

# BACKYARD ADVENTURES

EXPLORING THE TREES IN YOUR HOMETOWN

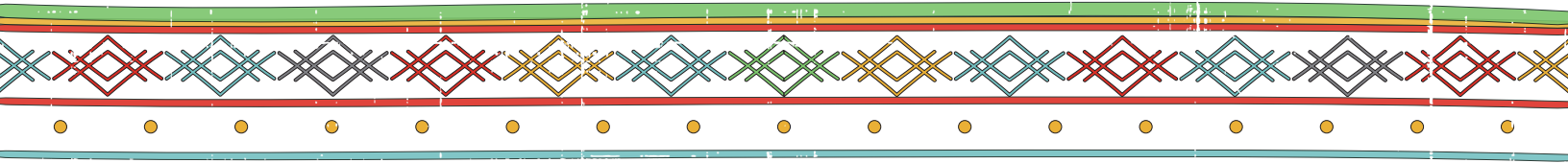
JIM CLAYPOOL ART & CONSERVATION WRITING CONTEST



KENTUCKY FARM BUREAU FEDERATION  
KENTUCKY ASSOCIATION OF CONSERVATION DISTRICTS







# WHAT IS A FOREST?



Forests are more than “just a bunch of trees.” They are complex communities that support a rich variety of plants and animals – over 750 wildlife species and over 1,800 different kinds of plants. They protect fragile soils from erosion, purify water and even, by reducing levels of carbon dioxide in the atmosphere, improve air quality.

Forests cover 47 percent of Kentucky’s land area – some 11.9 million acres. They provide employment for more than 35,000 Kentuckians, and wood industries add an estimated \$8.5 billion to Kentucky’s economy each year.

The forest is made up of a series of levels of life, arranged from the tops of the trees to the ground on which they grow. Each level constitutes a habitat where different species of plants and animals live. Altogether, the parts of the forest and the plants and the animals living in them make up the complex ecosystem we call, simply, a “forest.”

The top level, called the canopy, is formed by the crowns – the leafy tops – of the tallest trees. This is where photosynthesis – using sunlight to manufacture food the tree can use – is carried on most actively. It’s also the home of thousands of insects. These in turn attract thousands of insect-eating birds. Squirrels are also active in the canopy because seeds and nuts are plentiful there.

The next level is the understory. It’s made up of small trees pushing upward toward the light. It has its own population of animals, birds and insects that find the feeding conditions to their liking.

The next layer, considered part of the understory, is called the shrub/herb layer and is composed of many kinds of shrubs, low-lying wildflowers, grasses, ferns, mosses and vines, which offer still different nesting and feeding opportunities. This is the home of many of our songbirds that rely on the berries and seeds of shrubs for food and living here are also mice, insects, snakes and toads.

At the bottom is the forest floor where accumulations of autumn leaves, twigs, branches and even whole trees lie until they’re turned into humus – a rich, absorbent, brown or black layer of soil – by weather and the activity of the fungi, millipedes, ants and other insects.

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## TREE TRIVIA

There are 11.9 million acres of forestland in Kentucky, blanketing nearly half of the Commonwealth. Nearly 90 percent of Kentucky’s forestland is privately owned.

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# ◀ We All Need Trees! ▶

Trees supply thousands of products for our daily lives. We eat fruits and nuts from trees, use decorative woods for jewelry and art projects, and make practical items like books and fences from wood.



Wood is used as a fuel for cooking and heating in stoves, fireplaces and barbecue grills. Houses, paper and boxes are made from trees, and the fibers and chemicals from wood are used to make products such as rayon fabric and rubber balls.

How can so many different products come from trees? It's because of their structure. Trees are made up of cellulose that are held together with lignin. This makes the tree strong enough to use for building houses and furniture.

When wood is cooked, the cellulose is separated from the lignin to make wood pulp. This pulp is made into paper. The lignin can be used to make different chemicals that go into products like cosmetics, medicines and some foods.


Since so many products are made from wood and wood fiber, the average American uses the equivalent of a 100-foot tree every year!

Where does it all come from...

|   |  |  |
|---|--|--|
| <h2>STUMPS</h2> <p>Pine stumps provide the wood rosin and liquid terpenes used in making many products, including orange flavored soft drinks, pine cleaners and laundry detergents. Hardwood stumps readily produce sprouts that grow into new trees, assuring that we have plentiful hardwood forests for our future. Other products made from stumps: sports drinks.</p>  | <h2>Fruits &amp; Nuts</h2> <p>The fruits, nuts, berries and seeds of many trees are an important source of food for wildlife and people. Some of the most common of these are apples, peaches, pecans, walnuts, coffee and spices such as mace and nutmeg. Other fruits and nuts: oranges, pears, chestnuts.</p>  | <h2>ROOTS</h2> <p>In addition to providing food for the tree, roots play an important role in keeping our waters free of pollutants. They stabilize the soil to prevent erosion and sedimentation, and by absorbing nutrients to feed the tree, they prevent these nutrients from entering our rivers and streams. Other products made from roots: sassafras tea, root beer.</p> |
|---|--|--|

## Foliage

While growing on a tree, leaves produce oxygen, help filter pollutants from the air, provide shelter for many wildlife species and shade to help keep us cool. When harvested, leaves of the carnauba tree are used to produce furniture polish, car wax, crayons, lipstick and the coating on many medicine tablets. Whole leaves from some trees, such as bay, are used in cooking, while the oils of other leaves, such as the eucalyptus, are extracted for fragrances and flavorings. Garden mulch is another product made from foliage.



