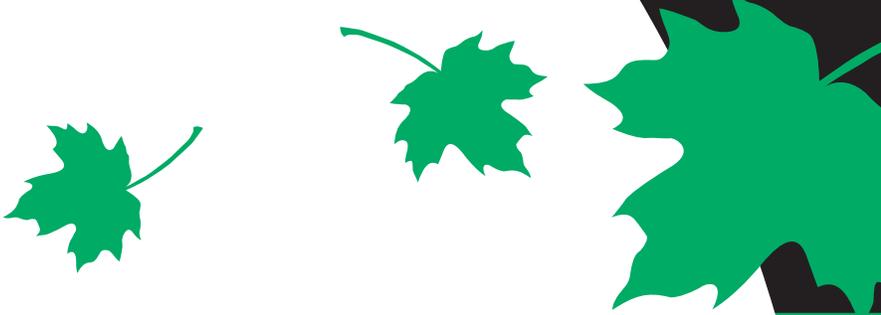




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GLOSSARY

ABIOTIC: Refers to nonliving things.

ASSOCIATE DIRECTOR, LAND TRUST:

A person who works to protect land, plants, and animals for the future.

BARK: The outermost layer on a tree's trunk that protects the tree from injury.

BELIEF: Something that a person thinks to be true to the best of his/her knowledge.

BILTMORE STICK: A graduated rule used to estimate the diameter of standing trees.

BIODIVERSITY: The variety and complexity of all life on Earth.

BIOME: A regional ecosystem characterized by distinct seasonal climatic differences, vegetation, and animals.

BIOSPHERE: The air, land, and water on Earth's surface that contain living organisms.

BIOTIC: Refers to living things.

BOARD FOOT: Unit used to measure the volume of wood; one board foot equals one foot by one foot by one inch.

CAMBIUM: The growing part of the trunk of a tree. This thin layer between the xylem and phloem produces cells that become new xylem and phloem.

CHAIN: Unit used to measure distance; one chain equals 66 feet.

CLEARCUT: A management technique in which all the trees in an area are cut at the same time.

CO-DOMINANT: Trees with crowns at the same height as other trees around them. They receive full light from above but little from the sides.

COMMUNITY: A group of plants and animals living and interacting with one another in a given area.

COMPETITION: The struggle that exists among plants or trees to acquire resources from a limited pool.

CONDENSATION: The process of vapor turning into liquid.

CONIFEROUS: A tree that bears cones and has needles.

CONSUMER: An organism that can't produce its own food energy and must get it by eating producers or other consumers.

CROWN: The part of a tree with live branches and leaves.

CULTURAL VALUE: The worth of a forest in terms of the way a person was raised to believe in it.

DBH: An acronym for diameter at breast height. Foresters measure diameter at breast height or 4.5 feet from the ground.

DECIDUOUS: A tree that sheds all of its leaves annually.

DECLINE: The part of a tree's life when it becomes less healthy and does not recover.

DECOMPOSER: An organism that gets its food energy from dead parts of other organisms.

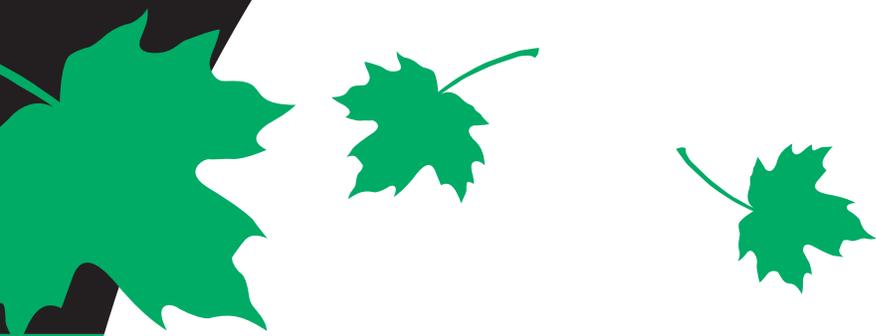
DISTURBANCE: An event that disrupts the succession of a forest (e.g., fire, harvest, wind, flood).

DOMINANT: Trees with crowns extending above other trees around them. They receive full light from above and partly from the sides.

ECOLOGICAL VALUE: The worth of a forest in terms of what it contributes to an ecosystem as a whole.

ECOLOGIST: A person who studies how forest parts work together and how humans fit in.

ECONOMIC VALUE: The worth of a forest in financial terms.



ECOSYSTEM: An area that contains organisms (e.g., plants, animals, bacteria) interacting with one another and their nonliving environment. Ecosystems can be of any size (e.g., forest, meadow, log).

EDUCATIONAL VALUE: The worth of a forest in terms of its benefits for teaching and learning.

ENERGY: The ability to do work (e.g., grow, reproduce, move).

EVAPORATION: The process of a liquid turning into vapor.

EXECUTIVE DIRECTOR, WISCONSIN WOODLAND OWNERS ASSOCIATION:

A person who assists members of WWOA to help them meet their goals.

