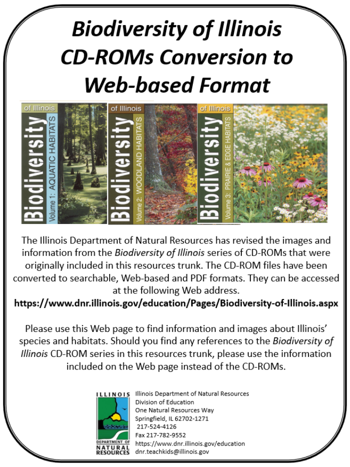
Illinois Tree Trunk – Binder Contents Checklist Key

Biodiversity of Illinois CD-ROMs Conversion to Web-based Format promo page



Biodiversity of Illinois CD-ROMs Conversion to Web-based Format

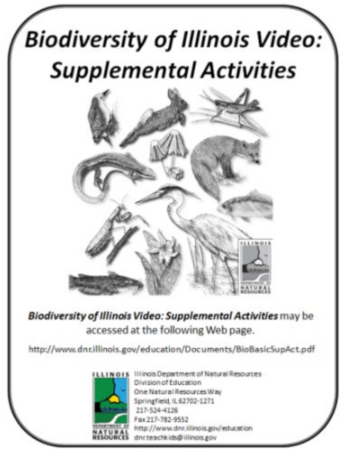
The Illinois Department of Natural Resources has revised the images and information from the *Biodiversity of Illinois* series of CD-ROMs that were originally included in this resources trunk. The CD-ROM files have been converted to searchable, Web-based and PDF formats. They can be accessed at the following Web address.

https://www.dnr.illinois.gov/education/Pages/Biodiversity-of-Illinois.aspx

Please use this Web page to find information and images about Illinois' species and habitats. Should you find any references to the *Biodiversity of Illinois* CD-ROM series in this resources trunk, please use the information included on the Web page instead of the CD-ROMs.

Illinois Department of Natural Resources
Division of Education
One Natural Resources Way
Springfield, IL 62702-1271
217-524-4126
Fax 217-782-9552
https://www.dnr.illinois.gov/education
dnr.teachkids@illinois.gov

Biodiversity of Illinois Video: Supplemental Activities promo page



Biodiversity of Illinois Video: Supplemental Activities

Biodiversity of Illinois Video: Supplemental Activities may be accessed at the following Web page.

http://www.dnr.illinois.gov/education/Documents/BioBasicSupAct.pdf

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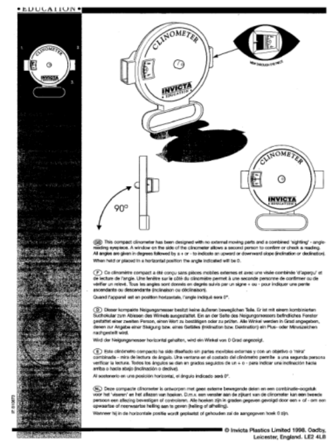
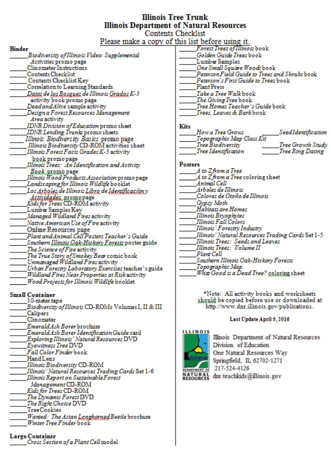
Clinometer Instructions

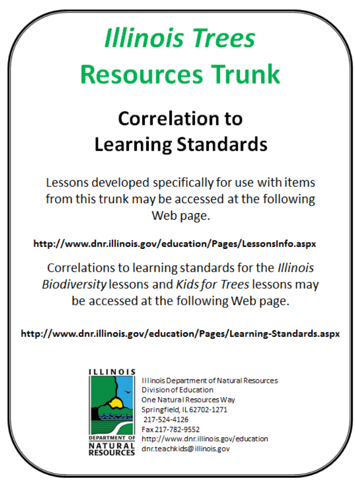


Contents Checklist



Illinois Tree Trunk
Illinois Department of Natural Resources
Contents Checklist
Please make a copy of this list before using it.

Correlation to Learning Standards



Illinois Trees
Resources Trunk

Correlation to
Learning Standards

Lessons developed specifically for use with items from this trunk may be accessed at the following Web page.

http://www.dnr.illinois.gov/education/Pages/LessonsInfo.aspx

Correlations to learning standards for the *Illinois Biodiversity* lessons and *Kids for Trees* lessons may be accessed at the following Web page.

http://www.dnr.illinois.gov/education/Pages/Learning-Standards.aspx

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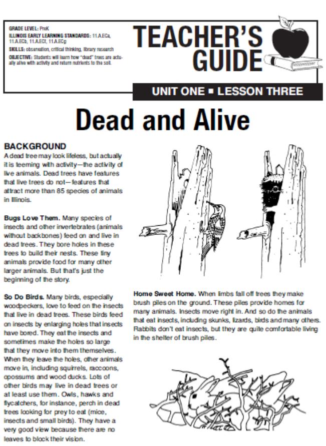
Datos de los Bosques de Illinois Grados K-3 activity book

