- All students can learn, and it happens at varying rates through multiple learning styles.
- Active learning requires taking risks, and mistakes are valuable for learning.
- Learning through a broad-based curriculum and exposure to different perspectives is integral to educating the whole child.
- Learners should feel safe, cared for, and valued.
- Learning requires a partnership between school, home, and the community.

We Work To Provide:

- A student-centered curriculum that is experiential, interdisciplinary, and exploratory.
- A staff that plays multiple roles in fostering student growth as they share knowledge, serve as role models, and respond to each individual's needs.
- A middle school environment that stresses civic and global awareness and each student's role as a member of a family, a community, and society at large.

We Strive To Develop:

- Creative and critical thinkers.
- Confident and open-minded risk-takers.
- Responsible and thoughtful decision-makers.
- Articulate and reflective communicators.
- Collaborative and socially conscious contributors to the community.

The Improvement Process:

Pollard Middle School is committed to an improvement process that addresses both the short and long-term needs of all students in their middle school years. Our *School Improvement Plan*, which is aligned with the *Needham Public Schools' District Goals*, establishes requisite strategies and actions that manifest themselves through our work and priority areas to support student achievement. We believe that it is necessary for staff, parents, students, and community to be involved and to work together in this process.

Needham Public Schools



MISSION: A school and community partnership that creates excited learners, inspires excellence, & fosters integrity.

VISION: Preparing ALL Needham Public Schools students to be:

- Creative Thinkers and Problem Solvers;
- Communicators and Collaborators;
- Socially and Culturally Responsive Contributors;
- Responsible and Resilient Individuals;
- Empowered Learners

CORE VALUES:

- Scholarship
- Community
- Citizenship
- Personal Growth

POLLARD CORE VALUES:

All members of the Pollard community will be curious, confident, and independent learners; act with compassion, integrity, and inclusivity; and strive for personal growth.

NEEDHAM STRATEGIC PRIORITIES:

1. All Students Are Drivers of Their Own Learning

- 1A) Incorporate opportunities for student choice, independent learning, & personalized pathways*
- 1B) Provide structures & experiences that enable student efficacy, leadership, and voice*
- 1C) Teach students the content & skills necessary for them to grow personally and academically.*

2. All Students Experience Integrative Teaching & Learning

- 2A) Extend interdisciplinary teaching and learning practices Pre-K to 12*
- 2B) Embed Portrait Competencies, Technology, Inclusive Practices, SEL, and Equity into all curricula and instructional practices*
- 2C) Provide opportunities for students to demonstrate knowledge and skills through multiple means of expression.*

3. All Students Learn & Grow Within Adaptable Environments

- 3A) Support and design classroom models and environments that foster collaboration & innovation*
- 3B) Provide time, schedules, and spaces that promote learning objectives*
- 3C) Complement instruction with accessible learning beyond the classroom, within the community, and in partnership with families.*

4. Infrastructure Supports Needs of All Students

- 4A) Provide staffing, facilities, and budget resources aligned to district priorities*
- 4B) Implement a recruitment, retention, and development process for staff growth and diversity*
- 4C) Establish a professional learning structure supporting equity and the Portrait vision.*

School Goals	Strategic Priority	Action Steps/ Strategies Employed	Person(s) Responsible	Impact on Students/ Ways to Measure Success	Timeline
1. Implement an integrated science curriculum according to the state's 2018 Science & Technology/Engineering Curriculum Framework.	1A, 1B, 1C 2B, 2C 3A, 3C 4A	<ul style="list-style-type: none"> Design new curriculum (content and pedagogy). Implement the new curriculum with students. Use common assessment data and revise as needed. 	Science Department Head and department members	Students will apply skills and recognize themes in an integrated science context, while covering the state's revised standards. (Creative Thinkers & Problem Solvers; Empowered Learners)	June 2020 ✓
2. Define and determine special education and regular education co-teaching model and replicate in both grade levels.	1A, 1C 2B 3A, 3B 4C	<ul style="list-style-type: none"> Explore and define co-teaching model. Determine co-teaching and inclusion support. Create PD and schedule to support co-teaching model. 	PATM	Students' learning community will be inclusive and differentiated to support diverse learners. (Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Empowered Learners)	June 2022 IP
3. Transition curriculum to meet the 2018 Massachusetts History and Social Science Framework	1A, 1B, 1C 2B, 2C 3A, 3C 4A	<ul style="list-style-type: none"> Analyze new standards. Develop and implement new units of study with students. Remove units of study from the curriculum. Use common assessment data to reflect on the outcomes, and revise as needed. Add civics requirement to grade 8 	Social Studies Department Head and department members	Students will have the opportunity to learn about more diverse people, places, and ideas. Students will engage in research and demonstrate their learning through authentic assessments Students will participate in a civics action project. (Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Empowered Learners)	June 2021 ✓
4. Identify bright spots from Remote Learning/ Hybrid model and replicate	1A, 1B, 1C 2B, 2C 3A, 3B, 3C	<ul style="list-style-type: none"> Determine positive learning opportunities and expand. Find and replicate positive outcomes of hybrid and remote learning to continue. 	All staff	Students will be provided with unique opportunities to continue to connect in personal ways. Students will enhance their remote learning skills (Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Empowered Learners)	June 2022

School Goals	Strategic Priority	Action Steps/ Strategies Employed	Person(s) Responsible	Impact on Students/ Ways to Measure Success	Timeline
5. Review and modify the current technology offerings to enhance and make effective use of the 1:1 program.	1A, 1B, 1C 2A, 2B, 2C 3A, 3B 4B, 4C	Incorporate electives that reflect innovative and creative programs, etc. (CoSpaces, social media, coding, gaming...).	Principal and Director of Media and Technology	Students will be provided relevant opportunities to develop technological skills to enhance their learning. Students will use the technology to differentiate and demonstrate their thinking/ learning. (Creative Thinkers & Problem Solvers; Communicators & Collaborators; Empowered Learners)	October 2020 ✓
6. Audit the impact of the math program (3 year review)	1A, 1B, 1C 2A, 2B, 2C 3A, 3B 4B, 4C	<ul style="list-style-type: none"> • Create surveys to solicit feedback from stakeholders. • Study other “like” districts and their leveling. • Make recommendations for future math programming. 	Principal, Math Curriculum Coordinator, NHS Math Department Head	Students will have a standards -based, research based math program that meets their needs. (Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Empowered Learners)	June 2020 ✓
7. Assess and adjust the world language program to insure all have access and equitable opportunities to advance language skills.	1A, 1B, 1C 2A, 2B, 2C 3A 4C	<ul style="list-style-type: none"> • Research “like” districts. • Determine changes to provide 2 year study for all students of level 1 language. 	Principal, K-12 World Language Director	ALL students will have opportunities to enroll in 2 year language and culture opportunities in 3-4 language options. (Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Empowered Learners)	June 2019 ✓

School Goals	Strategic Priority	Strategies Employed/ Action Steps	Person(s) Responsible	Impact on Students	Timeline
8. Actively create and maintain an environment in which staff and students' diverse backgrounds, identities, strengths and challenges are respected and honored. Ensure equitable and culturally responsive teaching and learning.	1A, 1B, 1C 2B 3C 4B, 4C	<ul style="list-style-type: none"> Investigate curricular choices, instructional practices, communication. Include cultural proficiency focus in various curricular and advisory instruction. Complete an inventory of lessons/ maps of what exists now-(curriculum map) Lead/determine equity team Differentiate PD for staff New curriculum in ELA Adopt racial literacy curriculum 	PATM	<p>Students will thrive in a culturally responsive classroom/ school environment. Cultural proficiency creates a community of acceptance and safety for all students.</p> <p>(Communicators & Collaborators; Socially & Culturally Responsive Contributors; Responsible & Resilient Individuals; Empowered Learners)</p>	June 2022 IP
9. Incorporate and align the recommendations, competencies, and goals from Portrait of a Graduate (POG) work.	1B 2B 4C	<ul style="list-style-type: none"> Communicate the competencies for grades 7 & 8. Identify strengths and areas of growth/ opportunities. Develop learning opportunities. 	PATM	<p>Students will be provided opportunities to learn, practice, and meet the key competencies.</p> <p>(Creative Thinkers & Problem Solvers; Communicators & Collaborators; Responsible and Resilient Individuals)</p>	December 2020 ✓
10. Implement and evaluate the efficacy of the new transition program for students in need.	1A, 1B, 1C 2B 3B, 3C 4B	<ul style="list-style-type: none"> Evaluate entrance and exit criteria. Collect and assess data. Identify future needs (staffing, space). 	PATM, Guidance and Special Education	<p>Students will be provided a transition space and program with academic and mental health support. Students will be able to transition back to school from excessive absences with proper support.</p> <p>(Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Responsible and Resilient Individuals; Empowered Learners)</p>	June 2021 IP

School Goals	Strategic Priority	Strategies Employed/ Action Steps	Person(s) Responsible	Impact on Students	Timeline
12. Explore models to expand family involvement.	2B 3C	<ul style="list-style-type: none"> Explore cluster-based conferences. Identify opportunities for school/home events. Increase special guests and speakers for parents (collaboration with community partnerships) 	Principal and Assistant Principals	<p>Students and families will increase their partnership with Pollard.</p> <p>(Communicators & Collaborators; Responsible and Resilient Individuals)</p>	<p>January 2021</p> <p>IP</p>
13. LAUNCH a new schedule that provides a highly effective program for all students and address the population growth.	1A, 1B, 1C 2A, 2B, 2C 3A, 3B, 3C 4A, 4B, 4C	<ul style="list-style-type: none"> Review projections and review scheduling options, class size, staffing, and building needs for anticipated increased enrollment. Create a scheduling committee. Research other districts with similar demographics. Recommend a new schedule in order to meet the needs of all students. 	PATM, Scheduling Committee	<p>Students will have a daily schedule that will meet our values and goals as well as address class size and growth.</p> <p>Population growth will impact class size, cluster model, current schedule, and staffing needs (esp. in elective courses):</p> <p>(Creative Thinkers & Problem Solvers; Communicators & Collaborators; Empowered Learners)</p>	<p>Planning June 2020 ✓</p> <p>Launch September 2021</p>
14. Develop and pilot innovation/ interdisciplinary cluster	1A, 1B, 1C 2A, 2B, 2C 3A, 3B, 3C 4A, 4B, 4C	<ul style="list-style-type: none"> Investigate interdisciplinary models. Design the purpose, goals, and curriculum. Communicate the program to community. Recruit students and develop schedule. Identify needs and address staffing and building concerns. 	Principal, PATM, NEF	<p>Students will have a unique learning experience in a SWS model- incorporating project based learning in an interdisciplinary way.</p> <p>Students will design, instruct, and assess through a standards-based method.</p> <p>(Creative Thinkers & Problem Solvers; Communicators & Collaborators; Socially & Culturally Responsive Contributors; Responsible and Resilient Individuals; Empowered Learners)</p>	June 2022

Glossary:

BRYT: [Bridge for Resilient Youth in Transition Program](#). Partners with Pollard (and many other schools including NHS) in order to bring students back to school after extended absences.

CASEL: [Collaborative for Academic and Social/ Emotional Learning](#). SEL learning standards and benchmarks articulate what students should know and be able to do in SEL from PreK to grade 12 and allow districts to outline intersections of SEL with standards in academic content areas, including the Common Core State Standards.

CoSpaces: [CoSpaces Edu](#) enables students to learn by doing, using the various tools available with the technology. All features in CoSpaces Edu can be adapted to fit different class subjects and learning objectives.

IDEAS: [Initiatives for Developing Equity and Achievement for Students](#). IDEAS will extend the professional learning opportunities available to school districts as they work to enhance the culturally proficient practices identified in Standards II and III of the MA Department of Elementary and Secondary Education Model Teacher Rubric.

PATM: Pollard Administrative Team (Principal; 2 Asst. Principals; ELA, math, science, social studies, special education, and literacy coordinators).

Professional Development (PD): Adult to earn or maintain **professional** credentials such as academic degrees to formal coursework, attending conferences, and informal learning opportunities situated in practice. It has been described as intensive and collaborative, ideally incorporating an evaluative stage.¹

School Within a School (SWS): Schools within schools are large public schools that have been divided into smaller autonomous subunits. The National Association of Elementary School Principals officially recognizes a school within a school as "a separate entity, running its own budget and planning its own programs."²

¹ https://en.wikipedia.org/wiki/Professional_development

² <https://www.ericdigests.org/2002-4/schools.html>

Pollard School Improvement Plan Presentation for School Committee

February 2, 2021



We have
accomplished
so much!

- Implement an integrated science curriculum according to the state's 2018 Science & Technology/Engineering Curriculum Framework.
- Transition curriculum to meet the 2018 Massachusetts History and Social Science Framework
- Review and modify the current technology offerings to enhance and make effective use of the 1:1 program.
- Audit the impact of the math program (3 year review)
- Assess and adjust the world language program to insure all have access and equitable opportunities to advance language skills.
- Incorporate and align the recommendations, competencies, and goals from Portrait of a Graduate (POG) work

And yet, we still
have progress to
make:

- Define and determine special education and regular education co-teaching model and replicate in both grade levels.
- Actively create and maintain an environment in which staff and students' diverse backgrounds, identities, strengths and challenges are respected and honored. Ensure equitable and culturally responsive teaching and learning.
- Implement and evaluate the efficacy of the new transition program for students in need.

New Goals...



- Develop and pilot innovation/ interdisciplinary cluster
- Identify bright spots from Remote Learning/ Hybrid model and replicate
- Implement the 8th Grade Civics Project

We are excited to highlight: Grade 8 Civics Project



- Transformed project builds on Pollard's service learning legacy while providing students an opportunity to engage in research, advocacy, and reflection
- Project will be completed in advisory and culminate on Students Take Action (STA) Day
- Project is scaffolded and ensures voice and choice for all students



Needham School Committee

February 2, 2021

Agenda Item: **Discussion**

Update on Student Learning

Background Information:

- The Superintendent will provide another update on student learning.

Person(s) Available for Presentation:

Daniel Gutekanst, Superintendent of Schools



TO: Needham School Committee
FROM: Dan Gutekanst, Superintendent of Schools
DATE: February 2, 2021
**RE: Enhancing Health & Safety and Strengthening the
Elementary Hybrid Instructional Model in the Needham Public
Schools**

“I am doing three different jobs. I am planning for the at home students, the in person students, and the green cohort. It’s overwhelming and too much. I’m stretched too thin and don’t feel like I am doing an effective job for anyone.”

“I will also want to commend my child’s teacher and the whole first grade team for the incredible organization to support families...they have done an amazing job with a tough situation.”

Comments from an NPS Elementary Teacher and Parent (November Survey)

Introduction

In the midst of a pandemic and with the support of our families, the Needham School Committee, and the community, our teachers, principals, and staff have implemented strong educational models in the 2020-21 school year that have prioritized health and safety as well as the learning needs of our students in grades Preschool through Twelve.

The two models, a [hybrid program](#) and the [Remote Learning Academy](#), offer our students the opportunity to learn and grow in a safe environment, whether at home or in school. The models were developed following [Department of Elementary and Secondary Education \(DESE\) guidelines](#) and in conjunction with NPS administrative

staff and the Needham Education Association (NEA). Ultimately, the [Plan for Reopening the Needham Public Schools](#) was approved by the School Committee in August and since then has been the plan we have implemented to provide educational programming for our students.

Teachers and counselors, school nurses, nutrition services workers, paraprofessionals, secretaries, technicians, principals and administrative leaders have adopted a “all hands on deck” approach to serving students, their families, and one another since the beginning of the health crisis last spring. Educators have reinvented their practice to meet the demands of a new online environment, and parents and families have supported their children in unprecedented ways. Students have patiently and maturely navigated a learning environment - both at home and in school - that has been difficult on many levels. I am in awe of the creativity, resilience, flexibility, and dogged determination of our school community as we work to ensure we stay healthy even while we focus on learning and growth.

The hybrid middle and high school models are imperfect, but students and staff have worked through obstacles and challenges and continue to address student learning and social and emotional needs as they arise. The developmental stage of middle and high school students and their ability to communicate and collaborate with adults allows a less than ideal learning situation to be sustained, at least for the rest of the school year. Our staff has been exceptional at identifying and addressing student needs, particularly those who are experiencing isolation, anxiety, and a sense of frustration. We will continue to focus resources and attention to engaging these students and their families as the year progresses.

However, as we approach the middle of the school year and consistent with the 2020-21 priorities and action steps in the [District’s Strategic Plan: Portrait of a Needham Graduate](#) and the principles articulated in the [Memorandum of Agreement \(MOA\) between the Needham Public Schools and the NEA](#) I am proposing that the Needham Public Schools consider a strategic and focused improvement to the elementary hybrid model in order to better serve our youngest learners.

Overview of Proposal

With a focus on health and safety for all students and staff I propose the following adjustments and modifications to strengthen the district's K-5 elementary hybrid learning model:

- Offer COVID surveillance testing for all staff, PreK to 12, and implement a daily student Health Attestation form for all families.
- Bring Kindergartners, 1st graders and 2nd graders back to school full-time, four days per week.
- Increase support for grades 3 to 5 students in the at-home cohort of the hybrid model with more consistent live interaction and instruction, as determined by the classroom teacher and based on students' needs.

These necessary changes will build confidence in our staff and families around health and safety issues, and they will address critical learning issues which have been exacerbated by the need to have at least one cohort of students at home learning, often without the structure and support necessary to help the youngest learners grow and achieve.

Context and Background of the District's Response to the Health Crisis

After receiving [guidance from the MA Department of Elementary and Secondary Education \(DESE\)](#) in June of 2020, teachers, principals, and administrators developed and designed the district's existing hybrid model for instruction with a focus on health and safety and the desire to maximize student learning to the degree possible during the pandemic.

A key and often overlooked component of our planning efforts was the reality that due to our [class sizes, which are often higher than surrounding communities](#), and the fact that we lack surplus classroom space, we had to adopt a model that would divide students into two cohorts (Blue and Gold) so that we could place students into classrooms with [sufficient physical distance \(up to six feet\)](#) between students. One cohort would be in school while the other would learn from home; they would alternate weekly.

Health & Safety Since the school year commenced for students on September 14th we have learned a great deal about how to provide instruction safely for students in school

and, collectively, the following procedures and data suggest we have been successful in our efforts.

- Health and safety measures have been carefully and consistently implemented throughout the district, and students and staff have responded to these measures (e.g., mask wearing) positively.
- While there have been many cases of students and staff testing positive for COVID-19 as reported on the [district's dashboard](#), as of February 2, 2021, the Needham Department of Public Health reports only two cases of known in-school transmission.
- Strict protocols, for example, around employee attestation, contact tracing, keeping students home who have shared classroom space with a positive individual, and requiring staff and students to await PCR test results before returning to school all seem to have paid off in regards to keeping our schools, students, and staff healthy.
- There is evidence that the week on/off hybrid instructional model has facilitated focused contact tracing and resulted in fewer students and staff being impacted by COVID-19.
- The Town is committed to a robust maintenance program involving custodial and HVAC support and programming; we have committed to maintaining appropriate and [safe levels of ventilation in our schools](#) with support and guidance from the Chan School of Public Health at Harvard University.
- The NPS has procured and deployed a variety of Personal Protective Equipment (PPE) to ensure a safe learning environment.
- Each school's Health and Safety Committee reviews and discusses safety concerns within the school, and the district's [Joint Committee on Health and Safety](#) holds weekly meetings to review health metrics and discuss health and safety concerns within the schools.
- The [recent staff, student, and family survey](#) indicates that the majority of the 3,500 respondents believed the school health and safety measures were *just right*. Staff 76%, Students 82%, and Families 86%

It is important to note that each school day an enormous amount of energy, focus, time, and attention goes into the implementation of health measures designed to keep students and staff safe. Hygiene protocols, lunch schedules, and instructional models, for example, must be carefully managed to optimize health measures. As a result, the staff has done an exceptional job of mitigating the risk of exposure among students and their colleagues. Elementary teachers, in particular, must assist the youngest students with bathroom breaks, hand washing/hygiene, snacks, mask breaks, and physical

distancing measures; all of this requires time, attention, patience, and the skill of a talented educator.

The teachers and staff are front line workers who make it possible to provide the hybrid model under challenging conditions. One missing piece in our otherwise robust protocols is a plan to provide ongoing testing for staff, and COVID-19 testing may enable staff to return to work sooner and alleviate some of their concerns about exposure.

Student Learning & the Elementary Hybrid Model The district's teachers, support staff, and administration have also prioritized an at home learning model designed to move student learning forward and in the process have learned much about supporting students. Classroom teachers, specialists, and special educators have gone above and beyond to support learners at home despite the extraordinary challenge of managing two groups of students simultaneously. Of course, challenges and opportunities exist to ensure our students are provided the best possible programming given the health emergency.

- During the at home week of instruction at the elementary level, children have a brief but daily check in with their classroom teacher, typically in the morning. Classroom teachers, supported by curriculum specialists and coaches then provide asynchronous instruction and independent learning for their students. Students are also supported by special education, guidance, and English Language Learner (ELL) staff throughout the week.
- It is typical for classroom teachers to augment the at home learning with additional and live check ins beyond those required throughout the week.
- Teachers and curriculum leaders have developed programs and resources to support students at home during the week they are not present in the school building, and the lessons, resources, and interventions they have deployed have been creative, thoughtfully planned, and aligned with district curriculum goals.
- Special area teachers (i.e., Wellness, the Arts, Spanish, Media) also provide live instructional opportunities during the at home week for learners. Once again, teachers have reinvented their practice and reshaped curriculum to match the circumstances of at home learning.
- Reports to the School Committee and [recent survey results](#) indicate that elementary teachers and families believe the in person instruction is going well, but they are struggling with the at home week of instruction. 65% of teachers believe it is harder to form relationships with students and 67% of families are slightly or not all satisfied with the way learning is structured in the hybrid model.

- 82% of Elementary staff report that they are only somewhat (43%), or slightly (30%), or not at all satisfied (9%) with the hybrid model; 78% believe the hybrid model has a slightly (24%) or moderately/very negative (54%) effect on their social and emotional wellbeing.
- DESE approved our learning plan and the average number of hours of live/synchronous instructional hours we provide across the district, 35.0 hours. However, many districts provide more live synchronous teaching, particularly at the elementary level: [DESE Student Learning Time Data Dashboard](#)
- Finally, the [Elementary Exploratory Team](#) reviewed and discussed the data from the November survey and identified three major themes: 1) Staff burnout from managing multiple teaching models; 2) Student engagement is highest in person; and 3) Supporting staff and student mental health is critical.

The implementation of the elementary hybrid model of learning in the NPS during a health emergency, has made at least three things clear:

1) Prioritizing health and safety continues to allow the NPS to keep schools open for all learners. Modifications to any learning model must incorporate and prioritize our learned experience, promote opportunities to strengthen our safety plans (e.g., COVID testing), and ensure the use of public health data and research to inform planning.

2) As structured, the elementary hybrid model is not sustainable or manageable in the long term for students or staff. All teachers have gone above and beyond to provide engaging and challenging lessons for students learning in school and at home - even while they divide their attention between both cohorts of students. However, the feasibility of the hybrid model as currently implemented at the elementary level and over the long term is not sustainable for students and staff.

3) Elementary students, particularly at the earliest grades, are struggling mightily to remain connected, focused, and learning in the at home week resulting in frustration, anxiety, and disengagement from their learning, teachers, and peers. This is particularly true for the youngest learners in grades K-2 who require more structure, support, and skill building. The hybrid model, particularly for the youngest learners, requires the attention and time of their families who already have work and other family responsibilities. In many cases, the youngest learners have little or no support at home due to family circumstances and employment.

Any change in the hybrid model, however, requires careful consideration and a review of current guidance and research.

Updated Guidance and Research

Recent data and research suggests that it is critical to get students, particularly younger students and those most at risk, back into school full time as soon as possible and as long as safety precautions are prioritized. Besides the obvious impact on academic growth and progress, students' emotional health has increasingly become a concern.

The results of the November staff and family survey indicated that [students' social and emotional needs](#) were a significant concern and should be addressed. A [December NPS Guidance Department](#) report to the School Committee highlighted the concerns students and staff have for their emotional, mental, and physical health.

The Centers for Disease Control has also highlighted concerns about students' emotional and mental health in a recent report: [Mental Health Related Emergency Department Visits Among Children <18 Years: Centers for Disease Control](#). In November the National Institutes of Health published [The Impact of Social Isolation and Loneliness on the Mental Health of Children and Adolescents in the Context of COVID-19](#), an article discussing higher rates of isolation and depression among young people as a result of school closures and lockdowns.

In November DESE Commissioner Riley urged school districts to prioritize in person learning to the extent feasible: [State Education Leaders Increase Pressure to Resume In-Person Learning](#). In December the State Board of Education, citing increased mental health concerns among students, [adopted new guidelines](#) requiring a minimum number of average hours of live instruction across a district to ensure students had regular and synchronous access to their teachers. (The Needham Public Schools meet the new guidelines for minimum hours of live instruction.) [American Academy of Pediatrics President Lee Savio Beers](#) stated in January that "Children absolutely need to return to in-school learning for their healthy development and well-being, and so safety in schools and in the community must be a priority."

Since the fall there has also been a national re-examination of some of the original health and safety considerations for schools. In June the [American Academy of Pediatrics \(AAP\) recommended](#) that schools maintain 3 to 6 feet of physical distance between students in classrooms. Locally, many districts (e.g., Wellesley, Medfield, Medway, Brookline, Weston) adopted a strict six feet distance standard as the school year began. In Needham we have a plan to keep students [physically distanced in](#)

[classrooms up to six feet](#), and the vast majority of classrooms provide for six feet of physical distancing between students in classrooms.

However, a strict six foot standard may not be as critical to maintain as originally thought, and this, it turns out, is consistent with the original AAP guidance. Harvard updated its original guidance in their November report, [Risk Reduction Strategies for Reopening Schools: Harvard Chan School of Public Health](#). In it the authors emphasize the need for mask wearing, hygiene, and efficient ventilation systems, but they also suggest that physical distancing of precisely six feet in classrooms may be unnecessary, particularly for younger children.

Researchers at Brown University came to a similar conclusion in their study, [Path to Zero: Brown University School of Public Health](#) and, in fact, suggest that three feet of physical distancing in classrooms for elementary students is sufficient as long as other health protocols are in place. The newly revised [World Health Organization: Checklist to Support Schools Reopening](#) also encourages students to be back in school while maintaining appropriate health protocols, including the need for at least one meter (three feet) of physical distancing between students in classrooms. However, in all of the studies, experts suggest that older students - middle and high school students - should maintain six feet of physical distancing when feasible.

At least some of these revised reports are based on the experience of schools throughout the country as shared in an October New York Times article: [School Children Seem Unlikely to Fuel Coronavirus Surges](#). Even without a vaccine yet available for children, medical and educational experts have also concluded that schools should open as much as possible, particularly for young students for whom learning loss is the greatest: [Reopening Schools Before a Children's Vaccine: New York Times](#) As reported by the Wall Street Journal in December, school districts are even reconsidering some of the protocols regarding the length of quarantining students: [Schools Rethink COVID Rules: Wall Street Journal](#).

The Journal of the American Medical Association (JAMA) confirmed in a [January 26, 2021 report](#) that the incidence of transmission of COVID in schools is rare and that appropriate health protocols, including physical distancing, mask wearing, improved ventilation, and regular testing, will help keep schools open.

Locally, the [Cambridge Public Schools](#) have decided to bring elementary students back into classrooms with physical distancing requirements of three feet between students in classrooms, and Needham's St. Joe's School has successfully brought students back to school since the early fall with less than six feet of physical distancing in most

classrooms with class sizes up to 19. Importantly, St. Joe's principal also reports the school has had no known in-school transmission of the virus.

Local districts have also adopted various plans for student and staff COVID testing to help identify and minimize the spread of the disease. The [Wellesley Public Schools](#) and more recently the [Newton Public Schools](#) have or will soon implement surveillance testing. The [Framingham](#) and Natick Public Schools have adopted a diagnostic testing service for impacted staff. Whether it is a surveillance or diagnostic program, testing alone is not a panacea and needs to be complemented by other health measures. In their report entitled [Testing in K-12 Schools published by Johns Hopkins University](#) Professors Caitlin Rivers and Christina Potter emphasize: "Testing alone is not enough. Masks, social distancing, hand hygiene, respiratory etiquette (like coughing into your elbow or covering your face with a tissue when you sneeze), cleaning and disinfection, and contact tracing are also important." The authors also cite the need for proper ventilation.

A [thoughtful surveillance testing program](#) could incorporate three goals: 1) Identify and isolate asymptomatic carriers of the COVID-19 virus; 2) Gather data and metrics to inform health and safety protocols; and 3) Build confidence in staff to ensure in-school teaching and learning can be as safe and effective as possible.

As of January 1st, NPS nurses have received the first dose of the new vaccine. While we await a vaccine rollout for all educators, a COVID testing program will strengthen our already strong protocols and will help build staff confidence in their own personal safety and ensure we can focus on the needs of our students.

With the wellbeing of our students and staff being paramount, our experience to date coupled with the updated guidance from Harvard and Brown, among others, suggests that we can and should bring our youngest learners back to school as long as we continue to follow and possibly strengthen our already robust health and safety protocols. With the addition of new staff and the utilization of all available spaces, we believe we can maintain an appropriate level of physical distancing in K, 1st, and 2nd grade classrooms of anywhere between three and six feet.

Furthermore, principals believe they can repurpose and reorganize existing spaces for lunch where six feet of physical distancing must be maintained between children. Recognizing that with our existing and strong health and safety measures in place we believe we can bring more younger students back into the classroom without jeopardizing the health and safety of students and staff.

Proposal to Strengthen the Elementary Instructional Model

With a continued focus on the health and safety of all students and staff and the need to prioritize the learning, growth, and development of the youngest learners, the superintendent proposes the following:

Beginning on March 8, 2021 the Needham Public Schools proposes to:

- Offer COVID surveillance testing for all NPS staff and implement a daily student Health Attestation form for all families.
- Bring all Kindergarten, 1st, and 2nd graders into school full-time on Mondays, Tuesday, Thursdays, & Fridays; Wednesdays will remain a remote learning day for part of the morning for all students with 90 minutes of live synchronous instruction expected, and the rest of the day will be asynchronous instruction for those students. Teachers will use the remainder of the day to plan lessons, collaborate, and meet. Assign Kindergarten, 1st, and 2nd grade students to classes of no more than 17 per section to allow for appropriate physical distancing and the implementation of other health protocols.
- Increase support for grades 3 to 5 students in the at-home cohort of the hybrid model with more consistent live interaction and instruction, as determined by the classroom teacher and based on students' needs.

How can this plan be achieved?

The planning and logistics for a mid year change like this are unprecedented and will require significant work on the part of an already strained administrative team, particularly at the building level. The necessary funds, hiring, spaces, and logistics will need to be carefully considered to meet an aggressive timeline. Further, curriculum leaders will need to recalibrate and reconsider units of study, planning, and pacing to accommodate the proposed changes.

Funding Since the pandemic hit, we have carefully managed our resources and secured grants to operate the schools during these unprecedented times. The superintendent proposes to use existing one time operating and grant funds totaling

approximately \$1.0 to \$1.2 million to hire 10.0 teachers (+/-), 16.0 TAs (+/-), pay for benefits, increase administrative support (assistant principals, K-6), purchase technology and supplies, fund additional transportation costs, and provide surveillance testing for staff. Preliminary budget details may be found here: [Budget resources required to improve elementary hybrid plan](#)

Hiring The district will need to hire 16.0 FTE (+/-) teacher assistants (TA), three for each school to be deployed in the 3rd, 4th and 5th grade to assist teachers with creating opportunities for additional contact time beyond what is already offered between the classroom teacher and at home students for an additional three hours per week. 1.0 TA will be needed for an additional Kindergarten section at Broadmeadow. In anticipation of this proposal, these positions have been posted by the Assistant Superintendent of Human Resources, and principals have tentatively identified several possible candidates for teaching positions from within their schools. The challenge will be in finding sufficient TAs to meet the need. We will seek college-aged students, professional retirees, parents, and others to fill these important roles.

Classrooms Principals will need to identify up to nine total teaching spaces within the schools to accommodate new classroom teachers and students. This can be accomplished by repurposing existing spaces, including classrooms, libraries, and other spaces to accommodate class sizes of no more than 17 students. In some cases students will need to be reassigned to a new teacher in order to cap class size at [no more than 17](#). Principals have already identified appropriate spaces and in some instances will need to make plans to move certain staff to alternative space that will allow for appropriate health protocols to be implemented (e.g., physical distancing of staff, plexiglass, etc.) Furthermore, some students in existing class sections of 19, 20, 21, or more students will need to be reassigned to a new teacher to bring the total number of students down to 17. We will need to work with families to decide how to best reassign students in the middle of the school year.

Finally, K-5 teachers will need time to set up classrooms, plan with colleagues, assist new Classroom Teachers and Teacher Assistants, and organize lessons. The district will schedule a “snow day” with no classes for K-5 students on Thursday, March 4th. Teachers will use the day to get ready for March 8th. This day will not need to be made up by students, and the last day of school for students will remain Friday, June 18th unless there are additional and weather-related school building closures.

Lunch/Transportation/Schedules Principals and staff will need to reconsider teacher schedules and provide for physically distanced lunchtime (6 feet) for students. Additional bus transportation will be necessary for Boston students; there are sufficient

bus seats for Needham students. Nutrition Services will provide more lunches and have to serve in different locations (e.g., gym, classroom) to meet student needs; additional staffing may be required to ensure breakfast and lunch service provides high quality meals. Classroom teachers and special area teachers (e.g., art, wellness) will need new and revised schedules that will address the fact that younger students are in the classroom more often.

Curriculum & Technology Resources New equipment must be purchased to outfit new classrooms. New teachers and TAs will need to be supported by curriculum leaders and receive appropriate orientation and training. The elementary curriculum, particularly literacy, math, and science instruction, may require an adjustment due to a shift in the instructional format in grades K, 1, and 2. Kindergarten teachers and classrooms will require support to readjust planning and thinking around learning “centers” and other logistics concerning student hygiene, supplies, and toys. Computers, projectors, and other technical equipment and support will be required to outfit new and temporary classrooms and staff.

Communication The plan will require extensive communication and outreach to K, 1, and 2 families and staff who will be impacted by this change. Some students will need to be placed in new classrooms with a new teacher, and parents must understand how we propose to do this mid-year placement. Teachers will need time to reorient and readjust classrooms and reconsider instructional strategies and plans. Parents and families will require time to plan and make adjustments to family schedules to accommodate for this new plan. A new and daily health attestation form for families will require training and clear communication with families and students.

Summary

There is no question that proposing this change in the elementary learning model at a time of increased COVID cases may raise questions and concern among teachers and parents who are already worried about health and safety and the spread of the virus.

In addition, teachers are overwhelmed with their existing teaching responsibilities, and even contemplating a change adds to their sense of uncertainty and anxiety despite its ability to improve instruction and make it more manageable for them and their students. The extra logistical and instructional burden this places on 3rd, 4th, and 5th grade teachers should not be understated; teaching is a complex human endeavor, and the hybrid model already requires teachers to manage two sets of learners, all of whom have unique needs, in two very different settings simultaneously.

Furthermore, it is a difficult and complicated task to pull off a mid year change that requires hiring professional staff, training and preparing the new staff, rerouting buses, reconfiguring lunches, rebuilding teacher and staff schedules, reassigning and moving into new classrooms, and procuring sufficient curriculum materials and supplies for students - all in a manner of weeks.

All of these concerns are real and must be considered carefully.

Yet the need to engage our youngest learners to the highest degree possible and ensure that their social, emotional, and mental health needs are addressed is crucial and urgent. Despite the obvious obstacles and challenges involved, I believe this is the right thing to do for our students and staff and will:

- **Bring** our youngest and most vulnerable learners into school providing them with about 54 days of in person instruction (vs. about 45 since the beginning of the school year) enabling them to strengthen relationships with caring adults and classmates, develop their skills, and build confidence in their learning. Their teachers will enjoy a more manageable and sustainable classroom environment, one that allows them to focus only on the students in front of them each day.
- **Provide** more consistent live interaction and instruction for 3rd, 4th, and 5th graders, offering them time to connect with their classroom teachers. Teachers will have the additional support they require in the classroom to enable them to connect with learners at home in a way that is least disruptive to students learning in school.
- **Offer** COVID surveillance testing for our staff to fortify our health and safety measures and to reassure our teachers and staff as they continue to provide in person instruction for students. Implement a student health attestation form for families to complete each day. Staff can become even more comfortable and confident that the district is employing every possible tool to ensure their safety and the safety of their loved ones.

With health and safety as a priority, I believe that we have the resources, stamina, and determination to consider a strategic change in our learning plan to meet the needs of struggling learners while also supporting our creative and caring teachers and staff.

While we are unable to address all concerns and needs with this plan, we are committed to working with our educators, families, and state and public health partners

to understand how we can bring all students back, PreK-12, as soon as safe and reasonably possible to do so.

We need to reflect on what is truly essential at this time, accept our circumstances, and recognize where we can affect change and where we cannot. Although we cannot bring back all of our students at this time and given the context of our schools, we can attend to these three critical areas which require attention and action.

I respectfully request for the Needham School Committee to support this proposal.



Needham School Committee

February 2, 2021

Agenda Item: **Action**

Approve 2021-22 Middle School and Needham High School Programs of Studies

Action Recommended:

Upon recommendation of the Superintendent, that the Needham School Committee approves the 2021-2022 Middle School and Needham High School Programs of Studies as submitted.

NEEDHAM PUBLIC SCHOOLS
Needham, Massachusetts

MIDDLE SCHOOL PROGRAM OF STUDIES

GRADES 6 – 8

2021 - 2022

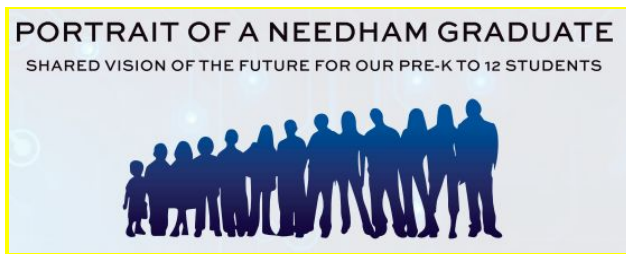
Dr. Dan Gutekanst
Superintendent of Schools

Dr. Terry Duggan
Assistant Superintendent for Student Learning

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NEEDHAM PUBLIC SCHOOLS PORTRAIT OF A NEEDHAM GRADUATE



MISSION:

A school and community partnership that creates excited learners, inspires excellence, & fosters integrity.

VISION:

Preparing ALL Needham Public Schools students to be:

- Creative Thinkers and Problem Solvers (CT & PS);
- Communicators and Collaborators (CC);
- Socially and Culturally Responsive Contributors (SCRC);
- Responsible and Resilient Individuals (RRI);
- Empowered Learners (EL)

CORE VALUES:

- Scholarship
- Community
- Citizenship
- Personal Growth

HIGH ROCK SCHOOL VALUES:

Learning, Self-Discovery, Caring for Others

POLLARD MIDDLE SCHOOL VALUES

All members of the Pollard community will be curious, confident, and independent learners; act with compassion, integrity, and inclusivity; and strive for personal growth.

NEEDHAM MIDDLE SCHOOL STATEMENT OF PURPOSE

We dedicate ourselves to cultivating academic excellence, civic responsibility, and the personal growth of each member of our community.

We Know:

Students enter Middle School at a critical phase of their development. They experience rapid physiological and emotional changes, an emerging sense of self, and an increased need for self-assertion. Cognitively, middle school students move from concrete toward abstract thinking. Middle school students strive for self-acceptance and a sense of belonging which shapes their behavior and perceptions. Healthy connections with adults and peers are crucial. Adult recognition reinforces students' sense of worth and their ability to balance extreme and competing developmental needs.

We Believe:

- All students can learn, and it happens at varying rates through multiple learning styles.
- Active learning requires taking risks, and mistakes are valuable for learning.
- Learning through a broad-based curriculum and exposure to different perspectives is integral to educating the whole child.
- Learners should feel safe, cared for, and valued.
- Learning requires a partnership between school, home, and the community.

We Work To Provide:

- A student-centered curriculum that is experiential, interdisciplinary, and exploratory.
- A staff that plays multiple roles in fostering student growth as they share knowledge, serve as role models, and respond to each individual's needs.
- A middle school environment that stresses civic and global awareness and each student's role as a member of a family, a community, and society at large.

