



# CAVOC Fourth Grade Curriculum

(Cedric A. Vig Outdoor Classroom)

## Suggested Schedule

9:00 - 9:30	Arrival, overview, expectations, rules, housekeeping questions, break up into three groups
9:35 - 10:20	First Activity
10:25 - 10:40	Snack/Bathroom
10:45 - 11:30	Second Activity
11:35 - 12:20	Third Activity
12:25 - 12:55	Lunch
1:00 - 1:50	Walk/Game
1:50 - 2:00	Housekeeping
2:00	Depart for school

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## Compass Use and Orienteering

### Objectives

- \*Students will use the cardinal coordinates.
- \*Students will use a compass to determine directions in terms of the cardinal coordinates and compass degrees on a map and in the field.
- \*Students will calculate the average distance of a pace.
- \*Students will calculate the pacing distances on a map.
- \*Students will discuss other ways to tell what direction they are going.

### DPI Environmental Education Standards

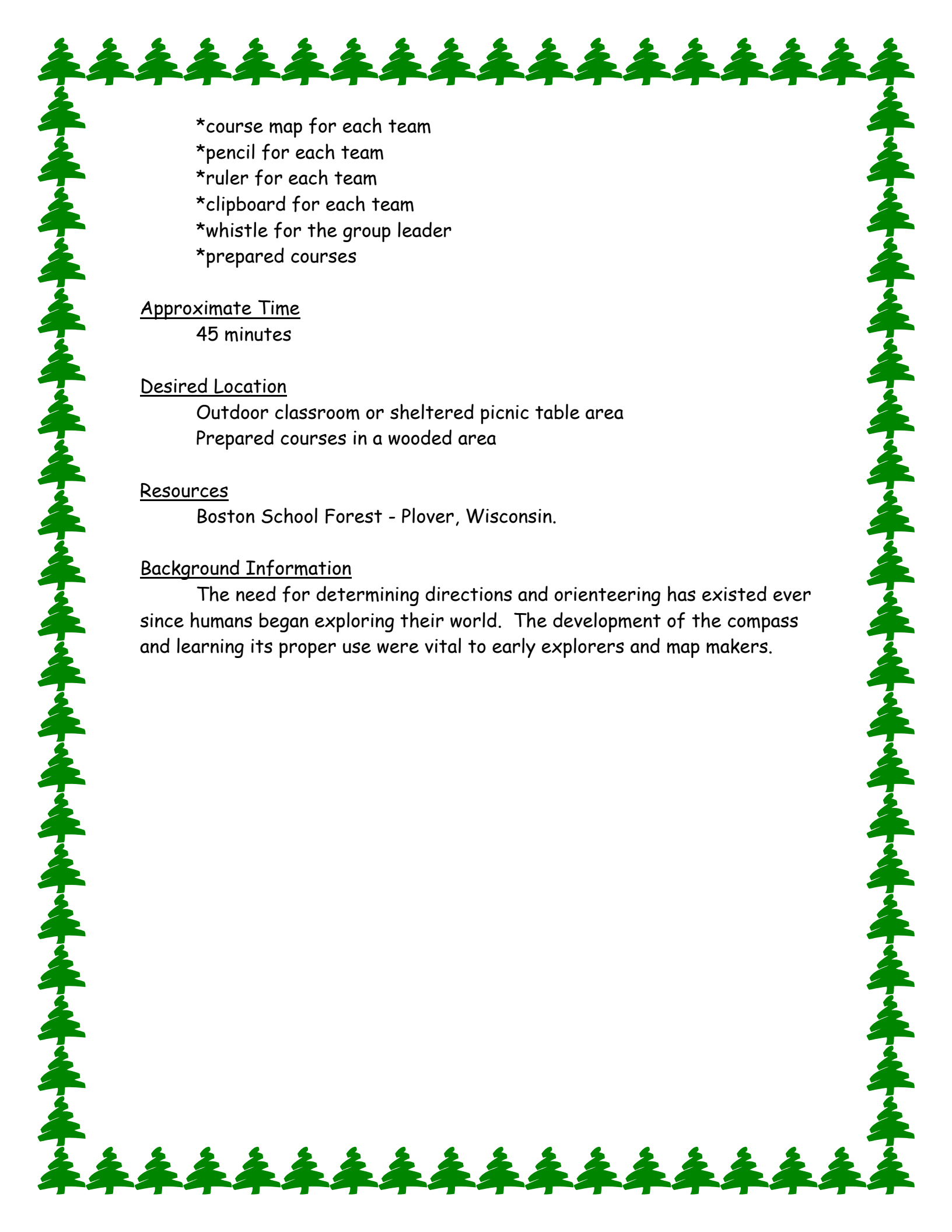
A.4.1, A.4.2, A.4.3

### School District of Rhinelander Benchmarks

LA.4.C.1, M.4.A.1, M.4.B.5, M.4.C.3, M.4.D.1, M.4.D.3, M.4.D.5, M.4.E.1, M.4.F.6, S.4.B.3, S.4.C.3

### Materials

- \*compass for each student
- \*poster of compass
- \*poster of an old map

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- \*course map for each team
  - \*pencil for each team
  - \*ruler for each team
  - \*clipboard for each team
  - \*whistle for the group leader
  - \*prepared courses

Approximate Time

45 minutes

Desired Location

Outdoor classroom or sheltered picnic table area  
Prepared courses in a wooded area

Resources

Boston School Forest - Plover, Wisconsin.

Background Information

The need for determining directions and orienteering has existed ever since humans began exploring their world. The development of the compass and learning its proper use were vital to early explorers and map makers.

The ability to determine direction is an important skill for anyone who spends time in the outdoors. The location of the sun and stars can help determine directions. A watch face can be used to approximate direction. There is also misinformation about determining direction that needs to be pointed out. Moss does not only grow on the north side of trees.

The cardinal coordinates are often taught to children as NEWS - North, East, West, and South - reading from the top and across each part of a compass rose.

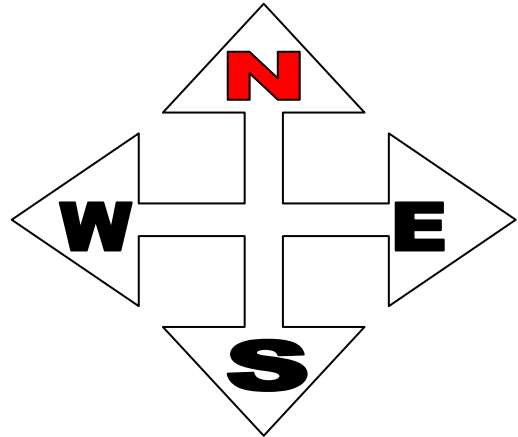
The compass is the most reliable means of determining direction. Compasses are based upon 360 degrees, and the directions are extensions of four adjacent angles each being 90 degrees. Compasses always point to North with a red needle because the needle is attracted to the magnetic force at the North Pole. Compasses can be affected by being too close to metal objects and magnets. Compasses must always be held flat and perpendicular to the body to work accurately.

