

The Public Schools of Brookline

GRADE EIGHT CURRICULUM OVERVIEW

Dear Parents and Guardians,

High achievement for all has been a core value in the Public Schools of Brookline for nearly two decades. There are many variables that contribute to a student's academic achievement and growth, one of the most important being a strong connection between the home and school. When families support their child's learning at home, express interest in their studies, and hold high expectations for achievement, the partnership between home and school is strengthened. We hope that this Curriculum Overview will be a useful tool for you as you support and encourage your child's academic success.

Curriculum Coordinators created this overview to highlight the concepts, skills, and knowledge central to each subject area in every grade level, K-8. This document is not intended to represent the entire curriculum for this grade; rather it provides the key elements taught to children across the eight K-8 Brookline schools in this grade. To learn more about the curriculum as outlined in our Learning Expectations, please visit the Public Schools of Brookline website (www.brookline.k12.ma.us/domain/58).

Each year provides new learning opportunities and a window to the world around us. Your involvement and knowledge of your child's school experience will help to nurture his or her learning far beyond the four walls of the classroom. As your child begins a new year in the Public Schools of Brookline, please know that we welcome your involvement and value your support.

Respectfully,

Nicole Gittens, *Deputy Superintendent for Teaching and Learning*
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Updated 2018, Grade 8

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Goals of the Public Schools of Brookline

Goal 1: Every Student Achieving

Ensure that every student meets or exceeds Brookline’s high standards and eliminate persistent gaps in student achievement by establishing educational equity across all classrooms, schools, and programs.

Goal 2: Every Student Invested in Learning

Increase every student’s ownership of his/her learning and achievement by using rigor, relevance, and relationships to foster a spirit of inquiry and the joy of learning.

Goal 3: Every Student Prepared for Change and Challenge

Instill in every student the habits of mind and life strategies critical for success in meeting the intellectual, civic, and social demands of life in a diverse, ever-changing, global environment.

Goal 4: Every Educator Growing Professionally

Foster dynamic professional learning communities that inspire inquiry, reflection, collaboration, and innovation, and use data to improve teaching, advance student learning, and refine the programs and practices of the Public Schools of Brookline.

SOCIAL EMOTIONAL LEARNING & BULLYING PREVENTION/INTERVENTION

The Public Schools of Brookline has created a comprehensive social emotional learning and bullying prevention and intervention program to nurture school culture and provide the knowledge, skills, procedures, and processes required to foster positive student behavior in support of learning. With the effective implementation of the comprehensive program, we envision all Brookline schools reflecting a safe, welcoming, respectful, and nurturing school culture that supports the development of all children through their preK-12 experiences.

The PSB Comprehensive Social Emotional Learning and Bullying Prevention and Intervention Program is characterized by the following program elements in the specified grade(s):

Social Emotional Learning

Social Thinking (K-12)
Responsive Classroom (K-5)
Developmental Designs (6-8)
Facing History and Ourselves (8)
Brookline High School Advisory (9-12)

Bullying Prevention and Intervention

Understanding Disabilities (4)
Second Step (7-8)

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EDUCATIONAL TECHNOLOGY AND LIBRARIES

The Public Schools of Brookline encourages a culture of inquiry that regularly investigates and experiments with promising new practices that engage students as 21st century learners and prepares them for the evolving global society. The Educational Technology and Library staff works in collaboration with the entire school community to help students become:

- Enthusiastic, independent readers for information and pleasure
- Independent, skillful information users who know how to access, analyze and produce information in a variety of formats using a variety of tools
- Responsible digital-age citizens
- Skillful learners and innovators who use digital tools to develop the “Four Cs”:
 - critical thinking
 - communication
 - collaboration
 - creativity

The integration of these skills is typically addressed through classroom projects within the major curriculum units of study in the core subjects. School libraries are complex hubs of student learning and engagement, with the ability to enhance all curriculum areas. Emerging technologies and near ubiquitous access creates new opportunities to deepen and extend learning, often connecting with people, resources, and perspectives beyond the walls of our classrooms.

Students in grade eight use the library to support research across the curriculum, furthering the development of their skills in abstract thinking and information literacy. Students work with both pre-selected sites and various internet search strategies. They hone their ability to find, gather, and assess new information from a variety of electronic and print sources. In addition to understanding about the ethical use of information, students are taught to evaluate their own research process and final products.

In grade eight, technology skills are exercised on a daily basis and special projects continue to provide students with opportunities to develop more advanced skills with hardware and software applications. Students regularly use technology to collaborate, provide feedback to each other, and share their work with a larger audience. Students continue to use a variety of technology resources for problem solving, communication, and presentation of thoughts, ideas, and stories.

