ILEARN Performance Level Descriptors
Grade 6 Mathematics

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Performance Level Descriptors (PLDs) serve as a foundational resource in the assessment process to inform item development and characterize student performance based on Indiana Academic Standards. PLDs are written from three perspectives: Policy PLDs, Range PLDs, and Threshold PLDs.

Policy PLDs: Policy PLDs provide overarching claims about a student's performance and are used by policymakers and stakeholders to articulate expectations about a state's performance standards.

Range PLDs: Range PLDs provide content-specific claims across each Indiana Academic Standard to represent the range of expectations for student performance within each proficiency level.

Threshold PLDs: Threshold PLDs provide content-specific claims across each Indiana Academic Standard to represent expectations for student performance surrounding each cut score as a model for standard setting.

The Policy PLDs approved by the Indiana State Board of Education for ILEARN consist of the following:

LEVEL 1: Below Proficiency
Indiana students below proficiency have not met current grade level standards. Students may require significant support to develop the knowledge, application, and analytical skills needed to be on track for college and career readiness.

LEVEL 2: Approaching Proficiency
Indiana students approaching proficiency have nearly met current grade level standards by demonstrating some basic knowledge, application, and limited analytical skills. Students may require support to be on track for college and career readiness.

LEVEL 3: At Proficiency
Indiana students at proficiency have met current grade level standards by demonstrating essential knowledge, application, and analytical skills to be on track for college and career readiness.

LEVEL 4: Above Proficiency
Indiana students above proficiency have mastered current grade level standards by demonstrating more complex knowledge, application, and analytical skills to be on track for college and career readiness.

The subsequent pages highlight the Range PLDs for each Indiana Academic Standard. These PLDs can be used to inform instructional practices as educators consider proficiency of the content. Additionally, educators may use the content examples to consider how to remediate or extend key instructional concepts to transition students across proficiency levels of performance.

Review this sample from grade seven, which models ways you can think about the expectations across the continuum of proficiency. Think about the way the descriptors differentiate student performance across the continuum and how you could use those descriptors in your classroom.

	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Mathematics 7 Standard: 7.DSP.1	Identifies a sample in a given scenario describing a population.	Recognizes that a random sample produces the most valid representation of the population.	Analyzes samples to select the best representation of a population.	Explains the usefulness of random sampling in real-life situations.
Classroom Implications	The key difference between Below Proficiency and Approaching Proficiency lies in a student's ability to recognize that a random sample should represent the entire population. When thinking about moving students into Approaching Proficiency, focus on which samples provide representation of an entire population. Then guide students to analyze the samples to determine the best representation of an entire population.	Students who are Approaching Proficiency can recognize that a random sample produces the most valid representation of the population but may not be able to analyze the samples to determine which best represents the population. When moving students into At Proficiency, guide students toward thinking about why a sample may be representative of the population.	The main difference between students At Proficiency and Above Proficiency is the student's ability to explain why random sampling is useful in real-life situations. When moving students into Above Proficiency, ask students to explain which sampling methods or samples will produce the most accurate representation of a population.	

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Algebra and Functions					
6.AF.1	Evaluate expressions for specific values of their variables, including expressions with whole-number exponents and those that arise from formulas used in geometry and other real-world problems.	**Evaluates** expressions with one variable without exponents.	**Evaluates** expressions with one variable with whole-number exponents.	**Evaluates** expressions with one variable with whole-number exponents, including real-world problems.	**Evaluates** expressions with multiple variables with whole-number exponents, including real-world problems.
6.AF.2	Apply the properties of operations (e.g., identity, inverse, commutative, associative, distributive properties) to create equivalent linear expressions and to justify whether two linear expressions are equivalent when the two expressions name the same number regardless of which value is substituted into them.	**Identifies** equivalent expressions using one property.	**Identifies** equivalent expressions using multiple properties.	**Applies** the properties of operations to create equivalent linear expressions.	**Applies** the properties of operations to create equivalent linear expressions and justifies why they are equivalent.
6.AF.3	Define and use multiple variables when writing expressions to represent real-world and other mathematical problems and evaluate them for given values.	**Evaluates** an expression given integer values.	**Defines and uses** one variable to write an expression that represents a real-world problem. **Evaluates** the expression given an integer value.	**Defines and uses** multiple variables to write an expression that represents a real-world problem. **Evaluates** the expression given integer values.	**Defines and uses** multiple variables to write an expression that represents a real-world problem. **Evaluates** the expression given rational values.

6.AF.4	Understand that solving an equation or inequality is the process of answering the following question: Which values from a specified set, if any, make the equation or inequality true? Use substitution to determine whether a given number in a specified set makes an equation or inequality true.	**Substitutes** a given value into an equation to determine whether it is a solution.	**Substitutes** a given value into an inequality to determine whether it is a solution.	**Substitutes** specified values into a given equation or inequality to determine whether they are solutions.	**Substitutes** specified values into a given equation or inequality to determine whether they are solutions. **Explains** what the solution means.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.AF.5	Solve equations of the form $x + p = q$, $x – p = q$, $px = q$, and $x/p = q$ fluently for cases in which p, q, and x are all nonnegative rational numbers. Represent real world problems using equations of these forms and solve such problems.	**Solves** a one-step equation with whole numbers.	**Solves** a one-step equation with rational numbers.	**Represents** real-world problems using a one-step equation with one type of rational number (e.g., only fractions) and **solves** it.	**Represents** real-world problems using a one-step equation with different types of rational numbers (e.g., fractions and decimals) and **solves** it.
6.AF.6	Write an inequality of the form $x > c$, $x \geq c$, $x < c$, or $x \leq c$, where c is a rational number, to represent a constraint or condition in a real-world or other mathematical problem. Recognize inequalities have infinitely many solutions and represent solutions on a number line diagram.	**Translates** between an inequality and words.	**Writes** an inequality for a real-world problem.	**Writes** an inequality for a real-world problem and **represents** it on a number line.	**Writes** an inequality for a real-world problem and **represents** it on a number line; **interprets** the solution.
6.AF.7	Understand that signs of numbers in ordered pairs indicate the quadrant containing the point. Identify rules or patterns in the signs as they relate to the quadrants. Graph points with rational number coordinates on a coordinate plane.	**Graphs** a point with integer coordinates.	**Determines** the signs of an ordered pair based on its quadrant; **graphs** a point with integer coordinates.	**Determines** the signs of an ordered pair based on its quadrant; **graphs** a point with integer coordinates; **recognizes** that ordered pairs differ by one sign when the locations of the points are a reflection over an axis.	**Determines** the signs of an ordered pair based on its quadrant; **graphs** a point with rational number coordinates; **recognizes** that ordered pairs differ by one or two signs when locations of the points are a reflection over one or both axes.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.AF.8	Solve real-world and other mathematical problems by graphing points with rational number coordinates on a coordinate plane. Include the use of coordinates and absolute value to find distances between points with the same first coordinate or the same second coordinate.	**Determines** the distance between two points having the same first or second coordinate (integers).	**Determines** the distance between two points having the same first or second coordinate (rational).	**Determines** the distance between two points having the same first or second coordinate; **solves** real-world problems by graphing points.	**Determines** the distance between two points having the same first or second coordinate using the absolute value; **solves** real-world problems by graphing points.
6.AF.9	Make tables of equivalent ratios relating quantities with whole-number measurements, find missing values in the tables, and plot the pairs of values on the coordinate plane.	**Graphs** points from a table.	**Makes** a table of equivalent ratios and **graphs** points from a table.	**Makes** a table of equivalent ratios, **finds** missing values in a table, and **graphs** points from a table.	**Makes** a table of equivalent ratios, **finds** missing values in a table, and **graphs** points from a table.
6.AF.10	Use variables to represent two quantities in a proportional relationship in a real-world problem; write an equation to express one quantity, the dependent variable, in terms of the other quantity, the independent variable. Analyze the relationship between the dependent and independent variables using graphs and tables and relate these to the equation.	**Identifies** graphs and tables of the same proportional relationship.	**Compares** graphs and tables of proportional relationship.	**Writes** an equation to represent a proportional relationship; **analyzes** the relationship between the variables on a graph and table of the relationship.	**Writes** an equation to represent a proportional relationship; **analyzes** the relationship between the variables on a graph and table of the relationship and **relates** these to the equation.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Geometry and Measurement, Data Analysis, and Statistics					
6.DS.1	Recognize a statistical question as one that anticipates variability in the data related to the question and accounts for the variability in the answers. Understand that a set of data collected to answer a statistical question has a distribution which can be described by its center, spread, and overall shape.	**Identifies** questions that have a single data point.	**Identifies** statistical questions; **recognizes** what characteristics data sets have.	**Writes** a statistical question; **recognizes** what characteristics data sets have.	**Explains** why or why not a question is statistical; **recognizes** what characteristics data sets have.
6.DS.2	Select, create, and interpret graphical representations of numerical data, including line plots, histograms, and box plots.	**Selects** a graphical representation of a data set.	**Creates** a graphical representation of a data set.	**Creates** and **interprets** a graphical representation of a data set.	**Creates** and **interprets** multiple representations of a data set.
6.DS.3	Formulate statistical questions; collect and organize the data (e.g., using technology); display and interpret the data with graphical representations (e.g., using technology).	**Organizes** given data and display with graphical representations.	**Formulates** a statistical question; **organizes** given data and display with one graphical representation.	**Formulates** statistical questions; **collects** and **organizes** the data; **displays** and **interprets** the data with one graphical representation.	**Formulates** statistical questions; **collects** and **organizes** the data; **displays** and **interprets** the data with multiple graphical representations.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.DS.4	Summarize numerical data sets in relation to their context in multiple ways, such as: report the number of observations; describe the nature of the attribute under investigation, including how it was measured and its units of measurement; determine quantitative measures of center (mean and/or median) and spread (range and interquartile range), describe any overall pattern andany striking deviations from the overall pattern with reference to the context in which the data were gathered; relate the choice of measures of center and spread to the shape of the data distribution and the context in which the data were gathered.	**Identifies** measures of center and spread, when limited to 10 data points.	**Solves** problems related to measures of center and spread; **describes** overall patterns in data sets within the context.	**Summarizes** numerical data sets in relation to their context in multiple ways; **draws** conclusions about the data sets.	**Determines** the best graphical representation of a data set based on measures of center, spread, and context or **determines** the best measure of center based on the data set; **justifies** the choice.
6.GM.1	Convert between measurement systems (English to metric and metric to English) given conversion factors and use these conversions in solving real-world problems.	**Converts** between measurement systems requiring the use of one conversion factor, given the conversion factor.	**Converts** between measurement systems given conversion factors.	**Converts** between measurement systems given conversion factors and **uses** these conversions in solving real-world problems.	**Converts** between measurement systems given conversion factors and **uses** these conversions in solving a multi-step, real-world problems.
6.GM.2	Know that the sum of the interior angles of any triangle is 180º and that the sum of the interior angles of any quadrilateral is 360º. Use this information to solve real-world and mathematical problems.	**Identifies** if a figure is a triangle or quadrilateral based on the sum of the interior angles.	**Solves** mathematical problems using the sum of the interior angles of triangles and quadrilaterals.	**Solves** real-world and mathematical problems using the sum of the interior angles of triangles and quadrilaterals.	**Solves** complex real-world and mathematical problems using the sum of the interior angles of triangles and quadrilaterals.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.GM.3	Draw polygons in the coordinate plane given coordinates for the vertices; use coordinates to find the length of a side joining points with the same first coordinate or the same second coordinate; apply these techniques to solve real-world and other mathematical problems.	**Draws** polygons in the coordinate plane given coordinates for the vertices.	**Draws** polygons in the coordinate plane given coordinates for the vertices; **uses** coordinates to find the length of the sides.	**Draws** polygons in the coordinate plane given coordinates for the vertices; **uses** coordinates to find the length of the sides; **applies** these techniques to solve real-world and other mathematical problems.	**Draws** nontraditional polygons in the coordinate plane given coordinates for the vertices spread across 3-4 quadrants; **uses** coordinates to find the length of the sides; **applies** these techniques to solve real-world and other mathematical problems.
6.GM.4	Find the area of complex shapes composed of polygons by composing or decomposing into simple shapes; apply this technique to solve real-world and other mathematical problems.	**Finds** the area of simple shapes.	**Finds** the area of complex shapes by composing simple shapes.	**Finds** the area of complex figures by composing and decomposing them into simple shapes.	**Finds** the area of complex figures by composing and decomposing them into simple shapes. **Solves** real-world problems.
6.GM.5	Find the volume of a right rectangular prism with fractional edge lengths using unit cubes of the appropriate unit fraction edge lengths (e.g., using technology or concrete materials), and show that the volume is the same as would be found by multiplying the edge lengths of the prism. Apply the formulas $V = lwh$ and $V = Bh$ to find volumes of right rectangular prisms with fractional edge lengths to solve real-world and other mathematical problems.	**Finds** the volume of rectangular prisms with whole-number edge lengths using the formulas.	**Finds** the volume of a rectangular prism with fractional edge lengths using the formulas.	**Finds** the volume of rectangular prisms with fractional edge lengths and by using the formulas; **solves** real-world problems.	**Finds** the volume of rectangular prisms with fractional edge lengths and by using the formulas; **shows** how they are the same; **solves** real-world problems.

