

Bean Bag Toss

Suggested Number of Volunteers: 2
(one for each target)

Materials in Activity Tub:

- bean bags
- bean bag targets
- orange cones

Materials Provided by the Group:

- none

Objectives

Students will:

1. Practice aiming skills;
2. Have fun being active in the outdoors.

Background:

Tossing a simple bean bag is a fun but effective means of developing motor skills in children. By aiming at target, children develop hand-to-eye coordination and the ability to develop over-hand throwing skills.

Procedure:

Before the Activity

Assemble the targets (plastic tubes snap together). Place the targets next to each other at one end of the “playing field,” place orange cones to mark the spot where participants stand at the other end of the “playing field.”

Predetermine the number of bean bags you will give each child to try to hit the target.

You may want to consider placing the orange cones at 2 different lengths for kids with different skills and of different ages.

The Activity

1. Give the child their allotment of beanbags and allow them to aim at the target.
2. Adjust to the child’s ability. If the child is skilled at tossing the beanbag encourage them to aim for different objects on the target, for example hit the deer once and then the pheasant.

If the child’s skill is less developed provide positive encouragement and congratulate them for hitting the target or tossing the bag near the target.



Bee Free BBQ

Suggested Number of Volunteers: 1

Materials in Activity Tub:

- plastic picnic basket (2)
- plastic picnic food
- pollinator wheel (3)
- copies of "Planting for Bees" - one per participant/family.

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn about ecosystems and how each animal (including insects) and plant plays a role in the ecosystem.
2. Learn about bees and all the foods they eat that need insects to pollinate them.

Background:

Think about your last meal. What did you have? Apples? Oranges? Maybe some potato chips? All of these things need an insect to pollinate them in order to grow. In fact, many of the foods we eat require insects for pollination. Some estimates say one in three bites of food we eat need an insect pollinator partnership.

A pollinator partnership is a partnership between a plant and an animal - usually an insect. This is a beneficial partnership for both the insect and the plant because the plant gets pollinated by the insect, and the insect gets nectar from the plant to eat.

Although we often think about bees as being great pollinators, plants can be pollinated by many different insects - bees, moths, butterflies, flies, wasps, etc.

For this activity, we will be focusing on bees. There are numerous different kinds of bees in Nebraska. Over 20 species of bumble bees are found in Nebraska (this does not include honey bees or other bee species!).

Procedure:

Before the Activity

Layout the picnic baskets with food and the pollinator wheels.

The Activity

1. Explain to the kids that most of the foods we eat need an insect to pollinate it in order to grow. In fact, one out of every three bites of food require an insect pollinator.

Ask the kids whether they like bees. You will probably get most participants who say they do not like bees - they sting! Some participants even be allergic to bee stings.

Tell the kids that they are going to explore a world without bees and, in particular, what the food supply would be like if bees no longer existed.

continued on next page



Bee Free BBQ, continued

2. Explain that they are going to attend a barbecue in the Bee-Free Zone and they will need to decide on a menu.

3. With the kids look at the pollinator wheel and discuss what insects help pollinate which plants.

4. Remind them that this is the bee-free barbecue and that the foods pollinated by bees” won’t be available. These include tomatoes, onions, cucumbers, lettuce, oil for frying potatoes, oranges, lemons, limes, mustard seed, cacao bean used in making chocolate, vanilla, almonds, watermelon, and apples.

5. Give the kids a plastic hamburger and bun. In a bee free barbeque you can have a hamburger bun because it self-pollinates and hamburgers are an animal product. Discuss with the kids all the foods they are missing.

6. Have the kids select plastic picnic food they would find at a Bee Free BBQ. There won’t be many things they can eat at a Bee Free BBQ. Reinforce that all these foods need insects to pollinate them.

7. Conclude by asking kids about the importance of the availability of bee-pollinated food. If they are still apprehensive about bees discuss the likely hood of being stung and measures to prevent being stung.

8. As participants leave, give them a copy of “Planting for Bees” and remind them that bees are an important part of the ecosystem and our food web. Encourage them and their families to plant plants which will help support a healthy bee population.



Binoculars & Bird Watching

Suggested Number of Volunteers: 2

Materials in Activity Tub:

- Binoculars (10 pairs)
- Common Nebraska Bird Images (11)
- Bird Markings ID Sheet
- Birds of Nebraska books (10)

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn how to use binoculars.
2. Learn how to identify birds.
3. About wildlife viewing, especially bird watching.

Background:

Birds! They are everywhere. No matter where you live, there are birds. If you live in an urban environment, like a city or town, you may see birds like Common Grackles, Cardinals, American Robins, or Blue Jays. If you live on a farm or in the country, you might see birds like the Eastern or Western Meadowlark, the Dickcissel, Eastern Kingbird, or the Horned Lark. And, if you happen to be in a wetland area you will often see Red-Winged Blackbirds, Great Blue Herons, or any number of waterfowl species such as Mallards, Blue-winged Teal, or Northern Pintail.

The great thing about birds is that not only can you find them in any habitat, you can also find them any time of year. Yes, some species migrate out of Nebraska for the winter, but many bird species stay here! In fact, some species even migrate to Nebraska for the winter! Dark-eyed Juncos spend their summer months in Canada, but travel south to Nebraska each winter. Cardinals, Blue Jays, and Red-tailed Hawks are all year-round residents of Nebraska.

Not only are birds everywhere, they are easy to see. By using simple identification tools, you can usually tell what kind of bird you are seeing (or at least what family of birds).

This activity introduces participants to the sport of wildlife viewing and bird watching.

Procedure:

Before the Activity

Place "Common Nebraska Bird Images" in trees or on structures around the station. These will be used by participants to learn how to use and focus their binoculars. They will also be used to help learn bird identification tips.