FOOD CHAIN: A series of organisms in which one eats or decomposes another and the transfer of food energy occurs.

FOOD WEB: A group of interconnected food chains.

FORB LAYER: Layer of the understory containing non-woody plants.

FOREST MANAGEMENT: The use of techniques (e.g., planting, harvesting) to promote, conserve, or alter forests to meet desired outcomes.

FOREST PATHOLOGIST: A person who diagnoses and determines treatment for forest pests such as insects, disease, and weather damage.

GERMINATION: The beginning growth of a seed when roots and stem sprout.

HEARTWOOD: The central core of a tree made of dense, dead wood. The heartwood provides strength for the tree.

INDIVIDUAL: One living thing.

INTERMEDIATE: Trees with crowns shorter than other trees around them. Their crowns extend into lower parts of the co-dominant and dominant trees' crowns. They receive little direct light from above and none from the sides.

KNOWLEDGE: The information or facts someone has about something.

LANDSCAPER: A person who designs landscapes. This includes planning what trees and shrubs to plant and where to plant them.

LITTER LAYER: Surface layer of the forest floor composed of leaves, twigs, needles, etc., with minimal decomposition.

LOG: Unit of measurement; one log equals 16 feet.

MATURITY: The part of a tree's life when noticeable growth slows and it can begin reproduction.

MERCHANTABLE: Being the appropriate size and condition to be sold.

MERRITT HYPSONETER: A graduated rule used to measure the height of standing trees.

MULTIPLE USE: A type of forest management that promotes at least two types of forest use (e.g., for recreation and wildlife habitat).

NATURAL REGENERATION: Allowing trees to grow on a site from seeds, sprouts, or suckering.

NURSERY MANAGER: A person who is in charge of planting many tree seeds and helping them grow.

OVERSTORY: The uppermost trees in a forest.

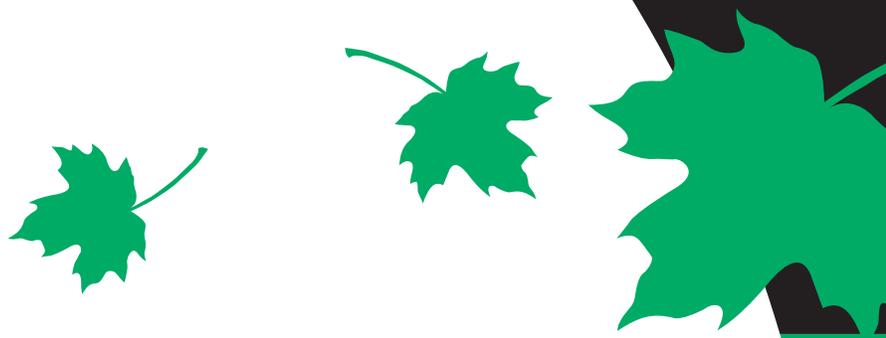
OVERTOPPED: Trees with crowns entirely below other trees around them. They receive no direct light from above or the sides.

PALLET: A small low wooden platform items are stacked on, usually for packing or shipping.

PARK SUPERINTENDENT: A person who manages a park and people who use it.

PLAT MAP: A map of a township that shows property boundaries.

PHLOEM: The layer in the trunk of a tree that carries sugars (food energy) created during photosynthesis from the leaves to the rest of the tree. Phloem is also called inner bark.



PHOTOSYNTHESIS: The process a plant uses to combine sunlight, water, and carbon dioxide to produce oxygen and sugar.

POPULATION: A group of individuals of the same species in an area.

PRECIPITATION: All forms of moisture that fall from the sky, including rain, snow, hail, etc.

PRESCRIBED BURN: A fire planned and executed to achieve management goals.

PRIMARY CONSUMER: A consumer that gets its energy from producers (plants). These are often called herbivores.

PRODUCER: An organism that produces its own food energy by using sunlight, water, and carbon dioxide through the process of photosynthesis. Plants are producers.

PULP: Fibrous material prepared from wood that is used to make paper.

RECREATIONAL VALUE: The worth of a forest in terms of its use for leisure.

REFORESTATION: Planting or use of natural regeneration to grow forests on land that had forests removed.

RENEWABLE RESOURCE: A resource that has the ability to regenerate, grow back, or produce more.

REPRODUCTION: The part of a tree's life when it produces seeds.

RUNOFF: Water that flows on the surface of the ground.

SECONDARY CONSUMER: A consumer that gets its energy from other consumers. These are often called carnivores.

SECTION: An area of land that is one mile by one mile and consists of 640 acres.

SEED-TREE: A management technique in which most of the trees in an area are harvested, but a few trees are left to provide a seed source.

SELECTION CUT: A management technique in which specific trees in an area are chosen and cut.

SHADE-INTOLERANT: Describes a plant's ability to compete for survival under direct sunlight conditions.

SHADE-TOLERANT: Describes a plant's ability to compete for survival under shaded conditions.

