

## ENGLISH LANGUAGE ARTS

Eighth grade students strengthen their skills as critical readers of both fiction and non-fiction literary selections. Students apply their knowledge of elements of plot, characterization, figurative language, imagery, and rhythm to analyze texts and deepen their understanding of various author’s works. Students read a variety of contemporary and classic novels and explore how authors draw on traditional themes and patterns to shape their literary pieces. Students write in a variety of genres and continue to apply research skills to develop and support a theses statement. Students are also expected to independently edit, revise and improve their written work.

### **In Oral Communication students will learn to:**

- Expresses ideas clearly
- Demonstrate correct word usage
- Use active listening skills
- Contribute to discussion topics
- Use appropriate rules for formal and informal discussions
- Makes oral presentations that demonstrate appropriate consideration of audience, purpose, and the information being conveyed

### **In Reading students will learn to:**

- Understand and acquire new vocabulary and use it correctly in reading and writing
- Use structural analysis and context clues to decode as well as determine word meaning
- Understand how our language has been developed and influenced by other languages
- Use a dictionary and thesaurus to determine pronunciation, meaning, appropriate word choice, and parts of speech
- Locate and analyze elements of plot and characterization, point of view, foreshadowing, elements of a short story, and determine the resolution of a conflict in fiction
- Identify and analyze how an author’s use of words creates tone and moods
- Interpret mood and tone, and give supporting evidence
- Identify and use the following organizational text structures to gain meaning from nonfiction or informational materials: compare/contrast, chronological or logical order, cause/effect, problem/solution, questions/answer and description
- Understand the use of figurative language, sensory imagery and literacy devices in poetry and other literature
- Recognize sound devices such as rhyme, repetition, alliteration, and onomatopoeia
- Differentiate between the specific characteristics of fairy tales, myths and fables
- Recognize the style of literary works of various cultures
- Identify and analyze the dialogue, stage directions, plot, and characters of dramatic literature
- Identify and evaluate a theme related to personal experience, lesson learned or main idea state or implied through literature, and provide support from the text
- Differentiate between plot, theme, and topic
- Locate relevant information in a text
- Recall characteristics of different genres

### **In Writing students will be able to:**

- Write in complete sentences, avoiding run-ons, comma splices, and fragments
- Integrate different methods of correcting flawed sentences; adding the missing component, separate the two clauses with: period, comma/conjunction, semicolon
- Write for different audiences and purposes
- Write in a variety of genres: including narrative, descriptive, informative, persuasive, and analytical
- Demonstrate improvement in organization, content, paragraph development, level of detail, style, tone and word choice in compositions after revision
- Use knowledge of standard English conventions in their writing, revising and editing
- Gather information from a variety of sources, analyze and evaluate the quality of the information and use it to answer their own questions
- Design and create age-appropriate media productions with a clear idea, adequate detail, consideration of audience, purpose, and medium
- Develop fiction writing that includes a problem and solution
- Use a dictionary and thesaurus to improve writing content
- Develop and support a thesis statement
- Use the components of a basic research paper, including theme, organization, the use of index cards, and footnoting
- Use technology and library resources
- Use rubrics to evaluate work samples
- Independently review, revise, and edit own work for punctuation, capitalization, grammar and spelling: including subject/verb agreement, proper punctuation, comma use and semicolons in sentence structure.
- Write with a clear focus and logical order of ideas and details
- Apply criteria for determining work quality

## SCIENCE

In Eighth grade, students expand their knowledge of the physical world, exploring concepts such as mass, volume, motion, and energy. Students use a variety of scientific tools for measurement and learn to collect, analyze, and graph data showing the relationship between two variables. Students also explore foundational concepts in Chemistry and Physics, examining the difference between atoms and molecules and between elements and compounds. Students develop their skills in describing both physical and chemical changes.