The Activity

1. Welcome participants to the station. Ask if they have ever used binoculars or been bird watching. If they have, ask if they have any questions about binoculars or bird identification. If they don't

continued on next page



Binoculars & Bird Watching, continued

and they would like to go bird watching, give them a pair of binoculars and a bird ID book and allow them to head out. Ask them to return in about 20 minutes to allow others to use the binoculars. Also, remind them that the binoculars' strap needs to remain around their neck at all times. It is advised that you give one pair of binoculars to groups of two of three participants. One participant can use the binoculars while the other(s) help identify birds using the bird ID book.

2. If participants have not been bird watching or have not used binoculars, give them a quick instruction session on how to use binoculars. Include in the session:

- The strap of the binoculars needs to remain around their neck at all times.
- When they get the binoculars, adjust the distance between the two eye pieces until they see one large circle when looking through both eye pieces. If they see two circles (one for each eye) the distance between the two eye pieces is probably too far... bring the eye pieces together. If they see no circle (it is black when they look through the binoculars), the eye pieces are probably too close together... move the eye pieces farther apart.
- The center dial between the two eye pieces is for focusing. Once they have found a bird and have located it with their binoculars, use the center focusing dial to bring the bird into focus.
- When looking for birds, look without the binoculars first. Your field of vision is much larger without the binoculars. So, the best way to find a bird is to locate it without the binoculars, stair at the bird (DO NOT MOVE YOUR HEAD) and bring the binoculars to their eyes... the bird should be in the field of vision of the binoculars.
- Do not walk with the binoculars to your eyes... you will trip or run into someone or something.
- Look and LISTEN for birds... listening is a great way to locate the general location of birds especially when they are hidden by leaves.
- Have fun and remember to be patient!

3. Once participants feel comfortable with the binoculars, ask if they know how to identify birds. If they don't, explain a few simple rules of bird identification:

- Color is the easiest way to identify a bird... always make note of the bird's color(s).
- Look for unusual markings... does the bird have a bright colored tail feather? Or, does the bird have a bright band of feathers on it's wing? These markings will help you identify the bird.
- Look at the size of the bird... if you are seeing a bird that is brown and white, it could be a sparrow or an eagle... the size will help you determine what you are actually seeing.
- Remember where you are... if you are in a wetland, you are probably not going to see a Meadowlark (a prairie bird), but if you are in the middle of a prairie, you are probably not going to see a Mallard (a water bird).

4. Once participants have an understanding of how to use binoculars and ID books, send them on their way.

Remind participants:

- To return in about 20 minutes to allow others to use the binoculars.
- That the binoculars' strap needs to remain around their neck at all times.

NOTE: It is advised that you give one pair of binoculars to groups of two of three participants. One participant can use the binoculars while the other(s) help identify birds using the bird ID book.



Building a Birdfeeder

Suggested Number of Volunteers: 3
(one to help drill holes, one to help insert the wooden dowel and wire, and one to help fill the feeder.)

Materials in Activity Tub:

- cordless drill (charged)
- drill bits
- wooden dowels (approximately 8" in length)
- wire
- wire cutters
- utility knife
- funnels (3)
- images of common Nebraska feeder birds

Materials Provided by the Group:

- 20 oz. soda or water bottles
- bird seed

Objectives

Students will:

1. Learn that all animals need food to survive;
2. Learn what birds will eat at a feeder;
3. Learn bird watching skills;
4. Learn the joy of wildlife viewing.

Background:

Wildlife viewing is a fun and rewarding hobby for many people. In fact, birdwatching is one of the most popular sports in the United States. One of the best ways to begin learning how to go birding is to attract birds to your backyard, home or school.

Feeding birds is an easy hobby and the birds it attracts are fun to watch.

This activity will provide children with a birdfeeder they have created and an opportunity to begin bird watching.

Procedure:

Before the Activity

Set up the folding tables. One will be for drilling holes; one will be for inserting the wire and dowels. At the drilling table you will have your drill, and your drill bits. At your other table you will have wooden dowels, your spool of wire and wire cutters. Just after the second table, set-up the filling area to fill the feeders with birdseed.

The Activity

1. Take the label off the bottle.
2. Turn bottle upside down. The cap is now at the bottom the bottom is now at the top.
3. Drill 2 holes (opposite each other) with a 5/16 bit approximately 3 inches from the bottle cap for the birds to grab seed from.
4. An inch and a half or 2 inches below the holes already drilled, drill another 2 holes (opposite each other) for the dowel to slide through.
5. At the top of the bottle drill two $\frac{1}{8}$ inch holes (opposite of each other).

continued on next page



Building a Birdfeeder, continued

6. Have the child take the pop bottle to the 2nd table.

7. Insert the dowel in the bottom set of holes nearest the bottle cap. The dowel should slide all the way through the bottle and come out on the other side providing a perch on either side of the bottle.

