High Impact Indicators

All of the indicators listed in the GED® Assessment Target indicators describe the critical thinking skills essential to test-taker success in college, career training, and the workforce. However, those we are highlighting in the **High Impact Indicators** may be useful for educators to emphasize in their instruction.

We selected the following skills as High Impact Indicators because:

- They represent particular **foundational skills** that are the basis for the development of other skills covered in the GED® Assessment Targets and have **broad usefulness** that can be applied in multiple contexts.
- They are a **good fit for classroom instruction** because they are not complicated but are important for students to know and use**.**
- GED® testing data suggests that **educators may not be currently focusing on these skills** in their GED® test preparation.

While focused classroom instruction on these High Impact Indicators may quickly and positively impact your students' test performance, **educators should note that the High Impact Indicators are not more important than the rest of the indicators.** Proficiency with all of the indicators is essential for test-takers to perform well on the GED® test.

Reasoning Through Language Arts – High Impact Indicators

Indicator	What to look for in student work: Students' work shows they have…
R.3.1: **Order sequences of events in texts.** *Primarily measured with literary texts.*	• located a single, discrete event or plot point in texts. • identified chronological and non-chronological sequences of events within texts. • described the progression from one event to the next in a text. • re-ordered events presented in non-chronological order in texts into chronological order. • re-ordered events provided in chronological order texts into a different order (e.g. cause-and-effect, etc.) in order to determine the text's meaning.

R.4.1/L.4.1: **Determine the meaning of words and phrases as they are used in a text, including determining connotative and figurative meanings from context.** *Measured with both informational and literary texts.*	• identified what a word means, specific to the sentence(s) that provides its context. • distinguished between denotative and connotative meanings of a word. • distinguished between denotative and figurative meanings of a word. • distinguished between connotative and figurative meanings of a word. • explained how context shapes or lends meaning to a specific word.
R.5.3: **Analyze transitional language or signal words (words that indicate structural relationships, such as consequently, nevertheless, otherwise) and determine how they refine meaning, emphasize certain ideas, or reinforce an author's purpose.** *Measured with both informational and literary texts.*	• identified transitional words or phrases within texts. • explained the function of transitional language as it is used in a specific text. • explained why specific transitional word(s) were used to convey meaning. • explained the structural relationship between two clauses or phrases in terms of their transitions. • explained how structural cues within a text serve an author's purpose.
R.8.3: **Evaluate the relevance and sufficiency of evidence offered in support of a claim.** *Primarily measured with informational texts.*	• explained how a particular piece of evidence is relevant to a point an author is making. • explained how a particular piece or pieces of evidence are sufficient to justify an author's singular point or overall message. • distinguished between irrelevant and relevant evidence. • distinguished between an idea that has sufficient evidence to support it and one that does not. • distinguished between explanation and evidence. • distinguished between reasoning and evidence. • made judgments on either the relevance or sufficiency (or both) of single and multiple pieces of evidence.
R.8.6: **Identify an underlying premise or assumption in an argument and evaluate the logical support and evidence provided.** *Primarily measured with informational texts.*	• identified explicit premises and assumptions inherent to an argument in a text. • Identified implicit premises and assumptions inherent to an argument in a text. • explained what, if any, of an author's biases and assumptions are observable within a text. • made judgments on whether any implicit premises or assumptions of an argument are justified (fully or partially) by evidence that is explicitly provided in the text.