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6.GM.6	Construct right rectangular prisms from nets and use the nets to compute the surface area of prisms; apply this technique to solve real-world and other mathematical problems.	**Constructs** a rectangular prism from a net.	**Constructs** a rectangular prism from a net; **uses** a net to compute the surface area of rectangular prisms.	**Constructs** a rectangular prism from a net; **uses** a net to compute the surface area of prisms.	**Constructs** a rectangular prism from a net; **uses** a net to compute the surface area of prisms; **solves** real-world problems.
			Number Sense		
6.NS.1	Understand that positive and negative numbers are used to describe quantities having opposite directions or values (e.g., temperature above/below zero, elevation above/below sea level, credits/debits, positive/negative electric charge). Use positive and negative numbers to represent and compare quantities in real-world contexts, explaining the meaning of 0 in each situation.	**Assigns** a positive value to a real-world problem.	**Defines** the meaning of zero in a real-world problem.	**Assigns** a positive or negative value to a real-world problem and defines the meaning of zero in the problem.	**Assigns** a positive or negative rational value to real-world problems.
6.NS.2	Recognize opposite signs of numbers as indicating locations on opposite sides of 0 on the number line; recognize that the opposite of the opposite of a number is the number itself (e.g., –(–3) = 3), and that 0 is its own opposite.	**Identifies** an integer.	**Identifies** an integer and its opposite on a number line.	**Evaluates** the opposite of a number and state that 0 is its own opposite.	**Identifies** opposites as the same distance from zero.
6.NS.3	Compare and order rational numbers and plot them on a number line. Write, interpret, and explain statements of order for rational numbers in real-world contexts.	**Locates** rational numbers on a number line.	**Compares** and **orders** rational numbers on a number line.	**Compares** and **orders** rational numbers on a number line; **interprets** order in a real-world situation.	**Gathers** real-world data while comparing, ordering, and analyzing the data.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.NS.4	Understand that the absolute value of a number is the distance from zero on a number line. Find the absolute value of real numbers and know that the distance between two numbers on the number line is the absolute value of their difference. Interpret absolute value as magnitude for a positive or negative quantity in a real-world situation.	**Evaluates** the absolute value of a number on a given number line.	**Evaluates** the absolute value of a number.	**Evaluates** the absolute value of a number as the distance that number is from zero; **applies** absolute value to a real-life situation.	**Evaluates** the opposite of an absolute value.
6.NS.5	Know commonly used fractions (halves, thirds, fourths, fifths, eighths, tenths) and their decimal and percent equivalents. Convert between any two representations (fractions, decimals, percents) of positive rational numbers without the use of a calculator.	**Identifies** commonly used fractions.	**Represents** commonly used fractions as decimals.	**Converts** between commonly used fractions, decimals, and percents.	**Converts** between uncommon fractions, decimals, and percents.
6.NS.6	Identify and explain prime and composite numbers.	**Identifies** prime and composite numbers as positive whole numbers.	**Identifies** prime and composite numbers.	**Identifies** numbers as prime or composite and **justifies** the differences.	**Identifies** numbers as prime, composite, or neither and **justifies** the differences.
6.NS.7	Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers from 1 to 100, with a common factor as a multiple of a sum of two whole numbers with no common factor.	**Identifies** the factors and multiples of numbers.	**Determines** the greatest common factor and least common multiple of two numbers.	**Applies** strategies to find the greatest common factor and least common multiple of two numbers; **applies** the distributive property to evaluate the sum of two whole numbers.	**Utilizes** the greatest common factor, least common multiple, and distributive property to solve real-world problems.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.NS.8	Interpret, model, and use ratios to show the relative sizes of two quantities. Describe how a ratio shows the relationship between two quantities. Use the following notations: *a/b*, *a* to *b*, *a:b*.	**Locates** the data of two quantities.	**Compares** two quantities as a ratio.	**Interprets** data to compare and model two quantities as a ratio using *a/b*, *a* to *b*, and *a:b*; **analyzes** how a ratio describes a relationship between two quantities.	**Evaluates** data with more information than is needed to describe a part-to-whole ratio.
6.NS.9	Understand the concept of a unit rate and use terms related to rate in the context of a ratio relationship.	**Identifies** a unit rate as a ratio with a denominator of 1.	**Simplifies** a given ratio to a unit rate.	**Calculates** the unit rate of two quantities in a ratio relationship.	**Calculates** the unit rate of two quantities with different units using multiple steps.
6.NS.10	Use reasoning involving rates and ratios to model real-world and other mathematical problems (e.g., by reasoning about tables of equivalent ratios, tape diagrams, double number line diagrams, or equations).	**Locates** the data of two quantities of a real-world problem.	**Compares** the data as a rate or ratio of two quantities in a real-world problem.	**Creates** and **models** ratios and rates to solve real-world problems.	**Analyzes** ratios and rate with different units to solve real-world problems.
Computation					
6.C.1	Divide multi-digit whole numbers fluently using a standard algorithmic approach.	**Finds** whole-number quotients and remainders with up to four-digit dividends and two-digit divisors, using a standard algorithmic approach.	**Divides** multi-digit whole numbers fluently using a standard algorithmic approach, where solutions are whole numbers.	**Divides** multi-digit whole numbers fluently using a standard algorithmic approach.	**Divides** multi-digit whole numbers fluently using a standard algorithmic approach.
6.C.2	Compute with positive fractions and positive decimals fluently using a standard algorithmic approach.	**Computes** simple, one-step problems with positive proper fractions and positive decimals, where limited to the tenths value, fluently using a standard algorithmic approach.	**Computes** positive fractions and positive decimals, where limited to the tenths value, fluently using a standard algorithmic approach.	**Computes** with positive fractions and positive decimals fluently using a standard algorithmic approach.	**Computes** multiple operations with positive fractions and positive decimals fluently using a standard algorithmic approach.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.C.3	Solve real-world problems with positive fractions and decimals by using one or two operations.	**Solves** real-world, one-step problems with positive, proper fractions and positive decimals, where limited to the tenths value, fluently using one operation.	**Solves** real-world problems with positive fractions and decimals by using one operation.	**Solves** real-world problems with positive fractions and decimals by using two operations.	**Solves** complex real-world problems with positive fractions and decimals by using two operations.
6.C.4	Compute quotients of positive fractions and solve real-world problems involving division of fractions by fractions. Use a visual fraction model and/or equation to represent these calculations.	**Computes** quotients of positive fractions and **solves** real-world problems involving division of a proper fraction by a whole number.	**Computes** quotients of positive fractions and **solves** real-world problems involving division of a proper fraction by a proper fraction.	**Computes** quotients of positive fractions and **solves** real-world problems involving division of fractions by fractions.	**Computes** quotients of positive fractions and **solves** complex real-world problems involving division of fractions by fractions.
6.C.5	Evaluate positive rational numbers with whole-number exponents.	**Evaluates** positive whole numbers with whole-number exponents.	**Evaluates** positive fractions with whole-number exponents.	**Evaluates** positive rational numbers with whole-number exponents.	**Evaluates** positive rational numbers with whole-number exponents.
6.C.6	Apply the order of operations and properties of operations (identity, inverse, commutative properties of addition and multiplication, associative properties of addition and multiplication, and distributive property) to evaluate numerical expressions with nonnegative rational numbers, including those using grouping symbols, such as parentheses, and involving whole-number exponents.	**Applies** the order of operations and properties of operations to evaluate numerical expressions with nonnegative rational numbers, involving whole-number exponents no greater than 2.	**Applies** the order of operations and properties of operations to evaluate numerical expressions with nonnegative rational numbers, involving whole-number exponents.	**Applies** the order of operations and properties of operations to evaluate numerical expressions with nonnegative rational numbers, involving whole-number exponents. **Justifies** each step in the process.	**Applies** the order of operations and properties of operations to evaluate numerical expressions including, but not limited to nonnegative rational numbers, complex fractions, and whole-number exponents. **Justifies** each step in the process.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Process Standards					
1	**Make sense of problems and persevere in solving them.** // Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway, rather than simply jumping into a solution attempt. They consider analogous problems and try special cases and simpler forms of the original problem to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” and "Is my answer reasonable?" They understand the approaches of others to solving complex problems and identify correspondences between different approaches. Mathematically proficient students understand how	**Identifies** important unknown quantities and key terms in order to solve real-world problems.	**Identifies** the overall objective to develop ideas and plan strategies to solve real-world problems.	**Perseveres** in developing and implementing strategy to solve real-world problems. **Solves** or **checks** the reasonableness of the solution and method.	**Perseveres** in developing and implementing multiple strategies to solve unconventional real-world problems. **Solves** or **checks** the reasonableness of solutions and methods using different methods.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
	mathematical ideas interconnect and build on one another to produce a coherent whole.				
2	**Reason abstractly and quantitatively.** Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.	**Identifies** quantities and operations necessary for solving problems.	**Represents** quantitative problems without considering all possible constraints or units.	**Applies** reasoning to create a coherent representation of quantitative and abstract problems, considering relevant referents.	**Applies** reasoning to create coherent representations of problems, considering relevant referents. Flexibly **uses** a variety of properties and operations.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
3	**Construct viable arguments and critique the reasoning of others.** Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in construc-ting arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They analyze situations by breaking them into cases and recognize and use counterexamples. They organize their mathematical thinking, justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. They justify whether a given statement is true always, sometimes, or never. Mathematically proficient	**Generates** a response based on limited prior knowledge or understanding of evidence.	**Develops** an argument, taking into limited consideration prior knowledge or understanding of evidence.	**Develops** and **defends** an argument, taking into consideration prior knowledge or evidence, to test a conjecture or critique others' conjectures for clarity or improvement.	**Develops** and **defends** arguments, taking into consideration prior knowledge, evidence, and other possible explanations, to test a conjecture or critique others' conjectures for clarity or improvement. **Asks** useful and probing questions to strengthen conjectures or the conjectures of others.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
	students participate and collaborate in a mathematics community. They listen to or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.				
4	**Model with mathematics.** Mathematically proficient students apply the mathematics they know to solve problems arising in everyday life, society, and the workplace using a variety of appropriate strategies. They create and use a variety of representations to solve problems and to organize and communicate mathematical ideas. Mathematically proficient students apply what they know and are comfortable making assumptions and approxima-tions to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical	**Identifies** models to represent situations.	**Develops** appropriate models to solve real-world problems using mathematical knowledge.	**Models** real-world problems using an appropriate tool to analyze and draw mathematical conclusions. **Interprets** results for reasonableness and possible revision.	**Develops** and **compares** multiple models to solve real-world problems.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
	results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.				
5	**Use appropriate tools strategically.** Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Mathematically proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. Mathematically proficient students identify relevant external mathematical resources, such as digital content, and use them to pose or solve problems. They use technological tools to explore and deepen their understanding of concepts and to support the development of learning mathematics. They use	**Identifies** tools to solve problems.	**Uses** given tools correctly for the tasks at hand.	**Identifies** and **uses** tools to solve problems with an understanding of mathematical concepts.	**Uses** a variety of tools to develop mathematical understanding, reasoning, and problem solving.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
	technology to contribute to concept development, simulation, representation, reasoning, communication, andproblem solving.				
6	**Attend to precision.** Mathematically proficient students communicate precisely to others. They use clear definitions, including correct mathematical language, in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They express solutions clearly and logically by using the appropriate mathematical terms and notation. They specify units of measure and label axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently and check the validity of their results in the context of the problem. They express numerical answers with a degree of precision appropriate for the problem context.	**Computes** solutions to problems without attending to precision.	**Computes** solution to problems and **explains** with limited mathematical vocabulary.	Precisely **communicates** mathematical reasoning using appropriate vocabulary. **Performs** calculations with precision and efficiency, checking validity of results	**Uses** appropriate mathematical vocabulary to precisely and logically explain the validity of results in the context of the problem.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
7	**Look for and make use of structure.** Mathematically proficient students look closely to discern a pattern or structure. They step back for an overview and shift perspective. They recognize and use properties of operations and equality. They organize and classify geometric shapes based on their attributes. They see expressions, equations, and geometric figures as single objects or as being composed of several objects.	**Applies** basic ideas of mathematical principles to solve simple problems.	**Applies** ideas of mathematical principles to solve any problem; **identifies** simple patterns to solve related problems.	**Identifies** patterns in mathematics to solve related problems. **Applies** ideas of mathematical principles to solve any problem. **Provides** different representations of the same math concept to solve problems.	**Analyzes** patterns and structures to make predictions about related problems.
8	**Look for and express regularity in repeated reasoning.** Mathematically proficient students notice if calculations are repeated and look for general methods and shortcuts. They notice regularity in mathematical problems and their work to create a rule or formula. Mathematically proficient students maintain oversight of the process, while attending to the details as they solve a problem. They continually evaluate the reasonableness of their intermediate results.	**Recognizes** that a general method or rule is possible for repeated calculations.	**Applies** general methods and rules for repeated calculations.	**Develops** general methods and rules for solving mathematical problems.	**Evaluates** the reasonableness of general methods and rules.