State of Illinois
Departamento de Recursos Naturales de Illinois

Datos de los Bosques de Illinois
Grados K-3

USDA Forest Service
State & Private Forestry
Cooperative Forestry

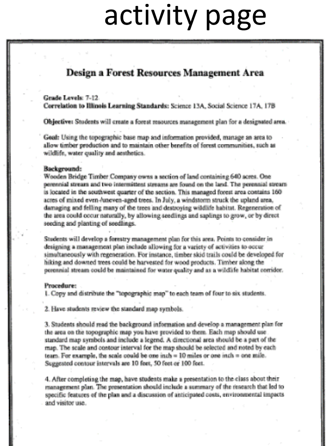
Dead and Alive sample activity page



TEACHER'S GUIDE
UNIT ONE ▪ LESSON THREE

Dead and Alive

Design a Forest Resources Management Area activity page



Design a Forest Resources Management Area

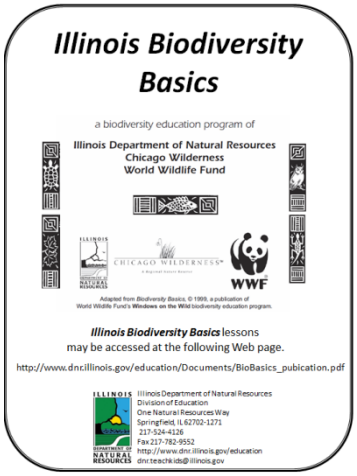
IDNR Division of Education promo sheet

Educational Materials & Programs

Illinois Tree Trunk – Binder Contents Checklist Key

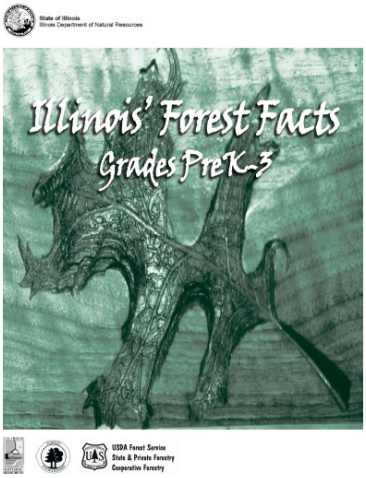
IDNR Lending Trunks
promo sheets

Illinois Biodiversity Basics
promo page

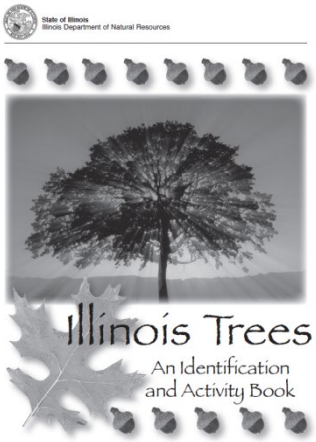


Illinois Biodiversity CD-ROM
activities sheet

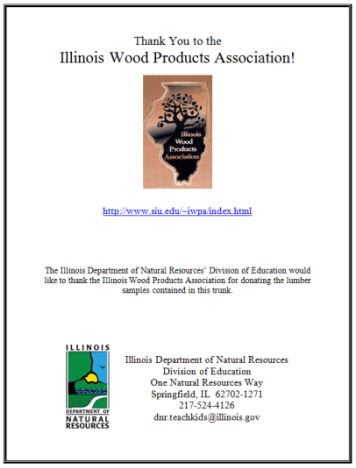
Illinois Forest Facts Grades K-3
activity book



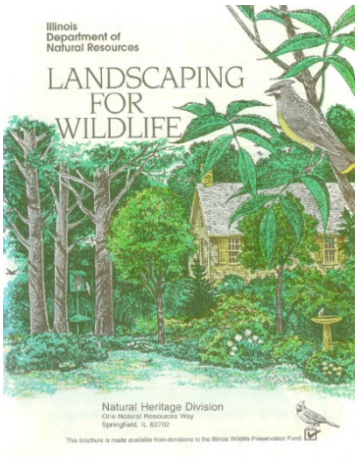
Illinois Trees: An Identification and Activity Book



Illinois Wood Products Association promo page

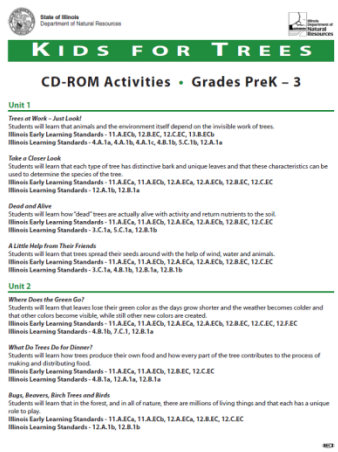


Landscaping for Illinois Wildlife booklet



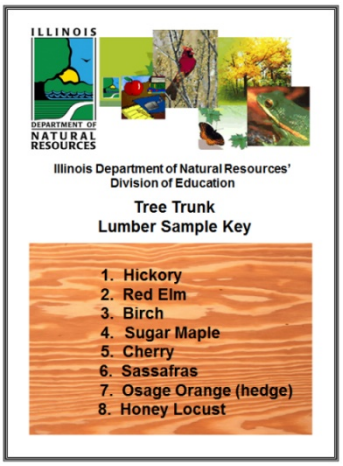
Los Árboles de Illinois Líbro de Identifícación y Actívidades
Activity book

Kids for Trees CD-ROM
activity page

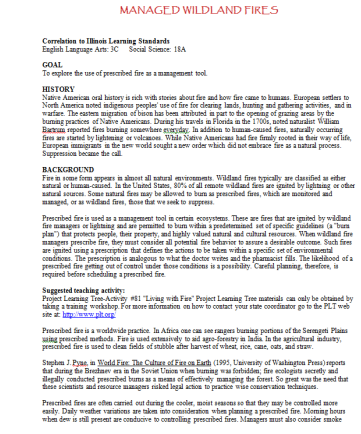


Illinois Tree Trunk – Binder Contents Checklist Key

Lumber Sample Key



Managed Wildland Fires activity


MANAGED WILDLAND FIRES

Correlation to Illinois Learning Standards
English Language Arts: 3C Social Science: 18A

GOAL
To explore the use of prescribed fire as a management tool.

HISTORY
Native American oral history is rich with stories about fire and how fire came to humans. European settlers to North America noted indigenous peoples' use of fire for clearing lands, hunting and gathering activities, and in warfare. The eastern migration of bison has been attributed in part to the opening of grazing areas by the burning practices of Native Americans. During his travels in Florida in the 1700s, noted naturalist William Bartram reported fires burning somewhere everyday. In addition to human-caused fires, naturally occurring fires are started by lightning or volcanoes. While Native Americans had fire firmly rooted in their way of life, European immigrants in the new world sought a new order which did not embrace fire as a natural process. Suppression became the call.

BACKGROUND
Fire in some form appears in almost all natural environments. Wildland fires typically are classified as either natural or human-caused. In the United States, 80% of all remote wildland fires are ignited by lightning or other natural sources. Some natural fires may be allowed to burn as prescribed fires, which are monitored and managed, or as wildland fires, those that we seek to suppress.