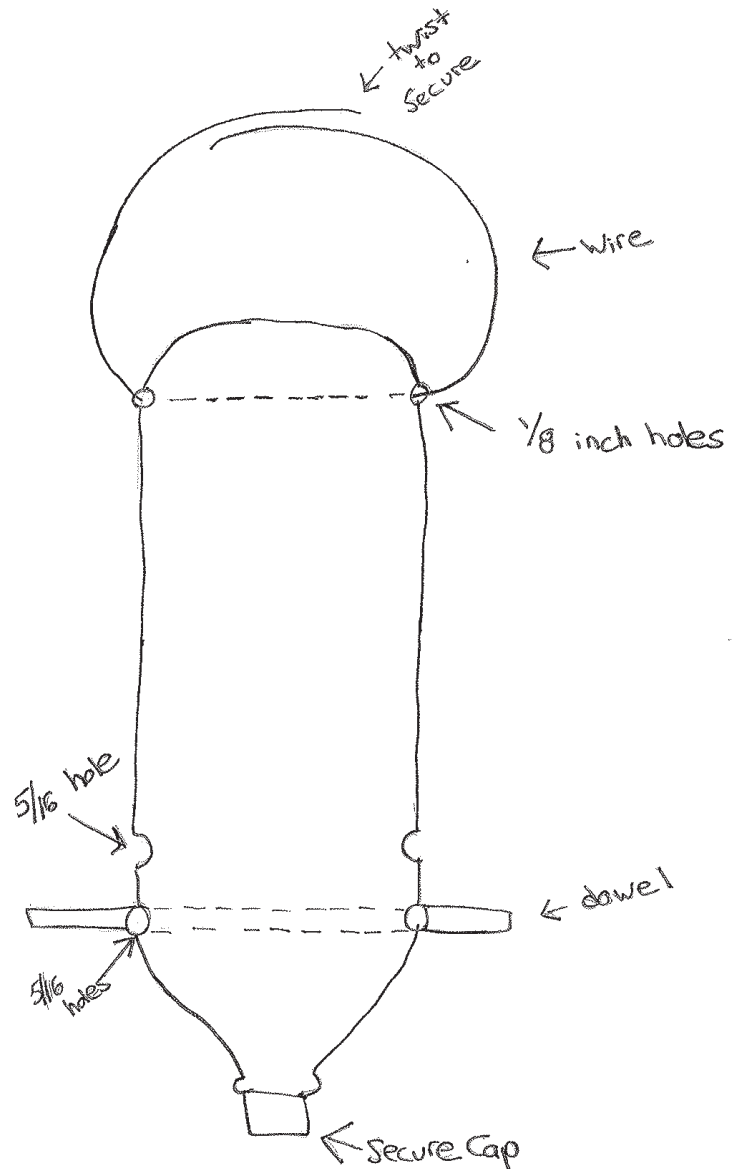
8. Insert a piece of wire through the top holes. The wire should go all the way through the bottle. Take the 2 ends or wire protruding from either side of the bottle and bring them together above the bottle to make a loop. Twist the two ends together. Slide the two twisted ends so they are inside the pop bottle.

9. Have the children take their bottle feeder to the filling area. Turn the birdfeeder over and remove the cap.

10. Using a funnel, fill the feeder with black oil sunflower seeds.

11. Secure the cap.

12. If time allows, show the participants images of several birds that may visit their new bird feeder.



Camouflage Basics

Suggested Number of Volunteers: 1

Materials in Activity Tub:

- multi-colored pasta
- kitchen timer

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn what camouflage is and how it works;
2. Learn that camouflage is one method animals use to protect themselves against predators;
3. Learn that predators, too, can be camouflaged to help hide when hunting their prey.

Background:

In order to survive, wild animals must find food and avoid being eaten. Many adaptations help wild animals accomplish these important tasks. One of the most common of these adaptations is natural camouflage.

Camouflage refers to any special coloring, marking or physical feature that allows a wild animal to blend in with its surroundings. Camouflaged prey animals are better able to escape detection by predators, while predators that blend in with their environment are better able to ambush or sneak up on their prey.

Examples of animals with great camouflage include:

- cottontail rabbit in grass
- wild turkey in a forested area
- a frog in wetland or duckweed covered pond
- an owl in a tree

Some animals are not camouflaged. In fact, their coloration is such that they are easily noticeable. A good example of this is the male cardinal who is bright red colored in order to attract a female mate. Another example is the Monarch butterfly which is bright orange and black to warn other animals that it is poisonous.

Procedure:

Before the Activity

For this activity you will need a small grassy area that participants can run around. Mark the edge of the area with the orange cones or orange flagging. Spread the multi-colored pasta in the marked area. The multi-colored pasta represents caterpillars. Some colors (orange) will be brighter and easier for the participants to see; these represent caterpillars which are not well camouflaged. Others (green) will blend in with the grass around them representing a caterpillar which is well camouflaged.

The Activity

1. Explain to participants that they are hungry birds looking for caterpillars to eat.

continued on next page



Camouflage Basics, continued

2. Point out the marked/flagged area to participants and explain that within this area there are numerous caterpillars for them to “eat.”

3. Explain that when you tell them, their job is to go into the field and find as many caterpillars as they can.

Yell GO! or ring the bell. Allow participants to run to the area and pick up as many caterpillars as possible. Allow participants to collect for 30-60 seconds. Yell stop or ring the bell.

3. Call the participants back and count how many of each color were collected.

Ask participants:

- Which colors were the hardest to find?
- Which colors were the easiest to find?
- Which color did you find the most of?
- If you were a caterpillar living in this field, what color would you want to be?

4. Give the participants a second chance. Ring the bell or yell GO! and give participants 20 more seconds to look for remaining caterpillars. Call participants back and again count each color of caterpillars collected.

5. Ask participants if they can name any animals in nature which have great camouflage. Do they know of any animals which are not camouflaged, but rather are colored to stand-out in nature?

6. Ask participants to throw their pasta back into the marked area for the next group.



Casting

Suggested Number of Volunteers:
3-5

Materials in Activity Tub:

- 10 fishing poles
- Hooks
- Fishing line
- Plastic Fish
- Fish tying instruction sheets

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn how to cast a fishing pole.
2. Learn how to tie fishing knots.
3. Learn where and when to go fishing.
4. Learn about fishing regulations.

Background:

Fishing is a fun and relaxing recreation activity. But, when should you go? And, where should you go? And, once you are there, what do you do? This activity will help teach participants how to tie fishing knots, learn about fishing regulations, learn where and when to go fishing, and how to cast a fishing pole.

Procedure:

Before the Activity

Set-out the plastic fish at one end of the casting area. Put the orange cones in a line at the other end of the casting area.

On the activity table, set out fishing hooks and fishing line along with knot tying instruction sheets.