ILEARN Performance Level Descriptors
Grade 6 English/Language Arts (ELA)

Updated July 1, 2022

Performance Level Descriptors (PLDs) serve as a foundational resource in the assessment process to inform item development and characterize student performance based on Indiana Academic Standards. PLDs are written from three perspectives: Policy PLDs, Range PLDs, and Threshold PLDs.

Policy PLDs: Policy PLDs provide overarching claims about a student's performance and are used by policymakers and stakeholders to articulate expectations about a state's performance standards.

Range PLDs: Range PLDs provide content-specific claims across each Indiana Academic Standard to represent the range of expectations for student performance within each proficiency level.

Threshold PLDs: Threshold PLDs provide content-specific claims across each Indiana Academic Standard to represent expectations for student performance surrounding each cut score as a model for standard setting.

The Policy PLDs approved by the Indiana State Board of Education for ILEARN consist of the following:

LEVEL 1: Below Proficiency
Indiana students below proficiency have not met current grade level standards. Students may require significant support to develop the knowledge, application, and analytical skills needed to be on track for college and career readiness.

LEVEL 2: Approaching Proficiency
Indiana students approaching proficiency have nearly met current grade level standards by demonstrating some basic knowledge, application, and limited analytical skills. Students may require support to be on track for college and career readiness.

LEVEL 3: At Proficiency
Indiana students at proficiency have met current grade level standards by demonstrating essential knowledge, application, and analytical skills to be on track for college and career readiness.

LEVEL 4: Above Proficiency
Indiana students above proficiency have mastered current grade level standards by demonstrating more complex knowledge, application, and analytical skills to be on track for college and career readiness.

The subsequent pages highlight the Range PLDs for each Indiana Academic Standard. These PLDs can be used to inform instructional practices as educators consider proficiency of the content. Additionally, educators may use the content examples to consider how to remediate or extend key instructional concepts to transition students across proficiency levels of performance.

Review this sample from grade seven, which models ways you can think about the expectations across the continuum of proficiency. Think about the way the descriptors differentiate student performance across the continuum and how you could use those descriptors in your classroom.

	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
ELA 7 Standard: 7.RL.2.2	Identify an explicit theme or central idea of a work of literature; provide a simple summary of the text.	Describe the development of a theme or central idea in a portion of a text of literature; provide an emerging summary of the text.	Analyze the development of a theme or central idea over the course of a work of literature; provide a detailed summary that supports the analysis.	Analyze the development of a complex theme or central idea over the course of a work of literature; provide a succinct, detailed summary that supports the analysis.
Classroom Implications	The key difference between Below Proficiency and Approaching Proficiency lies in a student's ability to describe the development of a theme or central idea as opposed to simply identifying an explicit theme or central idea. When thinking about moving students into Approaching Proficiency, focus on texts that do not have an obvious theme or central idea. Then guide students to describe what they think the text is about, focusing on portions of the text where the theme or central idea is conveyed.	Students who are Approaching Proficiency can describe a theme or central idea but may not be able to analyze the development of the theme or central idea over the course of the text. When moving students into At Proficiency, guide students toward thinking about why they chose a particular theme or central idea and have them identify details throughout the text that helped them identify the theme.	The main difference between students At Proficiency and Above Proficiency is the student's ability to support how the theme or central idea develops over the course of a text with a detailed summary supporting that analysis. When moving students into Above Proficiency, ask students to write a summary of the text. Then ask them to revise that summary to include only the most significant details that show how the theme or central idea develops over the course of the text.	

