



Academic Standards

3rd Grade Standards:

Module 1: Why is the Environment Important?

Unit A: What is an environment?

English/ Language Arts

Reading: Comprehension and Analysis of nonfiction and Informational Text- Structural Features of Informational and Technical Materials

3.2.1 Use titles, tables of contents, chapter headings, a glossary, or an index to locate information in text.

Reading: Comprehension and Analysis of Nonfiction and Informational Text- Analysis of Grade-Level-Appropriate Nonfiction and Informational Text

3.2.6 Locate appropriate and significant information from the text, including problems and solutions.

Writing: Processes and Features- Research Process and Technology

3.4.4 Use various reference materials (such as a dictionary, thesaurus, atlas, encyclopedia, and online resources).

Science

The Nature of Science and Technology- Scientific Inquiry

3.1.3 Keep and report records of investigations and observations* using tools, such as journals, charts, graphs, and computers.

Scientific Thinking- Manipulation and Observation

3.2.4 Appropriately use simple tools, such as clamps, rulers, scissors, hand lenses, and other technology, such as calculators and computers, to help solve problems.

Unit B: Who needs the environment?

Math

Number Sense

3.1.1 Count, read, and write whole numbers up to 1,000

Computation

3.2.1 Add and subtract whole numbers up to 1,000 with or without regrouping, using relevant properties of the number system.

Measurement

3.5.7 Estimate and measure weight using pounds and kilograms.



Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.3 Keep and report records of investigations and observations* using tools, such as journals, charts, graphs, and computers.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

Scientific Thinking- Computation and Estimation

- 3.2.1 Add and subtract whole numbers* mentally, on paper, and with a calculator.

The Mathematical World- Numbers

- 3.5.1 Select and use appropriate measuring units, such as centimeters (cm) and meters (m), grams (g) and kilograms (kg), and degrees Celsius ($^{\circ}\text{C}$).

Unit C: What makes a good environment?

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.

The Nature of Science and Technology- Technology and Science

- 3.1.8 Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.

Unit D: What does Indiana's environment look like?

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.4 Discuss the results of investigations and consider the explanations of others.

The Nature of Science and Technology- The Scientific Enterprise

- 3.1.5 Demonstrate the ability to work cooperatively while respecting the ideas of others and communicating one's own conclusions about findings.

Scientific Thinking- Manipulation and Observation

- 3.2.4 Appropriately use simple tools, such as clamps, rulers, scissors, hand lenses, and other technology, such as calculators and computers, to help solve problems.



Module 2: Learning more about Indiana's Environment and You

Unit A: Air

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.

Scientific Thinking- Communication Skills

- 3.2.6 Make sketches and write descriptions to aid in explaining procedures or ideas.

1. At Home

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.3 Keep and report records of investigations and observations* using tools, such as journals, charts, graphs, and computers.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

The Nature of Science and Technology- Technology and Science

- 3.1.6 Give examples of how tools, such as automobiles, computers, and electric motors, have affected the way we live.

Scientific Thinking- Manipulation and Observation

- 3.2.3 Keep a notebook that describes observations and is understandable weeks or months later.

Scientific Thinking- Communication Skills

- 3.2.6 Make sketches and write descriptions to aid in explaining procedures or ideas.

The Mathematical World- Shapes and Symbolic Relationships

- 3.5.3 Construct tables and graphs to show how values of one quantity are related to values of another.

2. At School

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.3 Keep and report records of investigations and observations* using tools, such as journals, charts, graphs, and computers.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

Scientific Thinking- Manipulation and Observation

- 3.2.4 Appropriately use simple tools, such as clamps, rulers, scissors, hand lenses, and other technology, such as calculators and computers, to help solve problems.
- 3.2.5 Construct something used for performing a task out of paper, cardboard, wood, plastic, metal, or existing objects.



The Living Environment- Human Identity

- 3.4.8 Explain that some things people take into their bodies from the environment can hurt them and give examples of such things.

3. At Work

Social Studies

Geography- The World in Spatial Terms

- 3.3.1 Distinguish between physical and political features on maps and globes and label a map of North America identifying countries, oceans, major rivers, the Great Lakes, and mountain ranges. Locate the United States, Indiana, and the local community.
- 3.3.2 Identify the continents and oceans, the equator, the Northern and Southern hemispheres, and the Eastern and Western hemispheres.