ENGLISH LANGUAGE ARTS

Brookline’s Learning Expectations in English Language Arts meet or exceed the standards outlined in the Massachusetts Frameworks. To reach these demanding standards, Brookline educators use the *Continuum of Literacy Learning PreK-8* (Heinemann, 2011) as their day-to-day guide when teaching specific behaviors in reading and writing. The descriptions of eight grade readers and writers below come primarily from the *Continuum*.

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Reading

Students in eighth grade will process and understand a multitude of texts across genres in print and online texts. Many texts will be long and have complex sentences and paragraphs as well as multisyllabic words and words that are seldom used in oral language. These texts will range widely and readers will be expected to understand and respond to mature themes. Complex fantasy, myths, and legends will offer added challenge and require readers to identify moral issues and classical motifs such as “the quest.” Biographies expose students to a range of individuals who may not be previously known to readers and may not always be admirable, requiring critical thinking on the part of readers. In addition, readers will encounter abstract forms of literature such as satire and literary language to convey irony. Additional challenge may include parody, allegory or monologue. Visual complexity will increase in both print and online texts. Themes and characters will be multidimensional, may be understood on several levels, and will be developed in complex ways, challenging readers to take on diverse perspectives. Visual complexity will increase in both print and online texts. Readers will be challenged by a heavy load of content-specific and technical words requiring use of embedded definitions, background knowledge, and readers’ tools such as glossaries. Texts may include archaic language or regional dialect. Readers will search for and use information in an integrated way, for example using complex graphics. Readers will continue to develop content knowledge, including scientific and historical information, and to apply prior understandings in a critical way when reading fiction, nonfiction and poetic texts. (*Continuum of Literacy Learning PreK-8*, pp. 352)

Writing

As eighth graders use writing for a variety of authentic purposes, they will develop a deep understanding of writing for many purposes and audiences. They will select mentor texts and construct hybrid texts and multimedia presentations with authority and skill. Eighth grade writers will use conventions with accuracy and purpose. They will self-evaluate and take more risks as writers. Eighth grade writers will employ a variety of fiction, nonfiction and poetic genres to tell stories; to explain to, persuade or inform readers; to express feelings; and to perform practical tasks. They will deepen their experience with the writing processes of developing ideas and organizing ideas, drafting and revising, and sharing their work. Eighth grade writers will use technology for both writing processes and publishing. (*Continuum of Literacy Learning PreK-8*, pp. 176-185)

MATHEMATICS

Brookline’s Mathematics Learning Expectations, built on the MA Curriculum Frameworks for Mathematics, are comprised of two main components: the Standards for Mathematical Practice and Standards for Mathematical Content. To achieve mathematical understanding, students are engaged in mathematical experiences which balance mathematical procedures and conceptual understanding.

Mathematical Practices

Two of the mathematical practices that we will be highlighting this year involve making sense of problems and constructing mathematical arguments. Grade eight mathematicians solve real world problems through the application of algebraic and geometric concepts. Students seek the meaning of a problem and look for efficient ways to represent and solve it. They may check their thinking by asking themselves, “What is the most efficient way to solve the problem?”, “Does this make sense?”, and “Can

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"I solve the problem in a different way?"

In grade eight, students construct arguments using verbal or written explanations accompanied by a variety of mathematical models, including expressions, equations, inequalities, models, and graphs, tables, and other data displays. They further refine their mathematical communication skills through mathematical discussions in which they critically evaluate their own thinking and the thinking of other students. They pose questions like "How did you get that?" "Why is that true?" "Does that always work?"

Mathematical Content

Building on a foundation of ratios and proportions, rational numbers, and equations, we focus on these three critical areas:

Linear Equations: Formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations.

Functions: Grasping the concept of a function and using functions to describe quantitative relationships.

Geometry: Analyzing two- and three- dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem.

PERFORMING ARTS

Eighth grade students have music (Conservatory) class twice per week during which they develop the following skills:

Performing: Students will develop skills in singing, reading music, playing instruments, movement, and dramatization of music.

Reading and Notating: Students will learn to interpret and apply visual representations for the sounds they hear (musical notation).

Listening and Appreciation: Students will learn to critically respond with understanding when they describe, analyze and interpret music. Students will study music from different periods and locations.

Creating: Students will improvise and compose original works of music.

Connecting: Students will develop understanding of artistic heritage through investigation of the historical and cultural contexts of music.