## TRUNK

The trunks of trees are primarily used to make solid wood products such as furniture, musical instruments, lumber and handles for tools and sporting equipment. Trunks are also peeled into thin sheets and used as veneer for plywood and furniture. Other products made from trunks: baseball bats, charcoal, canoe paddles, guitars, swing sets, birdhouses, crutches, fences, sleds.



## BRANCHES

Branches of large trees and trunks of smaller trees are used to make thousands of paper products, including paper, tissues and boxes. Chemical by-products of the paper making process are used in producing cleaning compounds, skin lotions, artificial vanilla flavoring, photographic film and molded plastic products such as eyeglass frames, football helmets, toothbrushes and buttons. Other products made from branches: carpeting, rayon, plastic twines, computer casings, luggage, newspapers, baby food, cereal, colognes.



## Gums

Gums, which are found in the sap of trees, are used in the manufacture of a variety of products including food, adhesives, paints and medicines. In foods, gums serve as thickening agents, provide a creamy texture, act as binders to keep ingredients from separating and help retain moisture. In ice cream and other frozen desserts, gums prevent the formation of crystals. The gums of some trees are used to make adhesives such as glue and hair spray, and act as drying agents in paint and printing ink. Other gums have antiseptic properties and are used in making soaps and cough syrups. Other products made from gums: cough drops, shampoo, dish washing liquid, adhesive bandages.



## BAK

Bark is used for a variety of purposes ranging from medicine to garden mulch to seasoning for foods. The willow tree, for example, provides the essential elements of aspirin, while the laurel tree provides cinnamon used to flavor many foods. Cork for wine bottles and fishing tackle comes from the cork oak tree. Bark also is burned to produce energy and used as a dye for fabrics, shoe polishes and other products. Other products made from bark: cosmetics, poultry bedding, oil spill control agents, the cancer-fighting drug Taxol.



Found in Kentucky →

### Logging Company

on-site processing for cutting trees and loading them onto trucks and generally taking them to a sawmill.

### Sawmill

business that takes the rough cut trees and cuts them into boards and then sells them to lumber yards.

### Lumber Yard

business that sells the lumber produced by the sawmill to construction companies, home improvement stores or consumers.

## MADE IN KENTUCKY



wood pallets, wood crates, barns, storage buildings, trusses, custom cabinetry and woodworking, animal bedding, wood blocks, firewood and kiln, mulch, doors and door frames, crafts, picture frames, furniture, bourbon barrels and many more.

# PROMOTING FORESTRY



*Revegetation*

*Streamside Management*

*Proper Fertilization*

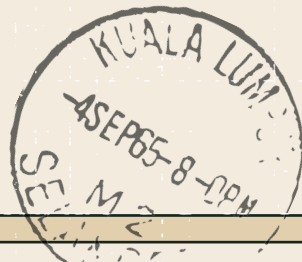
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Conservation districts are located in all of Kentucky's 120 counties. They assist landowners in developing conservation plans and provide technical assistance for best management practices that protect the soil and water resources. These practices are designed to reduce soil erosion and impact the amount of silt or contaminants that enter ponds, lakes and streams. Some examples of common forestry best management practices are:

## REVEGETATION

Revegetation means establishing a vegetative cover to stabilize the soil and reduce damage to downstream areas from sediment and runoff that result from the harvest of trees. Revegetation is accomplished by sowing grass on erodible or severely eroded areas, such as logging roads, skid trails, or log landings, as soon as possible.



## PROPER FERTILIZATION

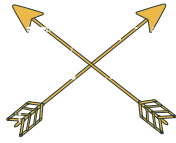
This practice concerns minimizing water quality while applying specific chemicals to the soil to favor increased growth of vegetation. It induces desirable vegetation to achieve maximum growth practices for site conditions, while managing the fertilizer in such a way as to protect the quality of nearby water bodies. Proper fertilization is achieved by:

- Using only the amount of fertilizer needed.
- Staying away from bodies of water or land immediately next to them.
- Avoid using fertilizer within 30 feet of sinkholes.

## STREAMSIDE MANAGEMENT ZONES

SMZs are buffer strips of a width consisting of the existing native vegetation, including trees, both deciduous and evergreen, and shrubs along the stream area. SMZs serve many important functions, and are of special importance in controlling and filtering sediment from forestry operations, promoting and sustaining wildlife and fish populations, and maintaining water quality. The SMZ not only acts as a buffer between land activities and sensitive aquatic ecosystems, but it also usually supports high diversity in animal and plant populations, valuable habitat, and multiple recreational uses.