Prescribed fire is used as a management tool in certain ecosystems. These are fires that are ignited by wildland fire managers or lightning and are permitted to burn within a predetermined set of specific guidelines (a "burn plan") that protects people, their property, and highly valued natural and cultural resources. When wildland fire managers prescribe fire, they must consider all potential fire behavior to assure a desirable outcome. Such fires are ignited using a prescription that defines the actions to be taken within a specific set of environmental conditions. The prescription is analogous to what the doctor writes and the pharmacist fills. The likelihood of a prescribed fire getting out of control under those conditions is a possibility. Careful planning, therefore, is required before scheduling a prescribed fire.

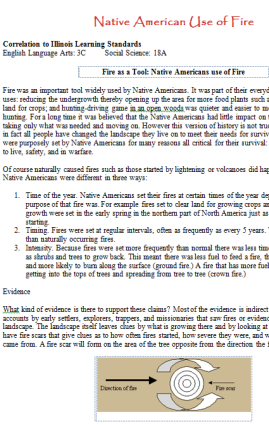
Suggested teaching activity:
Project Learning Tree-Activity #81 "Living with Fire" Project Learning Tree materials can only be obtained by taking a training workshop. For more information on how to contact your state coordinator go to the PLT web site at: http://www.plt.org/

Prescribed fire is a worldwide practice. In Africa one can see rangers burning portions of the Serengeti Plains using prescribed methods. Fire is used extensively to aid agro-forestry in India. In the agricultural industry, prescribed fire is used to clean fields of stubble after harvest of wheat, rice, cane, oats, and straw.

Stephen J. Pyne, in World Fire: The Culture of Fire on Earth (1995, University of Washington Press) reports that during the Brezhnev era in the Soviet Union when burning was forbidden; fire ecologists secretly and illegally conducted prescribed burns as a means of effectively managing the forest. So great was the need that these scientists and resource managers risked legal action to practice wise conservation techniques.

Prescribed fires are often carried out during the cooler, moist seasons so that they may be controlled more easily. Daily weather variations are taken into consideration when planning a prescribed fire. Morning hours when dew is still present are conducive to controlling prescribed fires. Managers must also consider smoke

Native American Use of Fire activity


Native American Use of Fire

Correlation to Illinois Learning Standards
English Language Arts: 3C Social Science: 18A

Fire as a Tool: Native Americans use of Fire

Fire was an important tool widely used by Native Americans. It was part of their everyday life. Fire had many uses: reducing the undergrowth thereby opening up the area for more food plants such as berries; clearing the land for crops; and hunting-driving game in an open woods was quieter and easier to move through when hunting. For a long time it was believed that the Native Americans had little impact on the land they inhabited, taking only what was needed and moving on. However this version of history is not true. Native Americans and in fact all people have changed the landscape they live on to meet their needs for survival and growth. Fires were purposely set by Native Americans for many reasons all critical for their survival: providing food, places to live, safety, and in warfare.

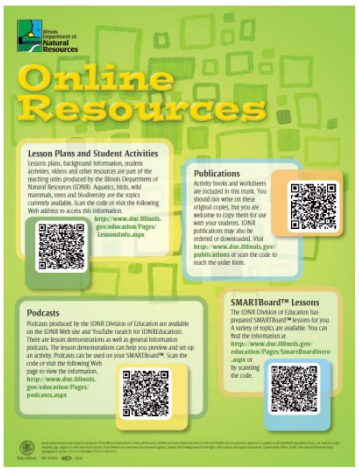
Of course naturally caused fires such as those started by lightening or volcanoes did happen but the fires set by Native Americans were different in three ways:

1. Time of the year. Native Americans set their fires at certain times of the year depending on what the purpose of that fire was. For example fires set to clear land for growing crops and stimulating berry growth were set in the early spring in the northern part of North America just as the new growth was starting.
2. Timing. Fires were set at regular intervals, often as frequently as every 5 years. This was more often than naturally occurring fires.
3. Intensity. Because fires were set more frequently than normal there was less time for larger plants such as shrubs and trees to grow back. This meant there was less fuel to feed a fire, the fires were less intense, and more likely to burn along the surface (ground fire.) A fire that has more fuel will be larger, often getting into the tops of trees and spreading from tree to tree (crown fire.)

Evidence

What kind of evidence is there to support these claims? Most of the evidence is indirect such as written accounts by early settlers, explorers, trappers, and missionaries that saw fires or evidence of fires on the landscape. The landscape itself leaves clues by what is growing there and by looking at tree rings. Trees often have fire scars that give clues as to how often fires started, how severe they were, and what direction the fire came from. A fire scar will form on the area of the tree opposite from the direction the fire came from.

Online Resources page



Plant and Animal Cell Posters Teacher's Guide


Plant and Animal Cells
Teacher's Guide
by Elizabeth Lunday
Poster artwork by Steve P. Wheeler

All living things—from microscopic organisms to giant sequoia trees—are made of one or more cells. Cells are the basic unit of life. Most cells are very tiny and cannot be seen without a microscope. Nevertheless, all cells carry out the basic functions of life such as taking in nutrients, getting rid of wastes, and reproducing. Complex, multicelled organisms such as plants and animals have different kinds of specialized cells that perform these essential functions as well as specialized tasks. Nerve cells in animals, for example, send messages from one point in the body to another. Plants have special water-conducting cells that direct water to different parts of a plant.

Cells come in a wide assortment of shapes and sizes. Most cells have certain structures in common. For example, both plant and animal cells contain a jelly-like fluid known as cytosol that supports the structures inside the cells. (Some sources use the terms *cytosol* and *cytoplasm* interchangeably. To be more exact, *cytosol* refers to the fluid in which the structures inside the cell are located. *Cytoplasm* refers to the cytosol and all the structures inside the cell except the nucleus.)

A cell's nucleus controls the cell's activities and is where the cell's genetic material—its deoxyribonucleic acid, or DNA—is stored. The nucleus often contains a nucleolus, which plays a role in the synthesis of ribosomes, which are structures that manufacture proteins.

All cells need energy or they will not be able to function. In plant cells, structures called chloroplasts absorb energy directly from the Sun and convert it into sugar (food) through the process of photosynthesis. Animal cells do not have chloroplasts. They get energy from the food the animal eats, such as plants or other animals. Cells do not immediately use all of the food they make or take in. They store it. When a cell needs energy, mitochondria convert the stored energy from food and make it available to the cell.

