	English/Language Arts	Mathematics	Social Studies
ACTIVITY			
Sounds Around (4)		8.6.4	8.2.12, 8.3.9
Poet-Tree (5)	8.4.1, 8.5.7, 8.7.14		8.3.9
Renewable Or Not? (14)			8.3.8, 8.3.9
Pass the Plants, Please (16)		8.6.1	
People of the Forest (17)	8.5.7, 8.7.10, 8.7.12		
Values On The Line (19)			8.3.5
Environment Exchange Box (20)			8.3.3
Adopt a Tree (21)		8.5.3	
Trees as Habitats (22)		8.6.4	
Rain Reasons (29)			8.3.1, 8.3.3, 8.3.5
Plant a Tree (31)			8.2.12
A Forest of Many Uses (32)			8.3.9
Forest Consequences (33)	8.5.4, 8.5.7, 8.7.13		8.2.11, 8.2.12, 8.3.9
Loving It Too Much (35)			8.3.1, 8.3.9, 8.5.9
Every Drop Counts (38)		8.3.1, 8.3.7, 8.5.1, 8.5.2, 8.7.1, 8.7.3, 8.7.4, 8.7.6, 8.7.8	
Energy Sleuths (39)			8.3.2, 8.3.8
Then And Now (40)	8.5.7. 8.7.1, 8.7.12		8.3.9
How Plants Grow (41)		8.6.4, 8.7.6	
Sunlight and Shades of Green (42)	8.5.7, 8.7.10		
Water Wonders (44)	8.5.7		8.3.9
Are Vacant Lots Vacant (47)		8.6.4, 8.7.6	

	English/Language Arts	Mathematics	Social Studies
ACTIVITY			
Field, Forest, and Stream (48)		8.5.1, 8.6.4, 8.7.6	
Tropical Treehouse (49)	8.2.5		
400-Acre Wood (50)		8.3.1, 8.5.1, 8.5.2, 8.6.1, 8.6.2, 8.7.1, 8.7.3, 8.7.4, 8.7.6	8.3.9
On The Move (53)		8.3.1, 8.5.1, 8.5.2, 8.7.1, 8.7.4, 8.7.6	
I'd Like to Visit A Place Where… (54)	8.5.7		8.3.8
Planning the Ideal Community (55)	8.7.13		
We Can Work It Out (56)	8.7.13		8.2.4, 8.2.12
Democracy In Action (57)			8.2.10, 8.2.12
The Ought To Be A Law (58)	8.5.7		8.2.4, 8.2.12
Power Of Print (59)	8.2.3, 8.5.3, 8.5.4, 8.5.7, 8.7.12, 8.7.13		8.3.9
Publicize It! (60)	8.4.1, 8.4.7, 8.4.8, 8.4.9, 8.5.7, 8.7.9		
How Big is Your Tree? (67)		8.3.1, 8.5.1, 8.5.3, 8.6.4, 8.7.1, 8.7.6	
Forest For The Trees (69)		8.7.4	8.3.9
Soil Stories (70)		8.5.1, 8.5.3, 8.6.4, 8.7.5, 8.7.6	8.3.5, 8.3.9
Watch on Wetlands (71)	8.2.5, 8.5.7, 8.7.12, 8.7.13		8.2.10, 8.2.12, 8.3.1
Waste Watchers (73)		8.3.1, 8.5.1, 8.5.2, 8.6.4, 8.7.1, 8.7.2, 8.7.5, 8.7.6	8.3.9
Tipi Talk (75)			8.1.1, 8.3.9
Tree Cookies (76)			8.3.9
Trees In Trouble (77)	8.5.7	8.5.1, 8.6.4	8.3.9
Nothing Succeeds Like Succession (80)		8.3.1, 8.5.1, 8.5.2, 8.6.4	
Living With Fire (81)			8.3.9

	English/Language Arts	Mathematics	Social Studies
ACTIVITY			
Resource-Go-Round (82)			8.3.2, 8.3.9
Reduce, Reuse, Recycle (83)	8.5.7, 8.7.13		8.3.9
In the Driver's Seat (85)		8.3.1, 8.5.1, 8.5.2, 8.6.4, 8.7.1, 8.7.3, 8.7.4, 8.7.6, 8.7.8	
Our Changing World (86)	8.7.12		8.3.1, 8.3.5, 8.3.8, 8.3.9
Life On The Edge (88)			8.3.9
Trees For Many Reasons (89)	8.3.4, 8.3.6		8.3.9
The Native Way (90)	8.3.4, 8.3.6, 8.3.7		8.1.1, 8.1.27, 8.1.28, 8.1.31, 8.3.1, 8.3.5, 8.3.7, 8.3.8, 8.3.9, 8.3.11
In the Good Old Days (91)	8.5.1, 8.5.3, 8.7.12, 8.7.14		8.1.24, 8.1.25, 8.1.30, 8.1.31, 8.3.8, 8.3.9, 8.5.3, 8.5.8, 8.5.9
A Look At Lifestyles (92)	8.3.4, 8.3.6, 8.5.7		8.1.1, 8.1.31, 8.3.7, 8.3.9
Paper Civilizations (93)			8.3.9
Where Are The Cedars Of Lebanon? (94)			8.1.31
Did You Notice? (95)	8.5.7		8.1.1, 8.1.9, 8.1.20, 8.1.25, 8.1.26, 8.3.5, 8.3.7, 8.3.9, 8.3.11, 8.4.5, 8.4.6, 8.4.11, 8.5.7
Improve Your Place (96)			8.3.9