# WHAT IS A TREE?

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A tree is a woody plant that's usually more than 10-feet tall and has one main stem. Although trees come in different shapes and sizes, most have the same basic parts. Each of these parts, from the highest leaves in the crown to the tiny root hairs buried in the soil, plays an important role in the tree's function and survival.



The **crown** of the tree is made up of the leaves and branches.

The **trunk** of the tree supports the crown and serves as a highway for food made in the leaves to travel to the roots and for water and nutrients from the roots to travel to the leaves.



The heartwood of the tree develops as the tree gets older. Its old sapwood that no longer carries sap gives the trunk support and stiffness. In many kinds of trees, the heartwood is darker color than the sapwood, since its water-carrying tubes get clogged up.



The cambium is a layer or zone of cells, one cell thick, inside the inner bark. The cambium produces both the xylem and phloem cells. This is where diameter growth occurs and where rings and inner bark are formed.

In the xylem (sapwood) layer, tree sap (water plus nitrogen and mineral nutrients) is carried back up from the roots to the leaves. Sapwood gives a tree its strength.

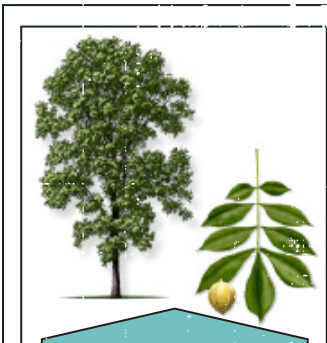
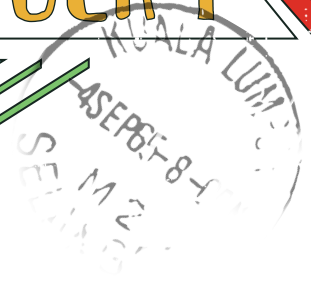
In the phloem (inner bark) layer, sugar that's made in the leaves or needles is carried down to the branches, trunks and roots, where it's converted into the food (starch) the tree needs for growth.



The bark layer protects the tree from insects and disease, excessive heat and cold and other injuries.

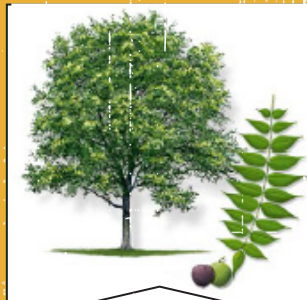
The roots of the tree support the trunk and crown and also anchor the tree in the soil. They serve as a storage facility during the winter for the food produced by the leaves during the growing season. The roots also absorb water and nutrients from the soil for use by the tree.

# COMMON TREES OF KENTUCKY



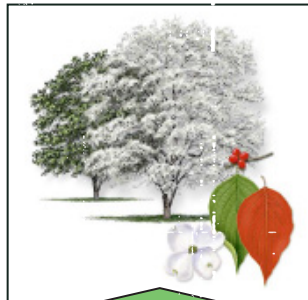
**BUTTERNUT HICKORY**  
*Carya cordiformis*

There are many hickory species in Kentucky; one of the most common is bitternut. Because bitternut hickory wood is hard and durable, it is used for furniture, paneling, dowels, tool handles and ladders. Like other hickories, the wood is used for smoking meat. Bitternut hickory seeds and its bark are eaten by wildlife.



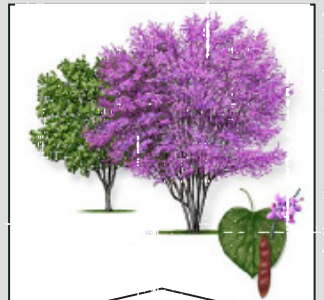
**BLACK WALNUT**  
*Juglans nigra*

Practicality and beauty combine in the black walnut to make this species one of the most treasured trees in Kentucky. The valuable dark brown wood is strong with a handsome grain that polishes easily and gleams forever. And the rich, flavorful nuts are enjoyed fresh and retain their flavor and texture during cooking.



**FLOWERING DOGWOOD**  
*Cornus florida*

Tough and stunning, the Dogwood is an excellent landscape choice in all four seasons. Flowers are showy in spring. Leaves turn red-purple in fall. Glossy red fruits attract winter songbirds. Likes partial shade; moist, acid, well-drained soil.



**EASTERN REDBUD**  
*Cercis canadensis*

Known as the harbinger of spring, the eastern redbud's delicate blossoms and buds are one of the season's most dramatic displays. Even in winter, covered with snow, the eastern redbud is stunning.





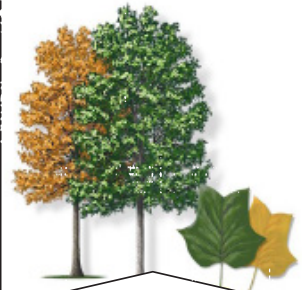
**GREEN ASH**  
*Fraxinus pennsylvanica*

This hardy tree is a popular yard tree due to its fast growth, nice shade, and ability to adapt to many soil conditions. The green ash has been heavily used as a replacement for the American elm in urban landscapes. Unfortunately, now the green ash is coming under attack by the emerald ash borer, which is spreading across Kentucky.



