

Listed below are LEAF lessons in the 2-3 grade lesson guide. They have been correlated to various formats of student learning standards. Included are: Wisconsin Model Academic Standards in Agriculture Education, Environmental Education, Social Studies, and Visual Arts; Common Core Standards for Mathematics and English Language Arts; Next Generation Science Standards. On the following pages, you will find the standards listed by lesson along with an explanation of how they are addressed by each lesson. Both current and previous versions of standards can be found on the LEAF website either in the original Lesson Guide pdfs or as addendums with the more recent standard formats.

## **LESSON 1: TO BE A TREE**

### **ENGLISH LANGUAGE ARTS W.2.2**

#### **Writing**

**Standard is:** Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

Students create a drawing and write a paragraph to demonstrate their understanding of tree vocabulary and natural processes.

### **ENGLISH LANGUAGE ARTS W.3.2**

#### **Writing**

**Standard is:** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Students create a drawing and write a paragraph to demonstrate their understanding of tree vocabulary and natural processes.

### **SCIENCE 2-LS2-1**

#### **Interdependent Relationships in Ecosystems**

**Standard is:** Plan and conduct an investigation to determine if plants need sunlight and water to grow.

Students simulate the need of water, nutrients, and sunlight by trees.

### **SCIENCE 3-LS1-1**

#### **Inheritance and Variation of Traits: Life Cycles and Traits**

**Standard is:** Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

Students use correct terms to identify the life stages of a tree by completing Student Page – *Life Stages*.

### **VISUAL ARTS E.4.4**

#### **Visual Communication and Expression**

**Standard is:** Communicate basic ideas by producing visual communication forms useful in everyday life, such as sketches, diagrams, graphs, plans, and models.

By drawing a tree and its parts, students communicate about the type of tree they have adopted and its features.

## VISUAL ARTS H.4.1

### Visual Thinking

**Standard is:** Study the patterns and color in nature.

Through the examination of leaf patterns, branches, bark, and fruit of trees, students learn unique characteristics used to identify trees.

## LESSON 2: WHAT MAKES A FOREST?

## AGRICULTURE EDUCATION A.4.3

### Global Agricultural Systems

**Standard is:** Explain how climate affects plants and animals raised.

- Identify ways climate affects plants and animals that are produced and live in various regions in Wisconsin.

Students learn about the nonliving things that influence forest ecosystems, including climate, by matching plant requirements to specific forest conditions.

## AGRICULTURE EDUCATION E.4.3

### Ecology/Environment

**Standard is:** Understand how different climatic conditions determine the plants that are grown in an area.

Students learn about the nonliving things that influence forest ecosystems, including climate, by matching plant requirements to specific forest conditions.

## ENGLISH LANGUAGE ARTS RI-2.3

### Reading for Information

**Standard is:** Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures.

Students determine which habitats meet the criteria for each tree species.

## ENGLISH LANGUAGE ARTS W-2.3

### Writing

**Standard is:** Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

Students create a skit demonstrating their understanding.

## ENGLISH LANGUAGE ARTS SL-2.1

### Speaking and Listening

**Standard is:** Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

Students create a skit demonstrating understanding.

## ENGLISH LANGUAGE ARTS SL-3.4

### Speaking and Listening

**Standard is:** Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.  
Students create a skit demonstrating understanding.

## ENVIRONMENTAL EDUCATION B.4.5

### Knowledge of Environmental Processes and Systems – Energy and Ecosystems

**Standard is:** Describe natural and human-built ecosystems in Wisconsin.  
While building forest ecosystems with description cards, students explore different types of forest ecosystems, including Wisconsin's urban forests.

## SCIENCE 2-LS4-1

### Interdependent Relationships in Ecosystems

**Standard is:** Make observations of plants and animals to compare the diversity of life in different habitats.  
Students decide which forest habitats contain the correct nonliving factors for various tree species.

## VISUAL ARTS H.4.1

### Visual Thinking

**Standard is:** Study the patterns and color in nature.  
Students explore and illustrate different forest ecosystems in the mural they create.

## VISUAL ARTS K.4.3

### Making Connections

**Standard is:** Use what they are learning about life, nature, the physical world, and people to create art.  
Students create a mural about a forest ecosystem that they have learned about.

## LESSON 3: FOREST ENERGY FLOW

## ENGLISH LANGUAGE ARTS W-2.3

### Writing

**Standard is:** Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.  
Students create a comic strip to demonstrate their knowledge and tell a story of energy flow.

## ENGLISH LANGUAGE ARTS W-3.3

### Writing

**Standard is:** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences..  
Students create a comic strip to demonstrate their knowledge and tell a story of energy flow.

## ENVIRONMENTAL EDUCATION A.4.2

### Questioning and Analysis

**Standard is:** Collect information, make predictions, and offer explanations about questions asked.

During the energy exchange game, students are asked to predict what will happen if the conditions of the game are changed.