### **While studying the content below, students’ use of the scientific method becomes more demanding. Students learn to:**

- Formulate a testable hypothesis
- Design and conduct an experiment specifying variables to be changed, controlled, and measured
- Select appropriate tools and technology (e.g., calculators, computers, thermometers, meter sticks, balances, graduated cylinders, and microscopes), and make quantitative observations
- Present and explain data and findings using multiple representations: including tables, graphs, mathematical and physical models, and demonstrations
- Draw conclusions based on data or evidence presented in tables or graphs, and make inferences based on patterns or trends in the data
- Communicate procedures and results using appropriate science and technology terminology
- Offer explanations of procedures and critique and revise them

### **Earth and Space Science**

- Explain that gravity is a force that pulls all things toward the center of the earth and that gravity influences the formation and movement of the planets, stars, and solar system
- Describe that the universe contains many billions of galaxies and each galaxy contains many billions of stars
- Study lift, drag, friction, thrust, and gravity through design of rockets

### **Life Science**

- Tell how multi-cellular organisms can be hierarchically organized from cells to tissues to organs to systems to organisms
- Describe general functions of the major systems of the human body, and the interactions of these systems

### **Physical Science**

- Explain that weight is the amount of gravitational pull on an object and is distinct from mass
- Identify that volume and mass are distinct components of density
- Describe how appropriate tools and use of significant digits are needed to measure volume and mass
- Tell how mass is conserved in a closed system
- Explain that many elements combine in a multitude of ways to produce compounds that make up living and nonliving things
- Identify differences between an atom and a molecule
- Give basic examples of elements and compounds
- Explain differences between mixtures and pure substances
- Tell that a substance has a melting point and a boiling point, both independent of the amount of the sample
- Describe physical changes and chemical changes
- Understand that an object’s motion can be described by its position, direction of motion, and speed
- Produce distance vs. time graphs for constant speed
- Explain how temperature change results from adding or taking away heat energy from a system
- Describe the effect of heat on particle motion during a change in phase

### **Engineering/Technology**

- Identify the five elements of a universal systems model

## MATH

Eighth grade students continue to hone their mathematical and logical reasoning skills, while applying those skills to solve increasingly complex problems. They are expected to use appropriate statistical methods to analyze and explain data and to examine and develop mathematical arguments about geometric relationships. Students are also expected to be able to communicate mathematical ideas coherently and to demonstrate their knowledge of different mathematical representations, particularly of proportional relationships. Students should be able to present their mathematical work in an organized, logical manner.

### **Number and Operations**

- Work flexibly with fractions, decimals, and percents to solve problems
- Use exponential, scientific, and calculator notation appropriately
- Understand the meaning and effects of operating with fractions, decimals, and integers
- Use the properties of numbers to simplify computations with integers, fractions, and decimals
- Understand absolute value and frequently used irrational numbers
- Understand and use the inverse relationships of addition and subtraction, multiplication and division, and squaring and finding square roots to simplify computations and solve problems
- Select appropriate methods and tools for computing with fractions and decimals from among mental computation, estimation, calculators or computers, and paper and pencil, depending on the situation, and apply the selected methods
- Develop and analyze algorithms for computing with fractions, decimals, and integers and develop fluency in their use
- Develop, analyze, and explain methods for solving problems involving proportions, such as scaling and finding equivalent ratios

### **Algebra**

- Represent, analyze, generalize, model, and solve a variety of patterns and problems with diagrams, tables, graphs, words, and, when possible, equations
- Identify functions as linear or nonlinear and contrast their properties from tables, graphs, or equations, paying particular attention to the meaning of intercept and slope
- Use symbolic algebra to represent situations and to solve problems, especially those that involve linear and proportional relationships
- Recognize and generate equivalent forms for simple algebraic expressions and solve linear equations
- Use graphs to analyze the nature of changes in quantities in linear relationships and explain how a change in one variable results in a change in another variable

### **Geometry**

- Precisely describe, classify, and understand relationships among types of two- and three-dimensional objects using their defining properties
- Understand relationships among the angles, side lengths, perimeters, areas, and volumes of similar and congruent objects
- Create and critique inductive and deductive arguments concerning geometric ideas and relationships, such as congruence, similarity, and the Pythagorean relationship
- Use coordinate geometry to examine special geometric shapes, such as regular polygons or those with pairs of parallel or perpendicular sides
- Draw geometric objects with specified properties, such as side lengths or angle measures
- Use geometric models to represent and explain numerical and algebraic relationships
- Predict the results of translating, reflecting, and rotating a figure and then draw the transformed figure
- Demonstrate an understanding of the relationships of angles formed by intersecting lines