We Strive To Develop:

- Creative and critical thinkers.
- Confident and open-minded risk-takers.
- Responsible and thoughtful decision-makers.
- Articulate and reflective communicators.
- Collaborative and socially conscious contributors to the community.

PROGRAM OVERVIEW

The middle school program has been developed with the understanding that the young adolescent is at a critical phase in their personal and social development. Given that students will face a rapidly changing world there is a core belief that students require a rigorous program that has a broad-based curriculum, which is experiential, interdisciplinary, and exploratory in nature. As a result, the program at the middle school level in Needham is comprehensive and it is expected that students, with few exceptions, will take all courses represented at each grade level outlined below.

CLUSTER MODEL

At High Rock and Pollard we value the National Middle School Association's ideal of developing and sustaining a middle level program that embodies interdisciplinary teaming, advisory, varied instruction, exploratory programs, and transitional activities. The current design of interdisciplinary teams in our middle level program is referred to as our "cluster model."

The environment of a cluster assists in supporting the transition of students from an elementary school model to their high school experience. Clusters create smaller schools or "family units" within our larger school community and support students in their cognitive, social and emotional development. Having this team of teachers working with the same group of students provides flexibility in order to schedule a variety of curriculum needs and foster programs of interdisciplinary study.

Clusters are developed in order to have heterogeneous classes that maximize the educational possibilities for all children. Our primary goal is to create balanced classes in terms of gender, academic strengths, social maturity, special needs, and supportive peer groups that are likely to promote healthy and productive learning environments.

Students in each grade will receive instruction in the four (4) core subjects every day, which includes English Language Arts (ELA), mathematics, science, and social studies. In addition to the study in these core subjects, students will participate in Essential courses. Students participate in two Essential courses per day that occur on a rotating basis. These courses are scheduled as trimester or year-long courses.

COURSE SCHEDULING

A typical daily schedule for students at the middle level is as follows:

Advisory
English
Math
Science
Social Studies
Essentials 1
Essentials 2

Students participate in multiple essential/ elective courses per day that occur on a rotating basis. These courses are scheduled as trimester or year-long courses. Outlined are essential courses assigned to each grade level.

Grade 6 Essentials	Grade 7 Essentials/ Electives	Grade 8 Essentials/ Electives
Physical Education	Physical Education	Physical Education
Health	Health	Health
World Language - Spanish	World Language - Spanish, French, Mandarin	World Language - Spanish, French, Mandarin
Visual Art	Visual Art	Visual Art
Digital Technology	Digital Technology	Engineering Design
Literacy for Learning	Engineering Design	Data Science I or II
	Data Science I	
Performing Arts Option*	Performing Arts Option* OR Arts Rotation Grade 7**	Performing Arts Option* OR Arts Rotation Grade 8**

*Performing Arts Options

Grade 6	Grade 7	Grade 8
Beginning Band Concert Band Strings Ensemble Chorus/General Music	Concert Band Strings Ensemble Cambiota Chorus Treble Chorus	Concert Band Strings Ensemble Cambiota Chorus Treble Chorus

**Arts Rotations (for students not choosing a Performing Arts Option)

Grade 6	Grade 7	Grade 8
	Music Explorations 7 Ceramics/Sculpture 7 Experiential Education 7	Ceramics/Sculpture 8 Chinese Culture 8 Global Art 8 2D Design 8 Experiential Education 8 Theater Musical Arts 8

DEPARTMENT OVERVIEW

ENGLISH LANGUAGE ARTS

Through a wide variety of classroom learning experiences which are largely literature based, our goal is to teach children how to fully comprehend and respond to what they read and teach them how to use the English language most effectively in their writing and speaking. This program has three components: language arts, composition, and literature.

The English curriculum draws on the four main literary genres: fiction, nonfiction, poetry, and drama. Selected age-appropriate readings within these genres are meant to expose students to a vibrant cross-section of viewpoints, cultures, and communities from around the world, past and present, and to foster an appreciation of this diversity.

Along with gaining skills in comprehending text on a factual level, students also learn how to think critically while they read and are given the tools to respond analytically and personally. These responses include small group and whole-class discussions, written responses, and projects that tap students' strengths in visual and performing arts. Students are also encouraged to read independently outside of what is required in school by teachers who model for children a love of reading as a lifelong habit of mind.

In all three grades, emphasis is placed on using the five-step writing process (prewriting or brainstorming, drafting, revising, editing, and publishing) to meet success in conveying ideas on paper. Students will increasingly learn how to adapt the writing process to fit the demands of individual assignments and shape their writing to satisfy specific purposes and audiences.

Generally, writing assignments ask students to: provide information or explain what something is about (expository); tell a story (narrative); describe a place or person (descriptive); persuade others to understand and accept your point of view (persuasive); express thoughts and feelings and create fictional worlds (expressive). In all the writing they do, students are encouraged to develop their own individual voices and styles.

FINE AND PERFORMING ARTS

As a core academic subject, Needham Public Schools students engage in a rigorous standards based arts education in both the visual and performing arts. Instruction is rooted in the creative process, where students are actively engaged in performing and producing. All students will become skilled in and develop an understanding of the four components of the creative process **as outlined by the National and MA Standards for the Arts**; 1. Creating, 2. Performing, Presenting, and Producing, 3. Responding, and 4. Connecting.

Instruction in the Fine and Performing Arts are inherently in alignment with the Vision of Portrait of a Needham Graduate. They encourage and teach students how to be “creative thinkers and problem solvers” and “communicators and collaborators”. The arts also are an avenue for social change and awareness, directly advancing the goal to create students who are “socially and culturally responsive contributors”. Instruction Arts further develops a child’s ability to communicate, think creatively, problem solve, and collaborate.

Visual Arts

The Visual Arts are part of our nation’s Academic Core for all students. In our Visual Arts courses, students explore a variety of mediums and methods in both 2D and 3D. Our hands-on visual arts program captures the imagination, energy, and creativity of the students, while building a variety of skills. We have four distinct goals:

- To build upon and add a layer of complexity to student’s knowledge of art elements, principles, and techniques.
- To develop student’s critical and creative thinking skills through the process of making art (creating the idea, problem-solving, analyzing, evaluating, etc.).
- To develop intra and interpersonal skills through both independent and cooperative learning (including the ability to challenge themselves and explore new possibilities).
- To connect our visual arts program to the arts in life outside the classroom using art and cultural history, current events, etc.

Interdisciplinary Visual Arts Program

Students at the High Rock School receive visual arts instruction throughout the year through a Visual Arts Interdisciplinary Program. The visual arts are integrated into and through the other academic subject areas. The Visual Arts Teacher co-teaches specific units and lessons in science, social studies and ELA, embedding visual art skills and concepts into other academic areas. This program greatly enriches all involved curricula areas and brings real-world elements into the schools, creating a higher level of personal connection and insight.

Performing Arts

Music and theater are part of the performing arts, which are part of our Nation’s Academic Core for all students. The Theater classes offer students an opportunity for individual and group expression through dramatic presentations. The music program offers the middle school student opportunities in three distinct areas: music performance, music theory/skills, and musical self-expression. In addition to the curricular ensembles, students also have the opportunity to participate in several select co-curricular performing groups, which meet outside of the school day. Participation in these select ensembles are by audition and are fee based.

Co-Curricular Select Performing Groups

These performing groups are open to sixth, seventh, and eighth grade students by audition. All ensembles rehearse in the afternoons, outside of the regular school day. Participating students must be members in good standing in the corresponding school ensembles or receive permission from the Fine and Performing Arts Director. There is an ensemble participation fee for each of

the performing ensembles if admitted. Any family with financial concerns should contact the Fine and Performing Arts Director.

After School Theatrical Productions

There are two Middle School Theatrical Productions held each year; a Musical in the Winter and a Play in the Spring. These productions are open to sixth, seventh, and eighth grade students. The cast is selected by audition. There are opportunities for interested students to participate in the many facets of a theatrical production including set building, costumes, and the technical theater crew.

HEALTH SERVICES

The Nursing Department bridges healthcare and education and provides evidence-based, episodic care to all students. School nurses build collaborative partnerships with school staff, families, and community partners to ensure that the delivery of school health services is culturally responsive, equitable, and responsive to individual student needs. School Nurses are an integral part of each school's team and help students to optimize their health so that they can fully participate in educational programming and achieve academic success. Services include: illness and injury assessment and treatment, assessment of physical and mental health conditions, health record compliance, illness surveillance, implementation of State mandated screenings and referrals, anticipatory guidance, care coordination, development of individualized healthcare/medical 504 plans and promotion of disease prevention. During the COVID-19 pandemic, school nurses collaborate with community partners and the Public Health Department to address contact tracing, surveillance of COVID-19 cases, and case management.

MATHEMATICS

The Middle School Mathematics Department aspires to equip students with the skills necessary to:

- value mathematics and recognize its importance in real-life.
- demonstrate confidence in their mathematical abilities.
- develop into enthusiastic mathematical problem solvers.
- communicate mathematically both verbally and in writing.
- reason mathematically.

The overarching goal of the Middle School Mathematics program is to provide a sequential transition between the basic arithmetic, geometric, statistical, and problem solving skills studied in the elementary grades to the advanced mathematical skills of algebra, geometry, analysis, calculus, and statistics taught at the high school. The study of pre-algebra and algebra at the middle level prepares students for a successful transition to high school mathematics and

prepares students for a continued study of mathematics and fields that require the use of mathematics.

Our mixed ability groupings in the middle grades provide high expectations for all, with support for those who need it. It is important to build a strong foundation in mathematics in middle school, where we emphasize conceptual understanding, procedural fluency, and application of the mathematics students have learned. Our curriculum enables each student to develop deep mathematical understanding and opportunities to competently apply math concepts and skills in a variety of school, home, and outside settings. Throughout the middle school experience, students will begin developing proficiency in precise mathematical communication, honing skills in both verbal and written mathematical presentation. Students will be challenged by sophisticated mathematical ideas as they move through our program and will develop perseverance, and the ability to reason, prove, and justify.

An important part of student mathematical work in the middle grades is the Massachusetts Standards of Mathematical Practice. These eight practices frame how teachers and students engage with school mathematics:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Whenever possible, the middle school teachers attempt to integrate the mathematics curriculum with other disciplines. This integration demonstrates to the students that all subjects are connected and not separate entities. In these units, students take knowledge learned in one subject and apply it to situations in other classes. The skills of analysis, synthesis, and generalization are the expected outcomes.

Calculators are an essential part of the middle school mathematics program. Students will use calculators to study certain mathematical topics where tedious computation detracts from the learning of concepts and development of problem solving strategies. Calculators will not be used for all units. Mathematical competency should not be dependent upon the use of a calculator.

MEDIA AND DIGITAL LEARNING

Media instruction and information literacy skills, which emphasize research, are integrated into project based learning experiences that occur in all content areas. The library media teacher collaborates with all teachers to integrate these skills into curriculum topics being studied. Students work in the Library/Media Center to gather, organize, evaluate, and use information from a broad range of print and electronic sources.

The library media teacher also collaborates with the language arts teachers to explore varied genres of literature with students, including fiction, non-fiction, poetry, and biography. The library media teacher supports the independent reading programs of the language arts teachers by providing tools and strategies to students to assist them in the selection of independent reading books.

Digital technology instruction is part of a K-12 sequence of skill development. Through direct and integrated instruction, students expand their knowledge and use of various technology tools. There is a continued focus on 21st century skills such as collaboration, communication, creativity, critical thinking, and independent problem solving. In grades 6 and 7, students take direct technology instruction through a required one-trimester course. In addition, all teachers, with the support of Technology Integration Specialists, engage students in the use of innovative applications and tools while promoting digital literacy and citizenship.

SCIENCE

It is increasingly important for all students to develop a firm understanding of scientific methods, content and skills. We aim to provide students with the content and skill set for viewing their world and communicating solutions as they make informed decisions about their environment, use and production of resources, and development of systems and products that will best serve the world's changing societies. Through a variety of lab investigations and experiments, case studies, inquiry opportunities, class discussions, and presentations, students will better understand the integrated nature of STEM (science, technology, engineering and math) fields.

Earth and Space, Life, and Physical Sciences, as well as Technology and Engineering principles, are continually integrated throughout sixth, seventh, and eighth grades. An emphasis is placed on relating the various principles, practices and concepts to real life and multiregional experiences. Development of effective communication (reading, writing, speaking and listening), problem solving, laboratory techniques, and study skills are important objectives of the science program. The integrated, spiraled approach of the curriculum ensures that students develop a strong science foundation, and the regularly applied Science and Engineering Practices ensure that students develop and apply the skills for approaching new challenges and decisions with a scientific mindset and framework.

Thus, in accordance with the **State** standards, students in *each* grade have ample opportunity to:

- Ask questions and define problems
- Develop and use models
- Plan and carry out investigations
- Analyze and interpret data
- Use mathematical and computational thinking
- Construct explanations and define solutions
- Engage in argument from evidence
- Obtain, evaluate and communicate information.

SOCIAL STUDIES

Now, more than ever, social studies is a key component of a child's education. In order to understand events in the world and to participate in a democratic society, children need to build their knowledge of public policy and the complex interactions of individuals, governments, and nations.

We aspire to equip children with a knowledge of history so that they can begin to understand the multiple reasons why events unfold as they do and that the future is a result of the past.

Knowledge of governments, past and present, helps students understand how people organize themselves in different ways. Experience with the viewpoints of diverse cultures and individuals challenge students and teachers alike to examine different opinions and approaches to living.

Close attention is paid to essential skills such as writing and reading in history and the social sciences, using geography to understand history and how to use these skills to conduct research.

We also dedicate ourselves to providing important experiences in areas such as teamwork and public speaking as well as providing opportunities for students to discuss and analyze current events.

WELLNESS

Health, Physical Education, and Experiential Education make up the middle school portion of our K through 12 comprehensive wellness program. Although each course is taught separately, they each incorporate a multidimensional approach to understanding human health and well-being. In a unique way, each course contributes to each student's ongoing development of skills, knowledge, and attitudes needed to participate in an active, healthy lifestyle. **This comprehensive** wellness curriculum emphasizes each student's responsibility for his or her own health and well-being based on a six-dimensional wellness model (social, emotional, physical, intellectual, spiritual, and **occupational/leisure**) with emphasis on personal growth. The middle school wellness program builds upon the knowledge, skills, and behaviors learned and practiced in grades K through 5, and is valuable in preparing middle school students for their high school experience.

WORLD LANGUAGES

World language study in the middle schools focuses on developing students' linguistic and cultural proficiency in a modern language. Curriculum and instruction supports the development of novice range learners, consistent with the national standards for foreign language learning (ACTFL Proficiency Guidelines).

Students at each grade level will develop the four basic language skills of speaking, listening, reading, and writing. Teachers provide extensive comprehensible input in the target language, use authentic materials, integrate technology, create opportunities for purposeful play, design tasks with interactive exchanges, and use short stories to practice writing and speaking as well as reading comprehension. Teachers of world languages strive to nurture students' love of language learning, positive self-efficacy, and appreciation of diverse cultures.

At Needham High School, students are required to study at least two years of the same world language, though at three or four years is strongly recommended. We currently offer Spanish, French, Latin and Mandarin at NHS.

World Language in Grade 6 (full year)

Students entering High Rock School will continue their study of Spanish through 6th grade. The 6th grade experience is designed to reinforce essential knowledge and skills introduced in the elementary Spanish program and further expand students' communicative capacity and cultural competence. Thematic units of study include: question words and expressions, intro to reading a short novel in Spanish, the school day, numbers, greetings and introductions, and an intro to South America (geography and various countries' practices and products).

World Language in Grade 7 (full year)

Students entering Pollard in 7th grade will have the opportunity to: a) continue their study of Spanish; b) begin Spanish (select Spanish 7a); c) begin French; or d) begin Mandarin. The language selected at the start of 7th grade is a two year commitment. It is designed to serve as the foundation for the 2 years of required language study at Needham High School.

World Language in Grade 8 (full year)

Students entering eighth grade will continue to study the same language studied in seventh grade. The Pollard world language experience is a two year commitment.

COMMUNITY SERVICE LEARNING PROGRAM

Students at Pollard Middle School participate in a Community Service Learning (CSL) Program. The program is implemented over the course of the seventh and eighth grade years and requires students to share their findings with their peers, faculty, and parents/guardians. The goal is to reinforce for students the importance of being active, responsible citizens who commit time and energy to “help make our world a better place.”

Research indicates that if students are involved in their learning in a hands-on way, they are likely to get more out of these learning experiences and feel that their efforts can and do make a difference. We hope that through this program students will be inspired to become involved with human and animal rights issues in our community and the larger society, both now and in the future.

Students are exposed to service work on a local, national or international level. They consider areas of personal interest in the realm of humanitarian and social justice work, and select a specific social issue and an organization or project in which to base their community service learning. Students select community organizations in and outside of Needham as sites for their service projects. They have a wide range of choices and we encourage parents/guardians to participate in the selection process so that both the student and the parent/guardian can be informed and comfortable with the project and site selected.

The project consists of the following steps:

- Brainstorm and discuss social/societal issues of concern.
- Consider personal and academic interests related to service learning.
- Research the social issue selected for service work.
- Select an organization where a minimum of 10 hours of service is performed.
- Develop an action plan for service learning.
- Reflect on the service done, contributions made, and the learning and personal growth that occurs through the service experience.
- Share their findings with peers, staff, and parents/guardians.

Expectations of Student Involvement:

We expect that students will perform a minimum of ten (10) hours of service over their two years at Pollard. Students will begin their community service learning work midway through 7th grade and complete their work in the spring of 8th grade. Full participation in our end-of-year social activities is contingent on the participation in this CSL Program.

COURSE DESCRIPTIONS

ENGLISH LANGUAGE ARTS

GRADE 6 ENGLISH LANGUAGE ARTS (full year)

Students are immersed in the study of literature, composition, and language arts. The goal is to help students become careful readers and thoughtful, expressive writers.

At the beginning of the year, students review ‘active reading’ strategies and begin their independent reading logs. They review the rudiments of the short story while reading and analyzing classic and contemporary tales such as *The Necklace*, by Guy de Maupassant, and *Charles*, by Shirley Jackson. Over the course of the year, students read young adult novels such as *The Breadwinner*, as a whole-class and choose from a curated list of novels to read in small-group settings. Additionally, students study a variety of short and long nonfiction texts, poems, and myths. Always the emphasis is on knowledge acquisition, interpretation of meaningful passages, and careful examination of theme or main idea. Students learn how to take notes, write analytical responses, back up interpretations with textual evidence, and identify effective craft techniques. Throughout the year, students also read numerous self-selected titles as part of the school’s Independent Reading Program.

In composition, students write in a wide range of genres that include fictional narratives, critical and persuasive essays, book reviews, reflections, journal entries, and various authentic texts such as letters or business memos. They begin by reviewing the steps in the writing process with examination of mentor texts and an emphasis on effective techniques, thoughtful revision of ideas and word choice, and careful proofreading/editing to ensure correct punctuation and capitalization. Students apply their knowledge of short story elements by constructing an original plot line and writing a well-developed story scene. They learn about expository structure and organization: how to write an effective introduction, how to support a thesis statement with facts and evidence, and how to conclude with a summarizing paragraph. As part of the poetry unit, students create an anthology that includes analytical interpretations, original poems, and reflections about their growth as a poet. Throughout this exploration of language and self-expression, the emphasis is on finding one’s voice as a writer, developing ideas, and learning effective organizational strategies.

In conjunction with reading and writing activities, students acquire new vocabulary, practice important grammatical constructs, and learn how to speak, argue, and listen effectively.

LITERACY FOR LEARNING (semester course)

This trimester course is designed to ensure that students gain an introduction to the range of reading skills needed for the complex literacy tasks they will encounter in various academic areas throughout middle school and beyond. In this project-based learning course, students take on the personas of inventors and entrepreneurs and then study a variety of texts in order to understand their purpose and characteristics. Then, they use both their personal lens (consumers) and adopted professional lens (inventors/ entrepreneurs) to create their own texts in service of their companies.

Students explore a selection of real-world texts in order to see how information can be presented through different types of texts across a range of subject areas (i.e. **descriptive texts, origin stories, advertisements, business memos, sales pitches, etc.**) The texts themselves may vary over the course of the year, depending on the needs and interests of the students. The goal of the course is to enable students to apply the powerful literacy skills and strategies learned in this course to their academic texts in school, as well as in their lifelong reading experiences.

In this course students will:

- Build their awareness of disciplinary literacy, the idea that there are unique skills and strategies used by expert readers and writers in each subject area.
- Identify their personal reading preferences, strengths, and areas for growth.
- Talk about their reading processes with peers to uncover and strengthen how they make sense of challenging texts.
- Read a wide-range of texts while considering text structures and styles, the author or source, and the various skills and approaches a reader must use to navigate different types of challenging reading.
- Learn and apply a core set of strategies that they can use flexibly as readers depending on the text, context and purpose of their reading.

Students demonstrate their learning in various ways including collaborative conversations, self-assessment, written responses, and project-based assessments.

GRADE 7 ENGLISH LANGUAGE ARTS (full year)

In grade 7 ELA, students study literature, composition, vocabulary, and grammar. The goal is to help students become careful, inferential readers, critical thinkers, and thoughtful, expressive writers.

At the beginning of the year, students review useful ‘active reading’ strategies and effective note taking skills while reading and analyzing a variety of challenging short stories. Building on the work begun in grade 6, students study character development in relation to plot events (the ‘emotional journey’ of the main character), point of view, setting, and theme. Over the course of the year students read a variety of texts, including a young adult novel (*The Outsiders*, by S. E. Hinton), a complex novel (*Roll of Thunder, Hear My Cry* by Mildred Taylor), poetry, nonfiction articles and books, and a number of theme-based literature circle selections. The emphasis is on understanding the influence of history and culture on characters’ behavior and on authors’ decisions as well as appreciating the multiple themes of a complex young adult novel. In discussions and written responses, students learn to support claims and opinions with examples, reasons, and textual evidence. Students explore word choice, language, and writing, with special attention given to understanding figurative language. As students move from concrete understandings to more abstract generalizations, they are encouraged to think broadly and deeply about topical questions, the challenges of adulthood, and their own lives. They study several themes in depth, particularly *identity, the role of the individual in society, and culture as a determinant of point of view*. Throughout the year, students read numerous self-selected titles as part of the school’s Independent Reading Program.

Students in grade 7 continue to write and experiment with a variety of forms and genres. In addition to summaries and analytical responses, students learn to write short story scenes, poems, personal and persuasive essays, narratives, and informational pieces. Each student in grade 7 develops and presents a portfolio of original poems and interpretations of published poems. Building on the work begun in grade 6, students continue to learn about the elements of an essay, including a well-developed thesis statement, topic sentences, transition words, embedded quotations, and a conclusion that extends the main idea. Increasingly, attention is paid to developing and supporting persuasive arguments, employing effective word choice, and revising and polishing final drafts.

In addition, each week students acquire new vocabulary (including Latin and Greek root words and combining forms); learn about parts of speech, sentence structure, and sentence boundaries; and practice speaking, arguing, and listening effectively. A culminating event is a declamation that is carefully practiced and delivered orally to the class.

GRADE 8 ENGLISH LANGUAGE ARTS (full year)

In grade 8 ELA students study literature, composition, vocabulary, and grammar. The goal is to help students become careful, inferential readers, critical thinkers, and thoughtful, expressive writers.

Building upon previous work in grades 6 and 7, at the beginning of the year students review ‘active reading’ strategies, note taking techniques and summarizing skills while reading a variety of challenging stories by Jackson, Poe, Connell, Bradbury, LeGuin, and others. The emphasis is on careful reading; identification of narrative techniques such as flashback, foreshadowing, and suspense; and understanding symbolism, mood, satire, irony, methods of characterization and theme. Students read, discuss, analyze, and write about short stories using examples and evidence from the text to support their interpretations. As a further assessment, students *apply* everything they have learned about short stories by **choosing a story to either continue or re-imagine from another point of view.**

As the year progresses, students move from shorter texts – both fiction and nonfiction – to a variety of longer texts, including complex adult novels, memoirs, plays, poetry, and nonfiction. Titles include *Fahrenheit 451* by Ray Bradbury, “*A Midsummer Night’s Dream*,” by William Shakespeare, and *Friedrich* by Hans Peter Richter, among others. The emphasis is always on inferential thinking, identification of text structures particular to each form or genre, language and writing style, the creative choices an author makes, and a thorough evaluation of thematic content. Students learn to read deeply; that is, to reflect on themes and issues in relation to their own experiences, to generalize about larger issues that affect society as a whole, and to compare diverging points of view and the cultural and personal factors that influence an author’s – or a reader’s – perspective. Specific units of study focus on *heroic archetypes*, *moral courage*, *the role of the individual in an unjust society* and *freedom vs. independence*. With increasing sophistication, students learn to make claims about the texts they are reading and support those claims with reasons, examples and evidence rooted in the texts themselves. In the spring of grade 8, students engage in a six-week literature-based study of the Holocaust in which they examine historical roots of the Holocaust, issues of ethics and moral justice, and

Holocaust-related contemporary issues such as the treatment of some cultural groups by other cultural groups. Throughout the year, students read, write about, and give oral presentations on numerous self-selected titles as part of the school's Independent Reading Program.

Students in grade 8 increasingly take control of their own writing as they learn new forms, write longer essays and narratives, and become more sophisticated at revising and editing their pieces. In addition to autobiographical and fictitious narratives and vignettes, students write a number of expository pieces including persuasive essays, literary essays, speeches, and analytical responses to their reading. Learning how to write a sophisticated, well-structured essay is a primary goal as students grow their ability to express themselves in organized structures and with powerful prose. Over the course of the year, students learn to plan and organize their ideas, use examples and evidence to argue effectively, and choose words and phrases precisely. Students are expected to use newly acquired vocabulary - including academic words and figurative language - in their writing and to demonstrate increasing control over the grammatical structures they have studied.

FINE AND PERFORMING ARTS

VISUAL ARTS

VISUAL ART 6 (trimester offering)

This class focuses specifically on the skills outlined in the MA State Visual Arts Frameworks and bridges the elementary and middle school art programs. Skills learned in the elementary grade are reviewed and expanded upon as students demonstrate their understanding of Visual Art structures and functions. Students will complete units incorporating the elements and principles of art, techniques in drawing, color, design, and ceramics (including observation, abstraction, and expression), craftsmanship, and the creative process. As part of this course, students complete a digital portfolio of their work. This course lasts for one trimester.

VISUAL ART 7 (trimester offering)

This class is the required art class for all seventh graders regardless of chosen track. Art 7 reviews and continues to develop skills learned in Art 6 and expands upon their understanding of visual art structures and functions. Students will complete units incorporating the elements and principles of art, techniques in drawing, color, and design (including observation, abstraction, and expression), craftsmanship, the creative process (brainstorming, problem-solving, analyzing, evaluating and presenting). This course lasts for one trimester.

THE VISUAL ART 8 (trimester offering)

This class is the required art class for all eighth graders regardless of chosen track. Art 8 reviews and develops skills learned in the earlier grades and further expands students' understanding of visual art structures and functions. Students will complete units incorporating the elements and principles of art, techniques in drawing (including observation, abstraction, and expression), craftsmanship, and the creative process.

CERAMICS/SCULPTURE 7 (trimester offering)

This art class is part of the Fine and Performing Arts Grade 7 rotation. Students in this course will explore the 3D art process with a variety of materials, such as paper mache, clay, etc. Both functional and sculptural projects will be produced that demonstrate understanding of craftsmanship, while maintaining a workspace responsibly. This course focuses on 3D skills outlined in the MA State Visual Arts Frameworks. **This course lasts for one trimester.**

CERAMICS/SCULPTURE 8 (trimester offering)

This art class is part of the Fine and Performing Arts Grade 8 rotation. Students in this course will continue the exploration of the 3D art processes and materials (paper mache, clay, etc) used in Ceramics/Sculpture 7. Emphasis will be on producing 3D artwork that shows understanding of craftsmanship while maintaining a workspace responsibly. This course focuses on 3D skills outlined in the MA State Visual Arts Frameworks. **This course lasts for half of one trimester.**

GLOBAL ARTS 8 (trimester offering)

This art class is part of the Fine and Performing Arts Grade 8 rotation. Global Arts enable students to produce individual works in a variety of media. Students study how artists around the globe express their culture through art, and then interpret the culture's style and symbolism in their own works. In addition to reinforcing the skills of creating and producing expressive art works; this course specifically brings focus to the standards relating to artistic meaning, critical response, and connection to different cultures. **This course lasts for half of one trimester.**

2D DESIGN 8 (trimester offering)

This art class is part of the Fine and Performing Arts Grade 8 rotation. 2D Design 8 expands on the visual art skills developed during Art 7 with an emphasis on using color and design to develop expressive **2D Design composition skills**. Students will also use color and craftsmanship to enhance the impact of their compositions. Some of the mediums used will be paint, pastels, colored pencils and marker. **This course lasts for half of one trimester.**

PERFORMING ARTS***CHORUS AND GENERAL MUSIC 6 (full year)***

This course is part of the sixth grade curriculum for students to sing in a chorus and continue with general music. In this class, students will study and perform music representative of a variety of musical styles and cultures through which they learn to control their rapidly changing adolescent voice in a safe and supportive environment. Public performances are important culminating experiences for this class. In addition, chorus/general music students spend substantial class time engaged in composition, drumming, notation study, and listening analysis. Students develop and use creative and critical thinking skills and cooperative learning techniques as they study all the elements of music in addition to performance. This course focuses specifically on skills outlined in the MA State Music Frameworks. **This is a yearlong course.**

CAMBIATA CHORUS 7 (full year)

This course is appropriate for all seventh graders whose singing voice corresponds to a voice in the tenor or bass range and/or is anticipated to change into one of these voice ranges. Students in this class are able to focus on developing and fine tuning their changing adolescent singing voice in a supportive and comfortable environment. Students experience a variety of musical styles designed to give them a strong artistic choral experience, while developing healthy vocal techniques. Students also learn the important skills of ear training, sight singing, and dictation. In addition to the two major concerts each year, the chorus may also perform for functions in Needham and surrounding communities. Members of Cambiata Chorus 7 are encouraged to audition for the Middle School Select Choir. This course continues the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

TREBLE CHORUS 7 (full year)

This course is appropriate for all seventh graders whose singing voice corresponds to a voice in the soprano or alto range and is expected to sing in one of these voice ranges. Students experience a variety of musical styles designed to give chorus members a strong artistic choral experience, while developing healthy vocal techniques. Students also learn the important skills of ear training, sight singing, and dictation. In addition to the two major concerts each year, the chorus may also perform for functions in Needham and surrounding communities. Members of Treble Chorus 7 are encouraged to audition for the Middle School Select Choir. This course continues the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

CAMBIATA CHORUS 8 (full year)

This is appropriate for all eighth graders whose singing voice corresponds to a voice in the tenor or bass range and/or is anticipated to change into one of these voice ranges. Students in this class continue to develop and fine-tune their changing adolescent singing voice in a supportive and comfortable environment. Students experience a variety of musical styles designed to give them a strong artistic choral experience, while developing healthy vocal techniques. Students also learn the important skills of ear training, sight singing, and dictation. In addition to at least one major concert each year, Cambiata Chorus 8 also spends time exploring techniques and concepts used in musical theater. Members of Cambiata Chorus 8 are encouraged to audition for Middle School Select Choir. This course continues the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

TREBLE CHORUS 8 (full year)

This course is appropriate for all eighth graders whose singing voice corresponds to a voice in the soprano or alto range and is expected to sing in one of these voice ranges. Students experience a variety of musical styles designed to give them a strong artistic choral experience, while developing healthy vocal techniques. Students also learn the important skills of ear training, sight singing, and dictation. In addition to the two major concerts each year, the chorus may also perform for functions in Needham and surrounding communities. Members of Treble Chorus 8 are encouraged to audition for the Middle School Select Choir. This course continues

the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

BEGINNING BAND 6 (full year)

This course is open to and designed for sixth grade students WITHOUT any prior playing experience on a brass, woodwind, or percussion instrument. Students will learn the fundamentals of their specific instruments, proper playing technique, and note reading. Students will participate in sixth grade concerts, a district-wide band performance, as well as other performance opportunities that arise. Band members are strongly encouraged to study their instrument privately, though it is not required. This course focuses specifically on skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. At the end of this course, students will be ready to join Concert Band 7. **This is a yearlong course.**

CONCERT BAND 6 (full year)

This course is open to sixth grade students who with a minimum of one year playing experience on a brass, woodwind, or percussion instrument. Students continue to expand the fundamentals of musicianship and technical skill through the study of different styles of band literature. The concert band participates in sixth grade concerts, district-wide band performance, as well as other performance opportunities that arise. Band members are strongly encouraged to study their instrument privately, though it is not required. Band members may also audition for the Middle School Wind and Jazz Ensembles. This course focuses specifically on skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

CONCERT BAND 7 (full year)

This course is open to seventh grade students who enter seventh grade able to play brass, woodwind, or percussion instruments at a beginning/intermediate level. A minimum of one-year experience on the instrument, or permission of the instructor, is needed to enroll. Students learn the fundamentals of musicianship and technical skill through the study of different styles of band literature. The concert band participates in a variety of school and district-wide bands performances, as well as other performance opportunities that arise. Band members may audition for the Middle School Wind and Jazz Ensembles. Interested students are strongly encouraged to study their instrument privately, though it is not required. This course continues the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

CONCERT BAND 8 (full year)

This course is open to eighth grade students who enter eighth grade able to play brass, woodwind, or percussion instruments at a beginning/intermediate level. A minimum of one-year experience on the instrument, or permission of the instructor, is needed to enroll. Students learn the fundamentals of musicianship and technical skill through the study of different styles of band literature. The concert band participates in a variety of school and district-wide bands performances, as well as other performance opportunities that arise. Band members may audition for the Middle School Wind and Jazz Ensembles. Interested students are strongly encouraged to study their instrument privately, though it is not required. This course continues

the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

STRING ENSEMBLE 6 (full year)

This course is open to sixth grade students who play violin, viola, cello, or string bass with a minimum of one year's playing experience or with permission of the instructor. String Ensemble 6 performs in all Middle School string concerts as well as the annual district-wide strings performance. Sixth grade string ensemble members may audition for the Town Orchestra. Interested students are strongly encouraged to study their instrument privately, though it is not required. This course focuses specifically on skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

STRING ENSEMBLE 7 (full year)

This course is open to seventh grade students who play violin, viola, cello, or string bass with a minimum of two year's experience on their instrument, or with permission of the instructor. String Ensemble 7 performs in all Middle School String concerts as well as the annual district-wide strings performance. Seventh grade String Ensemble members may audition for the select Town Orchestra. Interested students are strongly encouraged to study their instrument privately, though it is not required. This course continues the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

STRING ENSEMBLE 8 (full year)

This course is open to eighth grade students who play violin, viola, cello, or string bass with a minimum of two year's experience on their instrument, or with permission of the instructor. String Ensemble 8 performs in all Middle School String concerts as well as the annual district-wide strings performance. Eighth grade String Ensemble members may audition for the select Town Orchestra. Interested students are strongly encouraged to study their instrument privately, though it is not required. This course continues the development of skills outlined in the MA State Music Frameworks. Participation in public concert performances are a required component to this ensemble. **This is a yearlong course.**

MUSIC EXPLORATIONS 7 (trimester offering)

This music trimester class is part of the Fine and Performing Arts 7 rotation. Students who are not enrolled in a performing ensemble (band, orchestra, chorus) are enrolled in the Arts Rotation. In this class, students will develop and expand their skills as composers and performers. They will listen to and analyze a variety of genres to develop their command and understanding of the fundamentals of music. Class projects will include using music technology software to compose both individual and group works. This course continues the development of skills outlined in the MA State Music Frameworks.

THEATER ARTS 8 (trimester offering)

This is the performing arts class that is part of the Fine and Performing Arts Grade 8 Rotation. In this integrated performing arts class, students will expand upon and develop their theatrical skills by participating in a variety of roles used in professional and amateur productions. These roles include that of actor, director, and designer. Class activities may include rehearsal and performance of monologues and scenes, as well as script analysis and technical design. This is a half-trimester course.

CO-CURRICULAR FEE BASED SELECT PERFORMING GROUPS***MIDDLE SCHOOL SELECT CHOIR***

This performing group is composed of students selected by audition. Accepted students must be members of the sixth, seventh, or eighth grade curricular performing ensembles. Select Choir rehearses two afternoons per week at Pollard and members need to commit to attend both rehearsals to be admitted into the group with a successful audition. All Select Choir members need to commit to a minimum of two afternoons to be in the group. Some additional rehearsals may be added as the concerts approach. The Select Choir performs for professional and community organizations, and regional festivals. Interested students are strongly encouraged to consider studying voice privately, though it is not required. This is a fee based ensemble.

JAZZ ENSEMBLE

This performing group consists of students selected by audition from the sixth, seventh and eighth grade bands. Students study and perform multiple styles of jazz and popular music. The Jazz Ensemble performs at school events, and a variety of community and state events. Instrumentation includes saxophones, trumpets, trombones, drum set, guitar, bass, piano, and other instruments at the discretion of the director. The Jazz Ensemble meets two afternoons a week at Pollard. All accepted students must be in Concert Band preferably, or one of the other daytime performing groups, if the student is skilled and dedicated enough to manage both ensembles. Interested students are strongly encouraged to be studying their instrument privately, though it is not required. This is a fee based ensemble.

TOWN ORCHESTRA

This performing group consists of string players from grades six through nine who are selected by audition. Accepted students must be members of the sixth, seventh or eighth grade string ensembles, or one of the daytime performing ensembles, if the student is skilled and dedicated enough to manage both ensembles. The Town Orchestra performs in numerous school concerts, in addition to community and regional events. Town Orchestra meets one afternoon per week at Pollard. Interested students are strongly encouraged to be studying their instrument privately, though it is not required. This is a fee based ensemble.

WIND ENSEMBLE

This performing group consists of wind and percussion players from grades six through eight who are selected by audition. Accepted students must be members of the sixth, seventh or eighth grade concert bands, or one of the other daytime performing ensembles, if the student is skilled and dedicated enough to manage both ensembles. The Wind Ensemble rehearses one afternoon

per week at Pollard and performs at a variety of concerts each year, including participation in the state concert band festival (MICCA). Interested students are strongly encouraged to be studying their instrument privately, though it is not required. **This is a fee based ensemble.**

MIDDLE SCHOOL MUSICALS

This co-curricular experience involves students from the sixth, seventh, and eighth grades in producing a classic fully staged musical production. Students with acting/singing roles on stage are selected by audition. Other students have the opportunity to join the technical theater crew, working backstage on set, costumes, lighting, props, and more. The majority of rehearsals take place 3-5 days a week after school, with some weekend and evening dates as the performance dates get closer. The production process usually runs from early November through early February. All students grades six through eight are welcome to audition.

MIDDLE SCHOOL PLAY

This co-curricular theater experience involves students from the sixth, seventh, and eighth grades in producing a traditional play. Students with speaking roles will be selected and cast based on auditions. Other students have the opportunity to join the technical theater crew, working backstage on set, costumes, lighting, props, and more. The majority of rehearsals take place 3-5 days a week after school, with some weekend and evening dates as the performance dates get closer. The production process usually runs from late March through early June. All students grades six through eight are welcome to audition.

MATHEMATICS

MATH SUPPORT 6, 7, 8 (trimester offering)

High Rock and Pollard offer small group math support to general education students who would benefit from additional mathematics instruction. Math Support Class provides students an opportunity for repeated practice, pre-teaching, re-teaching and/or explicit teaching of essential math concepts and skills. This additional math course allows students to address any areas of need and gain critical support on topics students are learning in their grade level math course. Groups are small, and instruction is targeted toward the unique individual needs of the student. Students are identified for Math Support using MCAS, in-class assessment data, and teacher recommendation.

MATH 6 (full year)

The Massachusetts Mathematics Curriculum Frameworks Incorporating the Common Core State Standards frame the major mathematical work in this course. It is aligned with the recommended pathway for grade 6 students as outlined in these mathematics standards.

The purpose of the MATH 6 course is to insure that all students have been introduced to and have mastered the necessary prerequisite skills and essential knowledge to begin the transition to algebraic reasoning. This course will review and extend the students' mathematical knowledge

and skill development. Students study the following topics: number theory, fractions, decimals, ratio and proportion, percents, geometry, integers, statistics, probability, and an introduction to variables and equations.

The Standards for Mathematical Practice complement the content standards so students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout middle school. In addition, preparation for the Grade 6 MCAS will be provided. Calculators, iPads, and units integrated across the curriculum are used, when appropriate, to meet instructional goals.

