

**Pennsylvania Academic Standards for Science and Technology**  
**Curriculum: *Treetop***

Lesson	Academic Standards	Grade Level	Activities
<p style="text-align: center;"><b>Tree Tales</b></p>	<p>3.1.4.A. Know that natural and human-made objects are made up of parts.</p>	4	<p>Identify the main parts of a tree and learn what trees need for survival.</p>
	<p>3.1.7.A. Explain the parts of a simple system and their relationship to each other.</p>	7	<p>Learn the basic gas cycle and basic photosynthesis.</p>
	<p>3.1.4.E. Recognize change in natural and physical systems.</p>	4	<p>Understand the difference between producers, consumers, and decomposers.</p>
	<p>3.3.4.A. Know the similarities and differences of living things.</p>	4	<p>Identify deciduous and coniferous trees and learn why each type is important for animal habitat.</p>
	<p>3.3.4.D. Identify changes in living things over time.</p>	4	
<p style="text-align: center;"><b>Flows and Goes in the Forest</b></p>	<p>3.1.4.C. Illustrate patterns that regularly occur and reoccur in nature.</p>	4	<p>Learn about the basic water cycle, as well as why both water and energy are important to living things.</p>
	<p>3.2.4.B. Describe objects in the world using the five senses.</p>	4	<p>Recognize where soil comes from and identify the differences of soil types.</p>
	<p>3.2.4.C. Recognize and use the elements of scientific inquiry to solve problems.</p>	4	

<p><b>Flows and Goes in the Forest</b> (continued)</p>	<p>3.4.4.B. Know basic energy types, sources, and conversions.</p> <p>3.4.7.B. Relate energy sources and transfers to heat and temperature.</p> <p>3.5.4.A. Know basic landforms and Earth history.</p> <p>3.5.4.B. Know types and uses of earth materials.</p> <p>3.5.4.D. Recognize the Earth's different water resources.</p>	<p>4</p> <p>7</p> <p>4</p> <p>4</p> <p>4</p>	
<p><b>I Need You, You Need Me</b></p>	<p>3.2.4.B. Describe objects in the world using the five senses.</p> <p>3.3.4.A. Know the similarities and differences of living things.</p> <p>3.7.4.B. Select appropriate instruments to study materials.</p>	<p>4</p> <p>4</p> <p>4</p>	<p>Learn that living things depend on many factors for survival. Identify food chains and webs. Construct simple bird feeders to attract various birds.</p>
<p><b>Different Trees, Different Forests</b></p>	<p>3.2.4.B. Describe objects in the world using the five senses.</p>	<p>4</p>	<p>Understand that there are many types of forests and that they provide a variety of animal habitats.</p>

<p><b>Different Trees, Different Forests</b> (continued)</p>	<p>3.3.4.A. Know the similarities and differences of living things.</p>	<p>4</p>	<p>Learn the similarities and differences of different types of forests.</p>
<p><b>Change in the Wind</b></p>	<p>3.1.4.C. Illustrate patterns that regularly occur and reoccur in nature.</p> <p>3.1.4.E. Recognize change in natural and physical systems.</p>	<p>4</p> <p>4</p>	<p>Understand the difference between renewable and nonrenewable resources. Learn that trees have different habitat preferences as well as different ways of reproducing.</p>

**Pennsylvania Academic Standards for Environment and Ecology**  
**Curriculum: *Treetop***

Lesson	Academic Standards	Grade Level	Activities
<b>Tree Tales</b>	4.1.4.E. Recognize the impact of watersheds and wetlands on animals and plants.	4	Identify the main parts of a tree and learn what trees need for survival. Learn the basic gas cycle and basic photosynthesis. Understand the difference between producers, consumers, and decomposers. Identify deciduous and coniferous trees and learn why each type is important for animal habitat.
	4.3.4.A. Know that plants, animals and humans are dependent on air and water.	4	
	4.3.4.C. Understand that the elements of natural systems are interdependent.	4	
	4.3.7.C. Explain biological diversity.	7	
	4.6.4.A. Understand that living things are dependent on non-living things in the environment for survival.	4	
	4.6.7.A. Explain the flows of energy and matter from organism to organism within an ecosystem.	7	
	4.6.4.B. Understand the concept of cycles.	4	

<p><b>Tree Tales (continued)</b></p>	<p>4.6.4.C. Identify how ecosystems change over time.</p> <p>4.6.7.C. Explain how ecosystems change over time.</p> <p>4.7.4.A. Identify differences in living things.</p>	<p>4</p> <p>7</p> <p>4</p>	
<p><b>Flows and Goes in the Forest</b></p>	<p>4.1.4.B. Explain the differences between moving and still water.</p> <p>4.1.4.E. Recognize the impact of watersheds and wetlands on animals and plants.</p> <p>4.2.4.C. Know that some natural resources have limited life spans.</p> <p>4.2.7.C. Explain natural resource distribution.</p> <p>4.3.4.A. Know that plants, animals, and humans are dependent on air and water.</p> <p>4.3.4.C. Understand that the elements of natural systems are interdependent.</p>	<p>4</p> <p>4</p> <p>4</p> <p>7</p> <p>4</p> <p>4</p>	<p>Learn about the basic water cycle, as well as why both water and energy are important to living things. Recognize where soil comes from and identify the differences of soil types.</p>

<b>Flows and Goes in the Forest</b> (continued)	4.6.4.A. Understand that living things are dependent on non-living things in the environment for survival.	4	
	4.6.7.A. Explain the flows of energy and matter from organism to organism within an ecosystem.	7	
	4.6.4.B. Understand the concept of cycles.	4	
	4.6.4.C. Identify how ecosystems change over time.	4	
	4.6.7.C. Explain how ecosystems change over time.	7	
<b>I Need You, You Need Me</b>	4.3.4.A. Know that plants, animals, and humans are dependent on air and water.	4	Learn that living things depend on many factors for survival. Identify food chains and webs. Construct simple bird feeders to attract various birds.
	4.6.4.A. Understand that living things are dependent on non-living things in the environment for survival.	4	
	4.7.4.A. Identify differences in living things.	4	

<b>Different Trees, Different Forests</b>	4.3.4.C. Understand that the elements of natural systems are interdependent.	4	Understand that there are many types of forests and that they provide a variety of animal habitats. Learn the similarities and differences of different types of forests.
	4.6.4.A. Understand that living things are dependent on non-living things in the environment for survival.	4	
	4.7.4.A. Identify differences in living things.	4	
	4.7.7.A. Describe diversity of plants and animals in ecosystems.	7	
<b>Change in the Wind</b>	4.2.4.C. Know that some natural resources have limited life spans.	4	Understand the difference between renewable and nonrenewable resources. Learn that trees have different habitat preferences as well as different ways of reproducing.
	4.6.4.A. Understand that living things are dependent on non-living things in the environment for survival.	4	
	4.6.4.C. Identify how ecosystems change over time.	4	
	4.7.4.A. Identify differences in living things.	4	