Grade 8

Standard 2
READING: Comprehension (Focus on Informational Materials)

Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose. The selections in the **Indiana Reading List** *(available online at www.doe.state.in.us/standards/readinglist.html) illustrate the quality and complexity of the materials to be read by students. At Grade 8, in addition to regular classroom reading, students read a variety of narrative (story) and expository (informational and technical) texts, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.*

Comprehension and Analysis of Grade-Level-Appropriate Text

8.2.3 Find similarities and differences between texts in the treatment, amount of coverage, or organization of ideas.
Example: Read articles on the same current topic in magazines, such as *Time* and *Newsweek*, and editorials in national or local newspapers. Compare and contrast the texts in how they present the issue.

PLT Activities: 59

8.2.5 Use information from a variety of consumer and public documents to explain a situation or decision and to solve a problem.
Example: Decide which is the most practical and economical wireless telephone to purchase by reading articles, brochures, Web pages, and other consumer sources, such as *Consumer Reports*.

PLT Activities: 49, 71

Standard 3
READING: Literary Response and Analysis

Students read and respond to grade-level-appropriate historically or culturally significant works of literature that reflect and enhance their study of history and social science. They clarify the ideas and connect them to other literary works. The selections in the **Indiana Reading List** *(available online at www.doe.state.in.us/standards/readinglist.html) illustrate the quality and complexity of the materials to be read by students.*

Narrative Analysis of Grade-Level-Appropriate Text

8.3.4 Analyze the importance of the setting to the mood, tone, and meaning of the text.
Example: Discuss the importance of the setting, including the place, the time period, and the customs, to books, such as *Friendly Persuasion* by Jessamyn West or *Stranded* by Ben Mikaelsen.

PLT Activities: 89, 90, 92

8.3.6 Identify significant literary devices, such as metaphor, symbolism, dialect or quotations, and irony, which define a writer's style and use those elements to interpret the work.

- Metaphor: an implied comparison in which a word or phrase is used in place of another, such as *He was drowning in money*.
- Symbolism: the use of an object to represent something else; for example, a dove might symbolize peace
- Dialect: the vocabulary, grammar, and pronunciation used by people in different regions
- Irony: the use of words to express the opposite of the literal meaning of the words, often to be humorous

Example: Read several short stories by Mark Twain and discuss his use of dialect in his stories. Watch Alan Jay Lerner and Frederick Loewe's musical *My Fair Lady*, an adaptation of Bernard Shaw's *Pygmalion*, and discuss how the musical presents dialect and how this dialect is important to the conflict in the story.

PLT Activities: 89, 90, 92

Literary Criticism

8.3.7 Analyze a work of literature, showing how it reflects the heritage, traditions, attitudes, and beliefs of its author.
Example: Read a short biography of Edgar Allan Poe, Jack London, Shirley Jackson, Helen Keller, or Maya Angelou. Analyze how the author's experiences can be used to interpret his or her writings.

PLT Activities: 90

Standard 4
WRITING: Process

Students discuss, list, and graphically organize writing ideas. They write clear, coherent, and focused essays. Students progress through the stages of the writing process and proofread, edit, and revise writing.

Organization and Focus

8.4.1 Discuss ideas for writing, keep a list or notebook of ideas, and use graphic organizers to plan writing.

PLT Activities: 5, 60

Evaluation and Revision

8.4.7 Review, evaluate, and revise writing for meaning and clarity.

PLT Activities: 60

8.4.8 Edit and proofread one's own writing, as well as that of others, using an editing checklist or set of rules, with specific examples of corrections of frequent errors.

PLT Activities: 60

8.4.9 Revise writing for word choice; appropriate organization; consistent point of view; and transitions among paragraphs, passages, and ideas.