The Activity

1. Explain to participants that they will be casting for plastic fish today. Using the fishing poles, show participants how to cast the fishing pole. Then, let them try. This activity is about allowing participants learn by doing!
2. At the table, have hooks and fishing line for participants to practice tying fishing knots.
3. As you work with participants, talk with them about Nebraska fishing regulations:
 - If you are over 16, you must have a fishing permit.
 - You must carry your fishing permit when fishing.
 - A permit is required to take fish, bullfrogs, tiger salamanders, or snapping turtles.
 - It is unlawful to borrow or use the permit of another or lend your permit to another.
 - It is unlawful to leave dead fish or any part thereof on the banks or in the water of any stream, lake or other body of water.
 - It is unlawful to fish on any private land without landowner permission.
 - It is unlawful to seine sport fish of any size.

continued on next page



Camouflage Basics, continued

Fishing regulations, continued:

- For more information and to view all Nebraska fishing regulations, visit www.outdoornebraska.gov.

Throughout the activity, remind participants to have fun and encourage them to go fishing with their family and friends.



CSI: Critter Scene Investigations

Suggested Number of Volunteers:
1-2

Materials in Activity Tub:

- Scene #1 • owl feather
- owl pellet
- snake shed
- Scene #2 • turkey feather
- shotgun shell
- Scene #3 • grass duck nest
- empty egg shells
- Scene #4 • acorns
- Scene #5 • deer bone
- copies of participant answer sheet
- clipboards
- track ID booklets
- scene boards

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn about how to track animals and determine how using clues in nature, you can determine what has happened.

Background:

If you just take a moment and look in nature, there are a lot of “crimes!” Part of the fun in being active in nature is to find these clues and determine what has been happening in this area.

This is also a great way to determine what animals are in an area and what animals you might be able to see when out hiking.

Procedure:

Before the Activity

Set-up each of the five scenes before the event. Each scene should be labeled with the scene number card so participants know which scene they are at and which one corresponds with the answer sheet.

Scene #1: Place the owl feather near the owl wing tracks. Near this, place the snake shed. The owl pellet is optional. If you choose to use it, place it at the far end of the scene away from the feather and shed.

Scene #2: Place the turkey feather near the turkey tracks and blood. Place the shotgun shell near the human footprint.

Scene #3: Place the grass nest so all tracks (skunk and duck) lead to the nest. Place the broken egg shells in and around the nest.

Scene #4: Place the acorns near the squirrel tracks and blood.

Scene #5: Place the deer bone near the mouse tracks.

The Activity

1. Ask participants if they were to walk into a prairie or forest and not see any animals, would that mean that there were no animals living in this area? No! To know what animals live in an area, we must look at lots of clues. These clues include:

- Animal homes - bird nests, fox holes, insect hives, etc.
- Evidence of animals eating - a half eaten nut, a chewed bone, a hole in a leaf, etc.

continued on next page



CSI: Critter Scene Investigations, continued

- Animal body parts - fur on a branch, a bird feather, a deer antler shed, a snake shed.
- Scat - animal poop!
- Tracks - animal footprints left in the mud or snow.
- Animal calls or songs - a bird calling, a coyote howling, a deer snorting, etc.
- Animal Smells - a skunk's spray, a fox's territory smell, etc.

2. Explain to participants that their job is to visit each of five scenes and determine what happened at each one. You can build suspense by asking participants if they watch CSI on TV? That is what they are going to be doing at this station – taking in the clues, interpreting what they see, and deciding what happened at each scene.

Let them know that they will have track ID guides at each station to help them determine which animals were involved.

Also remind participants that just like a real crime scene, they should not touch the clues.

3. Give each participant, or group, a clipboard with an answer sheet and a pen/pencil. Ask each participant/group to start at a different scene. Explain that they will be rotating through all the scenes.

4. As participants work at each scene, volunteers should walk around and help participants/groups come to the correct conclusion. DO NOT tell participants the answers, simply help them with leading questions IF they need assistance.

5. When participants have completed each station, wrap-up the activity by going through each station and having participants tell you what they think happened. Be careful not to crush participants when they are wrong. Simply point out some hints to help them realize the correct

answer. Also, be aware that there can be more than one correct answer for each scene.

CSI: CRITTER SCENE INVESTIGATIONS ANSWERS

Scene #1: The snake just got done shedding. The owl swoops down and picks-up the snake to eat. Several hours later, the owl produces a pellet.

Scene #2: The hunter shot the turkey, the bobcat takes the turkey before the hunter can get to it. Or, the hunter shoots the turkey and retrieves it. Several hours (days) later, the bobcat passes through the area and smells the turkey's blood.

Scene #3: The mother duck leaves the nest to look for food for herself. The eggs have not yet hatched. A skunk walks up and eats the eggs. Or, the mother duck has taken her newly hatched ducklings for a swim. While they are out, a skunk walks over to look for a meal, but leaves when he finds nothing.

Scene #4: The squirrel is eating acorns when he is attacked by a red fox and eaten.

Scene #5: Coyote killed a small deer and ate most of the carcass. Several days (weeks) later, a mouse happens upon a bone left. The mouse chews on the bone for calcium.



Food Chain Stackables

Suggested Number of Volunteers: 2

Materials in Activity Tub: 16 wooden stacking blocks (4 sets of 4)

Materials Provided by the Group: none

Objectives

Students will learn:

1. Animals and plants in a local habitat are interdependent;
2. Food webs or chains can be used to represent feeding relationships in a habitat;
3. Food chains begin with a plant;
4. To construct a food web in a prairie habitat.

Background:

Do you like to play games? If you do, you will need energy. Every time you run or jump, you are using up energy in your body. How do you get the energy to play? You get energy from the food you eat. Similarly, all living things get energy from their food so that they can move and grow. As food passes through the body, some of it is digested. This process of digestion releases energy.

A food chain shows how each living thing gets its food. Some animals eat plants and some animals eat other animals. For example, a simple food chain links the grass and twigs, the deer (that eat grass and twigs), and the Mountain Lion (that eat the deer). Each link in this chain is food for the next link. A food chain always starts with plant life and ends with an animal.

Plants are called producers because they are able to use light energy from the Sun to produce food (sugar) from carbon dioxide and water.

Animals cannot make their own food so they must eat plants and/or other animals. They are called consumers. There are three groups of consumers.

