



**Thunderbird District Roundtable Den Splits.
May's Theme: "Leaf it to Cubs"**

Fingerprint Apple Tree Craft

- Stamp the side of your hand in brown paint and stamp it on the paper as the trunk
- Stamp your index finger in green paint and stamp it many times on the paper for the leaves (re-dipping in the paint as necessary)
- Stamp your pinkie finger in red paint and stamp it lightly on the paper for the apples (light stamps make rounder prints)



Tigers- Ach -5D&G, 1F Elect. - 4, 22, 30-33, 35
Wolf- Ach - 5, 11A, 6, 6B, 9D Elect. - 9B, 15B
Bear – Ach - 3G, 6B, 23A Elect. - 12A, 15D

From the Cub Scout Leader How-To Book:
 - Know Your Leaf (hiking game) – page 4-4
 - Fun with Trees – pages 4-9 to 4-12

Petrified Wood Game

- Cubs are scattered on the playing surface.
- Two are chose to be "chasers." One is chosen to be the "good woodsman."
- When a Cub is touched by either of the chasers, he becomes "petrified" and must freeze in place.
- When the good woodsman touches a petrified boy, the boy is free to run again.
- Play a few minutes then trade roles so everyone gets a chance to be chasers or the good woodsman.

Tree Chain Game

This game works best with a large group that divides evenly by six is ideal.

OBJECTIVE: Scouts will be able be able to identify factors that are necessary for seed germination and plant growth.

TIME FRAME: About 15-20 minutes (longer with additional rounds of play).

MATERIAL NEEDS: Need an open area with space for game play. Index cards for making "Tree Needs" cards. (Make one card per scout. With 18 children you would need 3 seed cards, 3 water cards, 3 soil cards, 3 sun cards, 3 air cards and 3 space cards.) If the group size does not divide evenly by six, make additional "tree needs" cards to hand out, starting from the top of the "Tree Needs Chart.")

<u>Tree Need</u> SEED	<u>Tree Need</u> WATER	<u>Tree Need</u> SOIL	<u>Tree Need</u> SUN	<u>Tree Need</u> AIR	<u>Tree Need</u> SPACE
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“Tree Needs Chart” show in order the “Tree Needs” to be collected.

BACKGROUND: A tree is a living organism. Like any living thing, a tree has certain needs that are essential for it to grow and thrive. Some trees can reproduce from cuttings, but most trees start from a seed. Starting as a seed, a tree requires water, soil, sun, air (carbon dioxide), and space to grow.

A **seed** can be described as a baby plant in a box with its lunch. A seed coat houses and protects the seed. There is enough food stored within the seed to feed and sustain the young plant as it begins to grow and until it develops leaves and can start to produce its own food through the process of photosynthesis. Sometimes seeds need a period of dormancy over the winter before they will germinate.

Water is an essential ingredient for life. Often water is required to soften the seed coat so the tiny plant inside can germinate. Water is a vital part of a tree’s basic structure and is one of the main components of photosynthesis. It also transports nutrients from the soil to the tree roots.

Soil sustains and supports the tree. The soil holds the water and contains essential nutrients the tree needs to grow. Tree roots spread out in the soil, sucking up water and pulling in the nutrients. There are many different soil types, each capable of supporting different kinds of trees.

Trees, like all green plants, get their energy from the **sun**. It is the catalyst for the process of photosynthesis. Each of the tree’s leaves is like a tiny factory - taking in sunlight and air (carbon dioxide) and mixing them with water and food from the tree’s roots. When this happens, the leaves make a sugar-like food that feeds the tree.

Trees need **space** to grow. Without enough space, trees may have to compete with other plants for light, soil nutrients, and water.

DIRECTIONS:

Ask scouts what factors are needed for a tree to grow. (Answers will vary.) As scouts respond, elaborate briefly on the function of each “tree need” mentioned and direct discussion so all factors (seed, water, soil, sun, air and space) are reviewed.

Tell scouts that they are going to play a game where they have to collect all the things a tree seed needs to grow. Starting with a seed, they must collect water, soil, sun, air and space. Scouts must collect all these “tree needs” **AND THEY MUST COLLECT THEM IN ORDER.** (For example - a seed must first get water, then soil, then sun, then air, then space...in that order.)

Put up the “Tree Needs Chart” to help scouts remember in what order they need to collect the “tree needs”. Tell scouts that they will each be handed a card. Each scout should look at his/her own card, but not let anyone else see what “tree need” is on that card. Hold cards face down and pass out one card to each scout, distributing an equal number of the different “tree needs.” (If the group size does not divide evenly by six, select additional “tree needs” cards to hand out, starting with requirements from the top of the “Tree Needs Chart.”)

Scouts hold cards face down so no one can see what is on the card. Have the scouts make two lines facing each other across the room or across a field. Ask the scouts holding the seed cards to come stand in the middle between the two lines then give instructions to all the scouts.