Unit B: Land

Science

The Nature of Science and Technology-Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

Scientific Thinking- Manipulation and Observation

- 3.2.4 Appropriately use simple tools, such as clamps, rulers, scissors, hand lenses, and other technology, such as calculators and computers, to help solve problems.

Common Themes- Constancy and Change

- 3.6.5 Observe that and describe how some changes are very slow and some are very fast and that some of these changes may be hard to see and/or record.

1. At Home

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

2. At School

Science

The Nature of Science and Technology- Technology and Science

- 3.1.8 Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.

Scientific Thinking- Computation and Estimation

- 3.2.1 Add and subtract whole numbers* mentally, on paper, and with a calculator.

3. At Work

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.



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The Nature of Science and Technology- Technology and Science

- 3.1.8 Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.

Unit C: Water

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

1. At Home

Science

The Nature of Science and Technology- Scientific Inquiry

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The Nature of Science and Technology- Technology and Science

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2. At School

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.3 Keep and report records of investigations and observations* using tools, such as journals, charts, graphs, and computers.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

The Living Environment- Human Identity

- 3.4.6 Explain that people need water, food, air, waste removal, and a particular range of temperatures, just as other animals do.

3. At Work

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
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The Nature of Science and Technology- Technology and Science

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The living Environment- Human Identity

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Module 3: Environmental Stewardship and You

Unit A: How can you help Indiana's Environment?

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

The Nature of Science and Technology- Technology and Science

- 3.1.8 Describe how discarded products contribute to the problem of waste disposal and that recycling can help solve this problem.

Common Themes- Constancy and Change

- 3.6.5 Observe that and describe how some changes are very slow and some are very fast and that some of these changes may be hard to see and/or record.

1. At Home

Science

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Participate in different types of guided scientific investigations, such as observing objects and events and collecting specimens for analysis.
- 3.1.3 Keep and report records of investigations and observations* using tools, such as journals, charts, graphs, and computers.
- 3.1.4 Discuss the results of investigations and consider the explanations of others.

2. In Your Community

English/Language Arts

The Nature of Science and Technology- Scientific Inquiry

- 3.1.2 Read words with several syllables.

Math

Measurement

- 3.5.6 Estimate and measure capacity using quarts, gallons, and liters.



4th Grade Standards:

Module 1: Why is the Environment Important?

Unit A: What is an environment?

English/ Language Arts

Writing: Processes and Features- Research Process and Technology

4.4.6 Locate information in reference texts by using organizational features, such as prefaces and appendices.

Science

Scientific Thinking- Critical Response Skills

4.2.6 Support statements with facts found in print and electronic media, identify the sources used, and expect others to do the same.

Unit B: Who needs the environment?

Math

Number Sense

4.1.1 Read and write whole numbers up to 1,000,000.

Data Analysis and Probability

4.6.1 Represent data on a number line and in tables, including frequency tables.

4.6.2 Interpret data graphs to answer questions about a situation.

Science

Scientific Thinking- Communication Skills

4.2.4 Use numerical data to describe and compare objects and events.

Unit C: What makes a good environment?

Science

The Nature of Science and Technology- Technology and Science

4.1.9 Explain how some products and materials are easier to recycle than others.

Unit D: What does Indiana's environment look like?

Science

Common Themes- Systems

4.6.1 Demonstrate that in an object consisting of many parts, the parts usually influence or interact with one another.



Module 2:

Learning more about Indiana's Environment and You

Unit A: Air

Science

The Physical Setting- Earth and the Processes That Shape It

- 4.3.2 Begin to investigate and explain that air is a substance that surrounds us and takes up space, and whose movements we feel as wind.

1. At Home

Math

Number Sense

- 4.1.1 Read and write whole numbers up to 1,000,000.

Data Analysis and Probability

- 4.6.1 Represent data on a number line and in tables, including frequency tables.
4.6.2 Interpret data graphs to answer questions about a situation.

Science

Scientific Thinking- Communication Skills

- 4.2.4 Use numerical data to describe and compare objects and events.