MATH 7 (full year)

The Massachusetts Mathematics Curriculum Frameworks Incorporating the Common Core State Standards frame the major mathematical work in this course. It is aligned with the recommended pathway for grade 7 students as outlined in these mathematics standards.

The MATH 7 course is designed to develop basic arithmetic and pre-algebraic skills and concepts. Students will apply arithmetic and pre-algebraic skills to real-world situations involving ratios, proportions and percents; understanding and application of proportional reasoning is emphasized. Variables are used in working with patterns, formulas and graphing. Integer and rational number operations are introduced. Students simplify numerical expressions and evaluate variable expressions. Geometric relationships and spatial sense are developed by drawing, measuring and classifying geometric figures; real-world applications such as scale drawings, area, surface area and volume frame the focus. Experiments and simulations help students determine probabilities, make predictions and inferences based on experimental and theoretical probabilities.

The Standards for Mathematical Practice complement the content standards so students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout middle school. In addition, preparation for the Grade 7 MCAS will be provided. Calculators, iPads, and units integrated across the curriculum are used, when appropriate, to meet instructional goals.

MATH 8 (full year)

The Massachusetts Mathematics Curriculum Frameworks Incorporating the Common Core State Standards frame the major mathematical work in this course. It is aligned with the recommended pathway for grade 8 students as outlined in these mathematics standards.

This course focuses on formulating and reasoning about expressions and equations, using functions to describe quantitative relationships, analyzing two and three dimensional space and figures and understanding and applying the Pythagorean theorem. Students use linear equations

and systems of linear equations to represent, analyze and solve a variety of problems. Understanding of distance and angles, translations, rotations reflections and dilations, and ideas about congruence and similarity are used to describe and analyze two-dimensional figures and to solve problems. Students apply the Pythagorean theorem and complete their work on volume by solving problems involving cones, cylinders and spheres. Students will derive formulas, explain the advantages of different forms of equations, and apply these algebraic skills to a variety of real world applications and mathematical problems. Problem solving, communicating mathematical ideas, technological connections, and reading a textbook for understanding are stressed throughout the course.

The Standards for Mathematical Practice complement the content standards so students increasingly engage with the subject matter as they grow in mathematical maturity and expertise throughout middle school. In addition, preparation for the Grade 8 MCAS will be provided. Calculators, iPads, and units integrated across the curriculum are used, when appropriate, to meet instructional goals.

DATA SCIENCE I (trimester offering)

This course builds upon the mathematical and problem-solving skills taught in grade level classes, while encouraging students to reason with, interact with, and think critically about data in many forms. Students will actively engage in the exploration of the intersection of math with the real world and other school subjects while studying data sets that require organization and analysis. Throughout this course, students will be encouraged to develop rich questions, be curious, determine patterns through an exploratory approach, use evidence, and demonstrate strong reasoning. In addition, students will work with spreadsheets, studying measures of central tendency and manipulating data to “tell a story” using a data set. In the final weeks of the trimester, students will be required to complete a capstone project through which they will explore personal meaning and relevance, conducting a data inquiry and exploring questions that are interesting to them and potentially supportive of the Needham community.

DATA SCIENCE II (trimester offering for grade 8 only)

This course builds upon mathematical and problem-solving skills taught in grade level classes and the Data Science I course. Students will continue and enhance their study of data by incorporating the statistical content and skills learned in their Math 7 courses and deepen their understanding of big data, spreadsheets, and “telling a story” using data sets. Students will extend their work with data sets requiring organization and analysis to linear regression and exploring confounding variables and their effects on data results. Throughout the trimester, students will develop their capstone project, including choosing a topic of their own, researching a statistical question, and conducting a data inquiry.

MEDIA & TECHNOLOGY

DIGITAL TECHNOLOGY 6 (trimester offering)

In this class, using a variety of applications and platforms, students develop technology skills that they will be able to transfer to other academic areas. Students learn to access, use, and organize files and applications on multiple devices. Students will practice and apply skills in multimedia presentations, video editing, interactive games, and coding. Focusing on effective communications, they will author creative works in a variety of media, including video, animation, and podcasts. Students will build upon their knowledge of coding and will develop a simple interactive program. Students will expand their knowledge and understanding of digital citizenship and anti-cyberbullying, and will learn that what they do online can be permanent and can impact themselves and others, now and in the future.

DIGITAL TECHNOLOGY 7 (trimester offering)

In this class, students will improve their use of digital tools to collaborate, communicate, and create. Students will explore new technologies through project-based learning with an emphasis on developing independent problem solving skills and practicing concepts of the design process. Internet safety and anti-cyberbullying instruction continue to be a focus of the digital citizenship curriculum in this course. Students will develop 21st century skills transferable to other applications, devices, and a variety of academic areas.

SCIENCE

The newly revised state science, technology and engineering (STE) standards, adopted in January 2016, provide guidance and flexibility during a district's development of new methods, content and skills. We have redesigned our curriculum accordingly, and are in the process of implementing the new standards with our students.

SCIENCE 6 (full year)

This is a general science course focusing on topics in the physical, life, and earth sciences. It includes the study of matter and its interactions, waves and communication, force interactions and motion in our universe, cellular and body systems, fossils as evidence of past events, and aspects of engineering design.

Laboratory activities are an integral part of the course. Considerable emphasis is placed on the development of laboratory, writing, and study skills through an integrated learning approach. The Science & Engineering Practices (skills) and Crosscutting Concepts (themes) are emphasized throughout the course.

SCIENCE 7 (full year)

This is a general science course focusing on topics in the physical, life, and earth sciences. It includes the study of energy and heat concepts, ecology, electromagnetism, human impacts and interactions with the environment, and Earth's changing surface. These units of study are united through an overarching theme of systems and cycles.

Concepts are reinforced by multiple teaching strategies including teacher led instruction, hands-on activities, inquiry and student presentations. Considerable emphasis is placed on the development of problem solving, and science thinking skills, as well as student decision making based on specified and diverse current event case studies. The Science & Engineering Practices (skills) and Crosscutting Concepts (themes) are emphasized throughout the course, and students are often asked to consider the role that humans play in shaping and being impacted by their environment.

SCIENCE 8 (full year)

This course is an integrated program relating the important physical science, earth science, and engineering and technology concepts of our world. The principles of forces, motion, density, forms of energy, and chemistry are studied and related to concepts that describe the features and processes of the earth and its resources. The principles and processes of technology and engineering are also woven into the above scientific concepts. Teacher led instruction, hands-on activities, and inquiry based learning are an integral part of the course. Emphasis is placed on the development of communication, reading, writing, problem solving, inquiry, and laboratory skills. The Science & Engineering Practices (skills) and Crosscutting Concepts (themes) are emphasized throughout the course.

ENGINEERING DESIGN 7 & 8 (trimester offering)

The course is a hands-on course that applies engineering and technology principles to practical engineering and technology problems. The investigated technologies are in the fields of manufacturing, construction, transportation, communication, and environmental engineering. The course integrates science, engineering, and technology concepts and relates them to improving the environment and people's lives. Problem solving and critical thinking skills provide students with opportunities to simulate real-world applications of science and math. Classroom studies take place in a shop and laboratory environment where practical safety procedures are emphasized during the learning. In **grade 7**, students apply the Engineering Design Process as they develop products, design systems, and reflect on the interactions of products and systems. In **grade 8**, students look at materials and manufacturing. Within this framework, they develop an understanding of how we can sustainably support the wants and needs of a growing and evolving population.

SOCIAL STUDIES

SOCIAL STUDIES 6 (full year)

This course begins with a study of archaeology and traces human development from prehistoric times through the ancient Middle East, ancient Egypt, the Greeks, and the Romans. Grade 6 Social Studies introduces students to the cultural achievements of ancient and classical civilizations worldwide. The course begins with a study of archaeology and traces human development from prehistoric times through the ancient time period in the Near East, Eastern Africa, and Southern Europe. Students learn about civilizations in each region including Sumer, Babylonia, Assyria, Phoenicia, Israel, and Palestine in the Near East; Egypt and Nubia in Eastern

Africa; and Greece and Rome in Southern Europe. The regional approach provides students with the opportunity to extend their knowledge of the physical world and expand their capacity for geographic reasoning.

Developing students' critical thinking skills around how we study history using primary and secondary sources to understand the past is a key component of the course. Special attention is paid to exposing students to a wide variety of sources, especially traditionally underrepresented voices, as students learn about each region. Additionally, through a variety of research projects, the course strengthens students' ability to develop research questions and conduct historical inquiries.

SOCIAL STUDIES 7 (full year)

Grade 7 Social Studies builds on the foundation set by Grade 6 Social Studies. Similar emphasis is placed on introducing students to the cultural achievements of ancient and classical civilizations worldwide. The course is also organized by geographic region as students continue to extend their knowledge of physical geography and expand their capacity for geographical reasoning. The regional approach challenges students to understand the movement of peoples and ideas across time and place. Students learn about the ancient history, indigenous peoples and cultural traditions of Australia and Oceania, South Asia, East Asia, the Middle East, and Central America, the Caribbean Islands, and South America.

This course broadens students' understanding and appreciation of diverse and indigenous people around the world while empowering students to be critical thinkers. It helps students to recognize the universal human conditions while providing opportunities to learn about the unique contributions of each region to world history. Special attention is paid to exposing students to a wide variety of sources, especially traditionally underrepresented voices, as students learn about each region.

Fostering students' religious literacy skills is a major component of the course. Students learn about the origins of various belief systems, and make connections between geography, theology, and culture. Additionally, through a variety of research projects, the course strengthens students' ability to develop research questions and conduct historical inquiries.

SOCIAL STUDIES 8 (full year)

Grade 8 Social Studies focuses on civics and early American history. The course introduces students to key ideas contained within the Declaration of Independence and the Constitution, their history, and their impact today. By focusing on the time period before, during, and after the American Revolution, students gain knowledge about how our government developed and its contemporary legacy.

The course provides opportunities for students to practice skills needed as citizens, such as how to express their ideas and respectfully participate in conversations with those of differing opinions. Special attention is paid to exposing students to a wide variety of sources, especially traditionally underrepresented voices, as they learn about American history. Other important civics concepts include how to get involved with one's community or government and the rights and responsibilities of citizenship.

Developing students' critical thinking and media literacy skills are major components of the course. The course challenges students to use evidence to develop persuasive arguments orally and in writing. Conducting inquiries through a variety of short and long-term research assignments helps students solidify skills taught in prior years and prepare for subsequent courses.

WELLNESS

The Middle School wellness program is designed to influence healthy behaviors and provide students with the knowledge and skills necessary to make lifestyle decisions that will promote optimal health and well being throughout their entire lives. The program comprises Health Education, Physical Education, and Experiential Education. The curriculum in each of these disciplines emphasizes students' responsibility for their own health and well being and fosters the development of skills and knowledge that will help them to nurture and care for themselves in the social, emotional, physical, and intellectual areas of their lives.

Notice to Parents about sex and sexuality education in grades 6, 7, and 8:

A unit focusing on sex and sexuality education is included in the **grade 6** and in the **grade 8** health education programs as part of our comprehensive sexuality education program. Detailed information about the content of these courses can be viewed on the Needham Public Schools website:

http://www.needham.k12.ma.us/departments/curriculum_and_academics/wellness/sexuality

In 7th grade, there will be **no formal sex education presented**. Issues of sexuality related themes will be included, however within other health units. There is mention of how the use of alcohol can influence your decisions around sexual behavior, and how peers can pressure you to do things you really don't want to do. The issue of sexual harassment will be discussed during a presentation by Needham Youth Services. HIV/AIDS is discussed briefly within the context of a unit on diseases.

Parent Engagement: We believe that parents/guardians are their children's primary educators and that each family has its own values and beliefs about sex and sexuality. The units with sexuality related topics/themes are designed to include homework assignments that promote discussion between students and a parent/guardian or other trusted adult about topics that are being covered in class.

Parent Notification: Parents/guardians will receive a letter in the fall from the Superintendent's Office that will inform them that topics related to sex and sexuality will be included in their sons/daughters 6th grade and 8th grade health classes. Prior to the start of these curriculum units, an additional communication will be sent home by the school. Detailed information about our curriculum can be viewed online at http://www.needham.k12.ma.us/departments/curriculum_and_academics/wellness/sexuality

Under Massachusetts law, parents/guardians have the right to decide whether their child will participate in any single lesson or unit that includes information about human sexuality. If you want your child to be exempted from any lesson(s) that contain information about human sexuality, a note or letter to the building principal requesting that your child not participate in the sexuality portion of the health education curriculum is all that is needed. An appropriate alternative activity will be provided for students whose parent(s)/guardian(s) chooses to have them not participate.

WELLNESS GRADE 6 (trimester offering)

In Grade 6, health education and physical education are combined to make up our wellness program. Students are assigned to a wellness class and spend part of that time in physical activity and part of that time in the classroom devoted to the study of health education. Both disciplines contribute to each student's ongoing development of the skills, knowledge, and attitudes needed to participate in an active healthy lifestyle.

The ***physical education*** portion of the wellness course provides a natural opportunity for students from five different elementary schools to develop physical skills, get to know one another, make friends, and develop lasting relationships. Physical education provides students with an opportunity to interact with one another through their physical involvement in games, sports, dance, and other movement activities. A special emphasis is placed on improving physical fitness and creating positive social experiences. In sixth grade physical education classes, teachers modify traditional games to increase students' opportunities to apply skills learned in elementary school, practice new skills, and develop a better understanding of movement concepts and game strategies. **In addition, students learn the fitness benefits of daily physical activity and begin to understand how goal setting can help to improve personal fitness.** Specific units for students in the sixth grade physical education classes include activities such as basic sports skill practice, basketball, creative games, fitness, invasion games, self-exploration, team handball, and volleyball. Students are expected to change into appropriate clothing for physical activity. This includes loose fitting shorts or sweatpants, T-shirts or sweatshirts, socks and sneakers.

The ***health education*** portion of the wellness course begins with an introduction to our wellness model and includes activities that help students make new friends and understand the qualities of healthy friendships. Conversely, students are taught how to identify characteristics of harmful friendships and resolve conflicts in their relationships. Students also study diet, food marketing, and nutrition fads as they relate to issues of healthy and unhealthy eating behaviors. They learn practical skills, such as how to choose healthy snacks and how to read food labels. They compare food products to learn how to make the best choice out of three different brands of the same food (e.g., name brand, store brand, organic brand).

A unit called Healthy Relationships is taught within health education and contains issues of sex and sexuality. This unit defines sex, sexuality and intimacy and teaches communication and decision-making skills to help support the healthy relationships and the new social expectations these students will encounter in middle school and beyond. Students will be given a homework assignment that promotes communication with a parent/guardian or other trusted adult about the topics and experiences covered in this unit. The specifics

of this unit can be viewed on the Needham Public Schools website:

http://www.needham.k12.ma.us/departments/curriculum_and_academics/wellness/sexuality

PHYSICAL EDUCATION 7 (trimester offering)

The seventh grade physical education program recognizes the uniqueness of the middle school child and is designed to support students' healthy social development by emphasizing the qualities of cooperation, competition, and good sportsmanship. Through their active participation in games, sports, adventure activities, fitness, and dance, students develop physical skills and improve their individual fitness levels. Specific units for students in the seventh grade include basketball, circuit training, creative games, invasion games, paddle tennis, survivor challenge, team handball, volleyball, and weight training.

HEALTH EDUCATION 7 (trimester offering)

In seventh grade health classes, students are expected to be more reflective by exploring how their behaviors, and the behaviors of others, influence health and well-being. Students revisit the wellness hexagon, identify areas where their habits contribute positively to their overall well-being and target a few behavior changes for improvement (physically, socially, emotionally, spiritually, and intellectually). They explore the website *MyPlate.gov* to learn about the five major food groups and how to incorporate them into their meal planning. They learn to read food labels and carefully analyze some of their favorite foods. Students study the causes, signs and symptoms of communicable diseases and non-communicable diseases with a focus on strategies for keeping the immune system healthy. They examine the spread of communicable diseases including direct contact (sexual contact, close touching, etc.), indirect contact (airborne, foodborne, waterborne, animal/vector – e.g. rabies transmitted by an animal bite or malaria transmitted by a mosquito bite) and explore prevention strategies.

Students learn ways to prevent and manage non-communicable diseases with emphasis on prevention. For example, they learn how to check their skin for melanoma and are given a homework assignment that requires them to teach a parent/guardian to do this life-saving skin check. Students study the physical, social, emotional and spiritual consequences of substance use (tobacco, electronic cigarettes (vaping), hookah, marijuana, and alcohol). They learn about the effects of smoking on the different systems of the body and the connection between tobacco and cancer. Students learn about the consequences of addiction and the dangers of other forms of smoking (electronic cigarettes, hookahs, marijuana). Students learn about the short and long-term effects of marijuana and discuss social and emotional consequences. They use a decision-making model and refusal skills to practice getting out of a situation in which they are being pressured to use marijuana.

Students learn about the dangers of using alcohol at an early age, calculate blood alcohol levels for different types of alcoholic drinks (beer, wine, hard liquor) and study the short and long-term effects of using alcohol (including the effects on the teenage brain). Students research current events to find a real-life consequence of binge drinking or heavy drinking. They share their article with the class and are asked to take the article home to discuss with a parent/guardian. Students also study mental health illnesses such as anxiety, depression and suicide prevention. They are taught how to recognize warning signs of a mental illness, ask for help, or respond as a bystander (S.O.S. training – Acknowledge, Care, Tell (ACT)). A unit called “risky behaviors”

has been established to deal with current student issues, which fall into the categories of peer pressure, friendship/gossip, and social media safety. Although the skills taught in this unit remain consistent, the specific examples used within these units are fluid and designed to respond directly to current health and social issues within the Pollard community.

PHYSICAL EDUCATION 8 (trimester offering)

The eighth grade physical education program recognizes the unique role that eighth grade students play as leaders in the middle school community. Through the use of games, sports, adventure activities, fitness, and dance, students are encouraged to be active, improve their fitness levels, and model good sportsmanship. Health fitness assessments are conducted to help students assess their own cardiovascular health, abdominal strength and endurance, upper body strength and flexibility. Students are given the results of their individual tests and are encouraged to develop exercise practices that will help them to improve their scores. Specific units for students in the eighth grade include basketball, circuit training, creative games, invasion games, paddle tennis, survivor challenge, team handball, volleyball and weight training.

HEALTH EDUCATION 8 (trimester offering)

In eighth grade health classes students examine the causes and potential influence of body image, and eating disorders. Students explore gender stereotypes to see how culture can influence our feelings about our bodies and the bodies of others. They are encouraged to identify the positive qualities and characteristics of themselves in an effort to improve self-esteem.

Students also explore mental health to better understand anxiety and depression. Students learn that it is just as important to seek help for a mental health concern as it is for a physical health concern. Students will continue to study the effects of alcohol and marijuana as well as other drugs (e.g. cocaine, heroin, prescription drugs) as a progression to the substance abuse prevention units.

They study the vocabulary of important drug terms (illicit drug, prescription drug, over the counter drug, synthetic drug, ingestion, inhalation, absorption, etc.). Students gain an understanding of how drugs affect the teenage brain and how repeat use can cause addiction. They explore marijuana, cocaine, heroin, (what does it look like, what type of drug is it, how is it used, how does it affect the body, and practice ways to say no to drugs (refusal skills). Members of the Students Advocating Life without Substance Abuse (SALSA) group at the high school speak to the advantages of living substance free and reiterate and practice the use of refusal skills. Lesbian, Gay, Bisexual, Transgender, and Questioning (LGBTQ) Identities as well as other terms relevant to sexuality are reviewed at the start of the sexuality education unit.

Students learn the structure and function of the male and female reproductive systems and examine the advantages (physically, socially, emotionally) of delaying sexual activity. Students examine the characteristics of healthy and unhealthy relationships. They learn about the pressures involved in being in a relationship and focus on skills to deal with the pressures that some may feel to make choices in order to please another person (this will include the pressure to participate in sexual behaviors). Students will discuss personal boundaries, practice assertive communication skills, and practice strategies for making good decisions that reflect their values

and goals. They will also learn skills for resolving conflict in their relationships. Needham Youth Services will present a workshop about sex in the media called “Picture Perfect”.

EXPERIENTIAL EDUCATION 7 (trimester offering)

This course uses the Needham Public Schools social and emotional learning standards as guidelines for student outcomes. In this course, the teacher purposefully engages students in a variety of indoor and outdoor challenge activities to facilitate a process of participation, reflection, and growth. Participation in these activities provides an opportunity for students to practice skills for decision-making, communication, cooperation, conflict resolution, problem solving and developing a healthy relationship with self and others. Students will be given problems to solve that will require them to practice these skills and then participate in a process of reflection and discussions to encourage them to think about ways to apply these skills to their daily lives now, and in the future. At the core of this program, is the student’s need for a safe, risk-taking environment, which fosters appreciation of others and promotes individual contribution, commitment, and follow-through. Specific activities stress creating community, developing healthy interpersonal relationships, group problem solving, and building trust and empathy.

EXPERIENTIAL EDUCATION 8 (trimester offering)

This course uses the Needham Public Schools social and emotional learning standards as guidelines for student outcomes. The eighth grade experiential education course was developed, specifically, to address the high levels of stress students have reported in the MetroWest Adolescent Health Survey (MWAHS). Survey data suggests that stress has become a significant health factor in the lives of adolescents in Needham and beyond. According to the 2016 MWAHS, 38% of Needham High School students report life being “very stressful in the past 30 days.” Data shows that students report that stress steadily increases as they progress through high school (19.8% in the 9th grade - rising to 61.9% in 12th grade). Pollard Middle School students are also reporting that school issues, social issues, appearance issues, and family issues represent four areas of significant stress in their daily lives. Given that students will encounter life situations that are stressful, and that these encounters will become more frequent as they grow older, this course will teach eighth grade students a variety of different skills and strategies that they can use to help them cope with stress. This course will also teach strategies to recognize the difference between healthy stress and unhealthy stress and help students discover ways to monitor their own capacity for stress.

WORLD LANGUAGES

SPANISH 7A (full year)

Spanish 7a is an introductory, novice level course designed for students who have not previously studied Spanish. Like Mandarin 7 and French 7, Spanish 7a begins a two-year language commitment. Students who enroll in Spanish 7a continue to Spanish 8a. Thematic units of study include: greetings & cultural courtesies, likes & dislikes (sports, arts, extracurricular activities), weather, the calendar, family and pets, the house, food and ordering at a restaurant, and places around town. This course also introduces students to elements of Spanish culture (products, practices and perspectives).

SPANISH 7 (full year)

Spanish 7 is a continuation of Spanish 6 and is conducted primarily in Spanish. In Spanish 7, students' capacity to understand and be understood continues to grow, as does their knowledge of Spanish-speaking countries. Throughout the school year teachers intentionally review previously learned content to reinforce knowledge and skills acquired in Spanish 6. Thematic units of study include: describing oneself, family and pets, friends, and one's home.

SPANISH 8 (full year)

Spanish 8 is a continuation of Spanish 7 and is conducted primarily in Spanish. In Spanish 8, students broaden their use of previously learned vocabulary and continue to develop their communicative capacity in the novice range. In this course, students transition from the production of short phrases (**speaking and writing**) to the creation of complete sentences and short paragraphs. Students' comprehension of conversations and short passages in the target language expands as does their capacity to ask and answer basic questions. Throughout the year, there is intentional spiraling of previously studied vocabulary and expressions to reinforce essential knowledge and skills. Thematic units of study include: community, clothes and shopping, food, and ordering at a restaurant.

Students who choose to continue with their Spanish studies at Needham High School will move on to "Spanish 2" in 9th grade and then "Spanish 3" in 10th grade.

FRENCH 7 (full year)

French 7 is designed for students who wish to learn French and who have not previously studied French. Like Mandarin 7 and Spanish 7, French 7 begins a two-year language commitment. Students who enroll in French 7 continue to French 8. French 7 offers an introduction to French language and culture at the novice level. Thematic units of study include: greetings & cultural courtesies, likes & dislikes (sports, arts, extracurricular activities), weather, the calendar, family and pets, the house, food and ordering at a restaurant, and places around town. This course also introduces students to elements of French culture (products, practices and perspectives).

FRENCH 8 (full year)

This course is a continuation of French 7. It is conducted primarily in French. In French 8, students broaden their use of previously learned vocabulary and continue to develop their communicative capacity in the novice range. In this course, students' capacity to ask and answer basic questions expands as does their comprehension of conversations and short passages in the target language. Students transition from the spoken and written production of short phrases in the target language to the creation of complete sentences and short paragraphs. Throughout the year, there is intentional spiraling of previously studied vocabulary and expressions to reinforce essential knowledge and skills. Thematic units of study include: community, shopping (for food and clothing), film study (les Choristes), study of literature (Fama va en Californie), descriptive language (people, places, things), and leisure activities.

Students who choose to continue with their French studies at Needham High School will move on to "French 2" in 9th grade and "French 3" in 10th grade.

MANDARIN 7 (full year)

Mandarin 7 is designed for students who wish to learn Mandarin and who have not previously studied Mandarin. Like French 7 and Spanish 7, Mandarin 7 begins a two year language commitment. Students who enroll in Mandarin 7 continue to Mandarin 8.

Mandarin 7 offers an introduction to the pronunciation and intonation of Mandarin as well as the development of novice level speaking, listening, reading and writing skills. Thematic units of study include: Greetings, numbers, the calendar, age, polite expressions, and classroom objects. This course also introduces students to elements of Chinese culture (products, practices and perspectives).

MANDARIN 8 (full year)

Mandarin 8 is a continuation of Mandarin 7. In Mandarin 8, students broaden their use of previously learned vocabulary and continue to develop their communicative capacity in the novice range. Thematic units of study include: Family, animals, sports and leisure activities, physical descriptions, and food. This course also introduces students to elements of Chinese culture (products, practices and perspectives). Students who choose to continue with their Mandarin studies at Needham High School will move on to "Mandarin 2" in 9th grade and "Mandarin 3" in 10th grade.

INTRODUCTION TO CHINESE LANGUAGE & CULTURE 8 (trimester offering)

This trimester course is part of the Performing Arts rotation in grade 8. It is an option provided to students who do not select band, strings, or chorus. This course is designed to enable students to gain some exposure to the extensive and profound Chinese civilization. It will introduce students to various Chinese cultural forms, including fine arts, language, festivals, and cuisine, as well as give students a glimpse of both ancient and modern Chinese life. The course will include hands-on projects, arts and crafts, a taste of Chinese food, and simple conversations in Mandarin.



2021-2022

Program of Studies



A Caring Community Striving for Personal Growth and Academic Excellence

Needham High School • Needham, Massachusetts

NOTICE OF NON-DISCRIMINATION

Every person shall have a right to attend the public schools of the town where s/he actually resides. No person shall be excluded from or discriminated against in admission to the Needham Public Schools or in obtaining the advantages, privileges and courses of study of the Needham Public School on account of race, color, sex, gender identity, religion, national origin, sexual orientation, disability, homelessness, or limited English-speaking ability.

The following person has been designated to handle inquiries regarding the school district's non-discrimination policy:

Name and Title:	Tom Denton, Director of Guidance
Address:	609 Webster Street, Needham, MA 02492
Telephone No:	781-455-0800 x 22130
TTY:	781-455-0434
FAX:	781-449-5111

SCHOOL COMMITTEE

Andrea Longo Carter, *Chair*
Connie Barr, Vice Chair
Heidi Black
Susan B. Neckes
Michael Greis
Aaron Pressman
Matthew Spengler

ADMINISTRATIVE STAFF

Dr. Daniel Gutekanst, Superintendent
Dr. Alexandra McNeil, Assistant Superintendent for Human Resources
Ms. Mary Lammi, Assistant Superintendent Student Support Services
Dr. Terry Duggan, Assistant Superintendent for Student Learning
Ms. Anne Gulati, Assistant Superintendent for Finance and Operations

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INTRODUCTION

I am pleased to present to you the Needham High School Program of Studies for the 2021-2022 academic year. You will see that it is a clear reflection of our Core Value that Needham High School is a Caring Community Striving for Personal Growth and Academic Excellence. The Program of Studies provides essential information including course offerings, descriptions, and diploma requirements for all Needham High students. The booklet is designed to guide the course selection process and should be consulted whenever academic information is needed. The program is reviewed each year in late fall. The high school administration forwards recommendations for changes to the Needham School Committee, which has the final approval for the Program of Studies.

Questions regarding the Program of Studies should be directed to the program director/department chair or to your child's school counselor. Students and parents need to select courses carefully. The staffing at Needham High School is based on the courses students select in February/March of the preceding year. It is important to note that due to increased enrollment for the 2021-2022 academic year, it is highly unlikely that course change requests will be honored once the school year has begun. Therefore, parents and students should seek the advice of teachers, department directors/chairs and counselors in preparing an academic program for next year. Students and parents new to Needham will meet with a counselor before selecting courses. Final responsibility for course selection decisions rests with students and their parents. Students should elect the equivalent of seven full periods of instruction each semester including monitored study time. As in the past, final course offerings will be based on enrollment, budgetary considerations, and the impact on the required curriculum. Thank you for your attention to this very important process. I wish you all the best for a successful 2021- 2022 school year.

Aaron Sicotte
Principal

NEEDHAM HIGH SCHOOL

Core Values, Beliefs, and Learning Expectations

Core Values Statement:

A Caring Community Striving for Personal Growth and Academic Excellence

Needham High School draws from the strengths of the community to create partnerships between faculty, parents, and students, both on an individual level and in groups, in order to provide a high quality education. Teaching and learning are central to our mission, as is integrity.

The school offers students a variety of opportunities to excel and diversity of perspectives from which to learn in an environment that is both nurturing and challenging.

The balanced student is able to participate actively in school and society, be creative, and self-advocate while determining their unique path to fulfillment.

At Needham High School, we believe meaningful critical inquiry empowers all students to collaboratively navigate challenging ideas and topics, embrace a variety of experiences, identities and viewpoints, and connect authentically with the world they inhabit and for which they share responsibility. We are dedicated to establishing and maintaining communities throughout the school that are safe, inclusive and supportive academic and interpersonal spaces, where students can explore nuanced curricula, safely pilot their ideas and perceive disagreement as an opportunity to learn.

Teaching & Learning Frameworks:

In conjunction with our school-wide learning expectations (e.g., Communication; Research; Analysis; Personal Responsibility; Civic Responsibility) and our Portrait of a Needham Graduate Core Competencies (e.g., “Preparing all Needham Public School Students to be...Creative Thinkers and Problem Solvers; Communicators and Collaborators; Knowledgeable; Responsible and Resilient; Socially and Culturally Competent”), student achievement and growth will be measured in the following domains:

Skill Enrichment -We embrace a growth mindset in our work to empower all Needham High School students to write effectively; research effectively; read critically for comprehension; solve complex problems; think critically; demonstrate non-written communication skills; demonstrate effective organizational skills; and monitor and direct their learning using various feedback sources. We believe that academic skills and social-emotional wellness are the foundation for students’ social and civic inquiry and outreach.

Positive & Proactive Digital Citizenship – We believe in a thorough source analysis, through which students consider the reliability, bias, and transparency of materials that supplement their exploration of core course texts, resources, and artifacts. Teaching students to be discerning consumers of online information is an essential skill, and our instruction empowers the discovery of trustworthy content, responsible online sharing practices, and negotiation of online communication.

Equitable Inquiry – We believe in engaging students in challenging critical inquiry as a means to achieve more equitable classroom, local, and national communities. This is most effectively accomplished through rigorous discourse exploring the role of history, power and privilege through lenses (i.e., race, ethnicity, faith, class, power, culture, gender, gender identity, sexual orientation, ability) that inform students’ understanding of core content as well as their own evolving views, values, and identity.

Civic Expectations & Student Voice – Through student-centered, collaborative and personally relevant inquiry, students will develop individual and collective voice, heightened self-confidence, agency and purpose. We aspire to increase students’ capacity to participate in dialogue across differences and - through authentic engagement and reflection - consider the perspectives of those whose experience and position in the world differ from their own. As students increasingly understand and define their own civic disposition, they will also expand their awareness of others’ fundamental needs and rights. Lastly, students will be encouraged and empowered to take thoughtful action, make informed choices and work together on projects that promote a public good beyond the classroom, forging reciprocal connection with the large communities of which they are a part.

Diploma Requirements

A. To be eligible for a diploma from Needham High School, a person must complete these standards prescribed by the Needham School Committee:

1. Successfully complete courses in this Program of Studies described as follows:
 - a. Four full years of English
 - b. Three full years of Mathematics
 - c. Three full years of History and Social Sciences including one year of United States History
 - d. Three full years of Science
 - e. Two full years of the same World Language
 - f. Two full years of Fine & Performing Arts; a maximum of one semester of Media/Technology may be substituted
 - g. One semester of Health/Physical Education for each year enrolled at Needham High School
 - h. Two credits in Community Service Learning
2. Successfully complete the equivalent of an additional five full year courses or its equivalent as described in the Program of Studies.
3. Earn a minimum total of ninety-two credits in the course of study outlined above or in credits earned with the prior written approval of the Principal.
4. Complete all state-mandated requirements.

B. The Principal may suitably recognize students who have completed all Needham High School requirements but not the state mandated diploma requirements.

C. Students may complete these requirements in less than four years upon prior written application and the approval of the High School Principal.

D. The Principal may make changes in requirements when, in his/her opinion, the best interest of the student will be served.

All 9th grade students must take a minimum of 24 credits and a maximum of 26 (the 26 credit max may only be exceeded if a student requests Skills Center, PLC, or an after school class); Grade 10 and 11 students must take at least 24 credits with a maximum of 28; and seniors must have a minimum of 22 credits and a maximum of 28 (** For grades 10, 11, and 12, the 28 credit maximum may be exceeded if a student selects an after school course in addition to the full schedule).**

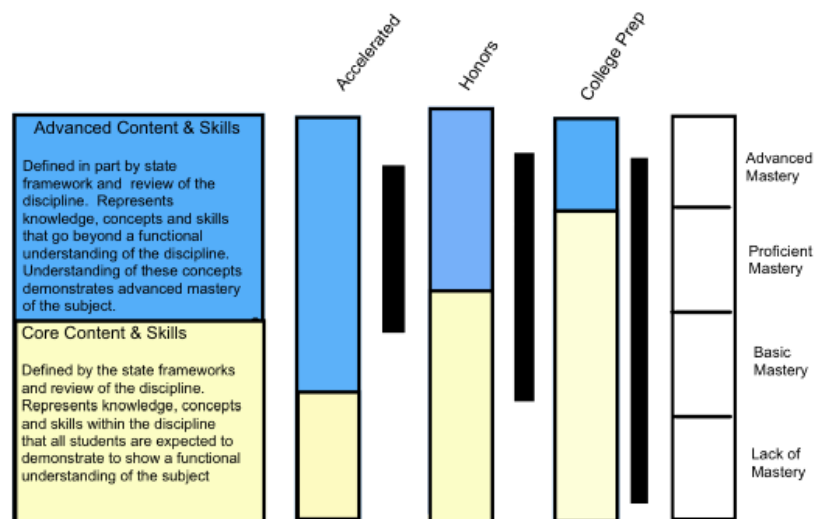
Course Level Descriptions

Needham High School offers courses at the College Prep, Honors, and Accelerated levels. Prior to course selection each year, teachers will recommend students for courses at these levels based upon the descriptions provided below. All courses are rigorous, address the Massachusetts State Frameworks, and are designed to appropriately challenge all students. Students and families are encouraged to consider balancing their academic interests, co-curricular activities, and other commitments when reviewing teacher course recommendations for the upcoming year.

College Prep - *Students who are recommended for courses at this level will build on a strong foundation of content and skills. Courses are rigorous, and require consistent effort and work for students to achieve at the highest level. Class time will be spent on mastery of core content and skills with some exposure to advanced content and skills. Students are expected to synthesize and analyze content with active teacher-directed support. Outside coursework is designed to reinforce the content and skills learned in class. Students will develop the organization needed to balance both short-term and long-term assignments throughout these courses.*

Honors - *Students who are recommended for courses at this level have strong academic skills. These courses are fast paced, rigorous, and require consistent effort and work for students to achieve at the highest level. In addition to developing core content and skills, class time will be spent working on advanced content and skills. Students are expected to synthesize and analyze content with teacher-directed support. Outside coursework is designed to advance the curriculum and provide skill development. Students should possess the strong organizational skills needed to balance both short-term and long-term assignments throughout the course.*

Accelerated - *Students who are recommended for courses at this level will build upon a strong foundation of content and skills. These classes will spend a significant amount of time working with advanced concepts and skills at an accelerated pace. Students are expected to synthesize and analyze content independently with limited teacher-directed support. Outside coursework is designed to advance the curriculum and provide skill development. Students will need to balance both short-term and long-term assignments throughout the course.*



The black bars represent areas where teacher-directed support is provided. For example, in the Accelerated level, students are expected to develop understanding of the core content largely independently, with little active teacher-directed support and monitoring. In the Honors level, active teacher-directed support and monitoring is provided for all but the basic components of the core content (many of which will have been learned previously by the student). In the College Prep level, active teacher-directed support and monitoring will be provided for all aspects of the core and advanced curriculum.

Course Change Procedures and Add/Drop Policy

Philosophy behind the Add/Drop policy

At Needham High School we encourage all students to make thoughtful decisions in selecting courses, to challenge themselves appropriately, to persevere and develop resilience when presented with growth opportunities, and to balance their academic responsibilities with their extra-curricular activities and life outside of school.

The partnership between students, families and teachers begins with the course selection process. Students and families are expected to very carefully choose courses for the following year. The high school follows a specific procedure at course selection time that requires input from teachers and students and encourages input from families. Students and families with questions at that time should consult teachers, counselors and other staff to assist in making appropriate choices regarding courses. Student course selection is the first step in crafting the high school master schedule, a process that takes months, and creating course sections based on student enrollment.

Course Change Procedure

There can be times when, despite everyone's best efforts, a particular course placement may not meet the student's needs. In those cases a student's options are:

- drop the course;
- drop the course and replace it with a different course;
- or change the level (College Prep, honors or accelerated) of the course.

These course changes can be characterized as either 'add/drop' or 'level change'. In both cases there is a specific process and timeline to be followed. Students should see their school counselor to initiate a course change request. All course changes require the approval of the appropriate Department Chair/Director, who must balance the needs of an individual student with the needs of all students impacted by the proposed change.

Drop/Add

A student may request to drop a course at any time during the school year. If a student drops a course after one complete quarter, the course will be represented on the permanent high school transcript with a grade of 'W'. There is no guarantee that if a student drops a course there will be room for the student in another course. Most often the only option for a student's schedule is a study hall. A student should be cautious when dropping a course that they are still carrying the required minimum number of credits for the school year and that they are still on track to fulfill all the graduation requirements.

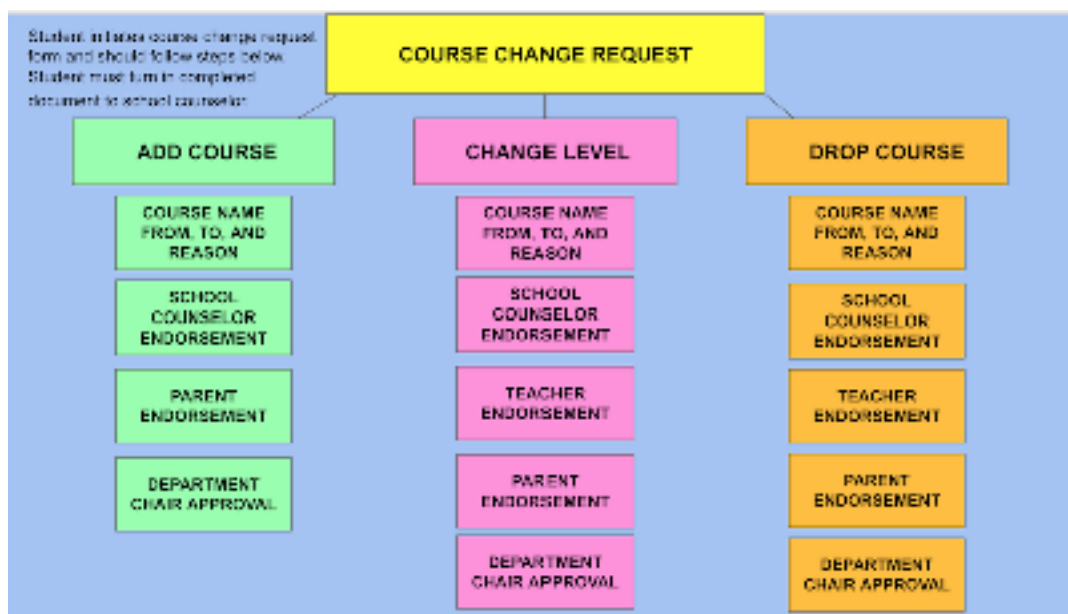
A student who wishes to add a course must make that request by the end of the first two instructional cycles of the class. No student will be allowed to enter a new course after that time unless there are extenuating circumstances.

