

# Indiana Academic Standards That Match Population Connection Activities

## Grades 6 – 12

### 1. *English/Language Arts*

#### a. *Grade 6*

##### **Standard 2: READING: Comprehension**

6.2.1 Identify the structural features of popular media (newspapers, magazines, online information) and use the features to obtain information.

6.2.3 Connect and clarify main ideas by identifying their relationships to multiple sources and related topics.

6.2.7 Make reasonable statements and conclusions about a text, supporting them with evidence from the text.

##### **Standard 3: READING: Literary Response and Analysis**

6.3.3 Analyze the influence of the setting on the problem and its resolution.

6.3.9 Identify the main problem or conflict of the plot and explain how it is resolved.

##### **Standard 4: WRITING: Process**

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

6.4.3 Write informational pieces of several paragraphs that: engage the interest of the reader, state a clear purpose, develop the topic with supporting details and precise language, and conclude with a detailed summary linked to the purpose of the composition.

##### **Standard 5: WRITING: Applications**

6.5.2 Write descriptions, explanations, comparison and contrast papers, and problem and solution essays that: state the thesis (position on the topic) or purpose, explain the situation, organize the composition clearly, offer evidence to support arguments and conclusions.

6.5.8 Write summaries that contain the main ideas of the reading selection and the most significant details.

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

6.7.1 Relate the speaker's verbal communication (such as word choice, pitch, feeling, and tone) to the nonverbal message (such as posture and gesture).

6.7.2 Identify the tone, mood, and emotion conveyed in the oral communication.

6.7.4 Select a focus, an organizational structure, and a point of view, matching the purpose, message, and vocal modulation (changes in tone) to the audience.

- 6.7.5 Emphasize important points to assist the listener in following the main ideas and concepts.
- 6.7.6 Support opinions with researched, documented evidence and with visual or media displays that use appropriate technology.
- 6.7.8 Analyze the use of rhetorical devices, including rhythm and timing of speech, repetitive patterns, and the use of onomatopoeia for intent and effect.
- 6.7.11 Deliver informative presentations that pose relevant questions sufficiently limited in scope to be completely and thoroughly answered, develop the topic with facts, details, examples, and explanations from multiple authoritative sources, including speakers, periodicals, and online information.
- 6.7.13 Deliver persuasive presentations that: provide a clear statement of the position, include relevant evidence, offer a logical sequence of information, engage the listener and try to gain acceptance of the proposition or proposal.
- 6.7.14 Deliver presentations on problems and solutions that theorize on the causes and effects of each problem, establish connections between the defined problem and at least one solution, offer persuasive evidence to support the definition of the problem and the proposed solutions.
- 6.7.15 Ask questions that seek information not already discussed.

b. *Grade 7*

**Standard 2: READING: Comprehension**

- 7.2.1 Understand and analyze the differences in structure and purpose between various categories of informational materials (such as textbooks, newspapers, and instructional or technical manuals).
- 7.2.2 Locate information by using a variety of consumer and public documents.
- 7.2.3 Analyze text that uses the cause-and-effect organizational pattern..
- 7.2.4 Identify and trace the development of an author’s argument, point of view, or perspective in text.
- 7.2.7 Draw conclusions and make reasonable statements about a text, supporting the conclusions and statements with evidence from the text.
- 7.2.8 Identify methods (such as repetition of words, biased or incomplete evidence) an author uses to persuade the reader.

**Standard 3: READING: Literary Response and Analysis**

- 7.3.3 Analyze characterization as shown through a character’s thoughts, words, speech, patterns, and actions; the narrator’s description; and the thoughts, words, and actions of other characters.
- 7.3.8 Analyze the influence of the setting on the problem and its resolution.

**Standard 4: WRITING: Process**

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

7.4.4 Use strategies of note-taking, outlining, and summarizing to impose structure on composition drafts.

7.4.5 Identify topics; ask and evaluate questions; and develop ideas leading to inquiry, investigation, and research.

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

7.7.11 Deliver persuasive presentations that: state a clear position in support of an argument or proposal, and describe the points in support of the proposal and include supporting evidence

c. *Grade 8*

**Standard 2: READING: Comprehension**

8.2.2 Analyze text that uses proposition (statement of argument) and support patterns

8.2.5 Use information from a variety of consumer and public documents to explain a situation or decision and to solve a problem.