PLT Activities: 60

Standard 5
WRITING: Applications (Different Types of Writing and Their Characteristics)

At Grade 8, students continue to write narrative (story), expository (informational), persuasive, and descriptive essays (of at least 750 to 1,000 words). Students are introduced to writing technical documents. Student writing demonstrates a command of Standard English and the research, organizational, and drafting strategies outlined in Standard 4 — Writing Process. Writing demonstrates an awareness of the audience (intended reader) and purpose for writing.

In addition to producing the different writing forms introduced in earlier grades, such as letters, Grade 8 students use the writing strategies outlined in Standard 4 — Writing Process to:

8.5.1 Write biographies, autobiographies, and short stories that:

- tell about an incident, event, or situation, using well-chosen details.
- reveal the significance of, or the writer's attitude about, the subject.
- use narrative and descriptive strategies, including relevant dialogue, specific action, physical description, background description, and comparison or contrast of characters.

Example: Write an autobiographical account of one of your most memorable first days of school. Describe the day and its importance clearly enough so the reader can see and feel the day from your perspective.

PLT Activities: 91

8.5.3 Write research reports that:

- define a thesis (a statement of position on the topic).
- include important ideas, concepts, and direct quotations from significant information sources, including print reference materials and the Internet, and paraphrase and summarize all perspectives on the topic, as appropriate.
- use a variety of primary and secondary sources and distinguish the nature and value of each.
- organize and display information on charts, tables, maps, and graphs.
- document sources with reference notes and a bibliography.

Example: Research the topic of the benefits and drawbacks of public transportation. Conduct research to learn why some experts argue that we should use more public transportation. Survey parents and friends to find out how often they use public transportation for school, business, or pleasure travel. Summarize the findings and write a report on the pros and cons of public transportation, including charts and graphs to support your findings.

PLT Activities: 59, 91

8.5.4 Write persuasive compositions that:

- include a well-defined thesis that makes a clear and knowledgeable appeal.
- present detailed evidence, examples, and reasoning to support effective arguments and emotional appeals.
- provide details, reasons, and examples, arranging them effectively by anticipating and answering reader concerns and counterarguments.

Example: Using the research completed on public transportation, write a persuasive letter to the mayor on why the community should or should not invest more resources into public transportation.

PLT Activities: 33, 59

8.5.7 Write for different purposes and to a specific audience or person, adjusting tone and style as necessary.
Example: Write a letter to the editor in response to an opinion column in your school or community newspaper.

PLT Activities: 5, 17, 33, 40, 42, 44, 54, 58, 59, 60, 71, 77, 83, 92, 95

Standard 7
LISTENING AND SPEAKING: Skills, Strategies, and Applications

Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and interests of the audience. They evaluate the content of oral communication. Students deliver well-organized formal presentations using traditional speech strategies, including narration, exposition, persuasion, and description. Students use the same Standard English conventions for oral speech that they use in their writing.

Comprehension

8.7.1 Paraphrase (restate) a speaker's purpose and point of view and ask questions concerning the speaker's content, delivery, and attitude toward the subject.

PLT Activities: 40

Analysis and Evaluation of Oral and Media Communications

8.7.9 Interpret and evaluate the various ways in which visual image makers (such as graphic artists, illustrators, and news photographers) communicate information and affect impressions and opinions.

PLT Activities: 60

Speaking Applications

8.7.10 Deliver narrative (story) presentations, such as biographical or autobiographical information that:

- relate a clear incident, event, or situation, using well-chosen details.
- reveal the significance of the incident, event, or situation.
- use narrative and descriptive strategies to support the presentation, including relevant dialogue, specific action, physical description, background description, and comparison or contrast of characters.

PLT Activities: 17, 42

8.7.12 Deliver research presentations that:

- define a thesis (a position on the topic).
- research important ideas, concepts, and direct quotations from significant information sources and paraphrase and summarize important perspectives on the topic.
- use a variety of research sources and distinguish the nature and value of each.
- present information on charts, maps, and graphs.

PLT Activities: 17, 40, 59, 71, 86, 91

8.7.13 Deliver persuasive presentations that:

- include a well-defined thesis (position on the topic).
- differentiate fact from opinion and support arguments with detailed evidence, examples, reasoning, and persuasive language.
- anticipate and effectively answer listener concerns and counterarguments through the inclusion and arrangement of details, reasons, examples, and other elements.
- maintain a reasonable tone.

PLT Activities: 33, 55, 56, 59, 71, 83

8.7.14 Recite poems (of four to six stanzas), sections of speeches, or dramatic soliloquies (sections of plays in which characters speak out loud to themselves) using voice modulation, tone, and gestures expressively to enhance the meaning.