Level changes

A student may request to change the level of a course up until the end of Term 1. Level changes after that time will be considered only under extenuating circumstances.

Transfer of grade: If a level change takes place before the final two weeks of Term 1, the teachers of the two courses will consult with each other in conjunction with the department chair regarding the student's term grade. If a student requests a level change within the final two weeks of the end of Term 1, the student's grade for Term 1 will stand and the student will begin the new class on the first day of term 2.

Course Change Flow Chart



Summer School

All summer school work must be approved IN ADVANCE by the principal or director/chairperson of the department. A form for this purpose is available in all department offices.

Credit received in summer school does not automatically entitle the student to elect the next higher course in a sequence. No more than three courses repeated in summer school and/or by tutoring will be allowed for credit toward a diploma. Only one course in a sequential subject may be made up in summer school or by tutoring. Additional credits will not be granted for a repeated course. The director must approve remedial courses prior to registration.

In any case, the original grade recorded by a Needham High School teacher is not to be changed as a result of summer study. The grade received from summer school will be recorded on the permanent record card in addition to the original grade.

Remedial and Make-up Courses

1. The student who does not complete a course satisfactorily and receives an F grade (of at least a 50) may:
 - A. Receive credit for the subject by repeating the course successfully in an accredited summer school.
 - B. Repeat the subject as an additional course and attain a satisfactory grade.
 - C. A student who fails English must make up the course in an approved summer school or repeat the course the following year. Two years of English cannot be taken simultaneously in grades 9 and 10.
2. The student who does not attain a necessary prerequisite grade for continuation in a sequential course may:
 - A. Repeat the course in an accredited summer school.
 - B. If no accredited summer school is available, have tutoring approved by the appropriate director/chairperson. Tutoring must be taken at the rate of one hour a day for a minimum of thirty days. The student must then pass a qualifying examination if appropriate.
 - C. Repeat the course and obtain a qualifying grade.

Enrichment Programs

Needham High School encourages students to participate in enrichment programs. There are programs offered in the Needham Summer School, through the TEC collaborative, and in various public and private schools. Participation in such programs may be recorded on your official transcript, may be awarded credit, and may fulfill core requirements. Students must receive prior approval from the Principal for enrichment courses to be recorded on the transcript and to receive credit.

Course Offerings

The Program of Studies booklet is divided by departments. Course descriptions are written by Department Heads/Chairpersons and are approved by the Needham School Committee.

Course Numbers

The first digit defines department.

The second and third digits are for scheduling purposes.

The fourth digit of the course number indicates the level of difficulty.

1=AP or Acc; 2=Honors; 3=College Preparatory

0, 5, 6, 7, 8, 9 are unlevleed or independent study.

Length/Credits

F/4 = A full year course meeting every scheduled block earning four credits

F/2 = A full year course meeting only half the scheduled blocks earning two credits

S/2 = A one semester course meeting every scheduled block earning two credits

/4 or /2 = Course not regularly scheduled earning four or two credits

★ Star indicates new course offering for 2021-2022.

INTERDISCIPLINARY COURSES

Needham High School offers several interdisciplinary courses and opportunities for the 2021-2022 school year. These experiences are developed and/or taught collaboratively and integrate knowledge and skills from two or more disciplines. The intent of each course/offering is to help students develop 21st Century skills, such as: problem solving, collaboration, communication, and self-direction. (course descriptions are listed below or within their departments)

Num	Length	Credit	Course	Num	Length	Credit	Course
4462	F	4	African American Studies	2490, 2496	F/S	4/2	Junior/Senior STEM Capstone
8412	F	4	AP Capstone Research	1260	S	2	Peer Tutoring
8411	F	4	AP Capstone Seminar	2615	S	2	Personal Finance
2481	F	4	AP Computer Science	7258	S	2	Product Design and Development
2488	F	4	AP Computer Science Principles	2489	S	2	Robotics
9800	F	4	Be the Change	8595	S	2	Storytelling with Numbers
2467	S	2	Computer Aided Design and Manufacturing	9899	S	2	TEC Internship
2476	S	2	Computer Programming Fundamentals	8455	S	2	Technology Leaders
8498	S	2	Digital Game History & Design	8486	S	2	Television Production
7156	S	2	Digital Portfolio	9898	S	2	Work Study
2466	S	2	Engineering Design 101	9897, 9887	F	2	Courageous Conversations on Race 1 and 2
3531, 3532, 3533	F	4	Environmental Science Acc, Hon, CP	9th Grade Interdisciplinary Program			
4214	S	2	History, Politics, and Popular Music	3022	F	4	Biology 9IP
0491	F	8	Integrated Senior Studies Acc: The Greater Boston Project	0112	F	4	English 9IP
9896	S	2	Internship in Special Education	2042	F	4	Mathematics 9IP
2482	S	2	Introduction to Computer Science	4112	F	4	World History 9IP

Be the Change (2 credits), Full Year (9800): This course will focus on preparing students to be future leaders, open to students in grades 10, 11, & 12. Students will learn skills to lead, organize, and manage groups such as grade 9 orientation, clubs, athletic teams, and/ or service groups. Students will focus on gaining multiple skills that can be translated into classrooms, future studies, and the workplace and will complete the class with the skills and knowledge-base to motivate and organize their peers. Course topics will include: substance abuse prevention; resiliency skills; negotiations and peer mediation skills; leadership skills to address teen issues; and how to create and facilitate discussion groups. Students will create a capstone proposal and presentation, exemplifying their new skills and strategies, that they will present to their peers, while changing their school and/or community. Guest speakers from the Needham community will also be involved in the course over the year. Be the Change is a course offered before school hours for 1-hour per week with an online component. (Prerequisite: Recommendation by an Assistant Principal)

Courageous Conversations on Race (9897): This full year course open to juniors and seniors through a recommendation process will focus on learning about how race functions as a social construct and how racism operates on a systemic level both in society and here at Needham High. The course will include an exploration of both personal identity, and strategies for increasing knowledge and closeness between ethnic and racial groups. Students will learn about this history of racial inequity through lessons of history, literature, and politics; reflect on their identity and on their own experiences in the equity arena in the current cultural and school climate; practice courageous conversations; and explore personal experiences of racism and inequity. Through experiential activities and a study of selected readings, videos, and other media, students will learn why it is important

to talk about race and how to do it. Course topics will include bias, privilege, discrimination, racism, and the cycle of oppression. As the culminating project for the course, students will use their knowledge to design Courageous Conversations on Race lesson plans that they will execute with grade 9 students. Students will be able to apply the knowledge and skills learned in this course to other areas of social inequity. This course will meet on Friday mornings before school for a full year.

Courageous Conversations on Race 2.0 (9887): This full year course expands and refines skills developed in CCOR 1. Students will focus on leadership development and facilitation skills necessary to participate in continued self-reflection, class interfacing, taking leadership roles in CCOR class and teaching of our 9th graders. Students enrolled in this course will help guide our Join the Conversation events, facilitate HS and middle school workshops, and partner with various clubs under the umbrella of SAFE in equity work. As well, students will have the opportunity to participate in youth leadership and equity-related events beyond NHS, such as Sparkshare and NDI summits. Students will also be supported in developing specialized areas of study that can be integrated into CCOR and 9th grade curriculum, such as National/Statewide Equity and BLM Movements; Voter Registration and accessibility; Inequity in the Pandemic; Economic Oppression; and Educational Systemic Oppression – school to prison pipeline.

Internship in Special Education (9896) This 2 credit volunteer program is available for students in grades 10 to 12. After training with special education staff including a special educator, speech and language pathologist, and a Board Certified Behavior Analyst. students would take part in programming focusing on peer modelling, tutoring, socialization, and friendship development. Additionally, students will develop an understanding of different disabilities, life skills curriculum, and functional academics. Students would be expected to participate in activities in school and in the community during class time.

Peer Tutoring (1 credit), Semester (1260): This volunteer program is available for juniors and seniors who are interested in using their academic talents to support their peers in academic support classes. After training, peer tutors will be able to provide numerous supports to students including: assistance with reading, support with note taking and test prep, guidance with editing and revising papers, support with organization. Participating students will attend the support class a minimum of three of the five class meeting days each rotation.

TEC Internship (9899): Internships are structured, supervised learning experiences allowing students the opportunity to explore a career. Needham is a member of The Educational Cooperative (TEC). The TEC internship program offers students the opportunity, for a fee, to be placed with an organization or business in a career area of interest. Students and families will be responsible, at least in part, for the internship fee. Interested seniors must have a minimum of 74 credits at the end of junior year. More information is available at www.tec-coop.org.

Work Study - full year, 4 credits (2 Math credits) (9898) The Work Study class is designed to provide the skills needed to be successful in a work environment, as well as, provide the opportunity to earn credit for valuable work experience under school supervision. The class will meet outside of the regular school day to provide more flexibility for the students. The in-class time will focus on the skills, interactions, and knowledge needed to be successful in any job setting. Students will also acquire and apply practical math skills in order to gain a deeper understanding of how a business manages its operation, as well as, understand how to manage their own finances. Students will be required to have a job prior to enrolling and will be expected to work a minimum of 15 hours per week during the year. The class instructors will complete periodic visits to each job site and maintain contact with employers throughout the year to assess how the in-class lessons are translating to the work environment. Participation in the class is limited and must be approved by the student's parent, counselor and assistant principal. The class will be graded on a Pass/Fail scale, based on fulfillment of the classroom requirements and satisfactory performance on the job.

ENGLISH

Num	Length	Credit	Course
0101	F	4	English 9 Acc
0102	F	4	English 9 Hon
0112	F	4	English 9IP
0103	F	4	English 9 CP
0201	F	4	English 10 Acc
0202	F	4	English 10 Hon
0203	F	4	English 10 CP
0311	F	4	AP Language & Composition
0631	F	4	Braver Newer World Acc

Num	Length	Credit	Course
0632	F	4	Braver Newer World Hon
0301	F	4	English 11 Acc
0302	F	4	English 11 Hon
0303	F	4	English 11 CP
0421	F	4	AP Literature & Composition
0431	F	4	English 12 Acc
0432	F	4	English 12 Hon
0433	F	4	English 12 CP
0491	F	8	Greater Boston Project Acc

The following elective courses are available to all students in addition to the required full year course:

0510	S	2	Public Speaking
0520	S	2	Experimental Writing
0530	S	2	Film Studies
0547	F	4	Journalism 1 - <i>The Hilltopper</i>
0548	S	2	Journalism 1 - <i>The Hilltopper</i> 2 credit

The goal of the English curriculum is to strengthen critical communication skills and to encourage an appreciation of literature. Accelerated and Advanced Placement courses are designed for students who demand especially challenging academic experiences and who are comfortable working independently with advanced materials. Although the course essentials at each grade are consistent, the pace and depth are different at each level. Nightly reading and writing assignments are progressively defined according to grade level and depend upon the complexity of a given text and corresponding class assignments.

Ninth Grade English

English 9 (0101; 0102; 0103): Ninth grade English includes the study of literary forms in conjunction with the development of foundational language arts skills. Students examine characteristics and critical elements of Fiction, Poetry, Nonfiction, Memior, and Drama. Students will develop and refine organization and clarity of expression in critical writing and personal essays, practice effective speaking and listening skills and study vocabulary, usage and writing mechanics. All ninth grade students will complete a comprehensive research assignment, the Grade 9 Research Paper. Representative texts include Harper Lee’s *To Kill a Mockingbird*, Marjane Satrapi’s *Persepolis*, John Steinbeck’s *Of Mice and Men*, James McBride’s *The Color of Water*, George Orwell’s *Animal Farm*, Lorraine Hansberry’s *A Raisin in the Sun*, William Shakespeare’s *Romeo and Juliet*, Sue Monk Kidd’s *The Secret Life of Bees*, Elie Wiesel’s *Night*, Mark Haddon’s *The Curious Incident of the Dog in the Night-Time*, Wes Moore’s *The Other Wes Moore*, and a collection of core poems.

Students enrolling in 9 Accelerated should be prepared for nightly reading assignments of approximately 30-35 pages; in 9 Honors 20-25 pages; in 9 College Prep 10-15 pages. Similarly, writing amounts vary by level.

English 9IP (0112): Students who choose this course must also sign up for Math 9IP, Biology 9IP, and World History 9IP. Ninth grade English includes the study of literary forms in conjunction with the development of foundational language arts skills. Students examine characteristics and critical elements of Fiction, Poetry, Nonfiction, and Drama. This course draws explicit connections to the other 9IP subjects using a project-based learning approach to the interdisciplinary themes of Observations and Patterns, Systems, Power and Influence, Disease; and Revolutions. Students will develop and refine organization and clarity of expression in critical writing and personal essays, practice effective speaking and listening skills and study vocabulary, usage and writing mechanics. Students will also complete a comprehensive research assignment, the Grade 9 Research Paper, which will be connected to at least one other 9IP subject. Representative texts include Mark Haddon’s *The Curious Incident of the Dog in the Night-Time*, Harper Lee’s *To Kill a Mockingbird*, George Orwell’s *Animal Farm*, Marjane Satrapi’s *Persepolis*, Elie Wiesel’s *Night* and a collection of core poems. Students enrolling in English 9IP should be prepared for nightly reading assignments of 20-25 pages, which is the established amount for the honors level.

Tenth Grade English

English 10 (0201; 0202; 0203): Tenth grade English offers a detailed examination of archetypes within the literary genres of Romance, Tragedy, Comedy and Satire & Irony. Students continue to explore a variety of literary forms and develop and refine their understanding of critical writing, with particular focus on conventions, organization, analysis, interpretation and style. Additionally, students learn and practice skills emphasized in the Massachusetts State Frameworks and the Common Core Curriculum, particularly those assessed by standardized tests. All tenth grade students will complete a comprehensive research project, the Sophomore Oral Presentation. Representative Texts include J.D. Salinger's *The Catcher in the Rye*, Sherman Alexie's *The Absolutely True Diary of a Part-Time Indian*, William Shakespeare's *Macbeth*, Laurie Halse Anderson's *Speak*, Maya Angelou's *I Know Why the Caged Bird Sings*, Benh Zeitlin's *Beasts of the Southern Wild* (film), Jesmyn Ward's *Sing, Unburied, Sing*, Ken Kesey's *One Flew Over the Cuckoo's Nest*, Barbara Kingsolver's *The Bean Trees*, George Orwell's *1984* and Sophocles' *Oedipus the King*.

Students enrolling in 10 Accelerated should be prepared for nightly reading assignments of approximately 35-40 pages; in 10 Honors 25-30 pages; in 9 College Prep 15-20 pages. Similarly, writing amounts vary by level.

Eleventh Grade English

AP Language & Composition (0311): AP Language and Composition focuses on techniques of persuasion and formal rhetoric. The bulk of the curriculum is American non-fiction. The four main units are as follows: Unit 1: Introduction to Rhetoric; Unit 2: Freedom (The Democratic Ideal); Unit 3: Equity (Social Justice); Unit 4: Opportunity (The American Dream). AP Language explores these ideas through a variety of texts and media and prepares students to enter into historical and contemporary conversations about matters of great importance to America. Texts include fiction, historical and contemporary essays, speeches, advertisements, biographies, studies, reports, films, cartoons, TED talks, poetry, etc.. Students write for a variety of purposes, audiences, and occasions, and write in a variety of forms including personal narrative, rhetorical analysis, online discussion, and persuasive argument. All students will complete a comprehensive, issue-based research paper that explores a self-selected topic from multiple points of view and synthesizes a range of sources. Students conduct a comprehensive review of usage, grammar and compositional mechanics. The course prepares students to take the AP Language exam offered by the CEEB.

English 11 (0301; 0302; 0303): Eleventh grade English offers a detailed examination of American literature and thought, focusing on the ways in which the various literary movements have shaped the idea of America. Students will think critically about how American Literature constructs and reflects shifting beliefs about religion, government, race, gender, morality, beauty and truth itself. In addition to developing critical insight into the works of major American writers and an awareness of the historical context of these writings, students identify and analyze how literary elements enhance meaning and review/refine usage, grammar and mechanics. All eleventh grade students must complete a comprehensive research project, the Junior Research Paper. Representative texts include Arthur Miller's *The Crucible*, Nathaniel Hawthorne's *The Scarlet Letter*, essays by Henry David Thoreau and Ralph Waldo Emerson, Charlotte Perkins Gilman's "The Yellow Wallpaper," *The Narrative Life of Frederick Douglass*, Zora Neale Hurston's *Their Eyes Were Watching God*, Mark Twain's *The Adventures of Huckleberry Finn*, August Wilson's *Fences*, F. Scott Fitzgerald's *The Great Gatsby*, Arthur Miller's *Death of a Salesman*, Gene Luen Yang's *American Born Chinese*, and Kurt Vonnegut's *Slaughterhouse-5*.

Students enrolling in 11 Accelerated should be prepared for nightly reading assignments of approximately 40-45 pages; in 11 Honors 30-35 pages; in 11 College Prep 20-25 pages. Similarly, writing amounts vary by level.

Twelfth Grade English Courses

AP Literature & Composition (0421): Advanced Placement Literature and Composition is designed to enable advanced students to gain first year college mastery of writing and literature. Units on nonfiction, drama, fiction and poetry review the elements and terms of each genre and require students to demonstrate their analytical and expository skills in writing and discussion. Students practice for the AP Literature and Composition exam, assume major responsibility for small group presentations and conduct research and analysis using critical sources. Continuous outside reading is assigned. Upon completion of the course, students may take the AP Exam in Composition and Literature offered by the CEEB if they so choose.

English 12 (0431; 0432; 0433): Twelfth grade English offers students an intricate examination of critical literary lenses through diverse, dynamic and didactic artifacts. Students will explore the purpose, assumptions, strategies and critical vocabulary that define Formalist Criticism, Biographical Criticism, Historical Criticism, Psychoanalytical Criticism, Postcolonial Criticism (Honors & Accelerated only) Feminist Criticism (Honors & Accelerated only) and Marxist Criticism (Accelerated only). In addition to demonstrating an understanding of critical lenses and applying their strategies to analyze and interpret literature, students will demonstrate through close textual analysis and interpretation of fiction, poetry, nonfiction and drama an understanding of the relationship between the form of a literary work and its meaning. The course offers students regular opportunities to refine creative, personal and critical essay writing skills, employing various strategies to generate and organize their ideas, draft and revise clear, focused, and coherent compositions and evaluate their own writing.

All twelfth grade students must complete a comprehensive research project, the Senior Paper. Representative texts include William Shakespeare's *Hamlet*, Toni Morrison's *Song of Solomon*, Jhumpa Lahiri's *Interpreter of Maladies*, William Golding's *Lord of the Flies*, Albert Camus' *The Stranger*, Margaret Atwood's *The Handmaid's Tale*, Ta Nehisi Coates' *Between the World and Me*, Ryan Coogler's *Fruitvale Station*, David Mamet's *Oleanna*. **Students enrolling in 12 Accelerated should expect to read 40-45 pages per night; in 12 Honors 40 pages; in 12 College Prep 25 pages. Similarly, writing amounts vary by level.**

Braver Newer World (0631, 0632) Offered for both Accelerated and Honors credit: In this full-year, 12th grade English course, students will explore contemporary identity paradigms through exclusively 21st century literature and media in order to understand the influence of diverse forms of literacy on modern character and voice. Navigating a range of texts and expressive forms—novel, play, podcast, film, music, digital news platform, social media, television, wikis/blogs—students will examine the influence of power, culture, race, gender, sexual orientation, class, and age on popular culture and present-day narrative structures. In the second semester, students will collaboratively design, manage, and deliver a capstone project in which they articulate a contemporary question or problem of their choice, research its nuanced history, and participate in a series of class-designed events during which groups may deliver presentations, facilitate community discussions, organize speakers, and engage in meaningful student activism. Students enrolling in Braver Newer World should expect to read 40+ pages per night. This is a single block, four credit course that fulfills the senior year English requirement.

Integrated Senior Studies Acc: The Greater Boston Project Acc (0491): This course explores how individuals and groups have worked throughout history to effect change in Greater Boston. Students will look at various historical moments through a variety of different lenses - population, government, economy, education, and arts and leisure - and consider how these have molded what Greater Boston has become today. The course of study is expressly interdisciplinary, as skills from the disciplines of English, history, and mathematics are brought together to explore Greater Boston's past and present and it is project-based, so group projects make up the majority of the course assessments. The course culminates in the Community Action Project, which entails collaborative exploration into and analysis of at least one area of study from the course; the project allows students to become agents of change as they work to develop, propose, present, and possibly implement their resolutions to existing real-world problems. **This is a double block, eight credit course that fulfills the senior year English requirement.**

Semester English Electives

Experimental Writing (0520): Experimental writing is an elective course designed to enable students to approach writing with a sense of freedom. Students have experiences in a variety of forms such as letters, personal narratives, journals, short stories, dramatic monologues, dialogues and one-act plays. They write poetry and experiment with different voices and styles. They have opportunities to discuss ideas and to share their writing with other students. Students are expected to complete reading and writing exercises for classroom discussion and evaluation. They are required to respond to both teacher and peer evaluation of their work and to complete the process of writing by editing their work carefully and precisely. Class time is given for individual conferences and evaluations of students' progress.

Public Speaking (0510): Public speaking is designed to enhance students' oral communication skills and to help students develop poise and confidence in public speaking situations. The course provides an opportunity to explore personal attitudes toward public speaking, the verbal and nonverbal dynamics of communication, listening skills, the speech-making process, various delivery styles and techniques and speech evaluation.

Film Studies (0530): In this course, students consider the medium of film both as audience and creator. Extensive film viewing and analysis are essential course components as students assess films both in and outside of class to develop their own aesthetic values. Students need to be able to think and write critically about film. Students study the history of film and film theory, learn to analyze their experience as an audience and place themselves within the position of director, cinematographer, editor and screenwriter by creating all elements of a film.

Journalism 1 - *The Hilltopper* (0547) or Journalism 1 - *The Hilltopper* 2 credit (0548): This semester and full year course will focus on writing for publication and critical consumption and analysis of news media. Students will interact with a variety of article types, including news articles, features, columns, editorials and reviews. The primary emphasis of the course will be the development of all phases of our school-based newspaper, *The Hilltopper*. Students will research and write pieces, edit and layout the paper. Students who have taken the previously titled Journalism and Media class are eligible to enroll in this new offering, though it is not a prerequisite.

ENGLISH LANGUAGE LEARNERS

The English Learner (EL) Program provides ELs with systematic, explicit, and sustained English language development and meaningful participation in the Needham's general educational program. English Language Development (ELD) happens in SEI classrooms as ELs learn grade-level content along with their proficient English-speaking peers.

English language development also happens in ESL classes, when ELs are grouped together and licensed ESL teachers guide students in a systematic, dedicated, and sustained study time to develop various aspects of the English Language that proficient English-speakers already know. The goal of ESL instruction is to advance English language development and to promote academic achievement. ESL instruction includes social and academic language in all four domains including listening, speaking, reading, and writing.

Effective ESL instruction supports student success in school, including improvement of ACCESS scores and acceleration of academic achievement. Effective ESL instruction also supports long term goals such as college and career readiness.

FINE AND PERFORMING ARTS

All Visual Arts and Performing Arts courses offered may be used to meet the NHS arts requirement of 8 credits for graduation.

Visual Art Courses

Num	Length	Credit	Course	Num	Length	Credit	Course
7010	F	4	Art 1	7158	S	2	Introduction to Sculpture
7022	F	4	Art 2 Hon	7159	S	2	Digital Art and Animation
7041	F	4	Art 3 Acc	7176	S	2	Intro to Photography 1 (grades 10, 11, 12)
7031	F	4	AP Art 3 Porfolio	7177	S	2	Intermediate Photography 2
7141	F	4	Art 4 Senior Studios Acc	7178	S	2	Advanced Photography 3
7116	S	2	Introduction to Ceramics 1	7185	S	2	Advanced Digital Portfolio
7118	S	2	Intermediate Ceramics 2	7193	S	2	Drafting and Linear Perspective 1
7109	S	2	Advanced Ceramics 3	7196	S	2	Drafting and Linear Perspective 2
7120	S	2	Crafts 1	7245	S	2	Design & Production 1
7128	S	2	Drawing & Painting 1	7235	S	2	Design & Production 2
7136	S	2	Drawing & Painting 2	7237	S	2	Advanced Design & Production 3
7258	S	2	Product Design & Development	7246	S	2	Motion Design
7238	S	2	Comics	7255	S	2	A Glimpse Through Time: Visual Language and Culture

The Art curriculum consists of tracks: 1.) Full Year Art 1 through Art 4 sequence and semester long art courses ranging in focus and discipline. Critiques, which are class discussions of student artwork aimed at providing feedback as part of the design process, are an integral part of all Art courses. Homework is assigned on a continuing basis for all courses, and students will experience a variety of strategies dealing with personal artistic assessment. Courses are designed to enable students to meet the National Standards, the Massachusetts Frameworks in Arts Education, and the Fine and Performing Arts Processes: Creating, Responding and Presenting, and Performing. Students will also further develop Social-Emotional and 21st Century Skills in all of the Visual Art Courses.

Full Year Art Courses

Designed as a sequential curriculum and increasingly challenging curriculum, students enrolled in Art 1 through Art 4 explore the Fine Arts and create a portfolio of work which can be used to enhance the college application process, apply for College Board AP Credit (in Art 4), or to pursue careers in art and design. These courses develop a student's ability to communicate visually, an understanding of the arts historically, development of design vocabulary, creativity and problem solving skills. Homework is assigned regularly, and students become familiar with various art media, techniques, tools, and concepts to gain a broad awareness of the visual arts. Each full year art course earns four credits.

Art 1 (7010): This full year course is open to ANYONE, and is perfect for those who have an interest in visual art. It is also the foundation course for many of the upper level art courses. Students experiment with a variety of two dimensional and three dimensional materials and processes. They will learn basic visual art concepts in design and technique, creative development, critical analysis and reflection, and create a variety of artworks throughout the year. Students will use sketchbooks to develop their personal voices, sketch and brainstorm, and touch upon cultural and historical contexts in art. Minimal homework is assigned on a continuing basis. Prerequisite: None: Students who pass this course may sign up for Art 2, and Drawing and Painting 2.

Art 2 Hon (7022): Art 2 Honors builds upon the fundamentals developed in Art 1 at a more complex, meaningful level. As the bridge that connects Art 1 to Art 3 Advanced Placement and Accelerated courses, a greater time commitment and level of investment is required. Activities, homework assignments, and in class pieces will continue improving technical and conceptual skills. Students will be required to make artistic decisions independently as they begin to develop a personal voice and style. Assignments include both two- and three-dimensional media, such as drawing, painting, printmaking, design, and sculpture. In-class critiques, reviews, and self-assessments take place on a regular basis. Weekly homework completion, sketchbook assignments, and the development of a second year portfolio are basic expectations of Art 2 Honors. Successful completion of Art 2 Honors will result in a portfolio of works that may be included as a portion of a student's "breadth section" portfolio in Art 3 Advanced Placement or Accelerated. (Prerequisite: Art 1 or both Drawing & Painting 1 and 2, or permission of the department with a portfolio review)

Art 3 Acc (7041): Expanding upon skills developed in Art 1 and 2, Art 3 students work towards mastery of technical skills in a range of two and three-dimensional media. Students focus on their personal growth and strive to develop a personal voice in their work. A high level of competence will be expected with project development and problem solving, as these skills enable students to push the boundaries of visual concepts and thematic focus. Students must have a strong grasp of the Elements of Art, the Principles of Design, and participate in critical analysis of their work. There will be a heavy homework obligation. A portfolio will be assembled for students to use during college interviews. (Prerequisite: Art 2)

AP Art 3 Portfolio (7031): This course will enable students to produce a large portfolio of artwork to apply for AP college credit and/or college/art school admission. Work must show evidence of a high level of competence in project development, visual problem solving, technical skill, personal expression and understanding of the elements and principles of design. This advanced placement course carries a heavy homework obligation. It challenges students to experiment with many materials, techniques and ideas. Critical analysis and assessment are important components of the course. This analysis will aid students in creating quality works demonstrating both breadth and thematic concentration. The course is open to juniors and seniors. (Prerequisite: Art 2 and teacher recommendation)

Art 4 Senior Studio Acc (7141): This is a challenging course that is intended for students who are working toward a sense of mastery and personal growth in their work. This course is for students who are willing to take risks to develop personal ideas and to refine them into skillfully and finely crafted statements. Students will continue preparing and assembling a portfolio that may be used for college admissions and/or scholarships, whether or not they are art-school bound. Part of the class time is devoted to critical analysis of student work and individual assessments. Throughout the year, students participate in curating exhibits at various locations. (Prerequisite: Art 3 Accelerated or AP Art 3 Portfolio, or departmental permission)

Semester Art Courses

The Fine Arts program includes a variety of semester length two credit courses. These courses are open to all students. Please note the sequential nature of courses, and be sure to register for the proper level. All students should register for the first level as the entry into a specific course sequence, unless they have Department permission to do otherwise. Homework is assigned on a regular basis.

Introduction to Ceramics 1 (7116): This semester course introduces students to the use of clay as a medium for art expression. Students will have the opportunity to explore the properties of clay, the history of clay, and create functional and sculptural pieces. Each student will experience the three basic hand building methods (pinch, coil, slab), the basics of the wheel, various surface decoration techniques, and the glazing and firing of all completed pieces.

Intermediate Ceramics 2 (7118): Intermediate Ceramics will engage students in more sophisticated techniques using clay and glazes. Students will learn more complex hand building and wheel throwing techniques, with emphasis on researching and developing personal

styles of expression and design concepts. Students will learn and participate in the complete cycle of processing a ceramic work from the recycling of clay to the firing process. (Prerequisite: Introduction to Ceramics)

Advanced Ceramics 3 (7109): This advanced course is designed for students who want to challenge themselves and work independently to master the medium of clay. Building on the skills and techniques developed in Introduction and Intermediate Ceramics, students will be presented with complex visual challenges that will require them to develop, design, and create solutions through hand building and the potter's wheel. A main focus of the course will be for students to design their own unit to explore individual interest and style in depth. (Prerequisite: Intermediate Ceramics)

Design & Production 1 (7245): This semester course,, presents a broad range of assignments based on the principles of design and typography. Students learn by progressing through a series of hands-on projects using Adobe Illustrator and Adobe InDesign.

Design & Production 2 (7235): This is an advanced course,, that provides students with computer based graphic design and production experience through layout and design assignments. . It builds upon the skills developed in Design & Production 1, with an increased focus on real world applications of these skills. (Prerequisite: Commercial Design & Production 1 or permission of the department).

Advanced Design & Production 3 (7237): This semester course, which utilizes the Graphics Production Lab, is for students who wish to gain skills in graphics production. Students interface with customers and are involved in all aspects of job production, including interviewing clients, designing, estimating cost, planning, purchasing materials, and the production of the final product. Examples of projects include concert programs, posters and event T-Shirts which are used by the school and community. Due to client requirements, students may need to work beyond the school day to meet deadlines. Successful students may have the opportunity to become paid interns in the summer Graphics Production program. (Prerequisite: Commercial Design & Production 2 or permission of the department)

Crafts 1 (7120): Students design and create utilitarian and non-functional works using a variety of techniques and materials. A wide variety of crafts media, forms and techniques from diverse cultures are explored. Assignments emphasize the fundamentals of good design, visual creativity, technical skill, and craftsmanship.) Students compare and contrast 'Crafts' with other forms of visual art.

Digital Art & Animation (7159): This course, open to all students, engages students with the world of computer generated art including digital painting and animation. This course takes place in the Fine and Performing Arts Computer lab. Students learn Photoshop, Flash, and other appropriate software to create works of art. Upon successful completion of this course, students will be ready for more advanced creative work in the areas of Photography, Graphic Design, and other arts media that utilize the potentials of 21st Century digital tools.

Motion Design (7246): This semester course is for students wishing to take the skills they have obtained through Digital Art, Design and Animation, and expand and utilize them in the study and creation of 3D renderings and more complex animation. A variety of digital creating tools will be used, such as Maya, as well as, non-digital animation techniques, such as stop motion. (Prerequisite: Digital Art and Animation)

Drafting & Linear Perspective 1 (7193): This semester course, open to all students, is ideal for those who enjoy a more mathematical and technical approach to drawing. Students will be introduced to the fundamentals of drafting, and the representation of three dimensions on a two dimensional plane by using 1 and 2 point perspective. Students will design and draw from observation and imagination, applying the elements and principles of design. A 3D construction unit will give students the opportunity to articulate design decisions in real space, as determined by a specific challenge and set of criteria. Students will be expected to participate in mini-lectures, coursework critiques and reflections.

Drafting & Linear Perspective 2 (7196): This semester course develops and builds upon the content explored in Drafting and Linear Perspective 1. During this class, students will work from observation and imagination, finding new applications for rendering in 2 point perspective and will also undertake a drawing that uses three vanishing points. As with Drafting and Linear Perspective 1, there will be at least one 3D challenge. Reference will be made to specific historical architectural styles and developments , to enrich and inform the student's aesthetic and design decisions. (Prerequisite: Drafting & Linear Perspective 1, or permission of the department)

Drawing & Painting 1 (7128): This semester course is open to anyone who is interested in learning how to paint and draw. It provides a solid foundation in the fundamentals of drawing and painting skills as a vehicle for thinking, seeing and communicating. Using a wide variety of tools and techniques, students learn to develop thoughtful and well-crafted pieces which pull from a broad range of subjects and techniques. Students will practice creative brainstorming and process development as a way to make their work personally meaningful. There is a light homework component. Prerequisites: None. This course is NOT open to students who have completed Art 1 with a C- or higher. Note: Upon completion of D/P 1 and 2, students may present their portfolio the FPA staff to determine eligibility for Art 2 Honors.

Drawing & Painting 2 (7136): This course is a continuation of Drawing & Painting 1. Students will expand and refine their drawing and painting skills and utilize a wide variety of tools and techniques to communicate visually. Journals, self-analysis, and daily critiques are an important part of the course. Upon successful completion of both Drawing & Painting 1 and Drawing & Painting 2, students may present their portfolio to the department to determine eligibility for Art 2 Honors. (Prerequisite: Drawing & Painting 1 or permission of the department)

Introduction to Sculpture (7158) This semester art course is suitable for ALL LEVELS who are interested in diving into the world of three dimensional art. Students discover and explore sculpture through hands on exploration of a variety of 3D media. They will be introduced to physical, cultural and social contexts in which traditional and modern sculptures are created. A wide range of sculptural disciplines will be touched upon, which may include realistic, figurative, abstract, kinetic and site specific/ public works. Learning the essentials of principles and elements of design, critical reflection and analysis, and creative development are part of this course. There is a minimal homework requirement. (Please note: Interdisciplinary collaboration may take place when schedules allow) Prerequisites: None

Introduction to Photography 1 (7176): This course gives students an introduction to shooting, processing, printing black and white photographs in the darkroom, as well as digital photography and computer enhancing/manipulation techniques with photoshop. Students learn the fundamentals, including how manual cameras work and understanding exposure. When not shooting, processing, or in the darkroom, in class assignments strengthen students' design and conceptual skills. The work of several photographers will be introduced throughout the course. When not shooting, processing, or in the darkroom, in class assignments strengthen students' design and conceptual skills. The work of several photographers will be introduced throughout the course. Students will borrow and sign-out materials, such as cameras from the school, and would benefit from access to a digital single lens reflex (DSLR) camera for personal use outside of school. There is a minimal homework component to this course. It can be applied to the fields of Photography, Design, Advertising, Marketing, and many more! This course is only open to students entering grades 10, 11 or 12.

Intermediate Photography 2 (7177): This course is a continuation of Photography 1 and provides the student with increased experiences in producing high quality photographs. Students progress through a series of incrementally challenging assignments using traditional photography techniques. Advanced techniques are designed to help students develop the skills necessary to translate creative ideas into more personal and compelling images. Since this course requires outside of class photo shooting, students would benefit from having access to a digital single lens reflex (DSLR) camera for their personal use. There is a light homework component to this course. It can be applied to the fields of Photography, Design, Advertising, Marketing, and many more! (Prerequisite: Introduction to Photography 1)

Advanced Photography 3 (7178): This course is designed for the student who has successfully completed Photography 1 and 2. Students will intensify their use of photography, both traditional and digital, as a means of self-discovery and personal expression while expanding and refining technical control of the medium. Students will learn to identify and articulate a personal response to the environment. The course emphasizes visual problem solving through in-depth photo essays. Since this is an advanced course and requires outside of class photo shooting, students must have access to a digital single lens reflex (DSLR) camera for their personal use. Students who would like to continue to develop their skills after the completion of Advanced Photography are encouraged to enroll in Advanced Digital Portfolio. (Prerequisite: Intermediate Photography 2) There is a medium amount of homework expected to fulfill to this course, as students will be asked to regularly make imagery outside of the classroom setting. This course can be applied to the fields of Photography, Design, Advertising, Marketing, and many more!

Advanced Digital Portfolio (7185) This semester course is designed to allow advanced art students who have successfully completed Advanced Photo 3, or Commercial Production 2, to use their digital art skills and accumulated works to create a portfolio of expressive works suitable for submission to college, and/or possibly for AP submission. Interested students should consult their Art teacher and/or the Director of Fine & Performing Arts to ensure they are qualified for this course. Currently offered during Fall Semester. (prereqs: Advanced Photo 3, Commercial Production, or permission of the Department)

Product Design and Development (7258): In this two credit semester course students will develop and design products, focusing on toys, board games, and musical instruments. They will use the Design Thinking process while creating, testing, and refining the product. Students will explore the design development process in the fields of Product and Toy Design from conceptualizing/ problem solving, drawing, creating presentation boards, models, prototyping etc. The course will cover the importance of functionality, ergonomics, preserved value, play patterns, and demographic needs. The history of product, toy and instrument design will be incorporated to inform student design decisions. They will use simulations and statistics to predict game flow/outcomes; study the physics behind the instruments/sound to inform their design. Instruction includes lectures, literature, design critiques and hands on modeling & utilizing the tools in Studio 605 and The DaVinci Workshop. Pre-requisites: This course is primarily for students in grades 10-12, who will benefit from having taken Digital Art & Animation; Commercial Design & Production 1; or Engineering Design 101 courses offered at NHS.

Comics (7236): Whether a Mayan codex or a Superman comic, humans have been expressing ideas and telling stories using images in sequence for hundreds of years. In this class, students will explore the history and uses of 'sequential art', and develop skills to create their own comics and graphic novels. Comic books and graphic novels have become an incredibly powerful, varied, and popular form of visual storytelling. Marvel and DC superheroes reach a vast audience, as does Manga, the Japanese form of comic books. Comics are used to express a range of themes, from comedy, to adventure and fantasy, as well as memoir, and social and political commentary. In this class, students will mostly use traditional art tools - pencil, pen, ink, and brush - to develop their work and vision. We will build upon our drawing skills while also exploring concepts unique to the world of comics, such as lettering, panel structure, panel transitions, and cinematic shots. Character Design and Narrative Structure will also be explored.

Prerequisite: (Drawing and Painting 1, Art 1, or permission of the Department.)

A Glimpse Through Time: Visual Language and Culture (7255) This process based course will travel through time to unleash the visual voices that are commonly left out of the conversation. Students will learn what it means to be a visual communicator through

a multicultural lens. Regions such as Northwest Africa, the Middle East, pre and post Columbian Latin America, East and Southeast Asia will be the primary focus in this hands on studio course. Students will get an opportunity to develop work using traditional materials and techniques such as; Calligraphy on Maobianzhi paper, Batiks with wax reduction, and much more. In this course, students will spend approximately thirty percent of time investigating cultural art practices and stories and seventy percent of the time designing, developing and creating pieces influenced by these stories. Together we will study how that language has changed over time, what voices stood out and what voices were left out of the conversation. Students will work together to redirect the conversation to build a more equitable future of visual communicators.