**MAPLE**  
*Acer*

KY has an abundance of maples. They're not picky about the soil and don't mind wide ranges of temperature. The hardy sugar maple can be a good replacement tree for an ash or elm tree taken by disease. Bonus: eye-popping fall foliage, and you can tap the sap and make your own syrup. Just don't plant close to roads, because salt from ice melters will harm the tree.



**YELLOW POPLAR**  
*Liriodendron tulipifera*

The yellow poplar or tulip-tree is Kentucky's state tree. One can argue about whether the "tulips" are the outline of its leaves or its cup-shaped flowers. When conditions are right, this tree is a rapid grower and is the tallest of the eastern hardwoods.



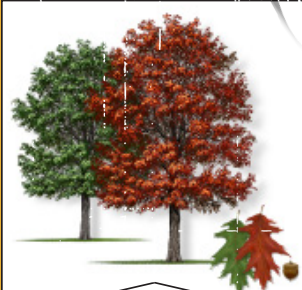
**HAWTHORN**  
*Crataegus*

Green hawthorn is an adaptable, urban-tolerant tree that offers winter interest with its abundant and attractive orange-red fruit. It has pretty red to gold foliage in fall and handsome silver-gray peeling bark that shows orange underneath. Thrushes and waxwings love the winter fruit, or 'haws,' of the Hawthorn trees. Be careful of the thorns! Great tree for wildlife and fall and winter interest.



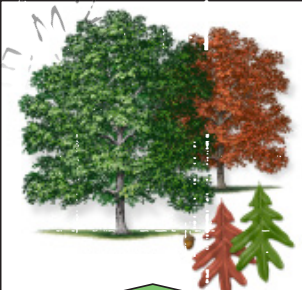
**SYCAMORE**  
*Platanus occidentalis*

The American Sycamore is very popular for residential landscaping because of its fast growth (up to 6 ft. a year) and thick canopy...which provides tons of shade. Its bark—a "camouflage" pattern of peeling patches, like tan, gray and brown puzzle pieces—eventually turns to a smooth white on the mature trunk and branches. This Kentucky favorite is often found along creek and river banks.



**NORTHERN RED OAK**  
*Quercus rubra*

Talk about long-term value for you and your descendants: Red oaks mature at 150 years old and can live to 300. They're famous for their generous shade, sturdy branches, and fire engine-red color in fall. Animals love them, too: Red oak acorns feed birds, squirrels, deer, and black bears. This is a KY favorite for yards.



**WHITE OAK**  
*Quercus alba*

This tree has a special connection to Kentucky as its wood is used to make bourbon barrels. A mature white oak can host up to 5,000 different species of invertebrate that will form the basis for a healthy food chain that benefits birds and mammals.



**SWEETGUM**  
*Liquidambar styraciflua*

Sweetgum is an excellent urban tree provided it has a large area for root development. Spiky seed balls develop in autumn and persist through winter, swinging from branches on their long stems. Many cities plant sweetgums along streets.





# Valuing My Community Trees

Did you know that people who live in cities, big and small, live in a forest? The trees in a city or town are called our urban and community forests, and they are everywhere! These urban forests include the forest in our local park, the trees over our backyard patio, the pocket park in a busy downtown and even the individual trees lining the street we live on. These trees add great value to the place we live.

Most people know that trees are good for the Earth, right? But what does that really mean? Trees and forests provide vital habitat to wildlife as a means of shelter and food. Trees absorb carbon dioxide from the atmosphere and release oxygen, helping to reduce the effects of climate change. Also, we all know it's cooler under a tree because of the shade, but also trees continuously release water vapor through their leaves. Our urban forests act like sponges for rainwater, giving us clean water to drink. Trees even remove pollution from the atmosphere, improving our air quality!

A park with many trees attracts neighbors to visit and interact with each other, helping to build a sense of community. Urban forests help reduce stress, promote active living and can even help us recover from illness more quickly. Community tree plantings provide an opportunity for community involvement no matter the age, gender or culture of the people. Areas with trees even have lower crime rates! That sounds like a neighborhood that we all want to live in.

A home with mature trees has much more property value than one without. One significant reason to the homeowner is energy savings. Properly placed trees around homes can reduce energy needs by 30% in the summer and 20-50% in the winter. Now, think about those values to a community as a whole, including reducing stormwater runoff. These values add a lot to the community as a whole, making them more attractive

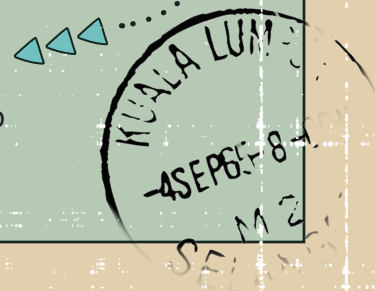
places for people to live, work and play. People linger longer in shopping areas lined with trees, and pay more to live in neighborhoods lined with trees.

