

## **The Public Schools of Brookline GRADE SIX 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, 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, a partnership between home and school is created. 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 you with the key elements taught to children across the eight K-8 Brookline schools in this grade. If you are interested in learning more about the curriculum as outlined in our Learning Expectations, visit the Public Schools of Brookline website ([www.brookline.k12.ma.us](http://www.brookline.k12.ma.us)).

Each year brings new learning challenges and a world of possibilities. Your involvement and knowledge about 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,

Jennifer Fischer-Mueller, Ed.D.  
*Deputy Superintendent for Teaching and Learning*

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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.

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## **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**

*Olweus* (K-12)  
*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.

Sixth grade students participate in learning activities in a resource rich environment tied primarily to science and social studies content. These opportunities allow students to practice advanced searching skills, critically evaluate resources, and select the most relevant information from a greater variety of print and online sources. Students also continue to use the library for independent reading, deepening their exposure to a variety of genres.

Technology skills are developed through regular tasks and special projects that provide students with opportunities to develop intermediate skills with hardware and software. Students develop the ability to use the computer as an advanced word processor, create advanced multimedia presentations, use simple spreadsheets, and begin to use technology to collaborate, provide feedback, and share their work with a larger audience. Students use a variety of technology resources for problem solving, communication, and presentation of thoughts, ideas, and stories.

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### 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 sixth grade readers and writers below come primarily from the *Continuum*.

#### Reading

Students in sixth grade will process a broad range of genres in both print and online texts. Texts will be longer, requiring readers to remember information and connect ideas over many days of reading.

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Complex fantasy, myths, and legends will offer added challenge and require readers to identify moral issues and classical motifs such as “the quest.” Biographies will offer exposure to a range of individuals who may not be previously known to readers and may not be wholly admirable. Readers will encounter mature themes that expand their knowledge of social issues. In addition, readers will encounter abstract forms of literature such as satire or literary devices used to convey irony. Themes will be multidimensional and may be understood on several levels. Most reading will be silent; fluency and phrasing in oral reading will be well established. Students will read aloud with expressiveness after practice. Readers will be challenged by more frequent content-specific and technical words requiring use of embedded definitions, background knowledge, and readers’ tools such as glossaries. Readers will search for and use information in an integrated way, for example using complex graphics. Texts may contain language that is archaic or from regional dialects or language other than English. (*Continuum of Literacy Learning PreK-8*, pp. 340)

### **Writing**

Students in sixth grade will use writing to achieve many purposes and they will compose with greater independence. They will learn how conventions apply to the writer’s craft and will use mentor texts as models as they produce unique pieces reflecting their personalities and interests. They will further develop self-evaluation strategies for revision and take more risks as writers. Sixth grade writers will employ a variety of fiction and nonfiction genres to tell stories; to explain to, persuade or inform readers; to express feelings; and to perform practical tasks. Writers will deepen their experience with the writing processes of developing and organizing ideas, drafting and revising, and sharing their work. (*Continuum of Literacy Learning PreK-8*, pp. 166-175)

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## **MATHEMATICS**

Brookline’s Mathematics Learning Expectations, built on the 2011 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 that 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. Sixth grade mathematicians solve problems involving ratios and rates and discuss their strategies. Students also 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, by asking themselves, “What is the most efficient way to solve the problem?”, “Does this make sense?”, and “Can I solve the problem in a different way?”

Sixth graders construct and critique mathematical 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 (i.e. box plots, line plots, histograms, etc.). 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?”

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### ***Mathematical Content***

Building on a foundation of operations with whole numbers and fractions, we focus on these four critical areas:

**Ratios and Rates**: Connecting ratio and rate to whole number multiplication and division, and using concepts of ratio and rate to solve problems.

**Division and Number Systems**: Completing understanding of division of fraction and extending the notion of number to the system of rational numbers, which includes negative numbers.

**Expressions and Equations**: Writing, interpreting, and using expressions and equations.

**Statistics**: Developing understanding of statistical thinking.

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## PERFORMING ARTS

Sixth grade students have music class (Conservatory) 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.

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

**Chorus**: In 6<sup>th</sup> – 8<sup>th</sup> 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**: 6<sup>th</sup> -8<sup>th</sup> Grade Band offers students who play wind and percussion instruments the chance to 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.

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**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.

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### PHYSICAL EDUCATION

Sixth grade students will begin to 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 was developed with the National Standards in mind; these standards describe the physically literate individual.  
(<http://www.shapeamerica.org/standards/pe/index.cfm>)

In the 6-8 grade span, 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. The Sport Education Model is employed as students learn the many facets of sport (e.g. player, coach, official, journalist, commentator, photographer/videographer).