- Animals that eat ONLY PLANTS are called herbivores.
- Animals that eat ONLY OTHER ANIMALS are called carnivores.
- Animals that eat BOTH ANIMALS AND PLANTS are called omnivores.

Some animals are predators. These animals are the ones who hunt other animals. Some animals are prey. These animals are eaten by other animals. Many animals are both predator and prey.

Procedure:

Ask children if they know what food chains are. Explain that food chains or webs are ways to represent the living organisms in a habitat and who eats who. Food webs show which animals are the predators and which animals are the prey (or, both!).

Show children the wooden blocks and ask them to build a food chain using the blocks. Ideally, plants would be at the bottom, then smaller consumers like insects and small mammals. Then comes the larger animals - mid-sized mammals, fish, raptors. The top blocks should consist of large predator animals.

Explain that the blocks on the bottom are larger because there needs to be more plants and small prey animals to ensure there is enough food as the energy is passed up the food web.

You can show them how the food chain crumbles when one of the blocks is removed.



GPS & GeoCaching

Suggested Number of Volunteers:
2-4

Materials in Activity Tub:

- Hand-held GPS Units (4)
- Caches (4)
 - stuffed football
 - red ball
 - jump rope
 - red frisbee

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn about GPS and how it works.
2. Learn how GPS can be used to track animals or wildlife.
3. Learn about GeoCaching - what it is, how it works, and GeoCaching opportunities in Nebraska.

Background:

GPS is a means of determining a point on the earth's surface using a hand-held device (or one mounted in your car) and satalited orbiting the earth.

GPS and How it Works:

- GPS stands for Global Positioning System
- GPS is a way to use latitude and longitude to mark a point on the earth's surface.
- GPS works by using satalites orbiting the earth. The hand-held GPS unit (or the one in your car) "lock" onto saltalites. The GPS Unit must lock onto at least 3 satalited to be accurate. These satalites and the GPS units beam signals back and forth to each other. Three saltalites "triangulate" to determine where the GPS unit is in realtion to all three satalites. This is done by measuring the time the signal from the GPS unit takes to get to the satalite. If a satalite is farther away, the signal will take longer to get there. Or, of the satalite is closer, the signal will reach it faster.
- When you move, the GPS unit is now farther from one satalite and closer to another... you have moved your latitude and longitude position which is then displayed on the GPS screen.
- You can mark a point using the GPS unit, then return to that point later using the GPS to guide you.

GeoCaching and How it Works:

- GeoCaching is a game of sorts where an object (cache) is hidden by one person or group, then using a GPS unit, another person or group tried to find the cache.

Procedure:

Before the Activity

The Preperation for this activity takes approximately 30-45 minutes!

1. Turn on GPS Units. Wait for them to find the satalites.
2. Hide the Caches and mark the caches (waypoints) with the GPS Units.

continued on next page



GPS & GeoCaching, continued

The Activity

1. Welcome participants to the station. Ask if they have ever hear of GPS? If they have, ask them what it is and how it works. If they haven't explain what GPS is and how it works.

2. Explain to participants that they will be using GPS units to find caches that have been hidden in nature. The caches are one of four items: a toy frog, a toy truck, a toy snake, and a jump rope.

3. Provide each group of 2-5 participants with a GPS unit (with the cache already marked). Show them how to use the GPS unit.

Remind participants:

- The GPS unit works best when you continue moving. The unit works by sending and receiving signals from satellites and the information is most accurate when you continue moving.
- The GPS units are only so accurate... the more satellites the GPS unit is "locked" onto, the more accurate it is. The unit will tell you how accurate it is at the current time. Be mindful that the GPS unit may say the cache is within 5 feet, but that does not take into account the +/- feet of accuracy... this means the cache may actually be 10 feet away!
- Be patient and have fun!

4. Send the participants on their way. Alternatively, if you have enough volunteers, it is helpful to send a volunteer with each group. The volunteer can encourage participants and help guide them when using the GPS unit.

If Participants are interested in learning where other caches can be found, instruct them to visit:

- Nebraska Game & Parks Commission: Geocaching at State Park Areas
outdoornebraska.ne.gov/parks/geocaching.asp

- Geocaching.com
www.geocaching.com

- Wyo-Neb Area Geocachers
www.wnag.net

If participants are interested in getting a GPS unit, you can let them know that the units they are using for this activity are approximately \$100. GPS units generally cost between \$100 and \$600.

GPS units can be purchased at many sporting goods stores, outdoor stores (Bass Pro, etc.).



Mud Ball Planting

Suggested Number of Volunteers: 1-2

Materials in Activity Tub:

- paper bags
- seed ($\frac{1}{8}$ teaspoon per mud ball is more than enough!)
- permanent marker for marking bags
- instruction sheets for participants to take home.
- stapler
- staples for stapling bags shut
- bucket for mixing mud

Materials Provided by the Group:

- mud
- handi-whipes

Objectives

Participants will:

1. Learn about native plants, their habitat requirements, and the importance of prairie plants for the ecosystem.

Background:

Whether you are in a shortgrass prairie, tallgrass prairie, mixed grass prairie, or the Sandhills, prairie plants are an intergrap part of the environment.

Prairies are not just filled with grasses! There are two major types of plants found in prairies – grasses and forbes. Grasses typically have long, slender leaves with a straight vein pattern. Forbs usually have wider leaves and their veins are branching. Both grasses and forbes are important to maintaining a healthy, diverse prairie ecosystem. Both grasses and forbes provide the prairie ecosystem with several benefits:

- provide food for many animals - nectar for insects, seeds for birds and small mammals, leaves for larger mammals, and even food for humans;
- provide shelter and cover for some prairie animals;
- help prevent soil erosion.

Procedure:

Before the Activity

Prepare enough mud for the number of kids that may visit this station. Set-out materials in an assembly line fashion. Place items in this order: mud, seed, label and bag, place to bag mud ball, and instructions.