Our urban trees and forests sure do provide a lot of value to our lives, don't they? Trees can live without us – but we cannot live without trees.



## HELPFUL WEBSITES

- <http://naturewithin.info/>
- [depts.washington.edu/hhwb/](https://depts.washington.edu/hhwb/)
- [treepeople.org](https://treepeople.org)
- [fs.fed.us/ucf/](https://fs.fed.us/ucf/)
- [itreetools.org/design.php](https://itreetools.org/design.php)
- [actrees.org](https://actrees.org)



# IN YOUR OWN BACKYARD



Can you grow a forest in your backyard? Few of us have the ability to grow more than a few trees, shrubs or wildflowers in our backyard, so it is especially important to choose wisely when selecting what to plant. Most importantly, if you want to attract wildlife, plant natives because that's what Kentucky's wildlife needs for good nutrition and good cover.

## THINGS TO CONSIDER

- A diversity of plants provides a diversity of foods (nectar, seeds, berries, nuts, leaves) and attracts a greater diversity of wildlife.
- Native perennials provide consistent food and shelter year after year.
- Build on existing habitat. For example, in shade create a forest or woodland habitat garden; in the sun, a prairie or glade habitat garden; and in wet areas, a wetland or water garden.
- To accommodate changes in our climate, choose plants suitable for your current vegetative zone rather than relying on old information concerning what can grow.
- Wildlife needs clean water just like you do.

## WHAT YOU CAN EXPECT

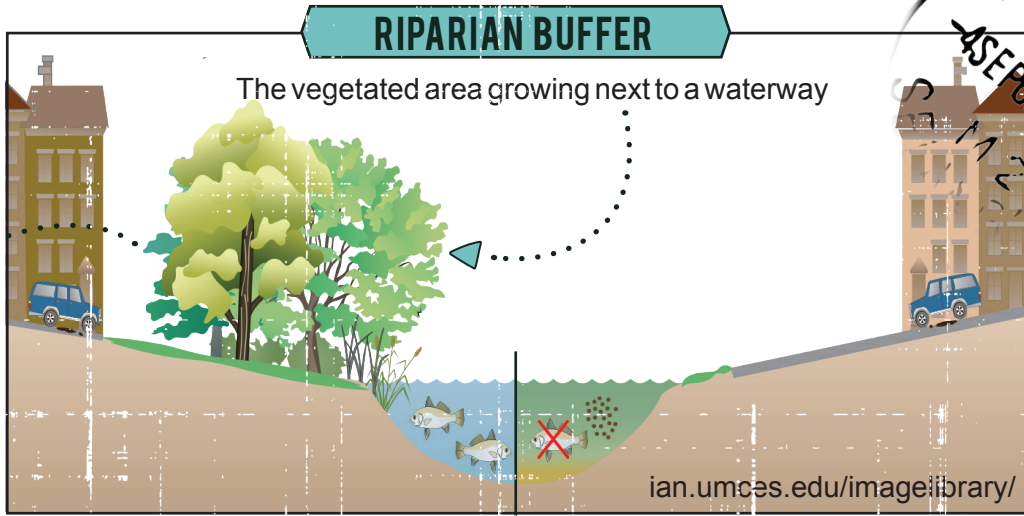
- Tulip tree – bees, hummingbirds, fritillary butterfly caterpillars, songbirds
- Elderberry, wild cherry and mulberry – orioles, mockingbirds, small mammals, turtles, ants
- Trees with natural cavities or loose bark – amphibians, flying squirrels, chickadees, bluebirds, barn swallows, bats
- Fallen logs and wood piles – wrens, raccoons, foxes, amphibians, box turtles and other reptiles, insects
- Wildflowers – butterflies, moths, bees, birds, small mammals

Keep a record of what visits and when. If you don't get visits, then research the species you want to attract and make a plan for their habitat requirements.

# PLANT A TREE: SAVE A FISH

## HOW A TREE CAN SAVE A FISH

It turns out that trees growing along a stream bank provide a variety of critical services to the water next to it. Trees and other native plants act as a sponge, soaking up water and slowing it down, while filtering out nutrients, sediment, and other harmful pollutants that can damage the health of your stream!



Water gets slowed down by Riparian Buffers allowing the water to soak into the soil.

When areas are paved, all the water can run off the land and very little gets to soak into the soil.



Shade trees can keep streams up to 15 degrees cooler than streams without!



When rain runs off the land it picks up pollutants like oil, fertilizers and soil.



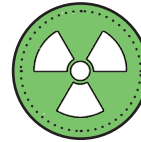
The roots of plants in the Riparian Buffers absorb water and hold soil in place, preventing erosion!



Riparian Buffers provide habitat and food for a variety of aquatic organisms.



When water is too warm it holds less oxygen, and many animals can't survive in those conditions.



Riparian plants can filter out pollution from runoff. When plants are removed it is carried directly to the stream.