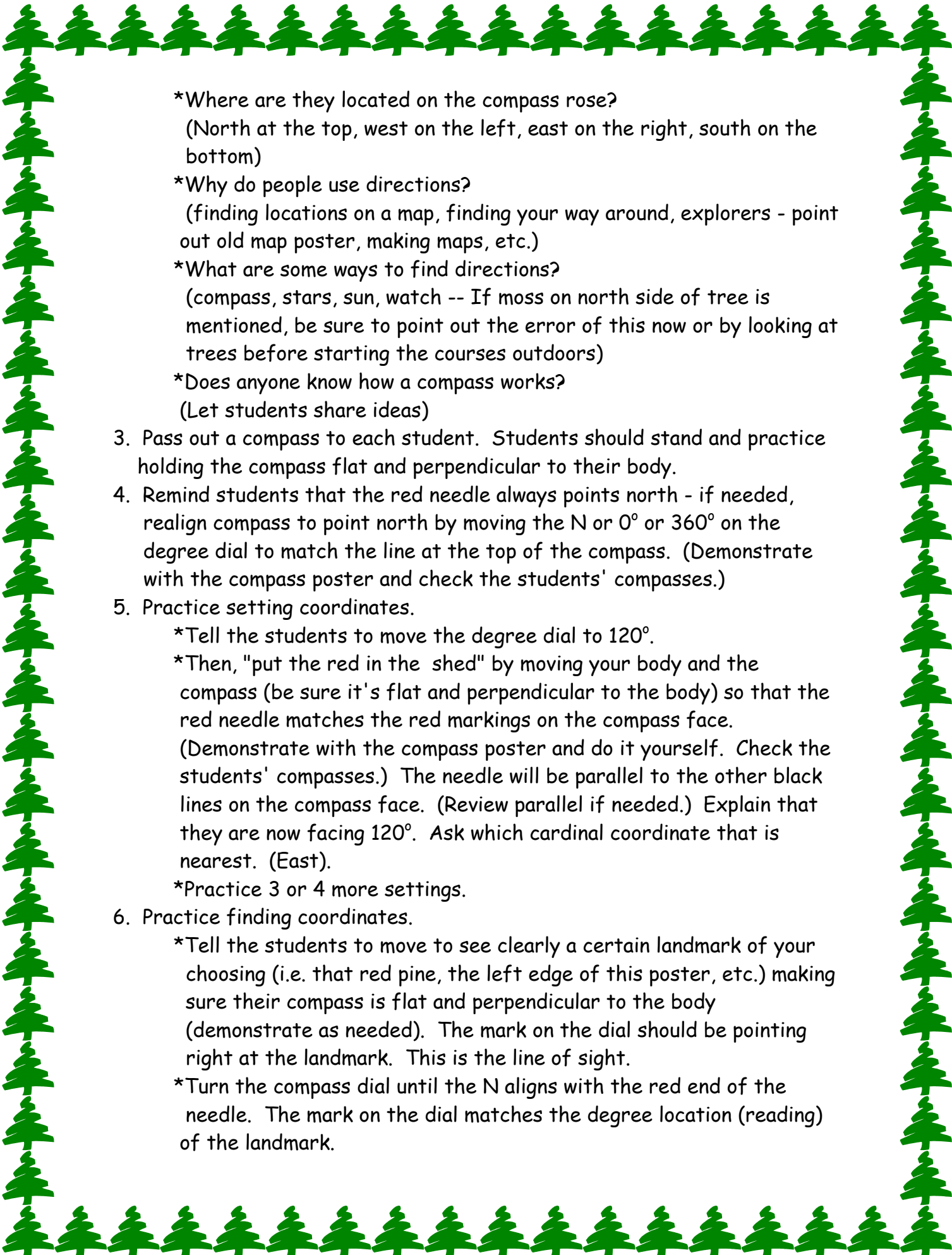
The four prepared courses are located on 100 foot by 100 foot areas next to each other. Each corridor has a site where an object will be placed beforehand. The students will follow the bearing and distance that they predetermined to reach that location. If successful, they will record what object was there and proceed back to the starting location. Each team will be receive a map, and the bearings and distances will be determined before the team begins. Teachers will want to divide the groups carefully to spread out the very successful students with those who are having more difficulty with learning how to use a compass.

#### Activity

1. Beforehand, the short course must be set up by placing objects at the locations on the course map. Objects for the first location might be "Tootsie Roll Pops" for each team member in a container.
2. Meet with students in one of the indoor classrooms or at the sheltered picnic table area for a brief discussion.

\*What are the cardinal directions or coordinates?  
(North, South, East, West)





\*Where are they located on the compass rose?  
(North at the top, west on the left, east on the right, south on the bottom)

\*Why do people use directions?  
(finding locations on a map, finding your way around, explorers - point out old map poster, making maps, etc.)

\*What are some ways to find directions?  
(compass, stars, sun, watch -- If moss on north side of tree is mentioned, be sure to point out the error of this now or by looking at trees before starting the courses outdoors)

\*Does anyone know how a compass works?  
(Let students share ideas)

3. Pass out a compass to each student. Students should stand and practice holding the compass flat and perpendicular to their body.

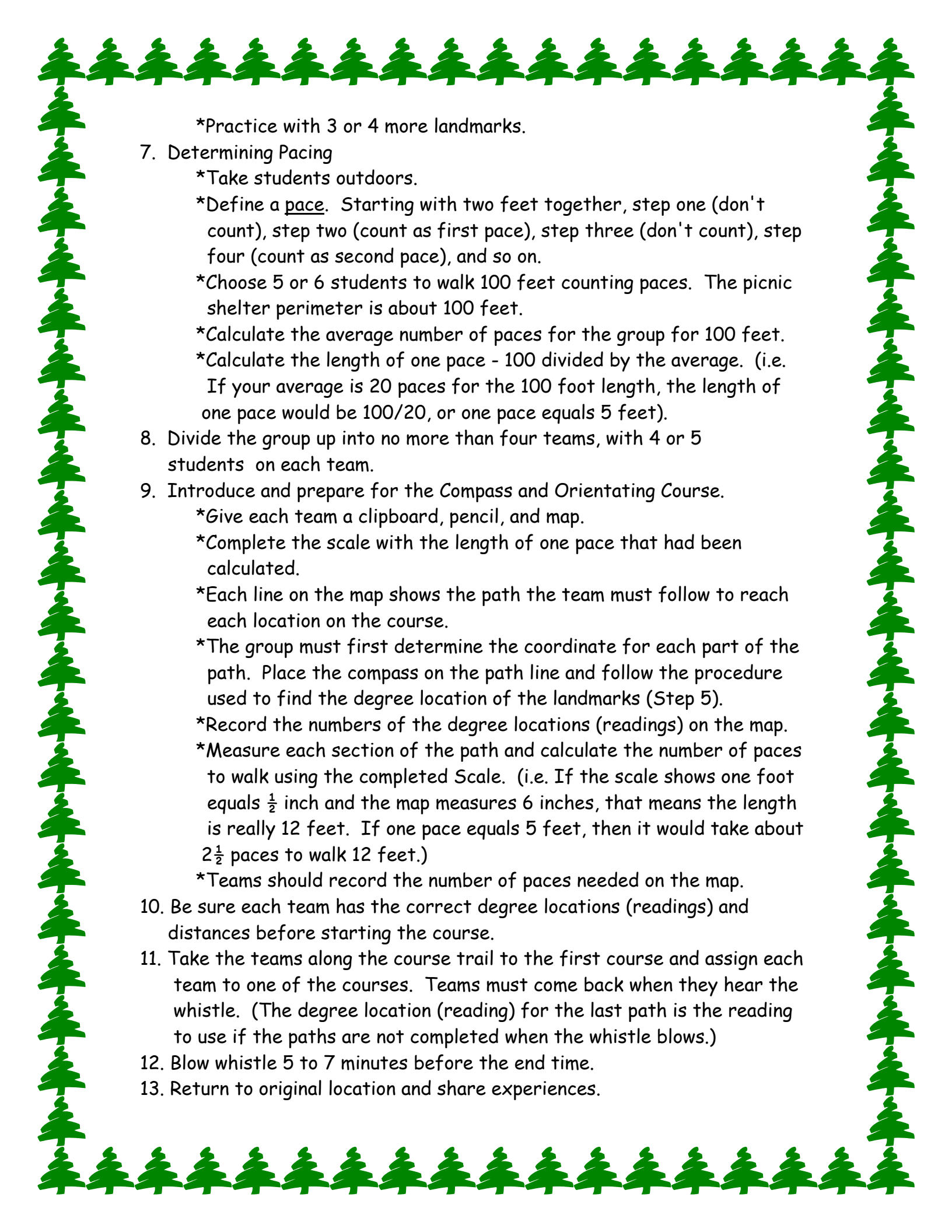
4. Remind students that the red needle always points north - if needed, realign compass to point north by moving the N or  $0^\circ$  or  $360^\circ$  on the degree dial to match the line at the top of the compass. (Demonstrate with the compass poster and check the students' compasses.)