SHELTERWOOD CUT: A management technique in which some trees are left during harvest to encourage trees that need partial shade to regenerate.

SHRUB LAYER: Layer of the understory containing woody plants with multiple stems.

STEWARD: A person who takes responsibility to make decisions and take actions today that will allow resources to be maintained in a healthy manner.

SUCCESSION: The gradual changing of an area from one community to another.

SUSTAIN: To nourish, keep up, or maintain.

SUSTAINABLE MANAGEMENT: Maintenance of forests to meet current and future ecological, economic, and social needs.

THINNING: A management technique in which some trees are removed to make room for other trees to grow.

TOWNSHIP: An area of land that is six miles by six miles and contains 36 sections.

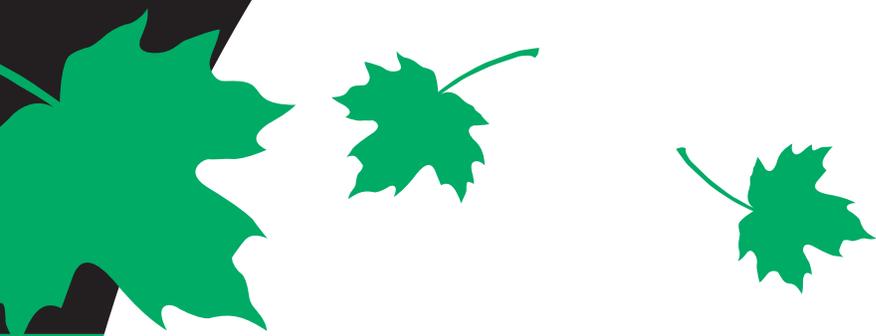
TRANSPIRATION: The evaporation of water from plants.

UNDERSTORY: Forest vegetation present under the overstory, which can include trees, shrubs, and forbs.

VALUE: The worth someone places on something.

WILDLIFE BIOLOGIST: A person who researches wildlife and their habitats and takes action to improve those habitats.

XYLEM: The layer in the trunk of a tree that carries water and nutrients absorbed from the soil by the roots to the leaves. It is located between the heartwood and the cambium layer.



WISCONSIN MODEL ACADEMIC STANDARDS

LEAF lessons address Wisconsin Model Academic Standards in Agriculture Education, Environmental Education, Language Arts, Mathematics, Science, Social Studies, and Visual Arts. On the following pages, you will find the standards listed by lesson along with an explanation of how they are addressed by each lesson.

LESSON 1: ME AS A TREE

LANGUAGE ARTS C.8.3

Oral Language

Standard is: Participate effectively in discussion.

- Participate in discussion by listening attentively, demonstrating respect for the opinions of others, and responding responsibly and courteously to the remarks of others.
- Establish and maintain an open mind when listening to others' ideas and opinions.
- Display and maintain facial expressions, body language, and other response cues that indicate respect for the speaker and attention to the discussion.
- Participate in discussion without dominating.

Students discuss their own ideas and listen to the ideas of others about the information they are learning throughout the lesson.

SCIENCE F.8.1

Structure and Function in Living Things

Standard is: Understand the structure and function of cells, organs, tissues, organ systems, and whole organisms.

Students learn about the structure, function, and systems of trees and humans by labeling a diagram comparing the functions of tree parts and human parts.

SCIENCE F.8.5

Life and Environmental Science Reproduction and Heredity

Standard is: Show how different structures both reproduce and pass on characteristics of their group.

Students label diagrams and play a game to study the life stages of trees and humans.

LESSON 2: WHAT MAKES A FOREST?

ENVIRONMENTAL EDUCATION B.8.6

Energy and Ecosystems

Standard is: Describe major ecosystems of Wisconsin.

Students use a game to put together the components needed for a forest ecosystem.

ENVIRONMENTAL EDUCATION B.8.11

Energy and Ecosystems

Standard is: Describe our society as an ecosystem.

Students put together a puzzle of individuals, communities, ecosystems, etc. using parts of human society as examples.



LANGUAGE ARTS C.8.3

Oral Language

Standard is: Participate effectively in discussion.

- Participate in discussion by listening attentively, demonstrating respect for the opinions of others, and responding responsibly and courteously to the remarks of others.
- Establish and maintain an open mind when listening to others' ideas and opinions.
- Display and maintain facial expressions, body language, and other response cues that indicate respect for the speaker and attention to the discussion.
- Participate in discussion without dominating.

Students discuss the results of their ecosystem game and the layers activity.

LESSON 3: FORESTS ARE ALWAYS CHANGING

ENVIRONMENTAL EDUCATION B.8.2

Energy and Ecosystems

Standard is: Explain how change is a natural process, citing examples of succession, evolution, and extinction.

Students act out forest succession and understand that change is constant.

ENVIRONMENTAL EDUCATION B.8.5

Energy and Ecosystems

Standard is: Give examples of human impact on various ecosystems.

Students learn that harvest is a human-caused disturbance and how it can influence the forest ecosystem.