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Key Ideas and Textual Support/Vocabulary					
6.RL.2.1	Analyze what a text says explicitly as well as draw inferences from the text through citing textual evidence.	Cite related textual evidence that provides limited support, including literal information that represents a simple understanding of what a text says explicitly.	Cite textual evidence to generally support a simple understanding of what a text says explicitly, including simple inferences drawn from the text.	Cite textual evidence to support analysis of what a text says explicitly as well as inferences drawn from the text.	Cite textual evidence to precisely support an in-depth analysis of explicit ideas from a text as well as supporting complex inferences drawn from the text.
6.RL.2.2	Determine how a theme or central idea of a work of literature is conveyed through particular details; provide a detailed, objective summary of the text.	Identify an explicit theme or central idea of a basic work of literature as conveyed through particular details that are obvious in a text; provide a simple summary of the basic text.	Explain an explicit theme or central idea in a portion of a simple work of literature as conveyed through particular details; provide a basic summary of the text.	Determine how a theme or central idea of a work of literature is conveyed through particular details; provide a detailed, objective summary of the text.	Analyze how a theme or central idea of a complex work of literature is conveyed through the most relevant details; provide a succinct, detailed, objective summary of the complex text.
6.RL.2.3	Explain how a plot unfolds in a series of episodes as well as how the characters respond or change as the narrative advances and moves toward a resolution.	Recognize how a simple plot unfolds in a series of episodes as well as identify the obvious changes in main characters from the exposition to the resolution of a short, simple narrative.	Explain how a plot unfolds in a series of episodes as well as identify the obvious changes in characters from the exposition to the resolution of a narrative.	Explain how a plot unfolds in a series of episodes as well as how the characters respond or change as the narrative advances and moves toward a resolution.	Analyze and explain how a complex plot unfolds in a series of episodes as well as how that results in the characters' responses or subtle changes as the complex narrative advances and moves toward a resolution.
6.RN.2.1	Analyze what a text says explicitly as well as draw inferences from the text through citing textual evidence.	Cite related textual evidence that provides limited support, including literal information that represents a simple understanding of what a text says explicitly.	Cite textual evidence to generally support a simple understanding of what a text says explicitly, including simple inferences drawn from the text.	Cite textual evidence to support analysis of what a text says explicitly as well as inferences drawn from the text.	Cite textual evidence to precisely support an in-depth analysis of explicit ideas from a text as well as supporting complex inferences drawn from the text.
6-8.LH.2.1	Cite specific textual evidence to support analysis of primary and secondary sources.	Cite related textual evidence that provides limited support that represents a simple understanding of primary and secondary sources.	Cite textual evidence to generally support a simple understanding of primary and secondary sources.	Cite specific textual evidence to support analysis of primary and secondary sources.	Cite extended textual evidence to precisely support an in-depth analysis of primary and secondary sources.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.LST.2.1	Cite specific textual evidence to support analysis of science and technical texts.	Cite related textual evidence that provides limited support that represents a simple understanding of science and technical texts.	Cite textual evidence to generally support a simple understanding of science and technical texts.	Cite specific textual evidence to support analysis of science and technical texts.	Cite extended textual evidence to precisely support an in-depth analysis of science and technical texts.
6.RN.2.2	Determine how a central idea of a text is conveyed through particular details; provide an objective summary of the text.	Identify an explicit central idea in a simple text based on particular details that are clearly stated in a text; provide a simple summary of a simple text.	Explain an explicit central idea in a portion of a simple text as it is conveyed through particular details; provide an emerging summary of the text.	Determine how a central idea of a text is conveyed through particular details; provide an objective summary of the text.	Analyze how a central idea of a complex text is conveyed through the most relevant details; provide a succinct, detailed, objective summary of the complex text.
6-8.LH.2.2	Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	Locate clearly stated central ideas or basic information of a simple primary or simple secondary source; provide a simple summary based on evidence from the text.	Identify apparent central ideas or information of a simple primary or simple secondary source; provide an emerging summary based on evidence from the text.	Determine the central ideas or information of a primary or secondary source; provide an accurate summary of the source distinct from prior knowledge or opinions.	Distinguish the development of implied central ideas or complex information of a complex primary or complex secondary source; provide a clear and concise summary that is detailed and objective and supports the analysis.
6-8.LST.2.2	Determine the central ideas or conclusions of a text; provide an accurate, objective summary of the text.	Locate clearly stated central ideas or basic conclusions in a simple text; provide a simple summary of the text.	Identify apparent central ideas or conclusions in a simple text; provide an emerging summary of the text.	Determine the central ideas or conclusions of a text; provide an accurate, objective summary of the text.	Distinguish the development of implied central ideas or complex information in a complex text; provide a clear and concise summary that is detailed and objective and supports the analysis.
6.RN.2.3	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).	Identify where a key individual, event, or idea is introduced, illustrated, and elaborated in a simple text.	Determine how a key individual, event, or idea is introduced, illustrated, and elaborated in a simple text.	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text.	Analyze and evaluate in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a complex text.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.LH.2.3	Identify key steps in a text's description of a process related to history/social studies (e.g., how a bill becomes a law, how interest rates are raised or lowered).	Locate steps in a lower-complexity text's description of a simple process related to history/social studies.	Identify steps in a text's description of a simple process related to history/social studies.	Identify key steps in a text's description of a process related to history/social studies.	Identify critical steps in a text's description of a complex process related to history/social studies.
6-8.LST.2.3	Precisely follow a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.	Follow simple step-by-step procedures when carrying out experiments, taking measurements, or performing technical tasks.	Follow consistent multi-step procedures when carrying out experiments, taking measurements or performing technical tasks.	Precisely follow a multistep procedure when carrying out experiments, taking measurements or performing technical tasks.	Follow and precisely apply a multistep procedure when carrying out experiments, taking measurements, or performing challenging technical tasks.
6.RV.2.1	Use context to determine or clarify the meaning of words and phrases.	Use obvious, literal context within the same sentence to recognize the meaning of words and phrases.	Use context within the same sentence to recognize the meaning of words and phrases.	Use context to determine or clarify the meaning of words and phrases.	Use context throughout a text to determine and clarify the meaning of complex words and phrases.
6.RV.2.2	Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.	Identify the simple relationship between lower-level words to better understand each of the words.	Use the simple relationship between particular words to better understand each of the words.	Use the relationship between particular words to better understand each of the words.	Use the complex relationship between higher-level words to better understand each of the words.
6.RV.2.3	Distinguish among the connotations of words with similar denotations.	Identify the obvious connotations of basic words with similar denotations.	Distinguish among the obvious connotations of basic words with similar denotations.	Distinguish among the connotations of words with similar denotations.	Interpret meanings of complex words using connotation and denotation skills.
6.RV.2.4	Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).	Identify the meaning of grade-appropriate Greek or Latin affixes and roots.	Understand that grade-appropriate Greek or Latin affixes and roots contribute to the meaning of basic words.	Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word.	Apply and explain the use of grade-appropriate Greek or Latin affixes and roots as clues to the meaning of complex words.
6.RV.2.5	Consult reference materials, both print and digital (e.g., dictionary, thesaurus), to find the pronunciation of a word or determine or clarify its precise meaning, part of speech, or origin.	Consult reference materials, both print and digital, to locate but not apply information about the pronunciation, meaning, part of speech, or origin of a word.	Consult reference materials, both print and digital, to locate but not apply information about the pronunciation, meaning, part of speech, or origin of a word.	Consult reference materials, both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, part of speech, or origin.	Consult reference materials, both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, part of speech, or origin.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.RV.3.1	Determine the meaning of words and phrases as they are used in works of literature, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	Identify the literal meaning of simple words and phrases as they are used in works of literature; recognize that word choice has an impact on meaning and tone.	Identify the meaning of simple words and phrases as they are used in works of literature, including basic figurative and connotative meanings; explain the impact of a specific word choice on meaning and tone.	Determine the meaning of words and phrases as they are used in works of literature, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.	Distinguish the meaning of complex words and phrases as they are used in works of literature, including subtle figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.
6.RV.3.2	Determine the meaning of words and phrases as they are used in a nonfiction text, including figurative, connotative, and technical meanings.	Identify the literal meaning of simple words and phrases as they are used in a nonfiction text, including simple figurative, connotative, and technical meanings.	Identify the meaning of simple words and phrases as they are used in a nonfiction text, including basic figurative, connotative, and technical meanings.	Determine the meaning of words and phrases as they are used in a nonfiction text, including figurative, connotative, and technical meanings.	Distinguish the meaning of complex words and phrases as they are used in a nonfiction text, including subtle figurative, connotative, and technical meanings.
6-8.LH.3.1	Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.	Identify the meaning of simple words and phrases as they are used in a simple history/social studies text.	Determine the simple meaning of words or phrases as they are used in a simple text, including vocabulary specific to domains related to history/social studies.	Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.	Explain how words and phrases are used in context related to a history/social studies text related to other content domains.
6-8.LST.3.1	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.	Locate the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a simple scientific or technical context relevant to grades 6–8 texts and topics.	Determine the basic meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a simple, specific scientific or technical context relevant to grades 6–8 texts and topics.	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.	Explain the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a complex, specific scientific or technical context relevant to grades 6–8 texts and topics.
6.RV.3.3	Interpret figures of speech (e.g., personification) in context.	Identify figures of speech in a basic context.	Determine simple meanings of figures of speech.	Interpret figures of speech in context.	Explain complex figures of speech in context.
Structural Elements and Organization/Synthesis and Connection of Ideas/Media Literacy					
6.ML.2.1	Use evidence to evaluate the accuracy of information presented in multiple media messages.	Identify facts that are related to information presented in multiple media messages.	Identify evidence that is related to the accuracy of information presented in multiple media messages.	Use evidence to evaluate the accuracy of information presented in multiple media messages.	Analyze evidence to thoroughly evaluate the accuracy of information presented in multiple complex media messages.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.ML.2.2	Identify the target audience of a particular media message, using the context of the message (e.g., where it is placed, when it runs, etc.)	Identify the explicit context of the message related to the audience.	Identify the target audience of a simple media message, using the explicit context of the message.	Identify the target audience of a media message, using the context of the message.	Identify and describe the target audience of a media message, using the implicit context of the message.
6.RL.3.1	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a work of literature and contributes to the development of the theme, characterization, setting, or plot.	Identify how a particular sentence, chapter, scene, or stanza relates to the theme, characterization, setting, or plot of a simple work of literature.	Explain how a particular sentence, chapter, scene, or stanza fits into the overall structure of a simple work of literature and how it relates to the theme, characterization, setting, or plot.	Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a work of literature and contributes to the development of the theme, characterization, setting, or plot.	Analyze in depth how a particular sentence, chapter, scene, or stanza fits into the overall structure of a complex work of literature and how it effectively contributes to the development of the theme, characterization, setting, or plot.
6.RL.3.2	Explain how an author develops the point of view of the narrator or speaker in a work of literature and how the narrator or speaker impacts the mood, tone, and meaning of a text.	Identify how the author develops the point of view of the narrator or speaker in a simple work of literature.	Identify how an author develops the point of view of the narrator or speaker in a simple work of literature and how the narrator or speaker explicitly impacts the mood, tone, or meaning of a text.	Explain how an author develops the point of view of the narrator or speaker in a work of literature and how the narrator or speaker impacts the mood, tone, and meaning of a text.	Analyze and explain how an author develops the point of view of the narrator or speaker in an complex work of literature and how the narrator or speaker implicitly impacts the mood, tone, and meaning of a text.
6.RL.4.1	Compare and contrast the experience of reading a story, play, or poem with listening to or viewing an audio, video, or live version of the text, including contrasting what they “see” and “hear” when reading the text with what they perceive when they listen or watch.	Describe the experience of reading a simple story, play, or poem or describe the experience of listening to or viewing an audio, video, or live version of the text.	Compare the experience of reading a simple story, play, or poem with listening to or viewing an audio, video, or live version of the text, including explaining what they perceive when they listen or watch.	Compare and contrast the experience of reading a story, play, or poem with listening to or viewing an audio, video, or live version of the text, including contrasting what they “see” and “hear” when reading the text with what they perceive when they listen or watch.	Compare and contrast the experience of reading a complex story, play, or poem with listening to or viewing an audio, video, or live version of the text, including clearly contrasting what they “see” and “hear” when reading the text with what they perceive when they listen or watch.
6.RL.4.2	Compare and contrast works of literature in different forms or genres (e.g., stories and poems; historical novels and fantasy stories) in terms of their approaches to similar themes and topics.	Describe simple works of literature in different forms or genres in terms of their basic approaches to similar themes and topics.	Compare simple works of literature in different forms or genres in terms of their basic approaches to similar themes and topics.	Compare and contrast works of literature in different forms or genres in terms of their approaches to similar themes and topics.	Compare and contrast more abstract works of literature in different forms or genres in terms of their nuanced approaches to similar complex themes and topics.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.RN.3.2	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.	Identify how a particular sentence, paragraph, chapter, or section relates to the ideas in a simple text.	Describe how a particular sentence, paragraph, chapter, or section fits into the overall structure of a simple text and how it relates to the ideas.	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.	Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a complex text and how it effectively contributes to the development of the ideas.
6-8.LH.3.2	Describe how a text presents information (e.g., sequentially, comparatively, causally).	Identify how a simple text presents information.	Identify how a text presents information.	Describe how a text presents information.	Provide a detailed description of how a complex text presents information.
6-8.LST.3.2	Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic	Identify the basic structure an author uses to organize a simple text, identifying the major sections.	Describe the structure an author uses to organize a text, identifying the major sections and a basic understanding of the topic.	Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.	Analyze and evaluate the structure an author uses to organize a complex text, including how the major sections and their organization contribute to the whole and to an in-depth understanding of the topic.
6.RN.3.3	Determine an author's perspective or purpose in a text and explain how it is conveyed in the text.	Identify an author's perspective or purpose in a simple text.	Identify an author's perspective or purpose in a simple text and explain how it is explicitly conveyed in the text.	Determine an author's perspective or purpose in a text and explain how it is conveyed in the text.	Analyze an author's perspective or purpose in a complex text, and thoroughly explain how it is conveyed in the text.
6-8.LH.3.3	Identify aspects of a text that reveal an author's perspective or purpose (e.g., loaded language, inclusion or avoidance of particular facts).	Identify aspects of a simple text that reveal an author's clearly stated perspective or purpose.	Identify aspects of a simple text that reveal an author's perspective or purpose.	Identify aspects of a text that reveal an author's perspective or purpose.	Identify key aspects of a complex text that reveal an author's implied perspective or purpose.
6-8.LST.3.3	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.	Identify the clearly stated author's purpose in providing simple and short explanations, descriptions of procedures, or discussions of experiments in a basic text.	Describe the author's purpose in providing simple and short explanations, descriptions of procedures, or discussions of experiments in a text.	Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.	Analyze and evaluate the author's purpose in providing a detailed explanation, describing a complex procedure, or discussing an elaborate experiment in a complex text.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.RN.4.1	Trace and evaluate the argument and specific claims in a text, distinguishing claims that the author supports with reasons and evidence from claims that are not supported.	Identify the argument and explicit claims in a simple text.	Determine the argument and specific claims in a simple text and identify information that is related to the claims.	Trace and evaluate the argument and specific claims in a text, distinguishing claims that the author supports with reasons and evidence from claims that are not supported.	Trace and analyze the implicit argument and specific claims in a complex text, distinguishing claims that the author supports with sufficient reasons and evidence from claims that are not supported.
6-8.LH.4.2	Distinguish among fact, opinion, and reasoned judgment in a text.	Distinguish the clear difference among fact, opinion, and clearly stated reasoned judgment in a simple text.	Distinguish the difference among fact, opinion, and clearly stated reasoned judgment in a simple text.	Distinguish among fact, opinion, and reasoned judgment in a text.	Distinguish and explain the difference among fact, opinion, and reasoned judgment in a complex text.
6-8.LST.4.2	Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	Distinguish the clear difference among facts, clearly stated judgment based on research findings, and obvious speculation in a simple text.	Distinguish the difference among facts, clearly stated judgment based on research findings, and obvious speculation in a simple text.	Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	Distinguish and explain the difference among facts, reasoned judgment based on research findings, and speculation in a complex text.
6.RN.4.2	Integrate information presented in different media or formats (e.g., visually, quantitatively, verbally) to demonstrate a coherent understanding of a topic or issue.	Identify clearly related information in different media or formats and explain how it is connected to a topic or issue.	Integrate clearly related information in different media or formats to demonstrate a limited understanding of a topic or issue.	Integrate information presented in different media or formats to demonstrate a coherent understanding of a topic or issue.	Integrate implicit information presented in different media or formats to demonstrate a comprehensive understanding of a complex topic or issue.
6-8.LH.4.1	Integrate visual information (e.g., charts, graphs, photographs, videos, or maps) with other information in print and digital texts.	Integrate basic visual information with other information in print and digital texts that are directly related.	Integrate visual information with other information in print and digital texts that are closely related.	Integrate visual information with other information in print and digital texts.	Integrate complex visual information with other information in print and digital texts from related topics.
6-8.LST.4.1	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).	Integrate basic quantitative or technical information expressed in words in a simple text with a clearly parallel version of that same information expressed visually.	Integrate quantitative or technical information expressed in words in a simple text with a version of that information expressed visually that is closely related.	Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually.	Integrate key pieces of quantitative or technical information expressed in words in a complex text with a version of that information expressed visually.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.RN.4.3	Compare and contrast one author's presentation of events with that of another.	Compare related facts from two authors' presentations of parallel events.	Compare two authors' presentations of parallel events.	Compare and contrast one author's presentation of events with that of another.	Thoroughly compare and contrast one author's nuanced presentation of events with that of another.
6-8.LH.4.3	Compare and contrast treatments of the same topic in a primary and secondary source.	Identify the relationship of treatments of the same topic in a primary and secondary source.	Compare the treatments of the same topic in a primary and secondary source.	Compare and contrast treatments of the same topic in a primary and secondary source.	Compare, contrast, and synthesize treatments of the same topic in a primary and secondary source.
6-8.LST.4.3	Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	Identify the clearly stated information gained from simple experiments, simulations, video, or multimedia sources with that gained from reading a basic text on the same topic.	Compare the clearly stated information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.	Compare, contrast, and synthe-size the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a complex text on the same topic.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Writing					