5. Practice setting coordinates.  
\*Tell the students to move the degree dial to  $120^\circ$ .  
\*Then, "put the red in the shed" by moving your body and the compass (be sure it's flat and perpendicular to the body) so that the red needle matches the red markings on the compass face. (Demonstrate with the compass poster and do it yourself. Check the students' compasses.) The needle will be parallel to the other black lines on the compass face. (Review parallel if needed.) Explain that they are now facing  $120^\circ$ . Ask which cardinal coordinate that is nearest. (East).

\*Practice 3 or 4 more settings.

6. Practice finding coordinates.  
\*Tell the students to move to see clearly a certain landmark of your choosing (i.e. that red pine, the left edge of this poster, etc.) making sure their compass is flat and perpendicular to the body (demonstrate as needed). The mark on the dial should be pointing right at the landmark. This is the line of sight.

\*Turn the compass dial until the N aligns with the red end of the needle. The mark on the dial matches the degree location (reading) of the landmark.



\*Practice with 3 or 4 more landmarks.

7. Determining Pacing

\*Take students outdoors.

\*Define a pace. Starting with two feet together, step one (don't count), step two (count as first pace), step three (don't count), step four (count as second pace), and so on.

\*Choose 5 or 6 students to walk 100 feet counting paces. The picnic shelter perimeter is about 100 feet.

\*Calculate the average number of paces for the group for 100 feet.

\*Calculate the length of one pace - 100 divided by the average. (i.e. If your average is 20 paces for the 100 foot length, the length of one pace would be  $100/20$ , or one pace equals 5 feet).

8. Divide the group up into no more than four teams, with 4 or 5 students on each team.

9. Introduce and prepare for the Compass and Orientating Course.

\*Give each team a clipboard, pencil, and map.

\*Complete the scale with the length of one pace that had been calculated.

\*Each line on the map shows the path the team must follow to reach each location on the course.

\*The group must first determine the coordinate for each part of the path. Place the compass on the path line and follow the procedure used to find the degree location of the landmarks (Step 5).

\*Record the numbers of the degree locations (readings) on the map.

\*Measure each section of the path and calculate the number of paces to walk using the completed Scale. (i.e. If the scale shows one foot equals  $\frac{1}{2}$  inch and the map measures 6 inches, that means the length is really 12 feet. If one pace equals 5 feet, then it would take about  $2\frac{1}{2}$  paces to walk 12 feet.)

\*Teams should record the number of paces needed on the map.

10. Be sure each team has the correct degree locations (readings) and distances before starting the course.

11. Take the teams along the course trail to the first course and assign each team to one of the courses. Teams must come back when they hear the whistle. (The degree location (reading) for the last path is the reading to use if the paths are not completed when the whistle blows.)

12. Blow whistle 5 to 7 minutes before the end time.

13. Return to original location and share experiences.



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## Pond Study

### Objectives

- \*Students will observe wetland organisms during a visit to a pond site.
- \*Students will sketch and record observations of plants and animals they observe at the pond site.
- \*Students will use a dichotomous key to life in a pond to classify organisms they observe.
- \*Students will use a wetland plant wheel to identify plants they observe in and near the pond site.

### DPI Environmental Education Standards

A.4.1, A.4.2, A.4.3, A.4.4, B.4.6

### School District of Rhinelander Benchmarks

LA.4.B.3, LA.4.C.1, S.4.A.3, S.4.B.1, S.4.C.3, S.4.D.2, S.4.F.2

### Materials

- \*Aquatic Organism Chart
- \*Wetland Plant Wheel
- \*Key to Life in the Pond chart
- \*Clipboards and pencils
- \*Pond Life recording sheets
- \*Pond Gear - dip nets, plastic jars and containers, magnifiers, eyedroppers, etc.
- \*Plastic bags to cover shoes

### Approximate Time

45 minutes

### Desired Location

- \* Outdoor classroom or sheltered picnic table area
- \*Wetland area such as a pond, bog, or small lake with a wetland shoreline **Sherry suggested a map with specific CAVOC sites marked - is there one available?**



## Resources

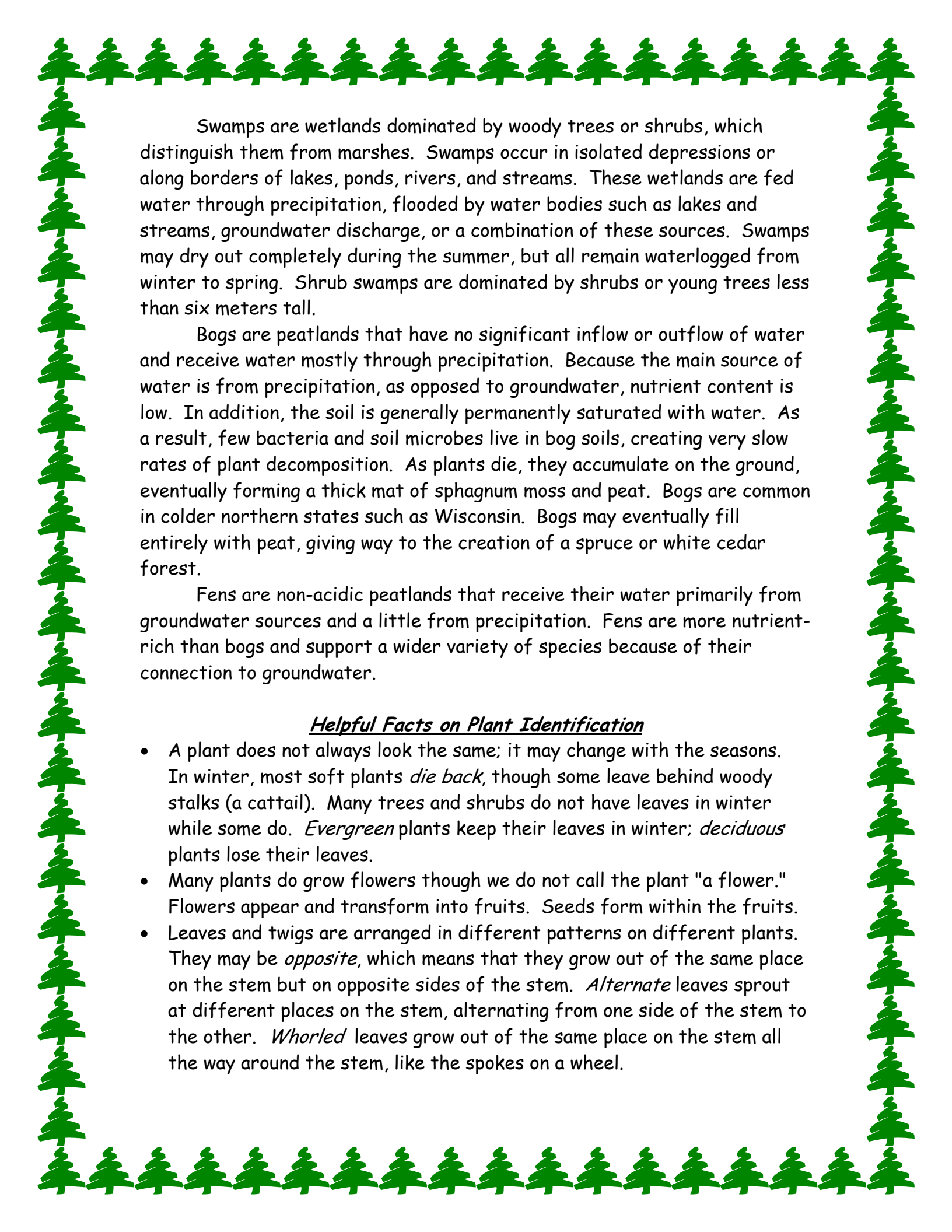
- \*"Journey to the Bottom of the Pail." Wetland Biology. pages 21-22B.
- \*Wow! The Wonders of Wetlands. Environmental Concern Inc. and The Watercourse.
- \*A World in Our Backyard. "Create a Wetland Plant Wheel." pages 15-21.
- \*A World in Our Backyard. "Wetland Types." pages 26-40>
- \*UW Extension - Key to Life in the Pond.
- \*"EEK!" Environmental Education for Kids. 2001. Online. Available [www.dnr.state.wi.us/or/caer/ce/EEK/critter/aquatict.htm](http://www.dnr.state.wi.us/or/caer/ce/EEK/critter/aquatict.htm). 7 July 2001.