Cells are able to manufacture the substances they need and move them from place to place. The endoplasmic reticulum is where many of these substances are made. The rough endoplasmic reticulum is a network of winding membranes embedded with ribosomes that manufacture certain types of proteins. (Some ribosomes also float freely in the cytosol.) The smooth endoplasmic reticulum is similar in appearance but has no ribosomes. It makes lipids (fats) and other proteins. The endoplasmic reticulum is also a transport system. Bits of it break off and carry packets of lipids and proteins to the cell's Golgi apparatus, where the substances are further processed and released into the cytosol or transported out of the cell.

In order to operate efficiently, cells store needed materials so they will have a steady supply of water, food, and other nutrients. They also store the waste they generate. Plant cells have a large sac-like structure called the central vacuole in which they store water and wastes. The water in the central vacuole helps keep a plant upright. When a plant wilts, it is because there is not enough water in the cells' central vacuoles. In animal cells, lysosomes distributed throughout the cytosol break down wastes and other materials.

Cells do not last forever. In fact, some, such as those that line human intestines, wear out and die in a matter of hours. Old cells are replaced by new cells that are created when existing cells divide. Cell division is also responsible for the growth of organisms. When a cell gets ready to divide, it first duplicates its DNA (genetic material). The DNA moves to the middle of the cell, splits, and is pulled to opposite ends of the cell. Two new nuclei, each containing a full set of DNA, form. In animal cells, the ends of the cell continue pulling away and the cell is pinched into two new daughter cells. In plant cells, a cell plate forms between the two nuclei and becomes part of the new cell wall for each cell.

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Southern Illinois Oak-Hickory Forests poster guide


AN EDUCATIONAL GUIDE TO THE
Southern Illinois Oak-Hickory Forest Poster

This poster depicts an upland oak-hickory forest in the Shawnee Hills of southern Illinois about the first week of May. The leaves are unfolding on the trees, a big flight of migrant songbirds has arrived, and the earliest spring wildflowers have gone to seed while many others remain in full bloom. The site is within a closed-canopy forest near sandstone bluffs and outcrops. The forest opens into a grassy, abandoned crop field at the upper right. A small pond has been dug at the lower right to provide water for wildlife. Numbers in parentheses refer to the numbered key on the poster.

Interpreting Features of the *Southern Illinois Oak-Hickory Forest Poster*

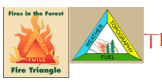
Layers of iron-cemented sand form dark lines within the sandstone creating unique designs as shown here. Plants like columbine (34), shooting star (33), ebony spleenwort (32), serviceberry (8) and red cedar (7) grow in crevices of the rock. The red cedar was spread to fields in the upper right of the poster by seeds dropped in waste deposits of birds that ate its fruits. The Christmas fern (10) grows on rocks and takes its name from its evergreen leaves, which are beautiful at Christmas time. The thin soil on top of bluffs and rocks is home to plants like low-bush blueberry (9) and blackjack oak (1). Animals, such as the northern fence lizard (30), scamper over the rock in search of insects and other food, while the turkey vulture (52) nests within a small cavelike opening in the bluff.

The white oak (3) is one of the most common trees in the upland forest. It gets its name from its pale-gray to almost white bark. Its acorns and those of other oaks and hickories provide abundant food for the gray squirrel (34), white-tailed deer (33) and wild turkey (50). The red-bellied woodpecker (44) and white-breasted nuthatch (45) are searching for insects, insect eggs and larvae beneath loose slabs of bark. Notice the cavity in the white oak that provides a den for the squirrel.

Red oaks (4) have darker and somewhat thinner bark than white oaks, which makes them more easily injured by fire. The large cavity in this tree is a result of a wildfire many years ago that scarred the trunk and allowed a trunk-rotting fungus to enter the tree. The shagbark hickory (5) gets its name from the shaggy bark on its trunk. This bark provides daytime roosting and nursery habitat for the Indiana bat (36).

The Cooper's hawk (51) is in pursuit of two brown-headed cowbirds (54). Small birds are the principal

The Science of Fire activity



Correlation to Illinois Learning Standards
Science: 13B

What is Fire?

Fire is a significant force in the forest environment. Depending upon the specific land management objective and a host of environmental variables, fire will sometimes be an enemy, sometimes a friend, and frequently its effects will be mixed between the two extremes.

Fire Triangle:

In order to have a FIRE, there must be three elements;

Fuel -- something which will burn (such as paper, wood, etc.)

Heat -- enough to make the fuel burn

Oxygen -- air we breathe

Usually these three elements are expressed as a triangle, called the FIRE TRIANGLE. Remove one of these three elements, and the fire will go out.

Fire Behavior Triangle:

Fire Behavior is one of the most important aspects of wildfires because almost all actions taken on a fire depend on how it "behaves." Success in presuppression planning and actual suppression of wildfires is directly related to how well Fire Managers understand and are able to predict fire behavior. The safety of all fire fighting personnel also depends on this knowledge.

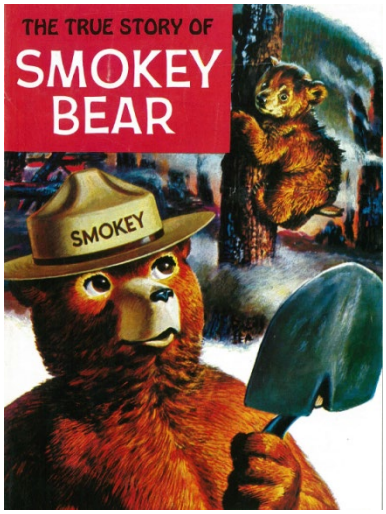
What makes some wildfires burn so hot and others not? What makes fires spread fast one day and slow on another day? A wildfire behaves according to the environment in which it is burning. This environment consists of various elements of fuels, topography and weather. These elements and their reactions with one another - and the fire itself - determine the behavior of fire.

Fire Behavior is defined as: the manner in which fuel ignites, flame develops, and fire spreads as determined by the interaction of fuel, weather, and topography

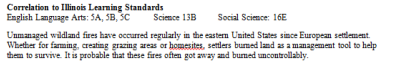
There are many elements under each of the three major components of the fire's environment that affect how a fire behaves. A change in any one of these elements will cause a change in the behavior of the fire--and this change can be very abrupt and rapid.

