

## **Standards Addressed on ELA Entrance Exam**

### **Progress Indicators Informational Text**

#### **Key Ideas and Details**

RI.7.1. Cite several pieces of textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text.

RI.7.3. Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).

#### **Craft and Structure**

RI.7.4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of a specific word choice on meaning and tone.

RI.7.5. Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to the development of the ideas.

RI.7.6. Determine an author's point of view or purpose in a text and analyze how the author distinguishes his or her position from that of others.

#### **Integration of Knowledge and Ideas**

RI.7.7. Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).

RI.7.8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

RI.7.9. Analyze and reflect on (e.g. practical knowledge, historical/cultural context, and background knowledge) how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.

### **Progress Indicators for Reading Literature**

#### **Key Ideas and Details**

RL.7.1. Cite several pieces of textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text.

RL.7.2. Determine a theme or central idea of a text and analyze its development over the course of the text; provide an objective summary of the text.

RL.7.3. Analyze how particular elements of a story or drama interact (e.g., how setting shapes the characters or plot).

#### **Craft and Structure**

RL.7.4. Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of rhymes and other repetitions of sounds (e.g., alliteration) on a specific verse or stanza of a poem or section of a story or drama.

RL.7.5. Analyze how a drama's or poem's form or structure (e.g., soliloquy, sonnet) contributes to its meaning.

## **Progress Indicators for Writing**

### **Text Types and Purposes**

W.7.2. Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

B. Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.

W.7.3. Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.

C. Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.

### **Production and Distribution of Writing**

W.7.5. With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed

## **Anchor Standards for Language**

### **Conventions of Standard English**

NJSLSA.L1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

NJSLSA.L2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

### **Vocabulary Acquisition and Use**

NJSLSA.L4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

NJSLSA.L5. Demonstrate understanding of word relationships and nuances in word meanings.

## **Progress Indicators for Language**

### **Conventions of Standard English**

L.7.5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

A. Interpret figures of speech (e.g., literary, biblical, and mythological allusions) in context.

B. Use the relationship between particular words (e.g., synonym/antonym, analogy) to better understand each of the words.

## **Standards Addressed on Math Entrance Exam**

7.EE.A.1 - Apply properties of operations as strategies to add, subtract, factor, and expand linear expressions with rational coefficients.

7.EE.B.3 - Solve multi-step real-life and mathematical problems posed with positive and negative rational numbers in any form (whole numbers, fractions, and decimals), using tools strategically. Apply properties of operations to calculate with numbers in any form; convert between forms as appropriate; and assess the reasonableness of answers using mental computation and estimation strategies. For example: If a woman making \$25 an hour gets a 10% raise, she will make an additional  $\frac{1}{10}$  of her salary an hour, or \$2.50, for a new salary of \$27.50. If you want to place a towel bar  $9\frac{3}{4}$  inches long in the center of a door that is  $27\frac{1}{2}$  inches wide, you will need to place the bar about 9 inches from each edge; this estimate can be used as a check on the exact computation.

7.EE.B.4.b - Solve word problems leading to inequalities of the form  $px + q > r$  or  $px + q < r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid \$50 per week plus \$3 per sale. This week you want your pay to be at least \$100. Write an inequality for the number of sales you need to make, and describe the solutions.

7.G.A.1 - Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.

7.G.B.4 - Know the formulas for the area and circumference of a circle and use them to solve problems; give an informal derivation of the relationship between the circumference and area of a circle.

7.G.B.5 - Use facts about supplementary, complementary, vertical, and adjacent angles in a multi-step problem to write and solve simple equations for an unknown angle in a figure.

7.G.B.6 - Solve real-world and mathematical problems involving area, volume and surface area of two- and three-dimensional objects composed of triangles, quadrilaterals, polygons, cubes, and right prisms.

7.NS.A.2b - Understand that integers can be divided, provided that the divisor is not zero, and every quotient of integers (with non-zero divisor) is a rational number. If  $p$  and  $q$  are integers, then  $-(p/q) = (-p)/q = p/(-q)$ . Interpret quotients of rational numbers by describing real world contexts.

7.NS.A.3

Solve real-world and mathematical problems involving the four operations with rational numbers.

7.RP.A.1 - Compute unit rates associated with ratios of fractions, including ratios of lengths, areas and other quantities measured in like or different units. *For example, if a person walks  $\frac{1}{2}$  mile in each  $\frac{1}{4}$  hour, compute the unit rate as the complex fraction  $\frac{1/2}{1/4}$  miles per hour, equivalently 2 miles per hour.*

7.RP.A.2.c - Represent proportional relationships by equations. *For example, if total cost  $t$  is proportional to the number  $n$  of items purchased at a constant price  $p$ , the relationship between the total cost and the number of items can be expressed as  $t = pn$ .*

7.RP.A.3 - Use proportional relationships to solve multistep ratio and percent problems. *Examples: simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.*

7.SP.A.1 - Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences.

7.SP.A.2 - Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. *For example, estimate the mean word length in a book by randomly sampling words from the book; predict the winner of a school election based on randomly sampled survey data. Gauge how far off the estimate or prediction might be.*

7.SP.C.7a - Develop a uniform probability model by assigning equal probability to all outcomes, and use the model to determine probabilities of events. *For example, if a student is selected at random from a class, find the probability that Jane will be selected and the probability that a girl will be selected.*

7.SP.C.8.a - Understand that, just as with simple events, the probability of a compound event is the fraction of outcomes in the sample space for which the compound event occurs.

8.EE.A.4 - Perform operations with numbers expressed in scientific notation, including problems where both decimal and scientific notation are used. Use scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.

8.EE.C.7.b - Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.

8.EE.C.8.b - Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. *For example,  $3x + 2y = 5$  and  $3x + 2y = 6$  have no solution because  $3x + 2y$  cannot simultaneously be 5 and 6.*

8.F.B.4 - Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two  $(x, y)$  values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

8.F.B.5 - Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

8.G.A.3 - Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.

8.G.A.5 - Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. *For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.*

8.G.B.7 - Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three dimensions.