## Background Information

Freshwater areas abound with life. The smallest organisms are microscopic plants and animals of the plankton community that are the basic food supply of their environment. Generally, the most common of the small animals visible to the naked eye or with a simple magnifier are the insect larvae and nymphs. Adult insects are also commonly found in wetland areas. Some beetles have adapted to water living by carrying their air supply with them. Many plants have adapted for living in freshwater. They may have flexible central stems that can bend with currents. Some have leaf and stem tissues that absorb minerals directly from the water, reducing the need for roots. Water plants are useful to aquatic animals. They add oxygen to the water and provide shelter for small creatures. Freshwater areas can include freshwater marshes, wet meadows, swamps, shrub swamps, bogs, and fens.

Freshwater marshes are dominated by non-woody plants which may emerge above the water, float on the surface, or remain completely submerged. Water levels range from about three feet to six inches or less. Surface water may be entirely absent during later summer or excessively dry periods. Marshes generally have sources of water other than direct precipitation, such as groundwater seeps and streams. The ponds at CAVOC seem to resemble freshwater marshes closely. At dry times, they have been known to dry up. Local wildlife specialists call these ponds ephemeral ponds.

Wet meadows are a type of marsh dominated by grasses or sedges. Water saturates the soil at a depth of six inches or less but generally is not visible on the surface most of the year.



Swamps are wetlands dominated by woody trees or shrubs, which distinguish them from marshes. Swamps occur in isolated depressions or along borders of lakes, ponds, rivers, and streams. These wetlands are fed water through precipitation, flooded by water bodies such as lakes and streams, groundwater discharge, or a combination of these sources. Swamps may dry out completely during the summer, but all remain waterlogged from winter to spring. Shrub swamps are dominated by shrubs or young trees less than six meters tall.

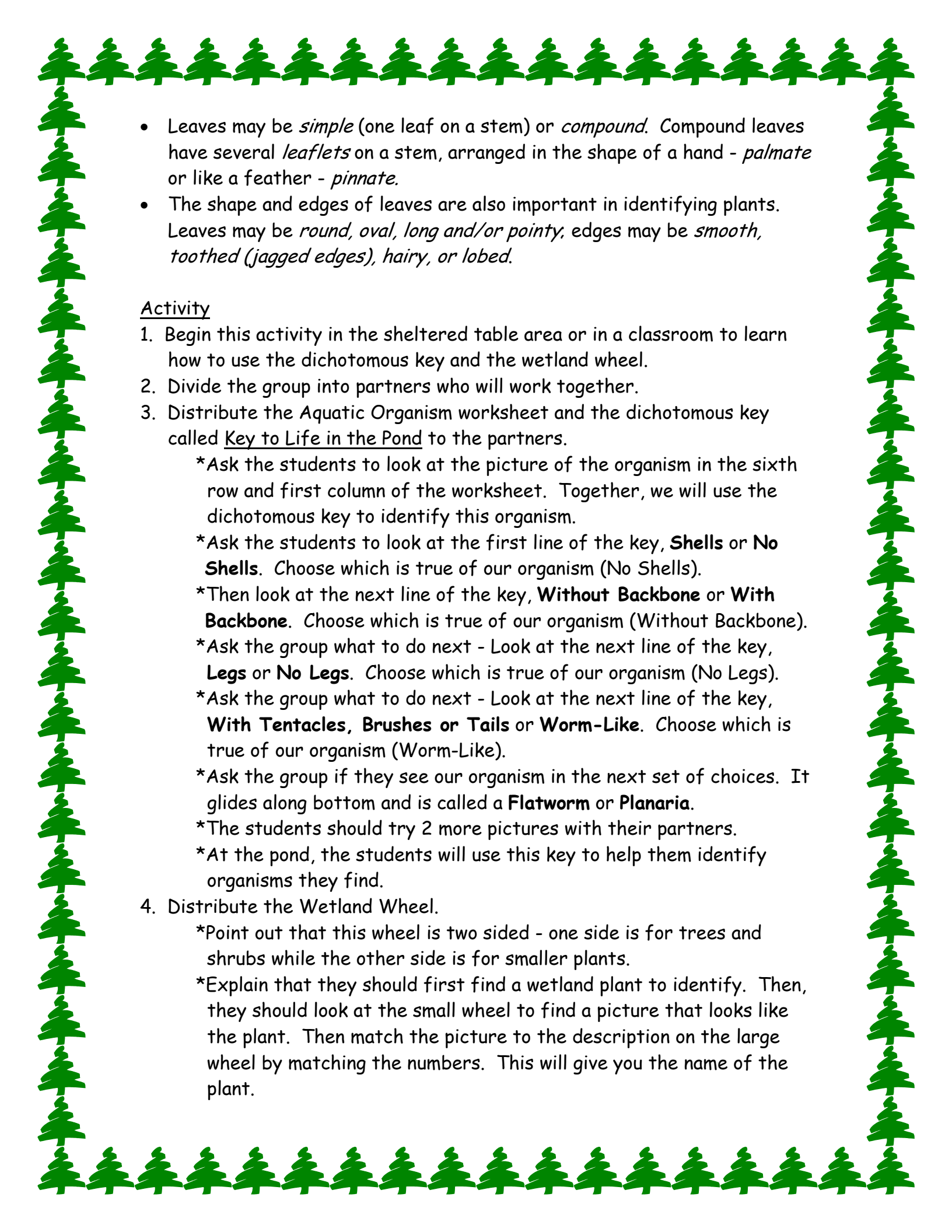
Bogs are peatlands that have no significant inflow or outflow of water and receive water mostly through precipitation. Because the main source of water is from precipitation, as opposed to groundwater, nutrient content is low. In addition, the soil is generally permanently saturated with water. As a result, few bacteria and soil microbes live in bog soils, creating very slow rates of plant decomposition. As plants die, they accumulate on the ground, eventually forming a thick mat of sphagnum moss and peat. Bogs are common in colder northern states such as Wisconsin. Bogs may eventually fill entirely with peat, giving way to the creation of a spruce or white cedar forest.

Fens are non-acidic peatlands that receive their water primarily from groundwater sources and a little from precipitation. Fens are more nutrient-rich than bogs and support a wider variety of species because of their connection to groundwater.

