Listed below are the Wisconsin learning standards correlations for the LEAF lessons in the 5-6 grade lesson guide. On the following pages, you will find the standards listed by lesson along with a brief explanation of how they are addressed by each lesson.

LESSON 1: ME AS A TREE

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students draw and explain the parts of a tree and their functions; compile a list of basic needs of a tree; explain that trees compete for their basic needs; illustrate and explain the life stages of a tree; differentiate functions of a tree in a forest community.

Related standards/Learning Priorities: NR1.b; PS1.b; PS1.c; PS2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Explore; ELS.EX2.A.i and ELS.EX2.A.m

Students differentiate functions of a tree in a forest community, and draw/explain the parts of a tree (system) and their functions.

Explore; ELS.EX4.A.i

Students compile a list of basic needs of a tree, and explain that trees compete for their basic needs.

Engage; ELS.EN6.A.i

Students differentiate functions of a tree in a forest community, and draw/explain the parts of a tree (system) and their functions.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students discuss the roles students and other community members play and relate it to trees.

Writing; W.5.3

In the Extension, students are asked to write in a journal.

Writing; W.6.3

In the Extension, students are asked to write in a journal.

Writing; W.5.10 & W.6.10

In the Extension, students are asked to write in a journal.

NEXT GENERATION SCIENCE STANDARDS

Matter and Energy in Organisms and Ecosystems; 5-LS1-1

Students learn about the needs of trees and humans by labeling a diagram and find out how trees and humans fulfill those needs.

Interdependent Relationships in Ecosystems; MS-LS2-2

Students simulate the interactions among organisms within an ecosystem such as competition.

LESSON 2: WHAT MAKES A FOREST?

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students define the term “ecosystem;” identify forests as ecosystems with trees as the dominant plant; identify the structural layers within a forest.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR2.d; PS1.b; PS1.d; PS2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Explore; ELS.EX2.A.i and ELS.EX2.A.m

Students identify the structural layers within a forest, and identify forests as ecosystems with trees as the dominant plant.

Explore; ELS.EX2.B.i and ELS.EX2.B.m

Students investigate the living and nonliving components of a forest ecosystem.

Engage; ELS.EN6.A.i

Students investigate the living and nonliving components of a forest ecosystem.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students discuss ecosystems and forest layers.

LESSON 3: FORESTS ARE ALWAYS CHANGING

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students describe how forest ecosystems are constantly changing through succussion; explain how disturbances contribute to succession; define the term “renewable resource” and relate how forests are renewable resources.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR2.d; NR4.a; PS1.c; PS1.d; PS2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Explore; ELS.EX2.B.i and ELS.EX2.B.m

Students describe how forest ecosystems are constantly changing through succession, and how disturbances contribute to succession.

Explore; ELS.EX3.B.i and ELS.EX3.B.m

Students complete a simulation that explores the relationship between biodiversity of forests and ecological succession.

Explore; ELS.EX5.B.i and ELS.EX5.B.m

Students describe how forest ecosystems are constantly changing through succession.

Engage; ELS.EN6.C.i and ELS.EN6.C.m

Students define the term “renewable resource” and relate how sustainable forest management supports forests as a renewable resource.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Writing for Literacy in History/Social Studies, Science, and Technology; WHST6-8.7

In the Summative Assessment, students write a report on the role that change plays in a particular ecosystem.

Writing; W.5.2

Students draw a changing forest, comic book style, and write a description of what is happening in the forest as time goes by.

Writing; W.6.2

Students draw a changing forest, comic book style, and write a description of what is happening in the forest as time goes by.

NEXT GENERATION SCIENCE STANDARDS

Matter and Energy in Organisms and Ecosystems; MS-LS2-4

Students use a simulation to illustrate the changes that forest succession creates.

Interdependent Relationships in Ecosystems; MS-LS2-5

Students use a simulation to illustrate the changes and competition that forest succession creates.

Growth, Development, and Reproduction of Organisms; MS-LS1-5

Students learn that environmental conditions that exist and the characteristics of a species can determine whether or not species grow in an area.

LESSON 4: ECOSYSTEM EXTRAVAGANZA

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students describe how consumers relate to producers; summarize the major functions of an ecosystem, including energy fixation through photosynthesis, energy flow through food chains and food webs, and cycling of matter.

Related Standards/Learning Priorities: NR1.a; NR2.b; NR2.d; PS1.b; PS1.c; PS1.d; PS2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Explore; ELS.EX2.A.i and ELS.EX2.A.m

Students summarize the major functions of an ecosystem, including energy fixation through photosynthesis, energy flow through food chains and food webs, and cycling of matter.

