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# Who Lives in A Tree Supplemental Guide



*The materials in this kit were funded by a generous grant #11660 from the Chesapeake Bay Trust and from Maryland Department of Natural Resources Wildlife & Heritage Service (<http://www.dnr.maryland.gov/>).*

*This kit has been designed to supplement Who Lives in a Tree?, a Growing Up WILD activity. Growing Up WILD is an early childhood education program designed to teach kids aged 3-7 about nature through interdisciplinary, developmentally appropriate activities. Growing Up WILD has been aligned with Common Core (K-2), Head Start Domains, NAEYC standards and Maryland Environmental Literacy Standards.*

*Growing Up WILD materials are copyrighted by the Council for Environmental Education (CEE). The Growing Up WILD guide with 27 activities can be purchased directly from CEE ([www.projectwild.org](http://www.projectwild.org)) or can be obtained by attending a workshop in Maryland. Check out the Maryland Dept. of Natural Resources website*

*<http://dnr2.maryland.gov/wildlife/Pages/Education/GrowingUpWILD.aspx> ) to find out about upcoming workshops or contact Sarah Witcher at 410-260-8566, [sarah.witcher1@maryland.gov](mailto:sarah.witcher1@maryland.gov) . Workshops can be set up for free with your organization if a minimum number of participants can be achieved.*

#### Who lives in a Tree Kit Contents:

1. Felt tree w/ suction cup
2. Gray Squirrel Puppet
3. Laminated Who Lives in a Tree Cards
4. Laminated Who Lives in a Tree Poem
5. 2 plastic binoculars
6. 5 magnifying glasses
7. Laminated wildlife guides (spiders, birds, butterflies)
8. Peterson Field Guide to Birds
9. Peterson Field Guide to Mammals
10. The Secret Life of Trees book
11. Birds, Nests and Eggs book
12. A Log's Life book
13. Laminated activity, resource guide & CD

## Why Are Trees Important?

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Trees are important resources for humans and wildlife. Trees provide food, shelter, shade, and oxygen. In addition, they also provide ecosystem services such as erosion control and can provide privacy, aesthetics to the landscape, and even noise reduction services. According to the U.S. Department of Agriculture, "One acre of forest absorbs six tons of carbon dioxide and puts out four tons of oxygen. This is enough to meet the annual needs of 18 people." Trees, shrubs and turf also filter air by removing dust and absorbing other pollutants like carbon monoxide, sulfur dioxide and nitrogen dioxide. After trees intercept unhealthy particles, rain washes them to the ground.

Many woody plants produce **soft mast** (fruit) or **hard mast** (nuts) that provides food for both birds and mammals. In Maryland, species like paw-paws (*Asimina triloba*) produce large, edible fruits that are consumed by many mammal species. Hard mast producing trees include American beech (*Fagus grandifolia*), hickories (*Carya* spp.), and oaks (*Quercus* spp.). In addition to food, trees also provide an important shelter resource for a variety of wildlife.



## Who Lives in a Tree?

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1. Bats- Maryland is home to 10 species of bats. Four of those species, the hoary (*Lasiurus cinereus*), eastern red (*L. borealis*), evening bat (*Nycticeius humeralis humeralis*) and silver-haired (*Lasionycteris noctivagans*) bats, are known as **tree bats**. Tree bats seldom enter caves. They typically roost in trees during summer days and spend winter primarily in hollow trees and/or hibernate to warmer locations. Bats are extremely important for pest insect control, and the US Department of Agriculture estimates the cost of bat pest control services at around \$3 billion dollars per year. Bats are often misunderstood and, unfortunately, populations of these insect-munching machines are dramatically declining due to white-nose syndrome.



*Eastern red bat, public domain photo*

2. Birds- Many species of birds depend on trees for some part of their lifecycle- whether it be for cover, nesting, food or a roost. Some birds are considered to be forest interior dwelling species (FIDS) due to their need for large, intact stands of forest to survive. Colorful species like scarlet tanagers and yellow warblers depend on forests as well as more common species such as blue jays, northern cardinals and Carolina chickadees.



