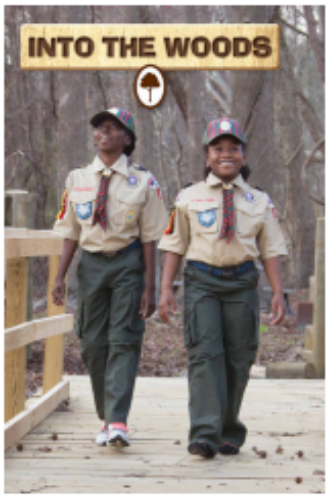
Webelos-AoL Elective Adventure: Into the Woods Complete at least Requirements 1-4 and one other.		
Requirements	Notes	Sign-off
1. Identify two different groups of trees and the parts of a tree.	We will review at the Webelos WOW.	
2. Identify four trees common to the area where you live. Tell whether they are native to your area. Tell how both wildlife and humans use them.	We will review at the Webelos WOW.	
3. Identify four plants common to the area where you live. Tell which animals use them and for what purpose.	We will review at the Webelos WOW.	
4. Develop a plan to care for and then plant at least one plant or tree, either indoors in a pot or outdoors. Tell how this plant or tree helps the environment in which it is planted and what the plant or tree will be used for.	Complete at the Den level	
5. Make a list of items in your home that are made from wood and share it with your den. OR: With your den, take a walk and identify useful things made from wood.	We will review at the Webelos WOW.	
6. Explain how the growth rings of a tree trunk tell its life story. Describe different types of tree bark and explain what the bark does for the tree.	We will review at the Webelos WOW.	
7. Visit a nature center, nursery, tree farm, or park, and speak with someone knowledgeable about trees and plants that are native to your area. Explain how plants and trees are important to our ecosystem and how they improve our environment	We will review at the Webelos WOW using Hoyt as a Nature Center. Dens may want to do an outside visit to a local Nature Center as well.	



ELECTIVE ADVENTURE

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SNAPSHOT OF ADVENTURE

Trees and plants play important roles in nature. In this

adventure, you will get to learn about the plants and trees in your community by exploring your area on a walk or visit to a local nature center, tree farm, or park.

If you've ever stood beneath a towering redwood or enjoyed the colors of fall leaves or watched pine trees swaying in the wind, you know that trees and plants are beautiful. But they are also important to life on Earth. As you go into the woods in this adventure, you'll learn what trees and plants do for us and for animals and why taking care of them is important to our planet's well-being.

A Scout is reverent. Spending time in nature can provide an opportunity for quiet reflection or prayer.

COMPLETE

COMPLETE REQUIREMENTS 1-4 AND ONE OTHER.

REQUIREMENT 1 | Identify two different groups of trees and the parts of a tree.

Unless you live in the desert, on the tundra, or at the top of a very tall mountain, there are probably trees around you—even in the middle of a city. But what kind of trees are they? If you look closely, you will discover that different trees have different characteristics. Some grow very tall, while others grow out as much as they grow up. Some keep their foliage all year round, while others lose their leaves in the fall (often after those leaves have turned brilliant shades of yellow, red, and orange).

Scientists divide most trees into two main groups: coniferous trees and deciduous trees.

Coniferous Trees

The seeds in coniferous trees grow in cones, which is where the word "coniferous" comes from. When a cone's scales open up, the seeds fall out, and new trees can take root. Coniferous trees tend to grow tall rather than wide; they have a triangular shape like a Christmas tree. Pines, cedars, firs, and spruces are examples of coniferous trees.

> Evergreens do lose their needles. They just don't lose them all at the same time.

Most coniferous trees are evergreen, meaning they don't lose their leaves (which are called needles) in the fall. However, some coniferous trees, like the bald cypress and larch, do lose their leaves as winter approaches.