6.W.3.1	Write arguments in a variety of forms that – • Introduce claim(s), using strategies such as textual analysis, comparison/contrast and cause/effect. • Use an organizational structure to group related ideas that support the argument. • Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. • Establish and maintain a consistent style and tone appropriate to purpose and audience. • Use appropriate transitions that enhance the progression of the text and clarify the relationships among claim(s) and reasons. • Provide a concluding statement or section that follows from the argument presented.	Write arguments in a variety of forms that – • Introduce claim(s) using basic strategies. • Use a basic organizational structure to group ideas that support the argument. • Support claim(s) with basic reasoning using sources. • Establish a style and tone that may be minimally connected to the appropriate purpose and audience. • Use basic transitions to progress between claim(s) and reasons. • Provide a concluding statement or section that minimally follows from the argument presented.	Write arguments in a variety of forms that – • Introduce claim(s) using simple strategies. • Use a simple organizational structure to group related ideas that support the argument. • Support claim(s) with basic reasoning using accurate, credible sources. • Establish a style and tone that begins to be appropriate to purpose and audience. • Use appropriate transitions that clarify the relationships among claim(s) and reasons. • Provide a concluding statement that minimally relates to the argument presented.	Write arguments in a variety of forms that – • Introduce claim(s), using strategies such as textual analysis, comparison/contrast, and cause/effect. • Use an organizational structure to group related ideas that support the argument. • Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. • Establish and maintain a consistent style and tone appropriate to purpose and audience. • Consistently use appropriate transitions that enhance the progression of the text and clarify the relationships among claim(s) and reasons. • Provide a concluding statement or section that follows from the argument presented.	Write arguments in a variety of forms that – • Introduce claim(s), using complex strategies. • Use a complex organizational structure to group related ideas that support the argument. • Support claims with complex, logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. • Establish and maintain an effective, consistent style and tone appropriate to purpose and audience. • Apply effective transitions to create cohesion and synthesize the relationships among claim(s), reasons, and evidence. • Develop a concluding statement or section that is derived from and clearly supports the argument presented.
6-8.LH.5.1	Write arguments focused on discipline-specific content.	Write facts focused on discipline-specific content.	Write arguments related to discipline-specific content.	Write arguments focused on discipline-specific content.	Write clearly developed arguments focused on discipline-specific content.
6-8.LST.5.1	Write arguments focused on discipline-specific content.	Write facts focused on discipline-specific content.	Write arguments related to discipline-specific content.	Write arguments focused on discipline-specific content.	Write clearly developed arguments focused on discipline-specific content.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.W.3.2	Write informative compositions in a variety of forms that – • Introduce a topic; organize ideas, concepts, and information, using strategies such as definition and classification. • Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples from various sources and texts. • Use appropriate transitions to clarify the relationships among ideas and concepts. • Include formatting (e.g., headings), graphics (e.g., charts, tables), and multimedia when useful to aiding comprehension. • Choose language and content-specific vocabulary that express ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. • Establish and maintain a style appropriate to purpose and audience. • Provide a concluding statement or section that follows from the information or explanation presented.	Write informative compositions in a variety of forms that – • Restate a topic; list simple ideas, concepts, and information. • Develop the topic with related information and examples from a source or text. • Use simple transitions between ideas and concepts. • Include simple formatting, graphics, and multimedia. • Choose simplistic language and vocabulary that express ideas. • Attempt to establish a style related to purpose or audience. • Provide a concluding statement that minimally supports the information or explanation presented.	Write informative compositions in a variety of forms that – • Introduce a topic; organize ideas, concepts, and information, using basic strategies. • Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples from various sources and texts. • Use transitions to create and clarify the relationships among ideas and concepts. • Include simple formatting, graphics, and multimedia to demonstrate related comprehension skills. • Choose language and content-specific vocabulary that generally express ideas, recognizing and eliminating wordiness and redundancy. • Establish and partially maintain a style appropriate to purpose and audience. • Provide a concluding statement or section that follows from and attempts to support the information or explanation presented.	Write informative compositions in a variety of forms that – • Introduce a topic; organize ideas, concepts, and information, using strategies such as definition and classification. • Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples from various sources and texts. • Consistently use appropriate transitions to clarify the relationships among ideas and concepts. • Include formatting, graphics, and multimedia when useful to aiding comprehension. • Choose language and content-specific vocabulary that express ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. • Establish and maintain a style appropriate to purpose and audience. • Provide a concluding statement or section that follows from the information or explanation presented.	Write informative compositions in a variety of forms that – • Introduce a topic clearly and concisely, thoroughly previewing what is to follow, using effective organizational strategies and concepts; include purposeful formatting, graphics, and multimedia when useful to aiding comprehension. • Develop the topic thoroughly with relevant facts, definitions, concrete details, quotations, or other information and specific examples from various sources and texts. • Consistently use a variety of appropriate transitions to create cohesion and logically clarify the relationships among ideas and concepts. • Choose clearly appropriate language and content-specific vocabulary that express ideas precisely and concisely, recognizing and eliminating wordiness and redundancy. • Maintain a well-established style clearly appropriate to purpose and audience. • Provide a clear and concise concluding statement or section that directly follows from and thoroughly supports the information or explanation presented.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.LH.5.2	Write informative texts, including analyses of historical events.	Write informative texts, recounting historical events.	Write informative texts, with limited analysis of historical events.	Write informative texts, including analyses of historical events.	Write informative texts, including in-depth analyses of historical events.
6-8.LST.5.2	Write informative texts, including scientific procedures/ experiments or technical processes that include precise descriptions and conclusions drawn from data and research.	Write informative texts, including minimal scientific procedures/ experiments or some technical processes that include details from data and/or research.	Write informative texts, including scientific procedures/ experiments or some technical processes that include details and conclusions drawn from data and/or research.	Write informative texts, including scientific procedures/ experiments or technical processes that include precise descriptions and conclusions drawn from data and research.	Write informative texts, including evaluations of scientific procedures/ experiments or technical processes that include precise and concise descriptions and conclusions drawn from data and research.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.W.3.3	Write narrative compositions in a variety of forms that – • Engage and orient the reader by developing an exposition (e.g., describe the setting, establish the situation, and introduce the narrator and/or characters). • Organize an event sequence (e.g., conflict, climax, resolution) that unfolds naturally and logically, using a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. • Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. • Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. • Provide an ending that follows from the narrated experiences or events.	Write narrative compositions in a variety of forms that – • Introduce the reader by developing a basic exposition. • Organize an event sequence using a limited number of transition words to convey sequence from one time frame or setting to another. • Make some attempt at narrative techniques, developing a limited number of experiences, events, and/or characters. • Use words, phrases, and details to attempt to capture the action, experiences, and events. • Provide a simple ending that contains narrated experiences or events.	Write narrative compositions in a variety of forms that – • Use a basic exposition to capture the reader's interest. • Organize an event sequence that unfolds logically, using a variety of transition words or clauses to convey sequence from one time frame or setting to another. • Use narrative techniques to develop a limited number of experiences, events, and/or characters. • Use related words and phrases, descriptive details, and sensory language to attempt to capture the action, experiences, and events. • Provide an ending that partially relates to narrated experiences or events.	Write narrative compositions in a variety of forms that – • Engage and orient the reader by developing an exposition. • Organize an event sequence that unfolds naturally and logically, using a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. • Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. • Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. • Provide an ending that follows from the narrated experiences or events.	Write narrative compositions in a variety of forms that – • Engage and orient the reader by thoroughly establishing a detailed exposition. • Organize an event sequence that clearly unfolds naturally and logically, using a variety of skillful transition words, phrases, and clauses to convey sequence and precisely signal shifts from one time frame or setting to another. • Use purposeful narrative techniques and vivid description to fully develop experiences, events, and/or characters. • Use precise words and phrases, relevant descriptive details, and effective sensory language to capture the action and convey cohesive experiences and events. • Provide a coherent ending that directly follows narrated experiences or events.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.W.4	Apply the writing process to all formal writing including but not limited to argumentative, informative, and narrative – • Plan and develop; draft; revise using appropriate reference materials; rewrite; try a new approach; and edit to produce and strengthen writing that is clear and coherent, with some guidance and support from peers and adults. • Use technology to interact and collaborate with others to generate, produce, and publish writing.	Apply the writing process to – • Partially plan and develop; draft; revise using reference materials; rewrite; attempt a different approach; and edit common errors to produce new writing. • Use technology to interact and collaborate with others to generate, produce, and publish writing.	Apply the writing process to – • Plan and develop; draft; revise using related reference materials; rewrite; attempt a different approach; and edit to produce and strengthen writing that is partially clear. • Use technology to interact and collaborate with others to generate, produce, and publish writing.	Apply the writing process to – • Plan and develop; draft; revise using appropriate reference materials; rewrite; try a new approach; and edit to produce and strengthen writing that is clear and coherent. • Use technology to interact and collaborate with others to generate, produce, and publish writing.	Apply the writing process to – • Plan and develop; draft; effectively revise using appropriate reference materials; rewrite; using a new approach; and skillfully edit to produce and strengthen writing that is clear, concise, and coherent. • Use technology to interact and collaborate with others to generate, produce, and publish writing.
6-8.LH.6.1	Plan and develop; draft; revise using appropriate reference materials; rewrite; try a new approach; and edit to produce and strengthen writing that is clear and coherent, with some guidance and support from peers and adults.	Plan and develop; draft; revise using reference materials; rewrite; attempt a different approach; and edit to produce new writing.	Plan and develop; draft; revise using related reference materials; rewrite; attempt a different approach; and edit to produce and strengthen writing that is clear.	Plan and develop; draft; revise using appropriate reference materials; rewrite; try a new approach; and edit to produce and strengthen writing that is clear and coherent.	Plan and develop; draft; effectively revise using appropriate reference materials; rewrite; using a new approach; and skillfully edit to produce and strengthen writing that is clear, concise, and coherent.
6-8.LST.6.1	Plan and develop; draft; revise using appropriate reference materials; rewrite; try a new approach; and edit to produce and strengthen writing that is clear and coherent, with some guidance and support from peers and adults.	Plan and develop; draft; revise using reference materials; rewrite; attempt a different approach; and edit to produce new writing.	Plan and develop; draft; revise using related reference materials; rewrite; attempt a different approach; and edit to produce and strengthen writing that is clear.	Plan and develop; draft; revise using appropriate reference materials; rewrite; try a new approach; and edit to produce and strengthen writing that is clear and coherent.	Plan and develop; draft; effectively revise using appropriate reference materials; rewrite; using a new approach; and skillfully edit to produce and strengthen writing that is clear, concise, and coherent.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.W.5	Conduct short research assignments and tasks to build knowledge about the research process and the topic under study. • Formulate a research question (e.g., In what ways did Madame Walker influence Indiana society?). • Gather relevant information from multiple sources and annotate sources. • Assess the credibility of each source. • Quote or paraphrase the information and conclusions of others. • Avoid plagiarism and provide basic bibliographic information for sources. • Present information, choosing from a variety of formats.	Conduct short research assignments and tasks to build knowledge about the research process and the topic under study. • Begin to formulate a basic research question. • Gather information from sources, using general search terms, and minimally annotate sources. • Assess the credibility and accuracy of some sources. • Incorrectly quote or paraphrase information and conclusions of others. • Inconsistently avoid plagiarism and follow a standard format for citation. • Ineffectively present information, choosing from limited simple formats.	Conduct short research assignments and tasks to build knowledge about the research process and the topic under study. • Formulate a basic research question. • Gather information from multiple sources, using search terms, and annotate sources. • Assess the credibility and accuracy of most sources. • Occasionally quote or paraphrase the information and conclusions of others. • Occasionally avoid plagiarism and follow a standard format for citation. • Present information, choosing from a variety of simple formats.	Conduct short research assignments and tasks to build knowledge about the research process and the topic under study. • Formulate a research question. • Gather relevant information from multiple sources and annotate sources. • Assess the credibility of each source. • Quote or paraphrase the information and conclusions of others. • Avoid plagiarism and provide basic bibliographic information for sources. • Present information, choosing from a variety of formats.	Conduct short research assignments and tasks to build knowledge about the research process and the topic under study. • Formulate a complex research question. • Gather relevant and in-depth information from multiple sources, using search terms effectively and purposefully, and annotate sources appropriately. • Assess the credibility of each source. • Effectively quote or paraphrase the information and conclusions of others. • Avoid plagiarism and follow a standard format for citation. • Effectively present detailed information, choosing from a variety of formats.
6-8.LH.7.1	Conduct short research assignments and tasks to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short research assignments and tasks to answer a basic question, drawing on several sources and generating additional basic questions that allow for limited exploration.	Conduct short research assignments and tasks to answer a basic question, drawing on several sources and generating related questions that allow for additional exploration.	Conduct short research assignments and tasks to answer a question, drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short research assignments and tasks to answer a complex question, drawing on several sources and generating additional related, focused questions that allow for additional avenues of in-depth exploration.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.LH.7.2	Gather relevant information from multiple sources, using search terms effectively; annotate sources; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation (e.g., APA or Chicago).	Gather information from multiple sources, using general search terms effectively; attempt to annotate sources; assess the credibility and accuracy of some sources; and incorrectly quote or paraphrase the data and conclusions of others while inconsistently avoiding plagiarism and following a standard format for citation.	Gather information from multiple sources, using search terms; annotate sources; assess the credibility and accuracy of most sources; and occasionally quote or paraphrase the data and conclusions of others while occasionally avoiding plagiarism and following a standard format for citation.	Gather relevant information from multiple sources, using search terms effectively; annotate sources; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	Gather relevant and in-depth information from multiple sources, using search terms effectively and purposefully; annotate sources appropriately; assess the credibility and accuracy of each source; and effectively quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
6-8.LH.7.3	Draw evidence from informational texts to support analysis, reflection, and research.	Draw facts from informational texts that generally connect to analysis, reflection, and research.	Draw explicit evidence from informational texts to partially support analysis, reflection, and research.	Draw evidence from informational texts to support analysis, reflection, and research.	Draw complex evidence from informational texts to thoroughly support analysis, reflection, and research.
6-8.LST.7.1	Conduct short research assignments and tasks to answer a question (including a self-generated question), or test a hypothesis, drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short research assignments and tasks to answer a basic question or test a basic hypothesis, drawing on several sources and generating additional basic questions that allow for limited exploration.	Conduct short research assignments and tasks to answer a basic question or test a basic hypothesis, drawing on several sources and generating related questions that allow for additional exploration.	Conduct short research assignments and tasks to answer a question or test a hypothesis, drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short research assignments and tasks to answer a complex question or test a complex hypothesis, drawing on several sources and generating additional related, focused questions that allow for additional avenues of in-depth exploration.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.LST.7.2	Gather relevant information from multiple sources, using search terms effectively; annotate sources; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation (e.g., APA or CSE).	Gather information from multiple sources, using general search terms effectively; attempt to annotate sources; assess the credibility and accuracy of some sources; and incorrectly quote or paraphrase the data and conclusions of others while inconsistently avoiding plagiarism and following a standard format for citation.	Gather information from multiple sources, using search terms; annotate sources; assess the credibility and accuracy of most sources; and occasionally quote or paraphrase the data and conclusions of others while occasionally avoiding plagiarism and following a standard format for citation.	Gather relevant information from multiple sources, using search terms effectively; annotate sources; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.	Gather relevant and in-depth information from multiple sources, using search terms effectively and purposefully; annotate sources appropriately; assess the credibility and accuracy of each source; and effectively quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
6-8.LST.7.3	Draw evidence from informational texts to support analysis, reflection, and research.	Draw facts from informational texts that generally connect to analysis, reflection, and research.	Draw explicit evidence from informational texts to partially support analysis, reflection, and research.	Draw evidence from informational texts to support analysis, reflection, and research.	Draw complex evidence from informational texts to thoroughly support analysis, reflection, and research.
6.W.6.1a	Pronouns – Using a variety of pronouns, including subject, object, possessive, and reflexive; ensuring pronoun-antecedent agreement; recognizing and correcting vague pronouns.	Pronouns – Use a variety of simple pronouns; recognize incorrect pronoun usage.	Pronouns – Use a variety of pronouns; recognize incorrect pronoun usage and attempt to correct.	Pronouns – Use a variety of pronouns, including subject, object, possessive, and reflexive; ensure pronoun-antecedent agreement; recognize and correct vague pronouns.	Pronouns – Purposefully select pronouns, including subject, object, possessive, and reflexive; ensure pronoun-antecedent agreement; recognize and correct vague pronouns.
6.W.6.1e	Usage – Writing simple, compound, complex, and compound-complex sentences; recognizing sentence fragments and run-ons.	Usage – Write simple sentences; recognize compound, complex, and compound-complex sentences; rarely recognize sentence fragments and run-ons.	Usage – Inconsistently write simple, compound, and complex sentences; inconsistently recognize sentence fragments and run-ons.	Usage – Write simple, compound, complex, and compound-complex sentences; recognize sentence fragments and run-ons.	Usage – Effectively write simple, compound, complex, and compound-complex sentences; consistently recognize sentence fragments and run-ons.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.W.6.2b	Punctuation – • Using punctuation (commas, parentheses, dashes) to set off nonrestrictive/parenthetical elements. • Using semicolons to connect main clauses and colons to introduce a list or quotation.	Punctuation – • Rarely use punctuation to set off nonrestrictive/parenthetical elements. • Recognize use of semicolons to connect main clauses and colons to introduce a list or quotation.	Punctuation – • Inconsistently use punctuation to set off nonrestrictive/parenthetical elements. • Rarely use semicolons to connect main clauses and colons to introduce a list or quotation.	Punctuation – • Use punctuation to set off nonrestrictive/parenthetical elements. • Use semicolons to connect main clauses and colons to introduce a list or quotation.	Punctuation – • Effectively use punctuation to set off nonrestrictive/ parenthetical elements. • Effectively use semicolons to connect main clauses and colons to introduce a list or quotation.
Speaking and Listening					
6.SL.3.1	Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.	Locate similar information presented in simple diverse media and formats and recognize how it relates to a topic, text, or issue under study.	Describe information presented in diverse media and formats and connect how it contributes to a topic, text, or issue under study.	Interpret information presented in diverse media and formats and explain how it contributes to a topic, text, or issue under study.	Interpret complex information presented in diverse media and formats and analyze how it contributes to a topic, text, or issue under study.
6.SL.3.2	Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.	Identify a speaker's argument and specific claim, recognizing simple claims that are supported by reasons and evidence and claims that are not.	Identify a speaker's argument and specific claims, describing claims that are supported by clear reasons and evidence and claims that are not.	Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.	Delineate a speaker's argument and specific claims in a more complex work, evaluating the soundness of the reasoning and the relevance and sufficiency of the evidence.