Fire Behavior Triangle Elements:

The True Story of Smokey Bear comic book



Unmanaged Wildland Fires activity


UNMANAGED WILDLAND FIRES

Correlation to Illinois Learning Standards
English Language Arts: 3A, 5B, 5C Science 13B Social Science: 16E

Unmanaged wildland fires have occurred regularly in the eastern United States since European settlement. Whether for farming, creating grazing areas or homesites, settlers burned land as a management tool to help them to survive. It is probable that these fires often got away and burned uncontrollably.

In addition to fires being human caused, fires were and are often caused by nature - namely lightning. These fires and out of control human caused fires often burned large expanses of the forests over mountains and through valleys until nature (the weather) or some natural fuel break (a river, lake or ridge) intervened.

Although there were localized burning regulations, large scale fire suppression efforts for "unmanaged wildland fires" did not begin until the early 20th century when the USDA Forest Service and State Forestry agencies were organized. At the time, because there were such large numbers of unmanaged wildland fires all across the nation, the main focus was for the suppression of all fires to protect the timber resources.

In 1941, more than 30,000,000 acres burned as a result of 208,000 wildfires in the United States. The USDA Forest Service statistics showed that nine out of ten of these fires were caused by humans and determined that they could be prevented. Unwanted, uncontrolled wildfires are not only harmful to the landscape but they can also be costly in terms of damage to our natural resources and the expense to control and suppress the fires.

The purpose of the development of the fire prevention and Smokey Bear programs was to reduce the number of unwanted human caused fires. With these efforts, the USDA Forest Service and State Forestry agencies were able to significantly reduce the number of fires and to protect our nation during a significantly vulnerable time (World War II.)

Even with our prevention and suppression efforts ongoing, wildland fires continue to occur in the Eastern United States. The causes of these unmanaged wildland fires vary from state to state but the human factors are present in each and most often include children, debris burning and arson. Lightning is a factor in some unmanaged wildland fires but is usually not the leading cause of fires in the eastern United States.

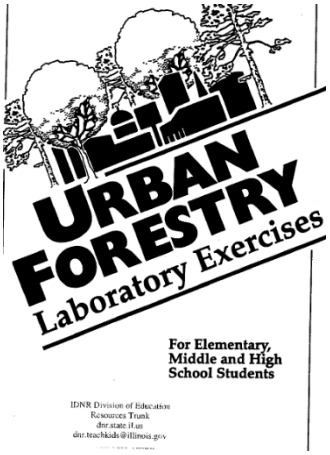
We have most recently witnessed catastrophic wildland fires in Southern California. Here is a list of the most significant fires in the United States.

Historically Significant Wildland Fires

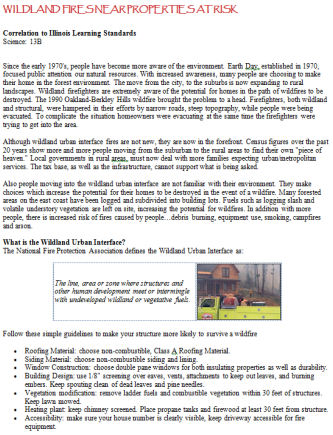
Date	Name	Location	Acres	Significance
October 1825	Miramichi and Maine Fires	New Brunswick and Maine	3,000,000	Large Amount of Acreage Burned
October 1871	Peshtigo	Wisconsin and Michigan	3,780,000	1,500 Lives Lost in Wisconsin
September 1881	Michigan	Michigan	1,000,000	169 Lives Lost
September 1894	Hinckley	Minnesota	Undetermined	418 Lives Lost
September 1894	Wisconsin	Wisconsin	Several Million	Undetermined, Some Lives Lost

Illinois Tree Trunk – Binder Contents Checklist Key

Urban Forestry Laboratory Exercises teacher's guide



Wildland Fires Near Properties at Risk activity


WILDLAND FIRES NEAR PROPERTIES AT RISK

Correlation to Illinois Learning Standards
Science: 12B

Since the early 1970's, people have become more aware of the environment. Earth Day, established in 1970, focused public attention our natural resources. With increased awareness, many people are choosing to make their home in the forest environment. The move from the city, to the suburbs is now expanding to rural landscapes. Wildland firefighters are extremely aware of the potential for homes in the path of wildfires to be destroyed. The 1990 Oakland-Berkley Hills wildfire brought the problem to a head. Firefighters, both wildland and structural, were hampered in their efforts by narrow roads, steep topography, while people were being evacuated. To complicate the situation homeowners were evacuating at the same time the firefighters were trying to get into the area.

Although wildland urban interface fires are not new, they are now in the forefront. Census figures over the past 20 years show more and more people moving from the suburban to the rural areas to find their own "piece of heaven." Local governments in rural areas, must now deal with more families expecting urban/metropolitan services. The tax base, as well as the infrastructure, cannot support what is being asked.

Also people moving into the wildland urban interface are not familiar with their environment. They make choices which increase the potential for their homes to be destroyed in the event of a wildfire. Many forested areas on the east coast have been logged and subdivided into building lots. Fuels such as logging slash and volatile understory vegetation are left on site, increasing the potential for wildfires. In addition with more people, there is increased risk of fires caused by people…debris burning, equipment use, smoking, campfires and arson.

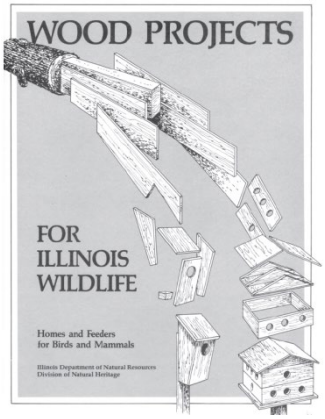
What is the Wildland Urban Interface?
The National Fire Protection Association defines the Wildland Urban Interface as:

The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Follow these simple guidelines to make your structure more likely to survive a wildfire

- Roofing Material: choose non-combustible, Class A Roofing Material.
- Siding Material: choose non-combustible siding and lining.
- Window Construction: choose double pane windows for both insulating properties as well as durability.
- Building Design: use 1/8" screening over eaves, vents, attachments to keep out leaves, and burning embers. Keep spouting clean of dead leaves and pine needles.
- Vegetation modification: remove ladder fuels and combustible vegetation within 30 feet of structures. Keep lawn mowed.
- Heating plant: keep chimney screened. Place propane tanks and firewood at least 30 feet from structure.
- Accessibility: make sure your house number is clearly visible, keep driveway accessible for fire equipment.