### Helpful Facts on Plant Identification

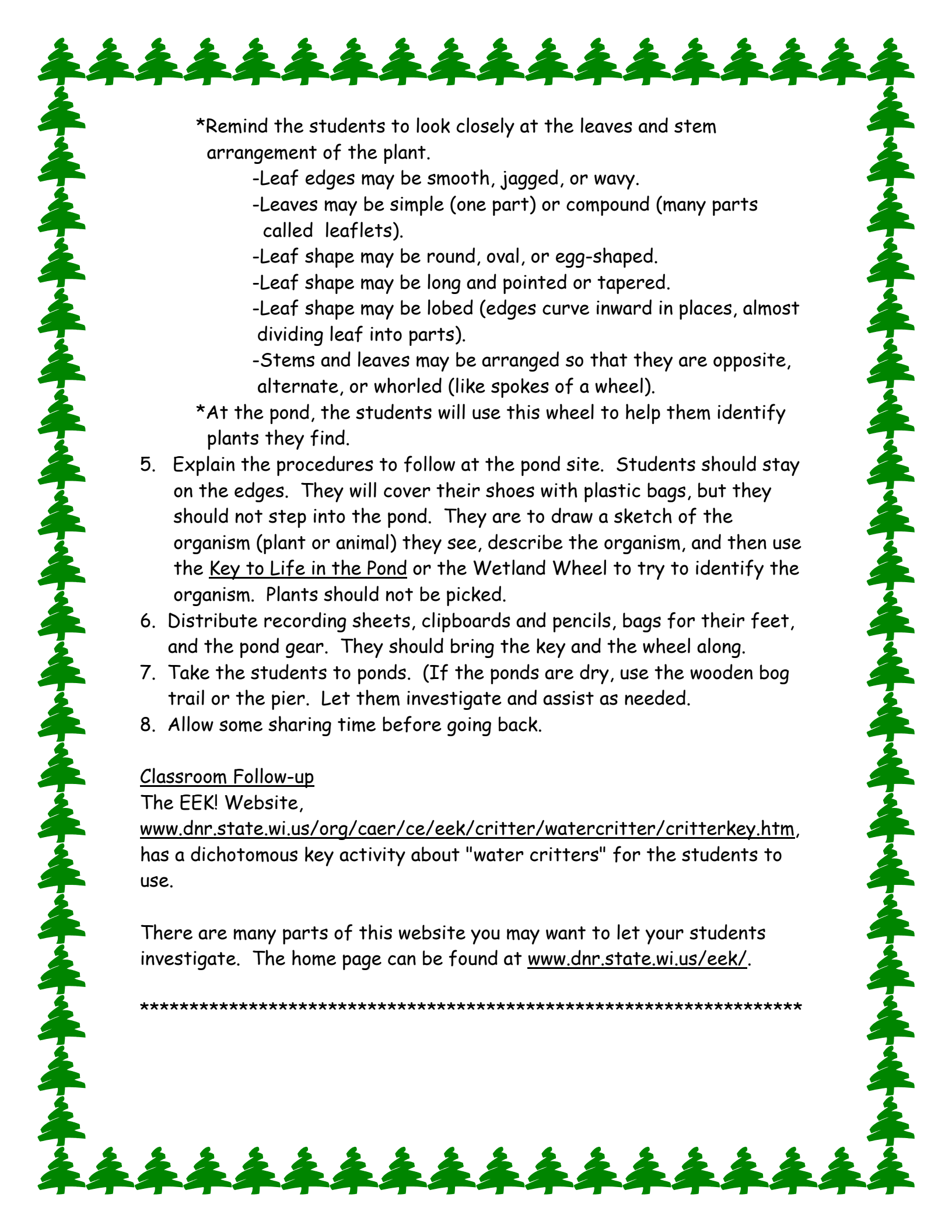
- A plant does not always look the same; it may change with the seasons. In winter, most soft plants *die back*, though some leave behind woody stalks (a cattail). Many trees and shrubs do not have leaves in winter while some do. *Evergreen* plants keep their leaves in winter; *deciduous* plants lose their leaves.
- Many plants do grow flowers though we do not call the plant "a flower." Flowers appear and transform into fruits. Seeds form within the fruits.
- Leaves and twigs are arranged in different patterns on different plants. They may be *opposite*, which means that they grow out of the same place on the stem but on opposite sides of the stem. *Alternate* leaves sprout at different places on the stem, alternating from one side of the stem to the other. *Whorled* leaves grow out of the same place on the stem all the way around the stem, like the spokes on a wheel.



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- Leaves may be *simple* (one leaf on a stem) or *compound*. Compound leaves have several *leaflets* on a stem, arranged in the shape of a hand - *palmate* or like a feather - *pinnate*.
  - The shape and edges of leaves are also important in identifying plants. Leaves may be *round, oval, long and/or pointy*, edges may be *smooth, toothed (jagged edges), hairy, or lobed*.

#### Activity

1. Begin this activity in the sheltered table area or in a classroom to learn how to use the dichotomous key and the wetland wheel.
2. Divide the group into partners who will work together.
3. Distribute the Aquatic Organism worksheet and the dichotomous key called Key to Life in the Pond to the partners.
  - \*Ask the students to look at the picture of the organism in the sixth row and first column of the worksheet. Together, we will use the dichotomous key to identify this organism.
  - \*Ask the students to look at the first line of the key, **Shells** or **No Shells**. Choose which is true of our organism (No Shells).
  - \*Then look at the next line of the key, **Without Backbone** or **With Backbone**. Choose which is true of our organism (Without Backbone).
  - \*Ask the group what to do next - Look at the next line of the key, **Legs** or **No Legs**. Choose which is true of our organism (No Legs).
  - \*Ask the group what to do next - Look at the next line of the key, **With Tentacles, Brushes or Tails** or **Worm-Like**. Choose which is true of our organism (Worm-Like).
  - \*Ask the group if they see our organism in the next set of choices. It glides along bottom and is called a **Flatworm** or **Planaria**.
  - \*The students should try 2 more pictures with their partners.
  - \*At the pond, the students will use this key to help them identify organisms they find.
4. Distribute the Wetland Wheel.
  - \*Point out that this wheel is two sided - one side is for trees and shrubs while the other side is for smaller plants.
  - \*Explain that they should first find a wetland plant to identify. Then, they should look at the small wheel to find a picture that looks like the plant. Then match the picture to the description on the large wheel by matching the numbers. This will give you the name of the plant.



\*Remind the students to look closely at the leaves and stem arrangement of the plant.

- Leaf edges may be smooth, jagged, or wavy.
- Leaves may be simple (one part) or compound (many parts called leaflets).
- Leaf shape may be round, oval, or egg-shaped.
- Leaf shape may be long and pointed or tapered.
- Leaf shape may be lobed (edges curve inward in places, almost dividing leaf into parts).
- Stems and leaves may be arranged so that they are opposite, alternate, or whorled (like spokes of a wheel).

\*At the pond, the students will use this wheel to help them identify plants they find.

5. Explain the procedures to follow at the pond site. Students should stay on the edges. They will cover their shoes with plastic bags, but they should not step into the pond. They are to draw a sketch of the organism (plant or animal) they see, describe the organism, and then use the Key to Life in the Pond or the Wetland Wheel to try to identify the organism. Plants should not be picked.
6. Distribute recording sheets, clipboards and pencils, bags for their feet, and the pond gear. They should bring the key and the wheel along.
7. Take the students to ponds. (If the ponds are dry, use the wooden bog trail or the pier. Let them investigate and assist as needed.
8. Allow some sharing time before going back.

#### Classroom Follow-up

The EEK! Website, [www.dnr.state.wi.us/org/caer/ce/eek/critter/watercritter/critterkey.htm](http://www.dnr.state.wi.us/org/caer/ce/eek/critter/watercritter/critterkey.htm), has a dichotomous key activity about "water critters" for the students to use.

There are many parts of this website you may want to let your students investigate. The home page can be found at [www.dnr.state.wi.us/eek/](http://www.dnr.state.wi.us/eek/).

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# Tree Cookies and Tree Identification

## Objectives

- \*Students will be able to explain how to determine a tree's age by its annual rings.
- \*Students will be able to explain what may have occurred in the tree's life cycle as indicated by differences in the size of rings.
- \*Students will be able to identify their birth year on the tree's rings.
- \*Students will use a dichotomous key to classify and identify native trees.