PLT Activities: 5, 91

Grade 8

In this technological age, mathematics is more important than ever. When students leave school, they are more and more likely to use mathematics in their work and everyday lives — operating computer equipment, planning timelines and schedules, reading and interpreting data, comparing prices, managing personal finances, and completing other problem-solving tasks. What they learn in mathematics and how they learn it will provide an excellent preparation for a challenging and ever-changing future.

The state of Indiana has established the following mathematics standards to make clear to teachers, students, and parents what knowledge, understanding, and skills students should acquire in Grade 8:

Standard 1 — Number Sense

Understanding the number system is the basis of mathematics. Students extend their understanding of irrational numbers, such as π and the square root of 2, learning the relationship between the nature of the decimal of a number and whether it is rational or irrational. They use negative exponents to write decimals in scientific notation, and they use the inverse relationship between squaring and finding a square root to calculate approximate square roots.

Standard 2 — Computation

Fluency in computation is essential. Students add, subtract, multiply, and divide rational numbers. They use percentages to calculate simple and compound interest. They also use mental arithmetic to compute with fractions, decimals, powers, and percentages.

Standard 3 — Algebra and Functions

Algebra is a language of patterns, rules, and symbols. Students at this level write and solve linear equations and inequalities, including solving pairs of linear equations by the substitution method. They use properties of the rational numbers to evaluate and simplify algebraic expressions. They further extend their understanding of the relationship between equations and graphs by connecting slopes to rates of change and by drawing graphs of quadratic functions and simple cubic functions.

Standard 4 — Geometry

Students learn about geometric shapes and develop a sense of space. They learn new concepts relating to shapes, such as altitudes, bisectors, and chords and perform constructions connected with them. They further develop their sense of three-dimensional space by investigating how objects intersect in space. They draw a wide range of transformations of shapes, and they apply the Pythagorean Theorem and its converse to problems in two- and three-dimensions.

Standard 5 — Measurement

The study of measurement is essential because of its uses in many aspects of everyday life. Students convert common measurements for lengths, areas, volumes, weights, capacities, and times. They develop and use the concept of rate and derived measures — e.g., velocity and density. They apply the concepts of similarity, ratio, and proportion to problems involving scale factors, areas, and volumes. They find areas, perimeters, volumes, and surface areas, including those of irregular shapes made up of more basic shapes.

Standard 6 — Data Analysis and Probability

Data are all around us — in newspapers and magazines, in television news and commercials, in quality control for manufacturing — and students need to learn how to understand data. At this level, they

evaluate whether claims based on data are reasonable and employ various sampling methods, analyzing their strengths and weaknesses. They understand the concepts of the median and quartiles and use these measures to draw and analyze box-and-whisker plots. They represent and analyze two-variable data using scatterplots. They understand the concept of equally likely events and use it to find probabilities. They also find the number of arrangements of objects using the Basic Counting Principle.

Standard 7 — Problem Solving

In a general sense, mathematics is problem solving. In all of their mathematics, students use problem-solving skills: they choose how to approach a problem, they explain their reasoning, and they check their results. As they develop their skills with irrational numbers, analyzing graphs, or finding surface areas, for example, students move from simple ideas to more complex ones by taking logical steps that build a better understanding of mathematics.

As part of their instruction and assessment, students should also develop the following learning skills by Grade 12 that are woven throughout the mathematics standards:

Communication

The ability to read, write, listen, ask questions, think, and communicate about math will develop and deepen students' understanding of mathematical concepts. Students should read text, data, tables, and graphs with comprehension and understanding. Their writing should be detailed and coherent, and they should use correct mathematical vocabulary. Students should write to explain answers, justify mathematical reasoning, and describe problem-solving strategies.

Reasoning and Proof

Mathematics is developed by using known ideas and concepts to develop others. Repeated addition becomes multiplication. Multiplication of numbers less than ten can be extended to numbers less than one hundred and then to the entire number system. Knowing how to find the area of a right triangle extends to all right triangles. Extending patterns, finding even numbers, developing formulas, and proving the Pythagorean Theorem are all examples of mathematical reasoning. Students should learn to observe, generalize, make assumptions from known information, and test their assumptions.

Representation

The language of mathematics is expressed in words, symbols, formulas, equations, graphs, and data displays. The concept of one-fourth may be described as a quarter, $\frac{1}{4}$, one divided by four, 0.25, $\frac{1}{8} + \frac{1}{8}$, 25 percent, or an appropriately shaded portion of a pie graph. Higher-level mathematics involves the use of more powerful representations: exponents, logarithms, π, unknowns, statistical representation, algebraic and geometric expressions. Mathematical operations are expressed as representations: +, =, divide, square. Representations are dynamic tools for solving problems and communicating and expressing mathematical ideas and concepts.