### **Measurement**

- Understand, select, and use units of appropriate size and type to measure angles, perimeter, area, surface area, and volume
- Using formulas, convert between systems of measurement
- Select and apply techniques, tools and formulas to accurately find length, area, volume, and angle measures
- Solve simple problems involving rates such as velocity and density

### **Data Analysis and Probability**

- Select, create, and use appropriate graphical representations of data, including histograms, box-and-whisker-plots, scatterplots, stem-and-leaf plots, Venn diagrams, circle graphs, tables and charts
- Differentiate between continuous and discrete data and ways to represent them
- Make conjectures on the basis of scatterplots and approximate lines of fit
- Use proportionality and a basic understanding of probability to make and test conjectures about the results of experiments and simulations
- Find, use, and interpret measures of central tendency and spread to compare data sets
- Use tree diagrams, tables, organized lists and area models to compute simple compound probabilities (fundamental counting principal)

## SOCIAL STUDIES

In Eighth grade, students study the development of World civilizations after the fall of the Roman Empire. Students explore the history of major political entities including the Ottoman Empire, the Moghul Empire, the Chinese Dynasties, the Byzantine Empire and other civilizations that existed in South and Central America. Students examine important political, religious and economic developments of this time period, as well as studying the development of democratic and scientific thought.

In each unit of history/social studies students will study the following topics and learn to:

### **The Emergence and Expansion of Islam to 1500**

- Describe Islam
- Understand the causes, course, and effects of Islamic expansion through North Africa, the Iberian Peninsula, and Central Asia
- Describe the central political, economic, and religious developments in major periods of Islamic history
- Analyze the influence and achievements of Islamic civilization during its “Golden Age”

### **The Medieval Period in Europe to 1500**

- Describe the rise and achievements of the Byzantine Empire
- Describe the major economic, social, and political developments that took place in medieval Europe
- Describe the major economic, social, and political developments that took place in medieval Europe
- Describe developments in medieval English legal and constitutional history and their importance in the rise of modern democratic institutions and procedures, including the Magna Carta, parliament, and habeas corpus

### **Encounters Between Christianity and Islam to 1500**

- Describe the religious and political origins of conflicts between Islam and Christianity, including the causes, course, and consequences of the European Crusades against Islam in the 11<sup>th</sup>, 12<sup>th</sup>, and 13<sup>th</sup> centuries
- Describe the rise of the Ottoman Empire in the 14<sup>th</sup> and 15<sup>th</sup> centuries, including the capture of Constantinople in 1453
- Describe the decline of Muslim rule in the Iberian Peninsula and the subsequent rise of the Spanish and Portuguese kingdoms after the Reconquest in 1492

### **The Origins of European Western Expansion and the Civilizations of Central and South America**

- Explain why European nations sent explorers westward and how overseas expansion led to the growth and development of the trans-Atlantic slave trade
- Identify the three major pre-Columbian civilizations that existed in Central and South America and their locations
- Describe their political structures, religious practices, economies, art and architecture and use of slaves
- Identify the major economic, political, and social effects of the European colonial period in South America

### **African History to 1800**

- Describe the indigenous religious practices observed by early Africans before contact with Islam and Christianity
- Explain how extended family/kinship and tribal relations have shaped indigenous African cultures, and their effect on the political and economic development of African countries
- Describe the different ways in which Islam and Christianity influenced indigenous African cultures
- Identify the locations and time periods of the empires of Ghana, Mali, and Songhay
- Describe important political and economic aspects of the African empires
- Describe the development and effects of the trans-African slave trade to the Middle East from the 8<sup>th</sup> century on, and the trans-Atlantic slave trade to the Western Hemisphere from the 16<sup>th</sup> century on

### **Indian History to 1800**

- Describe important economic, political, and religious developments in Indian history to 1800
- Describe the growth of the British influence in India and the emergence of the British Raj

### **History of China, Japan, and Korea to 1800**

- Summarize the major reasons for the continuity of Chinese civilization through the 19<sup>th</sup> century
- Describe the growth of commerce and towns in China and the importance of agriculture to the development of the Chinese economy to 1800, including the limited role of slavery
- Summarize the major economic, political, and religious developments in Japanese history to 1800
- Describe Japan’s cultural and economic relationship to China and Korea
- Describe the influence and consequences of the Japanese isolation to 1800
- Explain how Korea has been both a battleground and a cultural bridge between China and Japan