## ENVIRONMENTAL EDUCATION A.4.3

### Questioning and Analysis

**Standard is:** Develop answers, draw conclusions, and revise their personal understanding as needed based on their investigations.

During the energy exchange game, students are asked questions about what has happened and what will likely happen based on the game.

## ENVIRONMENTAL EDUCATION B.4.1

### Knowledge of Environmental Processes and Systems – Energy and Ecosystems

**Standard is:** Describe the flow of energy in natural systems, citing the sun as the source of energy on the earth: e.g., a food chain.

The entire lesson focuses on forests as ecosystems and their functions, including the transfer of energy.

## SCIENCE 2-LS4-1

### Interdependent Relationships in Ecosystems

**Standard is:** Make observations of plants and animals to compare the diversity of life in different habitats.

Students discuss the dependence of consumers on producers.

## VISUAL ARTS E.4.3

### Visual Communication and Expression

**Standard is:** Communicate basic ideas by producing popular images and objects, such as folk art, traditional arts and crafts, popular arts, mass media, and consumer products.

Students create a comic strip about the flow of energy.

## LESSON 4: FORESTS ARE IMPORTANT TO ME!

### AGRICULTURE EDUCATION A.4.1

#### Global Agricultural Systems

**Standard is:** Understand how products made from plants and animals are made available for use by people.

- Know which foods from their diet are produced in Wisconsin and which must be imported from other states and nations.

Students identify products they use that originate in forests, including food. Students also identify which products are created in Wisconsin and which must come from elsewhere.

## AGRICULTURE EDUCATION D.4.2

### Agriscience/Production

**Standard is:** Understand that the food and fiber system uses natural resources.

- Discuss and give examples of natural resources used in their daily lives to produce food, fiber, and ornamental plants.

Students identify forest products they use every day.

## ENGLISH LANGUAGE ARTS W.2.2

### Writing

**Standard is:** Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

Students write a paragraph explaining why forests are important to them.

## ENGLISH LANGUAGE ARTS W.3.2

### Writing

**Standard is:** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Students write a paragraph explaining why forests are important to them.

## ENVIRONMENTAL EDUCATION B.4.10

### Knowledge of Environmental Processes and Systems – Natural Resources and Environmental Quality

**Standard is:** Describe how they use natural resources in their daily lives.

Students mark on a worksheet the forest products they use.

## MATHEMATICS 2.MD.10

### Measurement and Data

**Standard is:** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.

Students build a bar graph and discuss how different values contributed to the graph.

## SOCIAL STUDIES A.4.2

### Geography: People, Places, and Environments

**Standard is:** Locate on a map or globe physical features such as continents, oceans, mountain ranges, and land forms; natural features such as resources, flora, and fauna; and human features such as cities, states, and national borders.

(In Extension) Students locate the towns and cities on a map where a certain forest product is made.

## VISUAL ARTS E.4.4

### Visual Communication and Expression

**Standard is:** Communicate basic ideas by producing visual communication forms useful in everyday life, such as sketches, diagrams, graphs, plans, and models.

Students create a graph to visually show the variety of forest values people have.

## LESSON 5: DECISIONS, DECISIONS

### SCIENCE 2-ESS2-2

#### Earth's Systems: Processes That Shape the Earth

**Standard is:** Develop a model to represent the shapes and kinds of land and bodies of water in an area.

Students map a schoolyard to determine the best use of the site. (In Extension, students map their own schoolyard.)

### SOCIAL STUDIES A.4.4

#### Geography: People, Places, and Environments

**Standard is:** Describe and give examples of ways in which people interact with the physical environment, including use of land, location of communities, methods of construction, and design of shelters.

Throughout the lesson, students examine how different people are involved in the decisions made about the management of forest land.

### SOCIAL STUDIES C.4.5

#### Political Science and Citizenship: Power, Authority, Governance, and Responsibility

**Standard is:** Explain how various forms of civic action such as running for political office, voting, signing an initiative, and speaking at hearings, can contribute to the well-being of the community.

Students play a card game to illustrate the different people who impact forests. Through this game, they see that citizens have a right and responsibility to participate by voting and voicing their opinion.

## LESSON 6: I CAN BE A FOREST STEWARD

### ENGLISH LANGUAGE ARTS W.2.2

#### Writing

**Standard is:** Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

In the Summative Assessment, students write about the forest stewardship.

### ENGLISH LANGUAGE ARTS W.3.2

#### Writing

**Standard is:** Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

In the Summative Assessment, students write about the forest stewardship.

## ENVIRONMENTAL EDUCATION A.4.2

### Questioning and Analysis

**Standard is:** Collect information, make predictions, and offer explanations about questions asked.

Through the concluding activity, students predict what the forests of the future might be like given two scenarios.

## ENVIRONMENTAL EDUCATION C.4.1

### Environmental Issue Investigation Skills

**Standard is:** Identify environmental problems and issues.

After playing the stewardship game, students give examples of forest problems that they could take action on.