Explain to the scouts that, at a given signal, each scout holding a seed card must run to one line and may ask only ONE scout in that line to show them his or her card. If the selected scout is not holding a water card, the scout with the seed card must run to the opposite line to ask someone there if they have a water card. If the selected scout is holding a water card, the two scouts link arms and run together to the opposite line to try to find someone with a soil card, the next needed component for a tree to grow. Game continues with scouts going back and forth, adding “tree needs” to the tree chain in the order listed on the “Tree Needs Chart”, until a chain of all six of the needed components has been made.

Winner is the team of six that completes the tree chain first.



CHICAGO BOTANIC GARDEN

1000 Lake Cook Road, Glencoe, IL 60022 • Phone 847.835.5440

Boy Scouts Tiger, Wolf and Bear Cubs (1 ½ hours):\$10 per child

Scouts can work towards their badges at the Garden. The [prairie](#), [woods](#) and other gardens offer environments and activities for advancement and challenge. Workshops range from terrarium-making to prairie walks to special holiday programs.

Workshops are available on scheduled dates. Some activities are subject to change due to weather conditions. All workshops may qualify participants for official awards programs; please inquire for specific details. Participants will receive a Chicago Botanic Garden activity patch.

Pre-registration is required for all workshops. Call 847-835-8361 with questions or to register. Groups may be combined to meet capacity. A minimum of 10 children is required to register for a workshop. Workshops are limited to 25 children. A minimum of one actively involved chaperone for every five children is required. There is no fee for adult chaperones for workshops or special events.



Fall 2007 – Spring 2008 Cub Scout and Webelo Schedule

All year-round, Scouts can work towards their badges at the Garden. Don't see a workshop that fits your schedule? Please call. Some accommodations can be made.

	September 10 – 28	October 1–19	Oct 22 – Nov 16	March 17 – April 4	April 28 – May 23
Tiger Cubs 3:45 – 5:15 p.m.	Let's Go Outdoors!	Let's Go Outdoors!			Let's Go Outdoors!
Wolf Cubs 3:45 – 5:15 p.m.	Flyways	Flyways	Let's Grow!	Let's Grow!	Flyways
Bear Cubs 3:45 – 5:15 p.m.	Water & Soil Conservation	Water & Soil Conservation	Junior Naturalists	Junior Naturalists	Water & Soil Conservation

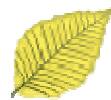
TIGER CUBS



**Let's Go
Outdoors**

Go on a nature hike and explore the great outdoors at Chicago Botanic Garden! Activities may include planting seeds, making a birdfeeder, playing an exciting nature game, and discovering leaves and trees.

BEAR CUBS



**Junior
Naturalists**

Create a colorful leaf identification book, "track" down some local wildlife, and study seeds up close and personal.

WOLF CUBS



FlyWays

Discover some of the wildlife that inhabits the skies at the Garden. Create a bird identification list, make a bird feeder, observe birds in their natural habitats and learn about animal adaptations.



**Water and
Soil
Conservation**

Is it all dirt to you? No way! Perform scientific experiments to learn what soil is made of and why it is so important. Discover how fire affects ecosystems and what you can do to prevent erosion.



Let's Grow

Learn how scientists at the Garden make plants grow year-round, and discover what surprises the greenhouses hold. Dissect seeds and plant a tropical plant of your own to bring home.

The Anatomy of a Tree

A

The **outer bark** is the tree's protection from the outside world. Continually renewed from within, it helps keep out moisture in the rain, and prevents the tree from losing moisture when the air is dry. It insulates against cold and heat and wards off insect enemies.

B

The **inner bark**, or “phloem”, is pipeline through which food is passed to the rest of the tree. It lives for only a short time, then dies and turns to cork to become part of the protective outer bark.

C

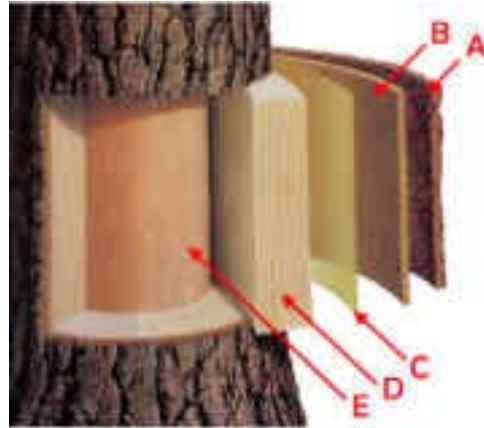
The **cambium cell layer** is the growing part of the trunk. It annually produces new bark and new wood in response to hormones that pass down through the phloem with food from the leaves. These hormones, called “auxins”, stimulate growth in cells. Auxins are produced by leaf buds at the ends of branches as soon as they start growing in spring.

D

Sapwood is the tree's pipeline for water moving up to the leaves. Sapwood is new wood. As newer rings of sapwood are laid down, inner cells lose their vitality and turn to heartwood.