### **Renaissance and the Reformation in Europe**

- Describe the origins and development of the Renaissance, including the influence and accomplishments of Machiavelli, Michelangelo, Leonardo da Vinci, Raphael, Shakespeare, and Johannes Gutenberg
- Describe the origins and effects of the Protestant Reformation
- Explain the purposes and policies of the Catholic counter-Reformation, including the influence and ideas of Ignatius Loyola
- Explain the role of religion in the wars among European nations in the 15<sup>th</sup> and 16<sup>th</sup> centuries

### **Scientific Revolution and the Enlightenment in Europe**

- Summarize how the Scientific Revolution and the scientific method led to new theories of the universe
- Describe the accomplishments of leading figures of the Scientific Revolution, including Bacon, Copernicus, Descartes, Galileo, Kepler, and Newton
- Describe the concept of the Enlightenment in European history and describe the accomplishments of major Enlightenment thinkers including, Diderot, Kant, Locke, Montesquieu, Rousseau, and Voltaire
- Explain how the Enlightenment contributed to the growth of the democratic principles of government

### **The Growth and Decline of Islamic Empires**

- Describe the expansion of the Ottoman Empire in the 15<sup>th</sup> and 16<sup>th</sup> centuries
- Describe the expansion of Islam into India from the 13<sup>th</sup> to 17<sup>th</sup> century
- Describe the role of the Mongols, the rise and fall of the Moghul Empire and the relationship between Muslims and Hindus
- Account for the declining strength of the Ottoman Empire beginning in the 17<sup>th</sup> century, including the failed siege of Vienna in 1683 and the rapid pace of modernization in European economic, political, religious, scientific, and intellectual life resulting from the ideas embedded in the Renaissance, the Reformation, the Scientific Revolution, the Enlightenment, and the Industrial Revolution

## WORLD LANGUAGE

Eighth grade students will utilize comprehensive vocabulary and communication skills acquired in the Spanish or French language. They will sustain their skills through listening, speaking, reading and writing at an advanced level. They will continue their exploration of the Spanish or French cultures. Students will increase connections with other disciplines and make deeper comparisons into the nature of language and culture. Students will continue to participate in multilingual communities at school, at home and around the world.

### Communication

- Ask and respond to questions to clarify information
- Exchange opinions about people, activities, or events
- Follow directions such as for a recipe, a word maze, or a logic problem
- Read authentic and adapted materials, such as short stories, narratives, advertisements, and brochures
- Write journals, letters and stories
- Narrate in the past, present, and future

### Cultures

- Identify patterns of social behavior that are typical of the target culture
- Identify distinctive aspects of the target culture presented in print, literature, films and videos

### Comparisons

- Compare contrast and exchange views on an aspect of the target language and culture
- Analyze differences and similarities between the writing systems of both languages

### Connections

- Obtain information and knowledge related to other disciplines from sources in the target language such as learning song lyrics

### Communities

- Apply knowledge of the target language and culture beyond the classroom setting such as interviewing guest speakers in the target language

## Our Philosophy

### **Core Values (CARE):**

- Challenging and innovative educational experiences promote academic excellence by meeting the needs of students in ways that engage them in their learning.
- A safe, supportive, and collaborative environment fosters positive attitudes among students and school staff.
- Respect for the diversity and dignity of individuals and cultures enriches learning and supports the development of responsible citizenship.
- Ensuring a quality education, cultivated by ongoing communication and shared resources among parents, teachers, town organizations, and residents, is the responsibility of the entire community.

### **Mission statement:**

The mission of the Foxborough Public Schools, guided by its core values, is to engage students in a rich, diversified education, thereby empowering them to challenge themselves as they become productive, responsible citizens.



# FOXBOROUGH PUBLIC SCHOOLS

## Curriculum Benchmarks



# GRADE 8

### **Vision:**

The Foxborough Public Schools, in collaboration with the community, will provide students with intellectual, artistic, and character building educational experiences to inspire them to achieve.

## COMMITTED TO EXCELLENCE