8.2.9 Make reasonable statements and draw conclusions about a text, supporting them with accurate examples.

**Standard 4: WRITING: Process**

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

8.4.2 Create compositions that have a clear message, a coherent thesis (a statement of position on the topic), and end with a clear and well-supported conclusion.

8.4.5 Achieve an effective balance between researched information and original ideas.

8.4.11 Identify topics; ask and evaluate questions; and develop ideas leading to inquiry, investigation, and research.

**Standard 5: WRITING: Applications**

8.5.7 Write for different purposes and to a specific audience or person, adjusting tone and style as necessary.

d. *Grade 9*

**Standard 2: READING: Comprehension**

9.2.3 Generate relevant questions about readings on issues or topics that can be researched.

9.2.8 Make reasonable statements and draw conclusions about a text, supporting them with accurate examples.

**Standard 4: WRITING: Process**

9.4.1 Discuss ideas for writing with classmates, teachers, and other writers and develop drafts alone and collaboratively.

9.4.4 Use writing to formulate clear research questions and to compile information from primary and secondary print or Internet sources.

9.4.5 Develop the main ideas within the body of the composition through supporting evidence, such as scenarios, commonly held beliefs, hypotheses, and definitions.

9.4.6 Synthesize information from multiple sources, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents, and Internet sources.

**Standard 5: Writing: Applications**

9.5.3 Write expository compositions, including analytical essays, summaries, descriptive pieces, or literary analyses that: gather evidence in support of a thesis (position on the topic), including information on all relevant perspectives, communicate information and ideas from primary and secondary sources accurately and coherently, anticipate and address readers' potential misunderstandings, biases, and expectations, make distinctions between the relative value and significance of specific data, facts, and ideas, use a variety of reference sources, including word, pictorial, audio, and Internet sources, to locate information in support of topic.

**Standard 7: Listening and Speaking**

9.7.7 Make judgments about the ideas under discussion and support those judgments with convincing evidence.

9.7.18 Deliver persuasive arguments (including evaluation and analysis of problems and solutions and causes and effects) that: clarify and defend positions with precise and relevant evidence, including facts, expert opinions, quotations, expressions of commonly accepted beliefs, and logical reasoning.

e. *Grade 10*

**Standard 2: Comprehension and Analysis of Nonfiction and Informational Text**

10.2.1 Analyze the structure and format of various informational documents and explain how authors use the features to achieve their purposes.

10.2.2 Extend — through original analysis, evaluation, and elaboration — ideas presented in primary or secondary sources.

10.2.5 Make reasonable statements and draw conclusions about a text, supporting them with accurate examples.

**Standard 4: Processes and Features**

10.4.1 Discuss ideas for writing with classmates, teachers, and other writers and develop drafts alone and collaboratively.

10.4.2 Establish a coherent thesis that conveys a clear perspective on the subject and maintain a consistent tone and focus throughout the piece of writing.

10.4.4 Use clear research questions and suitable research methods, including texts, electronic resources, and personal interviews, to compile and present evidence from primary and secondary print or Internet sources.

10.4.5 Develop main ideas within the body of the composition through supporting evidence, such as scenarios, commonly held beliefs, hypotheses, and definitions.

10.4.6 Synthesize information from multiple sources. Identify complexities and inconsistencies in the information and the different perspectives found in each medium, including almanacs, microfiche, news sources, in-depth field studies, speeches, journals, technical documents, and Internet sources.

**Standard 5: Applications**

10.5.3 Write expository compositions, including analytical essays, summaries, descriptive pieces or literary analyses that: gather evidence in support of a thesis (position on the topic), including information on all relevant perspectives, communicate information and ideas from primary and secondary sources accurately and coherently, make distinctions between the relative value and significance of specific data, facts, and ideas, use a variety of reference sources, including word, pictorial, audio, and Internet sources to locate information in support of a topic, include visual aids by using technology to organize and record information on charts, maps, and graphs, anticipate and address readers' potential misunderstandings, biases, and expectations, use technical terms and notations correctly.

**Standard 7: Listening and Speaking: Skills, Strategies and Applications**

10.7.7 Make judgments about the ideas under discussion and support those judgments with convincing evidence.

10.7.17 Deliver oral responses to literature that: advance a judgment demonstrating a comprehensive understanding of the significant ideas of works or passages.