Deciduous Trees

Instead of having needles, deciduous trees have wide, flat leaves that are good at capturing sunlight. They are called deciduous because they lose their leaves each year. These trees spread out as they grow, and they're often bigger at the top than they are at the bottom. Deciduous trees don't produce cones. Instead, their seeds are contained in nutshells or fruit. Oaks, maples, poplars, beeches, sycamores, and ashes are examples of deciduous trees. Maple trees have special seeds that "fly" to the ground like little helicopters.

A few deciduous trees are actually evergreens. The live oak is an example.

What About Palm Trees?

Palm trees, which are often seen in far southern parts of the United States, don't really fall into either the coniferous or the deciduous category. They don't have cones, and they also don't drop their leaves in the fall.

How a Tree Grows

A tree grows in its roots, trunk, and crown (its top, where all the branches and leaves are). The tree needs food to grow, and its roots and leaves play a part in the process of making food.

How far do a tree's roots stretch? A tree's root ball is usually as wide as its branches.

Crown: The crown is the upper part of the tree, including the branches and leaves. The leaves take in sunlight and use it to make food for the tree in a process called photosynthesis.

Trunk: The trunk is a pathway for water and minerals (food) to move from the soil up through the trunk to the leaves. It grows outward and upward each year. As the trunk grows taller, the crown of the tree grows higher in search of more sunlight. In trees used for lumber, the trunk produces most of the useful wood.

Roots: Roots anchor the tree in the earth and help slow erosion by holding soil in place. They soak up the water, minerals, and nitrogen from the soil and send it up the trunk to the leaves to make food for the tree. A layer of growth cells at the root tips makes new roots each year. Even when a tree is cut down, the roots may sprout new growth to revive and, perhaps, bring the tree back to life.

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REQUIREMENT 2 | Identify four trees common to the area where you live. Tell whether they are native to your area. Tell how both wildlife and humans use them.

Some trees are native to your part of the country and have been growing there for thousands of years. Others, especially those planted in parks and around buildings, may have been imported from other areas. (Some of these are called invasive species; they are pests that tend to crowd out native trees.)

A field guide to trees can help you identify trees in your area. It will show you characteristics that make it easy to tell one kind of tree from another.

When you are looking at trees, take time to look closely at everything. Use a magnifying glass to study tiny details.

Check for:

- Type of leaf. Feel it. Is it smooth or rough? Notice the shape.
- Leaf edges. Are they smooth or toothed?
- Type of bark. Is it smooth, rough, peeling, light, or dark?
- Unusual features like thorns, flowers, or berries. Some trees have more than one leaf shape. The sassafras tree has three leaf shapes.
- With coniferous trees, notice the length, shape, and grouping of the needles. Spruce needles are sharp and short, with four sides, and they grow separately on the twigs. Pine needles grow in bundles; count the number in a bundle for a clue to the kind of pine it is. Needles of a longleaf pine could be 18 inches long, but jack pine needles are only about 1 inch long.
- The size and type of cone or fruit will also provide clues to the identity of the tree. The acorns on most oak trees have small, fairly smooth caps, but bur oak acorns have fringed caps that nearly cover the whole acorn.

How do the trees smell? Some trees, like pines and eucalyptus, give off wonderful scents, especially when the air is moist.

If you look closely, you'll see how trees support other forms of life. Look for woodpecker holes, insects hiding under the bark, mistletoe rooted in the branches, fungi growing on the bark, and the nests of birds and squirrels.

Larger animals use trees, too. Bears mark their territory by clawing and biting tree trunks. Beavers eat tree bark and cut down trees to build dams and homes for themselves. Mountain lions sharpen their claws on trees. Moose, elk, and deer use tree trunks or flexible saplings to rub the velvet off their antlers. They also eat tree bark, leaves, and stems.

Trees Common to Connecticut

REQUIREMENT 3 | Identify four plants common to the area where you live. Tell which animals use them and for what purpose.