2. At School

Science

The Physical Setting- Earth and the Processes That Shape It

- 4.3.2 Begin to investigate and explain that air is a substance that surrounds us and takes up space, and whose movements we feel as wind.

3. At Work

Social Studies

Geography- Places and Region

- 4.3.4 Locate Indiana on a map of the United States; indicate the state capital, major cities, and rivers in Indiana; and be able to place these on a blank map of the state.

Economics

- 4.4.5 Give examples of Indiana's role in world trade.

Unit B: Land

Science

The Nature of Science and Technology- Technology and Science

- 4.1.9 Explain how some products and materials are easier to recycle than others.

The Physical Setting- Earth and the Processes That Shape It

- 4.3.7 Explain that smaller rocks come from the breakage and weathering of bedrock and larger rocks and that soil is made partly from weathered rock, partly from plant remains, and also contains many living organisms.



The Living Environment- Interdependence of Life and Evolution

4.4.6 Explain how in all environments, organisms are growing, dying, and decaying, and new organisms are being produced by the old ones.

1. At Home

Science

The Living Environment- Interdependence of Life and Evolution

4.4.3 Observe and describe that organisms interact with one another in various ways, such as providing food, pollination, and seed dispersal.

2. At School

Science

The Nature of Science and Technology- Technology and Science

4.1.9 Explain how some products and materials are easier to recycle than others.

3. At Work

Math

Data Analysis and Probability

4.6.1 Represent data on a number line and in tables, including frequency tables.

4.6.2 Interpret data graphs to answer questions about a situation.

Unit C: Water

Science

Common Themes- Constancy and Change

4.6.4 Observe and describe that some features of things may stay the same even when other features change.

Social Studies

Geography- Physical Systems

4.3.7 Describe Earth's atmosphere*, lithosphere*, hydrosphere*, and biosphere* and explain how these systems affect life in Indiana.

1. At Home

Science

Common Themes- Systems

4.6.1 Demonstrate that in an object consisting of many parts, the parts usually influence or interact with one another.

Common Themes- Models and Scale

4.6.3 Recognize that and describe how changes made to a model can help predict how the real thing can be altered.

2. At School

Social Studies

Geography- Physical Systems

4.3.7 Describe Earth's atmosphere*, lithosphere*, hydrosphere*, and biosphere* and explain how these systems affect life in Indiana.



3. At Work

Science

Common Themes- Systems

- 4.6.1 Demonstrate that in an object consisting of many parts, the parts usually influence or interact with one another.

Module 3: Environmental Stewardship and You

Unit A: How can you help Indiana's Environment?

1. At Home

Math

Data Analysis and Probability

- 4.6.2 Interpret data graphs to answer questions about a situation.

Science

The Nature of Science and Technology- Technology and Science

- 4.1.9 Explain how some products and materials are easier to recycle than others.

Scientific Thinking- Computation and Estimation

- 4.2.1 Judge whether measurements and computations of quantities, such as length, area*, volume*, weight, or time, are reasonable.

The Physical Setting- Matter* and Energy

- 4.3.14 Explain that energy in fossil fuels* comes from plants that grew long ago.

2. In Your Community

Social Studies

Civics and Government- Roles of Citizens

- 4.2.7 Define and provide examples of civic virtues* in a democracy.



5th Grade Standards:

Module 1: Why is the Environment Important?

Unit A: What is an environment?

English/ Language Arts

Reading: Comprehension and Analysis of Nonfiction and Informational Text- Structural Features of Informational and Technical Materials

- 5.2.1 Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organization, to find information and support understanding.

Unit B: Who needs the environment?

Math

Computations

- 5.2.1 Solve problems involving multiplication and division of any whole numbers.
5.6.2 Find the mean*, median*, mode*, and range* of a set of data and describe what each does and does not tell about the data set.

Science

The Nature of Science and Technology- Technology and Science

- 5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Scientific Thinking- Computation and Estimation

- 5.2.1 Multiply and divide whole numbers* mentally, on paper, and with a calculator.

The Mathematical World- Numbers

- 5.5.1 Make precise and varied measurements and specify the appropriate units.