ENVIRONMENTAL EDUCATION B.8.8

Energy and Ecosystems

Standard is: Explain interactions among organisms or populations of organisms.

Students act out succession and learn the effects one species of tree has on whether another is able to grow in an area.

MATHEMATICS B.8.2

Number Operations and Relationships

Standard is: Perform and explain operations on rational numbers (add, subtract, multiply, divide, raise to a power, extract a root, take opposites, and reciprocals, determine absolute value).

Students make calculations to answer questions on the *Forests Are Renewable* Student Page.

MATHEMATICS B.8.7

Number Operations and Relationships

Standard is: In problem-solving situations, select and use appropriate computational procedures with rational numbers such as calculating mentally.

Students mentally calculate the age the tree they represent is during the succession simulation.

SCIENCE A.8.6

Science Connections

Standard is: Use models and explanations to predict actions and events in the natural world.

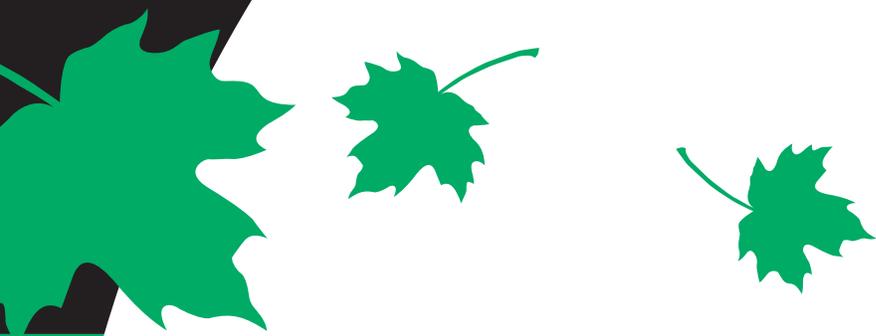
Students model succession by acting out the steps involved.

SCIENCE F.8.9

Diversity and Adaptations

Standard is: Explain how some of the changes on Earth are contributing to changes in the balance of life and affecting the survival or population growth of certain species.

Students learn that disturbances can determine whether or not species grow in an area.



LESSON 4: ECOSYSTEM EXTRAVAGANZA

ENVIRONMENTAL EDUCATION B.8.1 *Energy and Ecosystems*

Standard is: Describe the flow of energy in a natural and a human-built ecosystem using the laws of thermodynamics (energy).

Students learn about the process of photosynthesis. They use a worksheet to examine how energy flows and is given off by producers and consumers.

ENVIRONMENTAL EDUCATION B.8.7 *Energy and Ecosystems*

Standard is: Illustrate the conservation of matter using biogeochemical cycle; e.g., carbon, nitrogen, phosphorous.

Students read descriptions of the steps in biogeochemical cycles. They label illustrations based on the descriptions.

ENVIRONMENTAL EDUCATION B.8.8 *Energy and Ecosystems*

Standard is: Explain interactions among organisms or populations of organisms.

Students fill out a worksheet to demonstrate the flow of energy between different types of organisms.

LESSON 5: WE ALL NEED TREES

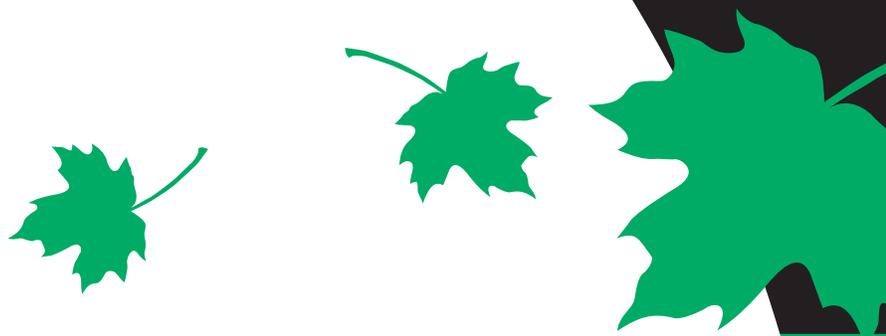
LANGUAGE ARTS C.8.3 *Oral Language*

Standard is: Participate effectively in discussion.

- Participate in discussion by listening attentively, demonstrating respect for the opinions of others, and responding responsibly and courteously to the remarks of others.
- Evaluate the stated ideas and opinions of others, seeking clarification through questions.
- Establish and maintain an open mind when listening to others' ideas and opinions.
- Display and maintain facial expressions, body language, and other response cues that indicate respect for the speaker and attention to the discussion.
- Participate in discussion without dominating.

Students discuss and react to the list of values the class created. They present and listen to an oral presentation.





LESSON 6: WHAT IS MANAGEMENT?

ENVIRONMENTAL EDUCATION B.8.5

Energy and Ecosystems

Standard is: Give examples of human impact on various ecosystems.

Students learn about the historic results of human impact on forest ecosystems in Wisconsin. Students choose management options and learn their consequences both good and bad.