Much like trees, smaller plants and shrubs are important to animals. Bluebirds, catbirds, and mockingbirds eat the red berries of the holly bush. Deer, rabbits, birds, and insects feast on flowers, leaves, fruits, and nuts of both trees and plants. Hummingbirds drink nectar out of flowers. Birds build nests in trees and shrubs.

See what you can learn about the plants in your area. If possible, observe a plant from a distance and watch an animal using it.

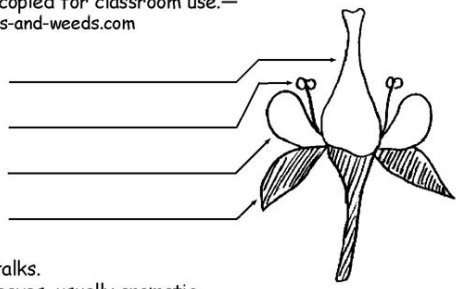
Patterns in Plants Quiz

Shanleya's Quest: A Botany Adventure for Kids Ages 9 to 99

—This page may be photocopied for classroom use.—

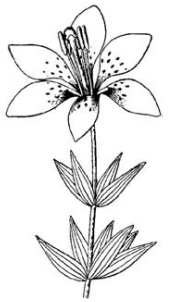
www.wildflowers-and-weeds.com

Part I: Start from the outside of the flower and label the flower parts.



Part II: Write "monocot" or "dicot" and the family name for each of the flowers below. Write the letter for the correct pattern for identification from the following list.

Families	Patterns for Identification
Mint	A. Compound umbels. Hollow stalks.
Parsley	B. Square stems and opposite leaves, usually aromatic.
Mustard	C. Weedy annuals with 4 petals and 6 stamens, 4 tall, 2 short.
Pea	D. Irregular flowers with "banner, wings, and keel." Pea-like pods.
Lily	E. Wind pollinated flowers without petals. Leaves with parallel veins.
Grass	F. Composite flowerheads with ray flowers, disc flowers, and pitted discs.
Rose	G. Flower parts in threes. Sepals and petals identical in size and color.
Aster	H. 5-petaled flowers with numerous stamens and often fleshy fruits.



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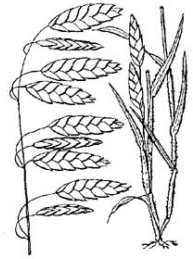

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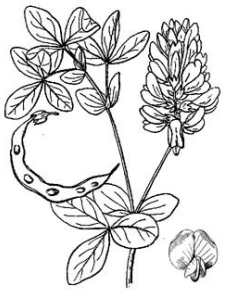

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M or D: _____

REQUIREMENT 4 | Develop a plan to care for and then plant at least one plant or tree, either indoors in a pot or outdoors. Tell how this plant or tree helps the environment in which it is planted and what the plant or tree will be used for.

No plant or tree lives forever. Some die of old age, some get damaged by fire or lightning, and some are cut down to be used for lumber or other purposes. You can help replace lost plants or trees by planting new ones. If you're lucky, you may someday walk beneath the branches of a tree you planted!

A local nursery or garden center can help you select a plant or tree that will grow well in your area.

Here are some planting tips:

- Carry seedlings in a bucket or box. Keep the roots damp.
- Place trees at least 6 feet apart. Place plants at least 6 inches apart (but follow the instructions that come with each plant).
- Dig a hole just deep enough to hold the roots. Loosen the sides and bottom of the hole so that tiny roots can push into the soil. The roots should not be stuffed into the hole.
- A seedling should be planted so that its old ground line is about one-quarter inch below the new ground level. (The ground line is the dark mark on the trunk.) Plants should be planted at the same ground level.
- A seedling or other plant should be planted with its trunk straight up. Fill the hole with soil so it is even with the ground. The soil should not be sunken in or mounded up above the ground.
- Press the soil down firmly around the roots to prevent air pockets. If you don't, the tree or plant may die because the air pockets dry out the roots, preventing water and nutrients from reaching them.
- A newly planted seedling needs lots of water, so soak the soil around the seedling with water, and then soak it again if it is planted in the ground.
- If you're planting in a pot, make sure the pot is large enough to allow the plant or tree to grow (at least double the size of the container the plant arrived in). Be sure there are holes in the bottom of the pot to allow excess water to drain and a saucer underneath to catch the water. Place a layer of pebbles in the bottom of the pot to prevent the soil from draining.
- Closely follow the instructions for watering given on any tag or label that comes with the plant or tree. Each type of plant has different watering needs. Be sure to provide water and food as required on a regular basis.
- Cover the ground around the base of a seedling with several inches of mulch—composted leaves, wood chips, grass cuttings, straw, or sawdust. This holds in moisture and helps make the soil richer for the new tree. The mulch should be flat or slope down from the trunk to the ground. Don't make it look like a volcano.

Your plant or tree can help the environment in several ways. Flowering plants provide food for bees and hummingbirds. Fruit and nut trees provide food for wildlife and people. Shade trees help keep buildings cooler. Evergreen trees offer shelter from winter winds. All trees provide habitat for wildlife and purify the air by taking in carbon dioxide and releasing oxygen.

REQUIREMENT 5 | Make a list of items in your home that are made from wood and share it with your den. Or with your den, take a walk and identify useful things made from wood.

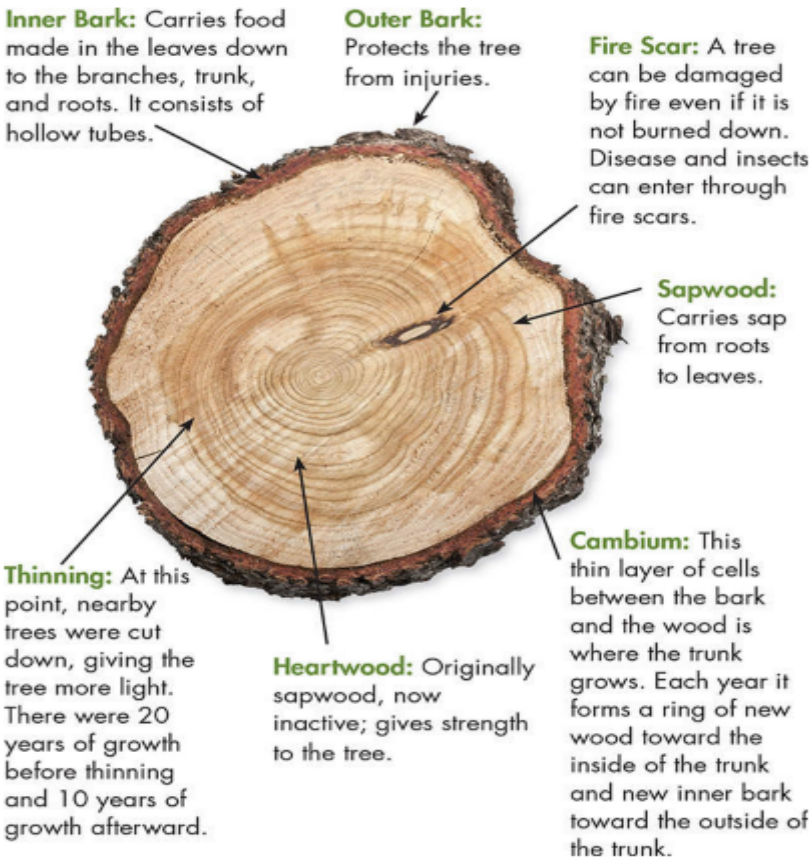
Many things in your home are made from wood. In fact, your home itself may be made from wood. If you go into an unfinished attic or basement, you can see some of this wood in the form of studs, joists, and floorboards.

Make a list of everything in your home that is made of wood, or take a walk around your neighborhood or school and look for other wooden things.