Connections

Connecting mathematical concepts includes linking new ideas to related ideas learned previously, helping students to see mathematics as a unified body of knowledge whose concepts build upon each other. Major emphasis should be given to ideas and concepts across mathematical content areas that help students see that mathematics is a web of closely connected ideas (algebra, geometry, the entire number system). Mathematics is also the common language of many other disciplines (science, technology, finance, social science, geography) and students should learn mathematical concepts used in those disciplines. Finally, students should connect their mathematical learning to appropriate real-world contexts.

Standard 3
Algebra and Functions

Students solve simple linear equations and inequalities. They interpret and evaluate expressions involving integer powers. They graph and interpret functions. They understand the concepts of slope* and rate.*

8.3.1 Write and solve linear equations and inequalities in one variable, interpret the solution or solutions in their context, and verify the reasonableness of the results.
Example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be least $100. Write an inequality for the number of sales you need to make, solve it, and check that your answer is reasonable.

PLT Activities: 38, 50, 53, 67, 73, 80, 85

8.3.7 Demonstrate an understanding of rate as a measure of one quantity with respect to another quantity.
Example: A car moving at a constant speed travels 90 km in 2 hours, 135 km in 3 hours, 180 km in 4 hours, etc. Draw a graph of distance as a function of time and find the slope of the graph. Explain what the slope tells you about the movement of the car.

PLT Activities: 38

* integers: …, -3, -2, -1, 0, 1, 2, 3, …

* slope: between any two points on a line, the slope is the change in vertical distance divided by the change in horizontal distance ("rise" over "run")

Standard 5
Measurement

Students convert between units of measure and use rates and scale factors to solve problems. They compute the perimeter, area, and volume of geometric objects. They investigate how perimeter, area, and volume are affected by changes of scale.

8.5.1 Convert common measurements for length, area, volume, weight, capacity, and time to equivalent measurements within the same system.
Example: The area of a hall is 40 square yards. What is the area in square feet?

PLT Activities: 38, 48, 50, 53, 67, 70, 73, 77, 80, 85

8.5.2 Solve simple problems involving rates and derived measurements for attributes such as velocity and density.
Example: A car travels at 60 mph for 20 minutes. How far does it travel? What units are appropriate for distance? Explain your answer.

PLT Activities: 38, 50, 53, 73, 80, 85

8.5.3 Solve problems involving scale factors, area, and volume using ratio and proportion.
Example: Calculate the volume and surface area of cubes with side 1 cm, 2 cm, 3 cm, etc. Make a table of your results and describe any patterns in the table.

PLT Activities: 21, 67, 70

Standard 6
Data Analysis and Probability

Students collect, organize, represent, and interpret relationships in data sets that have one or more variables. They determine probabilities and use them to make predictions about events.

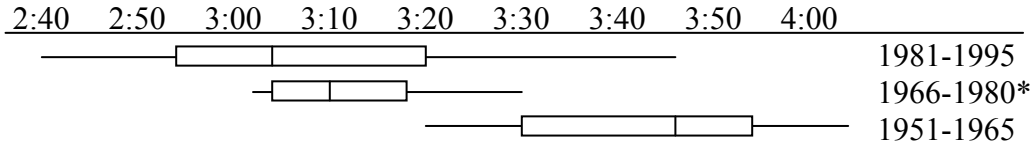
8.6.1 Identify claims based on statistical data and, in simple cases, evaluate the reasonableness of the claims. Design a study to investigate the claim.
Example: A study shows that teenagers who use a certain brand of toothpaste have fewer cavities than those using other brands. Describe how you can test this claim in your school.

PLT Activities: 16, 50

8.6.2 Identify different methods of selecting samples, analyzing the strengths and weaknesses of each method, and the possible bias in a sample or display.
Example: Describe possible bias in the following survey: A local television station has a daily call-in poll. Viewers of the morning and noon newscasts are asked to call one telephone number to answer "yes" and a different telephone number to answer "no." The results are reported on the six-o'clock newscast.

PLT Activities: 50

8.6.4 Analyze, interpret, and display single- and two-variable data in appropriate bar, line, and circle graphs; stem-and-leaf plots*; and box-and-whisker plots* and explain which types of display are appropriate for various data sets.
Example: The box-and-whisker plots below show winning times (hours:minutes) for the Indianapolis 500 race in selected years:



*Except 1967, 1973, 1975, and 1976.

In the years from 1951-1965, the slowest time was 3 h 57 min. Explain how the slowest time changed through the years 1951-1995. How did winning times change during that period? How did the median times change in the same period?

PLT Activities: 4, 22, 41, 47, 48, 67, 70, 73, 77, 80, 85

* stem-and-leaf plot: e.g., this one shows 62, 63, 67, 71, 75, 75, 76, etc.