*Scarlet tanager, USFWS photo*

3. Butterflies & Moths-All butterflies and moths depend on plants for the early stages of their lifecycle (aka the caterpillar or larval stage). The plants which the caterpillars consume are known as **host plants**, and many species have co-evolved with particular plants. For example, Tiger Swallowtail (*Papilio glaucus*) host plants include White Ash (*Fraxinus americana*), Green Ash (*Fraxinus pennsylvanica*), Black Cherry (*Prunus serotina*), Choke-cherry (*Prunus virginiana*) and others. Oak trees host 534 species of moth and butterfly caterpillars! In addition to providing a larval host site, some trees also provide nectar for hungry adult butterflies and moths.



4. Insects- In addition to butterflies and moths, many other species of insects also utilize trees. For example, species like treehoppers use camouflage to disguise themselves as 'thorns' on tree branches while drinking sap from the branches. Some species of ants dwell in trees while others simply consume ripe fruits. In the Fall, webworms build spider-like webs and spend their time in the webs, eating leaves from trees.



5. Owls-Eight species of owls can be in Maryland. Barred Owls, Barn Owls, Eastern Screech-Owls and Great-Horned Owls are commonly found throughout Maryland. Northern Saw-Whet Owls migrate through the State in late fall and a few occasionally breed in western Maryland in the summer. Short-Eared Owls and Long-Eared Owls historically nested in Maryland, but no breeding birds have been seen in a number of years. Snowy Owls occasionally migrate through the State and can be seen along Assateague Island. Owls are carnivorous and have special adaptations that enable them to hunt at night. For example, their eyes are large and fixed, with binocular vision and good depth perception. Because owls are unable to move their eyes, they have developed an incredibly flexible neck that allows them to turn their head 270 degrees, from one side to the other. (Humans can only rotate their heads about 180 degrees.) Their eyes are also extremely light sensitive, allowing them to see well at night. Another essential adaptation that allows owls to hunt at night is their extremely sensitive hearing. It is the owl's facial disc that enables it to hear a soft rustling in the grass as the disc acts to funnel and amplify all sound to their ears. Many owls also have asymmetrical ears which allow the owl to detect the distance and direction from which sound is coming more accurately. Owls also rely on silent flight to surprise their prey. Owl feathers are long and soft to help muffle sounds while flying. These are all perfect adaptations for finding and catching prey at night, and explain why owls have become the most efficient hunters of the night.



*Great-horned Owl*

6. Snakes- Snakes are limbless reptiles with elongate bodies that are covered with scales. All snakes lack external ear openings and eyelids and have long, forked tongues. There are twenty-seven different varieties (species and sub-species) in two families of snakes that can be found in Maryland. Two Maryland species, the copperhead (*Agkistrodon contortrix*) and timber rattlesnake (*Crotalus horridus*) are venomous and in the viper family (Viperidae). The remaining species are in the

family Colubridae, which is the largest snake family in the world. Only two of Maryland's snakes commonly can be found in trees: the eastern rat snake and the rough green snake. Eastern rat snakes are the largest snakes in Maryland and are black on the upper half of their bodies and white below. They commonly eat rodents but also will feast on bird eggs and nestlings if the opportunity arises. Rough green snakes are bright green in color and eat insects, spiders and other invertebrates.