Wood and Plant Uses

- Hickory and white ash are used to make baseball bats and tool handles.
- Cedar is used to make porches, decks, and shingles for roofs.
- Mesquite and hickory chips on cooking fires flavor food.
- Paper is made of wood pulp.
- Toothpaste contains cellulose gum, which is made from wood fiber.
- Cinnamon, nutmeg, and vanilla come from trees.
- Some candles are made from the waxy covering of the southern bayberry fruit.
- Maple syrup is made from the sap of sugar maples harvested in the early spring.

REQUIREMENT 6 | Explain how the growth rings of a tree trunk tell its life story. Describe different types of tree bark and explain what the bark does for the tree.



Sanding the slice can help bring the rings out.

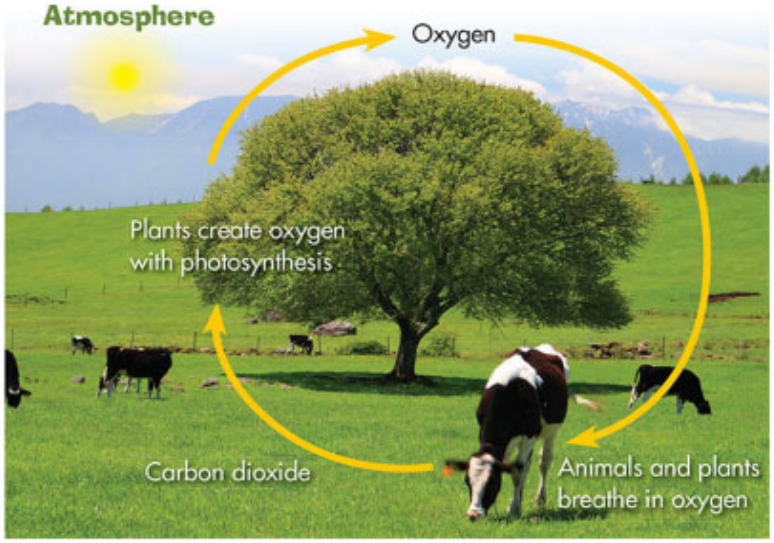
Look at a large slice of a tree trunk or thick branch that shows rings. For most types of trees, there will be one ring per year. The width of each ring represents the kind of year the tree experienced. A thin ring may indicate a lack of rain or nutrients. A thick ring may mean plenty of water and food for that year. A scar may mean a fire damaged the tree.

Make a bark rubbing by taping paper to the bark of a tree and rubbing the side of a crayon on the paper to transfer the texture of the bark to the paper. Different types of trees have very different bark. Some bark is thick and deeply furrowed, some bark is smooth with pock marks, and some has flaky outer layers that fall off naturally.

REQUIREMENT 7 | Visit a nature center, nursery, tree farm, or park, and speak with someone knowledgeable about trees and plants that are native to your area. Explain how plants and trees are important to our ecosystem and how they improve our environment.

An ecosystem is a community of plants and animals living in an environment that supplies what they need for life. Within an ecosystem, tree and plants produce leaves, bark, fruits, nuts, and seeds that many animals eat. They also produce oxygen, which animals need to breathe. In fact, plants and trees produce most of the oxygen on Earth.

Through a process called photosynthesis, plants turn sunlight, water, and carbon dioxide into energy. A byproduct of photosynthesis is oxygen. You know where sunlight and water come from, but where does carbon dioxide come from? It comes from animals and humans every time we breathe out! That's why scientists talk about the oxygen cycle that connects plants and animals.



By trapping carbon dioxide, plants and trees keep it out of the atmosphere. That's important because too much carbon dioxide in the atmosphere contributes to climate change.

Plants and trees do some other important things. They stabilize the soil, which prevents erosion, and they provide shade and shelter for animals and humans. They can be harvested to create furniture, building materials, clothing, paper, food, and many other things we use every day.