Stem	Leaf
6	2 3 7
7	1 5 5 6 8 9
8	0 1 1 2 3 5 5 7 8 8
9	1 2 2 3 3 4

* box-and-whisker plot: a diagram showing median, quartiles, and range (see diagram on previous page)

Standard 7
Problem Solving

Students make decisions about how to approach problems and communicate their ideas.

8.7.1 Analyze problems by identifying relationships, telling relevant from irrelevant information, identifying missing information, sequencing and prioritizing information, and observing patterns.
Example: Solve the problem: "For computers, binary numbers are great because they are simple to work with and they use just two values of voltage, magnetism, or other signal. This makes hardware easier to design and more noise resistant. Binary numbers let you represent any amount you want using just two digits: 0 and 1. The number you get when you count ten objects is written 1010. In expanded notation, this is $1 \leq 2^3 + 0 \leq 2^2 + 1 \leq 2^1 + 0 \leq 2^0$. Write the number for thirteen in the binary (base 2) system." Decide to make an organized list.

PLT Activities: 38, 50, 53, 67, 73, 85

8.7.2 Make and justify mathematical conjectures based on a general description of a mathematical question or problem.
Example: In the first example, if you have only two symbols, 0 and 1, then one object: 1, two objects: 10, three objects: 11, four objects: 100. Predict the symbol for five objects.

PLT Activities: 73

8.7.3 Decide when and how to divide a problem into simpler parts.
Example: In the first example, write expanded notation for the number five in base 2; begin with the fact that $5 = 4 + 1$.

PLT Activities: 38, 50, 85

Students use strategies, skills, and concepts in finding and communicating solutions to problems.

8.7.4 Apply strategies and results from simpler problems to solve more complex problems.
Example: In the first example, write the first five numbers in base 2 notation and look for a pattern.

PLT Activities: 38, 50, 53, 69, 85

8.7.5 Make and test conjectures using inductive reasoning.
Example: In the first example, predict the base 2 notation for six objects, then use expanded notation to test your prediction.

PLT Activities: 70, 73

8.7.6 Express solutions clearly and logically using the appropriate mathematical terms and notation. Support solutions with evidence in both verbal and symbolic work.
Example: In the first example, explain how you will find the base two notation for thirteen objects.

PLT Activities: 38, 41, 47, 48, 50, 53, 67, 70, 73, 85

8.7.8 Select and apply appropriate methods for estimating results of rational-number computations.
Example: Use a calculator to find the cube of 15. Check your answer by finding the cubes of 10 and 20.

PLT Activities: 38, 85

GRADE 8

United States History – Growth and Development

In Grade 8, students focus upon United States history, beginning with a brief review of early history, including the Revolution and founding era, and the principles of the United States and Indiana constitutions, as well as other founding documents and their applications to subsequent periods of national history and to civic and political life. Students then study national development, westward expansion, social reform movements, and the Civil War and Reconstruction.

The Indiana's K – 8 academic standards for social studies are organized around five content areas. The content area standards and the types of learning experiences they provide to students in Grade 8 are described below. On the pages that follow, age-appropriate concepts are listed underneath each standard. Skills for thinking, inquiry, and participation in a democratic society are integrated throughout. Specific terms are defined and examples are provided when necessary.

Standard 1 — History
Students will examine the relationship and significance of themes, concepts, and movements in the development of United States history, including review of key ideas related to the discovery, exploration, and colonization of America, and the revolution and founding era. This will be followed by emphasis on social reform, national development and westward expansion, and the Civil War and Reconstruction period.

Standard 2 — Civics and Government
Students will explain the major principles, values, and institutions of constitutional government and citizenship, which are based on the founding documents of the United States.

Standard 3 — Geography
Students will identify the major geographic characteristics of the United States and its regions. They will name and locate the major physical features of the United States, each of the states, and major cities, and use geographic skills and technology to examine the influence of geographic factors on national development.

Standard 4 — Economics
Students will identify, describe, and evaluate the influence of economic factors on national development from the founding of the nation to the end of Reconstruction.

Standard 5 — Individuals, Society, and Culture
Students will examine the influence of individuals, ideas, and cultural movements in the development of the United States; consider the impact of scientific and technological developments on cultural life, and analyze the importance of artistic expression in the development of the American nation.

Standard 1
History

Students will examine the relationship and significance of themes, concepts, and movements in the development of United States history, including review of key ideas related to the discovery, exploration, and colonization of America, and the revolution and founding era. This will be followed by emphasis on

social reform, national development and westward expansion, and the Civil War and Reconstruction period.