ILEARN Performance Level Descriptors
Grade 6 Science

Updated July 1, 2022

Performance Level Descriptors (PLDs) serve as a foundational resource in the assessment process to inform item development and characterize student performance based on Indiana Academic Standards. PLDs are written from three perspectives: Policy PLDs, Range PLDs, and Threshold PLDs.

Policy PLDs: Policy PLDs provide overarching claims about a student's performance and are used by policymakers and stakeholders to articulate expectations about a state's performance standards.

Range PLDs: Range PLDs provide content-specific claims across each Indiana Academic Standard to represent the range of expectations for student performance within each proficiency level.

Threshold PLDs: Threshold PLDs provide content-specific claims across each Indiana Academic Standard to represent expectations for student performance surrounding each cut score as a model for standard setting.

The Policy PLDs approved by the Indiana State Board of Education for ILEARN consist of the following:

LEVEL 1: Below Proficiency
Indiana students below proficiency have not met current grade level standards. Students may require significant support to develop the knowledge, application, and analytical skills needed to be on track for college and career readiness.

LEVEL 2: Approaching Proficiency
Indiana students approaching proficiency have nearly met current grade level standards by demonstrating some basic knowledge, application, and limited analytical skills. Students may require support to be on track for college and career readiness.

LEVEL 3: At Proficiency
Indiana students at proficiency have met current grade level standards by demonstrating essential knowledge, application, and analytical skills to be on track for college and career readiness.

LEVEL 4: Above Proficiency
Indiana students above proficiency have mastered current grade level standards by demonstrating more complex knowledge, application, and analytical skills to be on track for college and career readiness.

The subsequent pages highlight the Range PLDs for each Indiana Academic Standard. These PLDs can be used to inform instructional practices as educators consider proficiency of the content. Additionally, educators may use the content examples to consider how to remediate or extend key instructional concepts to transition students across proficiency levels of performance.

Review this sample from grade four, which models ways you can use the PLDs to think about the expectations across the continuum of proficiency. The sample provides context around how you could think about the way the descriptors differentiate student performance across the continuum and how you could use those descriptors in your classroom.

	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Science 4 Standard: 4.ESS.3	Identify that geological forces change the shape of the land.	Identify how geological forces change the shape of the land suddenly and over time.	Describe how geological forces change the shape of the land suddenly and over time.	Explain how geological forces change the shape of the land suddenly and over time.
Classroom Implications	The key difference between Below Proficiency and Approaching Proficiency lies in a student's ability to identify that geological forces change land suddenly and over long periods of time as opposed to identifying that land can be changed by geologic forces. When thinking about moving students into Approaching Proficiency, focus on the time scales for specific geologic forces. Then guide students to explain why some geological forces cause sudden changes to land while other can take millions of years to cause change.	Students who are Approaching Proficiency can identify that geologic forces change the land over different time periods, but may not describe how this happens. When moving students into At Proficiency, guide students toward thinking about how each geological force results in either a sudden change to land or a change over a longer period of time.	The main difference between students At Proficiency and Above Proficiency is the student's ability to explain how a geological force changes the land suddenly or over longer periods of time. When moving students into Above Proficiency, ask students to explain how a specific geological force changes the land, including the time scale of the change and characteristics of the geological force that result in either a rapid or slow change.	