Wood Projects for Illinois Wildlife booklet



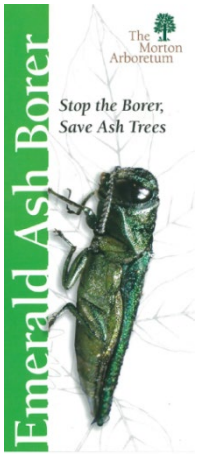
Illinois Tree Trunk – Small Container Contents Checklist Key

10-meter tape

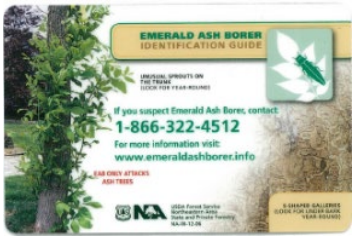
calipers

clinometer

Emerald Ash Borer brochure

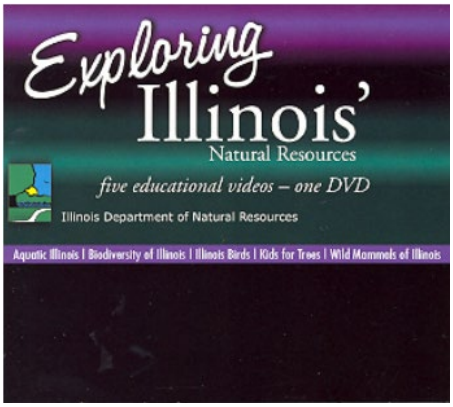


Emerald Ash Borer Identification Guide card

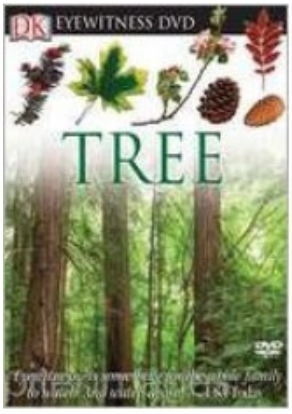


Illinois Tree Trunk – Small Container Contents Checklist Key

***Exploring Illinois' Natural Resources* DVD**



***Eyewitness Tree* DVD**



***Fall Color Finder* book**

hand lens

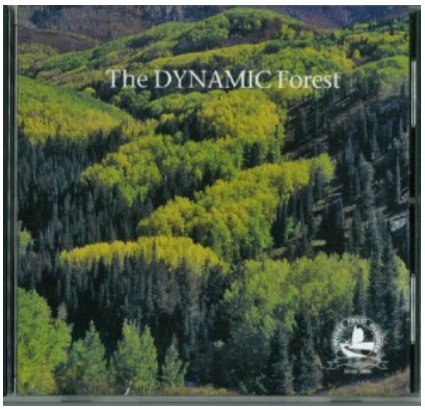
***Illinois Biodiversity* CD-ROM**

Illinois' Natural Resources Trading Cards

***Illinois Report on Sustainable Forest Management* CD-ROM**

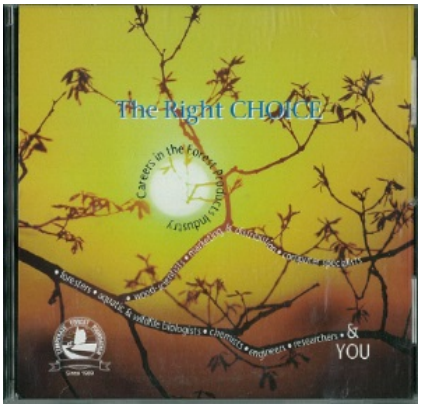
***Kids for Trees* CD-ROM**

***The Dynamic Forest* DVD**



Illinois Tree Trunk – Small Container Contents Checklist Key

The Right Choice DVD



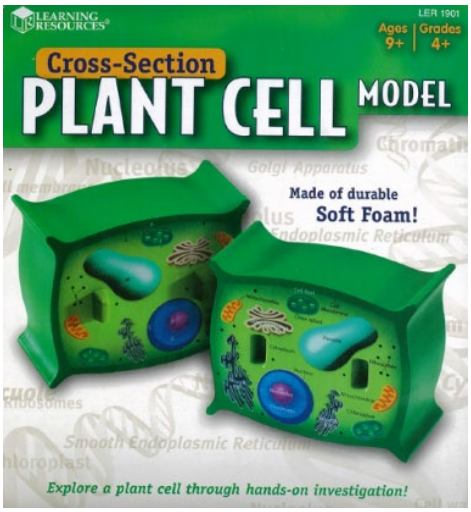
Tree Cookies

Wanted: The Asian Longhorned Beetle brochure

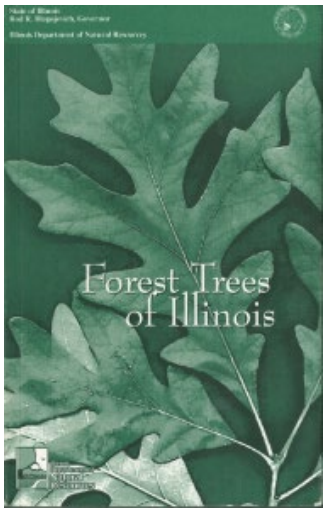
Winter Tree Finder book

Illinois Tree Trunk – Large Container Contents Checklist Key

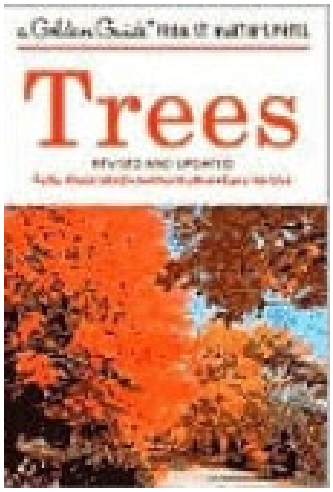
Cross Section of a Plant Cell model



Forest Trees of Illinois book



Golden Guide Trees book

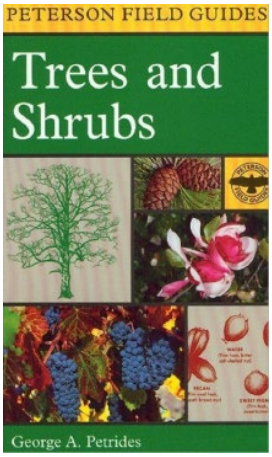


Illinois Tree Trunk – Large Container Contents Checklist Key

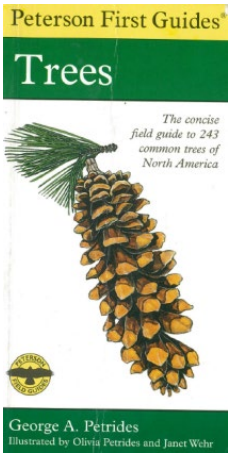
Lumber Samples

One Small Square Woods book

Peterson Field Guide to Trees and Shrubs book



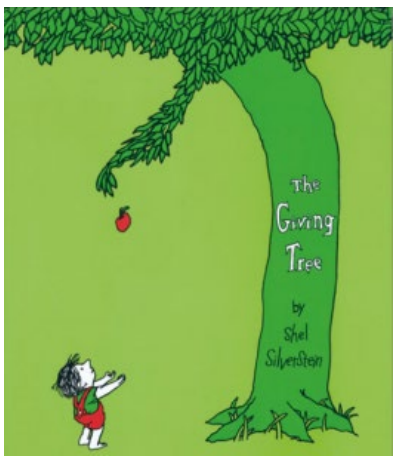
Peterson's First Guide to Trees book



Plant Press

Take a Tree Walk book

The Giving Tree book



Tree Homes Teacher's Guide book

Trees, Leaves and Bark book

Illinois Tree Trunk – Kits Checklist Key

How a Tree Grows kit

Seed Identification kit