Science – High Impact Indicators

Indicator	What to look for in student work: Students' work shows they have…
SP.2.b: **Identify and refine hypotheses for scientific investigations.**	• identified a hypothesis for a given scientific investigation. • differentiated between an appropriate hypothesis and a poorly conceived hypothesis. • used a hypothesis to support or challenge a given conclusion. • identified a hypothesis for a given data set. • refined a hypothesis to more appropriately suit a scientific experiment.
SP.2.e: **Identify and interpret independent and dependent variables in scientific investigations.**	• identified the independent variable in a given investigation. • identified the dependent variable in a given investigation. • fully explained the relationship between the independent and dependent variables in a given experiment.
SP.4.a: **Evaluate whether a conclusion or theory is supported or challenged by particular data or evidence.**	• identified and explained why the evidence supports the proposed claim or solution. • identified and explained which piece of data supports or contradicts the given hypothesis. • identified multiple reasons a piece of evidence supports a theory or hypothesis and compare those reasons to each other. • identified which scientific model would be weakened or strengthen by particular evidence. • fully explained why given evidence supports a scientific theory. • fully explained why given evidence challenges a scientific theory.
SP.6.a: **Express scientific information or findings visually.**	• translated information presented verbally or numerically into a visual format • integrated information presented verbally and numerically into a visual format • identified relationships among graphs or diagrams • identified visual representations of scientific processes explained in a given text • completed diagrams to demonstrate understanding of relationships among variables, scientific concepts, or processes
SP.7: **Apply formulas from scientific theories.**	• solved for a variable within a scientific equation • balanced an equation. • identified what changes will result if a variable within a scientific equation increases or decreases. • identified relationships between variables in a scientific formula. • interpreted symbolic representations of information and scientific data.

Social Studies – High Impact Indicators

Indicator	What to look for in student work: Students' work shows they have…
SSP.2.a: **Determine the central ideas or information of a primary or secondary source, corroborating or challenging conclusions with evidence.**	• differentiated between the concepts of topic and main idea. • identified the topic and/or main idea of a piece of text. • identified supporting details for a given main idea. • summarized a piece of text. • fully explained relevant details in the text that support the main idea. • located a single piece of evidence in the text. • located multiple pieces of evidence in a text. • differentiated between relevant and irrelevant evidence. • use evidenced to support or challenge an author's conclusion.
SSP.2.b: **Describe people, places, environments, processes, and events, and the connections between and among them.**	• described pertinent elements in the text, including: people, places, environments, processes, and events • identified relationships among multiple elements (listed above) in the text. • fully explained relationships among the elements.
SSP.3.c: **Analyze cause-and-effect relationships and multiple causation, including action by individuals, natural and societal processes, and the influence of ideas.**	• identified (potential or actual) causes for given effects. • identified (potential or actual) effects for a given cause. • identified examples of cause-effect relationships in texts. • fully explained how or why one event or set of circumstances in a cause-effect relationship caused another. • fully explained a sequence of causes leading to a given effect. • identify multiple causes of a given event or set of circumstances.
SSP.5.c: **Analyze how a historical context shapes an author's point of view.**	• identified the author's point of view in a primary source text. • identified the major eras in U.S. history relevant to a specific text and identify influential events, figures, and ideas therein. • identified context (events, figures, ideas) relevant to the given text. • fully explained how the historical context directly relates to the author's point of view.
SSP.8.a: **Compare treatments of the same social studies topic in various primary and secondary sources, noting discrepancies between and among the sources.**	• identified a common topic in multiple sources. • described commonalities in treatment of a topic across multiple sources. • identified differences in the way the sources treat the topic. • fully explained how a given difference in treatment is meaningful to the understanding of the topic itself.

Mathematical Reasoning – High Impact Indicators

Assessment Target	Indicator	What to look for in student work: Students' work shows they have…
Q.1 **Apply number sense concepts, including ordering rational numbers, absolute value, multiples, factors, and exponents**	• Q.1.a Order fractions and decimals, including on a number line. • Q.1.b Apply number properties involving multiples and factors, such as using the least common multiple, greatest common factor, or distributive property to rewrite numeric expressions. • Q.1.c Apply rules of exponents in numerical expressions with rational exponents to write equivalent expressions with rational exponents. • Q.1.d Identify absolute value of a rational number as its distance from 0 on the number line and determine the distance between two rational numbers on the number line, including using the absolute value of their difference.	• converted fractions to decimals or vice versa in order to compare them, and listed the original numbers in ascending order. • identified common factors and calculated the greatest common factor by multiplying common factors, and has also identified common multiples, including least common multiples. • selected the appropriate rule(s) of exponents to apply to exponential expressions, and simplified exponential expressions using one or more rules of exponents. • identified the location of a rational number on the number line, created absolute value expressions to represent distances on the number line, and simplified absolute value expressions.
Q.3 **Calculate and use ratios, percents and scale factors**	• Q.3.a Compute unit rates. Examples include but are not limited to: unit pricing, constant speed, persons per square mile, BTUs per cubic foot. • Q.3.b Use scale factors to determine the magnitude of a size change. Convert between actual drawings and scale drawings. • Q.3.c Solve multistep, arithmetic, real-world problems using ratios or proportions including those that require converting units of measure. • Q.3.d Solve two-step, arithmetic, real world problems involving percents. Examples include but are not limited to: simple interest, tax, markups and markdowns, gratuities and commissions, percent increase and decrease.	• identified the relationship between quantities, then divided appropriately to determine the unit rate defined by those quantities. • created proportions to model problems involving scale, then calculated measurements using proportional reasoning, and has also calculated measurements using scale factors. • created proportions to model real-world problems involving ratios and proportions, and used ratios, proportions, and proportional reasoning to calculate quantities relating to those problems. • identified the relationships between quantities (including amount of change) in problems involving percent increase and decrease, and has calculated quantities stemming from those problems, as well as the amount of percent increase of decrease.

