

## The Public Schools of Brookline GRADE FOUR CURRICULUM OVERVIEW

Dear Parents and Guardians,

**H**igh 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 children'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. This document is not intended to represent the entire curriculum for this grade; rather it provides you with the key elements taught to all children across the 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)) and look under Curriculum Areas in the Teaching and Learning section.

Each year brings new learning challenges and a world of possibilities. Your involvement and knowledge of your child's school experience will help to nurture learning well 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*

---

### **Curriculum Coordinators**

#### **Educational Technology and Libraries**

*Scott Moore, Coordinator*

#### **English Language Arts**

*Patricia Kinsella, Coordinator*

#### **Mathematics**

*Angela Allen, Coordinator*

#### **Performing Arts**

*Chris Thoft-Brown, Coordinator*

#### **Physical Education**

*Teddi Jacobs, Coordinator*

#### **Science and Health**

*Janet MacNeil, Coordinator*

#### **Social Studies**

*Geoff Tegnell, Coordinator*

#### **Visual Arts**

*Alicia Mitchell, Coordinator*

#### **World Language**

*Dawn Carney, Coordinator*

# The Public Schools of Brookline

## GRADE FOUR CURRICULUM OVERVIEW

### EDUCATIONAL TECHNOLOGY AND LIBRARIES

#### EDUCATIONAL TECHNOLOGY

##### Students will:

##### **Basic Operations and Concepts**

- Develop the ability to use hardware and software appropriately.

##### **Communication**

- Develop the ability to use the computer as a writing tool with basic word processing skills.

##### **Research**

- Develop the ability to use the computer as a research tool by utilizing the school library electronic catalog and other age-appropriate search engines.
- Develop rudimentary skills in evaluating Web sites.

##### **Productivity**

- Use a variety of technology resources for problem solving, communication, and illustration of thoughts, ideas, and stories (simple multimedia presentations, curriculum software, graphic organizers, and painting and drawing applications).

##### **Collaboration**

- Work cooperatively and collaboratively with peers and others when using technology.

##### **Social, Ethical, and Human Issues**

- Demonstrate responsible use of technology and respect for others' work and an awareness of Internet safety issues.

#### LIBRARY

##### Students will:

- Become enthusiastic readers of literature, including a variety of genres, and users of information resources.
- Use Internet and online databases in their research for curriculum-related projects and assignments.

---

### ENGLISH LANGUAGE ARTS

##### Students will:

##### **Comprehension**

- Develop and apply multiple reading strategies before, during, and after reading to actively construct meaning from text.

##### **Word Study**

- Develop and apply specific strategies for identifying unfamiliar multi-syllable words encountered in text as they read.

##### **Vocabulary**

- Increase knowledge and use of vocabulary by using strategies and resources to determine word meaning as they read and write.

##### **Fluency**

- Read instructional-level text accurately, with appropriate pacing and with expression to support comprehension.

##### **Writing**

- Use the writing process to compose pieces that effectively communicate their ideas in response to reading, content-area learning, and personal interests.

# The Public Schools of Brookline

## GRADE FOUR CURRICULUM OVERVIEW

### **Speaking and Listening**

- Develop their ability to communicate through effective, thoughtful speaking and listening skills.

### **Research**

- Develop the ability to research a topic.

### **Motivation**

- Choose to actively engage in reading and writing for enjoyment and to learn about the world around them.

### **Core Book**

*Because of Winn Dixie*

---

## MATHEMATICS

### **Students will:**

- Represent, order, and compare large numbers through 100,000 in a variety of ways such as expanded notation.
- Use a variety of strategies to show understanding for multiplication and division of whole numbers.
- Divide up to 3-digit whole numbers by a single-digit divisor (with or without re-grouping) accurately using non-standard and standard algorithms.
- Identify and represent common fractions as parts of whole, parts of groups, and locations on a number line.
- Use visual models, benchmarks and equivalent forms to compare and order common fractions.
- Read, name, and write decimals between 0 and 1 up to hundredths.
- Recognize classes that a number may belong to such as odd, even, factor and multiples.
- Categorize a number into its class.
- Use symbol or letter variables to represent unknown quantity.
- Solve one-step equations by finding the value of a variable in simple equations.
- Identify acute, right and obtuse angles.
- Recognize similar figures.
- Describe and draw intersecting, parallel and perpendicular lines.
- Find the area and perimeter of a rectangle and triangle.
- Establish benchmarks for simple metric measurement units.
- Compute elapsed time using analog and digital clocks.
- Represent the possible outcomes for a simple probability situation.
- Classify outcomes by designing experiments and using concrete objects such as spinners and number cubes.

---

## PERFORMING ARTS

### **Students will:**

#### **Perform Music**

- Sing more difficult songs.
- Begin to sing independently; show good posture, pitch, diction, and phrasing; and begin to read music.
- Acquire technique, develop reading skills, and play simple songs on a band or orchestral instrument.

## The Public Schools of Brookline

### GRADE FOUR CURRICULUM OVERVIEW

- Interpret music by creating an effective written interpretation of a beginning level solo they perform.

#### **Create Music**

- Compose music creating short pieces with patterns and parts that are the same, similar, or different.

#### **Listen and Respond to Music**

- Listen to and analyze music by writing short descriptions and/or graphic notations of music they sing and play.

#### **Critically Think About Music**

- Critique music by citing specific strengths and areas needing improvement.

