

**Grade 8**  
**LANGUAGE ARTS**  
**Promotion Benchmarks**

**Expand and enhance vocabulary through language and literature**

1. Reviews and applies knowledge of word origins and derivations, including Greek and Latin roots, prefixes, and suffixes, to enhance comprehension (SOL 8.2) (POS 8.2.1, 8.2.2, 8.6.1)
2. Reviews and applies knowledge of analogies, idioms, similes, and metaphors (SOL 8.2) (POS 8.2.2, 8.1.1, 8.1.2, 8.6.1, 8.4.1)

**Plan, compose, revise and edit in a variety of forms for a variety of purposes**

3. Uses prewriting strategies to generate and organize ideas (SOL 8.5) (POS 8.4.1, 8.4.2)
4. Focuses on elaboration and organization (SOL 8.5) (POS 8.4.2)
5. Revises writing for word choice, appropriate organization, consistent point of view, and transition among paragraphs (SOL 8.5) (POS 8.4.1, 8.4.2)
6. Edits final copy for grammar, punctuation, and standard sentence formation (SOL 8.5) (POS 8.4.2)

**Understand a variety of printed materials/resource materials**

7. Identifies persuasive techniques and recognizes the impact of mass media (SOL 8.6) (POS 8.3.4, 8.5.1)
8. Evaluates advertisements, editorials, and feature stories for the relationships between intent and factual information (SOL 8.6) (POS 8.3.4, 8.5.1)

**Understand elements of literature**

9. Activates prior knowledge and connects it with texts to provide foundation for comprehension (SOL 8.4) (POS 8.3.1, 8.3.2, 8.3.3, 8.1.1, 8.1.2, 8.6.1)
10. Identifies the main idea or themes (SOL 8.3) (POS 8.3.2, 8.6.1)
11. Recognizes cause and effect relationships within the plot (SOL 8.3) (POS 8.3.2, 8.1.1, 8.1.2)
12. Identifies point of view (SOL 8.3) (POS 8.3.2)
13. Identifies the use of symbols and figurative language (SOL 8.3) (POS 8.3.2)
14. Describes the impact of the literary selections on the reader (SOL 8.3) (POS 8.3.2)

**Grade 8**  
**MATHEMATICS**  
**Promotion Benchmarks**

**Number and Number Sense**

1. Simplifies numerical expressions that contain rational numbers and positive exponents by using properties of real numbers and the order of operations (POS 8.1.1) (SOL 8.1)
2. Converts numbers written in standard notation to scientific notation and vice versa (POS 8.1.1, 7.1.2) (SOL 8.1)

**Computation and Estimation**

3. Solves practical problems involving real-life data by using rational numbers, percents, and proportions (POS 8.2.1) (SOL 8.3)
4. Checks the solution to an equation by substitution and simplification (POS 8.2.1) (SOL 8.4)
5. Checks the solution to an inequality by substitution and simplification (POS 8.2.1) (SOL 8.4)

**Measurement**

6. Solves problems involving vertical angles, complementary angles, and supplementary angles (POS 8.3.2) (SOL 8.6)
7. Solves problems involving the volume of cones and pyramids (POS 8.4.1) (SOL 8.7)
8. Solves problems involving the surface area of cones and pyramids (POS 8.4.1) (SOL 8.7)

**Geometry**

9. Graphs the reflection or dilation of triangles and quadrilaterals on the coordinate plane (POS 8.3.1) (SOL 8.8)
10. Constructs a three-dimensional model given the top, side, and/or front views. (POS 7.4.1) (SOL 8.9)
11. Determines the measure of any side of a right triangle by using the Pythagorean Theorem (POS 8.4.1) (SOL 8.10)

**Probability and Statistics**

12. Solves probability problems involving independent events (POS 8.5.3) (SOL 8.11)
13. Determines the median, range, and quartiles of a data set represented as a box-and-whisker plot (POS 8.5.2) (SOL 8.12)
14. Makes predictions from data represented in a scatter plot (POS 8.5.2) (SOL 8.12)