Performing Art Courses

Num	Length	Credit	Course	Num	Length	Credit	Course
8020/ 8029	F	4	Concert/Symphonic Band	8165	S	2	Theatrical Construction and Design
8011	F	4	Symphonic Band Acc	8150	S	2	Theater Arts 1
8036	F	4	Jazz Ensemble (after school)	8157	S	2	Theater Arts 2
8040	S	2	Jazz Improvisation	8118	S	2	Music Technology 1: Song Writing
8060	F	4	String Orchestra	8119	S	2	Music Technology 2: Film Scoring
8061	F	4	String Orchestra Acc	8075	S	2	AP Music Theory 2
8068	F	2	★ Performance Seminar	8070		2	Music Theory 1
8080/ 8077	S	2	Chorus/Bella Voce Chorus	8067	F	2	★ Modern Music Laboratory
8081/ 8041	F	4	Chorus Acc/ Bella Voce Chorus Acc	8125	S	2	Guitar Class 1
8074	F	4	Concert Chorale	8126	S	2	Guitar Class 2
8051	F	4	Concert Choral Acc	8135			Piano Lab 1
8056			Chamber Orchestra	8136	S	2	Piano Lab 2
8151	F	4	Chamber Orchestra Acc				

All Performing Arts courses are designed to meet the National Standards and Massachusetts Frameworks in Music or Theater Education and the Fine and Performing Arts Domains: Creating, Responding and Performing. Performing Arts courses are divided into two categories: Performance Courses and Semester Classroom Courses. Performance Courses require students to continually refine their performance skills and to participate in public performances outside of the regular school day. Semester classroom courses do not require public performance.

PERFORMANCE COURSES

Concert/Symphonic Band (8020/8029) The High School Band is a full year, 4 credit performance course open to students in grades 9 through 12 who have previously or are currently studying a band instrument (e.g., Woodwind, Brass, or Percussion) at an intermediate to advanced level. The band program is divided into two groups, the Concert Band and the Symphonic Band, based upon playing ability (auditions), teacher recommendation, and balanced instrumentation between the bands. In both ensembles students will study music of a variety of styles and time periods in preparation for concert performance. Rehearsals will include section and/or small ensemble development in addition to the large ensemble playing. The Concert and Symphonic Bands perform in high school concerts, evaluation festivals, and community events throughout the year. Band is a four-credit course. Public concerts are part of each band's formal curricula and attendance at them is mandatory. (Prerequisite: Previous experience playing a traditional band instrument in an ensemble. Membership in Concert or Symphonic Band is required to audition for Jazz Ensemble, District and All-State Festivals)

Symphonic Band Acc (8011): Students enrolled in Symphonic Band may elect to take Symphonic Band Accelerated to receive academic credit for advanced study and performance on their chosen instrument. Students enrolled in this course must meet all of the Symphonic Band requirements, study their instrument with an approved private instructor, audition for District/Honors groups, perform in an additional ensemble beyond the regular school day, and present a formal solo for their instrument in a recital once each semester. In addition, Symphonic Band Accelerated students are expected to attend one non-Needham formal concert each marking period and complete a written review of the event. (Prerequisite: a minimum of one year's previous experience in high school band or department permission)

Jazz Ensemble (8036): This year long, 4 credit performance class is open to students by audition only. Instrumentation is for standard Big Band (i.e. saxophones, trumpets, trombones, piano, guitar, bass and drums). The Jazz Ensemble studies and performs a wide range of music, including Swing, Latin, Funk, and contemporary Jazz. Rehearsals emphasize understanding and playing the various styles, as well as balancing and blending within sections and the entire ensemble. Students also work on improvisation, scales, modes and chord construction. Auditions are held in the spring and the ensemble meets after school throughout the school year. The Jazz Ensemble performs at school concerts, an evaluation festival, and various school and community functions; these public concerts are part of the formal curricula and attendance at them is mandatory. (Prerequisite: Students must be members of Concert Band, Symphonic Band, or Marching Band to be eligible for Jazz Ensemble)

Jazz Improvisation (8040): The purpose of this one semester, 2 credit course is for students to develop confidence in independent playing and in the art of spontaneous composition in a jazz style. Students start by learning blues progressions, followed by other typical chord changes and progressions. Additionally, students engage in considerable study of scales, chords, and combo playing. Students are placed in groups according to their ability. (Prerequisite: At least two years successful performance in a middle or high school performing ensemble, or permission of the instructor)

String Orchestra (8060): The String Orchestra is a full year, 4 credit performance course open to students in grades 9 through 12 who play an orchestral string instrument. Students pursue the development of instrumental technique and musicianship through the study of orchestral works from various stylistic periods. Students receive coaching in sight-reading, ear training, and theory. There is opportunity for interested students to explore the art of conducting. Solo literature and chamber music are explored as well. The Orchestra performs at school concerts and at various evaluation festivals and community events throughout the year. Public concerts are a formal part of the orchestra's formal curricula and attendance at them is mandatory. (Prerequisite: Previous playing experience in an orchestral style ensemble or department permission. Membership is required to audition for District and All-State Festival Orchestras.)

String Orchestra Acc (8061): Students enrolled in String Orchestra may elect to take String Orchestra Accelerated to receive academic credit for advanced study and performance on their chosen instrument. Students enrolled in this course must meet all the classroom and performance requirements of the String Orchestra, along with studying their instrument with an approved private instructor, auditioning for District/Honors groups, performing in an additional ensemble beyond the regular school day, and presenting a formal solo for their instrument in recital once each semester. In addition, Accelerated students are expected to attend one non-Needham formal concert each marking period and complete a written review of the event. (Prerequisite: a minimum of one year previous experience in high school String Orchestra or department permission)

Chamber Orchestra (8056): The Chamber Strings Ensemble is a full year, 4 credit performance course open by audition to students in grades 9 through 12 who have previously or are currently studying an orchestral string instrument. Auditions are held in the Spring. Students pursue the development of instrumental technique and musicianship through the study of orchestral works from various stylistic periods. Students receive coaching in sight-reading, ear training, and theory. There is opportunity for interested students to explore the art of conducting. Solo literature and chamber music are explored as well. The Orchestra performs at school concerts and at various evaluation festivals and community events throughout the year. Public concerts are a formal part of the orchestra's formal curricula and attendance at them is mandatory. Membership is required to audition for District and All- State Festival Orchestras. Prerequisite: Enrollment is open by audition.

Chamber Orchestra Acc (8151): Students enrolled in Chamber Orchestra may elect to take Chamber Orchestra Accelerated to receive academic credit for advanced study and performance on their chosen instrument. Students enrolled in this course must meet all the classroom and performance requirements of the String Orchestra, along with studying their instrument with an approved private instructor, auditioning for District/Honors groups, performing in an additional ensemble beyond the regular school day, and presenting a recital on their instrument once each semester. In addition, Accelerated students are expected to attend one non-Needham formal concert each marking period and complete a written review of the event. (Prerequisite: a minimum of one year previous experience in high school Orchestra or department permission)

★ **Performance Seminar (8068):** This course is open to both Instrumentalists and vocalists. This is a two credit year long course which meets afterschool on Tuesdays and Thursdays from 2:45-3:45 PM. Students enrolled in this course will primarily work on solo literature that is appropriate for their instrument and skill level, although there may be additional opportunities for collaborative literature based upon the enrollment in the course. Students will receive coaching, participate in mock recitals during class for student feedback, and give formal recitals throughout the school year.

Chorus (8080)/Bella Voce (8077): The High School Chorus is a full year, 4 credit performance course open to all students in grades 9-12. No previous formal vocal experience is needed. Students sing a wide variety of choral literature representative of different styles by contemporary and historical composers. When there is a large number of soprano/alto voices, a separate treble voice chorus will be scheduled. In addition to selections performed by the entire group, students are provided with opportunities to form smaller groups within the chorus. Student conductors and accompanists have opportunities to develop their skills when appropriate. Students develop musicianship, vocal technique, listening, and critical thinking skills. The chorus performs for high school concerts and community programs throughout the year. Public concerts are a formal part of each chorus' curricula and attendance is mandatory. The student must be a member of chorus in order to audition for District and All-State Festivals.

Chorus Acc (8081)/Bella Voce Acc (8041): Students enrolled in Chorus or Bella Voce may elect to take the Accelerated option to receive academic credit for advanced formal vocal study and performance. In addition to meeting all of the classroom and performance requirements of the Chorus, students enrolled in this course must study privately with an approved vocal instructor, audition for District/Honors groups, perform in an additional vocal ensemble outside of Chorus on a regular basis, and present a formal vocal solo in a recital once a semester. Chorus Accelerated students are expected to attend one non-Needham formal concert each marking period and complete a written review of the event. (Prerequisite: a minimum of one year of previous experience in high school chorus or department permission)

Concert Chorale (8074): Concert Chorale is a full year 4 credit performance course open to students in grades 9-12 by audition. It is an advanced mixed vocal ensemble usually numbering between 16-20 students. Auditions for the group take place in the spring. Music studied/performed ranges from the Renaissance period through contemporary genres and is meant to challenge the most serious, advanced student singers. Chorale students may audition for District and All-State Festivals. The Chorale performs several times each year, as well as at a variety of community events and regional festivals. Public concerts are a formal part of the chorale's formal curricula and attendance at them is mandatory. (Prerequisite: Successful completion of the audition)

Concert Chorale Acc (8051): Students enrolled in Concert Chorale may elect to take the Accelerated option to receive academic credit for advanced formal vocal study and performance. In addition to meeting all of the classroom and performance requirements of the Chorus, students enrolled in this course must study privately with an approved vocal instructor, audition for District/Honors groups, perform in an additional vocal ensemble outside of Chorus on a regular basis, and present a formal vocal solo in a recital once a semester. Chorus Accelerated students are expected to attend one non-Needham formal concert each marking period and complete a written review of the event. Public concerts are a part of the chorale's formal curricula and attendance is mandatory. (Prerequisite: a minimum of one year of previous experience in high school chorus or department permission)

★ **Modern Music Laboratory (8067):** A full year, 2 credit performance seminar focused on music of the past 50 years, including rock, rap, R&B, folk, funk, pop, and more, with a strong leaning towards current music. Students will develop collaborative skills in arranging, recording, instrumental technique, performance, and project management. This course meets twice a week for the entire school year outside of normal school hours (typically Tuesday and Thursday mornings prior to the start of the school day). An informal meeting with the instructor is required for enrollment. Students will be required to participate in some after school events. Students who were interested in enrolling in Contemporary Music Ensemble should enroll in this course.

Guitar Ensemble (8127): Guitar Ensemble is a full year, 4 credit class that gives students the opportunity to play guitar repertoire in a performing ensemble. This course emphasizes skill-based knowledge learned in Guitar 1 and Guitar 2 such as reading music notation, playing position, technique, strummed and plucked chords, music symbols, and playing two, three, and four-part arrangements in an ensemble. Students will play on classical nylon string guitars and have a foot stand (both provided by the school). Students will participate in school concerts as well as other school and community events.

SEMESTER CLASSROOM COURSES

Music Technology 1: Production and Songwriting (8118): This one semester 2 credit course teaches students the skills and concepts needed for songwriting. They will compose original music using computers, software, and cloud based applications. Students will learn the same processes and tools that today's composers and recording artists use. Students will learn the basics of music technology, computer usage, music notation, composition, arranging, and theory to help them as they go through this process. This course has no prerequisite and is designed for students to be successful without having any previous formal musical training.

Music Technology 2: Film Scoring (8119): This one semester 2 credit course builds upon the skills and concepts taught in Music Technology 1. Students will expand their use of technology and software to explore music production, including film scoring, in greater detail. By the end of this course, students will feel comfortable creating original music and bringing it to a level suitable for recording and public performance. When possible students may have the opportunity to create musical scores for visual art animations and film clips. (Prerequisite: Music Technology 1 or permission of the instructor)

Music Theory 1 (8070): This one semester course covers the basics of music theory and ear training, including scales and modes, intervals, triads and seventh chords, harmony, non-harmonic tones, part-writing, and form and analysis. Students will use the music

technology lab for ear training, music writing assignments, and drill and practice programs. Any student interested in pursuing formal music instruction at the college level should enroll in this course, in addition to their performing ensemble course. (Prerequisite: the ability to read traditional music notation)

AP Music Theory 2 (8075): In this one semester 2 credit course, students build aural and written music skills through intensive study in ear training, sight singing, melodic and harmonic dictation, part writing, form and analysis, and score reading. Further harmonic study will focus on seventh chords, non-chord tones, secondary dominant and leading tone chords, and modulation. The emphasis in the class is on developing written and listening skills; there is much drill and practice on scales, intervals, and chords, as well as utilizing harmonic, melodic, and rhythmic dictation. Students use the music computer lab throughout the class. This course is designed to enhance preparation for the College Board's Advanced Placement Music Theory Exam given in the Spring. (Prerequisite: Music Theory I or permission of the instructor)

Guitar Class 1 (8125): This 2 credit semester course is designed for students new to the instrument and teaches the basics of guitar playing. Students will learn to play the guitar through tuning the guitar, playing daily warm ups, technique, reading notes, learning music symbols, playing chord progressions, and establishing a steady beat. Beginning guitar students as well as students with previous experience will find the course essential to establishing a strong foundation in the instrument. Students will participate in classroom performances. School concert performance opportunities available but not required.

Guitar Class 2 (8126): This 2 credit semester course builds upon skills learned in Guitar Class 1. Continuation of daily warm ups, technique, reading notes, learning music symbols, playing chord progressions, and establishing a steady beat. Students will learn more complex material and develop new skills as your guitar playing is brought to the next level. Class activities will culminate in at least one formal performance in front of an audience. (Prerequisite: Guitar Class 1 or permission of the department)

Piano Lab 1 (8135): Piano Lab 1 is a 2 credit semester class that is designed for students new to the instrument and teaches the basics of piano playing. Students will learn about technique, melody, accompaniment, music reading, and music symbols. Students will read exercises, partner songs, solo repertoire, playing by ear, and be introduced to improvisation. Students will play on electric keyboards. Students will participate in classroom performances. School concert performance opportunities available but not required.

Piano Lab 2 (8136): Piano Lab 2 is a 2 credit semester class that builds upon skills learned in Piano Lab 1. Students will learn about more complex technique, melody, accompaniment, music reading, and music symbols. Students will read exercises, partner songs, solo repertoire, playing by ear, and be introduced to improvisation. Students will have the opportunity to learn well-known, established repertoire on the piano from classical to contemporary. Students will play on electric keyboards. Students will participate in classroom performances. School concert performance opportunities available but not required. Prerequisite: Piano Lab 1 or permission of the Department.

Theater Arts 1 (8150): This semester, 2 credit course, open to all students, provides practice for the beginning/intermediate actor in voice, movement, and performance using scenes from a variety of plays, as well as improvisation and mime. Students learn the skills of projection and characterization by performing and critiquing scenes from plays and by developing original characters in specific settings. Class activities will culminate in at least one formal production in front of an audience. Preparation for this performance may require additional instructional time beyond the normal school day. No prior theatrical experience is necessary.

Theater Arts 2 (8157): This advanced theater 2 credit course builds upon and extends the skills developed in Theater Arts I. Emphasis in this course is on presentational acting techniques, scene analysis, and directing principles. Students will refine their skills by studying, analyzing, and performing a wide variety of scenes representing multiple genres of theatrical style and craft. Class activities will culminate in at least one formal production or presentation in front of an audience. Preparation for this performance may require instructional time beyond the normal school day. (Prerequisite: Theater Arts I or permission of the instructor. Students who have successfully completed both Theater Arts I and II may re-enroll in Theater Arts II for added credit with permission of the Department.)

Theatrical Construction & Design (8165): Theatrical Construction & Design is a 2 credit semester class which provides an opportunity for students to explore and create the design for a theatrical set. Students will engage in the processes of both designing and building a set, lighting and sound design and all other aspects of theatrical production often using one the high school theatrical productions as the working example.

MATHEMATICS

Num	Length	Credit	Course	Num	Length	Credit	Course
2023	F	4	Integrated Math 9	2332	F	4	Statistics Hon
2033	F	4	Math 9	2333	F	4	Fundamentals of Calculus and Statistics
2022	F	4	Math 9 Hon	2475	S	2	Critical Thinking in Math
2042	F	4	Math 9IP	2613	S	2	Principles of Accounting
2021	F	4	Math 9 Acc	2615	S	2	Personal Finance
2041	F	4	Math 9 Extended Acc	2489	S	2	Robotics
2113	F	4	Algebra 2	2466	S	2	Engineering Design 101
2122	F	4	Algebra 2 Hon	2467	S	2	Computer Aided Design and Manufacturing
2013	F	4	Geometry	2482	S	2	Introduction to Computer Science
2082	F	4	Geometry Hon	2476	S	2	Computer Programming Fundamentals
2091	F	4	Geometry Acc	2488	S	2	AP Computer Science Principles
2043	F	4	Integrated Math 10	2490 2496	F S	4 2	Junior/Senior STEM Capstone/ Junior/Senior STEM Capstone 2cr
2134	F	4	Contemporary Applied Mathematics	9898	F	4	Work Study
2203	F	4	Pre-calculus	2311	F	4	AP Calculus AB
2212	F	4	Pre-calculus Hon	2321	F	4	AP Calculus BC
2221	F	4	Pre-calculus Acc AB	2331	F	4	AP Statistics
2231	F	4	Pre-calculus Acc BC	2481	F	4	AP Computer Science
2302	F	4	Calculus Hon	0491	F	8	The Greater Boston Proj Acc
2234	F	4	Multivariable Calculus	2477	S	2	★ Math Explorations in Data Science

The mathematics program at Needham High School provides a comprehensive curriculum offering all students a rich and engaging experience. The main focus of the program is on teaching important and essential mathematics skills necessary for problem solving. The program's aim is to allow all students to reach their fullest potential as a critical and logical thinker. The program's balanced approach works on developing skills necessary for success in today's society. Accelerated and Advanced Placement courses are designed for students who demand especially challenging academic experiences and who are comfortable working with advanced materials. Although the course content at each grade are consistent, the pace and depth are different at each level.

Students will learn and practice skills emphasized in the Massachusetts State Frameworks and the Common Core Curriculum. Additionally, throughout our curriculum, emphasis will be given to these eight Mathematical Practices identified in the Massachusetts State Frameworks and Common Core curriculum:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Graphing calculators are an essential everyday tool for learning mathematics, so students in every mathematics course will need to have a graphing calculator. The NHS Mathematics Department requires that all of our students acquire a graphing calculator on their own. The Needham High School Mathematics department uses the TI-84, TI-84 silver edition and the TI-84 color edition.

A calculator purchased at the start of a student's high school career will be useful for class work, homework, and assessments in math and science classes through all four years of high school. Additionally, students will be allowed to use a graphing calculator on MCAS, SAT, ACT, and AP exams. The Mathematics Department has a limited supply of graphing calculators that we are able to loan out to students who request one (in person) at the start of the year.

Mathematics courses at NHS also make use of a variety of web-based and software applications where relevant to the curriculum. We aim to use these applications as tools for exploration as well as a means to assess students formally and informally.

MCAS Math Review: MCAS Math Review is for students who score within the Not Meeting Expectations or Partially Meeting Expectations range on the grade 8 MCAS exam. Students will be invited to enroll in this small group instructional program. The intent of the course is to help students bring their math up to an appropriate level. This course is taken in addition to a regular math course. The course relies on grant funds and will run provided adequate funding is received. The school will assign students to this course.

MATH COURSES

Integrated Math 9 (2023) Integrated Math 9 will take an integrated approach to the study of Algebra and Geometry, with an emphasis on Algebra. This course is aligned to the Massachusetts Curriculum Frameworks in order to prepare students for the Grade 10 MCAS Mathematics Exam. This course supports all students as they develop and strengthen computational fluency and develop conceptual understanding of the connections between algebra and geometry. Students will learn through discovery and application, developing and reinforcing the skills and strategies needed to break down complex problems. Topics in this course include, yet are not limited to: number sense and operations, graphing linear functions, linear equations and their application, and coordinate geometry. Graphing calculators will be used throughout the course.

Math 9 (2033, 2022, 2021) Math 9 will formalize and extend the mathematics that students learned in Math 8. Students will study and contrast different types of functions including absolute value functions, piecewise-defined functions, quadratic functions, polynomial functions, exponential functions, logarithmic functions, and rational functions. In each unit, students will graph, analyze, solve problems, and apply these functions in a variety of settings. Beyond functions, students will further their understanding of laws of exponents, explore circles and other conic sections from algebraic and geometric perspectives. Students will also use descriptive statistics to summarize, represent, and interpret one-variable and two-variable data involving categorical or quantitative variables, with an emphasis on linear modeling and regression. Students enrolled in Math 9 Accelerated should gain the foundation necessary to be recommended for Pre-Calculus AB. Graphing calculators will be used throughout the course. (Prerequisite: Math 8 or a course in Algebra 1. Please note: Students who take and pass Math 8 Accelerated will be placed in Advanced Math 9 Accelerated (2031) or Geometry Accelerated (2091) based on the Math 8 Accelerated performance benchmarks.)

Mathematics 9IP (2042): Students who choose this course must also sign up for Biology 9IP, English 9IP, and World History 9IP. The approach to interdisciplinary mathematics will deepen and extend the concepts from Mathematics 8 while encouraging collaboration and project-based learning. The scope of the course will mirror the Math 9 honors curriculum which centers around graphical, numerical, and algebraic representations of a variety of functions (linear, quadratic, polynomial, exponential, radical, and rational). This course draws explicit connections to the other 9IP subjects using a project-based learning approach to the interdisciplinary themes of Observations and Patterns, Systems, Power and Influence, Disease; and Revolutions. This course will also prepare students with the mathematical foundations for Geometry and Precalculus. Graphing calculators will be used throughout the course.

Math 9 Extended Acc (2041) Math 9 Extended is an accelerated course and will formalize and extend the mathematics that students learned in Math 8 Accelerated by reviewing the essential topics from Math 8 Accelerated, including linear systems, quadratics and higher-degree polynomial functions, rational functions, and exponential functions as well as finish any remaining topics which are taught in Math 9 Accelerated but not covered in Math 8 Accelerated, including: matrices, sequences and series, and statistics and probability. Content in the course is taught in a collaborative group environment, where students work with their peers to explore various situations and develop and present summative projects. Students will demonstrate their understanding through various assessment methods. Graphing calculators, one-to-one devices, and online graphing softwares will be used throughout the course. (Prerequisite: Math 8 Accelerated)

Algebra 2 (2122 and 2113) Algebra 2 takes a graphing, algebraic and numerical approach to the study of functions. Students will study and contrast different types of functions including absolute value functions, piecewise-defined functions, quadratic functions, polynomial functions, exponential functions, logarithmic functions, and rational functions. In each unit, students will graph, analyze, solve problems, and apply these functions in a variety of settings. Beyond functions, students will further their understanding of laws of exponents to square and cube roots. Other concepts in the course may also include sequences and series and selected topics in probability and statistics. Graphing calculators will be used throughout the course. (Prerequisite: Integrated Math 10 or a course in Algebra 1).

Integrated Math 10 (2043) Integrated Math 10 will take an integrated approach to the study of Algebra and Geometry with an emphasis on Geometry. Math 10 Integrated blends the study of Algebra and Geometry and is a continuation of Math 9 Integrated. This course is aligned to the Massachusetts Curriculum Frameworks in order to prepare students for the Grade 10 MCAS Mathematics Exam. Students will learn the skills they need to break down multistep problems and demonstrate their knowledge in various algebraic and geometric situations. Throughout the course, connections between algebra and geometry will be emphasized. Course topics include extending the number system; further study of linear relationships, descriptive statistics, area, volume, congruence, similarity, quadrilaterals, coordinate geometry and circles.

Geometry (2091, 2082, 2013) Geometry uses both an investigative and a deductive reasoning approach to the study of plane, solid, and coordinate geometry. Students at all levels will study straight-line figures, circles, transformations, right triangle trigonometry, area, volume, similarity, and proof. The emphasis on proof will vary by level. Geometry software and web-based applications are used throughout the year to allow students to investigate geometric principles. (Prerequisites: Accelerated; A in Math 8 Accelerated, Math 9 Accelerated or Math 9 Extended, Honors: B to A in Math 9 Honors).

Contemporary Applied Mathematics (2134): Contemporary Applied Mathematics will allow students the opportunity to reinforce learning of core high-school-level mathematics for college and career readiness. Students will learn the application of mathematics to the social sciences in today's world along with exploring topics in discrete mathematics. Throughout the course, all students will have the opportunity to strengthen their proficiency and fluency in all aspects of algebra. Students are required to have a graphing calculator as they will be used throughout the course (Prerequisite: Math 9 or Algebra II)

Precalculus (2203 and 2212): Precalculus is an extension of topics introduced in Math 9 or Algebra II. The course is designed to strengthen and broaden students' mathematical skills in order to prepare them for a course in calculus. Units of study in this course will allow students to develop their understanding of general concepts regarding functions. Students will also expand their knowledge of Trigonometry and be introduced to beginning topics of calculus such as limits. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: B- to A in Math 9 or Algebra II and Geometry).

Precalculus Acc-AB (2221): Precalculus-AB is an accelerated course and includes units of study required to prepare students to take AP Calculus AB. Units of study in this course include analysis of various functions, discrete mathematics, conic sections, and an extensive study of trigonometry. Beginning topics in calculus are also covered including limits and an introduction to the derivative. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: B- to A in Math 8 Accelerated, Math 9 Accelerated or Math 9 Extended and a B+ to A in Accelerated Geometry)

Precalculus Acc-BC (2231): Precalculus-BC is an accelerated course and includes units of study required to prepare students to take AP Calculus BC. Units of study in this course include analysis of functions, discrete mathematics, operations with complex numbers, analytic geometry, and an extensive study of trigonometry. Beginning topics in calculus are also covered including limits and techniques of differentiation. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: A above in Math 8 Accelerated, Math 9 Extended or Math 9 Accelerated and an A in Geometry Accelerated and teacher recommendation)

Fundamentals of Calculus and Statistics (2333): Fundamentals of Calculus and Statistics focuses on introducing students to essential concepts of Calculus and introducing students to central topics in Statistics. Units of study in this course include limits, derivatives, anti-derivatives and their applications. This course will also serve as an introductory course to statistics, which provides students the opportunity to learn statistical concepts, explore statistical properties, and apply statistical techniques in a real-world setting. Students are required to have a graphing calculator as they will be used throughout the course (Prerequisite: B- to A in Precalculus CP or completion of Precalculus Honors)

Calculus Hon (2302): Calculus is an honors course which focuses on the understanding of Calculus using numeric, algebraic and graphical approaches. Units from differential and integral calculus provide the main themes, however some time will be taken to master topics not adequately studied in precalculus. Included are topics of differentiation techniques, integration techniques and differential equations. Along with the theoretical aspects of Calculus, practical applications such as business, the behavioral sciences, the social sciences, Biology, Chemistry and Physics will be emphasized. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: B- to A in Honors Precalculus, C- to A in Precalculus Accelerated AB or teacher recommendation)

AP Calculus AB (2311): AP Calculus AB includes differential and integral calculus. The course closely follows the curriculum set by the College Board. Students are expected to take the AP-AB exam and may place out of or receive college credit for one semester of Calculus. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: B- to A in Precalculus Accelerated AB, completion of Precalculus Accelerated BC or A in Precalculus Honors with teacher recommendation)
*Additional summer work may be required for students who have not taken Accelerated Pre- Calculus.

AP Calculus BC (2321): AP Calculus BC includes a rigorous and extensive treatment of Calculus and Analytic geometry. The course closely follows the curriculum set by the College Board and the content of the course parallels the year's course now given in many colleges and universities. Students are expected to take the AP-Calculus exam and may be able to place out of or receive college credit for a year of Calculus. Students are required to have a graphing calculator as they will be used throughout the course (Prerequisite: B- to A in Precalculus Accelerated BC or A in Precalculus AB* with teacher recommendation)
*Additional summer work may be required for students who have not taken Accelerated Precalculus BC.

Statistics Hon (2332): Statistics is an honors course that serves as an introduction to data collection and data analysis. The course will expose students to statistical applications that they will likely see in other classes in the high school and in future college courses. Specific topics include data collection and display, regression, probability, statistical inference, and an introduction to the most common distributions and statistical tests. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: C- to A better in Math 9 Accelerated, C+ to A in Algebra II Honors or Math 9 Honors or C+ to A in Precalculus)

AP Statistics (2331): AP Statistics serves as an introduction to the major concepts and tools for collecting, analyzing and drawing conclusions from data. Students will be exposed to four broad conceptual themes: 1) Exploring Data: Observing patterns and departures from patterns; 2) Planning a Study: Deciding what and how to study; 3) Anticipating Patterns: Producing models using probability and simulation and 4) Statistical Inference: Confirming models. Students who successfully complete the course and the advanced placement examination may receive credit and/or advanced placement for a one-semester introductory college statistics course. Students completing this course are expected to take the Advanced Placement examination. Students are required to have a graphing calculator as they will be used throughout the course. (Prerequisite: B+ to A in Math 9 Accelerated, A in Math 9 or Algebra II Honors, B+ to A in Precalculus Honors, B- to A in Precalculus Accelerated AB, C- to A in Precalculus Accelerated BC or teacher recommendation)

Critical Thinking in Math (2475): Critical Thinking in Math is an open-ended one-semester math course. It is designed to explore a wide variety of topics in mathematics with students who have completed three years of mathematics. This is a “hands-on” course, incorporating group projects using manipulatives, the calculator, and the computer. (Prerequisite: 3 years of high school math)

Introduction to Computer Science (2482): Introduction to Computer Science uses the nationally recognized Exploring Computer Science (ECS) Curriculum. This semester course is designed to introduce students to the breadth of the computer science field through an exploration of engaging and accessible topics. Rather than focusing the entire course on learning particular software tools or programming languages, the course is designed to focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. The goal of Exploring Computer Science is to develop in students computational practices of algorithm development, problem solving and programming within the context of problems that are relevant to the lives of today’s students. The course covers the first four units of the ECS curriculum: Unit 1 Human Interaction, Unit 2 Problem Solving, Unit 3 Web Design, and Unit 4 Introduction to Programming and requires the students to complete capstone project. (Prerequisite: B- to A in Math 8)

AP Computer Science (2481): AP Computer Science is comparable to a first year college course in computer science, and is designed to prepare the student for the AP Computer Science exam. The Java programming language will be used. The course will focus on algorithm development, using concepts such as classes, linked lists, stacks, recursion, queues, trees, searching, hashing, and inheritance. It is recommended that students have access to a computer (not ChromeBook) at home when taking this course. Priority for enrollment will be given to students in their junior and senior year and for students who have taken a Computer Science course at Needham High School. (Prerequisites: Priority for enrollment will be given to students who have, earned a B- to A in Introduction to Computer Science, Fundamentals of Computer Science or AP CS Principles. Students who have earned a B to A in Precalculus and receive Department Chair, or concurrent enrollment in Pre-calculus and Department Chair approval will also be considered for enrollment)

AP Computer Science Principles (2488): AP Computer Science Principles provides an introduction to programming and the basic principles that underlie the field of computer science. The programming portion of the course focuses on algorithms, abstraction, and the logic behind programming languages. The principles portion of the course focuses on how computers and the internet work and how technological advances are affecting society, culture, and the economy. The AP test consists of a multiple choice exam as well as a portfolio component. For the portfolio tasks, students design their own program and research and report on the benefits and potential drawbacks of a new technological advance. Priority for enrollment will be given to students in their junior and senior year and for students who have taken a Computer Science course at Needham High School. (Prerequisites: Completion of Math 9. Additionally, having had the Introduction to Computer Science course is recommended or a comparable experience. The course closely follows the curriculum set by the College Board.

Robotics I (2489): Robotics I is a one-semester hands-on course that will introduce students to the engineering design process through robotics. Students will be assigned challenges that will be solved by building robots to perform given tasks. Students will learn about mechanical design, software design, and electrical components. Students will also learn about actuators and sensors, and how to effectively use them when building a robot. The equipment used for the course will remain in the classroom and as such students may need to complete some of their work after school. No programming or engineering background is required. When the schedule allows, students in Robotics I will collaborate with students in Introduction to Sculpture for an interdisciplinary Kinetic Sculpture Unit. (2482 or equivalent). (Prerequisite: B to A in Math 9 or departmental permission)

Personal Finance (2615): Personal Finance is designed to provide students with the confidence and knowledge to successfully navigate the financial decisions they will face as young adults after high school graduation. Topics include budgeting, banking, credit and loans, taxes, insurance, and investing. Assignments aim to prepare students to identify and evaluate trade offs in financial decisions such as choosing a college, car, or apartment. Students will also visit local businesses to enhance their learning through meetings with professionals. Priority will be given to students in their junior and senior year.

Principles of Accounting (2613): Principles of Accounting is a one-semester course that presents the principles of financial accounting and gives students insight into the language of business. Students will learn how businesses fund their operations and how business decisions impact the bottom line. Students will learn how to create journal entries and then how build and interpret balance sheets, income statements, and statements of cash flows. Students will learn to evaluate and analyze critical ratios to better understand the health of businesses. (Prerequisite: C to A in prior mathematics courses)

Integrated Senior Studies Acc: The Greater Boston Project (0491): This course explores how individuals and groups have worked throughout history to effect change in Greater Boston. Students will look at various historical moments through a variety of different lenses - population, government, economy, education, and arts & leisure - and consider how these have molded what Greater Boston has become today. The course of study is expressly interdisciplinary, as skills from the disciplines of English, history, and mathematics are

brought together to explore Greater Boston's past and present. The course culminates in the Community Action Project, which entails collaborative exploration into and analysis of at least one area of study from the course; the project allows students to become agents of change as they work to develop, propose, present, and possibly implement their resolutions to existing real-world problems. This is a double block, eight credit course that fulfills the senior year English requirement.

Junior/Senior STEM Capstone (2490) or Junior/Senior STEM Capstone 2 credit (2496) Junior/Senior STEM Capstone is independent Study course and is designed to give the self-motivated student or a small group of students the opportunity to work on a significant project of their design during school hours. Students will utilize the Da Vinci Workshop and will be expected to perform work beyond the school day. Options for learning range from scientific research and engineering projects, to work as part of scientific competitions and service learning community action projects, to other approved projects. In this course, students will write a proposal for their work, produce their results and present their work publicly in a manner agreed upon with the instructor. Prerequisites: Two teacher references that support the student's ability to work independently. Please Note: It is recommended/strongly encouraged that students do group projects. Any junior or senior is encouraged to take this course even if you are undecided about a project. Students can meet with the instructor to generate some project ideas.

Work Study - full year, 4 credits (2 Math credits) (9898) The Work Study class is designed to provide the skills needed to be successful in a work environment, as well as, provide the opportunity to earn credit for valuable work experience under school supervision. The class will meet outside of the regular school day to provide more flexibility for the students. The in-class time will focus on the skills, interactions, and knowledge needed to be successful in any job setting. Students will also acquire and apply practical math skills in order to gain a deeper understanding of how a business manages its operation, as well as, understand how to manage their own finances. Students will be required to have a job prior to enrolling and will be expected to work a minimum of 15 hours per week during the year. The class instructors will complete periodic visits to each job site and maintain contact with employers throughout the year to assess how the in-class lessons are translating to the work environment. Participation in the class is limited and must be approved by the student's parent, counselor and assistant principal. The class will be graded on a Pass/Fail scale, based on fulfillment of the classroom requirements and satisfactory performance on the job.

Computer Aided Design and Manufacturing (2467) Computer Aided Design and Manufacturing is a semester course in which students will learn the basics of Computer Aided Design using modern design software packages. Students will learn how to model ideas for parts and assemblies on the computer similar to the way this is done in industry. Students will learn about additive and subtractive manufacturing processes, and practice creating their designs using equipment in the Da Vinci Workshop, such as a 3D printer, laser cutter, or milling machine. Students will be expected to create a culminating project. This course may require a materials fee. (Prerequisite: B to A in Math 9 or Algebra 2 and a B to A in Physics)

Engineering Design 101 (2466) Engineering Design 101 is a semester course. This course is for students interested in learning more about engineering or are thinking about pursuing a career in Engineering or related areas. Students will learn about the tools, methods, materials, and processes used by engineers. This class will simulate the university engineering experience by giving students exposure with various aspects of the engineering profession. This course will proceed as a project based learning class involving several different engineering disciplines including: electrical, mechanical and structural. As students advance through the different units they will learn problem solving, critical thinking, design skills, 3D modeling as well as other skills that are vital to becoming a successful engineer. (Prerequisite: Successful completion of Math 9 and current enrollment in Physics).

Computer Programming Fundamentals (2476) Computer Programming Fundamentals is a semester course. Students will expand the computer science knowledge acquired in Introduction to Computer Science (course 2482) as well as develop or expand their computer programming skills. The course will use a contemporary programming language for students to grow their computer programming skills. (Prerequisite: 2482: Intro to Computer Science or Mathematics Department Chair approval)

Multivariable Calculus (2234) Multivariable Calculus is a full year, post AP Calculus elective course that is designed for students who are interested in furthering their understanding of calculus topics and their applications. The course extends the concepts of calculus to the study of real-valued functions of more than one variable and to vector-valued functions of one or more variables. Topics include partial derivatives, gradients, optimization, multiple integrals, and vector fields. How do we maximize a function of many variables subject to a number of constraints? What does it mean to integrate a function of many variables, or a function with vector outputs, over a region of space? How does a local point-measure like density "add up" to give a function of a solid region of space, like mass? How do we find the volume of a k-dimensional prism in n-dimensional space? Learn the answers to all these questions and many others in our full-year elective, Multivariable Mathematics. (Prerequisite: Successful completion of AP Calculus (AB or BC). Students who have completed a course in AP Calculus AB wishing to take multivariable calculus will be required to complete assignments after the AP exam to prepare for the course).

★ **Math Explorations through Data Science (2477):** Math Explorations through Data Science is a semester elective course for grade 9 students who are looking for a challenge or support in mathematics. Students will work collaboratively and be introduced to the main ideas in data science through the use of such tools as Google Sheets, Python, Data Common and Tableau. Students will learn to be data explorers in project-based units, through which they will develop their understanding of data analysis, sampling, correlation/causation, bias and uncertainty, probability, modeling with data, making and evaluating data-based arguments, the power of society and more. As part of their work students will create a portfolio of their data science work. In addition to data science work, students will receive targeted support and challenge as a means to enhance, refine and further develop their algebra skills in an effort to provide students the opportunity to enroll in a course that meets their desired level of challenge.

MEDIA

Num	Length	Credit	Course
8455	S	2	Technology Leaders
8490	S	2	Television Communications 1
8495	S	2	Television Communications 2
8486	S	2	Television Production
8497	S	2	News and the Web
8595	S	2	Storytelling with Numbers
8498	S	2	Digital Game History & Design
8411	F	4	AP Capstone Seminar
8411	F	4	AP Capstone Research

Technology Leaders (8455): This help desk model course will give students a background in technical support at Needham High School. Students will be introduced to common tech problems and develop solutions in the following areas: computer software, hardware, television production, audiovisual hardware and software, and web design. Technology Leaders will assist staff and students with troubleshooting and other supports as needed. When not assisting students and staff, tech leaders will work on their independent learning project of their choosing. They will also be actively contributing to an educational technology blog. Because of the nature of the experience it will be limited to 2 students per period. This opportunity is available for the full year or a semester. Prior to course selection, a technology specialist must interview interested students.

Television Communications 1 (8490): This course is designed to enable students to learn television production skills in a hands-on team environment. Students will learn to use video as an effective form of communication and look critically at television productions to critique the medium. This includes learning to operate equipment in the television studio, working as a member of a team and serving as a crew member for productions. Students will write scripts and direct individual and team projects. The course will provide an opportunity for you to create a variety of video productions (newscasts, public service announcements, advertisements, etc.), while developing the ability to form story ideas and effectively translate these ideas into videos using Final Cut. This course may also be used for two of the FPA graduation credits, provided the student's body of work in the course shows evidence of meeting at a satisfactory level the Creating, Responding and Performing Standards of the FPA Department.

Television Communications 2 (8495): This course is designed to enhance television production skills. Students should have a background in how to use studio/field equipment, and will be focusing on increasing skills and creativity to design a more involved production. In addition to using Final Cut as an editing tool, you will learn to create graphics using Motion. The course will also focus on students creating a mini-documentary that adheres to television industry standard guidelines of digital citizenship and fair use. This course may also be used for two of the FPA graduation credits, provided the student's body of work in the course shows evidence of meeting at a satisfactory level the Creating, Responding and Performing Standards of the FPA Department. (Prerequisite: Television Communication 1)

News and the Web (8497): This course is designed for students who wish to examine web design through the lens of news. During this class, students will learn how to critically examine news sources, further their own understanding of what news is, and tell stories through words, images, and sounds. Students will learn to apply the basics of web design, including basic graphics, layout, animation, and video production. Students will also examine their ethical role as a creator throughout this course. The course level is beginner to intermediate. This course may also be used for two of the FPA graduation credits, provided the student's body of work in the course shows evidence of meeting at a satisfactory level the Creating, Responding and Performing Standards of the FPA Department.