## DPI Environmental Education Standards

A.4.1, A.4.2, A.4.3, A.4.4, B.4.6

## School District of Rhinelander Benchmarks

LA.4.A.2, LA.4.A.3, LA.4.B.3, LA.4.C.1, S.4.C.3, S.4.D.2, S.4.F.2

## Materials

- \*variety of tree cookies
- \*Worksheets - Tree Rings, Part 1 and 2
- \*CAVOC Tree Key
- \*clipboard and pencil

## Approximate Time

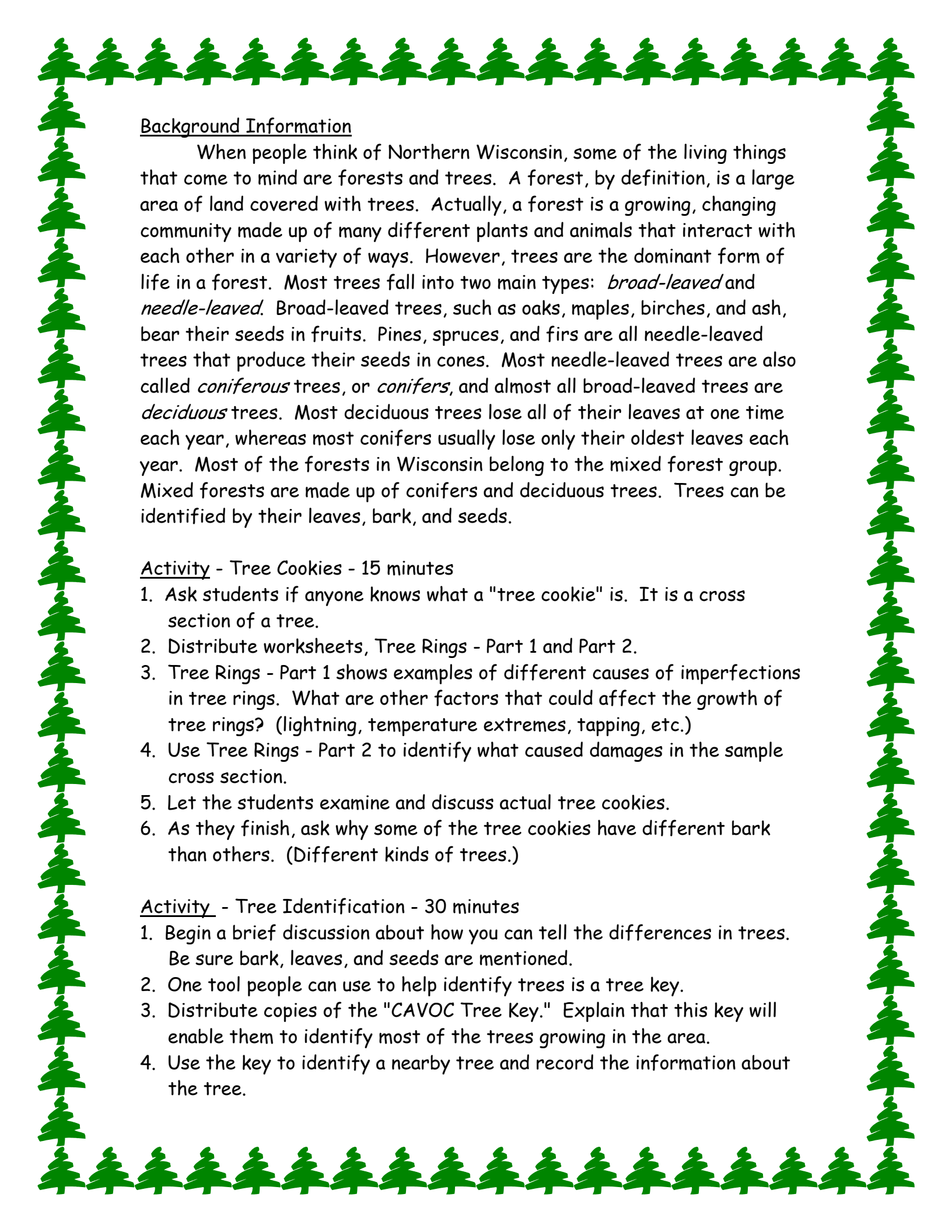
45 minutes

## Desired Location

Wooded area

## Resources

- \*Project Learning Tree, Environmental Education Activity Guide, Pre K-8, pages 289-290, 1993.
- \*Wisconsin's Millenium Tree Curriculum, pages 53-58.
- \*Ranger Rick's NatureScope, "Trees Are Terrific!" National Wildlife Federation.



### Background Information

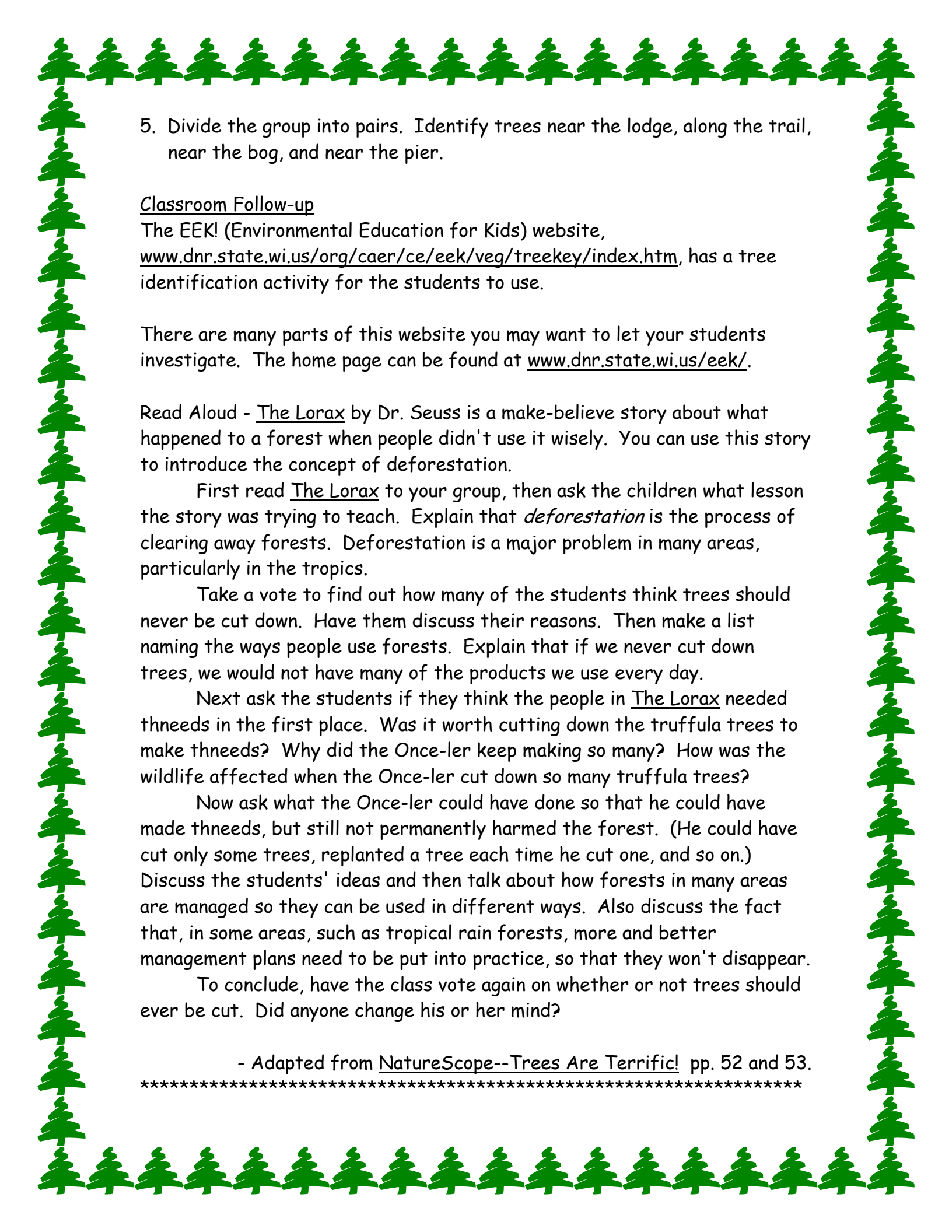
When people think of Northern Wisconsin, some of the living things that come to mind are forests and trees. A forest, by definition, is a large area of land covered with trees. Actually, a forest is a growing, changing community made up of many different plants and animals that interact with each other in a variety of ways. However, trees are the dominant form of life in a forest. Most trees fall into two main types: *broad-leaved* and *needle-leaved*. Broad-leaved trees, such as oaks, maples, birches, and ash, bear their seeds in fruits. Pines, spruces, and firs are all needle-leaved trees that produce their seeds in cones. Most needle-leaved trees are also called *coniferous* trees, or *conifers*, and almost all broad-leaved trees are *deciduous* trees. Most deciduous trees lose all of their leaves at one time each year, whereas most conifers usually lose only their oldest leaves each year. Most of the forests in Wisconsin belong to the mixed forest group. Mixed forests are made up of conifers and deciduous trees. Trees can be identified by their leaves, bark, and seeds.