SCIENCE F.8.10

Diversity and Adaptations of Organisms

Standard is: Project how current trends in human resource use and population growth will influence the natural environment, and show how current policies affect those trends.

Students examine historical use of forests and compare the level of use to the level of population. They consider the results of population growth both with advancements in management and without.

SOCIAL STUDIES B.8.3

History: Time, Continuity, and Change

Standard is: Describe the relationships between and among significant events, such as the causes and consequences of wars in United States and world history.

Students place historical Wisconsin events on a timeline and consider how those events shaped Wisconsin and why they occurred.

LESSON 7: WHO OWNS IT?

LANGUAGE ARTS B.8.1

Writing

Standard is: Create or produce writing to communicate with different audiences for a variety of purposes.

- Write clear and pertinent responses to verbal or visual material that communicate, explain, and interpret the reading or viewing experience to a specific audience.

Students plan changes for the classroom and use writing to describe the changes they would make.

LANGUAGE ARTS C.8.3

Oral Language

Standard is: Participate effectively in discussion.

- Participate in discussion by listening attentively, demonstrating respect for the opinions of others, and responding responsibly and courteously to the remarks of others.
- Establish and maintain an open mind when listening to others' ideas and opinions.
- Participate in discussion without dominating.

Students participate in a discussion during the conclusion about the choices that were made in planning for the classroom setup.

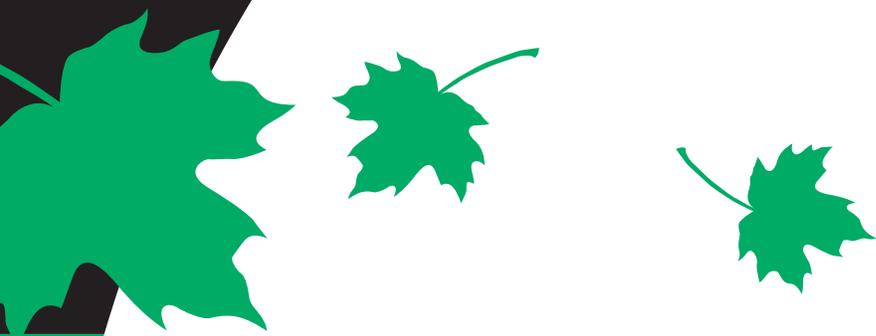
MATHEMATICS B.8.5

Number Operations and Relationships

Standard is: Apply proportional thinking in a variety of problem situations that include, but are not limited to:

- Ratios and proportions
- Percents, including those greater than 100 and less than one

Students compare the amount of land owned by different types of owners on a plat map and calculate percentage of ownership.



SOCIAL STUDIES A.8.1

Geography: People, Places, and Environments

Standard is: Use a variety of geographic representations, such as political, physical, and topographic maps, a globe, aerial photographs, and satellite images, to gather and compare information about a place.

Students examine plat maps to determine ownership patterns. A map of cover types is used to compare land use with land composition.

SOCIAL STUDIES A.8.2

Geography: People, Places, and Environments

Standard is: Construct mental maps of selected locales, regions, states, and countries and draw maps from memory, representing relative locations, direction, size, and shape.

Students draw a map of their neighborhood or town and estimate percentages of ownership.

SOCIAL STUDIES A.8.3

Geography: People, Places, and Environments

Standard is: Use an atlas to estimate distance, calculate scale, identify dominant patterns of climate and land use, and compute population density.

Students examine plat maps to determine ownership and apply cover map information to determine how the type of vegetation influences ownership.

SOCIAL STUDIES C.8.8

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

Standard is: Identify ways in which advocates participate in public policy debates.

Students match individuals, groups, and institutions to the types of actions they could take toward forest management in a community or the state.

SOCIAL STUDIES E.8.4

The Behavioral Sciences: Individuals, Institutions, and Society

Standard is: Describe and explain the means by which individuals, groups, and institutions may contribute to social continuity and change within a community.

Students identify roles different groups (government agencies, private businesses, organizations, and communities) have in forest management.

LESSON 8: WHOSE JOB IS IT?

ENVIRONMENTAL EDUCATION D.8.3

Decision and Action Skills

Standard is: List reasons why an individual or group chooses to participate or not participate in an environmental activity in the home, school, or community.

Students act as different citizens during a mock school board meeting and learn reasons those citizens are participating in the meeting.

ENVIRONMENTAL EDUCATION D.8.5

Decision and Action Skills

Standard is: Explain how personal actions can impact an environmental issue; e.g., doing volunteer work in conservation.