Q.4 **Calculate dimensions, perimeter, circumference, and area of two-dimensional figures** Q.5 **Calculate dimensions, surface area, and volume of three-dimensional figures**	• Q.4.a Compute the area and perimeter of triangles and rectangles. Determine side lengths of triangles and rectangles when given area or perimeter. • Q.4.b Compute the area and circumference of circles. Determine the radius or diameter when given area or circumference • Q.4.c Compute the perimeter of a polygon. Given a geometric formula, compute the area of a polygon. Determine side lengths of the figure when given the perimeter or area. • Q.4.d Compute perimeter and area of 2-D composite geometric figures, which could include circles, given geometric formulas as needed. • Q.4.e Use the Pythagorean theorem to determine unknown side lengths in a right triangle. • Q.5.a When given geometric formulas, compute volume and surface area of rectangular prisms. Solve for side lengths or height, when given volume or surface area. • Q.5.b When given geometric formulas, compute volume and surface area of cylinders. Solve for height, radius, or diameter when given volume or surface area. • Q.5.c When given geometric formulas, compute volume and surface area of right prisms. Solve for side lengths or height, when given volume or surface area. • Q.5.d When given geometric formulas, compute volume and surface area of right pyramids and cones. Solve for side lengths, height, radius, or diameter when given volume or surface area. • Q.5.e When given geometric formulas, compute volume and surface area of spheres. Solve for radius or diameter when given the surface area. • Q.5.f Compute surface area and volume of composite 3-D geometric figures, given geometric formulas as needed.	• identified the dimensions of a geometric figure from a diagram, then substituted the values for those dimensions into the appropriate formula for geometric measurement, then calculated the resulting numerical expression. • calculated the perimeter of polygons. • identified the shapes that comprise a composite figure.

A.3 **Write, manipulate, solve, and graph linear inequalities**	• A.3.a Solve linear inequalities in one variable with rational number coefficients. • A.3.b Identify or graph the solution to a one variable linear inequality on a number line. • A.3.c Solve real-world problems involving inequalities. • A.3.d Write linear inequalities in one variable to represent context.	• solved inequalities in one variable, using the standard algorithms. • solved a one-variable inequality and identified or created a graph on the number line of the solution . • analyzed the relationship between quantities in a real-world problem, and then created an inequality to model the problem situation. • analyzed the relationship between quantities in a real-world problem, and then solved the problem through algebraic reasoning.
A.7 **Compare, represent, and evaluate functions**	• A.7.a Compare two different proportional relationships represented in different ways. Examples include but are not limited to: compare a distance-time graph to a distance-time equation to determine which of two moving objects has a greater speed. • A.7.b Represent or identify a function in a table or graph as having exactly one output (one element in the range) for each input (each element in the domain). • A.7.c Evaluate linear and quadratic functions for values in their domain when represented using function notation. • A.7.d Compare properties of two linear or quadratic functions each represented in a different way (algebraically, numerically in tables, graphically or by verbal descriptions). Examples include but are not limited to: given a linear function represented by a table of values and a linear function represented by an algebraic expression, determine which function has the greater rate of change.	• identified functions and non-functions displayed in graphs and tables, and created functions (graphs/tables). • substitute values for variables in functions and evaluated the resulting numerical expressions. • converted functional representations from one from to another, and compared properties of the functions.