**Physical Activity & 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.

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

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### SCIENCE

In sixth grade science, students explore the physical properties of water, the effects of water on the Earth's surface, the ocean system, and the nervous system. 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.

**Physical Properties of Water, Changes in State and the Water Cycle:** In this unit, students explore the unique properties of water and their connection to Earth, the water planet. These concepts become the foundation for subsequent studies of changes in state and their role in the water cycle. Students also study the effect that the cycle of water in the Earth's system has on the Earth's surface via erosion and weathering, as well as the effect of human activities on Earth's water.

**The Ocean System:** In this unit, students explore the biology, geology, and environmental issues associated with the ocean system, specifically focusing on the Gulf of Maine, New England's ocean system. The unit begins with an introduction to the Gulf of Maine and then is following by lessons on the 1) physical/chemical features of the Gulf of Maine and how they affect marine species, 2) the Gulf of Maine marine ecosystem and the interconnectedness of its components, and 3) human impacts on the ocean system. The unit is structured to integrate science, engineering, English language arts, math, and technology, as well as science, practices. This unit provides students with an engaging and authentic way to learn about these important concepts via an in-depth study of New England's ocean resources. In addition, they have the opportunity to grapple with real-world problems currently facing New England's marine resources, such as cod overfishing, habitat reduction due to invasive fishing methods, and reductions in key species due to bycatch.

**The Nervous System (Science and Health):** In a combined Science/Health unit, grade six students study the nervous system, delving into topics such as the complexity and adaptations of animal nervous systems, the role of the nervous system in connection with other body systems, and cutting edge research on the brain and its functions. In partnership with the Brookline Police Department, the AWARE program focuses on the hazards of addiction and its effect on the human brain.

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### SOCIAL STUDIES

In the sixth grade social studies course of study, World Geography, History, and Culture, students will be introduced to the study of world geography, after which they will explore six important world regions in the following manner. They will begin by researching the physical features and climate of a given region. Next, students will survey key historical events that shape the way people now live in that region. They will then investigate the cultures of the peoples living in these regions, studying languages, social groupings, religions, daily life, arts, economy, and governance. Students will conclude by inquiring about an important issue confronting people in that region.

**Introduction to Geography:** In this unit students review the five themes of geography and explore how maps enable us to acquire and process spatial information. They utilize longitude and latitude in order to determine absolute and relative location of places and employ thematic maps to understand regional geographic features and conditions.

**Europe:** In this unit students learn about the physical features, climate, and national boundaries of the

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European regions. They research epochs in European history, assess the impact on Europe of the fall of the Berlin Wall, and conclude with an exploration of the current issues facing the European Union.

**South America:** In this unit, students undertake to explore continental physical and political geography in order to conduct country research. Next, they look into the impact of historical events on South American societies and cultures and then engage in a case study debate/deliberation simulation about the use of the Amazonian rainforest.

**North Africa Southwest Asia:** In this unit students begin by mapping the region's physical and political features and assessing the relationship between the region's climate and water issues. After surveying NASWA's history and cultures, students consider the policy choices related to the region's oil resources.

**Sub-Saharan Africa:** In this unit students reflect on the diversity of Sub-Saharan geographic features and cultures and consider the impact of imperialism on the development of African nations. They end the unit by undertaking research projects about challenges facing policymakers in different African regions.

**Asia:** This unit is organized around an in-depth study of China and India. Students investigate the physical and human geographies of both countries, look into important events in their histories, and make informed predictions about contemporary choices and challenges for peoples in these two rising economic powers.

**Australia/Oceania/Antarctica:** In this unit students compare the features of these three adjacent regions. They also ponder the effects of European colonization on indigenous peoples in these cultural domains, and investigate the potential regional impact of global warming.

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### VISUAL ARTS

In grade six, students develop a deeper artistic practice working with intention to create meaningful art pieces that communicate ideas clearly. The artists begin to understand that creativity and innovation is a long-term process that includes both successes and mistakes. They learn to analyze, interpret, evaluate, and respond to the work of artists to gain a better understanding of the visual world in which they live.

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.



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

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

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.

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### WORLD LANGUAGE

Students in grade six continue to study the elementary program language of Spanish/Chinese while transitioning to our middle grades program. The middle grades world language program continues the focus on what students can *do* with the language, while also emphasizing grammatical accuracy. Near exclusive use of Spanish/Chinese (90%+) by both teachers *and* students is the goal. This builds on the strong comprehension developed in the elementary program 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 grade six are learning to handle basic, uncomplicated communication needed for daily survival; use sentences and strings of sentences to create with the language; participate in simple, direct conversations, asking and answering questions about the topics they are learning, with increasing accuracy. Classes meet three times a week for forty-five minutes.