

GRADE EIGHT EXPECTATIONS

Reading and Language Arts

The eighth grade curriculum places an emphasis on the student's ability to independently apply strategies to critically read and recall new information gained from books. The complexity of the fiction and nonfiction reading material increases. Student writing focuses on using references to present an argument.

By the end of grade eight, your child will be expected to:

- Read critically and independently for pleasure and to learn new information. Students should be able to paraphrase (explain and write in his or her own words) what they have read.
- Ask and respond critically to questions before, during, and after reading.
- Use the structure and organization of text, styles of writing, and graphics to build meaning independently.
- Use reading strategies independently to understand unfamiliar vocabulary and concepts. Some strategies are summarization, problem solving, and making generalizations.
- Use graphic organizers such as charts and diagrams to take notes from reading materials. Identify important information from text to answer questions about story elements, such as characters (describe the characters, their traits, and their relationships with other characters) settings, events, details, and theme to show an understanding and interpretation of literature.
- Use resources such as the almanac, encyclopedia and the Internet.
- Learn new vocabulary by studying how to read, spell and write using root words such as unfriendly, prefixes such as unicycle and suffixes such as likeliness. Use context clues and the dictionary to determine the meanings of unknown or multiple meanings of words. Students should use synonyms and antonyms to determine meaning.

- Write at least 5 paragraphs about a single topic in a well-developed and organized response to a prompt that takes a stand or supports a position. Write using a logical order of organization, details, and elaboration, with a minimum of 5 complete sentences in each paragraph.

Mathematics

The eighth grade curriculum will provide opportunities for students to become problem solvers and gain confidence in their ability to use mathematics in their every day life. The curriculum contains both content that reviews or extends concepts and skills learned in previous grades and new content that prepares students for more abstract concepts in algebra. Students will develop problem-solving strategies that have been integrated throughout the curriculum.

Grade eight students should, by the end of the school year:

- Relate percents to fractions and decimals.
- Find a given percent of a number and what percent one number is of another (What is 50% of 10? or 5 is what percent of 10?).
- Measure length, weight, and volume in both metric and customary units.
- Use the correct order of operations when computing an expression (multiply and divide before adding and subtracting etc.).
- Understand ratio (the comparison of two numbers) and proportion (an equation showing that two ratios are equal).
- Use correct formulas to calculate the perimeter and area of circles, rectangles, triangles, and hexagons.
- Use models to develop formulas for surface area and volume of rectangular solids and cylinders.
- Evaluate algebraic expressions (what is the value of $b+3$ when $b=5$?)
- Construct line, bar, and circle graphs from a set of data.
- Solve linear equations having one variable (i.e. $3x + 2x = 15$).
- Graph a linear equation with two variables on a coordinate plane.
- Determine similar and congruent (figures having the same size and shape) figures.

- Create and solve problems involving the mean, median, mode, and range of a set of data.
- Determine the probability of a given event (i.e. If a coin is tossed in the air, what is the probability of it landing on its head?).
- Identify or extend patterns involving numbers and attributes and state rules for patterns.
- Interpret data from tables, graphs, and charts and make predictions based on patterns.

Science

In grade eight science the curriculum places emphasis upon Scientific Inquiry Skills, Motion, Forces, Energy, Simple Machines, Properties of Elements, Chemical Interactions, and Carbon Compounds.

By the end of eighth grade, the student will:

- Calculate average speed of a moving object and illustrate the motion of objects in graphs of distance over time.
- Describe the qualitative relationships among force, mass and changes in motion.
- Describe the forces acting on an object moving in a circular path.
- Explain the relationship between force, distance and work, and use the relationship ($W=F \times D$) to calculate work done in lifting heavy objects.
- Explain how simple machines such as inclined planes, pulleys and levers are used to create mechanical advantage.
- Describe how different types of stored (potential) energy can be used to make objects move.
- Explain how beam, truss and suspension bridges are designed to withstand the forces that act on them.

Science (Continued)

- Describe the properties of common elements such as oxygen, hydrogen, carbon, iron and aluminum.
- Describe how the properties of simple compounds, such as water and table salt, are different from the properties of the elements of which they are made.
- Explain how mixtures can be separated by using the properties of the substances from which they are made, such as particle size, density, solubility and boiling point.
- Explain how the structure of the carbon atom affects the type of bonds it forms in organic and inorganic molecules.
- Describe combustion reactions of hydrocarbons and their resulting by-products.
- Explain the general formation and structure of carbon-based polymers, including synthetic polymers such as polyethylene and biopolymers such as carbohydrate.

Social Studies

In the grade eight social studies course, students will learn about major events in United States history through the study of geography, politics, and government. The causes and effects of documents such as the Declaration of Independence and the Constitution will also be studied.

By the end of grade eight the student will:

- Understand the major events and trends of United States history such as: the role of the Puritan church, The American Revolution, The Civil War, industrialization, migration, The Great Depression and The Cold War on a local and national level.
- Understand the origins of American religious and political diversity.
- Explain how roles and status of people have differed and changed throughout history based on gender, age, class, race, ethnic identity, wealth, and/or social position.
- Compare the American form of government with the more common forms of government found in the past and present such as: monarchies, socialism, communism, and other democracies.
- Explain how economic factors influenced historical events in the United States.
- Explain the historical background of the Declaration of Independence and the Constitution.
- Explain how and why powers are distributed among national, state, and local government.
- Understand how an individual's rights to life, liberty, and property are protected by the Constitution.
- Describe how one becomes a citizen of the United States and explain the meaning of political and personal rights.
- Identify important characteristics of citizenship.
- Identify major geographic features and the 50 states and capitals on a map of the United States.
- Explain how the United States measures economic growth and how choices are made to use resources.

To be considered for promotion to grade nine, students must demonstrate at least 80% mastery of Bridgeport Public Schools' Grade Eight Student Expectations for Learning in reading and math. Mastery will be assessed through portfolios and report card grades.

STUDENT EXPECTATIONS FOR LEARNING

Bridgeport Public Schools



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