### Activity - Tree Cookies - 15 minutes

1. Ask students if anyone knows what a "tree cookie" is. It is a cross section of a tree.
2. Distribute worksheets, Tree Rings - Part 1 and Part 2.
3. Tree Rings - Part 1 shows examples of different causes of imperfections in tree rings. What are other factors that could affect the growth of tree rings? (lightning, temperature extremes, tapping, etc.)
4. Use Tree Rings - Part 2 to identify what caused damages in the sample cross section.
5. Let the students examine and discuss actual tree cookies.
6. As they finish, ask why some of the tree cookies have different bark than others. (Different kinds of trees.)

### Activity - Tree Identification - 30 minutes

1. Begin a brief discussion about how you can tell the differences in trees. Be sure bark, leaves, and seeds are mentioned.
2. One tool people can use to help identify trees is a tree key.
3. Distribute copies of the "CAVOC Tree Key." Explain that this key will enable them to identify most of the trees growing in the area.
4. Use the key to identify a nearby tree and record the information about the tree.



5. Divide the group into pairs. Identify trees near the lodge, along the trail, near the bog, and near the pier.

Classroom Follow-up

The EEK! (Environmental Education for Kids) website, [www.dnr.state.wi.us/org/caer/ce/EEK/veg/treekey/index.htm](http://www.dnr.state.wi.us/org/caer/ce/EEK/veg/treekey/index.htm), has a tree identification activity for the students to use.

There are many parts of this website you may want to let your students investigate. The home page can be found at [www.dnr.state.wi.us/EEK/](http://www.dnr.state.wi.us/EEK/).

Read Aloud - The Lorax by Dr. Seuss is a make-believe story about what happened to a forest when people didn't use it wisely. You can use this story to introduce the concept of deforestation.

First read The Lorax to your group, then ask the children what lesson the story was trying to teach. Explain that *deforestation* is the process of clearing away forests. Deforestation is a major problem in many areas, particularly in the tropics.

Take a vote to find out how many of the students think trees should never be cut down. Have them discuss their reasons. Then make a list naming the ways people use forests. Explain that if we never cut down trees, we would not have many of the products we use every day.

Next ask the students if they think the people in The Lorax needed thneeds in the first place. Was it worth cutting down the truffula trees to make thneeds? Why did the Once-ler keep making so many? How was the wildlife affected when the Once-ler cut down so many truffula trees?

Now ask what the Once-ler could have done so that he could have made thneeds, but still not permanently harmed the forest. (He could have cut only some trees, replanted a tree each time he cut one, and so on.) Discuss the students' ideas and then talk about how forests in many areas are managed so they can be used in different ways. Also discuss the fact that, in some areas, such as tropical rain forests, more and better management plans need to be put into practice, so that they won't disappear.

To conclude, have the class vote again on whether or not trees should ever be cut. Did anyone change his or her mind?

- Adapted from NatureScope--Trees Are Terrific! pp. 52 and 53.

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# Animal Game Activity

## Objectives

Students will be able to identify animals based on characteristics given as clues in the game.

## DPI Environmental Education Standards

A.4.2, A.4.3

## School District of Rhinelander Benchmarks

LA.4.A.1, LA.4.C.1, PE.4.1, PE.D.4.3, PE.F.4.1

## Materials

- \*Animal Clue Cards
- \* Three 8 foot ropes (optional - use if unable to draw lines on the ground)

## Approximate Time

30 minutes

## Desired Location

Open area - relatively flat

## Resources

Adapted from Sharing Nature with Children by Joseph B. Cornell.

## Background Information

The playing area is set up by drawing a line through the center (use a rope if needed). A second and third line are drawn 15 feet away from the center line. Behind those lines are each team's home base.

TEAM A's HOME BASE

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TEAMS

A A A A A A  
B B B B B B

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TEAM B's HOME BASE



### Activity

1. Divide group into two teams - A and B
2. Each team chooses one clue card.
3. Each team decides which members will give which clues.
4. Team A clearly reads its first clue to Team B, and Team B tries to guess the identity of Team A's animal. The Team can make only one guess.
5. If the guess is wrong, nothing happens.
6. Now Team B clearly reads its first clue to Team A, and Team A tries to guess the identity of Team B's animal, but they also guess wrong, so still nothing happens.
7. This continues until one of the teams guesses correctly.
  - \*For example, Team A says, "I have three toes," and Team B guesses, "Are you a black-backed, three-toed woodpecker?"
  - \*The members of Team A turn nervously toward home base, while Team B hovers eagerly over them. Team A cannot move closer to their home base and Team B cannot cross the middle line until someone from Team A says, "Yes!"
8. Team A streaks for its home base with Team B in hot pursuit.
9. Each player to reach home base without being tagged scores a point.
10. Continue play until all the cards are used. Teams take turns starting.

Variation: Let each team choose an animal and then think up six to eight riddle clues for that animal. The clues should be progressively easier, proceeding from the general to the specific.

### Clue Cards and Answers

#### FLYING SQUIRREL

1. I have four feet, and my body temperature stays the same.
2. I use my tail as a rudder.
3. My habitat is the forest.
4. My front teeth are constantly growing, so I gnaw a lot.
5. I store no food for the winter like my cousins do. My diet includes nuts, seeds, tree buds, insects, fungi, and some animal flesh.
6. Owls are one of the few animals that can catch me.
7. I go through the air, but I don't fly.
8. I have skin flaps that extend along each side of my body between my ankles and wrists.



#### DRAGONFLY

1. I move quickly now, but not so in my youth.
2. I usually hunt near water.
3. I eat flying insects.
4. I'm a strong flier.
5. Sometimes I'm very colorful.
6. I'm cold-blooded, and I wear my skeleton on the outside instead of the inside.
7. I have two more legs than a mouse and have very large eyes.
8. With my four wings, I look like a helicopter flying in the air.

#### TOAD

1. I will eat anything that moves and can be swallowed.
2. I hibernate in winter, except where it is warm.
3. I must live in damp or wet places, avoiding the dry heat of summer and the cold of winter.
4. Almost all my kin lay their eggs in water.
5. I'm chunky and wouldn't win very many races.
6. Almost all my kin sing.
7. I can secrete a sticky white poison. In some of my kin, this poison can kill or paralyze dogs and other predators who might try to eat them.
8. My close kin travel farther away from water than our distant cousins whom you might be thinking of. Also, it isn't true, as some say, that I will give you warts.

#### HUMAN

1. I can walk and swim.
2. My vision is good, but I don't have a good sense of smell.
3. I care for and raise my young.
4. My body temperature stays the same.
5. My kind are very adaptable and live in many different environments.
6. I like to change my environment.
7. I walk on two feet and speak several different languages.
8. I wear clothing.

#### GOPHER

1. During extreme hot and cold weather my home is also a home for many different kinds of animals.
2. I have small eyes and ears in relation to the rest of my body.
3. My front teeth are constantly growing. I can run forward and backward.
4. My work is considered beneficial by humans if it is done out in the wilds.
5. I eat roots, stems, and leaves.
6. My heavily-built forefeet and long claws equip me for digging.
7. Look for mounds of dirt if you want to see where I've been working. My work is helpful because it tills the soil and allows more water to sink into the ground.
8. I can see better than my neighbor the mole.