Topographic Map Class kit

Tree Biodiversity kit

Tree Growth Study kit

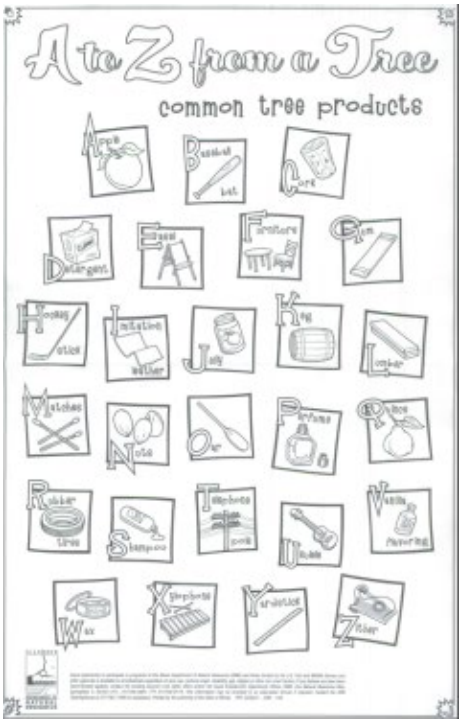
Tree Identification kit

Tree Ring Dating kit

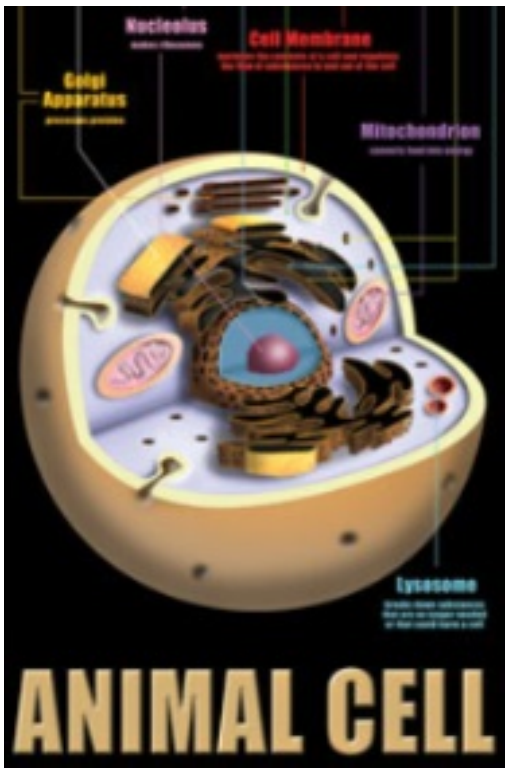
Illinois Tree Trunk – Poster Key

A to Z from a Tree

A to Z from a Tree coloring sheet



Animal Cell



Árboles de Illinois

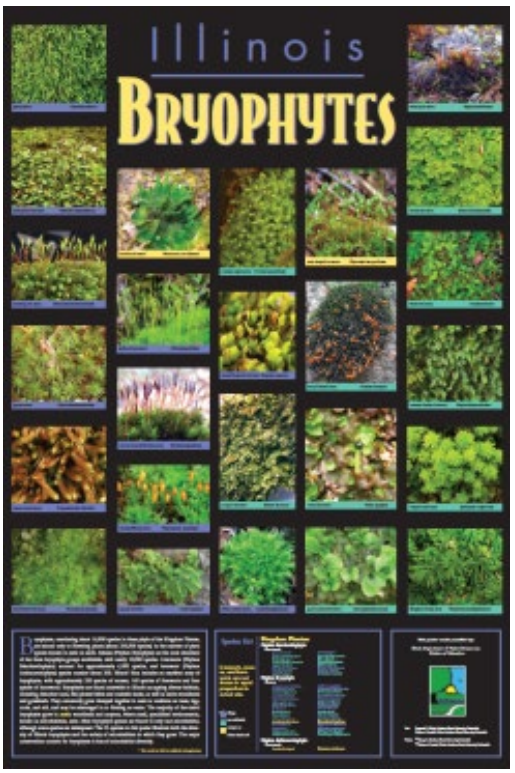
Illinois Tree Trunk – Poster Key

Colores de Otoño de Illinois

Gypsy Moth Life Cycle

Habitats are Homes

Illinois Bryophytes



Illinois Tree Trunk – Poster Key

Illinois Fall Colors

Illinois' Forestry Industry

Illinois' Natural Resources Trading Cards Set 1

Illinois' Natural Resources Trading Cards Set 2

Illinois Tree Trunk – Poster Key

Illinois' Natural Resources Trading Cards Set 3

Illinois' Natural Resources Trading Cards Set 4

Illinois' Natural Resources Trading Cards Set 5

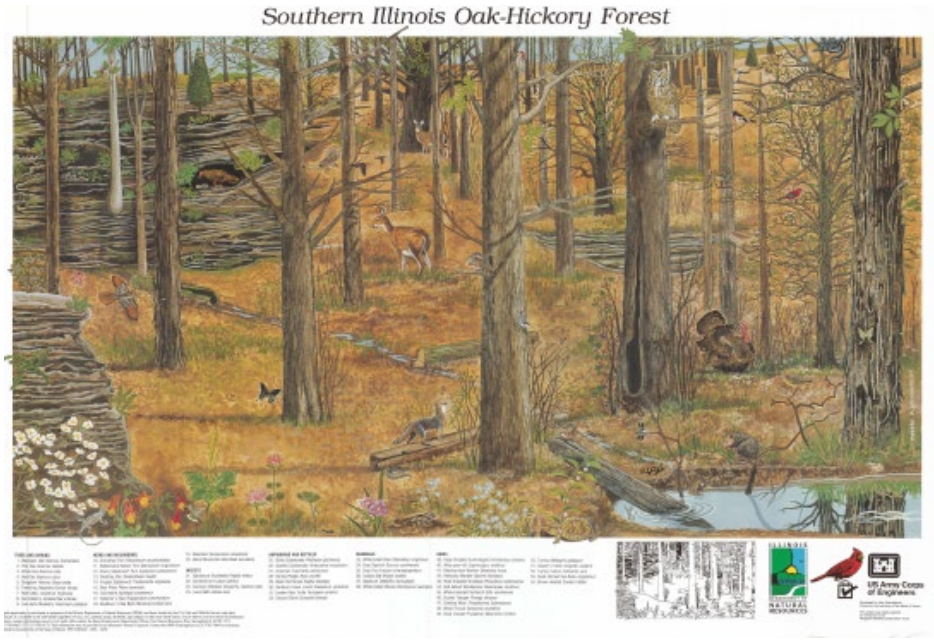
Illinois Trees: Seeds and Leaves

Illinois Tree Trunk – Poster Key

Illinois Trees: Volume II

Plant Cell

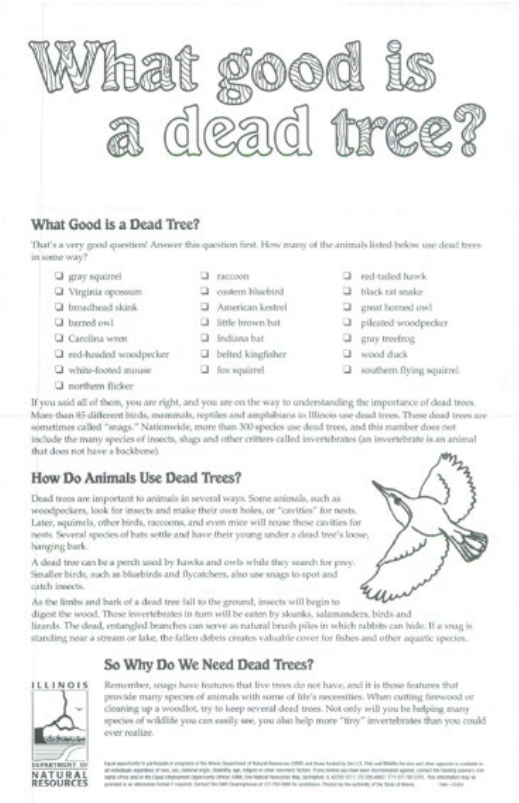
Southern Illinois Oak-Hickory Forests



Illinois Tree Trunk – Poster Key

Topographic Map

What Good is a Dead Tree? Coloring sheet



What good is a dead tree?

What Good is a Dead Tree?

That's a very good question! Answer this question first. How many of the animals listed below use dead trees in some way?

- ❑ gray squirrel
- ❑ Virginia opossum
- ❑ broadhead skink
- ❑ barred owl
- ❑ Carolina wren
- ❑ red-headed woodpecker
- ❑ white-footed mouse
- ❑ northern flicker
- ❑ raccoon
- ❑ eastern bluebird
- ❑ American kestrel
- ❑ little brown bat
- ❑ Indiana bat
- ❑ belted kingfisher
- ❑ fox squirrel
- ❑ red-tailed hawk
- ❑ black rat snake
- ❑ great horned owl
- ❑ pileated woodpecker
- ❑ gray treefrog
- ❑ wood duck
- ❑ southern flying squirrel