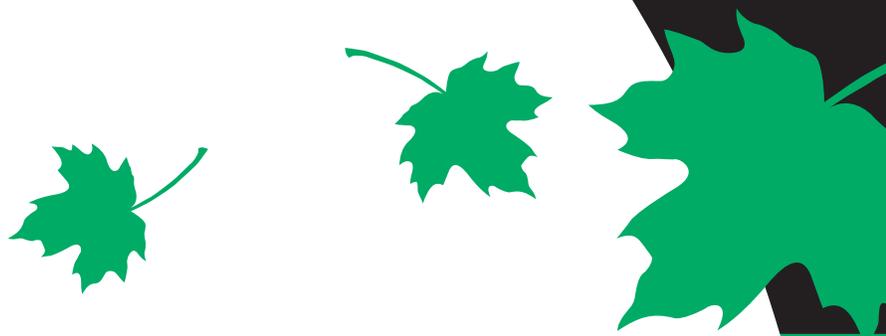
Students participate in a mock school board meeting and discuss how the information one person had could have changed the outcome of the meeting.

ENVIRONMENTAL EDUCATION D.8.7

Decision and Action Skills

Standard is: Identify examples of how personal beliefs can influence environmental decisions.

Students discuss the reasons the characters in the mock school board meeting felt the way they did about the issue.



LANGUAGE ARTS C.8.1

Oral Communication

Standard is: Orally communicate information, opinions, and ideas effectively to different audiences for a variety of purposes.

Students act out roles during a mock school board meeting. They read a summary of a citizen's viewpoint and speak to the group from that point of view.

LANGUAGE ARTS C.8.3

Oral Communication

Standard is: Participate effectively in discussion.

Students discuss the results of the mock school board meeting as a group.

SOCIAL STUDIES C.8.8

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

Standard is: Identify ways in which advocates participate in public policy debates.

Students participate in a mock school board meeting to learn about the importance of participation.

SOCIAL STUDIES E.8.4

The Behavioral Sciences: Individuals, Institutions, and Society

Standard is: Describe and explain the means by which individuals, groups, and institutions may contribute to social continuity and change within a community.

Students participate in a mock school board meeting. They represent various individuals and groups with differing viewpoints. They learn how the information provided by the individuals and groups can influence policy decisions.

CAREERS EXPLORATION

ENVIRONMENTAL EDUCATION B.8.22

Natural Resources and Environmental Quality

Standard is: Identify careers related to natural resources and environmental concerns.

Students read career profiles, act out careers, and create a poem, song, or rap about a career they would be interested in.

FIELD ENHANCEMENT 1: WOOD'S WORTH

AGRICULTURE EDUCATION B.8.1

Technology/Information

Standard is: Describe the need for data to make decisions.

After measuring trees and determining how many products can be made from them, students learn how foresters gather information to determine the best utilization of trees.

AGRICULTURE EDUCATION D.8.2

Agriscience/Production

Standard is: Understand the role of natural resources essential to the food, fiber, and ornamental horticulture industry in Wisconsin.

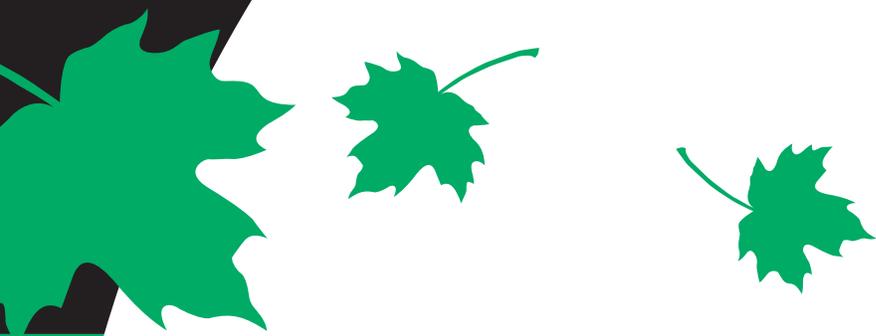
Students learn about economic, ecologic, and social values of forests in Wisconsin throughout the lesson.

ENVIRONMENTAL EDUCATION A.8.4

Questioning and Analysis

Standard is: Use critical-thinking strategies to interpret and analyze gathered information.

Students gather information about trees in a forest and use their critical thinking skills to analyze how a forest is valuable.



ENVIRONMENTAL EDUCATION A.8.5 *Questioning and Analysis*

Standard is: Use the results of their investigations to develop answers, draw conclusions, and revise their personal understanding.

Students use the results of their investigations to draw conclusions and revise their personal understanding of how forests are important to them.

ENVIRONMENTAL EDUCATION B.8.22 *Knowledge of Environmental Processes and Systems*

Standard is: Identify careers related to natural resources and environmental concerns.

Students identify and gain a better understanding of forestry as a career by using tools to take measurements in the forest and making related calculations.

MATHEMATICS B.8.2 *Number Operations and Relationships*

Standard is: Perform and explain operations on rational numbers.

Students take measurements and perform calculations to determine the number of products that can be made from a tree.

MATHEMATICS D.8.3 *Measurement*

Standard is: Determine measurement directly using standard units.

Students use a Biltmore stick to measure the diameter of trees in inches.