# DROP BY DROP



TREES HELP WITH STORMWATER MANAGEMENT

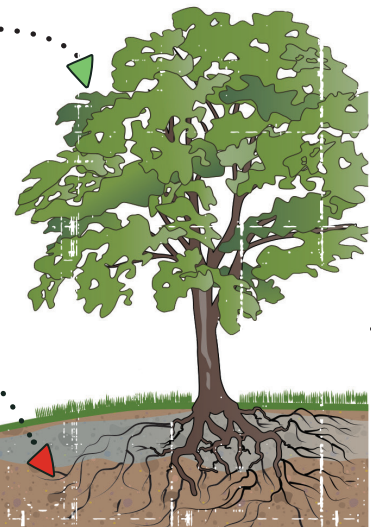
Stormwater runoff is a big problem in developed areas where many are replaced by impervious surfaces, like roads, roof tops, and sidewalks. Impervious surfaces don't allow rain to soak into the soil, which means that it is on the ground. These contaminants are washed directly into the nearest creek, or into the city storm sewer, which empty into the nearest waterway. These types come from not one but many sources, and everyone contributes to it. Giving stormwater a chance to slow down and soak in can prevent pollution from entering our waterways.

And trees can play a major role in making this happen!

## LEAVES

Leaves and bark capture moisture, some of which evaporates while some is gradually released into the soil.

Leaf litter helps trap water giving it a chance to soak in.



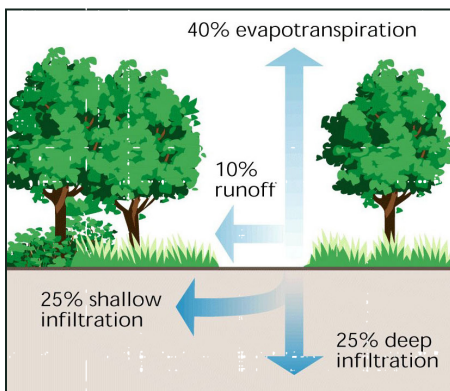
## ROOTS

Water gets a chance to slowly infiltrate into the soil, which also filters out pollutants.

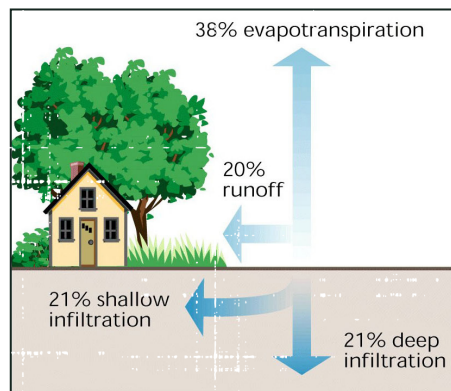
## RUNOFF

Impervious surfaces like roads prevent water from soaking in.

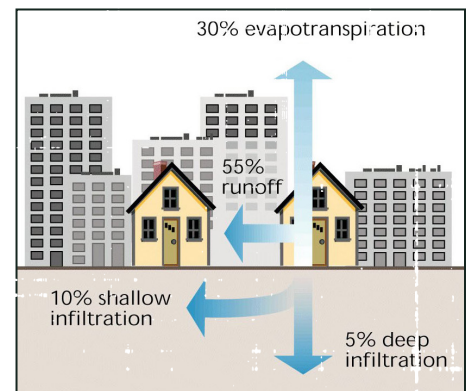
[ian.umces.edu/imagelibrary/](http://ian.umces.edu/imagelibrary/)



Natural Ground Cover



10%-20% Impervious Surface



75%-100% Impervious Surface

# AGROFORESTRY

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Agroforestry is a way of making production on a farm more sustainable. Most farmers grow crops that are planted and harvested in one growing season, like corn and soybeans. By planting trees on their farms, farmers could have additional crops such as fruit or nuts. The crop could be produced every year without replanting but could also keep the soil from eroding and add leaves to enrich the soil.

There are five agroforestry practices. There are four practices that require planting by the farmers in areas where trees do not currently grow and the other is a way for farmers to manage their forests in order to produce an annual crop.

## PRACTICE #1: ALLEY CROPPING

Alley cropping is the technique of planting trees so that other crops can grow in between the rows. Often the trees used in alley cropping are nut producers such as black walnut or pecan trees, but fruit and conifer trees could also be used. In the alley between the trees, certain crops and forages can be grown. As the trees grow, the type of crop may have to be changed due to the increase of shade.

## PRACTICE #2: SILVOPASTURE

Foresters do not like having cattle or other animals running in the forests, but this practice is designed to mix trees and livestock. Silvopasture is a way to get three products from one area: the trees, the grass and the animals. The relationship between the three products creates an ideal atmosphere: the trees provide shade for the animals and protect the soil from erosion and the animals provide fertilizer for the trees and grass. The farmer will need to protect any newly planted trees from the animals. Many different tree and animal combinations can be used.