Explore; ELS.EX2.B.i and ELS.EX2.B.m

Students summarize the major functions of an ecosystem, including energy fixation through photosynthesis, energy flow through food chains and food webs, and cycling of matter.

Explore; ELS.EX4.A.i and ELS.EX4.A.m

Students explore the role that forests play in energy flow and biogeochemical cycling.

Engage; ELS.EN6.A.i and ELS.EN6.A.m

Students describe how consumers relate to producers in a forest ecosystem, and explore the role that forests play in energy flow and biogeochemical cycling.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students participate in various discussions throughout the lesson.

Writing; W.5.3

In the Summative Assessment, students are asked to draw a food web and write a paper about how producers and consumers fit into water and carbon cycles.

Writing; W.6.3

In the Summative Assessment, students are asked to draw a food web and write a paper about how producers and consumers fit into water and carbon cycles.

WISCONSIN STANDARDS FOR MATHEMATICS

Ratios and Proportional Relationships; 6.RP.3C

Students understand percent and solve problems given a whole part and multiplying by 10%.

NEXT GENERATION SCIENCE STANDARDS

Matter and Energy in Organisms and Ecosystems; 5-PS3-1

Students use discussion and a worksheet to learn about the energy flow in an ecosystem from the sun to consumers.

Matter and Energy in Organisms and Ecosystems; MS-LS1-6

Students use discussions and a worksheet to learn about the flow of energy and matter in an ecosystem from the sun to consumers.

Matter and Energy in Organisms and Ecosystems; MS-LS2-3

Students label drawings of the carbon and water cycles and study the energy cycle through the example of producers and consumers in a forest ecosystem.

Matter and Energy in Organisms and Ecosystems; 5-LS1-1

Students label drawings of the carbon and water cycles through the example of a forest ecosystem.

Matter and Energy in Organisms and Ecosystems; 5-LS2-1

Students label drawings of the carbon and water cycles through the example of a forest ecosystem.

Earth's Systems; 5-ESS2-1

Students label drawings of the carbon and water cycles.

Earth's Systems; MS-ESS2-4

Students label drawings of the carbon and water cycles.

LESSON 5: WE ALL NEED TREES

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students explain reasons humans value forests; describe how forests support a healthy environment; discuss ways forests are economically valuable; list forest products and services they use every day.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR2.d; NR3.a; NR5.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Connect; ELS.C1.B.i and ELS.C1.B.m

Students explain that humans value forests for their aesthetic, ecological, economic, recreational, educational and cultural importance.

Connect; ELS.C1.D.i and ELS.C1.D.m

Students discuss the role that forests play in their personal recreation and education.

Explore; ELS.EX3.B.i and ELS.EX3.B.m

Students explain that humans value forests for their aesthetic, ecological, economic, recreational, educational and cultural importance.

Explore; ELS.EX3.C.i and ELS.EX3.C.m

Students discuss the connection between the reasons humans value forests and how they use them.

Explore; ELS.EX4.B.i and ELS.EX4.B.m

Students explore the resources and economic opportunities that forests provide.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students discuss the values of trees.

Writing for Literacy in History/Social Studies, Science, and Technology; WHST.6-9.6

Students create a video, radio, or live commercial about the value of trees during the Conclusion.

Structure and Properties of Matter; MS-PS1-3

Students investigate the products that are made from forest materials that they may use.

Interdependent Relationships in Ecosystems; MS-LS2-5

Students consider the ecosystem services like water purification and air purification as products of the forest that humans value.

LESSON 6: WHAT IS MANAGEMENT?

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students discuss the impact that early logging in Wisconsin had on the need for forest management; identify ways that people promote, conserve, or alter forests to meet their wishes; examine the ways that management and use of forest resources will need to become more efficient to support the needs of the world's growing population; indicate that forests can be managed for multiple uses such as ecological, economic, and social uses.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR2.d; NR3.a; NR4.a; PS1.b; PS1.c; PS1.d; PS2.a; PS3.d

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Connect; ELS.C1.B.i and ELS.C1.B.m

Students discuss the impact that early logging in Wisconsin had on the need for forest management.

Explore; ELS.EX2.B.m

Students discuss the changes that early logging in Wisconsin had on the forest ecosystem.

Explore; ELS.EX3.B.i and ELS.EX3.B.m

Students explain that the management and use of forest resources will need to become more efficient to support the needs of the world's growing population.