### WOODPECKER

1. My body temperature is usually seven degrees warmer than man's.
2. Each foot of mine has two toes in front and two in back.
3. I usually undulate when I fly.
4. My stiff spiny tail feathers act as a prop when I hunt for my food.
5. My diet consists mainly of tree-boring insects, but also of ants, acorns, flying insects, berries, and sap.
6. My nest is a cavity in a tree that I make myself.
7. My bill is used for chiseling wood.

### PELICAN

1. My kind live in all of these places: lakes, marshes, salt bays, and beaches.
2. I have a long neck and a robust body; my sexes are alike.
3. My diet consists of mostly fish and crustaceans.
4. I nest on the ground in colonies.
5. My kind fly in orderly lines, and alternate several flaps with a glide. I can catch fish only by swimming.
6. I fly with my head hunched back on my shoulders.
7. I am a huge water bird with an 8- to 9½-foot wingspan.
8. My great throat-pouches are handy for scooping up fish.

### BEAR

1. My sight is poor, but I can hear and smell very well.
2. My tail is six inches long or less.
3. I live mostly on forest floors and thickets.
4. Both young and old of my kind are good climbers and when disturbed find safety in a tree.
5. My diet includes the following: small mammals, insects, any flesh, garbage, grasses, leaves, fruit, berries, and nuts.
6. When it starts to get cold and snows, I go inside for the winter.
7. I'm dark-colored and sometimes weigh as much as five hundred pounds.

### RACCOON

1. I feed my young milk and lick their fur.
2. I'm sturdily built, but agile.
3. I'm more afraid of dogs than I am of humans.
4. My varied diet includes rodents, rabbits, birds, eggs, frogs, fish, insects, acorns, fruit, melons, carrion, and grain.
5. My home is a tree hole, rock pile, or large burrow.
6. I'm active mostly at night.
7. My fingers are clever and curious.
8. I prefer to live mostly near streams and lakes.
9. The black mask over my eyes disguises me as I go out on my food raids.



### ELK

1. My body temperature stays the same. I'm hairy and I nourish my young with milk. My teeth indicate what kind of food I eat.
2. I have no upper teeth, a complex stomach, and I chew my cud.
3. Only males of my kind have antlers.
4. Man and mountain lions are my only enemies. And mountain lions usually won't attack me when I'm full grown.
5. My young are spotted until their winter hair grows out.
6. My larger size, heavily-maned neck and larger, round antlers distinguish me from what you might have been thinking of.
7. I am especially noted for my high-pitched bugle call. If this call is answered by another male of my own kind, a fierce battle may occur.

### GRAY SQUIRREL

1. Some of my "kin" fly.
2. My relatives and I come in many colors.
3. I spend the summer collecting and storing food.
4. I am in the rodent family.
5. I sometimes live in leafy nests.
6. I am noisy and chattery.
7. I have a bushy tail, and I'm larger than my red cousin.
8. I like to be around trees.

### ROBIN

1. My kin are known as thrushes.
2. I am found in forests, farmlands, and suburbs.
3. I sometimes eat insects.
4. My home is made of mud and grass.
5. I like worms as well as fruits.
6. Seeing the first of my kind tells everyone spring is near.
7. I'm orange, but my eggs are blue.
8. I'm one of Wisconsin's state symbols.

### GRASSHOPPER

1. Sometimes I seem to fly.
2. My hind legs are very long and powerful.
3. I am a vegetarian and can be a pest to farmers.
4. When I am young, I look like the adults except that I'm smaller and have no wings.
5. I can be brown or green.
6. I have a very hard head and thorax.
7. I can have long or short antennae.
8. Some of my kind are very good jumpers.



#### PORCUPINE

1. I am a large, night-loving rodent.
2. My home is usually in trees.
3. I cause a lot of damage to trees.
4. I often feed on buds, twigs, and the bark of trees.
5. I move rather slowly.
6. My weapon is released by slapping my enemy with my tail.
7. I can not shoot anything.
8. I can cause pain to animals who try to touch or bite me.

#### DEER

1. Early morning and dusk are the best times to see me.
2. During the day I usually rest, hide, and digest my food.
3. My fur helps to camouflage or hide me.
4. I raise my tail when alarmed.
5. I have hooves, and my tracks are distinctive.
6. We usually are not in large groups - only mothers and young.
7. Males begin growing antlers several months after birth.
8. My young have spots and are called fawns.

#### RAINBOW TROUT


1. If you want to find me, look for water.
2. I'm a carnivore and eat mostly insects and the smaller of my kind.
3. I am a fast, strong swimmer.
4. I need cold, well-oxygenated water to live in.
5. I spawn my eggs during the spring, in small clear streams.
6. I'm slim and sleek.
7. I'm as pretty as a rainbow.

#### SALAMANDER

1. My skin is thin and moist.
2. I have four toes and no claws.
3. When I'm young, I have gills, but I breathe through my skin when I am an adult.
4. I am carnivorous. I eat fish, insects, and worms.
5. I am easiest to find in the spring and fall.
6. I can be found under stones, logs, leaves, and even underground.
7. I am an amphibian.
8. I resemble a lizard.

#### GARTER SNAKE

1. I rely only on animals for food.
2. I shed several times a year.
3. I have no eyelids.
4. My relatives are different because of the pattern of their stripes.
5. My young are born alive.
6. I eat fish, worms, and other small animals.

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7. I'm not poisonous, but I may bite.
  8. I have no legs.

#### BULLFROG

1. I may not go through metamorphosis for several years in some colder areas.
2. I eat many insects.
3. I am sometimes raised for food on farms.
4. I am not as abundant now because of pollution and the destruction of wetland habitat.
5. My back feet are webbed.
6. As a youngster, I breathe through gills, but later I develop lungs.
7. I am the largest of my kind.
8. In the spring I sing solo rather than joining in a chorus.

#### MOSQUITO

1. Some of my kind can carry disease.
2. I have a single pair of wings.
3. My young need to be raised in water.
4. In the water, my young have a breathing tube to get air.
5. The males of my kind live on plant juices and nectar.
6. The females of my kind can pierce skin.
7. The females of my kind must have a meal of blood to produce eggs.
8. I am considered a pest.

#### BEAVER

1. I am the largest of the rodent family.
2. During the day, I stay in my lodge.
3. I forage for food, usually near dusk.
4. My young, called kits, are born in the spring.
5. I am a good swimmer.
6. I have very strong teeth.
7. My tale is large and scaly.
8. I am known for my building ability.

#### BLUEJAY

1. I feed on fruit, seeds, nuts, insects, bird eggs, small birds, mice, tree frogs, snails, and even fish.
2. I can be up to 12 inches long.
3. I'm handsome, but I have many calls, cries, and screams.
4. I appear to have a black V-shaped necklace, and I have a crest on my head.
5. I am found in woodlands, farmlands, suburbs, and cities.
6. My kin are called gray, scrub, and stellar.
7. My blue coloring is often very striking.
8. Part of my name is in the alphabet.



GROUSE

1. I'm a woodland drummer.
2. My tail is shaped like a fan.
3. My brown colors hide me easily.
4. I am hunted by some.
5. I am sometimes called a "chicken" or "partridge."
6. I often hide until you go by, then I'll startle you with a whirl of sound.
7. You'll often hear my drumming before you see me.
8. I sound like a motor starting -thump-thump-thump-thump-thump-ump-ump-prrr.

PAINTED TURTLE

1. I have no teeth but can cause a painful bite.
2. I am usually found in or near water.
3. My feet are not webbed.
4. I move slowly on land, but I'm a good swimmer.
5. I lay eggs.
6. I love to bask in the sun; we sometimes pile on top of each other to bask.
7. I am cold blooded.
8. I carry my house on my back.