## PRACTICE #3: WINDBREAKS

In western Kentucky, the land is flatter and strong winds can come from the west or south, damaging the crops. Windbreaks are rows of trees planted in a way to slow down much of the wind. The windbreaks need to be planted so that the wind is broken at all times of the year, so conifers or evergreens are necessary. The next row should be deciduous trees that grow more quickly. The last row should be shrubs providing leaves and branches closer to the ground. Windbreaks should be between 3-5 rows. The rows should be planted so there are no holes in the middle for wind to pass through and should also be tall enough to get the most benefit over the land. The trees should not be so tight that they block the wind, but should slow the wind.

## PRACTICE #4: RIPARIAN BUFFER STRIPS

Riparian buffer strips are built near streams and designed to protect the water of the streams from fertilizer and pesticide run-off as well as keeping the waters cool. The riparian area should be composed of the three types of plants separated into rows. The first section, closest to the stream, is made up of trees that are used to being near water, such as willows, sycamores and birches. The second section should be shrubs, such as dogwood or berry bushes. The third section should be native grasses such as prairie grass, eastern gamagrass and little and big bluestem. All sections should be equal in width and no trees from the first section should be cut.

## PRACTICE #5: FOREST FARMING

This type of agroforestry deals with a forest that is already present. Farmers can grow crops that can be harvested every year, like hen of the woods, shiitake, and morels. Medicinal plants can also be grown, such as ginseng, goldenseal and black cohosh, which are all native to Kentucky. Other types of forest farming include bee hives, arts and crafts from broken limbs and maple syrup.

# DISCOVER

PROJECTS, GAMES & MORE



## SCIENCE PROJECT IDEAS:

- How does flow rate affect plant growth in streams and rivers? [www.education.com/science-fair/article/flow-rate-plant-growth/](http://www.education.com/science-fair/article/flow-rate-plant-growth/)
- How do Seeds Hitchhike? [www.education.com/science-fair/article/how-do-seeds-hitchhike/](http://www.education.com/science-fair/article/how-do-seeds-hitchhike/)
- How do pine cones make more trees? [www.education.com/science-fair/article/conifers/](http://www.education.com/science-fair/article/conifers/)
- Build a Rainforest Terrarium. [www.education.com/science-fair/article/build-a-rainforest/](http://www.education.com/science-fair/article/build-a-rainforest/)
- How does the shape of a track vary when imprinted in wet and dry sand, mud, and dry soil? [www.education.com/science-fair/article/make-animal-tracks/](http://www.education.com/science-fair/article/make-animal-tracks/)



## FUN WEBSITES WITH GAMES AND ACTIVITIES:

- A science website for kids from the American Museum of Natural History [www.amnh.org/explore/ology](http://www.amnh.org/explore/ology)
- Explore the inner parts of a tree and discover the history of a 62 year old pine tree. [www.arboday.org/kids/carly/lifeofatree/](http://www.arboday.org/kids/carly/lifeofatree/)
- Do an on-line maple leaf jig-saw puzzle, start an Autumn leaf collection book, learn why leaves change colors in the fall. This site by kidzone can help you explore trees. [www.kidzone.ws/plants/index.htm](http://www.kidzone.ws/plants/index.htm)
- The Tree story provides short video clips on the growth of trees, how trees adapt to their environment and the impact mankind has on trees. [www.aucoeurdelarbre.ca/en/](http://www.aucoeurdelarbre.ca/en/)
- Have you ever wondered how you can tell different species of trees apart? Use this key and see if you can identify the trees in your neighborhood or woodlot. [dnr.wi.gov/eek/veg/treekey/index.htm](http://dnr.wi.gov/eek/veg/treekey/index.htm)
- Fun facts, photographs, and information about tree types, classification, life cycles, habitat, stems, rings, and harvesting operations. [www.realtrees4kids.org/](http://www.realtrees4kids.org/)

## SERVICE LEARNING PROJECT IDEAS:

- An Earth Day Council of students will plan, promote, & conduct an Annual Earth Day event for their community.
- Students in grades 3 to 6 will plant trees & native plants next to their school. They will come up with a plan to keep them weeded, mowed and watered throughout the calendar year.
- Have students build one of four academic gardens: botanical, rock, English or art, while using exclusively native Kentucky plants. Students should also build a rain water recovery system for the gardens to maintain them during droughts.







# KEEP YOUR TREES HEALTHY

1

## Protect Your Tree Roots

Make sure your soil is good and not compacted. Compacted soil keeps water and oxygen from reaching the roots.

2

## Protect The Bark

Tree bark is a shield that protects the tree so avoid damage from lawn mowers, weed eaters, and vehicles.

3

## Water Effectively

Most trees can survive during normal weather conditions, but during a drought, a long, deep soaking is better than a quick spray from a hose.

4

## Prune Properly

Remove dead, broken, low or rubbing branches with a clean cut so the tree will heal.



## < Put together an Envirothon Team! >

The Kentucky Association of Conservation Districts and the Kentucky Envirothon Committee offer the opportunity for high school students to participate in the Envirothon. The Envirothon competition tests students' knowledge on aquatics, forestry, soils, wildlife and a current environmental issue. For 2017, the current environmental issue will be Agricultural Soil and Water Conservation Stewardship.