Eighth graders have the option of taking one of the following Conservatory classes:

Chorus: In 6th-8th Grade Chorus, students develop their ability to sing with healthy vocal technique, read rhythms, pitches and musical markings, sing multiple part harmony, and to express themselves through singing. Students develop their abilities as individual singers and as a group. There are two evening concerts per year.

Band: 6th-8th Grade Band offers students who play wind and percussion instruments the chance to

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further develop their instrumental and musical skills both individually and in a larger ensemble with more sophisticated and longer works. Students prepare music in a wide variety of styles to be performed for winter and spring concerts.

Orchestra: String students develop more advanced orchestral repertoire, focusing on the techniques and skills required to play together as an ensemble in several parts with longer and more sophisticated works. There are two evening concerts per year.

Music Production: Music production is a course designed to help students better understand musical forms, genres, literacy, and composition through the use of the computer program *Garage Band*.

General Music: Students engage in music making through a variety of approaches including rhythm activities, singing, composition and improvisation, listening and appreciation, the study of popular music history, and listening analysis.

Guitar/Ukulele: Guitar/Ukulele class covers the fundamentals of guitar and ukulele for students with little or no experience, or those with some experience who want to learn more about the basics of the instrument and how to play both solo and in an ensemble.

The **Performing Arts Learning Expectations** meet the **National Standards for Arts Education** music learning outcomes that are integral to the comprehensive K-12 education of every student. Music class meets twice a week throughout the school year.

PHYSICAL EDUCATION

By the end of eighth grade, students will apply tactics and strategies to modified game play; demonstrate fundamental movement skills in a variety of contexts; understand how to design and implement a health-enhancing fitness program; participate in self-selected physical activity; cooperate with and encourage classmates; accept individual differences and demonstrate inclusive behaviors; and engage in physical activity for enjoyment and self-expression.

All of the skills students learn are lifetime skills. Using "fun" as a catalyst, we try to develop, in each child, the desire to maintain a healthy and active lifestyle.

The Grades 6-8 Physical Education Curriculum is aligned to the National Physical Education Standards and Grade Level Outcomes. (<http://www.shapeamerica.org/standards/pe/index.cfm>)

In grades 6-8, students work on the skill progressions within each of the following areas:

Motor Skills and Movement Patterns: Develop skills in dance and rhythms, games and sports, outdoor pursuits, and individual performance activities.

Physical Activity and Fitness: Demonstrate the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness. Students increase knowledge about physical activity, engage in physical activity, and learn to program plan. They engage in a physical fitness assessment.

Personal and Social Behavior: Demonstrate respect of self and others, including personal responsibility, accepting feedback, working with others, learning rules and etiquette, and maintaining safety.

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Value of Physical Activity and Social Interactions: Recognize the value of physical activity for health, enjoyment, challenge, self-expression and social interaction.

SCIENCE

In eighth grade science, students explore two major themes: Earth in Space and Changes in Earth's Atmosphere. Eighth graders also study Chemistry and Force & Motion as it relates to these two themes. Science and engineering practices are woven throughout all of the science content, as well as the use of science notebooks and integration with the other curriculum areas.

Earth in Space: During the investigation of Earth in Space, eighth graders explore the relationship of Earth to the solar system and galaxy, as well as the relative position and movements of the Earth, moon and Sun. They also study the role that gravity and inertia play in the motion and formation of celestial objects.

Changes in the Earth's Atmosphere: In this unit, students explore the role of the Sun in driving Earth's weather and how energy is transferred throughout the Earth's systems. The effects of human activities on climate change are also investigated. The integrated Science/Engineering project that corresponds to this theme includes the design, construction and testing of wind turbines.

Chemistry: The foundations of chemistry are investigated (matter, atoms, elements, molecules, compounds, physical and chemical properties of matter) in order to provide foundational knowledge for the concepts that students will study this year, such as during the Changes in the Earth's Atmosphere theme.

Force & Motion: Explorations of the basics of force and motion, as well as gravity, are a part of the eighth grade science curriculum in order to provide the necessary basics for explaining the movements of the Earth, moon and Sun as well as forces and motion in the world around us.

SOCIAL STUDIES

Students will begin their eighth grade social studies course of study, U.S. History: Citizenship, National Identity, and Human Rights, by exploring the creation of such founding documents as the Declaration of Independence, the Constitution, and the Bill of Rights in their historical context. Based on their understanding of American founding principles, students will then explore the transition of African-Americans from slavery to freedom and finally to full citizenship in the 20th century. Students will also investigate the impact of various waves of immigration on concepts of American national identity from 1840 to the present day. Students will conclude their examination of American founding principles in U.S. history by tracing the development and impact of the Universal Declaration of Human Rights on U.S. foreign policy.