## ENVIRONMENTAL EDUCATION C.4.2

### Environmental Issue Investigation Skills

**Standard is:** Apply ideas of past, present, and future to specific environmental issues.

Students draw what they think the future of forests would be if they did or did not act as a forest steward.

## ENVIRONMENTAL EDUCATION D.4.1

### Decision and Action Skills

**Standard is:** Demonstrate knowledge of a decision-making process that includes selecting and using data, suggesting possible alternatives, predicting consequences, and being aware of available resources.

During the entire lesson, students are learning the steps to be a steward and are gathering information, making decisions, and acting on those decisions.

## SCIENCE 3-LS4-4

### Interdependent Relationships in Ecosystems

**Standard is:** Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

Students complete the “What if we...?” worksheet to express the changes they envision under different scenarios.

## VISUAL ARTS E.4.4

### Visual Communication and Expression

**Standard is:** Communicate basic ideas by producing popular visual communication forms useful in everyday life, such as sketches, diagrams, graphs, plans, and models.

Students draw what they think forests will look like in the future if we do or don't take the responsibility of being stewards.

## VISUAL ARTS K.4.3

### Making Connections

**Standard is:** Use what they are learning about life, nature, the physical world, and people to create art.

Through drawing, students visually describe what they know about the future of forests if humans are good stewards.

## CAREERS EXPLORATION

### AGRICULTURE EDUCATION D.4.5

#### Agriscience/Production

**Standard is:** Identify careers in the areas of food, fiber, and ornamental plant production and processing.

By reading descriptions of jobs, completing a word search, and drawing a picture, students learn about careers in fruit and tree production

### AGRICULTURE EDUCATION F.4.4

#### Business Management and Marketing

**Standard is:** Recognize that a variety of occupations are involved in agricultural businesses.

- Identify jobs/careers associated with agricultural products other than food (e.g., fiber and natural resources)
- List the knowledge and skills necessary for jobs in the food, fiber, and natural resources industry

By reading descriptions of different forest and forestry-related jobs, students learn about the jobs and skills needed for those jobs.

### ENVIRONMENTAL EDUCATION B.4.11

#### Natural Resources and Environmental Quality

**Standard is:** List jobs in the community that result from or are influenced by processing and using natural resources.

By reading descriptions of jobs, completing a word search, and drawing a picture, students learn about jobs related to forests and forestry.

## FIELD ENHANCEMENT 1: I CAN BE A FORESTER

### ENVIRONMENTAL EDUCATION B.4.1

#### Knowledge of Environmental Processes and Systems

**Standard is:** Describe the flow of energy in natural systems, citing the sun as the source of energy on the earth; e.g., a food chain.

Through a discussion, an activity and a game, students describe the flow of energy in a natural system and cite the sun as the source of energy on the earth.



## VISUAL ARTS H.4.5

### Visual Thinking

**Standard is:** Be able to read simple maps, charts, and plans.  
Students read and complete diagrams during a scavenger hunt.

## FIELD ENHANCEMENT 2: OBSERVING FOREST INTERACTIONS

### ENVIRONMENTAL EDUCATION A.4.1

#### Questioning and Analysis

**Standard is:** Make observations, ask questions and plan environmental investigations.  
Students spend focused, individual time making observations about the natural world.

### ENVIRONMENTAL EDUCATION A.4.4

#### Questioning and Analysis

**Standard is:** Communicate their understanding to others in simple terms.  
After making observations, students communicate what they saw to the rest of the class.

## VISUAL ARTS H.4.1

### Visual Thinking

**Standard is:** Study the patterns and color in nature.  
Students spend focused, individual time watching and studying the patterns in nature.

## VISUAL ARTS K.4.3

### Making Connections

**Standard is:** Use what they are learning about life, nature, the physical world, and people to create art.  
Students draw as they observe the natural world.

## FIELD ENHANCEMENT 3: FOREST ENERGY SCAVENGER HUNT

### ENVIRONMENTAL EDUCATION A.4.1

#### Questioning and Analysis

**Standard is:** Make observations, ask questions, and plan environmental investigations.  
Students make observations and ask questions about a forest sample plot.

### ENVIRONMENTAL EDUCATION A.4.2

#### Questioning and Analysis

**Standard is:** Collect information, make predictions, and offer explanations about questions asked.  
Students collect information from a forest sample plot to answer questions asked.

## VISUAL ARTS E.4.4

### Visual Communication and Expression

**Standard is:** Communicate basic ideas by producing visual communication forms useful in everyday life, such as sketches, diagrams, graphs, plans, and models.

By sketching three different leaf types, seed types, and crown shapes, students communicate about the variety that exists in nature.

## VISUAL ARTS H.4.1

### Visual Thinking

**Standard is:** Study the patterns and color in nature.

Students study and observe differences in the patterns of leaves, seeds, and crown shapes.