The Activity

1. Inform participant that they will be learning about native Nebraska prairie plants and making a mud ball filled with seeds from these plants to take home.
2. Talk to participants about the importance of prairie plants (see background infomration).
3. Discuss what plants need to survive: water, sun, nutrients (from soil) and, space.
4. Give participants a scoop of mud and $\frac{1}{8}$ teaspoon of seed. No more than $\frac{1}{8}$ teaspoon is need! You may need to help participants get seeds in the middle of the mud ball and work the mud into a ball.
5. Instruct participants about where they should plant their mud ball and how they should care for it.
6. Label a paper bag with the child's name; ask parents to help.
7. Place the mud ball in the child's sack and staple instructions and information about their plant to the sack.



Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Prairie Mud Ball Instructions!

Allow your Prairie Mud Ball to dry for 24 hours. Then find a place that will not be mowed and has full sun to partial sun. Now, throw your mud ball! Then, let your seeds grow! Generally, rain will provide enough water for your seeds and prairie plants, but an occasional watering may be necessary in the summer.

Nebraska Wildlife Jeopardy

Suggested Number of Volunteers:
1-2

Materials in Activity Tub:

- Nebraska Wildlife Jeopardy board including questions and answers.

Materials Provided by the Group:

- prizes (optional)

Objectives

Students will:

1. Learn about Nebraska's wildlife - mammals, birds, reptiles, plants, fish.

Background:

Nebraska is home to over 400 species of birds, 80 species of fish, 1,470 different species of plants, 95 mammal species, 60 different species of reptiles and amphibians, and more than 10,000 species of insects. That's over 12,000 different species that can be found right here in Nebraska!

Knowing about these animals, their habitats, and survival needs is an important part of wildlife management. Additionally, knowing about Nebraska's wildlife is a great way to become engaged in our natural history and natural resources.

Although this game is filled with simple, fun facts, these are some of the basics of wildlife management. For example, it is vitally important that wildlife biologists and managers know that Nebraska has seven threatened and endangered plant species. Or, biologists need to know that amphibians need two habitats to complete their life cycle - water and land.

Procedure:

Before the Activity

Set-up the Nebraska Wildlife Jeopardy game board. Sections titles are pre-paced on the board. Answers, questions, and point values will be layered. Answers should go on the bottom, the questions, then point values.

The Activity

1. Invite participants to play "Nebraska Wildlife Jeopardy." Allow participants to choose a subject (Nebraska Plants, Nebraska Reptiles, etc.) and a dollar amount (100, 200, 300, 400, or 500).

Once they have chosen a subject and dollar amount, carefully pull off the dollar amount to reveal the question (answer in Jeopardy terms). Read the answer out loud. Allow the participant to guess. When participants have given their "final answer," carefully pull off the answer to reveal the answer (question in Jeopardy terms).

Allow participants to continue playing. If there are others at the station, you can turn it into a competition between participants or teams/groups of participants.

Once participants leave, replace the questions and answers in the correct place for new participants to play.



Scavenger Hunt

Suggested Number of Volunteers: 1

Materials in Activity Tub:

- clip boards
- copies of scavenger hunt
- pens or markers

Materials Provided by the Group:

- prizes (optional)

Objectives

Students will:

1. Learn how to use observation skills to note details in nature.
2. Learn to look at nature in new ways and find nature in “new” places.

Background:

Whether you plan a career in banking or as a wildlife biologist, observation skills are vital to success. When young, many children have an innate sense of wonder and thrive on making new observations. And, yet, many people do not develop their observation skills. This activity helps people of all ages take a deeper look at nature and the environment while working on observation skills.

When people learn to use their observation skills, they will begin to see nature in many places – parks, their backyard, parking lots, busy city streets, and on farms or ranches.

Procedure:

Before the Activity

Place clip boards, scavenger hunts, and pens or markers on the table to be prepared for participants.

The Activity

1. As participants approach the station, ask if they would like to participate in a scavenger hunt. If they would, give them a clip board with a copy of the scavenger hunt and a pen or marker. Send them on their way. Tell participants to return when they have completed the scavenger hunt for a prize (optional, provided by the group).



Tracks & Teeth & Skulls, Oh My!

Suggested Number of Volunteers:
1-2

Materials in Activity Tub:

- Skulls:
 - coyote
 - fox
 - bobcat
 - raccoon
 - skunk
 - squirrel
 - beaver
 - deer
- Replitracks
 - coyote
 - fox
 - bobcat
 - raccoon
 - skunk
 - squirrel
 - beaver
 - deer

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn about the different types of teeth and how each are used by the animal;
2. Learn what a herbivore, omnivore, and carnivore are and how to tell which an animal is based on their teeth.

Background:

You can tell a lot about an animal simply by looking at its skull and tracks. By looking at the skull, you can almost instantly tell if the animal is an herbivore, an omnivore, or a carnivore.

An **herbivore** is an animal which eats exclusively plants and plant materials like seeds, nuts, or flowers.

A **carnivore** is an animal which eats exclusively meat or other animals. They eat no plant material.

An **omnivore** is an animal which eats both plant material and meat.

By looking at the skull, you can also tell if the animal is a predator or a prey species. Animals which are predators typically have their eyes at the front of their head. This allows these species to have greater depth-perception and be better hunters. Prey species, on the other hand, typically have their eyes on the side of their head. This allows these species to be able to see all around them and constantly be on the look-out for predators.

An animal's tracks also tell you a lot about the animal. If the tracks are webbed, this is a good indication that the animal spends much time in water. Or, if the track has large claws, this can indicate that the animal is a digging animal.

Procedure:

Before the Activity

Layout skulls and tracks on the table. You can have a skulls section and a tracks section, or you can place each track next to the corresponding skull.

The Activity

1. Discuss with participants what an herbivore, omnivore, and carnivore are. Show participants the skulls and begin to identify the teeth of several skulls - an herbivore skull, and omnivore skull, and a carnivore skull.

continued on next page



Tracks & Teeth & Skulls, Oh My!, continued

Point out differences in the three types of teeth. For example, show participants that coyotes teeth are sharp for tearing meat, or deer teeth are for grinding plants.