---

## PHYSICAL EDUCATION

### **Students will:**

#### **Skill Acquisition and Development**

- Identify and demonstrate critical elements of fundamental and specialized movement skills and provide feedback to partner.
- Demonstrate overhand throw, kick, and strike patterns consistently for distance and accuracy and catch skills using varying balls, levels, and distances.
- Develop more movement control by increasing static and dynamic balance.
- Practice movement in self-space to promote body awareness and in general space for safety.

#### **Physical Fitness**

- Describe healthful benefits that result from regular participation in physical activity.
- Maintain continuous aerobic activity while developing the concept of pacing.
- Identify physiological signs of moderate exercise (e.g. increased heart rate, heavier breathing) through experience in fitness activities.
- Support, lift, and control their body weight in a variety of ways.

#### **Social and Personal Development**

- Promote inclusion and demonstrate an appreciation of and respect for the abilities, differences, and diversity of classmates.
- Demonstrate an acceptance of skills and abilities of self and others through verbal and non-verbal behavior.
- Take leadership roles during activity and sport.
- Develop communication, problem-solving, and conflict resolution skills.
- Work cooperatively while participating in group activities.
- Work independently and on task for short periods of time.
- Follow rules, procedures, etiquette, and safety practices and accept consequences of infractions.
- Try new skills and activities.

---

## SCIENCE/HEALTH

### **Students will:**

#### **Nature of Science**

- Explore the natural world using their senses and scientific tools.
- Record their observations in science notebooks and share this information with others.

## The Public Schools of Brookline GRADE FOUR CURRICULUM OVERVIEW

- Search for patterns in their observations.
- Listen to other students' ideas, raise new questions and suggest ways to investigate these questions.

### **Mystery Powders**

- Explore the different approaches for identification and classification of matter.
- Describe and identify physical and chemical changes.

### **Botany**

- Investigate the special living requirements of plants; the way that they get energy, nutrients and how they reproduce.
- Experiment with environmental conditions and investigate the effect on plant development and characteristics.

### **Rocks and Minerals**

- Investigate, identify, and classify various forms of rocks and minerals, and learn how they were formed.

### **Circulatory and Respiratory Systems**

- Explore the anatomy and physiology of the heart and lungs as individual but interdependent systems.
- Describe the effects of cigarette smoking and smokeless tobacco on the heart, lungs, mouth and throat.

---

## SOCIAL STUDIES

### **Students will:**

#### **Civics**

- Examine the origin of such democratic principles as representative government.

#### **Economics**

- Use line and circle graphs to frame hypotheses and make predictions based on resource and product maps.

#### **History**

- Learn about early North American history, e.g. Native America and the Age of Exploration.

#### **Geography**

- Understand how to locate places using longitude and latitude and be able to read elevation maps.

#### **Skill Acquisition**

- Gather information from timelines, identify causes and effects, and make inferences from primary sources.

#### **Social Development**

- Develop conflict resolution, problem solving and decision making skills.

---

## VISUAL ARTS

### **Students will:**

#### **Develop Understandings**

- Art as an essential part of daily life.
- Artists respond to what happens during the process.
- Artists develop favorite tools and materials.

## The Public Schools of Brookline

### GRADE FOUR CURRICULUM OVERVIEW

- Artists use what they know, who they are and what they imagine to inform their art.
- Artists implement strong Habits of Mind to create artwork that is expressive, personal, and communicated clearly.

#### **Demonstrate Skills**

- Demonstrate command of tools and materials.
- Demonstrate knowledge of the elements of a good 2D composition.
- Demonstrate knowledge of balance, scale, form, and structural integrity in 3D constructions.

#### **Engage in Habits of Mind**

- Observe, plan, implement, and reflect during the making of art.
- Retrace past experiences.
- Notice what choices created surprises.
- Respect and react to others' ideas and responses.
- Identify preferences and strengths.
- Determine what you need to remember.

---

## WORLD LANGUAGE

The 2010-2011 school year marks the second full year of Elementary World Language instruction for all Brookline students in grades K-6. The district wide program began in January 2009, with the exception of the Driscoll School which has had a vibrant Mandarin program for 10 years.

#### **Program goals**

The K-6 World Language Program is based on current pedagogical research about effective approaches to language acquisition. It meets the rigorous expectations of the Massachusetts Foreign Languages Curriculum Framework as well as the nationally established standards for foreign language education. The three overall goals are:

- To acquire proficiency in speaking, listening, reading and writing the target language
- To reinforce learning of the general curriculum content through the study of a world language; and
- To acquire an understanding of and appreciation for other cultures.

#### **Program model**

Brookline's K-6 World Language is Content-Enriched FLES (Foreign Language in the Elementary School), which provides a sequential language learning experience that aims to develop language proficiency, appropriate to each grade level. Content-Enriched FLES programs are those in which language lessons include concepts from other subject areas (social studies, science, and math) to reinforce the subject area knowledge and present material in meaningful contexts.

The schedule for world language instruction, by grade, is:

Grades K-2: 3 sessions x 20 minutes = 60 minutes/week

Grades 3-6: 3 sessions x 30 minutes = 90 minutes/week

The Brookline Elementary World Language Learning Expectations are based upon the 5 C's of the National Standards for Foreign Languages: Communication, Cultures, Comparisons, Connections and Communities. Material is introduced in thematic units of School and Community, Family, and Climate, and lessons are often carried out through the use of songs, games, books, and other interactive activities. For more information about the program in your child's grade, please contact your child's World Language Teacher.