*Rough green snake by Scott Smith*

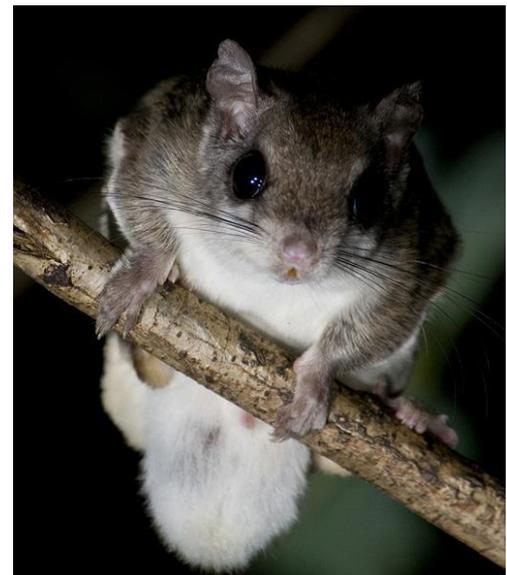
7. Spiders- Several hundred species of spiders call Maryland home. Spiders are important for catching and consuming pest insects. It is estimated that 1 acre of spiders can consume more than 80 pounds of insects in a year! In addition, spiders eat more insects than birds and mammals combined. Some of the more commonly seen spiders include orbweavers which spin orb-shaped webs in trees, windowsills and other locations.



*Jumping spider by Kerry Wixted*

Charlotte from Charlotte's Web by E.B. White was modeled after a species of orb weaver known as the barn spider. While many orbweavers are dull in color, some species like the marbled orbweaver and the black and yellow garden spider have ornate patterns. While orbweavers have venom used to immobilize their prey, their venom is not known to cause negative reactions in people.

8. Squirrels- Five species of squirrels can be found in Maryland: red squirrel, gray squirrel, southern flying squirrel, eastern fox squirrel and the Delmarva fox squirrel. All but the Delmarva fox squirrel are common species found throughout most of Maryland. One of the most common squirrels in Maryland is the gray squirrel, which lives almost anywhere that it can find open woodlands (especially oak and hickory forests). Most gray squirrels are just as their name sounds- gray. The color is good camouflage and protects them from predators in the woods. However, some gray squirrels are black, white or blonde. Gray squirrels have large, bushy tails which serve many functions from balance to shade to a rudder when swimming. Southern flying squirrels are very common in Maryland but are rarely seen because they are nocturnal. They live in hardwood forests and



*Southern flying squirrel by J.P. Myers*

can often be heard calling in the middle the night. Flying squirrels, despite their name, cannot fly but they can glide from tree to tree using extra folds of skin between their front and hind legs. Southern flying squirrels eat a variety of nuts, acorns and seeds as well as lichen and fungi.

9. Treefrogs- There are a total of nine species of treefrogs in three genera that can be found in Maryland. *Hyla* species primarily live in trees (**arboreal**) and have greatly enlarged pads at the terminal ends of the toes to facilitate climbing. They lack dark longitudinal lines or "X" shaped markings on the back. *Hyla* species include the barking treefrog (*Hyla gratiosa*), gray treefrog (*Hyla versicolor*), Cope's gray treefrog (*Hyla chrysoscelis*), and green treefrog (*Hyla cinerea*). Both the barking treefrog



*Green treefrog by John White*

and Cope's gray treefrog are rare in Maryland.

10. Woodpeckers- Eight species of woodpeckers can be found in Maryland and many often visit backyards and schoolyards. The largest woodpecker in Maryland is the pileated woodpecker while the smallest is the downy woodpecker. Most woodpeckers are year-round residents in Maryland. However, red-headed woodpeckers and yellow-bellied sapsuckers are more commonly seen in the winter. Woodpeckers often make their nests in hollowed out trees as well as eat insects found in rotting trees.



*Pileated woodpecker by Dave Kazyak*

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# **Additional Tree Activities**