Explore; ELS.EX3.C.i and ELS.EX3.C.m

Students identify ways that people promote, conserve, or alter forests to meet their wishes.

Explore; ELS.EX4.B.i and ELS.EX4.B.m

Students indicate that forests can be managed to meet multiple human demands including economic and social uses.

Explore; ELS.EX5.C.i and ELS.EX5.C.m

Students discuss the impact that early logging in Wisconsin had on the need for forest management, and examine the ways that forest management can lead to changes in the forest.

Engage; ELS.EN6.A.i and ELS.EN6.A.m

Students indicate that forests can be managed for multiple uses, and examine the ways that management can lead to changes in the forest.

Engage; ELS.EN6.C.i and ELS.EN6.C.m

Students identify ways that people promote, conserve, or alter forests to meet their wishes.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students discuss how forest management differs depending on landowner goals.

Writing for Literacy in History/Social Studies, Science, and Technology; WHST6-8.7

In the Summative Assessment, students write a report on forest management for public landowners.

NEXT GENERATION SCIENCE STANDARDS

Engineering Design; 3-5ETS1-2

Students use a story concept to determine which is the best solution to a problem based on the criteria given.

Engineering Design; MS-ETS1-1

Students use a story to simulate the different goals of landowners in forest management and how those different goals can be a challenge.

Human Impacts; MS-ESS3-4

Students use a simulation to determine how changes in demand caused by human populations will impact forests.

MODEL ACADEMIC STANDARDS FOR SOCIAL STUDIES

History: Time, Continuity, and Change; B.8.3

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

LESSON 7: WHO OWNS IT?

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students indicate that forests can vary in size and are both publicly-and privately-owned; explain how forest ecosystems are affected by having multiple owners; define the roles of government agencies, private businesses, organizations, communities, and individuals in forest management.

Related Standards/Learning Priorities: NR1.a; NR2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Explore; ELS.EX2.A.m

Students explain how forest ecosystems are affected by having multiple owners.

Explore; ELS.EX5.C.m

Students define the roles of government agencies, private businesses, organizations, communities, and individuals in forest management.

Engage; ELS.EN6.B.m

Students define the roles of government agencies, private businesses, organizations, communities, and individuals in forest management, and explain how forest ecosystems are affected by having multiple owners.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students discuss the roles different groups and individuals play in making land use decisions.

Writing; W.5.1

Students write about and defend their ideas for change to room arrangement.

Writing; W.6.1

Students write about and defend their ideas for change to room arrangement.

WISCONSIN STANDARDS FOR MATHEMATICS

Ratios and Proportional Relationships; 6.RP.3C

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

NEXT GENERATION SCIENCE STANDARDS

Earth's Systems; 5-ES3-1

Students participate in a mock school board meeting to understand the role individuals play in community decisions.

Engineering Design; MS-ETS1-1

Students participate in a mock school board meeting to understand the role individuals of different opinions and knowledge play in forest management decisions.

WISCONSIN MODEL ACADEMIC STANDARDS FOR SOCIAL STUDIES

Geography: People, Places, and Environments; A.8.1

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

Geography: People, Places, and Environments; A.8.2

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

Geography: People, Places, and Environments; A.8.3

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

Political Science and Citizenship: Power, Authority, Governance, and Responsibility; C.8.8

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

The Behavioral Sciences: Individuals, Institutions, and Society; E.8.4

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

LESSON 8: WHOSE JOB IS IT?

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students explain that citizens have a responsibility to be stewards of the environment; explain that citizens can make decisions as individuals or as part of a group; describe how choices people make affect the future of forests.

Related Standards/Learning Priorities: NR1.a; NR3.a; NR5.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Connect; ELS.C1.A.i and ELS.C1.A.m

Students discuss how personal views of forest use are influenced by knowledge, belief and values.

Explore; ELS.EX5.A.i and ELS.EX5.A.m

Students explore how different perspectives shape decisions we make about forest uses.

Explore; ELS.EX5.C.i and ELS.EX5.C.m

Students describe how choices people make affect the future of forests.

Engage; ELS.EN6.A.m

Students explain that citizens can make decisions as individuals or as part of a group.

Engage; ELS.EN6.B.i and ELS.EN6.B.m

Students explain that citizens have a responsibility to be stewards of the environment.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students discuss the roles students and other community members as stewards of forests.

Speaking and Listening; SL.6.3

Students participate in a mock school board meeting and make decisions based on the information from various community members.

Reading for Information; RI.5.6

Students take on different roles as participants in a mock school board meeting.

Reading for Information; RI.6.6

Students take on different roles as participants in a mock school board meeting.