If you said all of them, you are right, and you are on the way to understanding the importance of dead trees. More than 85 different birds, mammals, reptiles and amphibians in Illinois use dead trees. These dead trees are sometimes called "snags." Nationwide, more than 300 species use dead trees, and this number does not include the many species of insects, slugs and other critters called invertebrates (an invertebrate is an animal that does not have a backbone).

How Do Animals Use Dead Trees?

Dead trees are important to animals in several ways. Some animals, such as woodpeckers, look for insects and make their own holes, or "cavities" for nests. Later, squirrels, other birds, raccoons, and even mice will reuse these cavities for nests. Several species of bats settle and have their young under a dead tree's loose, hanging bark.

A dead tree can be a perch used by hawks and owls while they search for prey. Smaller birds, such as bluebirds and flycatchers, also use snags to spot and catch insects.

As the limbs and bark of a dead tree fall to the ground, insects will begin to digest the wood. These invertebrates in turn will be eaten by skunks, salamanders, birds and lizards. The dead, entangled branches can serve as natural brush piles in which rabbits can hide. If a snag is standing near a stream or lake, the fallen debris creates valuable cover for fishes and other aquatic species.

So Why Do We Need Dead Trees?

Remember, snags have features that live trees do not have, and it is those features that provide many species of animals with some of life's necessities. When cutting firewood or cleaning up a woodlot, try to keep several dead trees. Not only will you be helping many species of wildlife you can easily see, you also help more "tiny" invertebrates than you could ever realize.

ILLINOIS DEPARTMENT OF NATURAL RESOURCES