2. Discuss other aspects of the skulls. For example, point out the eye position on predator skulls vs. prey skulls.

3. Discuss tracks. Ask participants:

- How does the design of the feet help the animal move?
- Is this animal required to move fast? (Run after prey? Run from predators?)
- Does the track have claws? How would this help the animal?
- Is the track webbed? How would this help the animal?

Helpful Hint:

Discuss and ask the kids questions about the different items available. Make sure to ask THEM questions and give them hints to enable them to come to the answer on their own. Also encourage participants to ask you questions about the items.

You can also lay pictures of each of the animals on the table and ask participants to match the skull and track to the correct picture.



Turkey Calls

Suggested Number of Volunteers:
1-2

Materials in Activity Tub:

- Turkey Calls
 - Slate Call (3)
 - Box Call (3)
 - Push-Pull Call (3)
- Types of Turkey Call Poster
- Images of Wild Turkeys (4)

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn about turkeys and turkeys in Nebraska.
2. Learn about the different calls of turkeys and how they can be used to attract turkeys.

Background:

Wild Turkeys are a common game species in Nebraska. But, this was not always the case. In the early 1900's, Wild Turkeys were extirpated from Nebraska. Due to concerted efforts, Wild Turkeys were brought back to Nebraska through the introduction of several species of turkeys. Today, the Wild Turkeys in Nebraska are one of several sub-species or a hybrid.

Getting to know Wild Turkeys is a fun and engaging way to go wildlife viewing. Learning Wild Turkey calls can help wildlife enthusiasts know where Wild Turkeys are located in the habitat and what the turkeys are doing.

This activity introduces participants to Wild Turkeys and their numerous calls.

Procedure:

Before the Activity

Place the three types of turkey calls on the table along with the "Sounds of the Wild Turkey" Poster and images of Wild Turkeys.

The Activity

1. When participants come to the station, talk with them about the different calls of the Wild Turkey. Explain that there are lots of different calls used to attract turkeys.

At this station, participants will be able to try using three different calls - the box call, the slate call, and the push-pull box call.

In addition to the three calls at this station, there are also the windpipe call, the diaphragm call, shaker calls, and tube calls.

2. Allow participants time to experiment with the calls. Once participants have had some time to experiment, begin showing them different ways to use each of the calls and how the calls can be used to mimic the different calls of the Wild Turkey.



Un-Natural Hike

Suggested Number of Volunteers: 3

Materials in Activity Tub:

Clipboards	
Orange flagging	
Paper for writing	
Pens/pencils	
sponge	green marker
CD	baseball hat
pot holder	wire whisk
candle	paint brush
play dough	hanger
ruler	dish towel
chip clip	rubber duckie
soda can	jump rope
random book	
light bulb	

Materials Provided by the Group:
replacing un-natural objects if needed

Objectives

Students will:

1. Learn how to use observation skills to note details in nature;
2. Observe how camouflage is used in nature;
3. Develop an understanding of the difference between natural and un-natural;
4. Talk about the roll they play in taking care of the environment.

Background:

Whether you plan a career in banking or as a wildlife biologist, observation skills are vital to success. When young, many children have an innate sense of wonder and thrive on making new observations. And, yet, many people do not develop their observation skills. This activity helps people of all ages take a deeper look at natural and un-natural objects.

In nature, many animals are often over-looked. Because of their amazing camouflage, they blend in with their surrounds and are very difficult (if not impossible) to see. These animals use their camouflage to hide from predators or to hide from their prey.

When people learn to use their observation skills, they will begin to see nature in many places – parks, their backyard, parking lots, busy city streets, and on farms or ranches.

When people learn to use their observation skills, they may also see many un-natural objects in nature. Sadly, some people do not understand the need to care for the environment and pick-up after themselves. Learning to care for the environment and understanding that man-made objects can harm the environment is an important lesson for all people to learn.

Procedure:

Before the Activity

Prepare the trail: Choose a path (about 20 yards long), and place the un-natural items along the paths. This should be done prior to the participants arrival. The path may be marked with flagging tape, flags, or cones to define the area of the search. The trail should be set up in a way that requires the participants to constantly look high and low, forward, and behind them. Vary the sequence of the placement with camouflaged, not camouflaged, high, low, large, and small items. Allow some to be more obvious in relation to their surroundings than others.

The Activity

1. Ask participants if they know the meaning of the terms, “natural” and “un-natural”.

continued on next page



Un-Natural Hike, continued

Ask participants how many of them have ever been on a nature hike. What types of things would they expect to see on a nature hike? List some items they will find on the un-natural hike and have the participants say if they think it is “natural” or “un-natural.”

2. When your participants are gathered, tell them that there are a number of human-made objects along the trail. Hand them a clip board with piece of blank paper and a pen/pencil. Instruct participants to write down all the un-natural objects they find as they meander down the trail. Remind participants that other will be walking around them and not to point out any of the un-natural objects they are seeing.

Let them go quietly down the trail to see what they can discover. Do not let all participants start at one time; let one or two go, then wait about 20 seconds before letting another person go. This will spread out participants along the trail and ensure they are concentrating on the trail.

Remind participants that objects discovered should be left where they are.

3. When participants have completed the trial, talk with the group about what they found (and what they didn't find). Most likely, they will have found all the large, not camouflaged items that were on the ground, and perhaps a few of the more difficult items. Tell the students there were a total of 20 items on the trail.

The ones they found were probably the ones that did not blend in with the colors of the environment (define “camouflage”). Positively tell the participants they were very good at finding these items (yeah!). The smaller, higher, or camouflaged items are much harder to find. .

4. Relate some of the items to an element of nature (i.e. the green marker in some green grass could have been an

insect, the jump rope could have been a snake).

5. Show kids some of the other items that were not located. Now, they are ready to go on a nature walk and observe all the critters and scenes of the natural world.