Storytelling with Numbers (8595): Storytelling with Numbers teaches students the fundamentals of data visualization, spreadsheets, and how to communicate effectively with data. Students will learn how to use data to create an engaging, informative, compelling story. They will create their own surveys, explore survey bias, and analyze the resulting data. Students will be able to evaluate graphic representations of data and identify the purpose behind the graphic. Utilizing these skills, the class culminates in a final project with the presentation of data in what the student deems the most effective method. Included in this course are topics such as basics of spreadsheets, analyzing data and graphs, designing and analyzing surveys, importance of context, models of visual data, basics of visual design, using data to tell a story.

Digital Game History & Design (8498): This course is designed to give students an overview of digital games and game development. Students will learn about gaming history, game design, storytelling, and the psychological and sociological aspects of games and gaming. The technology behind consoles, computers, arcades, and mobile gaming platforms will be covered as well. Students will use this knowledge to examine trends to provide their own answer to the question, “What is the future of digital games and how do emerging technologies fit in?” The culminating project of this class will be creating a choose your own adventure computer game using Twine and components of HTML, CSS, and Javascript. Prior videogame experience and coding is recommended but not required. Topics covered include, history of video game creation, basic video game design process, storytelling and world building, gaming technology, sociology, and trends, student created games.

Television Production (8486): This course is designed to enhance television production skills in a real world setting. Students should have a background in how to use studio equipment, and will be focusing on increasing skills and creativity to design a more involved production. Students will act as a high school television production house, creating television episodes to air on The Needham Channel. Students will investigate series television and create their own ideas for an ongoing series. Students will pitch their concepts to the rest of the class and a show will be selected for production. After pitching a show idea to the teacher and to a representative from the Needham Channel, students will work to produce a total of six 30-minute episodes. The class will operate under professional procedures to get their shows ready for air at The Needham Channel. (Prerequisite: Television Communication I)

AP Capstone Seminar (8411): AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world issues. Using an inquiry framework, students practice analyzing and interpreting articles, research studies, literary and philosophical texts, speeches, broadcasts, personal accounts, and artistic works. Students learn to synthesize information from multiple sources, develop their own perspectives in research-based written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. This course is year one of the two-year AP Capstone Diploma Program and students are encouraged to enroll in AP Research at the completion of this course. Prerequisites: teacher recommendation, preference given to sophomores and juniors.

AP Capstone Research (8412): AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long, research-based investigation to address a research question. In the AP Research course, students further refine their skills acquired in the AP Seminar including research methodology, ethical research practices, and accessing, analyzing, and synthesizing information as they address a research question. Students document their processes and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of 4000–5000 words, accompanied by a performance or exhibition of product where applicable, and a presentation with an oral defense. This course is year two of the two-year AP Capstone Diploma Program. Prerequisites: successful completion of AP Seminar.

Media Facilities

Students and staff have many resources available, both physical and virtual. Teachers schedule their classes to work on projects in the Library, Multimedia Lab (409), Television Studio, or two computer labs. Students may work independently in the Library before and after school or during study periods. The NHS Library web page offers many tools for research, including the web catalog, databases, citation help, and pathfinders for class projects. NHS has a wireless network, available to students who have signed the Responsible Use Policy. Please refer to the Student Handbook for more information.

SCIENCE

Num	Length	Credit	Course	Num	Length	Credit	Course
3001	F	4	Biology Acc	3502	F	4	Modern Physics Hon
3012	F	4	Biology Hon	3542	F	4	Experiencing Chemistry Hon
3022	F	4	Biology 9IP	3531	F	4	Environmental Science Acc
3023	F	4	Biology	3532	F	4	Environmental Science Hon
3101	F	4	Physics Acc	3533	F	4	Environmental Science CP
3112	F	4	Physics Hon	3610	S	2	Introduction to Astronomy
3123	F	4	Physics	3642	F	4	Marine Science Hon
3201	F	4	Chemistry Acc	3701	F	8	AP Biology
3212	F	4	Chemistry Hon	3801	F	8	AP Physics
3223	F	4	Chemistry	3901	F	8	AP Chemistry
3401	F	4	Physiology Acc	2490	F	4	Junior/Senior STEM Capstone
3412	F	4	Physiology Hon	2496	S	2	Junior/Senior STEM Capstone- 2 cr

The aim of the Science program is to ensure students develop a scientific perspective with which to observe, analyze, and make decisions about the world around them. In order to realize this goal, the department offers a carefully sequenced curriculum that provides knowledge and skills in experimental scientific methods, life sciences, physical sciences, and chemical sciences. Science offerings in grades 9, 10, and 11 provide foundational content in Biology, Physics, and Chemistry while building hands-on laboratory practices and technical communication skills. Each of the disciplines seek to present core content through common thematic concepts across the physical and life sciences. Senior elective offerings provide a wide range of opportunities for students to integrate and deepen their understanding of science within and across the major disciplines, including Advanced Placement courses. Assignments in all courses work to develop data analysis and presentation skills, the ability to apply theories and methods to real world situations, engineering practices and technical writing skills. Content in each course aligns with the Massachusetts Science and Technology/Engineering standards (<http://www.doe.mass.edu/stem/standards/StandardsDraft.pdf>) and prepares students for MCAS testing. Twelve credits, 3 years, of science are required for graduation.

Science Department Course Expectations (Broken down by Level)			
	Accelerated	Honors	College Prep
Differentiation among levels	Can conduct research in scientific topics and find appropriate supporting resources independently. Can synthesize multiple sources of data and research in formulating an argument.	Can analyze multiple sources of data and research in formulating an argument.	Can apply multiple sources of data and research in formulating an argument.
Time Management	Ability to manage time independently.	With assistance, is guided toward independent time management.	Curriculum is structured to provide support for time management.
Homework Expectations (on average)	2 - 4 hours per week.	1 - 2 hours per week.	30 minutes to 1 hour per week.

Notice to Parents of Students Taking Biology or Physiology: Biology and Physiology courses include issues of human sexuality.

Under Massachusetts law and Needham School Committee policy, you may exempt your child from any portion of the curriculum that involves human sexual education or human sexuality issues. To receive an exemption, simply send a letter addressed to your building principal requesting an exemption for your child. Any student who is exempted will be excused from those lessons that cover topics on human sexuality and will be provided with an alternative assignment. A student who is exempted from this portion of the curriculum will not be penalized in any way.

Biology

Accelerated, Honors, College Prep (3001, 3012, 3023): The Biology curriculum focuses on topics related to living organisms including structures and processes from a molecular level to the level of a complete organism, ecosystem dynamics and interactions, inheritance and variation of traits, and unity and diversity of biological evolution. The curriculum is aligned with the Massachusetts High School Life standards and practices. Detailed descriptions of the learning standards can be found at <http://www.doe.mass.edu/stem/standards/StandardsDraft.pdf>. Thematic links are used to introduce and weave the concepts of Biology together. These themes include: Homeostasis, Organization, Unity and Diversity, Structure meets Function, and Transfer of Energy and Matter. The curriculum incorporates a significant emphasis on the practices of science including an introduction to laboratory equipment, procedures, and science writing skills. All levels of the ninth grade curriculum serve to prep our students for the MCAS exam in June while incorporating real world applications of Biological concepts.

Biology 9IP (3022) Students who choose this course must also sign up for English 9IP, Math 9IP, and World History 9IP. The biology curriculum focuses on topics related to living organisms, including structures and processes from a molecular level to the level of a complete organism, ecosystem dynamics and interactions, inheritance and variation of traits, and unity and diversity of biological evolution. Biology 9IP will align with the content taught in an honors biology course and will prepare students for the MCAS exam in June. The real world applications and science practices will be taught by making explicit connections to the other 9IP subjects using a project-based learning approach to the interdisciplinary themes of Observations and Patterns, Systems, Power and Influence, Disease; and Revolutions. Students will be analyzing data from various sources and will learn to develop their communication and collaboration skills that cross disciplines. The curriculum will also emphasize the practices of science, including an introduction to laboratory equipment, procedures, and science writing skills.

Physics

Accelerated, Honors, College Prep (3101, 3112, 3123): Physics is the study of the behavior of matter and energy. The physics program uses “hands on” science practices to introduce and support the physical laws of nature including motion, forces, energy, momentum, sound, light, electricity, magnetism, and atomic structure. Understanding of concepts is reinforced through modelling of physical and natural phenomenon, investigations and problem solving. Using 21st century technology and equipment, students will gather and analyze data related to real world situations including sports, technology, and the environment. While mathematical skills are the foundation of application within the physics program, students work to utilize, discuss, and explain physical concepts and problems with scientific fluency. The accelerated level uses algebra and trigonometry in multi-step problem solving, the honors level uses algebra to develop problem solving skills, and the college prep level will utilize a problem-based curriculum focussed on developing 21st century skills.

Chemistry

Accelerated, Honors, College Prep (3201, 3212, 3223): Chemistry examines the structure of matter, its properties, and the changes it undergoes. The major topics of chemistry include atomic structure, reactivity and bonding, energy in chemical processes, as well as the physical characteristics of chemicals. These topics are related to the essential themes of conservation, structure and function, stability and change, equilibrium, and the scientific method. Through quantitative and qualitative analysis, students will acquire an understanding of chemistry and use its concepts to explain phenomena seen in and out of the classroom. The curriculum further develops the practices of science by providing opportunities for students to design experiments to investigate chemical phenomena and scientific claims, support their findings with data, and analyze the impact of error on their conclusions.

Suggested Math Prerequisites:

Chemistry Accelerated (3201) - Students should be simultaneously enrolled in either Accelerated or Honors Pre-Calculus and have earned either an A in Honors Algebra II or a C or higher in Accelerated Algebra II.

Chemistry Honors (3212) - Students should be simultaneously enrolled in Honors Pre-Calculus and have earned a C or higher in Honors Algebra II.

Chemistry College Prep (3223) - Students should be simultaneously enrolled in Algebra II or higher.

Senior Electives - Full Year

Anatomy and Physiology: The accelerated and honors A&P courses investigate the major concepts and ideas of human physiology. Major body systems are studied as they relate to the themes of Structure meets Function, Homeostasis, Communication and Plasticity. Understanding is built by comparing and analyzing the effects of disorders on the body. These courses are experimentally based with

a strong laboratory component that incorporate aspects of Biology, Physics, Chemistry and statistical techniques. Both levels work to prepare students for the independent nature of college academics.

Physiology Acc (3401): Students will design and implement experiments to study essential structures and functions of the body. The class is largely built upon written expression of knowledge, but includes presentations building oration skills. Students are expected to work independently outside of class and within groups inside class to actively unravel the mysteries of the human body as applied to real world situations. This course is designed to mimic a college level physiology course and prepare students for the rigors of self directed study.

Physiology Hon (3412): Students will perform experiments to study essential structures and functions of the human body. This class incorporates written assignments and also provides alternative ways of demonstrating understanding and knowledge. It involves both independent and group work within the classroom, while making connections and applying understanding to real-world medical situations. This course is designed to build the foundation of skills to succeed at college level courses.

Modern Physics Hon (3502): A course designed to introduce students to the major developments in physics over the past 150 years. The course covers the development of the photon model of light, special and general relativity, the fundamentals of quantum mechanics, nuclear physics, particle physics and cosmology. The course will emphasize an understanding of the experiments that shaped these new developments. Students will be doing hands on lab work, article analysis, problem solving, and presentations in addition to the standard lectures on the topics. Prerequisite: Students must have earned a passing grade in 10th grade physics to enroll in this course.

Experiencing Chemistry Hon (3542): This course takes the basic concepts learned in chemistry and biology and applies them to real-world situations such as food chemistry and nutrition, forensic chemistry, biochemistry, materials chemistry, and environmental chemistry. The course is designed to engage students in the hands-on exploration of career-relevant concepts and practices such as crime scene investigation, process development, experimental design, and hazardous and nuclear waste management. To follow up on specific interests, students will also have the opportunity to plan field trips and invite guest speakers to gain a firsthand perspective of working and living in the scientific community.

Environmental Science: This interdisciplinary course will examine the relationship between humans and the environment through significant field work. Students will explore topics of ecology, natural resources, populations, forestry, fisheries, climatology, environmental health & toxicology, environmental engineering & modeling, production & consumption of energy, and environmental policy, law, & planning. Students will be involved in a variety of citizen science initiative and green technologies with a focus on local impact. Students will be expected to collect data using environmental field techniques, interpret this data, and propose solutions to environmental problems indicated by data. A major focus of this course is to increase students' scientific literacy to evaluate the validity and accuracy of information from media and other sources through the investigation of case studies.

Suggested Math Prerequisites:

Accelerated Level (3531): Advanced math skills (strong foundation from accelerated or honors pre-calculus)

Honors Level (3532): Proficient math skills (basic understanding of pre-calculus)

College Preparatory Level (3533): Comfortable with algebraic manipulations

Marine Science Hon (3642): Marine Science is a full year course integrating the biological and physical aspects of ocean study (a holistic approach to understanding and experiencing the marine environment). Topics include marine food chains and ecosystems, the physical factors that influence productivity in the oceans, plankton, marine plants and animals (invertebrates and vertebrates), sea water, waves, tides, ocean currents and circulation, and the geology of the ocean bottoms. Also included will be a consideration of the biological and physical resources of the oceans as they relate to humans. This course will be laboratory oriented and will include several field trips as an important means of appreciating the marine environment.

Introduction to Astronomy (3610): This course highlights an introductory survey of the universe. Some of the topics covered include the solar system (the earth, moon, planets and their motion); comets, meteors, eclipses and tides; the evolution of stars, the formation of red giants, black holes, pulsars, etc.; galaxies, cosmology and extraterrestrial life. Telescopic observations on certain evenings will be available but not mandatory.

Junior/Senior STEM Capstone (2490) or Junior/Senior STEM Capstone 2 credit (2496) Junior/Senior STEM Capstone is independent Study course and is designed to give the self-motivated student or a small group of students the opportunity to work on a significant project of their design during school hours. Students will utilize the Da Vinci Workshop and will be expected to perform work beyond the school day. Options for learning range from scientific research and engineering projects, to work as part of scientific competitions and service learning community action projects, to other approved projects. In this course, students will write a proposal for their work, produce their results and present their work publicly in a manner agreed upon with the instructor. Prerequisites: Two teacher references that support the student's ability to work independently. Please Note: It is recommended/strongly encouraged that students do group projects. Any junior or senior is encouraged to take this course even if you are undecided about a project. Students can meet with the instructor to generate some project ideas.

Advanced Placement Courses

AP Biology (3701): This is a second year course in biology that is the equivalent of a two semester introductory course taught at most colleges and universities. This course uses a College Board approved syllabus and prepares students for the May AP Exam. The content is taught thematically with unit topics all incorporating the following Big Ideas: Evolution, Cellular Processes, Genetics and Information Transfer, Interactions. The Science Practices are an essential part of the course. Students continue to design experiments to answer questions and continue their use of data analysis by incorporating various statistical measures and using spreadsheets to analyze large data sets. The connections between Science, Technology and Society are also explored as learn to read and discuss journal articles and relate current research to the topics learned throughout the course. AP Biology is an 8 credit course and will meet 10 periods per cycle.

AP Physics (3801): This is a second year course in physics. This course is designed to prepare students for the Advanced Placement Physics C exam. Mechanics, electricity, and magnetism are covered in great depth, utilizing calculus wherever appropriate. This is an intensive course comparable to a college course for students majoring in the physical sciences or engineering. Students who have completed calculus or are currently enrolled in the calculus program may elect Physics AP. AP Physics is an 8 credit course and will meet 10 periods per cycle.

AP Chemistry (3901): This is a second year course in chemistry. AP Chemistry is the equivalent of the introductory chemistry course taught at most colleges and universities. This course will prepare the student for the Advanced Placement Chemistry Exam. The laboratory section of this course is rigorous, and independent laboratory experiments will be stressed. It is assumed that students have retained a firm understanding of what they learned in their first year of chemistry, and group work, focused around complex or applied chemical concepts illustrates the course's style. AP Chemistry is an 8-credit course and will meet 10 periods per cycle.

HISTORY AND SOCIAL SCIENCES

Num	Length	Credit	Course	Num	Length	Credit	Course
4101	F	4	World History Acc	4212	F	4	The World Since 1945 Hon
4102	F	4	World History Hon	4402	F	4	American Legal System Hon
	F	4	World History 9IP	4412	F	4	Economics Hon
4103	F	4	World History	4421	F	4	AP Psychology
4201	F	4	The World and America Acc	4422	F	4	Psychology and Sociology Hon
4202	F	4	The World and America Hon	4423	F	4	Psychology and Sociology
4203	F	4	The World and America	4462	F	4	African American Studies and Contemporary Issues Hon
4301	F	4	AP U.S. History	4441	F	4	AP United States Government
4302	F	4	United States History Hon	4445	F	4	Debate and Argument
4303	F	4	United States History	0491	F	8	The Greater Boston Project
4311	F	4	United States History Acc	4214	S	2	History, Politics, and Popular Music

The aim of the History and Social Sciences program is to prepare students for intelligent participation in our democratic society. In order to realize that goal, the department offers a carefully sequenced curriculum that provides knowledge and skills in history, geography, political science, psychology, sociology, and economics. Students are encouraged to take a two year World History sequence and one year of United States History is required for graduation. History course offerings in grades 9, 10, and 11 examine the heritage of major cultures and societies, and the development of the American identity. The curriculum investigates the responsibilities of citizenship in American society in an era of increasing globalization. Assignments in all courses work to develop analytical thinking and writing skills, research, and verbal presentation skills. The electives program allows students to study in greater depth a variety of courses in history and the social sciences.

Grade Nine

World History, Middle Ages to the Nineteenth Century (4101; 4102; 4103): The purpose of this course is to have students learn about the historical development of the major cultures and societies from the Middle Ages to the nineteenth century. The emphasis is placed upon both European and non-Western societies. Geographical knowledge of our world, historical analysis and comparison of different cultures, and political and economic development of societies that have contributed to our modern global community, are areas of focus.

World History 9IP (4112): Students who choose this course must also sign up for Biology 9IP, English 9IP, and Mathematics 9IP. Interdisciplinary World History fits within the sequenced curriculum of the Social Studies department to prepare students for intelligent participation in our democratic society while developing essential collaboration and communication skills. Students will learn about the historical development of the major cultures and societies from the Middle Ages to the nineteenth century. Assignments in all courses work to develop analytical thinking, writing, research, and verbal presentation skills. This course also draws explicit connections to the other 9IP subjects using a project-based learning approach to the interdisciplinary themes of Observations and Patterns, Systems, Power and Influence, Disease; and Revolutions. Students will develop geographical knowledge, historical analysis and research, and connections to the modern world in an engaging project-based approach.

Grade Ten

The World and America - Accelerated, Honors, and College Prep (4201; 4202; 4203): This course examines key themes in World and American History from the Age of Revolution until the present day. Themes studied include Imperialism, the World Wars, the rise of communism and fascism, the Cold War, Post-Imperialism, and modern China. As well as looking at the main events, the course analyzes the US perspective and America's role in the world. In addition, the course includes a unit, Facing History and Ourselves, that asks students to study the Holocaust and genocide and connect themes from history to the world today. Current events and geography are integrated throughout. The course places emphasis on research, debate and presentation skills and analytical writing. Accelerated students have the opportunity to participate in National History Day or an alternative long-term project.

Grade Eleven

AP U.S. History (4301): This course provides a thorough survey of America from the period of sectionalism to contemporary times. Supplementary readings and research papers will be required. In addition, the course is designed to prepare students for the Advanced Placement Examination in United States History.

Accelerated United States History (4311) Accelerated United States History is an upper level American studies class that is similar to the AP course in level of difficulty but different in terms of its focus and methodology. The course is focused on encouraging students to think about and discuss many of the large scale issues and themes that frame American history, including the tension between majority rule and minority rights, the role of individuals and groups in making history, the role of government in American society, the challenges of a multicultural society, and the effects of economic growth and technological development on everyday Americans. Supplementary readings and research papers will be required on a similar level to those in AP US History.

United States History - Honors and College Prep (4302; 4303): This course surveys American history and civilizations with an emphasis on the nineteenth century through the twentieth century. The focus will include developing skills in the areas of historical inquiry and critical thinking, primary source and data analyses, historical research and writing, and oral expression.

Electives

Debate and Argument (4445): OPEN TO ALL GRADES- Debate and Argument enables students to develop speaking, listening, critical thinking, and research skills. Through participation in several distinct debate formats, students will work towards being able to understand, analyze, and explain the controversies underlying a wide variety of subjects. The crucial role of debate and critical thinking in both a democratic society and one's personal life will be emphasized. Several social, political, and philosophical topics will also be examined in the course. No prior speech or debate experience is necessary.

The following Electives are open to Seniors and Juniors:

The American Legal System Hon (4402): This course will examine the practical and theoretical aspects of law in American society. Students will investigate the many facets of our legal system including criminal, and civil. In addition law enforcement, incarceration, and the American courts will be examined. A variety of experiences will be provided to students. Among those are mock trials, guest speakers, court visits and a visit to the Massachusetts Correctional Institute. The main objective of the course is to acquaint the student with an understanding of the rights and responsibilities of citizens in a democratic society.

Economics Honors (4412): Economics is the study of how individuals and societies decide how to use scarce resources in order to satisfy their unlimited wants. The course focuses upon concepts and principles that include supply and demand, marketing, money and banking, the stock market, fiscal and monetary policies, as well as international trade. Comparing different types of economic systems is part of this introductory course. Economics should assist students in becoming informed decision makers through economic analysis of data, issues, trends and theories.

Psychology and Sociology Honors and College Prep (4422, 4423): The focus of this course will be upon the various theories of human behavior, the study of the brain, the senses and perception, motivation and emotion, the factors that influence personality development, the dynamics of group behavior, the unique nature of adolescence, gender differences, scientific methodology, and the historical significance of psychology. Field experiences, guest speakers and simulations will augment instruction.

African American Studies and Contemporary Issues Hon (4462): This course will serve as an introduction to the study of African American life from the end of the Civil War to the present. Using a chronological framework, students will explore a wide range of themes involving politics, culture, and the arts, while emphasizing the dynamic role played by African Americans in U.S. culture. Students will engage in lectures, debates, research projects and discussions, examining the African American experience through documents, music, film, and digital resources.

The World Since 1945 Hon(4212): This course examines cultural, political, economic, military, and social developments throughout the World since the end of World War II. The aim of the course is to enhance cultural literacy and familiarize students with the world's most significant issues and regions in recent history. Political issues highlighted include the Arab-Israeli conflict, India and China as emerging world powers, contemporary mechanisms for the prevention of genocide, and the status of democracy around the globe. Students are expected to be well versed in current events.

History, Politics, and Popular Music (4214)

How does your favorite music reflect the society in which it was created? How can pop music help you better understand our country's past and present? How do we use the act of listening to music as a lens through which we can understand issues of race, class, and gender in our nation's history? How does analyzing music help us better understand ourselves? To answer these questions and others, this course will analyze how youth culture (especially popular music) reflects, critiques, and influences American politics and society. The course is interdisciplinary and will be taught by one English teacher and one History teacher. Class work will be project-based and will allow all students to bring their own passions to the course; the music you listen to today will be a crucial part of this class! For 11th and 12th grade students only.

The following Electives are open to Seniors only:

AP Psychology (4421): This fast paced course is designed to introduce students to the systematic and scientific study of behavior and mental processes. Units include: research methods and ethics, intelligence, the physiological basis of behavior, motivation and emotion, learning theory, memory and thinking, sensation and perception, stress and frustration, social psychology, human growth and

development, personality theory, abnormal psychology, and psychotherapy. The varied format uses a college level text, outside reading books, case study analyses, class discussion, experiments, demonstrations and labs. Activities are offered for each student to explore his/her own self-awareness. Additionally there is a small amount of required summer reading. Students are expected to contribute to class discussions and complete a project each term. Students will also design and conduct original research putting theory into practice. Students who elect to enroll should be highly motivated independent learners.

AP United States Government (4441): United States Government is designed to give students a critical perspective on government and politics in the United States. Students enrolled in this course will investigate the constitution, federalism, civil rights and civil liberties, the presidency, congress, and political interest groups. The course also examines U.S. political culture and its evolution, as well as public policy. This course's main focus is U.S. politics since 1980, with a special focus on political themes played out through current events and elections. Students are encouraged to develop their own theories through readings, role plays, discussions and term projects. (Prerequisite: A full year of US History)

Integrated Senior Studies Accelerated: The Greater Boston Project (0491) This course explores how individuals and groups have worked throughout history to effect change in Greater Boston. Students will look at various historical moments through a variety of different lenses - population, government, economy, education, and arts & leisure - and consider how these have molded what Greater Boston has become today. The course of study is expressly interdisciplinary, as skills from the disciplines of English, history, and mathematics are brought together to explore Greater Boston's past and present. The course culminates in the Community Action Project, which entails collaborative exploration into and analysis of at least one area of study from the course; the project allows students to become agents of change as they work to develop, propose, present, and possibly implement their resolutions to existing real-world problems. **This is a double block, eight credit course that fulfills the senior year English requirement.**

WELLNESS (HEALTH / PHYSICAL EDUCATION)

Num	Length	Credit	Course
8605	S	2	Wellness 9
8615	S	2	Wellness 10
8625	S	2	Wellness 11
8635	S	2	Wellness 12

All high school students are required to take one semester of Wellness (Health/Physical Education) each year while at Needham High School. Students must pass all (4) years of Wellness (8 credits) in order to meet their requirements for graduation. Students should sign up for the Wellness number that pertains to their grade level (as listed above). Sophomore and senior classes will meet during the fall semester while 9th grade and 11th grade classes will meet during the spring semester.

Failure Policies: A student who fails to successfully complete a required health/physical education course in any given semester, and/or is dropped from a course, must make up the deficiency prior to the receipt of a diploma from Needham High School. It is expected that students will make up their Wellness requirement by repeating the course they have failed or by attending a summer school program approved by the Principal. Participation in additional semesters of Wellness can be done in extreme situations but only with the approval of the Director of the Wellness Department. Students should make up courses as soon as possible after failing a course.

Notice to Parents of students in grades 9 & 11 about Sex Education: Health Classes in grades 9 and 11 include issues of human sexuality.

During the second semester of **9th grade**, sexuality education will be taught within a larger unit called “9th Grade Health”. The overall program is designed to teach students to make responsible decisions about alcohol and other drugs, tobacco, and sexual behaviors. The sexuality component of this course views sexual behavior as an adult behavior that occurs within the context of a committed, respectful, physically and emotionally healthy relationship.

Also during the second semester, **grade 11** students will take a traditional health education class that addresses a wide range of teenage health issues (including sex and sexuality) and challenges teens to consider the risks and consequences (to self and others) behind their decisions. Students reflect upon their role in creating healthy relationships (peer/collegial, friendships, family relationships, romantic relationships) and think about the importance of negotiating roles and responsibilities (regardless of gender).

Detailed information about our sexuality education curriculum can be viewed on the Needham Public Schools website: <http://rwd1.needham.k12.ma.us/wellness/Sexuality>

Under Massachusetts law and Needham School Committee policy, you may exempt your child from any portion of the curriculum that involves human sexual education or human sexuality issues. To receive an exemption, simply send a letter addressed to your building principal requesting an exemption for your child. Any student who is exempted will be excused from those lessons that cover topics on human sexuality and will be provided with an alternative assignment. A student who is exempted from this portion of the curriculum will not be penalized in any way.

Program Description: At Needham High School, Health Education content and Physical Education content are combined to make up our wellness curriculum. Each individual course offers students a combination of “health” concepts and related “activities” designed to build the skills, knowledge and attitudes needed to participate in an active healthy lifestyle. The wellness curriculum is designed to emphasize the student’s responsibility for his/her own health and well-being based on a six dimensional wellness model (see wellness hexagon below). This model explores human health as a multidimensional phenomenon that requires the individual student to take care of and nurture himself or herself in all the areas identified within the wellness hexagon.

The high school curriculum is part of a comprehensive K-12 Health and Physical Education sequence which enables the high school teachers to plan courses that build upon the knowledge, skills, and behaviors learned throughout the K-8 program. Because of this, high school classes focus more on encouraging each individual to evaluate his/her own wellness and set specific goals that will result in self improvement. As a result, high school wellness courses provide students with information, skills, and opportunities to carefully examine their current health status and challenge them to make appropriate adjustments towards healthier living.

The design of the high school wellness program includes a thematic focus for each grade level. Throughout the semester, this theme is integrated into 3 - 4 units of study (a required wellness unit, a required activity unit, and one or two additional activity units). As students experience this sequence of units, they learn wellness concepts in the classroom and then learn to apply them through specific activities in the fitness center, wellness studio, gymnasium, tennis courts and playing fields.



9th Grade Thematic Focus ~ Healthy Mind-Healthy Body Connection

This theme is used to help students understand the important relationship between a strong mind and a strong body. Students will learn about the developing teenage brain and how it affects their ability to make decisions. They will be challenged to think about the many decisions they will have to make in high school and learn ways to develop and maintain a healthy mind and body. Decision-making - particularly decisions about the use of alcohol and other drugs, and delaying participation in sexual behaviors will be stressed. Students will also be introduced to the Needham High School fitness center and learn practical ways to improve muscular endurance and strength. In addition students will learn about the many benefits of physical activity (physical, social, emotional, intellectual) through sports and games.

10th Grade Thematic Focus ~ Exploring Individual & Community Wellness

In this course, students are taught to use the wellness hexagon as a tool for thinking more broadly about their health and wellbeing and the wellbeing of others. This model expands students' thinking about health beyond the typical absence of disease to a more holistic understanding of health as interdependent parts (dimensions) that work in concert with one another (see model of wellness hexagon above).. Each dimension is continually affecting and/or responding to the others which results in a dynamic and ever changing sense of well being. By becoming more conscious of each of the dimensions of wellness, and working to nurture them, students learn ways to affect their overall sense of well-being (regardless of their current health condition). We refer to this process as becoming an active participant in our own wellness journey. In addition to self -- students will also explore ideas and ways to improve community wellness.

11th Grade Thematic Focus ~ Understanding and Assessing Personal Risk and Consequences

This theme is used to guide students as they examine and assess the positive and negative personal risks and consequences they may face as young adults. Participation on our indoor ropes course will illustrate the importance of building trust in relationships and demonstrate how stepping outside one's comfort zone can lead to positive risk taking (growth). In their health class, students will continue to explore characteristics of healthy and unhealthy relationships and will reexamine the negative risks and consequence of sexual activity and the use of alcohol and other drugs. Students will reexamine the development of the teenage brain and explore the potentially dangerous role that alcohol and other drugs play in poor decision-making.

12th Grade Thematic Focus ~ In Pursuit of a Healthy Balance

This theme is used in the culminating year of our program to help students reflect upon their past knowledge and experience in wellness classes and to explore and develop their own role and responsibilities in the ongoing pursuit of maintaining a healthy balance in their young adult lives. Students are challenged to explore their nutritional practices and think about ways to adopt healthy eating habits. Students learn strategies for managing stress and participate in both mindfulness and yoga practices. All students take CPR (those interested can receive a CPR card) and study health and wellness opportunities in the community and on college campuses.

CONTENT DESCRIPTION FOR CORE WELLNESS CLASSES: At each grade level, all students take two wellness units that are required and one or two others that are assigned based on space and time of year (some units can only be offered when certain spaces are available or when classes can be held outside). The required curriculum units have been carefully chosen to address health and wellness issues that are important to high school age students and that address school and community issues and concerns. State and national guidelines and The Metrowest Adolescent Health Survey (MWAHS) results guide decisions about content that should be required for all students.

Wellness 9

9th Grade Health: Information about alcohol, drugs and sexuality will be taught within the context of a larger unit called 9th grade health. This unit begins by explaining the process of adolescent brain development. Research has shown that the brain continues to grow and develop into the early-to-mid 20's. It is the frontal lobe that is responsible for reasoning, problem-solving, and ultimately responsible decision-making that develops last. The frontal lobe also helps in the ability to control emotions and impulses. As a result, teenagers are at risk for making impulsive decisions. This course, is therefore, designed to help teens understand this risk and provides skills and strategies for good responsible decision-making in relation to alcohol, drugs, and sexual behavior. Towards this end, all 9th grade students will take Sexuality Education, AlcoholEdu for High School, Prescription Drug Safety, and HEADS UP: Real News About Drugs and Your Body.

Fundamentals of Fitness: This course provides students with the basic facts concerning fitness by addressing three questions: (1) What is fitness? (2) Why is it important? (3) How do I attain fitness? Students are introduced to the Needham High School fitness center and taught how to use all the equipment safely and appropriately. Each student sets personal fitness goals and learns how to develop an exercise plan to meet their goals.

Sexuality Education is a course that has been adapted from Get Real, which is a comprehensive sex education curriculum developed by Planned Parenthood of Massachusetts. Get Real emphasizes social and emotional skills as a key component of healthy relationships and responsible decision-making and emphasizes the important role that parents play in educating their children about sex and sexuality. Information provided is medically accurate and age-appropriate. In this course students will develop agreements and expectations for creating a safe and comfortable class climate, identify a parent/guardian or other trusted adult from whom they can obtain information about sex and sexuality, understand the meaning of the terms sex, sexuality and sexual health, identify and analyze the reliability of the different sources where teens get information about sex and sexuality, analyze the difference between adult readiness for sexual behavior and teen readiness, talk with a parent/guardian or other trusted adult about dating rules, review proper vocabulary and explain the structure and function of the male and female reproductive systems, review the process of human conception, review what we know about the teenage brain, review the decision-making model and discuss the role that values play in supporting good decision-making, understand how emotions and the use of substances (alcohol and other drugs) can interfere with responsible decision-making, talk to a parent/guardian or other trusted adult about one's family's values, identify characteristics of a healthy and unhealthy relationship, assess whether behaviors between two dating partners are healthy or unhealthy, identify the risks of dating a significantly older partner, assess behaviors as being acceptable or unacceptable in a relationship, talk with a parent/guardian or other trusted adult about healthy and unhealthy relationships, assess one's attitudes and beliefs about gender norms in relationships, talk with peers about their attitudes and beliefs about gender norms in relationships, explain why both males and females are responsible for the possible consequences of sexual behavior and unprotected sex, identify ways that both partners (same sex and opposite sex) can take responsibility for their own sexual health within a relationship, identify ways that both partners can support the sexual health of their partner within a relationship, identify STIs and how they are transmitted and prevented, learn names of STIs and whether they are curable or treatable, reflect on one's feelings about learning about STIs, understand the importance of being totally honest with the doctor when s/he asks questions about sexual behavior, identify important future goals, understand how an unplanned pregnancy will alter all future plans and goals, name and describe popular methods for pregnancy prevention, understand that abstinence is the only way to prevent pregnancy and STIs/HIV, understand that a condom will protect against pregnancy & STIs most of the time (a condom is not 100% guaranteed), observe a teacher demonstration on the correct steps for condom use, identify all the steps of correct condom use, identify risky situations and ways to lower the risk of sexual intimacy, learn to make responsible decisions in sexual relationships and practice effective assertive communication and refusal skills, identify ways to negotiate postponement and protection within relationships, identify and maintain boundaries.

AlcoholEdu for High School is an evidence-based, online alcohol prevention course proven to reduce negative consequences associated with underage drinking. Five online modules are designed to help students address difficult alcohol-related decisions and scenarios. Students learn how to leverage their personal values and goals, resist peer pressure, and step in when they see someone who may be in trouble. Students will be able to define a standard drink of beer, wine, and liquor, assess personal values and goals, challenge common myths and misconceptions and learn where they come from, recognize the influence of advertising on people's drinking-related attitudes and behaviors, identify reasons for abstaining from drinking, describe the dangers of drinking from communal sources, assess personal background risks for drinking-related problems, explain the basic facts concerning "blood alcohol content - BAC", recognize how parts of the brain are affected by alcohol use, list effective strategies to help someone who may have alcohol poisoning, analyze internal and external factors that may impact decisions, identify positive examples of refusing a drink and resisting peer pressure, list strategies for staying safe if choosing not to drink, identify options for handling a situation involving someone who might drive under the influence,

understand the laws surrounding underage drinking, explain positive techniques for approaching difficult alcohol-related conversations, reassess personal goals and values, and create an action plan for future alcohol-related behaviors. AlcoholEdu offers a version for parents which can be accessed on the Needham Public Schools Website - wellness department page.

Prescription Drug Safety is an innovative digital course that arms high school students with the knowledge and tools to make health, informed decisions when it comes to prescription medications. The program uses interactive scenarios and self-guided activities to help students learn facts about drugs, how to properly use and dispose of them, and how to step in when faced with a situation involving misuse. Topics include Opioids, stimulants, and depressants; Proper prescription drug use, storage, and disposal; Brain and body: the science of addiction; Simulations: refusal and bystander skills; and Debunking common myths.

HEADS UP: Real News About Drugs and Your Body is a science-based education series that honors our 9th grade theme which is Mind-Body Awareness. The series is a product of a partnership between the National Institute for Drug Abuse (NIDA) and Scholastic, Inc. and presents easy to understand information about a variety of different drugs and their effects on the teenage brain and body. This site covers a wide range of different drugs, introduces both the scientific name and street names, describes what the drugs look like and how they are presented for sale, and covers the effects of the drugs on the human brain and body. Teachers will create a series of questions that will require students to navigate their way through the site to respond. They will encourage students to share information they learned from the site and review the skills of decision-making related to substance use. Examples of drugs discussed include alcohol, anabolic steroids, bath salts, cocaine, cough and cold medicine, heroin, inhalants, marijuana, MDMA (ecstasy or molly), methamphetamines (meth), prescription drugs (opioids, depressants and stimulants), salvia, and spice. Materials are updated every year so information will remain current.

NIDA offers information for parents on its website which can be accessed on the Needham Public Schools Website - wellness department page.

NIDA for TEENS: <https://teens.drugabuse.gov/>

NIDA for TEACHERS: <https://teens.drugabuse.gov/teachers>

NIDA for PARENTS: <https://teens.drugabuse.gov/parents>

Wellness 10

Introduction to Wellness: Students will assess their physical, social, emotional, spiritual, and intellectual well-being and learn strategies for nurturing their health in each of these areas. Students will acquire knowledge about wellness principles, human needs, life patterns, and risk-taking behaviors and look at ways in which they affect (and are affected by) illness and wellness. After learning more about each of the six domains of wellness (physical, social, emotional, spiritual, intellectual, occupational), students will define a healthy human being, look at how healthy and unhealthy behaviors affect well-being, explore attributes of internal and external locus of control, and internal and external motivation, look at ways cultural norms affect healthy and unhealthy choices, assess their current well-being in each of the six dimensions of wellness, explore potential reasons why some people follow lifestyles that are unhealthy, and develop a wellness creed outlining their commitment to their own wellness journey. Students will also assess their relationship with their school community and determine ways to enhance overall community well-being.

Group Dynamics: This course provides a unique opportunity for students to understand the importance and dynamics of group development. Class sessions consist of both mental and physical challenges that require students to work together to find solutions. Students learn the characteristics of five different stages of group development (forming, storming, norming, performing, adjourning) ((Bruce Tuckman in 1965) and practice skills to help move their group through these stages. Students learn the effect that an individual's actions can have on the attitudes and performance of others. Other areas of learning include the ability to listen and express oneself, group cooperation, concern and respect for others, and exploring ways to share one's strengths with others. Students also look at ways group dynamics (peer pressure) can lead people to make decisions that they might not make on their own.

Understanding Games: Students will play and analyze games and identify those characteristics that are similar among like activities (invasion games, net games, target games, etc.). Emphasis will be placed on the application of skills, understanding movement concepts, the joy of play, and creating new games that can be shared with classmates.