FIELD ENHANCEMENT 2: STUDYING FOREST LAYERS

ENVIRONMENTAL EDUCATION A.8.5 *Questioning and Analysis*

Standard is: Use the results of their investigations to develop answers, draw conclusions, and revise their personal understanding.

Students draw conclusions and revise their personal understanding about the different types of plants and animals that makeup a forest through investigating the structural layers of the forest.

ENVIRONMENTAL EDUCATION B.8.6 *Knowledge of Environmental Processes and Systems*

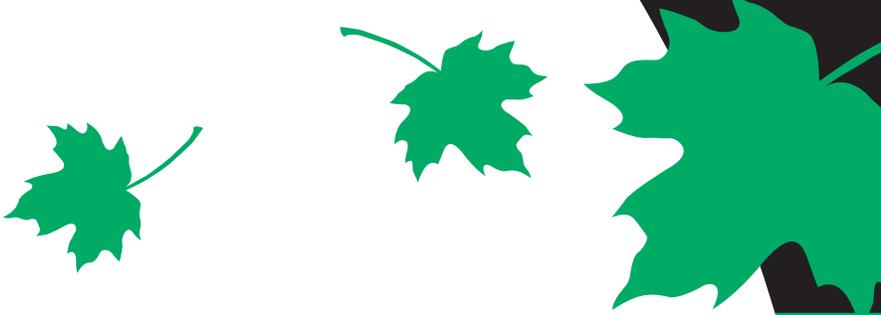
Standard is: Describe major ecosystems of Wisconsin.

Students are able to describe a Wisconsin forest ecosystem after making careful observations of the structural layers and wildlife within a forest.

ENVIRONMENTAL EDUCATION B.8.8 *Knowledge of Environmental Processes and Systems*

Standard is: Explain interactions among organisms or populations of organisms.

Students make observations and explain some of the interactions among and between plants and animals in a forest.



FIELD ENHANCEMENT 3: COMPETITION IN A FOREST

ENVIRONMENTAL EDUCATION A.8.4 *Questioning and Analysis*

Standard is: Use critical-thinking strategies to interpret and analyze gathered information.

Students gather information about trees and use critical-thinking strategies to interpret and analyze how competition affects trees.

ENVIRONMENTAL EDUCATION A.8.5 *Questioning and Analysis*

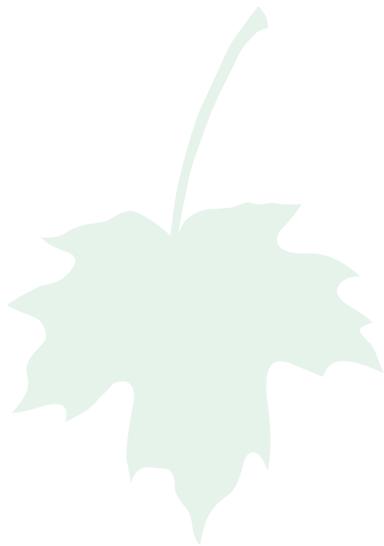
Standard is: Use the results of their investigations to develop answers, draw conclusions, and revise their personal understanding.

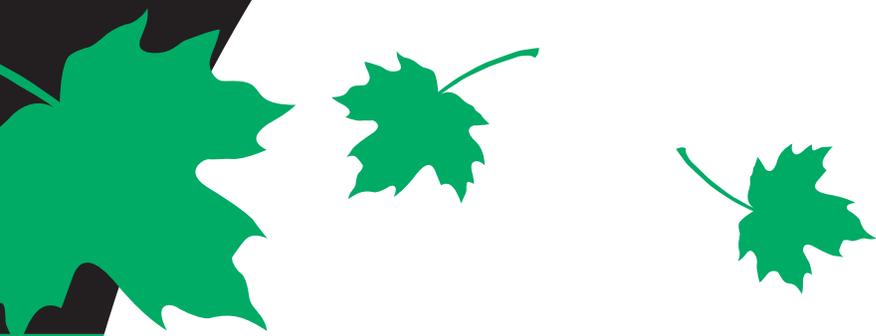
Students use the results of their investigations to draw conclusions and revise their personal understanding about the role competition plays in a forest.

ENVIRONMENTAL EDUCATION B.8.8 *Knowledge of Environmental Processes and Systems*

Standard is: Explain interactions among organisms or populations of organisms.

Students are able to explain how competition affects a tree's ability to meet its basic needs through observation and discussion.