E

Heartwood is the central, supporting pillar of the tree. Although dead, it will not decay or lose strength while the outer layers are intact. A composite of hollow, needlelike cellulose fibers bound together by a chemical glue called lignin, it is in many ways as strong as steel. A piece 12” long and 1” by 2” in cross section set vertically can support a weight of twenty tons!



Leaves make food for the tree

And this tells us much about their shapes. For example, the narrow needles of a Douglasfir can expose as much as three acres of chlorophyll surface to the sun.

The lobes, leaflets and jagged edges of many broad leaves have their uses, too. They help evaporate the water used in food-building, reduce wind resistance— even provide “drip tips” to shed rain that, left standing, could decay the leaf.



Can You Hear the Heartbeat?

If you listen carefully with a stethoscope, you can hear the “heartbeat” of a tree. Find a thinbarked tree more than 6 inches in diameter and place your stethoscope against its trunk. Be very quiet. Move the stethoscope around until you can hear the crackling, gurgling sound of sap flowing up to the branches.

Online Resources:

<http://old.scouting.org/cubscouts/resources/34304/2008-05.pdf>

<http://kismif.org/category/themes/leaf-it-to-cubs/>

<http://www.scoutingthenet.com/Training/Roundtable/Handouts/08/04/>

Attention Bear Leaders –

Your bears become Webelos on June 1. Are you ready?? Be sure to take Webelos Leader Position Specific and Outdoor Webelos Leader Training as soon as possible. Sign your Cubs up for Webelos Resident, if your council offers it!!! If they don't, sign them up at a neighboring council's camp.

Do Trees Drink?

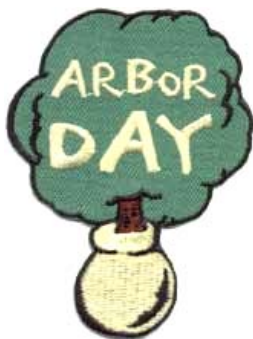
A simple demonstration can be done with celery.

- Use a piece of celery with leaves for each boy.
- Place three drops of red food coloring in a glass of water and place celery in the water.
- Over a couple of days, the veins on the outside of the celery will start changing color, showing how the liquid goes up the stalk.
- The same type of activity takes place inside a tree.

PLANT A TREE!

Leaf Poundings

Materials: Fresh leaves and flowers (pick as close as possible to using them so they don't dry out), cotton muslin, rubber mallet or hammer, masking tape, piece of wood (to protect the table), iron, cardboard, glue.



Cut the muslin into 8-by-8 in squares. Lay one or two flowers or leaves facedown on the muslin.

Cover them with masking tape. Flip the muslin over and lay it on top of the piece of wood. Use the mallet to hammer out the flowers and leaves.

As you are hammering, the color will be released and the image should appear on your fabric. Remove the leaves and tape. Have the adult partner use the iron to set the colors. Once the piece of fabric has been ironed, lay it on the table with the image facedown. Center a 6-by-6-in. square of cardboard on the fabric. Use the glue to attach the extra fabric to the back of the cardboard. Use masking tape to finish the raw edges.

Twig Frames

(Tiger Elective 4)

Materials: Lots of small, straight twigs; glue; twine or yarn; cardboard; picture to be framed; ruler; low-temperature glue gun



Measure the picture to be framed and cut out a piece of cardboard the same size. Glue the picture to the cardboard. Break the twigs into pieces that are about 2 in. longer than each side of the picture. Arrange the sticks to form the picture frame. Adult partners use the glue gun to tack the sticks down. Use twine or yarn to wrap the four corners in an X pattern. Glue the ends of the twine to the back of the sticks. Now glue the picture to the back of the frame. Glue a piece of twine to the back of the photo to hang.



People across the nation are joining together to collect important climate change data on the timing of leafing and flowering of trees and flowers through Project BudBurst! This national citizen science field campaign targets native tree and flower species across the country. By recording the timing of the leafing and flowering of native species each year, scientists can learn about the prevailing climatic characteristics in a region over time. With your help, we will be compiling valuable environmental information that can be compared to historical records to illustrate the effects of climate change.

Poison Ivy...

COLOR IT ITCHY!

Nobody wants to get Poison Ivy. It makes your skin get red and break out in very, very itchy bumps.

What's the best way not to get Poison Ivy? By knowing what it looks like!

This is not always easy. Poison Ivy can have shiny leaves or dull leaves. It can grow close to the ground or up on trees and posts. Sometimes, it has tiny white flowers. Other times, it has pale green berries.

But one thing about Poison Ivy never changes. Its leaves always grow in groups of three!



Poison Ivy leaves can have edges with teeth on them. Color these leaves green.



In the spring, Poison Ivy leaves are small and young. Color these leaves red.

Or Poison Ivy leaves can have smooth edges. Color these green too.



In the summer, the leaves get bigger and turn green.



In the fall, Poison Ivy leaves can turn yellow, red, or orange.



In the winter, Poison Ivy loses its leaves, but not its hair! That's how you can tell the stems of Poison Ivy in the winter. But be careful, it's still poisonous! Color these stems brown.