Historical Knowledge

The American Revolution and Founding of the United States: 1754 to 1801

8.1.1 Describe major Indian groups of eastern North America, including early conflict with European settlers.

PLT Activities: 75, 90, 92, 95

8.1.9 Describe the influence of individuals on social and political developments.
Example: James Otis, Mercy Otis Warren, Samuel Adams, Thomas Paine, George Washington, John Adams, Abigail Adams, Patrick Henry, Thomas Jefferson, James Madison, Alexander Hamilton, and Benjamin Banneker.

PLT Activities: 95

National Expansion and Reform: 1801 to 1861

8.1.20 Explain the influence of individuals on key events and developments of the early United States.
Example: Thomas Jefferson, Robert Fulton, Meriwether Lewis, William Clark, Sacajewea, Daniel Boone, Little Turtle, Tecumseh, Black Hawk, John Marshall, James Madison, Dolley Madison, Andrew Jackson, John C. Calhoun, Henry Clay, Daniel Webster, James Polk, Elizabeth Cady Stanton, William Lloyd Garrison, Frederick Douglass, Horace Mann, Dorothea Dix, and Lucretia Mott.

PLT Activities: 95

The Civil War and Reconstruction Period: 1850 to 1877

8.1.24 Describe the conflicts between Indians and settlers of the Great Plains.

PLT Activities: 91

8.1.25 Identify the influence of individuals on political and social events and movements.
Example: Henry Clay, Harriet Tubman, Harriet Beecher Stowe, Roger Taney, Stephen A. Douglas, Abraham Lincoln, Frederick Douglass, John Brown, Jefferson Davis, Clara Barton, Robert E. Lee, Ulysses S. Grant, William T. Sherman, Andrew Johnson, Thaddeus Stevens, Susan B. Anthony, Sitting Bull, Crazy Horse, and Chief Joseph.

PLT Activities: 91, 95

Chronological Thinking

8.1.26 Develop and interpret United States history timelines from 1750 to 1877 by designating appropriate intervals of time and recording events according to the chronological order in which they occurred.

PLT Activities: 95

Comprehension, Analysis, and Interpretation

8.1.27 Recognize historical perspective by identifying the historical context in which events unfolded and by avoiding evaluation of the past solely in terms of present-day norms.

PLT Activities: 90

8.1.28 Identify, evaluate, and distinguish fact from opinion in a variety of information resources*; differentiate between historical facts and interpretations, recognizing that the facts the historian reports reflects his or her judgment of what is most significant about the past.

PLT Activities: 90

* information resources: print media, such as books, magazines, and newspapers; electronic media, such as radio, television, Web sites, and databases; and community resources, such as individuals and organizations

Research Capabilities

8.1.30 Form historical research questions and seek responses by analyzing primary resources — such as autobiographies, diaries, maps, photographs, letters, and government documents — and secondary resources, such as biographies and other nonfiction books and articles on the history of the United States.
Example: Analyze and interpret the Virginia Statute for Religious Freedom (1786), President George Washington's Farewell Address (1796), the First Inaugural Address by Thomas Jefferson (1801), the Declaration of Sentiments and Resolutions of the Seneca Falls Convention (1848), and the Second Inaugural Address by Abraham Lincoln (1865).

PLT Activities: 91

Issues-Analysis, Decision-Making, Planning, and Problem Solving

8.1.31 Examine the causes of problems in the past and evaluate solutions chosen as well as possible alternative courses of actions. Consider the information available at the time, the interests of those affected by the decision, and the consequences of each course of action.

PLT Activities: 90, 91, 92, 94

Standard 2
Civics and Government

Students will explain the major principles, values, and institutions of constitutional government and citizenship, which are based on the founding documents of the United States.

Foundations of Government

8.2.4 Define and explain the importance of individual and civic responsibilities.
Example: Individual responsibilities might include taking care of yourself, accepting responsibility for the consequences of your actions, assuming the responsibility to become educated, and supporting your family. Civic responsibilities might include obeying the law, respecting the rights of others, being an informed citizen, becoming involved in civic affairs, monitoring the actions of governmental officials, communicating with elected representatives, voting, paying taxes, serving in the armed forces, and serving on juries.

PLT Activities: 56, 58

Roles of Citizens

8.2.10 Explain the importance in a democratic republic of responsible participation by citizens in voluntary civil associations/nongovernmental organizations that comprise civil society.

PLT Activities: 57, 71

8.2.11 Describe various types of elections and explain ways that citizens can participate in political parties, campaigns, and elections, such as primary, general, state, local, and national elections.

PLT Activities: 33

8.2.12 Explain how citizens can monitor and influence the development and implementation of public policies.

PLT Activities: 4, 31, 33, 56, 57, 58, 71

Standard 3
Geography

Students will identify the major geographic characteristics of the United States and its regions. They will name and locate the major physical features of the United States, each of the states, and major cities, and use geographic skills and technology to examine the influence of geographic factors on national development.