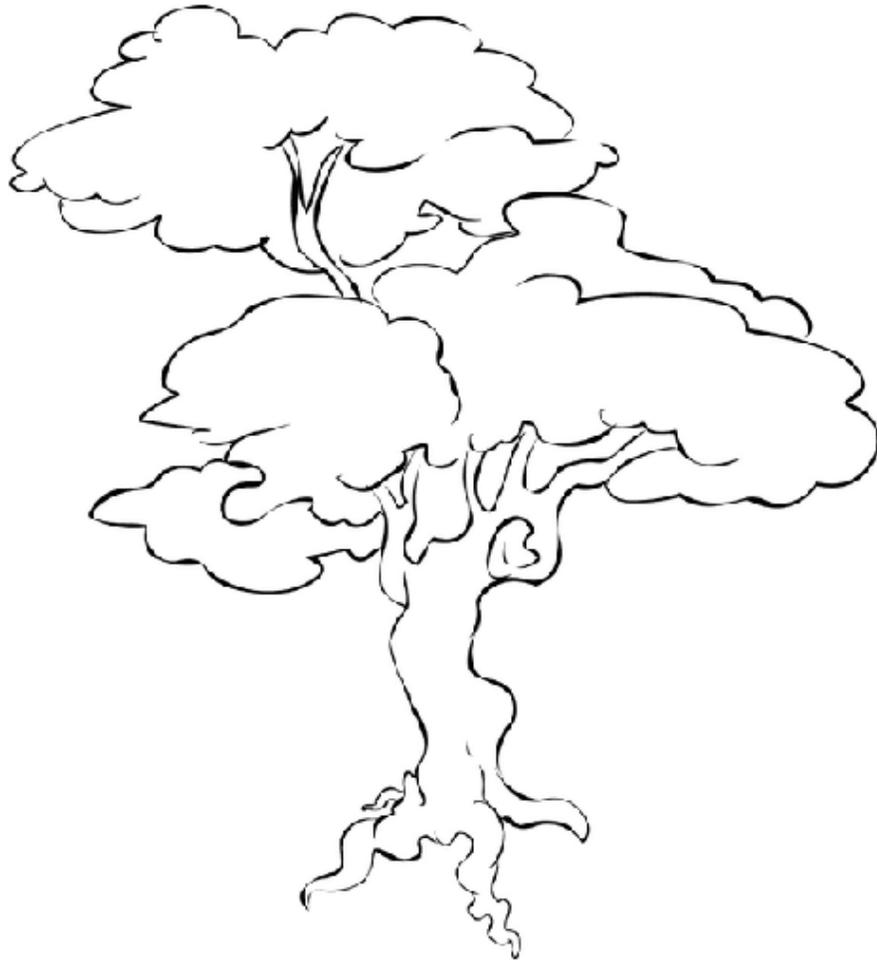
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# Many Animals Live in Trees

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11/15/13

Many animals live in trees Worksheet - Twisty Noodle



Many animals live in trees.

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twistynoodle.com

# Who Lives in a Tree

Visit a tree outside and write or draw what you see!

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Weather (circle one):



Draw Your Tree Below:

A large, empty rounded rectangle with a green border, intended for drawing a tree.

What animals live in a tree?

What else did you see?

**My tree is:** Small      Medium      Tall

**The bark is:** Smooth      Rough

# Owl Songs

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## Five Little Owls by Leanne Guenther

Five little owls,  
On a branch by the shore,  
A squirrel scampered by,  
And then there were four.

Four little owls,  
Perched high up in a tree,  
The wind shook one off,  
And then there were three.

Three little owls,  
With nothing fun to do,  
One got very bored,  
And then there were two.

Two little owls,  
Just having some fun,  
A bear came along,  
And then there was one.

One little owl,  
Winked at the setting sun,



## There Was a Wise Old Owl by Leanne Guenther

There was a wise, old owl --  
Who lived up in a tree.

He sat upon a branch --  
So all the world he'd see.

He looked at a snake,  
He looked at a bee.

He looked at a mouse,  
But he winked at me!



# Bat Toilet Paper Roll Craft

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From: <http://www.dltk-teach.com/>

## **Materials:**

- Toilet paper roll
- printer
- Glue
- Scissors
- Crayons or markers
- A piece of paper



## **Instructions:**

- Print out the template of the bat and wings (below).
- Color the pieces as appropriate and cut them out. You can color them different colors to represent different bats.
- Glue the large rectangular piece around the toilet paper tube.
- Glue the head onto the front of the tp roll.
- Glue the wings onto the back of the tp roll, so it appears to be flying.
- Glue the five-toed feet to the bottom of the tube.

