

The Public Schools of Brookline

GRADE FIVE 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).

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,

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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.

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.

Fifth 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, often 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.

ENGLISH LANGUAGE ARTS

Brookline’s Learning Expectations in ELA 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 description of the successful fifth grade reader and writer below comes primarily from the *Continuum*.

Reading

Students at the end of fifth grade will read, be able to identify the characteristics of, and discuss the full range of genres. Texts will be longer, requiring students to remember information and connect ideas

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over many days of reading. Fifth grade students automatically adjust strategic actions to skillfully use what they understand of genre to process texts. Complex fantasy, myths, and legends offer added challenge and an increased use of symbolism. In addition, readers in fifth grade will encounter some abstract special forms of literature, such as satire. Readers understand perspectives different from their own, and they understand settings and people far distant in time and place. Most reading is silent; fluency and phrasing in oral reading is well established. In addition, these readers can be very expressive when presenting poetry or readers' theater. Students are challenged by many longer descriptive words and by content-specific and technical words that require using embedded definitions, background knowledge, and readers' tools, such as glossaries. They can take apart multi-syllable words and use a full range of word-solving strategies. Readers in fifth grade search for and use information in an integrated way, using complex graphics and texts that present content requiring background knowledge. (*Continuum PreK-8*, pp. 336)

Writing

Fifth graders expand upon their work as writers by continuing to write in narrative, Informational and persuasive genres. They include many techniques to convey information in writing, including: compare and contrast, cause and effect, established sequence and temporal sequence.

Fifth grade writers can craft a strong lead to hook the reader. They sustain the reader's interest by using inner dialogue, writing with unique perspective and displaying a persuasive standpoint.

Students use interesting, descriptive words that help the reader better visualize the topic of the piece. Writers understand that deliberate word choice is an important tool for creating an engaging text. Fifth graders can vary their writing style and voice according to their audience.

Students in fifth grade use a variety of strategies to spell words, including breaking multisyllabic words into parts and using homophones correctly. They are very comfortable using a keyboard and can write legibly in cursive handwriting.

HEALTH

Introduction to Adolescence: In fifth grade health, students learn about the changes (social, emotional, and physical) that they are experiencing and the reasons behind them. They are introduced to the basics of the human reproductive system as a foundation for the more-detailed curriculum in middle school.

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 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. Fifth grade mathematicians solve a range of

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problems by applying their understanding of operations with whole numbers, decimals, and fractions including mixed numbers, as well as problems related to volume and measurement conversions. 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 I solve the problem in a different way?”

In fifth grade, students may construct arguments concretely, for example by using objects, pictures, and drawings. They justify calculations using models and properties of operations and rules that generate patterns. They refine their mathematical communication skills as they participate in mathematical discussions involving questions like “How did you get that?” and “Why is that true?” They explain their thinking to others and respond to others’ thinking.

Mathematical Content

Building on a foundation of fluency with whole number operations (addition, subtraction, and multiplication), fraction equivalence, and addition and subtraction of fractions with like denominators, we focus on these three critical areas:

Fraction Operations: Developing fluency with addition and subtraction of fractions, and developing understanding of the multiplication of fractions and of division of fractions in limited cases (unit fractions divided by whole numbers and whole numbers divided by unit fractions).

Place Value and Operations: Extending division of 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations.

Geometry: Developing understanding of volume.

PERFORMING ARTS

Fifth grade students have music class twice a week in which they joyfully create music while developing 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.

In fifth grade, students continue with general music class once a week and have a second Conservatory music class once a week. For grade five Conservatory, students choose one of three ensembles for the school year – *Orchestra*, *Band* or *Chorus*. In each of these groups, students have the opportunity to practice and perform in a true ensemble setting.

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Students who choose to continue on the instrument they began in fourth grade will join the *Orchestra* (string instruments) or *Band* (band instruments), while others will choose to join *Chorus*. In each of these ensembles, students begin longer, more challenging repertoire, developing as members of the ensemble and as individual instrumentalists and singers.

In general music class, students will continue to develop their musical repertoire and skills, singing songs, playing classroom instruments, and studying the music of cultures being studied in the social studies. Students will identify ways in which the principles and subject matter of other disciplines taught in the school are interrelated with those of music in order to make connections between the role that music plays in culture and history.

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

In the grade 3-5 *span*, children's thinking is becoming more orderly, more structured, and more logical. Therefore, students will be more realistic and more rule-oriented. Play will reflect a developing need for order. A challenge to the emerging self-concepts of these students is to demonstrate to themselves and others that they are competent, and that they have skills and abilities in which they can be proud. Physical education classes offer an environment of effective socializing. The Physical Education teacher helps children differentiate between acceptable and unacceptable ways of expressing feelings. Children need to internalize and understand the merits of participation, cooperation, and competition.

Cooperation precedes the development of competition and it is emphasized in the physical education class. The nature of competitive games demands cooperation, fair play, and sportsmanship, and when these are not present, the joy of participation is lost. Cooperative games teach children that all participants are needed.