Plans are being made for the 2017 Envirothon that will take place in the spring. For more information about Envirothon, visit [www.envirothon.org](http://www.envirothon.org) or [conservation.ky.gov/Pages/Envirothon.aspx](http://conservation.ky.gov/Pages/Envirothon.aspx).



# BACKYARD ADVENTURES

## 2016 JIM CLAYPOOL ART AND CONSERVATION WRITING CONTEST | RULES

**STATE WINNERS:** First - \$250 check; Second - \$150 check; Third - \$50 check

**REGIONAL WINNERS:** \$50 check

**COUNTY LEVEL WINNERS:** \$25 check

\* State and Regional winners will receive a personalized certificate. County winners that win regional or state awards will only receive one check for the top prize.

### RULES

- Kentucky students grades 6-12 are eligible to compete in the writing contest. Only students through grade 5 may compete in the art contest.
- A student may not enter both the Jim Claypool Conservation Art Contest and the Conservation Writing Contest during the same contest.
- An entry must be created by one and only one student. Any entry submitted by more than one student will be disqualified.
- All entries become the property of the contest sponsors. The decisions of the judges at all levels of competition are final.
- **WRITING:** entry may not exceed 1,000 words and must be written in ink or typed on one side of paper only. Typed entries must be written in 12pt font, Times New Roman or Calibri. No photographs or artwork may be included with the written work. It is suggested that the written entry take the form of informational writing (from the perspective of an informed writer to a less informed reader) and may be in the form of a letter, blog entry, editorial or speech. It should persuade the reader to take action toward good forestry conservation practices or propose a solution to one or more forestry conservation issues. The work should be from the student author and avoid plagiarism from this source or other sources. Sources should be cited.
- **ARTWORK:** shall be 8 1/2"x11". Any thickness or color of art board may be used. Art paper may be used, but must be pasted onto art board or cardboard before submitting for competition. NO plywood will be accepted. Artwork may be rendered in any medium: pencil, ink, charcoal, crayon, oil, etc., but it must be flat art. 3-D art is unacceptable; however, collages, photographs or other art pasted onto your board will be accepted as long as it is flat art pasted securely to the poster board. An art entry may take the form of a poster, newspaper advertisement or editorial cartoon, making sure that whatever form is used the artwork conveys a message at a glance that persuades its viewers to take action toward good forestry conservation practices.
- Top three writing entries and/or artworks from your school must be submitted to your local county conservation district by Dec. 1, 2016.
- The entry form must be completed and secured to the back of your entry.

### POINT SYSTEM FOR ARTWORK

- 50 points - Purpose / Audience. (Appropriate communication style to reach audience, establishes and maintains a purpose; and holds to subject in community. Theme clearly conveyed at a glance.)
- 30 points - Composition / creativity / craftsmanship. (Layout, originality, and quality of work, such as neatness.)
- 20 points - Language / correctness. (Word choice, usage, spelling, punctuation, capitalization.)

### POINT SYSTEM FOR WRITING

- 30 points - Purpose/Audience (establishes and maintains a purpose, communicates with audience, employs a suitable voice and/or tone)
- 20 points - Organization (logical order, coherence, transition, organizational signals)
- 20 points - Idea Development/Support and Evidence of Research (student's original work the shows sources of research)
- 30 points - Correctness (spelling, punctuation, capitalization), Language (word choice, usage), Sentences (varied in structure and length, constructed effectively, complete and correct)

### HELPFUL HINTS

- Keep entry simple and sincere.
- Be creative and original. Avoid plagiarism by using original words and ideas. Plagiarism is defined as the act of stealing and passing off the words of another as your own without crediting the source.
- Consider an area of forestry conservation that is important to you, your family and your community.
- Draw from your personal interests or experiences.
- Writing entry should take the form of informational.
- Think about forestry issues in your community, farm, subdivision or city.
- DO NOT use the "Backyard Adventures" as your only source.
- Interview people in your community about changes in forestry issues
- Find ways to improve forestry in your community. TAKE ACTION!

The Division of Conservation acknowledges and thanks the following organizations and agencies for their support: Kentucky Farm Bureau Federation; Kentucky Association of Conservation Districts; Division of Water, Energy and Environment Cabinet; Department of Fish and Wildlife Resources; Division of Forestry; Department of Education; USDA Natural Resources Conservation Service, UK Cooperative Extension Service

## BACKYARD ADVENTURES CONTEST ENTRY FORM

Name (Miss, Mr) \_\_\_\_\_

Parent's Name \_\_\_\_\_

Home Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone ( ) \_\_\_\_\_

Age \_\_\_\_\_ Grade \_\_\_\_\_ Teacher \_\_\_\_\_

County \_\_\_\_\_

School \_\_\_\_\_

School Address \_\_\_\_\_

City \_\_\_\_\_ Zip \_\_\_\_\_

School Phone ( ) \_\_\_\_\_

I hereby certify that I have read the rules and helpful hints and this entry is the original work of:

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Parent/Guardian Signature (required)

\_\_\_\_\_  
Teacher or Principal's Signature (required)