Wellness 11

Critical Health Issues: This health class explores the potential risks and consequences associated with the teen and young adult social scene. Students reexamine the teenage brain to learn more about their propensity to take risks and practice skills to prepare them to make healthy decisions. Students analyze scenarios to explore how different decisions could lead to various possible outcomes. They explore how decisions can be influenced by their relationships with others in both positive and negative ways and learn the role that values play in making healthy and safe decisions. Students reflect upon their own personality and explore traits and behaviors they want to bring to a relationship as well as traits and behaviors they'd like to have in a relationship. They define the characteristics of healthy and unhealthy

relationships and identify signs of abusive relationships. Students explore different communication styles (confrontational/aggressive, passive, assertive), and learn effective ways to communicate within a relationship. Terms and issues related to sexual diversity (gender identity, gender expression, sexual orientation, etc.) are discussed. Students learn about the biology of sexual desire and discuss ways to negotiate intimacy while remaining committed to abstinence/postponement of sexual behaviors. Students study the effect that alcohol and other drug use can have on relationships and on decisions to participate in sexual behaviors. They study current events in which substance use affected one's ability to make good decisions about sexual behaviors and brainstorm strategies that could have prevented the situation. Issues of sexual harassment, sexual assault, dating violence, and signs and symptoms of an unhealthy relationship and/or an abusive relationship are included.

Ropes Challenges: Through preparation and participation on our indoor ropes course, students learn the importance of trust, teamwork, communication, personal awareness, courage, support, and problem-solving. In small teams, students support one another as they learn the skills required to safely participate on a challenge course. Students learn to tie safety knots, wear safety gear correctly, run a pre-climb safety check, spot (support) climbers, communicate clearly, and climb the various initiatives that make up the challenge course. No student is required to climb. We want students to choose to climb only when they feel safe and ready. All students learn the skills and expectations for each role of a belay team (belayer, back-up belayer, anchor, and rope attendant) so that they can better work as a team to support climbers.

Wellness 12

Nutrition: Students learn why healthy eating is important in preventing major diseases, and in maximizing mental and physical energy and performance. Students learn basic food facts and study the US Dietary Guidelines recommended for all Americans. Students will learn the difference between calorie dense foods and nutrient dense foods, learn to read food labels, calculate personal caloric and nutrient needs, explore personal eating habits, understand the difference between safe and unsafe ways to lose and gain weight, identify healthy options in a grocery store (field trip to Sudbury Farms) and plan a healthy meal for themselves and their families.

Yoga: This course covers the basic knowledge, attitudes and concentration necessary to benefit from a Yoga practice. Flexibility, balance, and body alignment, as well as breathing, relaxation techniques and stress management strategies are part of each exercise session. Students also learn the benefits of mindfulness. Students practice yoga skills and mindfulness skills throughout the unit.

First Aid/CPR: The American Heart Saver First Aid and CPR course is taught to all seniors and includes information and skills to provide first aid, cardiopulmonary resuscitation (CPR), and automated external defibrillator (AED) use in a safe, timely, and effective manner. The course goals include content knowledge and physical skills. In addition to learning CPR and AED skills, students also learn how to assess an emergency situation, help a choking adult or child, stop severe bleeding, use an epinephrine pen, and respond to a adult opioid-associated life-threatening emergency. Students learn about Naloxone and how it can be administered in an emergency situation. Upon completion of the course, students may be certified to administer CPR to infants, children, and adults.

WORLD LANGUAGES

Num	Length	Credit	Course	Num	Length	Credit	Course
1112	F	4	French 1 Hon	1522	F	4	Spanish 2 Hon
1121	F	4	French 2 Acc	1523	F	4	Spanish 2
1122	F	4	French 2 Hon	1531	F	4	Spanish 3 Acc
1131	F	4	French 3 Acc	1532	F	4	Spanish 3 Hon
1132	F	4	French 3 Hon	1533	F	4	Spanish 3
1141	F	4	French 4 Acc	1541	F	4	Spanish 4 Acc
1142	F	4	French 4 Hon	1542	F	4	Spanish 4 Hon
1152	F	4	French 5 Hon	1563	F	4	Spanish 4
1161	F	4	French 5 Acc	1581	F	4	AP Spanish Language and Culture
1171	F	4	AP French Language and Culture	1552	F	4	Spanish 5 Hon
1313	F	4	Latin 1 CP	1561	F	4	Spanish 5 Acc
1311	F	4	Latin 1 Acc	1602	F	4	Mandarin 1 Hon
1312	F	4	Latin 1 Hon	1612	F	4	Mandarin 2 Hon
1321	F	4	Latin 2 Acc	1621	F	4	Mandarin 2 Acc
1322	F	4	Latin 2 Hon	1631	F	4	Mandarin 3 Acc
1331	F	4	Latin 3 Acc	1622	F	4	Mandarin 3 Hon
1332	F	4	Latin 3 Hon	1641	F	4	Mandarin 4 Acc
1341	F	4	Latin 4 Acc	1632	F	4	Mandarin 4 Hon
1342	F	4	Latin 4 Hon	1681	F	4	Mandarin 5 Acc
1513	F	4	Spanish 1	1691	F	4	AP Mandarin Chinese Language and Culture
1512	F	4	Spanish 1 Hon	1719	F	4	INDEX World Language
1521	F	4	Spanish 2 Acc				

The World Languages Department offers language sequences in four different languages: French, Spanish, Mandarin and Latin. Each language sequence develops students' skills in reading, writing, listening and speaking. All modern language courses focus on communicative proficiency, cultural understanding and making linguistic connections. Modern language courses above the introductory level are taught in the target language and students are expected to use only the target language during class.

The NHS high school graduation requirement is two years of study in the same world language. Students who want to become proficient in a particular language by graduation should study the same world language for four years in high school.

Guidelines for Selecting the Most Appropriate Course:

Students may continue studying the language they studied in middle school or they may begin learning a new language. If a student wants to begin studying a new language at Needham High, the student should elect one of the first year courses (Examples: Latin 1 or Mandarin 1)

If a student studied French, Spanish or Mandarin in middle school and wants to continue studying that language at Needham High, then the student should select French II, Spanish II or Mandarin II.

Guidelines for Selecting the Most Appropriate Level:

When selecting a language "level" students are encouraged to consider the following level descriptions. Please note: It is easier to change levels earlier in one's language sequence than later.

College Preparatory (Latin and Spanish only): College Preparatory World Language classes are paced to ensure students have ample in-class practice with essential linguistic structures and high frequency vocabulary. There is extensive guided practice provided in class. Homework emphasizes skills practice and structured application.

Honors (All languages): Honors World Language classes are taught at a moderate pace and require moderate amounts of preparation outside of the classroom. Instruction focuses on essential linguistic structures, high frequency and enrichment vocabulary, and there is a some repetition. Homework blends skills practice with skills application.

Accelerated (All languages): Accelerated World Language classes are taught at a fast pace and require a significant amount of preparation outside of the classroom. Instruction integrates complex linguistic structures, extensive vocabulary, and there is a limited amount of in-class guided practice and limited repetition. Accelerated courses are excellent preparation for the Advanced Placement course. Homework generally focuses on students' application of skills (reading, writing, speaking, listening).

Current NHS students should make their course level selection in consultation with their current world language teacher.

French

French 1 (1112): This honors level course is an introduction to French, to its pronunciation and intonation, to its basic grammar and idioms, and to an elementary vocabulary. The aim is to develop the listening and speaking skills and also includes the reading of simple texts. The student will be introduced to France and the Francophone world.

French 2 (1121, 1122): This course is for students who began their study of French in middle school and are entering grade 9. The course builds upon the core content found in the textbook. Students may be expected to maintain an oral and/or written journal, to write several compositions, to make oral presentations, to use the language lab, and to read cultural and/or literary selections.

French 3 (1131, 1132): This course builds on French 2, expanding the use of all four language skills with more complex use of language and comprehension of more sophisticated texts and other materials.

French 4 (1141, 1142): This course builds on French 2 and 3 as students read and/or view selected works of literature and culture of the Francophone world that deal with issues such as emigration, immigration, cross-cultural adaptation, and current events. Emphasis will be placed on the further development and practice of the four language skills. The honors level focuses more on practical vocabulary in a variety of daily situations and studies cultures of the Francophone world through adapted literature. In general, the accelerated level goes deeply into grammar, verb tenses, and vocabulary with a focus on analytical and creative writing.

French 5 (1161, 1152): This is a course based on the principles of project-based learning. Students will reinforce communicative functions learned in French 4 and will continue to develop their proficiency through investigations, debates, performances and products of film, art, literature, cuisine and cultural/historical studies of French and the Francophone world.

Advanced Placement French Language and Culture (1171): This course is designed to develop the four language skills at a high level of proficiency and accuracy and to prepare the students for the French Language and Culture Advanced Placement examination in May. Those students who are successful on the AP exam may receive college standing and/or credits for their outstanding high school performance. Students will read selected works, classic and modern, to discuss various themes and social issues.

Spanish

Spanish 1 (1512, 1513): This course is an introduction to Spanish, its pronunciation and intonation, basic vocabulary, and basic grammar and idioms. The emphasis of the course is on listening and speaking with some beginning reading and writing. 1512 is an honors level course designed for students who have had previous successful experience with another world language. 1513 is a College Prep level course designed for those students who are just beginning their study of a world language.

Spanish 2 (1521, 1522, 1523): This course is for students who began their study of Spanish in middle school and are entering grade 9; or for students entering grade 10, who are continuing with their Spanish studies after completing Spanish 1. In this course, students expand their knowledge and use of the present and past tenses, write several compositions, make oral presentations, use the language lab, and read cultural and/or literary selections. Thematic units of study include: geography of the Spanish speaking world, daily routines, childhood, an exploration of celebrations in the Spanish speaking world, and the study of sports and sports figures in the Spanish speaking world. Students studying at the accelerated pace will also study news reporting and current events.

Spanish 3 (1531, 1532, 1533): This course builds on Spanish 2, expanding the use of all four language skills with more complex use of language and comprehension of more sophisticated texts and other materials. Thematic units of study include: shopping (places and ways one can shop), how to care for one's self (healthy practices in the Spanish speaking world and one's own community; how to communicate about illness, remedies and provide recommendations to improve one's health), and an exploration into social issues in the Spanish speaking world and one's own community.

Spanish 4 (1541, 1542, 1563): This course builds on Spanish 2 and 3 as students further develop their communicative capacity in the target language through conversation as well as reading and/or viewing of selected works of literature and culture of the Hispanic world. Thematic units of study at the college prep and honors pace include: exploration of study abroad experience through planning for international travel, accommodations (making hotel reservations), using public transportation and navigating a city, housing and home life abroad (finding a host family and/or roommates), and eating out (restaurants, street food, and social norms & customs).

Thematic units of study at the 4 accelerated pace include: art in the Spanish speaking world, identity, immigration, and the study of social media in the Spanish speaking world as well as one's own community. This course also emphasizes refinement of one's communication skills relative to grammatical accuracy and nuances in meaning (word choice, phrasing and contextual appropriateness).

Spanish 5 (1561, 1552): This course continues the work of Spanish 4 honors and 4 accelerated. In this course students examine the various cultures of the Spanish-speaking world from different perspectives: through authentic readings, songs, poetry, art, technology, films and cultural/historical projects. Students will complete projects and present them to the class as a way of participation and assessment. Advanced grammar will be reviewed and practiced within classroom discussions and debates as well as in written products.

Advanced Placement Spanish Language and Culture (1581): This course is designed to develop the four language skills at a high level of proficiency and accuracy and to prepare the students for the Spanish Language and Culture Advanced Placement examination in May. Students will deepen their knowledge not only of the Spanish language, but also the culture of countries where Spanish is spoken. Those students who are successful on the AP exam may receive college standing and/or credits for their outstanding high school performance.

Mandarin (Chinese)

Mandarin 1 (1602): This course is an introduction to Mandarin and the Chinese-speaking world. Students study pronunciation, intonation, basic grammar and idioms, and develop an elementary vocabulary. The aim is to develop students' listening and speaking skills and for students to acquire a basic level of fluency. The course also includes the reading and writing of simple texts.

Mandarin 2 (1612, 1621): This course for students who began their study of Mandarin in middle school and are entering grade 9; or for students entering grade 10, who are continuing with their Mandarin studies after completing Mandarin 1. This course builds on Mandarin 1 and is designed to develop the four language skills. In addition to the core content found in the textbook, students will read selected works from Rhythm & Rhyme and do hands-on projects. Students will also learn about the culture of China and Chinese speaking countries.

Mandarin 3 (1631, 1622): This course is a continuation of Mandarin 2, and is designed to further develop the four language skills. Students will achieve greater proficiency through reading more complex Mandarin, reporting on news from the Chinese-speaking world, and carrying out projects. Students also learn how to type Chinese characters in good speed.

Mandarin 4 (1641, 1632): This course builds on Mandarin 3 as students further develop the four language skills. Students will read more complex Mandarin texts and students' will further develop their writing skills through journals, compositions and/or short essays. Students will also report on news from the Chinese-speaking world and regularly type in Chinese characters.

Mandarin 5 Acc (1681): This course is designed to develop the four language skills at a high level of proficiency and accuracy. Students will read works from classic and contemporary authors and will develop their writing skills. Students will also engage actively in listening and speaking activities. Finally, students will study Chinese culture through articles, newspaper, films, and short stories.

AP Mandarin Chinese Language and Culture (1691): This course is designed to develop the four language skills at a high level of proficiency and accuracy and to prepare the students for the Chinese Language and Culture Advanced Placement examination in May. Those students who are successful on the AP exam may receive college standing and/or credits for their outstanding high school performance. Students will read works from classic and contemporary authors and will develop their writing skills. Students will also engage actively in listening and speaking activities. Finally, students will study Chinese culture through articles, newspaper, films, and short stories.

Latin

The Latin program focuses on the following areas: (1) developing students' understanding of the impact of Latin on English and the modern Romance languages through the study of roots, prefixes, suffixes; (2) developing students' understanding of the impact of Roman culture on modern art, architecture, literature, and political and cultural institutions; (3) the development of reading skills

through a combination of fictional Latin stories and original Latin (both adapted and unadapted) so that students are able to read authentic Latin upon completion of the Latin 4 course; and (4) the development of students' speaking, listening and writing skills in order to better translate and understand Latin.

Latin 1 (1311, 1312, 1313): This course is an introduction to the Latin language and the world of ancient Rome. Students learn to see Latin and elements of ancient culture as an important part of their world, and to view that world through the lens of Latin. Emphasis is placed on the elements of the language: alphabet, pronunciation, parts of speech, word-formation, vocabulary (including English derivatives), and grammatical rules. Students will use the *Ecce Romani* textbook, which uses an intuitive "reading based" method of learning, as well as "Active Latin" methods including speaking and listening to support students' development of reading and communication skills. Through readings about an aristocratic Roman family, students will begin to learn the geography of the ancient Roman world, Roman mythology, an outline of Roman history, and important aspects of Roman private and public life. Because this course is the foundation for the continuing study of Latin, it is vital that students develop the necessary habits of memorization, attention to detail, preparation of daily work, and organization. Memorization of word-forms, vocabulary and grammatical rules is essential.

Latin 2 (1321, 1322): This continuation of Latin 1 further develops the student's Latin vocabulary and involves the study of more advanced aspects of the Latin language. Students continue using the *Ecce Romani* texts as well as Active Latin methods to read continuous passages of increasing difficulty. Students also study various aspects of Roman transportation and travel. At this stage in the Latin sequence, students begin to apply their Latin language skills in context and transition away from memorization. To prepare for Latin 3, students in Latin 2 will develop a solid knowledge of subordinate sentence structures, the architecture of a complex Latin sentence, and skills for dealing with variable Latin word order.

Latin 3 (1331, 1332): During the first part of the year students will continue to learn the grammar and syntax of Latin that is important for translating original texts, again using the *Ecce Romani* text well as Active Latin methods. Students will also continue to study English derivatives and Roman civilization forms of entertainment, such as the Circus Maximus and *comissatio* - the Roman dinner party. In this course, students make their first leap to connected reading in authentic Latin. The course requires students to engage in strong study habits in preparation for Latin 4.

Latin 4 (1341, 1342): During the first part of the year students will continue to learn the grammar and syntax of Latin that is important for translating original texts. Students will finish reading the *Ecce Romani* texts, well as Active Latin methods. The inclusion of authentic Latin will be more consistent and more challenging than what students experienced in Latin 3. Students will explore authors from Aesop to Caesar to Horace.

Electives

INDEX World Language (1719): INDEX World Language study may be elected as a full-year course for students who want to study a language that is not currently taught at Needham High School (examples are German, Italian, and Arabic). Similarly, a student may want to study French, Spanish or Latin at a level that is not offered (either Latin 5, or a sixth year of French or Spanish). INDEX is available to students who have already met their world language high school graduation requirement or have achieved an advanced level in another world language.

The term INDEX stands for "independent exploration". Thus, students must:

Present a study plan for approval by the Director of World Languages. Acceptance into the INDEX Program and registration for INDEX as a course are contingent upon such approval.

Commit to carrying out study that is self-directed and carried out with minimal supervision and guidance.

INDEX study will be graded 'pass/fail', carry full academic credit, and will not be weighted.

STUDENT SUPPORT SERVICES

PLC and SKILLS classes are graded on a Pass/Fail basis. A passing grade is earned by students who engage in regular attendance, have a willingness to work, and accept support and assistance from teachers. Students earn credit for these classes. PLC and SKILLS classes are considered “major” classes and can be considered toward athletic eligibility.

GRADE LEVEL SKILLS CLASSES are designed to serve students who are registered into general education College Prep, Honors or Accelerated level academic classes and who require supportive instruction to help them access the general curriculum. Students in the Skills Center utilize academic support and develop strategies to learn how to use their strengths to compensate for area(s) of difficulty or challenge, to develop self awareness, self advocacy, and to gain independence in managing their academic responsibilities. Recommendations for Skills classes and frequency are made by the student’s IEP team.

9TH GRADE ACADEMY provides support for students who require a language-based approach to learning. Students participate in College Prep Level general education classes where small class sizes and consistency of practices and routines are infused into their academic program through a variety of staffing supports so students can internalize these practices and make educational progress. This is open to all students enrolling in college prep level 9th grade classes.

SKILLS CLASS in the **CONNECTIONS PROGRAM** provides organizational support, academic and therapeutic interventions including individual and group counseling. Students learn coping skills in order to become successful students. Recommendations for Skills classes and frequency are made by the student’s IEP team.

SKILLS CLASS in the **INSIGHT PROGRAM** provides targeted support in the area of executive function and social pragmatics. Students take part in social skills/ social pragmatic groups with the Speech and Language Pathologist at least once a cycle as part of the program. Recommendations for Skills classes and frequency are made by the student’s IEP team.

FOUNDATIONS SUBJECT AREA CLASSES (in English, Social Studies, Math, and Science) are special education classes that provide a modified curriculum and are delivered in a small group environment. The curriculum follows the Common Core Standards in each subject. Recommendations for Skills classes and frequency are made by the student’s IEP team.

The SKILLS AND CAREER DEVELOPMENT PROGRAM is a community based model of instruction for students who require transition services as designated by their IEP’s. The program is designed to promote a seamless transition from High School to the demands of adulthood. “Undergraduate students” complete a combination of mainstream and specialized academic classes within NHS. Internships are developed at an early age to introduce work skills and expanded upon in a meaningful and age-appropriate manner. Additional services include (but are not limited to): travel training, shopping, meal planning, cooking, budgeting, self-advocacy instruction, social skill development and accessing community resources, as the academic schedule allows. Following completion of the academic portion of their program, students participate in the NHS graduation ceremony and move on to manage an individualized schedule comprised of some or all of the following components: internships/ competitive employment, post-secondary education, functional academics taught in natural contexts, community based recreation, travel using multiple modes of transportation, independent living skill development and self-determination (planning for the future). The program duration and intensity of supports provided is determined by the individual and his or her Team. Individuals and their families are supported as they evaluate and select adult service providers and community resources following their exit from the school system.

THE PATHWAYS PROGRAM is a sub separate program located within Needham High School providing students with an academic curriculum aligned with the Massachusetts Curriculum Frameworks and high level of therapeutic support. Recommendations for Pathways are made by the student’s IEP team and each student’s program is unique to their learning and emotional needs.

***PERSONALIZED LEARNING CENTER (PLC)** is a structured general education program designed to assist students in need of academic support. Students enrolled in the PLC work to complete assignments, and improve study skills, organization and test taking strategies. Referrals for PLC are made by the student’s school counselor to the Student Support Team (SST).

*PLC is overseen by the special education department but is not a special education service.

GUIDANCE DEPARTMENT SERVICES

The School Counselors in the Guidance Department at Needham High School provide comprehensive social/emotional, academic, and postsecondary counseling, as well as career and community service exploration, to all students at Needham High School. The following services are available to all students:

The School Counselors work to help all students achieve academic success, balance in their lives, help in times of crisis, and to assist in developing a meaningful plan for life after high school. All School Counselors can be accessed by appointment or on a drop in basis. Regardless of the severity of an issue, all students are encouraged to meet with and establish a working relationship with their School Counselors as early as possible. If an emergency situation arises, any available School Counselor will meet the needs of student(s) if the assigned School Counselor is not available.

Guidance Department Website: <https://sites.google.com/a/needham.k12.ma.us/nhs-guidance-department/home>

Social and Emotional Support

Students may face challenges during their time at Needham High School. School and Personal Counselors collaborate to support students and their families during these difficult times.

Personal Counselors provide a continuum of services to students in need. They support students to help them navigate the disappointments and frustrations that may occur during the high school years. They also help students manage more serious emotional or behavioral concerns and high risk behaviors. They provide crisis intervention for any student or family in need, assisting with locating the appropriate resources. Students can be seen individually or in group counseling sessions.

Besides the counseling and case management functions, the personal counselors' responsibilities include the oversight of the Mediation Program and facilitate student re-entry meetings after hospitalizations with the Transition Program Social Worker.

While students often initiate the contact with their School or Personal Counselor, another student, parent, guardian, teacher, or administrator who is concerned may reach out to the School or Personal Counselor directly. Counselors will also reach out to students to help establish a relationship or to address a personal issue as the need for this is identified to them. Please note that conversations with Counselors are considered confidential, and are not part of the school record, although there are limits to the bounds of confidentiality with situations that pertain to safety.

Every student is assigned to one of eight School Counselors (divided alphabetically) for four years. Each student is assigned one of two Personal Counselors (divided alphabetically) for four years.

Personal Counselor Assignments 2021-2022

Counselor	Jennifer Roberts, LICSW	Amanda Katz, LICSW
Phone	781-455-0800 x22150	781-455-0800, x22106
E-mail	Jennifer_Roberts@needham.k12.ma.us	Amanda_Katz@needham.k12.ma.us
Class of 2022	A-Linc	Lind-Z
Class of 2023	A-Kin	Kir-Z
Class of 2024	A-Ler	Les-Z
Class of 2025	TBD	TBD

School Adjustment Counselors / Transition Program Social Worker

The school adjustment counselors work with students who have a specific social-emotional goal within an Individualized Education Plan (IEP). The Transition Program Social Worker works with students returning back to school after a mental health crisis or significant medical event.

Michelle Brenhiser, LICSW
Michell_Brenhiser@needham.k12.ma.us

Heather Harris, LMCH
Heather_Harris@needham.k12.ma.us

Bobby Hermesch, LICSW
bobby_hermesch@needham.k12.ma.us

Academic Planning Support

The School Counselor is the student's main resource each year for academic planning, scheduling, and for accessing academic support. The classroom teacher is the main resource for content support and is the primary resource for extra help (note: the classroom teacher also makes the official recommendation of course level for the following year). The School Counselor will help the student track his/her progress toward academic goals and towards meeting all graduation requirements. Students are encouraged to meet with their School Counselor to discuss academic concerns and questions. School Counselors reach out to students on a scheduled and as needed basis.

School Counselor Assignments 2021-2022

COUNSELOR	Grade 12 (2022)	Grade 11 (2023)	Grade 10 (2024)	Grade 9 (2025)
Will Grannon (x22118)	A-Cla	A-Bro	A-Caro	TBD
Renee Vasquez (x22126)	Clo- Fr	Bru-Dad	Carp-E	TBD
Katrina Martyn (x22120)	Ful-Joh	Dem-Gl	F-Ha	TBD
I'Esha Thomas (x22122)	Jon-Linc	Go-Kin	E-Ler	TBD
Mary Jane Walker (x22127)	Lind- Muro	Kir- Mel	Les-M	TBD
James Ash (x22116)	Murp - Rose	Men-P	N-R	TBD
Meridith Welch (x22128)	Rosen - Szet	R-Sul	Sa-Se	TBD
Shannon Mastropoalo (x22123)	Szewc-Z	Sun-Z	T-Z	TBD

Contact Information:

Tom Denton, Director of Guidance, ext. 22130 or Tom_Denton@needham.k12.ma.us
Jean McDavitt, Guidance Secretary, ext. 22144 or Jean_McDavitt@needham.k12.ma.us

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i'esha_thomas@needham.k12.ma.us
mary_jane_walker@needham.k12.ma.us
meridith_welch@needham.k12.ma.us

Seminars (9th and 10th Grade)

The Guidance Department has developed a series of seminars/meetings for 9th and 10th grade students. School Counselors lead the seminars in an effort to meet the students and deliver important information on a variety of topics. It is also the goal of the Guidance Department to get to know students through these programs, so that students will feel more comfortable accessing the many services and resources that are available to them.

In grade nine, the counselors present four seminars during the first half of grade 9. The topics include: Orientation to Resources and Services, Time Management and Study Skills, Social Emotional Skills, and 10th Grade Course Selection. In grade 10, students participate in a Career Exploration Seminar, presented by the Guidance and Health and Wellness Departments.

Community Service Learning (CSL) Program/Volunteer Service

Each student's School Counselor is his/her contact person for participation in Needham High School's CSL Program.

The Community Service Learning Program is an important part of the educational experience offered at Needham High School. All students are required to complete two community service learning credits (60 hours) as part of their graduation requirement. Each credit equals 30 hours of volunteer or internship service. A minimum of 30 hours must be done with the same organization. Students may complete the entire 60 hours with one organization if they choose, or they may do 30 hours each with two different organizations. Students may earn up to 2 credits per year with a maximum of 8 credits over four years. Those who earn 8 credits will be acknowledged at Senior Class Day.

The mission of the Community Service Learning Program is to broaden students' experiences beyond the traditional classroom by providing opportunities to become involved in volunteerism, service learning, and career exploration. By engaging in such activities, students learn more about themselves, their interests, and the privileges and responsibilities of being a member of a school, local, and global community.

Students may complete their community service learning requirements through volunteer work, an unpaid internship, or a combination of both. Specific requirements for each of these two options are listed below. Students may start their community service learning hours beginning in their 9th grade year. Hours earned prior to that year, including the summer, may not be used. Students may volunteer for a minimum of 30 hours at a non-profit organization of their choosing, or one suggested by their school counselor. Students may not be supervised by a parent or other relative. Students who participate in one week service trips through a non-profit organization, such as Habitat for Humanity or a local church or temple, are eligible to receive one credit for successful completion of a trip. Volunteering without pay at a business, unless it is a pre-approved internship, cannot be used for community service.

We strongly recommend that students receive approval prior to beginning their community service by completing a student proposal form and turning this into their school counselor in the guidance office. This is the best way to insure that a student's volunteer hours will meet the requirements. With the exception of the TEC internship program, no internship credit can be given without prior approval. The Community Service Learning forms are available in the guidance office and can also be downloaded from the guidance web site or the Career and Community Service Learning page.

Community service opportunities are also posted in the weekly News From the Hill. Students are also welcome to check in with their school counselor to discuss additional ideas, to propose their own project, or to find out more information about a particular organization.

Students receive a grade of "P" (Pass) on their transcript when they have completed their community service requirements. All community service credits should be completed by January of the student's senior year. Students are encouraged, however, to begin fulfilling this requirement early on in their high school years. Our experience has shown us that many students who actively engage in volunteer service from the beginning of high school sustain their involvement and participate in additional service activities. Additionally, volunteer work can help students begin the process of career exploration.

Regional High School Relationships

Needham is a member of Minuteman Vocational Regional Technical High School in Lexington, MA and Norfolk County Agricultural High School in Walpole, MA. Students most often attend these high schools starting in 9th grade. Needham High School students and families who are interested in learning more about these schools are encouraged to review the websites and speak with their guidance counselors as well.

Minuteman Regional Vocational Technical High School: <http://www.minuteman.org>

Norfolk County Agricultural High School: <http://www.norfolkaggie.org>

Post-secondary Planning

The school counselor is the main school resource for a student's postsecondary planning. Although the bulk of the postsecondary planning commences with a comprehensive program in the Spring of Junior year, there are other aspects, which occur as early as grade 9. From self-assessments, interest inventories, career discovery, and some standardized testing, the school counselors, in conjunction with the Personal Counselors, address issues related to healthy development throughout high school. With the resulting personal growth and self-discovery, students are able to enter the postsecondary planning process during junior year in a more meaningful and directed fashion.

In grade 11 the school counselors meet with all students in small groups in February to start the postsecondary planning process. Subsequently, the school counselors have at least two individual meetings with their students prior to the close of junior year. By the end of grade 11, the juniors will have written college essays (through English class), will have asked two teachers for confidential recommendations, and will have an initial list of colleges and programs to explore, which is all monitored by the school counselor. Additionally, the Guidance Department offers three parent nights during junior year to address the Postsecondary Planning Process, Visiting and Touring Colleges, and Financial Aid. Junior families also receive two newsletters during junior year.

In grade 12 the school counselors meet with all students in small groups in September to continue the postsecondary planning process. Subsequently, the school counselors have individual meetings with their students in the fall to track their progress and to support them in their application submissions. In September the school counselors offer a parent evening with three Directors of Admissions from local colleges. School counselors write a confidential letter of recommendation for each student. Counselors also coordinate visits from over 150 college admissions officers to the high school in the fall of senior year.

All students and families have access to the comprehensive Guidance Database in Naviance throughout the Postsecondary Planning Process. They also have access to Guidance Department's Postsecondary website: <http://nhs.needham.k12.ma.us/college/default.htm>

Post-Secondary College/University Requirements

For those considering college, admission requirements should be strongly considered when students plan their programs. Because these requirements vary widely, the best sources of information are the individual school catalogs or individual college and university websites. Students should sample a few catalogs and websites for the types of schools they are considering to make sure that they are covering the requirements. It is better to have more than is needed than to be short a required or recommended course. Resources and direct links to college and university websites can be found on the Guidance Department website.

Typical requirements for the different types of post-secondary schools to which many Needham High School students apply are:

Four-Year State and Private Schools: English: 4 years Social Studies: 2-3 years Mathematics: 3-4 years Sciences: 3 years (two of which must be lab sciences) World Language: 2-4 years

In addition to a student's having taken required and recommended courses, admissions' personnel place significant weight on the level of courses taken, grades and grade point average.

Two-Year State and Private Colleges: Associate degree program (two-year) requirements vary widely from a high school diploma to requirements similar to the four-year schools. If a student completes a two-year program, a student may transfer to a four-year school.

Business and Secretarial Schools: A high school diploma is required with courses related to the intended major recommended.

Technical Institutes: Requirements vary widely from a high school diploma to physics and four years of college preparatory mathematics.

Serious consideration is given by Technical Institutes admissions officers and by employers to character, personality, work experience and extracurricular activities both in and out of school.

College and University Visits

Each year approximately one hundred and fifty representatives of colleges, universities, junior colleges, community colleges, technical schools and other specialized schools visit Needham High School. A schedule of these visits is posted on the Senior Bulletin on the NHS homepage: <http://nhs.needham.k12.ma.us/guidance/sb>. Students and parents are strongly urged to check this each week beginning in September. In addition, our school participates in two TEC College Fairs, in October and April. These fairs provide an opportunity for students to compare one institution with another.

Many schools and colleges conduct Open House sessions. Visiting Days, and area interviews, which are publicized through the daily notices, the weekly Senior Bulletin, and the Guidance Office bulletin board. Please check individual schools' and colleges' web sites for additional information about such events.

For much more comprehensive information on options and considerations regarding post-secondary plans, you are urged to consult the Post-Secondary Counseling website <http://nhs.needham.k12.ma.us/guidance/Postsecondary>.

United States Armed Services Visits

Each branch of the Armed Services visit Needham High School to meet with interested students. These visits are set up and advertised by the Guidance Department.

College Testing Program

Booklets describing the following testing programs are available in the Counseling Center: PSAT/NMSQT (Preliminary SAT/National Merit Scholarship Qualifying Test), the SAT Program, which includes the SAT - Reasoning Tests (Critical Reading, Mathematics, and Writing), the SAT subject tests (discontinued January 2021), the Advanced Placement Exams and the ACT Program. For students who speak English as a second language, the TOEFL (Test of English as a Foreign Language) may also be necessary. Students should consult college catalogs to determine which tests are required or recommended.

A typical testing pattern for students is as follows:

Junior Year

The PSAT/NMSQT is administered in October and is comparable to the SAT. This test is designed primarily for juniors. The colleges do not recognize PSAT/NMSQT for admission requirements. The results, however, are valuable to both the student and counselor when discussing possible choices of colleges. Students whose scores are high enough (typically 1% of population) become semifinalists for National Merit Scholarships by taking this examination. The SAT is usually taken by juniors in the spring of the junior year. AP Exams will be administered in the spring of a student's Junior or Senior year to those students desiring advanced placement or college credits upon being admitted to the college of their choice.

Senior Year

Students may wish to retake the SAT during the fall and winter of their senior year. The ACT (with writing) is another test used by colleges for admission and is as widely accepted as the SAT. Needham High School participates in the Advanced Placement Program (AP) of the College Entrance Examination Board. Advanced Placement Courses are the equivalent of college courses. Students who select AP courses should plan to take the AP examinations. Although Needham High School grants credit towards graduation for AP courses, college credit for AP courses may be granted individually to students by colleges participating in the College Entrance Examination Board. AP Exams will be administered in the spring of the senior year to those students desiring advanced placement or college credits upon being admitted to the college of their choice. If a student's results meets the minimum standard as set by the College Board and a participating college, students may be able to earn college credit. The college a student is planning on attending makes this decision regarding awarding college credit based on AP scores. Most colleges do participate in the Advanced Placement Program.

Refer to collegeboard.com and actstudent.org for exact test dates.

Standardized Testing and the Student Receiving Special Education Services

Students who have a documented disability may be eligible for accommodations on College Board tests such as the PSAT, SAT, AP, and the ACT. More information can be found at <http://sat.collegeboard.org/register/for-students-with-disabilities>. Students should work with their guidance counselor or special education liaison to ensure the disability documentation required for the application is complete and substantiates the need for the accommodations being requested. Applications may be completed online or on paper. It takes about 7 weeks from the College Board's receipt of all documentation for a determination to be made. Students are encouraged to make application for accommodations for College Board tests during their 9th grade year if possible. Students who receive accommodations can use them throughout their high school careers. Once approved, a student does not need to reapply.



Needham School Committee

February 2, 2021

Agenda Item: **School Committee Comments**

Background Information:

- Members of the School Committee will have an opportunity to report on events, information, and matters of interest not on the agenda.

Members of the School Committee available for comment:

Andrea Longo Carter, Chair

Connie Barr, Vice-Chair

Heidi Black

Michael Greis

Susan Neckes

Aaron Pressman

Matthew Spengler

Aidan Michelow, Student Representative member of School Committee



Needham School Committee

February 2, 2021

Agenda Item: **Information Item**

- FY22 Athletics Revolving Fund Budget Request

Revolving Fund FY22 Budget Request

Fund Name:	High School Athletics
Fund Manager:	High School Athletics Director
Executive Summary:	<ul style="list-style-type: none">● No Changes to Program Fees.

Fund Description:

This account funds the activities of the Needham Athletics Program, which offers a broad spectrum of competitive opportunities for student-athletes in Grades 6-12. At the High School, the program includes 34 interscholastic, 12 club and 2 unified sports, and fields 90 teams at the varsity, junior varsity, freshman and club levels. The middle school program consists of 11 sport offerings across 16 teams. In FY22, it is projected that up to 2,313 athletes will be participating in Needham sports programs. The depth and rich diversity of the Athletics program exemplifies the District's commitment to providing an inclusive program designed to foster the development of well-rounded students.

The current fee is \$300 per athlete competing in an interscholastic sport, and \$235 for club and middle school sport participants. In addition, some athletes pay a surcharge to offset the cost of renting their venues: hockey players and skiers pay a \$330 surcharge; snowboarders pay \$275; club sailors, fencers and squash players pay an additional \$190; club hockey players pay \$175; Water polo participants pay an additional \$80; swimmers and divers pay an additional \$55; and middle school volleyball, basketball, wrestling and softball pay \$25. Fees are capped at four sports per family per year. The Athletic Program also derives funding from the regular school operating budget, gate fees, and donations.

Enabling Legislation:

M.G.L. Chapter 71, Section 47.

Support for District Vision, Mission, Goals and Objectives:

The Athletics Program supports Portrait of a Needham Graduate Priority 4.a, which provides staffing, facilities and budget resources that are aligned to district priorities.

Critical Issues:

The Needham program is the now the largest in the state, offering a wide variety of student participation opportunities at the varsity, club, unified sports and middle school levels. In combination with the challenges of running teams during a pandemic, a separate challenge for this program in the future will be to balance the desire for more diverse and accessible offerings with the need to ensure program quality.

Escalating program costs remain an ongoing issue for the Athletics Program. Transportation expenses have increased due to the new contractual rates, and the cost of ice time continues to rise. Gate receipts are projected to diminish as well, due to the Massachusetts Interscholastic Athletic Association (MIAA) state football playoff system and the devaluation of the Thanksgiving Day Football Game.

In addition, a disparity exists amongst the varsity level coaching stipends. Although many stipends were recently adjusted to make Needham more competitive with our comparison districts, an internal equity gap exists between sports. Currently, stipends are organized by tiered categories. The head coaches representing 'traditional' sports like football, soccer, basketball and ice hockey (in Categories I and II) receive larger stipends than coaches in the Category III varsity sports like cross country, volleyball and swimming. Since the work of a varsity coach is similar across all sports, the Athletic Director believes an equity adjustment should be made to provide uniform compensation to varsity coaches in all categories.

For FY21, there is the added challenge of operating athletic programming in the midst of a pandemic. These challenges have reduced sporting opportunities for students and hurt the bottom line. Due to transportation safety limitations on the number of riders, we are faced with increased transportation costs because we need to add additional busses for teams that traditionally rode to away contests together. In addition, select sports have not been able to run, due to health and safety precautions, causing a drop in fee revenue. (These sports include fall and winter middle school sports, as well as club snowboarding, cheer and sailing in the fall and winter.) Finally, our budget also relies heavily on gate fees from athletic contests throughout the school year. In FY21 we have not, and likely will not, collect any gate fees due to limitations on spectators. On average throughout the past few years, we bring in somewhere between \$70,000-\$80,000, including Thanksgiving Football, that we will forego in FY21. As a result of these challenges, net income is projected to be negative in FY21, as the program relies on fund balance to make ends meet.

Critical Issues Addressed:

To address the fiscal challenges brought on by the pandemic in FY21, we have thoughtfully adjusted our budget to balance out some of the increased costs and decreased revenue. We have put a hold on purchases like uniforms, decreased professional development and are reusing old equipment if safe to do so. We also have fewer contests during the season so that reduces officiating costs, ice time and other facility rentals and also helps offset the increased transportation costs. We will continue to carefully monitor our athletic budget throughout the remainder of FY21 as we are faced with the fiscal challenges of the pandemic.

For FY22, two alternative budgets are presented: a 'return to normal' budget and a "COVID-19" budget. The return to normal budget assumes that school reopens normally in September, without social distancing restrictions or limitations on the size of social gatherings. The COVID-19 budget, however, assumes that current year restrictions continue through the end of FY22.

Overall Program Budget:

"Return to Normal" Budget

In the "return to normal" FY22 budget, total budgeted program revenues are \$1,465,990, which includes user fee receipts of \$708,705, \$57,017 in gate receipts (including \$28,288 from the Needham-Wellesley Thanksgiving game), donations of \$25,500 from the Boosters to cover waivers and a \$674,768 requested allocation from the Operating Budget. Under this scenario, we project all sports to resume.

Total "return to normal" FY22 program expenses are projected at \$1,463,097 and include the following major components: \$929,992 in salaries for program directors and supervisors, coaches, and trainers and game workers; \$182,610 for transportation to games and practices; \$130,115 in venue rental expenses; \$79,558 for equipment and uniforms; \$64,942 for officials; \$7,150 for custodial and police detail; and \$68,730 for other expense such as conference dues, memberships, scheduling and registration software, meetings and equipment maintenance.

The projected ending revolving fund balance is \$75,520, including \$64,741 in the revolving fund and \$10,779 in anticipated donated fund balance.