Unit C: What makes a good environment?

Science

The Nature of Science and Technology- Technology and Science

- 5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Common Themes- Systems

- 5.6.1 Recognize and describe that systems contain objects as well as processes that interact with each other.

Unit D: What does Indiana's environment look like?

Science

Common Themes- Systems

- 5.6.1 Recognize and describe that systems contain objects as well as processes that interact with each other.



Module 2: Learning more about Indiana's Environment and You

Unit A: Air

Science

Scientific Thinking- Manipulation and Observation

5.2.4 Keep a notebook to record observations and be able to distinguish inferences* from actual observations.

Common Themes- Models and Scale

5.6.2 Demonstrate how geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories can be used to represent objects, events, and processes in the real world, although such representation can never be exact in every detail.

1. At Home

Science

The Nature of Science and Technology- Technology and Science

5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.

5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

2. At School

Science

The Nature of Science and Technology- Technology and Science

5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.

5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

3. At Work

Science

The Nature of Science and Technology- Technology and Science

5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.

5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Unit B: Land

Science

Common Themes- Systems

5.6.1 Recognize and describe that systems contain objects as well as processes that interact with each other.

1. At Home

Science

Scientific Thinking- Manipulation and Observation

5.2.4 Keep a notebook to record observations and be able to distinguish inferences* from actual observations.

Common Themes- Systems

5.6.1 Recognize and describe that systems contain objects as well as processes that interact with each other.



2. At School

Science

The Nature of Science and Technology- Technology and Science

5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Scientific Thinking- Computation and Estimation

5.2.1 Multiply and divide whole numbers* mentally, on paper, and with a calculator.

3. At Work

Science

The Nature of Science and Technology- Technology and Science

5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.

5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Scientific Thinking- Manipulation and Observation

5.2.4 Keep a notebook to record observations and be able to distinguish inferences* from actual observations.

Unit C: Water

Science

The Physical Setting- Earth and the Processes That Shape It

5.3.4 Investigate that when liquid water disappears it turns into a gas* (vapor) mixed into the air and can reappear as a liquid* when cooled or as a solid* if cooled below the freezing point of water.

5.3.5 Observe and explain that clouds and fog are made of tiny droplets of water.

The Physical Setting- Matter and Energy

5.3.8 Investigate, observe, and describe that heating and cooling cause changes in the properties of materials, such as water turning into steam by boiling and water turning into ice by freezing. Notice that many kinds of changes occur faster at higher temperatures*.

1. At Home

Science

The Nature of Science and Technology- Technology and Science

5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.

5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

2. At School

Science

The Nature of Science and Technology- Technology and Science

5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.



3. At Work

Science

The Nature of Science and Technology- Technology and Science

- 5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.
- 5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Common Themes- Systems

- 5.6.1 Recognize and describe that systems contain objects as well as processes that interact with each other.

Module 3: Environmental Stewardship and You

Unit A: How can you help Indiana's Environment?

1. At Home

Math

Algebra and Functions

- 5.3.4 Identify and graph ordered pairs of positive numbers.
- 5.3.7 Use information taken from a graph or equation to answer questions about a problem situation.

Science

The Nature of Science and Technology- Technology and Science

- 5.1.5 Explain that technology extends the ability of people to make positive and/or negative changes in the world.
- 5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

Common Themes- Systems

- 5.6.1 Recognize and describe that systems contain objects as well as processes that interact with each other.

Common Themes- Models and Scale

- 5.6.2 Demonstrate how geometric figures, number sequences, graphs, diagrams, sketches, number lines, maps, and stories can be used to represent objects, events, and processes in the real world, although such representation can never be exact in every detail.

Common Themes- Constancy and Change

- 5.6.4 Investigate, observe, and describe that things change in steady, repetitive, or irregular ways, such as toy cars continuing in the same direction and air temperature reaching a high or low value. Note that the best way to tell which kinds of changes are happening is to make a table or a graph of measurements.

2. In Your Community

Science

The Nature of Science and Technology- Technology and Science

- 5.1.6 Explain how the solution to one problem, such as the use of pesticides in agriculture or the use of dumps for waste disposal, may create other problems.