Founding Documents: In this unit students identify the social contract and civic republican origins of American democracy. Then they overview the Constitutional Convention and reflect on the functions of the branches of government. They conclude by analyzing the Bill of Rights and how it has been

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interpreted throughout American history.

Civil War to Civil Rights Revolution: In this unit students reflect on the legacy of antebellum slavery, Civil War and Reconstruction. After assessing the consequences of Jim Crow, students look into the strategies of the Civil Rights Movement. They conclude by researching and reporting on subsequent social justice movements.

Immigration and National Identity: Students undertake this unit by, first, examining the 19th century U.S. economic context and comparing and contrasting the Old and New Immigration experiences. They then assess the arguments for and against the Immigration Act of 1924. Students look into the consequences of the Immigration Act of 1965 and consider current national and international immigration issues.

U.S. in a Turbulent World: Human Rights: In this unit students learn about the causes and consequences of World War I and how this conflict contributed to the rise of the Axis totalitarian regimes and World War II. Then they investigate the Holocaust, Nuremberg trials, and the creation of the Universal Declaration of Human Rights. At the end of the unit, students survey recent world history in order to research contemporary human rights issues.

VISUAL ARTS

In grade eight, students' visual expressions become more individualistic and imaginative. Students understand that artwork can be powerful. They are curious to know who they are, what they know and what they can do. The art curriculum combines craftsmanship and the chance to create highly personal representations. Through analysis and evaluation of visual artworks and self-reflection on the creative process, students identify personal strengths and preferences and recognize that the preferences of others may differ from their own. They gain a deeper appreciation of their own values, of the values of other people, and the connection of the visual arts to universal human needs, values, and beliefs.

Art lessons are developed to engage students in rich tasks that develop their critical and creative thinking skills, and allow them to develop artistry through deliberate practice. Students develop their artistic skills in the following areas:

Drawing: Creating compositions through mark making, lines and forms that communicate the artists' intention with multiple drawing tools

Painting: Creating a composition using paint that tells a story, expresses an emotion, suggests a feeling, develops a pattern or illustrates the relationship of colors.

Collage: Creating a cohesive composition that communicates the artists' intention by gluing multiple pieces of paper/found materials together in one image.

Printmaking: Creating a composition that transfers images using printmaking tools, stamps, stencils, and plates to other surfaces multiple times.

3D Construction: Building a form that has multiple sides, has structural integrity, and embodies the artists' vision.

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Lessons have an array of beginning points: interdisciplinary work connected to grade specific themes in other curriculum studies, art history, contemporary art, and student generated curiosities. The work focuses on developing strong artistic habits of mind that develop skill and craftsmanship. The Visual Arts classes meet once a week throughout the year.

WORLD LANGUAGE

The middle grades world language program continues the focus on what students can *do* with the language, particularly oral proficiency, while also emphasizing grammatical accuracy in appropriate contexts. Near exclusive use of the target language (90%+) by both teachers *and* students is the goal, with a longer start-up period for students beginning a new language in grade 6. This builds on the strong comprehension strategies previously developed and requires students to apply a variety of communication strategies to make themselves understood.

Students continue to develop their language proficiency through multi-modal instruction with vocabulary and grammar presented in context. Students encounter language as it is used *by* and *for* native speakers through culturally authentic documents and videos. Students in grades seven and eight can handle basic, uncomplicated communication needed for daily survival; use sentences and strings of sentences to create with the language; participate in conversations, asking and answering questions, while broadening the topics about which they are familiar. Classes meet four times a week for sixty minutes or five times a week for forty-five minutes, depending on the school schedule.

ENRICHMENT AND CHALLENGE SUPPORT (ECS)

The Enrichment and Challenge Support program is designed to align with the district's Strategic Plan goals and to provide collaborative support to teachers in helping all students to:

- *Experience meaningful learning and growth (extension and challenge);*
- *Become invested in their own learning and be able to pursue their passions;*
- *Acquire the skills and habits of effective learners; and*
- *Utilize technology to create, collaborate, and communicate.*

ECS Specialists work together with classroom teachers to meet the needs of their students for challenge, enrichment, and extension across all disciplines, within the classroom, throughout the school day. To do this, ECS Specialists spend most of their time collaborating with classroom teachers in conjunction with other specialists. Collaboration among classroom teachers and ECS could include:

- *co-teaching a differentiated lesson;*
- *working in the classroom with small groups of students or stations;*
- *designing and implementing digital, inquiry-based, personalized, and project-based learning;*
- *assessing students and co-planning appropriate follow-up.*