The Tactical Games Approach is used when teaching sport skills, using student interest in the game itself to promote skill development and tactical knowledge. In essence, students are playing the game as they work on skills and tactics.

At this age, students begin to relate the value of movement and healthy nutrition practices to personal, long-term healthy lifestyles. Students develop a better understanding of the components of fitness and how these relate to their overall fitness status.

The 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 3-5 grade span, students work on the skill progressions within each of the following areas:

Motor Skills and Movement Patterns: Develop skills in dribbling with hands/feet, striking with varied implements, jumping rope with rhythm, overhand throwing, and catching. In these grade levels, skills are increasingly incorporated into game play. The Tactical Games Approach is employed when learning sport skills.

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Physical Activity & Fitness: Participate for longer periods of time in a variety of vigorous activities. Throughout this grade level cluster, students begin to relate the fitness components to overall personal fitness status. In fifth grade, all students participate in a physical fitness assessment.

Personal and Social Behavior: Demonstrate positive behaviors throughout cooperative activities. Students begin to learn skills in leadership and followership.

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

SCIENCE

In fifth grade science, students explore birds, the Sun, Earth and Moon system, and light and sound. 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.

BirdSleuths: Building on what they learned about living things in third grade (mammals) and fourth grade (plants), fifth graders extend their learning to birds. They explore the features of birds, the needs of birds and their role in ecosystems, and the adaptations that allow birds to survive in their environment (beaks, feet, flight and behavior, etc.). Many of these concepts will be explored through the study of five mystery birds, allowing students to examine different pieces of evidence and make (or revise) claims based on this information. Students will study birds outdoors whenever possible, will learn about the work of professional ornithologists, and will be encouraged to become citizen scientists by gathering their own data to share with the Cornell Lab of Ornithology.

The Sun, Earth and Moon System: In this unit, students make direct observations of shadows, the sun, and the moon to gather data and subsequently make claims about the movements of the earth and its moon in relationship to the sun. They use models to explain the evidence that they have gathered. Students also explore the size of the sun, earth and moon system by creating a scale model and they explore why the sun, earth and moon are a system (and how the components of the system interact). They also study how the position of constellations in the sky changes from day to day and over the course of the year. Finally, they are introduced to the concept of gravity.

Light and Sound: Fifth graders explore two types of energy: light and sound. They investigate how light moves (connection to the Sun, Earth and Moon System), as well as reflection, refraction, and color. In addition, students learn about the role of light in how we see, and then dissect sheep eyes. They also revisit what they learned about sound in first grade and extend that learning to the investigation of how sound and light travel in waves. In 2015/2016, this unit will begin to be transitioned to a new Energy unit, which will focus on the transfer of energy between light, sound, heat, electricity, chemical energy, and energy of motion.

SOCIAL STUDIES

Students will begin the fifth grade social studies course of study, Early American History, by investigating life in the English colonies, focusing on reasons for migration, adaptation to new environments, and resulting social and ethnic conflicts. Next, students will explore the causes and consequences of the War

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for Independence. Additionally, students will examine the problems that motivated the founders to begin writing the Constitution, the principles of American democracy that it embodies, and the process of compromise that led to the ratification of a new government. Students will conclude by tracing the development of the new nation, exploring the first presidencies, territorial expansion, and the emergence of a national identity.

Life in the English Colonies: In this unit students will begin by learning about the establishment of the first English settlements in North America. They then explore physical features, natural resources, societies, economies, and governments in the three major colonial regions.

American Revolution and War of Independence: In this unit students will begin by investigating the impact of the French and Indian War on the relationship between Britain and the American colonies. Next, they will explore the causes and consequences of events like the Boston Massacre that led up to the War of Independence. Students will conclude the unit by researching important Revolutionary War events and people.

Writing the Constitution: Students will explore both the Constitutional Convention and the document the Founders produced in this unit. Students will investigate the Convention itself, focusing in on the representation debate. Finally, students will examine the Constitution, assessing the powers, checks, and balances of the three branches of government and the rights and responsibilities of citizenship.

New Nation: In this unit students will look into the Washington and Adams presidencies and the inception of the federal government. They will then turn toward the Jefferson presidency, with a special focus on the Louisiana Purchase and the Lewis and Clark expedition. They will end the unit by examining the War of 1812 and the impact it had on the nations that took part in the struggle.

VISUAL ARTS

In grade five 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 in order 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.

WORLD LANGUAGE

Students in grade five continue their journey as language learners, developing a deeper understanding of culture and solidifying their conversation skills. Our K-5 elementary world language program focuses on developing oral proficiency, with lessons conducted almost exclusively in Spanish or Chinese. This provides students with many opportunities to hear words in context and make meaning out of them without direct translation. This repetition, coupled with visual supports, first develops comprehension, followed by oral production.

Students continue to comprehend more than they can produce in the target language, and build on the foundation of grade four to expand their conversation skills. They 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. The themes continue from grades three and four: community, leisure time, climate and food, with the cultural focus on Spain. Lessons are thirty minutes, three times a week.