2. **Social Studies**

a. *Grade 6*

**Standard 3: Geography**

6.3.8 Identify major biomes of Europe and the Americas and explain how these are influenced by climate.

6.3.9 Identify current patterns of population distribution and growth in Europe and the Americas using a variety of geographic representations such as maps, charts, graphs, and satellite images and aerial photography.

6.3.13 Explain the impact of humans on the physical environment in Europe and the Americas.

6.3.14 Explain and give examples of how nature has impacted the physical environment and human populations in specific areas of Europe and the Americas

b. *Grade 7*

**Standard 1: History**

7.1.12 Describe worldwide voyages of exploration and discovery.

**Standard 2: Civics and Government**

7.3.12 Identify current trends and patterns of rural and urban population distribution in selected countries of Africa, Asia and the Southwest Pacific. Example: Life expectancy, income, industry, education, natural resources, climate and land forms in Australia, China, India, Japan, Nigeria and South Africa.

7.3.14 Use a variety of information resources to identify current issues and developments related to the environment in selected countries in Africa, Asia and the Southwest Pacific. Example: Use National Geographic and United Nations Web sites and interactive maps to research global warming, hunger, health epidemics or aid during weather-related disasters.

**Standard 4: Economics**

7.4.2 Identify economic connections between the local community and the countries of Africa, Asia or the Southwest Pacific

c. *Grade 8*

**Standard 3: Geography**

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

8.3.9 Analyze human and physical factors that have influenced migration and settlement patterns and relate them to the economic development of the United States.

8.3.11 Identify ways people modified the physical environment as the United States developed and describe the impacts that resulted. Example: Identify urbanization, deforestation and extinction or near extinction of wildlife species; and development of roads and canals.

d. *Grades 9 & 10: Geography and History of the World*

**GHW.3: Population Characteristics, Distribution and Migration**

GHW.3.1 Map the distribution of the world's human population for different time periods. Analyze changes in population characteristics and population density in specific regions.

GHW.3.3 Analyze the changes in population characteristics and physical and human environments that resulted from the migration of peoples within, between, and among world regions.

GHW.3.4 Give examples of and evaluate how the physical and human environments in different regions have changed over time due to significant population growth or decline.

GHW.3.5 Analyze population trends in the local community and suggest the impact of these trends on the future of the community in relation to issues such as development, employment, health, cultural diversity, schools, political representation and sanitation. Propose strategies for dealing with the issues identified.

**GHW.5: Urban Growth**

GHW.5.2 Describe, using maps, timelines and/or other graphic presentations, the worldwide trend toward urbanization. Assess the impact of factors such as locational advantages and disadvantages, changing transportation technologies, population growth, changing agricultural production, and the demands of industry on this trend.  
GHW.5.5 Analyze and assess the impact of urbanization on the physical and human environments in various parts of the world.

**GHW.9: Human and Environmental Interactions: Resources, Hazards and Health**

GHW.9.2 Identify regional resource issues that may impede sustainability, economic expansion and/or diversification. Assess the impact of these issues on the physical and human environments of specific regions. Propose strategies for dealing with regional resources issues.

**Global Change**

GHW.12.1 Analyze global climate change (sometimes called “global warming”) and assess the validity of this idea, the variable climate changes it forecasts for different parts of Earth, and the implications of these changes for humans (political, economic, and health and welfare).

e. *Grades 11 & 12: World Geography*

**WG.4: Human Systems**

WG.4.1 Using maps, establish world patterns of population distribution, density and growth. Relate population growth rates to health statistics, food supply or measure of well-being. Explain that population patterns differ not only among countries but also among regions within a single country.

**WG.5: Environment and Society**

WG.5.2 Identify solutions to problems caused by environmental changes brought on by human activity.

3. *Science*

a. *Grade 6*

**Standard 2: Scientific Thinking**

6.2.5 Organize information in simple tables and graphs and identify relationships they reveal. Use tables and graphs as examples of evidence for explanations when writing essays or writing about lab work, fieldwork, etc.

**Standard 3: The Physical Setting**

6.3.8 Explain that fresh water, limited in supply and uneven in distribution, is essential for life and also for most industrial processes. Understand that this resource can be depleted or polluted, making it unavailable or unsuitable for life.