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
Science 6					
6.PS.1	Distinguish between the terms position, distance, and displacement, as well as, the terms speed and velocity.	Identify the terms position and distance.	Define the terms position, distance, and displacement.	Distinguish between the terms position, distance, and displacement, as well as, the terms speed and velocity.	Explain the difference between the terms position, distance, and displacement, as well as, the terms speed and velocity.
6.PS.2	Describe the motion of an object graphically showing the relationship between time and position.	Observe and collect data on the motion of an object.	Observe and collect data on the motion of an object graphically showing the relationship between time and position.	Observe and collect data to describe the motion of an object graphically, showing the relationship between time and position.	Generalize a pattern of the motion of an object graphically showing the relationship between time and position.
6.PS.3	Describe how potential and kinetic energy can be transferred from one form to another.	Identify potential and kinetic energy.	Identify how potential and kinetic energy can be transferred from one form to another.	Describe how potential and kinetic energy can be transferred from one form to another.	Explain how potential and kinetic energy can be transferred from one form to another.
6.PS.4	Investigate the properties of light, sound, and other energy waves and how they are reflected, absorbed, and transmitted through materials and space.	Identify the properties of light, sound, and other energy waves.	Describe the properties of light, sound, and other energy waves and how they are reflected, absorbed, and transmitted through materials and space.	Explain the properties of light, sound, and other energy waves and how they are reflected, absorbed, and transmitted through materials and space.	Explain the properties of light, sound, and other energy waves and analyze how they are reflected, absorbed, and transmitted through materials and space.
6.ESS.1	Describe the role of gravity and inertia in maintaining the regular and predictable motion of celestial bodies.	Identify the role of gravity and inertia.	Identify the role of gravity and inertia in maintaining the regular and predictable motion of celestial bodies.	Describe the role of gravity and inertia in maintaining the regular and predictable motion of celestial bodies.	Distinguish between the roles of gravity and inertia in maintaining the regular and predictable motion of celestial bodies.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.ESS.2	Design models to describe how Earth's rotation, revolution, tilt, and interaction with the sun and moon cause seasons, tides, changes in daylight hours, eclipses, and phases of the moon.	Identify models that describe Earth's rotation, revolution, and tilt. Identify models that describe Earth's interaction with the sun and moon.	Identify models that describe how Earth's rotation, revolution, tilt, and interaction with the sun cause seasons and changes in daylight hours. Identify models that describe how Earth's rotation, revolution, tilt and interaction with the sun and moon cause tides, eclipses, and phases of the moon.	Design models to describe how Earth's rotation, revolution, tilt, and interaction with the sun cause seasons and changes in daylight hours. Design models to describe how Earth's rotation, revolution, tilt and interaction with the sun and moon cause tides, eclipses, and phases of the moon.	Design and explain models to describe how Earth's rotation, revolution, tilt, and interaction with the sun cause seasons and changes in daylight hours. Design and explain models to describe how Earth's rotation, revolution, tilt and interaction with the sun and moon cause tides, eclipses, and phases of the moon.
6.ESS.3	Compare and contrast the Earth, its moon, and other planets in the solar system, including comets and asteroids. (Comparisons should be made in regard to size, surface features, atmospheric characteristics, and the ability to support life.)	Classify the Earth, its moon, and other planets in the solar system, including comets and asteroids by characteristics.	Compare the Earth, its moon, and other planets in the solar system, including comets and asteroids.	Compare and contrast the Earth, its moon, and other planets in the solar system, including comets and asteroids.	Analyze characteristics of the Earth, its moon, and other planets in the solar system, including comets and asteroids.
6.LS.1	Investigate and describe how homeostasis is maintained as living things seek out their basic needs of food, water, shelter, space, and air.	Identify basic needs of living things.	Identify how homeostasis is maintained as living things seek out their basic needs.	Describe and explain how homeostasis is maintained as living things seek out their basic needs.	Evaluate how homeostasis is maintained as living things seek out their basic needs.
6.LS.2	Describe the role of photosynthesis in the flow of energy in food chains, energy pyramids, and food webs. Create diagrams to show how the energy in animals' food used for bodily processes was once energy from the sun.	Identify diagrams to show how the energy in animals' food used for bodily processes was once energy from the sun.	Identify the role of photosynthesis in the flow of energy. Identify diagrams to show how the energy in animals' food used for bodily processes was once energy from the sun.	Describe the role of photosynthesis in the flow of energy. Create diagrams to show how the energy in animals' food used for bodily processes was once energy from the sun.	Evaluate the role of photosynthesis in the flow of energy. Analyze diagrams to show how the energy in animals' food used for bodily processes was once energy from the sun.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6.LS.3	Describe specific relationships (predator/prey, consumer/producer, parasite/host) and symbiotic relationships between organisms. Construct an explanation that predicts why patterns of interactions develop between organisms in an ecosystem.	Identify specific relationships and symbiotic relationships between organisms.	Identify specific relationships and symbiotic relationships between organisms. Identify an explanation that predicts why patterns of interactions develop between organisms in an ecosystem.	Describe specific relationships and symbiotic relationships between organisms. Construct an explanation that predicts why patterns of interactions develop between organisms in an ecosystem.	Evaluate specific relationships and symbiotic relationships between organisms. Construct an explanation that predicts why patterns of interactions develop between organisms in an ecosystem.
6.LS.4	Investigate and use data to explain how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.	Identify biotic and abiotic components in a given habitat.	Identify data that explains how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.	Use data to explain how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.	Use data to evaluate how changes in biotic and abiotic components in a given habitat can be beneficial or detrimental to native plants and animals.
6.LS.5	Research invasive species and discuss their impact on ecosystems.	Identify that an invasive species can impact ecosystems.	Describe how invasive species can impact ecosystems.	Explain how invasive species can impact ecosystems.	Evaluate and predict how invasive species might impact ecosystems.
6-8.E.1	Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	Identify the criteria of a design to ensure a successful solution.	Identify the criteria of a design to ensure a successful solution, taking into account relevant scientific principles.	Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people that may limit possible solutions.	Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and predict potential impacts on people and the natural environment that may limit possible solutions.
6-8.E.2	Evaluate competing design solutions using a systematic process to identify how well they meet the criteria and constraints of the problem.	Identify potential design solutions for a given problem.	Compare competing design solutions using a systematic process to identify how well they meet the criteria of the problem.	Compare competing design solutions using a systematic process to identify how well they meet the criteria and constraints of the problem.	Evaluate competing design solutions using a systematic process to identify how a solution best meets the criteria and constraints of a problem.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.E.3	Analyze data from investigations to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.	Compare data from investigations to determine similarities among several design solutions.	Compare data from investigations to determine similarities among several design solutions to identify the characteristics of each.	Analyze data from investigations to determine similarities among several design solutions to identify the characteristics of each that can be combined into a new solution to better meet the criteria for success.	Analyze data from investigations to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.
6-8.E.4	Develop a prototype to generate data for repeated investigations and modify a proposed object, tool, or process such that an optimal design can be achieved.	Identify a prototype to generate data for repeated investigations and identify a working modified proposed object, tool, or process.	Identify a prototype to generate data for repeated investigations and identify the best modified proposed object, tool, or process such that an optimal design can be achieved.	Evaluate a prototype to generate data for repeated investigations and identify the best modified proposed object, tool, or process such that an optimal design can be achieved.	Develop a prototype to generate data for repeated investigations and modify a proposed object, tool, or process such that an optimal design can be achieved.
Computer Science 6–8					
6-8.DI.1	Use the basic steps in algorithmic problem-solving to design solutions (e.g., problem statement and exploration, examination of sample instances, design, implementing a solution, testing, and evaluation).	Identify the basic steps in algorithmic problem-solving to design solutions	Describe the basic steps in algorithmic problem-solving to design solutions.	Demonstrate the basic steps in algorithmic problem-solving to design solutions.	Analyze, modify, and apply the basic steps in algorithmic problem-solving to design solutions.
6-8.DI.2	Describe the process of parallelization as it relates to problem solving.	Identify the process of parallelization.	Identify the process of parallelization as it relates to problem solving.	Describe the process of parallelization as it relates to problem solving.	Explain the process of parallelization as it relates to problem solving.
6-8.DI.3	Represent data in a variety of ways (e.g., text, sounds, pictures, and numbers), and use different visual representations of problems, structures, and data (e.g., graphs, charts, network diagrams, flowcharts).	Identify a variety of ways to represent data.	Present data in a variety of ways and use different visual representations of problems, structures, and data (graphs, charts)	Present data in a variety of ways, and use different visual representations of problems, structures, and data (graphs, charts, network diagrams, flowcharts).	Present and explain data in a variety of ways, and use different visual representations of problems, structures, and data (graphs, charts, network diagrams, flowcharts).

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.DI.4	Understand the notion of hierarchy and abstraction in computing including high level languages, translation, instruction set, and logic circuits.	Identify various levels/steps of problem-solving design.	Identify the hierarchy in computing including high level languages, translation, instruction set, and logic circuits.	Describe the hierarchy in computing including high level languages, translation, instruction set, and logic circuits.	Compare and critique the hierarchy in computing including high level languages, translation, instruction set, and logic circuits.
6-8.DI.5	Demonstrate interdisciplinary applications of computational thinking and interact with content-specific models and simulations to support learning and research.	Identify interdisciplinary applications of computational thinking.	Describe interdisciplinary applications of computational thinking. Interact with content-specific models and simulations to support learning and research.	Demonstrate interdisciplinary applications of computational thinking. Interact with content-specific models and simulations to support learning and research.	Explain interdisciplinary applications of computational thinking. Demonstrate and interact with content-specific models and simulations to support learning and research.
6-8.CD.1	Demonstrate an understanding of the relationship between hardware and software.	Identify hardware and software.	Identify the relationship between hardware and software.	Demonstrate the relationship between hardware and software.	Analyze and explain the relationship between hardware and software.
6-8.CD.2	Apply troubleshooting strategies to identify and solve routine hardware and software problems that occur during everyday computer use.	Identify troubleshooting strategies to routine hardware and software problems that occur during everyday computer use.	Describe troubleshooting strategies to identify routine hardware and software problems that occur during everyday computer use.	Apply troubleshooting strategies to identify and solve routine hardware and software problems that occur during everyday computer use.	Analyze troubleshooting strategies to identify and solve routine hardware and software problems that occur during everyday computer use.
6-8.CD.3	Describe the major components and functions of computer systems and network.	Identify the major components and functions of computer systems.	Describe the major components and functions of computer systems.	Describe the major components and functions of computer systems and network.	Describe how the major components and functions of computer systems and network work.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.CD.4	Describe what distinguishes humans from machines focusing on human intelligence versus machine intelligence and ways we can communicate, as well as ways in which computers use models of intelligent behavior (e.g., robot motion, speech and language understanding, and computer vision).	Identify what distinguishes humans from machines focusing on human intelligence versus machine intelligence.	Identify what distinguishes humans from machines focusing on human intelligence versus machine intelligence and ways we can communicate, as well as ways in which computers use models of intelligent behavior	Describe what distinguishes humans from machines focusing on human intelligence versus machine intelligence and ways we can communicate, as well as ways in which computers use models of intelligent behavior.	Explain what distinguishes humans from machines focusing on human intelligence versus machine intelligence and ways we can communicate, as well as ways in which computers use models of intelligent behavior.
6-8.PA.1	Select appropriate tools and technology resources to support learning and personal productivity, publish individual products, and design, develop, and publish data, accomplish a variety of tasks, and solve problems.	Identify appropriate tools and technology resources to support learning, personal productivity, and publish individual products.	Identify appropriate tools and technology resources to support learning and personal productivity, publish individual products, and design, develop, and publish data, accomplish a variety of tasks, and solve problems.	Select appropriate tools and technology resources to support learning and personal productivity, publish individual products, and design, develop, and publish data, accomplish a variety of tasks, and solve problems.	Explain why appropriate tools and technology resources were selected to support learning and personal productivity, publish individual products, and design, develop, and publish data, accomplish a variety of tasks, and solve problems.
6-8.PA.2	Implement problem solutions using a programming language that includes looping behavior, conditional statements, logic, expressions, variables, and functions.	Identify problem solutions using a programming language.	Identify problem solutions using a programming language that includes looping behavior, conditional statements, logic, expressions, variables, and functions.	Apply problem solutions using a programming language that includes looping behavior, conditional statements, logic, expressions, variables, and functions.	Test problem solutions using a programming language that includes looping behavior, conditional statements, logic, expressions, variables, and functions.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.PA.3	Demonstrate dispositions amenable to open-ended problem solving and programming (e.g., comfort with complexity, persistence, brainstorming, adaptability, patience, propensity to tinker, creativity, accepting challenge).	Demonstrates persistence during problem solving.	Demonstrates skills to solve open-ended problems (e.g., prior knowledge, rigid, one thought/solution, makes the solution fit what they already know)	Demonstrates skills to solve open-ended problems and programming (e.g., flexible, open-minded, using prior knowledge, multiple viewpoints)	Demonstrates skills to solve open-ended problems and programming (e.g., tinker-ing, out of the box thinking, compares/contrasts multiple solutions, tests multiple solutions)
6-8.NC.1	Collaboratively design, develop, publish, and present products (e.g., videos, podcasts, websites) using technology resources that demonstrate and communicate curriculum concepts.	Individually design products using technology resources	Collaboratively design, develop, publish, and present products using technology resources	Collaboratively design, develop, publish, and present products (e.g., videos, podcasts, websites) using technology resources that demonstrate and communicate curriculum concepts.	Collaboratively design, develop, publish, and present products (e.g., videos, podcasts, websites) using technology resources that evaluate curriculum concepts.
6-8.NC.2	Exhibit dispositions neces-sary for collaboration: providing useful feedback, integrating feedback, understanding and accepting multiple perspectives, socialization.	Exhibit dispositions neces-sary for collaboration: providing useful feedback.	Exhibit dispositions neces-sary for collaboration: providing useful feedback and integrating feedback.	Exhibit dispositions neces-sary for collaboration: providing useful feedback, integrating feedback, understanding and accepting multiple perspectives, socialization.	Exhibit dispositions neces-sary for collaboration: providing useful feedback, integrating feedback, understanding and accepting multiple perspectives, socialization.
6-8.IC.1	Exhibit legal and ethical behaviors when using technology and information and discuss the consequences of misuse.	Identify legal and ethical behaviors when using technology and information.	Describe legal and ethical behaviors when using technology and information.	Describe legal and ethical behaviors when using technology and information and discuss the consequences of misuse.	Exhibit legal and ethical behaviors when using technology and information and discuss and describe the consequences of misuse.
6-8.IC.2	Analyze the positive and negative impacts of technology on one's personal life, society, and our culture.	Identify the positive or negative impacts of technology on one's personal life.	Identify the positive and negative impacts of technology on one's personal life, society, and our culture.	Describe the positive and negative impacts of technology on one's personal life, society, and our culture.	Analyze the positive and negative impacts of technology on one's personal life, society, and our culture.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
6-8.IC.3	Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources.	Define that the accuracy, relevance, appropriateness, comprehensiveness, and biases occur in electronic information sources.	Identify the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources.	Describe the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources.	Evaluate the accuracy, relevance, appropriateness, comprehensiveness, and biases that occur in electronic information sources and explain the implications of these characteristics on its use.
6-8.IC.4	Describe ethical issues that relate to computers and networks (e.g., security, privacy, ownership, and information sharing), and discuss how unequal distribution of technological resources in a global economy raises issues of equity, access, and power.	Identify ethical issues that relate to computers and networks.	Identify ethical issues that relate to computers and networks and identify examples of how unequal distribution of technological resources in a global economy raises issues of equity, access, and power.	Describe ethical issues that relate to computers and networks and describe how unequal distribution of technological resources in a global economy raises issues of equity, access, and power.	Evaluate ethical issues that relate to computers and networks and compare and contrast how unequal distribution of technological resources in a global economy raises issues of equity, access, and power.