“COVID” Budget

In the “COVID” FY22 budget, total budgeted program revenues are \$1,370,433, which includes user fee receipts of \$670,165, donations of \$25,500 from the Boosters to cover waivers and a \$674,768 requested allocation from the Operating Budget. Note that, under this scenario, we assume that high school and middle sports run, but multiple club sports will not. In addition, no gate revenues are projected, due to limitations on the size of social gatherings.

Total program expenses are projected at \$1,301,580 and include the following major components: \$899,858 in salaries for program directors and supervisors, coaches, trainers and game workers; \$147,545 for transportation to games and practices; \$114,344 in venue rental expenses; \$35,056 for equipment and uniforms; \$45,767 for officials; \$1,200 for custodial; and \$57,810 for other expense such as conference dues, memberships, scheduling and registration software, meetings and equipment maintenance.

The projected ending revolving fund balance is \$141,481, including revolving fund balance of \$130,702 and \$10,779 in anticipated donated fund balance.

Description of Revolving Fund Revenues:

Return to Normal Budget

In FY22, total Revolving Fund revenues are \$765,722. These revenues include \$708,705 in user fees and \$57,017 in gate receipts.

- Fee revenues represent fees received from 2,313 student athletes paying the fees. There are no user fee rate increases proposed for FY22.
- We are projecting the same gate revenues in the fall as FY20, 50% of FY20 gate revenues for winter sports (as indoor venues may still have capacity limits), and the same spring gate revenues as FY19.

As mentioned above, the overall program budget also includes \$674,768 in operating funds and \$25,500 in donated revenues which are received outside of the Revolving Fund, but which go toward supporting the overall Athletics Budget. The donated funds represent fee waivers provided by the Booster Club to needy student athletes.

COVID Budget

In FY22, total Revolving Fund revenues are \$670,165. These revenues consist entirely of user fees, coming from 2,217 student athletes paying the fees. There are no user fee rate increases proposed for FY22. There are also no gate receipts budgeted under this scenario.

As mentioned above, the overall program budget also includes \$674,768 in operating funds and \$25,500 in donated revenues which are received outside of the Revolving Fund, but which go toward supporting the overall Athletics Budget. The donated funds represent fee waivers provided by the Booster Club to needy student athletes.

Fees Under Both Budgets

Historical and proposed program fees are shown below:

Athletics Participation Fee	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	\$ Inc	% Inc
User Fee	\$285	\$285	\$285	\$285	\$285	\$285	\$285	\$285	\$285	\$300	\$300	\$300	\$0	0%
User Fee - Club, Middle School				\$225	\$225	\$225	\$225	\$225	\$225	\$235	\$235	\$235	\$0	0%
Family Cap	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$1,140	\$0	0%
Hockey Surcharge	\$250	\$250	\$250	\$250	\$250	\$250	\$300	\$300	\$300	\$330	\$330	\$330	\$0	0%
Ski Surcharge	\$250	\$250	\$250	\$250	\$250	\$250	\$300	\$300	\$300	\$330	\$330	\$330	\$0	0%
Swim Surcharge	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$50	\$55	\$55	\$55	\$0	0%
Sailing Club Surcharge				\$175	\$175	\$175	\$175	\$175	\$175	\$190	\$190	\$190	\$0	0%
Squash Club Surcharge					\$175	\$175	\$175	\$175	\$175	\$190	\$190	\$190	\$0	0%
Bowling Club Surcharge					\$75	\$75	\$75	\$75	\$75	\$80	\$80	\$80	\$0	0%
Fencing Club Surcharge						\$175	\$175	\$175	\$175	\$190	\$190	\$190	\$0	0%
Snowboarding Club Surcharge						\$175	\$225	\$225	\$225	\$250	\$250	\$250	\$0	0%
Water Polo Club Surcharge						\$75	\$75	\$75	\$75	\$80	\$80	\$80	\$0	0%
Ice Hockey Club Surcharge									\$175	\$175	\$175	\$175	\$0	0%
MS Volleyball Surcharge							\$25	\$25	\$25	\$25	\$25	\$25	\$0	0%
MS Basketball Surcharge							\$25	\$25	\$25	\$25	\$25	\$25	\$0	0%
MS Wrestling Surcharge							\$25	\$25	\$25	\$25	\$25	\$25	\$0	0%
MS Softball Surcharge							\$25	\$25	\$25	\$25	\$25	\$25	\$0	0%

FY22 Revenues by Sport are detailed in Attachment B.

Revolving Fund Expenditures:

Return to Normal Budget

The FY22 “Return to Normal” Revolving Fund expenditures total \$762,829. Components of the expenditure budget include: \$223,967 in salaries for a portion of departmental staff, middle school program supervision, coaches; \$24,570 for athletic trainers; \$15,987 for game workers; \$152,610 for transportation, \$130,115 for venue rental, \$64,942 for officials, \$75,858 for uniforms and equipment, \$31,595 for dues/registrations/entry fees, \$10,000 in Needham-Wellesley Thanksgiving Game, \$7,150 for police and custodial detail, and \$26,035 for other expenses. These estimates are based upon FY20 actuals in fall and winter, and FY21 budget in spring, with modifications for select sports that are new (such as girls’ golf) or being discontinued (such as club cheer).

The overall program budget includes \$700,268 in expenses funded outside of the Revolving Fund, by the Operating Budget and donation account. The requested Operating Budget funding of \$674,768 funds the remaining portion of departmental staff (Director, Assistant Director, Bookkeeper/Secretary), the coaches, the trainer, \$8,200 in unified sports transportation and equipment, and \$1,100 in professional development expense. The \$25,500 donation account is used to offset forgone revenues and funds transportation and uniforms expense.

COVID Budget

The FY22 “COVID” Revolving Fund expenditures total \$601,312. Components of the expenditure budget include: \$207,820 in salaries for a portion of departmental staff, middle school program supervision, coaches; \$24,570 for athletic trainers; \$2,000 for game workers; \$117,545 for transportation, \$114,344 for venue rental, \$45,767 for officials, \$31,356 for uniforms and equipment, \$22,345 for dues/registrations/entry fees, \$1,200 for custodial detail, and \$34,365 for other expenses. These expenses are based upon the projection for FY21, except for sports that are anticipated to run next year despite not running in FY21 (includes club sailing, snowboarding, middle school sports, unified sports, and others), which are based upon the non-COVID projection.

As in the non-COVID scenario, the overall program budget includes \$700,268 in expenses funded outside of the Revolving Fund, by the Operating Budget and donation account. The requested Operating Budget funding of \$674,768 funds the remaining portion of departmental staff (Director, Assistant Director, Bookkeeper/Secretary), the coaches, the trainer, \$8,200 in unified sports transportation and equipment, and \$1,100 in professional development expense. The \$25,500 donation account is used to offset forgone revenues and funds transportation and uniforms expense.

Revolving Fund Program Staffing:

As noted above, the FY22 Revolving Fund Budget includes a portion of the department staff, supervision and coaching stipends. The department is managed by the Director of Athletics and the Assistant Director and supported by 1.3 FTE of bookkeeping staff. The coaching positions include head coaching positions as well as assistant coaches who provide supervision and support for each team.

Revolving Fund Balance:

The projected ending balance in the Revolving Fund is \$64,741 in “Return to Normal” and \$130,702 in “COVID, both which represent an increase from the beginning carry over balance of \$61,849. The Program’s fund balance is the result of Revolving Fund operations while the donation account also maintains fund balance of \$10,779. The revolving fund ending balance, equivalent to approximately 0.85 months of expenditures under non-COVID and 4.04 months under COVID, will be sufficient to meet unanticipated program expenses and cash flow needs for FY22. Over time, with continued incremental contributions from the operating fund, as recommended in the feasibility study, paired with sound fiscal management efforts, the Athletics Revolving Fund will accumulate a fund balance closer to the targeted three months of operating expenditures, or approximately \$210,000.

FY22 Proposed Budget:

The FY22 Combined Budget of the Athletics Program is presented as Attachment A. Detailed breakouts of the FY22 budgets by sport is presented as Attachments B and C. Subsequent attachments present detail for the current year, on a projected basis.

	FY20 Actual			
	Revolving Fund	Donations	Operating Fund	Total
Beginning Balance	\$76,011	\$8,476	0	\$84,488
Revenues				
User Fees	\$535,986			\$535,986
Thanksgiving FB Gate Fees				\$0
Gate Fees	\$68,956			\$68,956
Total Fees	\$604,942			\$604,942
Donations		\$32,189		\$32,189
Baseline Operating Budget			\$518,457	\$518,457
Budget Holdback/Adjustments				\$0
Budget Savings Reallocated to Remote Learning Academy				\$0
Operating Budget				\$653,342
Current Revenue	\$604,942	\$32,189	\$518,457	\$1,155,588
Expenses				
Salaries (Excluding Trainers)	\$164,659.51		\$464,291	\$628,950
Athletic Trainers	\$-509.00		\$10,609	\$10,100
Game Workers	5123 \$9,788.44			\$9,788
Officials	5380 \$61,824.49			\$61,824
Police	5380 \$656.00			\$656
Custodial	5380 \$2,805.00			\$2,805
Transportation	5330 \$105,247.85	\$17,933		\$123,181
Venue Rentals	5270 \$118,531.81	\$4,560	\$4,578	\$127,670
Equipment & Uniforms	5510 \$49,352.74	\$5,984		\$55,337
Dues & Memberships	5730 \$24,685.00			\$24,685
Thanksgiving FB Profit Sharing				\$0
Other (Restrooms, Scoreboard, Refunds, misc) 5780, 552	\$76,423.16	\$1,409	\$17,357	\$95,189
Current Expense	\$613,465	\$29,886	\$496,835	\$1,140,186
Net Income (Revenue - Exp)	-\$8,523	\$2,303	\$21,622	\$15,402
Ending Balance	\$67,488	\$10,779	\$21,622	\$99,889

	FY21 Budget			
	Revolving Fund	Donations	Operating Fund	Total
Beginning Balance	\$110,255	\$8,477	0	\$118,732
Revenues				
User Fees	\$693,450			\$693,450
Thanksgiving FB Gate Fees	\$27,000			\$27,000
Gate Fees	\$60,500			\$60,500
Total Fees	\$780,950			\$780,950
Donations		\$25,500		\$25,500
Baseline Operating Budget			\$653,342	\$653,342
Budget Holdback/Adjustments				\$0
Budget Savings Reallocated to Remote Learning Academy				\$0
Operating Budget				\$653,342
Current Revenue	\$780,950	\$25,500	\$653,342	\$1,459,792
Expenses				
Salaries (Excluding Trainers)	\$221,215		\$616,647	\$837,862
Athletic Trainers	\$18,401		\$27,394	\$45,795
Game Workers	\$15,987			\$15,987
Officials	\$64,942			\$64,942
Police	\$5,950			\$5,950
Custodial	\$1,200			\$1,200
Transportation	\$150,470	\$25,500	\$4,500	\$180,470
Venue Rentals	\$130,115			\$130,115
Equipment & Uniforms	\$75,858		\$3,700	\$79,558
Dues & Memberships	\$31,595			\$31,595
Thanksgiving FB Profit Sharing	\$10,000			\$10,000
Other (Restrooms, Scoreboard, Refunds, misc) 5780, 552	\$20,030		\$1,100	\$21,130
Current Expense	\$745,763	\$25,500	\$653,342	\$1,424,605
Net Income (Revenue - Exp)	\$35,187	\$0	\$0	\$35,187
Ending Balance	\$145,441	\$8,477	\$0	\$153,918

	FY21 Projection			
	Revolving Fund	Donations	Operating Fund	Total
Beginning Balance	\$67,488	\$10,779	\$0	\$78,267
Revenues				
User Fees	\$583,360			\$583,360
Thanksgiving FB Gate Fees	\$0			\$0
Gate Fees	\$0			\$0
Total Fees	\$583,360			\$583,360
Donations		\$25,500		\$25,500
Baseline Operating Budget			\$653,342	\$653,342
Budget Holdback/Adjustments				\$-4,255
Budget Savings Reallocated to Remote Learning Academy				\$-4,255
Operating Budget				\$-105,762
Current Revenue	\$583,360	\$25,500	\$543,325	\$1,152,185
Expenses				
Salaries (Excluding Trainers)	\$218,746		\$545,673	\$764,419
Athletic Trainers	\$28,315		\$22,868	\$51,183
Game Workers	\$2,000			\$2,000
Officials	\$42,885			\$42,885
Police	\$0			\$0
Custodial	\$1,200			\$1,200
Transportation	\$111,550	\$25,500	\$0	\$137,050
Venue Rentals	\$107,008			\$107,008
Equipment & Uniforms	\$26,900		\$0	\$26,900
Dues & Memberships	\$20,645			\$20,645
Thanksgiving FB Profit Sharing	\$0			\$0
Other (Restrooms, Scoreboard, Refunds, misc) 5780, 552	\$29,750		\$0	\$29,750
Current Expense	\$588,999	\$25,500	\$568,541	\$1,183,040
Net Income (Revenue - Exp)	-\$5,639	\$0	-\$25,216	-\$30,855
Ending Balance	\$61,849	\$10,779	-\$25,215	\$47,413

FY20-22 Athletics Program Summary
Attachment A

	FY22 Budget (Non-COVID)				FY22B (NC) vs FY21P	FY22 Budget (COVID)				FY22B @ vs FY21P
	Revolving Fund	Donations	Operating Fund	Total		Revolving Fund	Donations	Operating Fund	Total	
Beginning Balance	\$61,849	\$10,779	\$0	\$72,628	-\$5,639	\$61,849	\$10,779	\$0	\$72,628	-\$5,639
Revenues										
User Fees	\$708,705			\$708,705	\$125,345	\$670,165			\$670,165	\$86,805
Thanksgiving FB Gate Fees	\$28,288			\$28,288	\$28,288	\$0			\$0	\$0
Gate Fees	\$28,729			\$28,729	\$28,729	\$0			\$0	\$0
Total Fees	\$765,722			\$765,722	\$182,362	\$670,165			\$670,165	\$86,805
Donations		\$25,500		\$25,500	\$0		\$25,500		\$25,500	\$0
Baseline Operating Budget			\$674,768	\$674,768	\$21,426			\$674,768	\$674,768	\$21,426
Budget Holdback/Adjustments				\$0	\$4,255				\$0	\$4,255
Budget Savings Reallocated to Remote Learnir				\$0	\$105,762				\$0	\$105,762
Operating Budget					\$0					\$0
Current Revenue	\$765,722	\$25,500	\$674,768	\$1,465,990	\$313,804	\$670,165	\$25,500	\$674,768	\$1,370,433	\$218,248
Expenses										
Salaries (Excluding Trainers)	\$223,967		\$637,458	\$861,425	\$97,006	\$207,820		\$637,458	\$845,278	\$80,859
Athletic Trainers	\$24,570		\$28,010	\$52,580	\$1,397	\$24,570		\$28,010	\$52,580	\$1,397
Game Workers	\$15,987			\$15,987	\$13,987	\$2,000			\$2,000	\$0
Officials	\$64,942			\$64,942	\$22,057	\$45,767			\$45,767	\$2,882
Police	\$5,950			\$5,950	\$5,950	\$0			\$0	\$0
Custodial	\$1,200			\$1,200	\$0	\$1,200			\$1,200	\$0
Transportation	\$152,610	\$25,500	\$4,500	\$182,610	\$45,560	\$117,545	\$25,500	\$4,500	\$147,545	\$10,495
Venue Rentals	\$130,115			\$130,115	\$23,107	\$114,344			\$114,344	\$7,336
Equipment & Uniforms	\$75,858		\$3,700	\$79,558	\$52,658	\$31,356		\$3,700	\$35,056	\$8,156
Dues & Memberships	\$31,595			\$31,595	\$10,950	\$22,345			\$22,345	\$1,700
Thanksgiving FB Profit Sharing	\$10,000			\$10,000	\$10,000	\$0			\$0	\$0
Other (Restrooms, Scoreboard, Refunds, misc)	\$26,035		\$1,100	\$27,135	-\$2,615	\$34,365		\$1,100	\$35,465	\$5,715
Current Expense	\$762,829	\$25,500	\$674,768	\$1,463,097	\$280,057	\$601,312	\$25,500	\$674,768	\$1,301,580	\$118,540
										\$0
										\$0
Net Income (Revenue - Exp)	\$2,892	\$0	\$0	\$2,892	\$33,747	\$68,853	\$0	\$0	\$68,853	\$99,708
										\$0
Ending Balance	\$64,741	\$10,779	\$0	\$75,520	\$28,108	\$130,702	\$10,779	\$0	\$141,481	\$94,068

FY22 Budget Non-COVID (11/1/20)	Transportation	Officials	Game Workers	Custodial /DPW	Police Detail	Lights/ Field Maint	Insurance	Dues/Memb	Venue Rental	Equip & Uniforms	Misc	Salaries & Stipends	Total Expense	Projected # Athletes	User Fee Revenue	Gate Fee Revenue	Donations	Total Revenues (user, gate, don)
ADMIN																		
<i>Salaries - Admin</i>																		
1.0 FTE Athletic Director	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$134,227	\$134,227					\$0
1.0 FTE Assistant Athletic Director	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,922	\$70,922					\$0
Unit B Allocation- Professional Develop	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100	\$0	\$1,100					\$0
1.3 FTE Bookkeeper	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,737	\$77,737					\$0
Event Program Manager (Cat IX 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,860	\$4,860					\$0
Equipment Manager (Cat V 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,143	\$4,143					\$0
Assistant Equipment Manager (Cat V 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,624	\$3,624					\$0
Middle School Coordinator	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,945	\$6,945					\$0
Middle School Faculty Mgr	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,845	\$4,845					\$0
Head Athletic Trainer (Budgeted as St	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,010	\$28,010					\$0
Assistant Athletic Trainer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,815	\$18,815					\$0
Unused Stipends (Bowling, Fencing)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Nurses - Summer Hours	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
<i>General Expenses</i>																		
Dues/Entry Fees (BayState, PCA Works	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,645	\$0	\$0	\$0	\$0	\$20,645					\$0
Reconditioning Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,200	\$0	\$0	\$8,200					\$0
Training Room Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$5,000					\$0
Rental Porta Potties	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$2,000					\$0
Scoreboard Maint	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200	\$0	\$0	\$1,200					\$0
Online Registration Program: Activity L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$2,000					\$0
AED Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$1,000					\$0
In Town Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,400	\$0	\$2,400					\$0
Meetings: NHS Coaches, BCS Mtg	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300	\$0	\$1,300					\$0
Contingency FALL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800	\$0	\$800					\$0
Contingency WINTER	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800	\$0	\$800					\$0
Contingency SPRING (venue/bus if fiel	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$800	\$0	\$4,800					\$0
OT/Cust	\$0	\$0	\$0	\$1,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200					\$0
Print/Office Equip/Pad	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,120	\$0	\$1,120					\$0
Coaches Gear	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$0	\$1,000					\$0
Thanksgiving FB Game: Wellesley Pay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10,000	\$0	\$10,000					\$0
Boosters Fee Waivers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,755	\$0	\$5,755					\$0
Admin Totals	\$2,000	\$0	\$0	\$1,200	\$0	\$0	\$0	\$20,645	\$2,000	\$14,200	\$30,275	\$354,128	\$424,448			\$0	\$0	\$0
FALL																		
Football	\$7,800	\$5,550	\$3,667	\$0	\$3,400	\$1,200	\$1,750			\$9,687		\$43,037	\$76,091	92	\$27,600.00	\$28,288		\$55,888
Fall Cheer	\$2,580									\$0		\$5,980	\$8,560	13	\$3,900.00	\$0		\$3,900
Fall Dance	\$1,280									\$0		\$5,202	\$6,482	25	\$7,500.00	\$0		\$7,500
Boys Soccer	\$8,125	\$4,474	\$953		\$680	\$500			\$1,416	\$1,416		\$16,164	\$32,312	82	\$24,600.00	\$1,665		\$26,265
Girls Soccer	\$8,125	\$4,300	\$953		\$510	\$500			\$5,910	\$5,910		\$18,168	\$38,466	57	\$17,100.00	\$2,556		\$19,656
Field Hockey	\$5,200	\$3,916			\$0				\$5,563	\$5,563		\$14,359	\$29,038	63	\$18,900.00	\$0		\$18,900
Boys/GirlsX-C	\$10,725	\$480						\$900	\$1,200	\$1,200	\$900	\$16,651	\$30,856	119	\$35,700.00	\$0		\$35,700
Girls Swim	\$2,500	\$1,414						\$6,600	\$2,970	\$2,970		\$14,542	\$28,026	44	\$15,620.00	\$0		\$15,620
Boys Golf	\$1,820								\$1,120	\$1,120		\$5,040	\$7,980	12	\$3,600.00	\$0		\$3,600
Girls Volleyball	\$3,380	\$2,854	\$102						\$900	\$900		\$14,322	\$21,558	47	\$14,100.00	\$0		\$14,100
Club Cheer										\$0		\$0	\$0	0	\$0.00	\$0		\$0
Club Dance	\$640									\$0		\$2,196	\$2,836	26	\$6,110.00	\$0		\$6,110
Club Sailing	\$260							\$1,700	\$2,080	\$0		\$3,815	\$7,855	29	\$12,325.00	\$0		\$12,325
Unified Basketball - moved to winter	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		\$0.00	\$0		\$0
Boys/GirlsX-C	\$1,560	\$308							\$900	\$900		\$14,668	\$17,436	98	\$23,030.00	\$0		\$23,030
Field Hockey	\$2,080	\$992							\$816	\$816		\$8,147	\$12,035	61	\$14,335.00	\$1,035		\$15,370
Girls Volleyball	\$1,820	\$280							\$540	\$540		\$5,677	\$8,317	60	\$15,600.00	\$1,650		\$17,250
Fall Totals	\$57,895	\$24,568	\$5,675	\$0	\$4,590	\$2,200	\$1,750	\$2,600	\$8,680	\$31,022	\$900	\$187,968	\$327,848	828	\$240,020	\$35,193	\$0	\$275,213
WINTER																		
B Basketball	\$5,460	\$3,962	\$2,312		\$680					\$1,462		\$17,044	\$30,920	48	\$14,400.00	\$6,635		\$21,035
G Basketball	\$5,460	\$3,788	\$2,480		\$170					\$1,462		\$17,044	\$30,404	40	\$12,000.00	\$3,818		\$15,818
B Hockey	\$7,625	\$2,892	\$1,477						\$38,427	\$405		\$13,491	\$64,317	42	\$26,460.00	\$3,262		\$29,722
G Hockey	\$7,625	\$2,796	\$1,477						\$38,427	\$405		\$13,491	\$64,221	30	\$18,900.00	\$2,536		\$21,436
B&G In Track	\$9,800	\$1,200						\$900		\$1,200		\$26,127	\$39,227	156	\$46,800.00	\$0		\$46,800
G Gymnastics	\$1,700	\$920								\$150		\$10,057	\$12,827	16	\$4,800.00	\$0		\$4,800
Win Cheer	\$2,580									\$0		\$5,979	\$8,559	13	\$3,900.00	\$0		\$3,900
Win Dance	\$1,280									\$0		\$5,202	\$6,482	26	\$7,800.00	\$0		\$7,800

FY22 Budget Non-COVID (11/1/20)	Transportation	Officials	Game Workers	Custodial /DPW	Police Detail	Lights/ Field Maint	Insurance	Dues/Memb	Venue Rental	Equip & Uniforms	Misc	Salaries & Stipends	Total Expense	Projected # Athletes	User Fee Revenue	Gate Fee Revenue	Donations	Total Revenues (user, gate, don)
Wrestling	\$2,220	\$1,096	\$530					\$900		\$537		\$15,624	\$20,906	35	\$10,500.00	\$631		\$11,131
B Swimming	\$2,100	\$880							\$6,500	\$1,575		\$10,489	\$21,544	35	\$12,425.00	\$0		\$12,425
Skiing	\$10,350								\$22,400	\$4,500		\$9,973	\$47,223	52	\$32,760.00	\$0		\$32,760
Club Cheer			Sport discontinued							\$0		\$0	\$0	0	\$0.00	\$0		\$0
Club Dance	\$640									\$0		\$2,196	\$2,836	25	\$5,875.00	\$0		\$5,875
Club Bowling			Club discontinued									\$0	\$0	0	\$0.00	\$0		\$0
Club Squash	\$780								\$2,705	\$240		\$5,817	\$9,542	37	\$15,725.00	\$0		\$15,725
Club Fencing												\$3,229	\$3,229	5	\$2,125.00	\$0		\$2,125
Club Snowboarding	\$1,000								\$5,256	\$0		\$1,646	\$7,902	18	\$8,100.00	\$0		\$8,100
Club Ice Hockey								\$3,250				\$0	\$3,250	11	\$2,585.00	\$0		\$2,585
Unified Sports Basketball	\$1,500									\$1,300		\$6,550	\$9,350	0	\$0.00	\$0		\$0
Unified Sports Basketball	\$1,500									\$1,300		\$4,391	\$7,191	0	\$0.00	\$0		\$0
Boys/Girls Basketball	\$2,275	\$1,302								\$420		\$8,702	\$12,699	29	\$7,540.00	\$0		\$7,540
Wrestling	\$650	\$352								\$416		\$4,351	\$5,769	12	\$3,120.00	\$0		\$3,120
Dance										\$480		\$2,181	\$2,661	25	\$5,875.00	\$0		\$5,875
Winter Totals	\$64,545	\$19,188	\$8,275	\$0	\$850	\$0	\$0	\$5,050	\$113,715	\$15,852	\$0	\$183,585	\$411,060	655	\$241,690	\$16,882	\$0	\$258,572
SPRING																		
Baseball	\$5,200	\$3,916	\$0	\$0	\$0	\$400	\$0	\$0	\$0	\$3,570	\$0	\$16,036	\$29,122	55	\$16,500.00			\$16,500
Softball	\$2,860	\$2,664	\$0	\$0	\$0	\$320	\$0	\$0	\$0	\$641	\$0	\$12,412	\$18,897	30	\$9,000.00			\$9,000
Boys Lax	\$7,020	\$3,916	\$794	\$0	\$340	\$520	\$0	\$0	\$0	\$489	\$0	\$16,100	\$29,180	65	\$19,500.00	\$1,476		\$20,976
Girls Lax	\$4,940	\$4,264	\$937	\$0	\$170	\$520	\$0	\$0	\$0	\$4,986	\$0	\$16,100	\$31,917	60	\$18,000.00	\$2,388		\$20,388
B&G Sp Track	\$9,400	\$1,200	\$0	\$0	\$0	\$0	\$0	\$900	\$0	\$2,200	\$0	\$29,728	\$43,428	160	\$48,000.00			\$48,000
Boys Tennis	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600	\$0	\$9,266	\$12,466	24	\$7,200.00			\$7,200
Girls Tennis	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600	\$0	\$9,266	\$12,466	24	\$7,200.00			\$7,200
Boys Volleyball	\$2,380	\$3,198	\$306	\$0	\$0	\$0	\$0	\$0	\$0	\$480	\$0	\$12,318	\$18,682	35	\$10,500.00	\$1,079		\$11,579
Rugby	\$1,950	\$620	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$550	\$0	\$9,833	\$12,953	40	\$12,000.00			\$12,000
Girls Golf	\$1,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$4,929	\$7,129	12	\$2,820.00			\$2,820
Club Boys Ultimate Frisbee	\$2,340	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200	\$0	\$240	\$0	\$3,842	\$7,622	32	\$7,520.00			\$7,520
Club Girls Ultimate Frisbee	\$2,080	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200	\$0	\$170	\$0	\$2,196	\$5,646	22	\$5,170.00			\$5,170
Club Sailing	\$1,820	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,512	\$528	\$0	\$3,815	\$7,675	16	\$6,800.00			\$6,800
Club Water Polo	\$960	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,208	\$380	\$0	\$2,196	\$7,744	20	\$6,300.00			\$6,300
Girls Rugby	\$1,300	\$352	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$0	\$2,195	\$4,097	22	\$5,170.00			\$5,170
Unified Sports Track & Field	\$1,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$6,550	\$9,300	24	\$0.00			\$0
B&G Sp Track	\$2,600	\$308	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,170	\$0	\$14,126	\$18,204	125	\$29,375.00			\$29,375
Softball	\$1,820	\$588	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,797	\$6,205	16	\$4,160.00			\$4,160
Ultimate Frisbee	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$450	\$0	\$3,797	\$5,547	28	\$6,580.00			\$6,580
B Volleyball	\$1,300	\$160	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$180	\$0	\$4,061	\$5,701	20	\$5,200.00			\$5,200
Spring Totals	\$58,170	\$21,186	\$2,037	\$0	\$510	\$1,760	\$0	\$3,300	\$5,720	\$18,484	\$250	\$182,564	\$293,981	830	\$226,995	\$4,942	\$0	\$231,937
FY22 Budget Non-COVID	\$182,610	\$64,942	\$15,987	\$1,200	\$5,950	\$3,960	\$1,750	\$31,595	\$130,115	\$79,558	\$31,425	\$908,244	\$1,457,336	2,313	\$708,705	\$57,017	\$0	\$765,722

FY22 Budget COVID (11/1/20)	Transportation	Officials	Game Workers	Custodial /DPW	Police Detail	Lights/ Field Maint	Insurance	Dues/Memb	Venue Rental	Equip & Uniforms	Misc	Salaries & Stipends	Total Expense	Projected # Athletes	User Fee Revenue	Gate Fee Revenue	Donations	Total Revenues (user, gate, don)
ADMIN																		
<i>Salaries - Admin</i>																		
1.0 FTE Athletic Director	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$134,227	\$134,227					\$0
1.0 FTE Assistant Athletic Director	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70,922	\$70,922					\$0
Unit B Allocation- Professional Develop	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100	\$0	\$1,100					\$0
1.3 FTE Bookkeeper	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$77,737	\$77,737					\$0
Event Program Manager (Cat IX 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,860	\$4,860					\$0
Equipment Manager (Cat V 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,143	\$4,143					\$0
Assistant Equipment Manager (Cat V 3)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,624	\$3,624					\$0
Middle School Coordinator	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Middle School Faculty Mgr	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Head Athletic Trainer (Budgeted as St	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,010	\$28,010					\$0
Assistant Athletic Trainer	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,815	\$18,815					\$0
Unused Stipends (Bowling, Fencing)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Nurses - Summer Hours	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
<i>General Expenses</i>																		
Dues/Entry Fees (BayState, PCA Work)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,645	\$0	\$0	\$0	\$0	\$20,645					\$0
Reconditioning Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,200	\$0	\$0	\$8,200					\$0
Training Room Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$5,000					\$0
Rental Porta Potties	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$2,000					\$0
Scoreboard Maint	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200	\$0	\$1,200					\$0
Online Registration Program: Activity L	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$2,000					\$0
AED Maintenance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$1,000					\$0
In Town Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Meetings: NHS Coaches, BCS Mtg	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Contingency FALL	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800	\$0	\$800					\$0
Contingency WINTER	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$800	\$0	\$800					\$0
Contingency SPRING (venue/bus if fiel	\$2,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$800	\$0	\$4,800					\$0
OT/Cust	\$0	\$0	\$0	\$1,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,200					\$0
Print/Office Equip/iPad	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,120	\$0	\$1,120					\$0
Coaches Gear	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$0	\$0	\$1,000					\$0
Thanksgiving FB Game: Wellesley Pay	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Boosters Fee Waivers	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0					\$0
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,755	\$0	\$5,755					\$0
Admin Totals	\$2,000	\$0	\$0	\$1,200	\$0	\$0	\$0	\$20,645	\$2,000	\$14,200	\$16,575	\$342,338	\$398,958			\$0	\$0	\$0
FALL																		
Football	\$6,500	\$2,880	\$300	\$0	\$0	\$1,600	\$1,750	\$0	\$0	\$250	\$250	\$43,037	\$56,567	90	\$27,000.00			\$27,000
Fall Cheer	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$5,980	\$7,280	18	\$5,400.00			\$5,400
Fall Dance	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$5,202	\$6,502	22	\$6,600.00			\$6,600
Boys Soccer	\$4,550	\$2,150	\$0	\$0	\$0	\$400	\$0	\$0	\$0	\$250	\$250	\$16,164	\$23,764	72	\$21,600.00			\$21,600
Girls Soccer	\$4,225	\$1,894	\$0	\$0	\$0	\$400	\$0	\$0	\$0	\$250	\$250	\$18,168	\$25,187	62	\$18,600.00			\$18,600
Field Hockey	\$4,225	\$1,894	\$0	\$0	\$0	\$400	\$0	\$0	\$0	\$250	\$250	\$14,359	\$21,378	67	\$20,100.00			\$20,100
Boys/GirlsX-C	\$2,600	\$480	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$16,651	\$20,231	94	\$28,200.00			\$28,200
Girls Swim	\$0	\$1,414	\$0	\$0	\$0	\$0	\$0	\$0	\$6,000	\$250	\$250	\$14,542	\$22,456	32	\$11,360.00			\$11,360
Boys Golf	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$460	\$250	\$5,040	\$8,350	16	\$4,800.00			\$4,800
Girls Volleyball	\$6,500	\$2,132	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$14,322	\$23,454	45	\$13,500.00			\$13,500
Club Cheer	Sport discontinued	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00			\$0
Club Dance	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$2,196	\$3,496	22	\$5,170.00			\$5,170
Club Sailing	\$260	\$0	\$0	\$0	\$0	\$0	\$0	\$1,700	\$2,080	\$0	\$0	\$3,815	\$7,855	\$29	\$12,325.00			\$12,325
Boys/GirlsX-C	\$1,560	\$308	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$900	\$0	\$14,668	\$17,436	\$98	\$23,030.00			\$23,030
Field Hockey	\$2,080	\$992	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$816	\$0	\$8,147	\$12,035	\$61	\$14,335.00			\$14,335
Girls Volleyball	\$1,820	\$280	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$540	\$0	\$5,677	\$8,317	\$60	\$15,600.00			\$15,600
Fall Totals	\$39,320	\$14,424	\$300	\$0	\$0	\$2,800	\$1,750	\$1,700	\$8,080	\$5,216	\$2,750	\$187,968	\$264,308	788	\$227,620	\$0	\$0	\$227,620
WINTER																		
B Basketball	\$6,500	\$2,928	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$17,044	\$27,622	45	\$13,500.00			\$13,500
G Basketball	\$6,500	\$2,928	\$650	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$17,044	\$27,622	45	\$13,500.00			\$13,500
H Hockey	\$4,550	\$2,160	\$200	\$0	\$0	\$0	\$0	\$0	\$24,902	\$250	\$250	\$13,491	\$45,803	44	\$27,720.00			\$27,720
G Hockey	\$4,550	\$2,088	\$200	\$0	\$0	\$0	\$0	\$0	\$24,902	\$250	\$250	\$13,491	\$45,731	36	\$22,680.00			\$22,680
B&G In Track	\$5,200	\$1,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500	\$500	\$26,127	\$33,527	132	\$39,600.00			\$39,600
G Gymnastics	\$0	\$1,472	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$10,057	\$12,029	24	\$7,200.00			\$7,200
Win Cheer	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$5,979	\$7,279	18	\$5,400.00			\$5,400
Win Dance	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$5,202	\$6,502	22	\$6,600.00			\$6,600
Wrestling	\$3,250	\$580	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$15,624	\$19,954	38	\$11,400.00			\$11,400
B Swimming	\$0	\$1,414	\$0	\$0	\$0	\$0	\$0	\$0	\$6,600	\$250	\$250	\$10,489	\$19,003	32	\$11,360.00			\$11,360
Skiing	\$9,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$30,250	\$250	\$250	\$9,973	\$49,923	44	\$27,720.00			\$27,720
Club Cheer	Sport discontinued	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0.00			\$0

FY22 Budget COVID (11/1/20)	Transportation	Officials	Game Workers	Custodial /DPW	Police Detail	Lights/ Field Maint	Insurance	Dues/Memb	Venue Rental	Equip & Uniforms	Misc	Salaries & Stipends	Total Expense	Projected # Athletes	User Fee Revenue	Gate Fee Revenue	Donations	Total Revenues (user, gate, don)
Club Dance	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$2,196	\$3,496	16	\$3,760.00			\$3,760
Club Bowling	No longer a club	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	\$0.00			\$0
Club Squash	\$975	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,705	\$250	\$250	\$5,817	\$9,997	24	\$10,200.00			\$10,200
Club Fencing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500	\$250	\$250	\$3,229	\$6,229	10	\$4,250.00			\$4,250
Club Snowboarding	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,256	\$0	\$0	\$1,646	\$7,902	18	\$8,100.00			\$8,100
Club Ice Hockey	Not an approved sport yet	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	\$0.00			\$0
Unified Sports Basketball	\$975	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$6,550	\$8,025	30	\$0.00			\$0
Unified Sports Basketball	\$1,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300	\$0	\$4,391	\$7,191	0	\$0.00			\$0
Boys/Girls Basketball	\$2,275	\$1,302	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$420	\$0	\$8,702	\$12,699	29	\$7,540.00			\$7,540
Wrestling	Assumed not running due to	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	0	\$0.00			\$0
Dance	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$480	\$0	\$2,181	\$2,661	25	\$5,875.00			\$5,875
Winter Totals	\$48,875	\$16,072	\$1,700	\$0	\$0	\$0	\$0	\$0	\$97,114	\$6,200	\$4,000	\$179,234	\$353,195	632	\$226,405	\$0	\$0	\$226,405
SPRING																		
Baseball	\$6,500	\$2,928	\$0	\$0	\$0	\$500	\$0	\$0	\$0	\$250	\$250	\$16,036	\$26,464	55	\$16,500.00			\$16,500
Softball	\$4,550	\$1,992	\$0	\$0	\$0	\$400	\$0	\$0	\$0	\$250	\$250	\$12,412	\$19,854	30	\$9,000.00			\$9,000
Boys Lax	\$6,500	\$2,928	\$0	\$0	\$0	\$650	\$0	\$0	\$0	\$250	\$250	\$16,100	\$26,678	65	\$19,500.00			\$19,500
Girls Lax	\$6,500	\$2,928	\$0	\$0	\$0	\$650	\$0	\$0	\$0	\$250	\$250	\$16,100	\$26,678	60	\$18,000.00			\$18,000
B&G Sp Track	\$3,900	\$1,100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500	\$500	\$29,728	\$35,728	132	\$39,600.00			\$39,600
Boys Tennis	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$9,266	\$12,366	24	\$7,200.00			\$7,200
Girls Tennis	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$9,266	\$12,366	22	\$6,600.00			\$6,600
Boys Volleyball	\$4,550	\$2,116	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$12,318	\$19,484	35	\$10,500.00			\$10,500
Rugby	\$1,950	\$465	\$0	\$0	\$0	\$140	\$0	\$0	\$0	\$250	\$250	\$9,833	\$12,888	40	\$12,000.00			\$12,000
Girls' Golf	\$1,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$4,929	\$7,129	12	\$2,820.00			\$2,820
Club Boys Ultimate Frisbee	\$2,600	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$3,842	\$6,942	32	\$7,520.00			\$7,520
Club Girls Ultimate Frisbee	\$1,625	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$2,196	\$4,321	22	\$5,170.00			\$5,170
Club Sailing	\$2,275	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,890	\$250	\$250	\$3,815	\$8,480	16	\$6,800.00			\$6,800
Club Water Polo	\$800	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,260	\$250	\$250	\$2,196	\$8,756	22	\$6,930.00			\$6,930
Girls Rugby	\$975	\$264	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$2,195	\$3,934	22	\$5,170.00			\$5,170
Unified Sports Track & Field	\$975	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$6,550	\$8,025	30	\$0.00			\$0
B&G Sp Track	\$3,250	\$154	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$990	\$250	\$14,126	\$18,770	110	\$25,850.00			\$25,850
Softball	\$1,300	\$336	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$3,796	\$5,932	16	\$4,160.00			\$4,160
Ultimate Frisbee	\$975	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$3,796	\$5,271	28	\$6,580.00			\$6,580
B Volleyball	\$975	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$4,062	\$5,597	24	\$6,240.00			\$6,240
Spring Totals	\$57,350	\$15,271	\$0	\$0	\$0	\$2,340	\$0	\$0	\$7,150	\$5,740	\$5,250	\$182,563	\$275,664	797	\$216,140	\$0	\$0	\$216,140
FY22 BUDGET COVID	\$147,545	\$45,767	\$2,000	\$1,200	\$0	\$5,140	\$1,750	\$22,345	\$114,344	\$31,356	\$28,575	\$892,103	\$1,292,125	2,217	\$670,165	\$0	\$0	\$670,165