WISCONSIN MODEL ACADEMIC STANDARDS FOR SOCIAL STUDIES

Political Science and Citizenship: Power, Authority, Governance, and Responsibility; C.8.8

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

The Behavioral Sciences: Individuals, Institutions, and Society; E.8.4

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

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Engage; ELS.EN6.C.e

Students learn about jobs related to forests and forestry.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Reading for Information; RI.5.2

Students read career profile documents to gain information about forest-related careers.

Writing; W.5.2

Students write a rap, song, or poem about a forestry-related career.

Writing; W.6.2

Students write a rap, song, or poem about a forestry-related career.

FIELD ENHANCEMENT 1: WOOD'S WORTH

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students determine the number of board feet in a tree; identify social, economic, and environmental values of trees.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR3.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Connect; ELS.C1.C.i and ELS.C1.C.m

Students investigate the economic value of forests through hands-on measurement of trees, and reflect on the other values of forests, including environmental and social.

Explore; ELS.EX3.B.i and ELS.EX3.B.m

Students explain that humans value forests for their aesthetic, ecological, economic, recreational, educational and cultural importance.

Explore; ELS.EX4.B.i and ELS.EX4.B.m

Students explore the resources and economic opportunities that forests provide.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students have discussions in pairs and as a larger group about things that are valuable in a forest.

WISCONSIN STANDARDS FOR MATHEMATICS

Number and Operations in Base Ten; 5.NBT.5

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

Measurement and Data; 5.MD.3

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

Measurement and Data; 5.MD.5

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

FIELD ENHANCEMENT 2: STUDYING FOREST LAYERS

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students identify the structural layers in a forest; describe wildlife that can be found in each of the layers of a forest.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR2.d; PS1.a; PS1.b; PS1.c; PS1.d; PS2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Connect; ELS.C1.C.i and ELS.C1.C.m

Students investigate the structure and composition of a forest ecosystem through direct outdoor observation.

Explore; ELS.EX2.A.i and ELS.EX2.A.m

Students identify the structural layers within a forest, and identify forests as ecosystems with trees as the dominant plant.

Explore; ELS.EX2.B.i and ELS.EX2.B.m

Students investigate the living and nonliving components of a forest ecosystem.

Engage; ELS.EN6.A.i

Students investigate the living and nonliving components of a forest ecosystem.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students clearly explain their own drawing of forest layers.

Writing; W.5.3

Students write a story from the perspective of a mouse riding an elevator through the forest layers.

Writing; W.6.3

Students write a story from the perspective of a mouse riding an elevator through the forest layers.

FIELD ENHANCEMENT 3: COMPETITION IN A FOREST

WISCONSIN STANDARDS FOR AGRICULTURE, FOOD AND NATURAL RESOURCES

Students list the basic needs of a tree; explain what part of a tree gathers each of the tree's basic needs; give examples of how competition affects a tree meeting its basic needs; identify crown layers in a forested area.

Related Standards/Learning Priorities: NR1.a; NR1.b; NR2.b; NR2.c; NR2.d; PS1.b; PS1.c; PS1.d; PS2.a

WISCONSIN STANDARDS FOR ENVIRONMENTAL LITERACY AND SUSTAINABILITY

Connect; ELS.C1.C.i and ELS.C1.C.m

Students observe competition in a forest ecosystem through direct outdoor observation.

Explore; ELS.EX2.A.i and ELS.EX2.A.m

Students explain the parts of a tree (system) and their functions.

Explore; ELS.EX4.A.i

Students give examples of how competition affects a tree meeting its basic needs.

Engage; ELS.EN6.A.i

Students explain the parts of a tree (system) and their functions.

WISCONSIN STANDARDS FOR ENGLISH LANGUAGE ARTS

Speaking and Listening; SL.5.1 &SL.6.1

Students participate in discussion throughout the lesson.

Writing; W.5.3

In the Summative Assessment, students write a story from the perspective of an overtopped tree.

Writing; W.6.3

In the Summative Assessment, students write a story from the perspective of an overtopped tree.

Questioning and Analysis; A.8.4

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

NEXT GENERATION SCIENCE STANDARDS

Matter and Energy in Organisms and Ecosystems; 5-LS1-1

Students review the needs of basic needs of trees and how they get them.

Matter and Energy in Organisms and Ecosystems; MS-LS2-1

Students participate in a simulation and make first-hand observations about competition among trees in a forest.

Interdependent Relationships in Ecosystems; MS-LS2-2

Students participate in a simulation and make first-hand observations about competition among trees in a forest.