6.3.13 Identify, explain, and discuss some effects human activities, such as the creation of pollution, have on weather and the atmosphere.

6.3.14 Give examples of some minerals that are very rare and some that exist in great quantities. Explain how recycling and the development of substitutes can reduce the rate of depletion of minerals.

6.3.16 Explain that human activities, such as reducing the amount of forest cover, increasing the amount and variety of chemicals released into the atmosphere, and farming intensively, have changed the capacity of the environment to support some life forms.

**Standard 5: The Mathematical World**

6.5.2 Evaluate the precision and usefulness of data based on measurements taken.

b. *Grade 7*

**Standard 4: The Living Environment**

7.4.10 Describe how technologies having to do with food production, sanitation, and disease prevention have dramatically changed how people live and work and have resulted in changes in factors that affect the growth of human population.

c. *Grade 8*

**Standard 3: The Physical Setting**

8.3.6 Understand and explain that the benefits of Earth's resources, such as fresh water, air, soil and trees are finite and can be reduced by using them wastefully or by deliberately or accidentally destroying them.

d. *Grades 9 & 10: Environmental Science*

**ENV.1: Principles of Environmental Science**

Env.1.4 Understand and explain that human beings are part of Earth's ecosystems and give examples of how human activities can, deliberately or inadvertently, alter ecosystems

Env.1.5 Explain how the size and rate of growth of the human population in any location is affected by economic, political, religious, technological, and environmental factors, some of which are influenced by the size and rate of growth of the population.

Env.1.19 Demonstrate and explain how factors such as birth rate, death rate, and migration rate determine growth rates of populations.

Env.1.20 Demonstrate how resources, such as food supply, influence populations.

4. **Math**

a. *Grade 6*

**Standard 5: Measurement**

6.5.1 Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature and the size of angles.

6.5.2 Understand and use larger units and tools to measure length by comparing miles to yards and kilometers to meters.

6.5.3 Understand and use larger units for measuring area by comparing acres and square miles to square yards and square kilometers to square meters.

**Standard 6: Data Analysis and Probability**

6.6.1 Organize and display single-variable data in appropriate graphs and stem-and-leaf plots, and explain which types of graphs are appropriate for various data sets.

6.6.2 Make frequency tables for numerical data, grouping the data in different ways to investigate how different groupings describe the data. Understand and find relative and cumulative frequency for a data set. Use histograms of the data and of the relative frequency distribution, and a broken line graph for cumulative frequency, to interpret the data.

6.6.6 Understand and represent probabilities as ratios, measures of relative frequency, decimals between 0 and 1, and percentages between 0 and 100 and verify that the probabilities computed are reasonable.

6.6.5 Use data to estimate the probability of future events.

**Standard 7: Problem Solving**

6.7.6 Recognize the relative advantages of exact and approximate solutions to problems and give answers to a specified degree of accuracy.

b. *Grade 7*

**Standard 2: Computation**

7.2.1 Solve addition, subtraction, multiplication, and division problems that use integers, fractions, decimals, and combinations of the four operations.

7.2.2 Calculate the percentage increase and decrease of a quantity.

7.2.4 Use estimation to decide whether answers are reasonable in problems involving fractions and decimals.

7.2.5 Use mental arithmetic to compute with simple fractions, decimals, and powers.

**Standard 3: Algebra and Functions**

7.3.9 Identify functions as linear or nonlinear and examine their characteristics in tables, graphs and equations.

7.3.10 Identify and describe situations with constant or varying rates of change and know that a constant rate of change describes a linear function.

**Standard 5: Measurement**

7.5.1 Compare lengths, areas, volumes, weights, capacities, times, and temperatures within measurement systems.

**Standard 6: Data Analysis and Probability**

7.6.1 Analyze, interpret, and display data in appropriate bar, line, and circle graphs and stem-and-leaf plots and justify the choice of display.

7.6.2 Make predictions from statistical data.

**Standard 7: Problem Solving**

7.7.9 Use graphing to estimate solutions and check the estimates with analytic approaches.

c. *Grade 8*

**Standard 5: Measurement**

8.5.1 Convert common measurements for length, area, volume, weight, capacity and time to equivalent measurements within the same system.

**Standard 6: Data Analysis and Probability**

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.

**Standard 7: Problem Solving**

8.7.10 Make precise calculations and check the validity of the results in the context of the problem.