Science and Engineering Process Standards (SEPS)					
SEPS.1 Posing questions(for science) and definingproblems (for engineering)	A practice of science isposing and refining questions that lead to descriptions and explanations of how thenatural and designed world(s) work and these questions can be scientifically tested. Engineering questions clarify problems to determine criteria for possible solutions and identify constraints to solve problems about the designed world.	Identify questions that lead to descriptions and explanations of how the natural and designed world(s) work. Identify engineering problems.	Identify questions that lead to descriptions and explanations of how the natural and designed world(s) work and scientifically tests these questions. Identify engineering problems to determine criteria for possible solutions and identify constraints to solve problems about the designed world.	Pose and evaluate questions that lead to descriptions and explanations of how the natural and designed world(s) work and scientifically tests these questions. Clarify engineering problems to determine criteria for possible solutions and identify constraints to solve problems about the designed world.	Pose, evaluate and refine questions that lead to descriptions and explanations of how the natural and designed world(s) work and scientifically tests these questions. Solve engineering problems to determine criteria for possible solutions and analyze constraints to solve problems about the designed world.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
SEPS.2 Developing and using models and tools	A practice of both science and engineering is to use and construct conceptual models that illustrate ideas and explanations. Models are used to develop questions, predictions and explanations; analyze and identify flaws in systems; build and revise scientific explanations and proposed engineered systems; and communicate ideas. Measurements and observations are used to revise and improve models and designs. Models include, but are not limited to: diagrams, drawings, physical replicas, mathematical representations, analogies, and other technological models. Another practice of both science and engineering is to identify and correctly use tools to construct, obtain, and evaluate questions and problems. Utilize appropriate tools while identifying their limitations. Tools include, but are not limited to: pencil and paper, models, ruler, a protractor, a calculator, laboratory	Identify conceptual models that illustrate ideas and explanations. Use models to identify questions and explanations; analyze and identify flaws in systems; identify scientific explanations and proposed engineered systems; and communicate ideas. Revise and improve models and designs. Identify and correctly use tools to construct questions and problems. Utilize appropriate tools.	Use conceptual models that illustrate ideas and explanations. Use models to develop questions and explanations; analyze and identify flaws in systems; build scientific explanations and proposed engineered systems; and communicate ideas. Use observations to revise and improve models and designs. Identify and correctly use tools to construct and obtain questions and problems. Utilize appropriate tools.	Use and construct conceptual models that illustrate ideas and explanations. Use models to develop questions, predictions and explanations; analyze and identify flaws in systems; build and revise scientific explanations and proposed engineered systems; and communicate ideas. Use measurements and observations to revise and improve models and designs. Identify and correctly use tools to construct, obtain, and evaluate questions and problems. Utilize appropriate tools while identifying their limitations.	Use, construct, and analyze conceptual models that illustrate ideas and explanations. Use models to develop and evaluate questions, predictions and explanations; analyze and identify flaws in systems; build and revise scientific explanations and proposed engineered systems; and communicate ideas. Use measurements and observations to revise and improve models and designs. Evaluate the use of use tools to construct, obtain, and analyze questions and problems. Utilize appropriate tools and explain their limitations.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
	equipment, safety gear, a spreadsheet, experiment data collection software, and other technological tools.				
SEPS.3 Constructing and performing investigations	Scientists and engineers are constructing and performing investigations in the field or laboratory, working collaboratively as well as individually. Researching analogous problems in order to gain insight into possible solutions allows them to make conjectures about the form and meaning of the solution. A plan to a solution pathway is developed prior to constructing and performing investigations. Constructing investigations systematically encompasses identified variables and parameters generating quality data. While performing, scientists and engineers monitor and record progress. After performing, they evaluate to make changes to modify and repeat the investigation if necessary.	Perform investigations in the field or laboratory, working collaboratively as well as individually. Identify a plan to a solution pathway prior to performing investigations. Perform investigations that systematically encompass identified variables and parameters generating quality data. Monitor and record progress.	Perform investigations in the field or laboratory, working collaboratively as well as individually. Research analogous problems in order to gain insight into possible solutions will allow them to make conjectures about the form and meaning of the solution. Identify a plan to a solution pathway prior to performing investigations. Perform investigations that systematically encompass identified variables and parameters generating quality data. Monitor and record progress. After performing, evaluate to make changes to modify.	Construct and perform investigations in the field or laboratory, working collaboratively as well as individually. Research analogous problems in order to gain insight into possible solutions will allow them to make conjectures about the form and meaning of the solution. Develop a plan to a solution pathway prior to constructing and performing investigations. Construct investigations that systematically encompass identified variables and parameters generating quality data. Monitor and record progress. After performing, evaluate to make changes to modify and repeat the investigation if necessary.	Construct, perform and analyze investigations in the field or laboratory, working collaboratively as well as individually. Research and evaluate analogous problems in order to gain insight into possible solutions to allow them to make conjectures about the form and meaning of the solution. Develop a plan to a solution pathway prior to constructing and performing investigations. Construct investigations that systematically encompass identified variables and parameters generating quality data. Monitor and record progress. After performing, evaluate and analyze to make changes to modify and repeat the investigation if necessary.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
SEPS.4 Analyzing and interpreting data	Investigations produce data that must be analyzed in order to derive meaning. Because data patterns and trends are not always obvious, scientists and engineers use a range of tools to identify the significant features in the data. They identify sources of error in the investigations and calculate the degree of certainty in the results. Advances in science and engineering makes analysis of proposed solutions more efficient and effective. They analyze their results by continually asking themselves questions; possible questions may be, but are not limited to: “Does this make sense?” “Could my results be duplicated?” and/or “Does the design solve the problem with the given constraints?”	Use investigations to produce data. Use tools to identify the significant features in the data. Identify solutions efficiently and effectively.	Use investigations to produce data. Use tools to identify the significant features in the data. Identify solutions efficiently and effectively. Analyze results by continually asking questions; possible questions may be, but are not limited to: “Does this make sense?”	Use investigations to produce data that must be analyzed in order to derive meaning. Use a range of tools to identify the significant features in the data. Identify sources of error in the investigations and calculate the degree of certainty in the results. Analyze proposed solutions efficiently and effectively. Analyze results by continually asking questions; possible questions may be, but are not limited to: “Does this make sense?” “Could my results be duplicated?” and/or “Does the design solve the problem with the given constraints?”	Use investigations to produce data that must be analyzed in order to derive meaning. Evaluate a range of tools to identify the significant features in the data. Analyze sources of error in the investigations and calculate the degree of certainty in the results. Analyze proposed solutions efficiently and effectively. Analyze results by continually asking questions; possible questions may be, but are not limited to: “Does this make sense?” “Could my results be duplicated?” and/or “Does the design solve the problem with the given constraints?”
SEPS.5 Using mathematics and computational thinking	In both science and engineering, mathematics and computation are fundamental tools for representing physical variables and their relationships. They are used for a range of tasks such as constructing	Use mathematics and computation as fundamental tools for representing physical variables. Use mathematics and computation for a range of tasks such as constructing simulations; solving equations exactly or	Use mathematics and computation as fundamental tools for representing physical variables. Use mathematics and computation for a range of tasks such as constructing simulations; solving equations exactly or	Use mathematics and computation as fundamental tools for representing physical variables and their relationships. Use mathematics and computation for a range of tasks such as constructing	Use mathematics and computation as fundamental tools for representing physical variables and explain their relationships. Use mathematics and computation for a range of tasks such as constructing

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
	simulations; solving equations exactly or approximately; and recognizing, expressing, and applying quantitative relationships. Mathematical and computational approaches enable scientists and engineers to predict the behavior of systems and test the validity of such predictions. Scientists and engineers understand how mathematical ideas interconnect and build on one another to produce a coherent whole.	approximately. Identify how mathematical ideas interconnect and build on one another.	approximately; and recognizing quantitative relationships. Predict the behavior of systems. Identify how mathematical ideas interconnect and build on one another to produce a coherent whole.	simulations; solving equations exactly or approximately; and recognizing, expressing, and applying quantitative relationships. Predict the behavior of systems and test the validity of such predictions. Explain how mathematical ideas interconnect and build on one another to produce a coherent whole.	simulations; solving equations exactly or approximately; and recognizing, expressing, and applying quantitative relationships. Predict the behavior of systems and test and analyze the validity of such predictions. Explain how mathematical ideas interconnect and build on one another to produce a coherent whole.
SEPS.6 Constructing explanations (for science) and designing solutions (for engineering)	Scientists and engineers use their results from the investigation in constructing descriptions and explanations, citing the interpretation of data, connecting the investigation to how the natural and designed world(s) work. They construct or design logical coherent explanations or solutions of phenomena that incorporate their understanding of science and/or engineering or a model that represents it, and are consistent with the available evidence.	Use results from the investigation in constructing descriptions. Identify logical explanations or solutions of phenomena.	Use results from the investigation in constructing descriptions, citing the interpretation of data, connecting the investigation to how the natural and designed world(s) work. Identify logical coherent explanations or solutions of phenomena that incorporate their understanding of science and/or engineering or a model that represents it.	Use results from the investigation in constructing descriptions and explanations, citing the interpretation of data, connecting the investigation to how the natural and designed world(s) work. Construct or design logical coherent explanations or solutions of phenomena that incorporate their understanding of science and/or engineering or a model that represents it, and are consistent with the available evidence.	Analyze results from the investigation in constructing descriptions and explanations, citing the interpretation of data, connecting the investigation to how the natural and designed world(s) work. Evaluate the construction or the design of logical coherent explanations or solutions of phenomena that incorporate the students' understanding of science and/or engineering or a model that represents it, and its consistency with the available evidence.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
SEPS.7 Engaging in argument from evidence	Scientists and engineers use reasoning and argument based on evidence to identify the best explanation for a natural phenomenon or the best solution to a design problem. Scientists and engineers use argumentation, the process by which evidence-based conclusions and solutions are reached, to listen to, compare, and evaluate competing ideas and methods based on merits. Scientists and engineers engage in argumentation when investigating a phenomenon, testing a design solution, resolving questions about measurements, building data models, and using evidence to evaluate claims.	Identify an explanation for a natural phenomenon or a solution to a design problem. Identify evidence to evaluate a claim.	Use reasoning and argument based on evidence to identify an explanation for a natural phenomenon or a solution to a design problem. Use argumentation to listen to and compare competing ideas and methods based on merits. Engage in argumentation when investigating a phenomenon, testing a design solution, resolving questions about measurements, building data models, and using evidence to evaluate claims.	Use reasoning and argument based on evidence to identify the best explanation for a natural phenomenon or the best solution to a design problem. Use argumentation to listen to, compare, and evaluate competing ideas and methods based on merits. Engage in argumentation when investigating a phenomenon, testing a design solution, resolving questions about measurements, building data models, and using evidence to evaluate claims.	Use reasoning and argument based on evidence to analyze the best explanation for a natural phenomenon or the best solution to a design problem. Use argumentation to listen to, compare, and evaluate competing ideas and methods based on merits. Engage in argumentation when investigating a phenomenon, testing a design solution, resolving questions about measurements, building data models, and analyze evidence to evaluate claims.

	Standard	Below Proficiency	Approaching Proficiency	At Proficiency	Above Proficiency
SEPS.8 Obtaining, evaluating, and communicating information	Scientists and engineers need to be communicating clearly and articulating the ideas and methods they generate. Critiquing and communicating ideas individually and in groups is a critical professional activity. Communicating information and ideas can be done in multiple ways: using tables, diagrams, graphs, models, and equations, as well as, orally, in writing, and through extended discussions. Scientists and engineers employ multiple sources to obtain information that is used to evaluate the merit and validity of claims, methods, and designs.	Communicate and articulate simple ideas and methods students generate. Communicate ideas individually. Communicate information and ideas in one of the following ways: using tables, diagrams, graphs, models, and equations as well as, orally, in writing, and through extended discussions.	Communicate the ideas and methods students generate. Describe and communicate ideas individually. Communicate information and ideas in two or three of the following ways: using tables, diagrams, graphs, models, and equations, as well as, orally, in writing, and through extended discussions. Employ one source to obtain information that is used to evaluate the merit and validity of claims, methods, and designs.	Communicate clearly and articulate the ideas and methods students generate. Critique and communicate ideas individually and in groups. Communicate information and ideas in multiple ways: use tables, diagrams, graphs, models, and equations, as well as, orally, in writing, and through extended discussions. Employ multiple sources to obtain information that are used to evaluate the merit and validity of claims, methods, and designs.	Defend clearly and articulate the ideas and methods students generate. Critique and communicate ideas individually and in groups. Communicate information and ideas in multiple ways: using tables, diagrams, graphs, models, and equations, as well as, orally, in writing, and through extended discussions. Employ multiple sources to obtain information that is used to evaluate the merit and validity of claims, methods, and designs.