WISCONSIN MODEL ACADEMIC STANDARDS

Standard	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8	Careers	FE 1	FE 2	FE 3
AGRICULTURE EDUCATION												
B.8.1												
D.8.2												
ENVIRONMENTAL EDUCATION												
A.8.4												
A.8.5												
B.8.1												
B.8.2												
B.8.5												
B.8.6												
B.8.7												
B.8.8												
B.8.11												
B.8.22												
D.8.3												
D.8.5												
D.8.7												
LANGUAGE ARTS												
B.8.1												
C.8.1												
C.8.3												

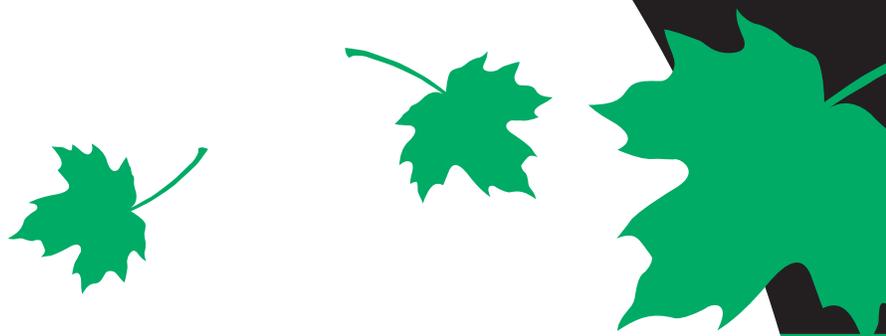


WISCONSIN MODEL ACADEMIC STANDARDS

Standard	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5	Lesson 6	Lesson 7	Lesson 8	Careers	FE 1	FE 2	FE 3
MATHEMATICS												
B.8.2												
B.8.5												
B.8.7												
D.8.3												
SCIENCE												
A.8.6												
F.8.1												
F.8.5												
F.8.9												
F.8.10												
SOCIAL STUDIES												
A.8.1												
A.8.2												
A.8.3												
B.8.3												
C.8.8												
E.8.4												

SUBJECT AREAS

	ARTS (Art, Dance, Drama, Music)	LANGUAGE ARTS	MATHEMATICS	SCIENCE	SOCIAL STUDIES
LESSON 1 Me as a Tree					
LESSON 2 What Makes a Forest?					
LESSON 3 Forests Are Always Changing					
LESSON 4 Ecosystem Extravaganza					
LESSON 5 We All Need Trees					
LESSON 6 What Is Management?					
LESSON 7 Who Owns It?					
LESSON 8 Whose Job Is It?					
CAREERS EXPLORATION					
FIELD ENHANCEMENT 1 Wood's Worth					
FIELD ENHANCEMENT 2 Studying Forest Layers					
FIELD ENHANCEMENT 3 Competition in a Forest					



MULTIPLE INTELLIGENCES

Multiple Intelligences can be thought of as different modes of learning and retaining information. Generally everyone has all the multiple intelligences, but in varying strengths. Students excel when they have an opportunity to express themselves in their preferred intelligences, but also need to have opportunities to strengthen other areas. The table below lists each of the LEAF lessons and the multiple intelligences that are addressed.

V-L: VERBAL-LINGUISTIC

Using language to express ideas and concepts, thinking symbolically and reasoning abstractly, and the ability to create conceptual verbal patterns.

L-M: LOGICAL-MATHEMATICAL

Skillfully able to think logically, inductively, categorically; recognize patterns; and work with abstract concepts.

V-S: VISUAL-SPATIAL

Perceiving images and spatial elements and representing those expressions effectively.

B-K: BODILY-KINESTHETIC

Creatively using the whole body to illustrate ideas and concepts.

M-R: MUSICAL-RHYTHMIC

Discriminating among musical components and using instruments or the voice to express understanding.

INTER: INTERPERSONAL

Demonstrating empathy toward or appreciating the thoughts and feelings of others.

INTRA: INTRAPERSONAL

Analyzing one's own thoughts and motivations and expressing understanding of those thoughts and feelings through behavior.

NAT: NATURALISTIC

Sensing patterns in and making connections with nature and the environment.

	 V-L	 L-M	 V-S	 B-K	 M-R	 Inter	 Intra	 Nat
Lesson 1: Me as a Tree								
Lesson 2: What Makes a Forest?								
Lesson 3: Forests Are Always Changing								
Lesson 4: Ecosystem Extravaganza								
Lesson 5: We All Need Trees								
Lesson 6: What Is Management?								
Lesson 7: Who Owns It?								
Lesson 8: Whose Job Is It?								
Careers Exploration								
Field Enhancement 1: Wood's Worth								
Field Enhancement 2: Studying Forest Layers								
Field Enhancement 3: Competition in a Forest								

LESSON CONNECTIONS TO THE LEAF CONCEPTUAL GUIDE

The objectives of each lesson in the *LEAF Wisconsin K-12 Forestry Education Guide* are based on subconcepts outlined in the *LEAF Conceptual Guide to K-12 Forestry Education in Wisconsin*.

This chart identifies the subconcepts covered by each lesson in the 5-6 Unit.

		Theme 1: What Is a Forest?															Theme 2: Why Are They Important?																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Subconcept:																																		
Lesson 1																																		
Lesson 2																																		
Lesson 3																																		
Lesson 4																																		
Lesson 5																																		
Lesson 6																																		
Lesson 7																																		
Lesson 8																																		
Careers																																		

		Theme 3: How Do We Sustain?															Theme 4: What Is the Future?																		
		31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60				
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