The World in Spatial Terms

8.3.1 Read a topographic map to interpret its symbols. Determine the land forms and human features that represent physical and cultural characteristics* of areas in the United States.

PLT Activities: 29, 35, 71, 86, 90

* cultural characteristics: human features, such as population characteristics, communication and transportation networks, religion and customs, and how people make a living or build homes and other structures

Places and Regions

8.3.2 Map and locate all states of the United States, major cities, mountain ranges, and river systems of the United States.

PLT Activities: 39, 82

Physical Systems

8.3.3 Locate and map the major climate regions in the United States and describe the characteristics of each climate type.

PLT Activities: 20, 29

Human Systems

8.3.5 Identify the agricultural regions of the United States and be able to give reasons for the type of land use during different historical periods.

PLT Activities: 19, 29, 70, 86, 90, 95

8.3.7 Analyze geographic factors that have influenced migration and settlement patterns and relate them to the economic development of the United States.
Example: The presence of a major waterway influences economic development and the workers who are attracted to that development.

PLT Activities: 90, 92, 95

Environment and Society

8.3.8 Develop maps showing the distribution of natural resources — such as forests, water sources, and wildlife — in the United States at the beginning of the nineteenth century and give examples of how people exploited these resources as the country became more industrialized and people moved westward.

PLT Activities: 14, 39, 40, 44, 50, 54, 86, 90, 91

8.3.9 Identify ways people modified the physical environment as the United States developed and the types of problems that resulted.
Example: Identify urbanization*, deforestation*, and extinction* or near extinction of wildlife species.

PLT Activities: 4, 5, 14, 32, 33, 35, 59, 69, 70, 73, 75, 76, 77, 81, 82, 83, 86, 88, 89, 90, 91, 92, 93, 95, 96

* urbanization: the growth of cities
* deforestation: the clearing of trees or forests
* extinction: the state in which all members of a group of organisms, such as a species, population, family or class, have disappeared from a given habitat, geographic area, or the entire world

Uses of Geography

8.3.11 Use information technology, such as Geographic Information Systems (GIS)* and remotely sensed images, to gather information on ways people changed the physical environment of the United States in the nineteenth century.

PLT Activities: 90, 95

* Geographic Information Systems (GIS): information technology systems used to store, analyze, manipulate, and display a wide range of geographic information

Standard 4
Economics

Students will identify, describe, and evaluate the influence of economic factors on national development from the founding of the nation to the end of Reconstruction.

8.4.5 Analyze contributions of entrepreneurs, inventors, and other key individuals in the development of the United States economy.
Example: Contributors included Alexander Hamilton, Lewis and Clark, Eli Whitney, Samuel Gompers, Madam C.J. Walker, Andrew Carnegie, and George Washington Carver.

PLT Activities: 95

8.4.6 Relate technological change and inventions to changes in labor productivity in the United States in the eighteenth and nineteenth centuries.
Example: The cotton gin increased labor productivity in the early nineteenth century.

PLT Activities: 95

8.4.11 Compare and contrast job skills needed in different time periods in United States history and use a variety of information resources* to research jobs and careers.

PLT Activities: 95

* information resources: print media, such as books, magazines, and newspapers; electronic media, such as radio, television, Web sites, and databases; and community resources, such as individuals and organizations

Standard 5
Individuals, Society, and Culture

Students will examine the influence of individuals, ideas, and cultural movements in the development of the United States; consider the impact of scientific and technological developments on cultural life, and analyze the importance of artistic expression in the development of the American nation.

8.5.3 Examine the concepts of a work ethic, philanthropy, volunteerism, and concern for the common good as important aspects of American society in the eighteenth and nineteenth centuries.
Example: In the 1830s, French observer Alexis de Tocqueville noted the importance of volunteerism, the American tendency to form voluntary associations to address community needs.

PLT Activities: 91

8.5.7 Give examples of scientific and technological developments that changed cultural life in the nineteenth-century United States, such as the use of photography, the invention of the telegraph (1844), and the invention of the telephone (1876).

PLT Activities: 95

8.5.8 Identify individuals in the arts and literature and their roles in portraying American culture in the nineteenth century including Louisa May Alcott, John James Audubon, George Caleb Bingham, George Catlin, Emily Dickinson, Frederick Douglass, Washington Irving, Alfred Jacob Miller, Edgar Allan Poe, and Walt Whitman.

PLT Activities: 91

8.5.9 Describe changes in entertainment and recreation, such as the growing interest in sports of various kinds, in the mid-nineteenth century and explain how these changes related to urbanization and technological developments.

PLT Activities: 35, 91