6. If the students observe all of the “unnatural” objects they can get a prize.

7. As a final note, talk with participants about the importance of caring for the environment and cleaning-up after yourself. Littering can cause damage to the plants and animals in an area and is ugly for other people to look at.

Talk to the participants about how much time it takes for some of our trash to decompose.

- Banana peel.....3-4 weeks
- Paper bag.....1 month
- Cardboard.....2 months
- Cotton rag.....5 months
- Cigarette butt.....2-5 years
- Tin can.....80-100 years
- Plastic bag.....20-1,000 years
- Plastic jug.....1 million years
- Glass.....1-2 millions years
- Styrofoam.....1 million years

NOTE: As an alternative to doing this activity with a larger group, you can have one volunteer at the start of the activity/trail explaining what the object of the game is and what the participants should do as each participant comes to the station. Then, at the end of the trail, another volunteer can talk with participants about what they found (and what they didn't fine) and the importance of caring for the environment.



What is Wild?

Suggested Number of Volunteers: 1

Materials in Activity Tub:

- magnetic boards with landscape backgrounds (3 - farmyard, grassland, and woodland);
- magnets of various animals
- easels (3)

Materials Provided by the Group:

- none

Objectives

Participants will:

1. Learn the definition of “wild” and “domestic;”
2. Be able to distinguish between wild and domestic animals;
3. learn what habitat various animals prefer.

Background:

What makes an animal wild? And, what characteristics make an animal domesticated?

A **wild animal** is defined as an animal which lives in nature (is not provided shelter by a human), is responsible for getting its own food (is not provided food by humans), and is not cared for by humans. Examples include red foxes, pheasants, songbirds, channel catfish, or white-tailed deer.

A **domesticated animal** is an animal which is dependent on humans for its shelter, food, and general care. Domesticated animals have generally lost the ability to hunt or provide food for themselves, or find adequate shelter. Examples include house cats, dogs, parakeets, a cow, or a pig.

Some animals could be considered either wild or domesticated depending on the situation. For example, a cottontail rabbit is a wild animal, but many people have domesticated rabbits as pets. Or, most horses are domesticated, but some states in the West have wild populations of horses.

Procedure:

Before the Activity

Lay the magnets out on the table. Prop the magnetic landscape boards up against a secure structure; wall, tree etc.

The Activity

1. Let the kids choose an animal from the table. Ask them what animal they choose and have them identify it.
2. Ask them about their animal. What sounds does it make? What does it eat?
3. Ask them where they think the animal lives and let them place the animal on one of the magnetic boards.
4. If they are correct congratulate them. If they need help, gently guide them to a better decision. For example: They place a cow in the woods. Does the farmer feed the cow? Yes. Well where would the cow want to live so the farmer could feed it?
5. If time allows, let participants try another animal.



Wildlife Show and Tell

Suggested Number of Volunteers: 2
(one for white-tailed deer, one for pheasant)

Materials in Activity Tub:

White-tailed Deer

- skull
- pelt (portion)
- leg with hoof
- antlers
- chewed twig - one chewed from a white-tailed deer and one from a rabbit
- images of white-tailed deer

Pheasant

- skull
- feathers (wing and tail)
- leg with foot
- images of pheasants

Materials Provided by the Group:

- none

Objectives

Students will:

1. Learn about the adaptations of white-tailed deer and pheasants.
2. Learn about Nebraska's populations of white-tailed deer and pheasants.

Background:

White-tailed deer are one of the most common large mammals in Nebraska. They are found in nearly all habitats - prairie, forest, urban, farm, ranch.

Although Ring-necked Pheasants are an introduced species, they are now a major upland game bird.

This activity will introduce participants to the adaptations of both white-tailed deer and ring-necked pheasants.

Procedure:

Before the Activity

Place all the white-tailed deer artifacts on one table, all the pheasants on another table.

Read background information on both white-tailed deer and pheasants.

The Activity

1. As participants come to the station, encourage them to explore the wildlife artifacts. Ask participants the questions relating to each artifact.
2. Encourage participants to think about each artifact and how these artifacts represent adaptations of the animal which help it survive in its habitat.



White-tailed Deer

Skull

How would you describe the size of a deer's eye socket? How might the size of deer's eyes help them to see at dusk or in a dark forest? Examine the teeth. Do deer have upper and lower front teeth.

Nipped Twigs

Compare the nipped twigs. Try to determine which twig was bitten off by a deer and which a rabbit bit off. What observations lead you to your conclusion? Hint: Unlike deer, rabbits have sharp upper and lower front teeth.

Antlers

What do you think these antlers are made of? How might the size of a deer's antlers reflect the habitat in which it lives?

Pelt

Examine the pelt. What color is it? Are the hairs hollow or solid; crinkly or straight; long or short? How might a different pelt for summer and winter help a deer? Do you think this is a winter or summer pelt?

Leg

What do you notice about the shape and size of a deer's leg? Of a deer's foot? How might the design of the legs and feet help deer in certain habitats or situations? In what conditions or habitats might a deer have difficulty moving around?

Tape Measure

Unroll the measuring tape to 8' to see how high a deer can jump. How does this help a deer running from a predator in the woods? Unroll the tape to 25' to see how far a deer can jump. How does this help a deer running from a predator in a field?



Ring-necked Pheasant

Skull

How would you describe the size of a pheasant's eye socket? How would a pheasant's eyes help them find food and see predators? Examine the beak. What kind of food is this beak designed to eat?

Feathers

What do you think these feathers are made of? Are the feathers solid or hollow? How might the size and shape of the pheasant's wing be affected by the habitat it lives in?

Male and Female Plumage

Examine the pictures. What color are they? Why are females dull colored? Why are males brightly colored?

Leg

What do you notice about the shape and size of a pheasant's leg? Of a pheasant's foot? How might the design of the legs and feet help pheasant in certain habitats or situations? In what conditions or habitats might a pheasants have difficulty moving around?