**Patterns, Functions, and Algebra**

15. Represents relations by using tables and graphs (POS 8.2.2) (SOL 8.14)
16. Represents relations by using algebraic sentences and word statements (POS 8.2.2) (SOL 8.14)
17. Solves equations by using algebraic sentences, concrete materials, or pictorial representations (POS 8.2.1) (SOL 8.15)
18. Solves inequalities by using algebraic sentences, concrete materials, or pictorial representations and represents the solution graphically (POS 8.2.1) (SOL 8.15)
19. Graphs linear equations in two variables on the coordinate plane (POS 8.2.2) (SOL 8.16)
20. Solves practical problems by using formulas. (POS 8.2.1) (SOL 8.17)

**Grade 8  
SCIENCE  
Promotion Benchmarks**

**Scientific Investigation**

1. Designs a simple chart or data table and uses an appropriate graph to display the data (POS 8.4.3-3) (SOL PS.1)
2. Interprets data charts and graphs and identifies patterns and trends in the data (POS 8.5.2-1) (SOL PS.1)

**Forces and Motion**

3. Applies the scientific meaning of work to everyday situations using an inclined plane, a pulley, and a lever to make work easier (POS 8.1.10-1 & 8.1.10-2) (SOL PS.10)
4. Differentiates between mass and weight (POS 8.1.12-1) (SOL PS 11 & SOL 6.10)

**Properties of Matter**

5. Describes the properties of a solid, liquid, and gas and the effect that heating and cooling has on the states of matter (POS 8.1.1-1 & 8.1.6-4) (SOL PS 2 & PS)
6. Finds the mass and volume of an object, and calculates its density (POS 8.1.1-2) (SOL PS 2)
7. Differentiates between a physical and a chemical change (POS 8.1.2-1) (SOL PS.5)
8. States the Law of Conservation of Mass/Energy (POS 8.1.2-2) (SOL PS 5)
9. Differentiates between an element and a compound (POS 8.1.3-4) (SOL PS.4)
10. Identifies the location, charge, and relative size of the three basic particles of an atom (POS 8.1.4-1) (SOL PS 3)

**Energy and Its Transformation**

11. Predicts that heat will move from a warmer to cooler substance until both substances reach the same temperature (POS 8.1.7-2) (SOL PS 7)

**Earth and Space Systems**

12. Identifies predictable patterns/cycles (tides, moon phases, and rotation and revolution) that are explained by the arrangement and movement of the sun, moon, and earth (POS 8.1.13-3,4,5) (SOL 6.10)

**Grade 8**  
**SOCIAL STUDIES**  
**Promotion Benchmarks**

**Civics**

1. Describe the duties and responsibilities of citizens (POS 8.1.2a,b) (SOL CE.3c,d)
2. Define democracy and representative government (POS 8.1.1c) (SOL CE.2a)
3. Explain the functions of political parties (POS 8.1.3c) (SOL CE.5a)
4. Identify and give examples of the First Amendment freedoms (POS 8.1.1d) (SOL CE.3b)
5. Give examples of due process protections found in the Bill of Rights (POS 8.1.1d; 8.2.2f) (SOL CE.3b; CE.8d)
6. List the levels of government within the federal system (POS 8.2.1b) (SOL CE.6a, b)
7. Explain the functions of the legislative branch of the federal government (POS 8.2.1c) (SOL CE.6b, c; CE.7a)
8. Explain the functions of the executive branch of the federal government including the powers of the president (POS 8.2.1.c) (SOL CE.6b; CE.7b)
9. Explain the functions of the judicial branch of the federal government (POS 8.2.1c) (SOL CE.6b, c; CE.7a)

**Economics**

10. Demonstrate an understanding of how supply and demand affect price (POS 8.3.1a) (SOL CE.9a)
11. Explain how scarcity, resources, incentives, and opportunity cost influence the choices that entrepreneurs make (POS 8.3.1a, b) (SOL CE.9a, CE.10a)
12. Identify reasons why Virginia and the United States trade in a global economy (POS 8.3.2c) (SOL CE.10d)