Cub Meeting Schedule: Week Two

Theme: Eco-Systems

Date: _____

Time	*Activity*	*Program Details*	*Leader Responsible*
10 mins.	Gathering Activity	Helping Habitat *(See detail planning sheet)*	_____
5 mins.	Opening Ceremony	*(Details can be found in the **Cub Leader's handbook**)*	
10 mins.	Game	Eat and be Eaten *(See detail planning sheet)*	_____
20 mins.	Theme Activity	Litter We Know (Part 1) *(See detail planning sheet)*	_____
10 mins.	Game	Oh Deer *(See detail planning sheet)*	_____
20 mins.	Theme Activity	Litter We Know (Part II) *(See detail planning sheet)*	_____
10 mins.	Song/Story	Fish Song *(See detail planning sheet)*	_____
10 mins.	Six Meeting		_____ _____
5 mins.	Spiritual Fellowship	- Recite Law/Promise - Prayer	_____ _____
5 mins.	Closing Ceremony	*(Details can be found in the **Cub Leader Handbook**)*	
15 mins.	Leader Discussion time	Review meeting and discuss next week's plans	_____ _____

Badge Links: World Conservation Badge #7

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Meeting Notes: _____

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ECO-SYSTEMS: GATHERING ACTIVITY

Helping Habitat Puzzle

1. As Cubs arrive, distribute Helping Habitat puzzle and pencils. Ask Cubs to draw a line between the problem and the solution. Provide picture for Cubs to observe the problems.

Problems for Habitat	Habitat Solutions
Cattle in streams cause pollution.	Put up sign saying "No dumping allowed".
Trees cut along shoreline.	Build fishways to allow migrating fishes to go around the dam and reach the spawning areas.
Dam blocking migrating fishes.	Properly plough and plant at stream bank.
Soil from construction site washes into stream.	Build fences to keep cattle away from the stream.
Garbage dumped into stream.	Plant shrubs and trees near the stream.

2. Can the Cubs think of any other solutions for the problems. Are there similar problems where the Cubs live that they have observed in their community?

GAME: Eat and Be Eaten

READ THIS FIRST

Topics: Producers; consumers; food chains and webs; communication; survival

Objectives:

1. To introduce the concepts of producers and consumers (primary, secondary, tertiary) to Cubs.
2. To identify a few typical wetland food chains and food webs.

Background:

All ecosystems contain producers and consumers. The producers are our plants, which get energy from the sun and produce their own food. Consumers are divided into groups based on what they eat. Plant eaters are called herbivores (primary consumers). A cow is an example of a herbivore, but the plant sucking and chewing insects consume the most plants. First level carnivores (secondary consumers) feed on plant eaters. First level carnivores include frogs eating insects, a giant water bug eating a tadpole, coyotes or foxes eating mice, and birds eating insects or worms. Second level carnivores (tertiary consumers) are animals which prey on and eat first level carnivores. They tend to be larger, more fierce and fewer in number (within each species) than the first level carnivores. Omnivores eat both plants and animals. Scavengers eat dead and decaying plants and animals. The following activity focuses on carnivores, although it can be adapted to include herbivores and omnivores.

Equipment:

- Blindfolds, noisemakers (optional)

How to play:

1. Select a food web of some sort. For example, a typical wetland food web could include mosquitoes, frogs, toads, snakes, foxes or coyotes, racoons, fish, crayfish, a heron and a hawk. Briefly review how these animals could be arranged in a food web (make a diagram).
2. Each person plays a particular animal in the food web. Depending on the total number of people, several Cubs may play the same animal. Discuss who eats whom.
3. The group decides what type of noise each animal should make (whenever possible try to imitate the real animals as closely as possible (e.g. mosquitoes “buzzzzzzz”, foxes “bark”, snakes “hisssss”.) Animals of the same species make the same noise. All noises must be distinct and easily recognizable. Cubs should practise making and listening to the noises for a few minutes because the noises are all they will use to find prey, avoid predators and find mates.
4. The game should be played in a cleared, safe area. Cubs must move slowly to minimize the chance of some one getting hurt. The leader, and other adults should act as spotters to prevent stragglers from straying from the playing area.
5. The goal of the game is to stay alive as long as possible. All players wear blindfolds. Begin the game with players scattered about in the playing area. Each time a player moves, they must make the sound (call). When a player encounters a mate, they must link arms and stay together. Prey animals must leave the game if they are tagged by a predator. Who stays alive the longest? Who catches the most prey? Who finds a mate? How can a mate be a problem? What are important factors for survival?
6. Playing the game again allows the Cubs to develop and try out new survival strategies.

Extension

7. Repeat the game but decrease the size of the playing field to simulate the loss of wildlife habitat (like the draining of the wetlands). How does this effect survival?
8. Introduce other elements into the game such as the impacts of humans, disease or fire.

THEME ACTIVITY: ***Litter We Know*** *(Part I)*

READ THIS FIRST

Objectives:

Cubs will be able to:

1. Identify and evaluate ways that litter pollution can endanger wildlife; and
2. Propose ways they can help eliminate these dangers.

Method:

Cubs collect and evaluate litter, making collages.

Background:

Environmental pollution affects all forms of life. Litter is unsightly. It also exposes wildlife and other animals to illness, injury, and death.

Monofilament fish line may get tangled on legs and beaks of water birds like geese and herons. Some of these birds need to run short distances to take off when they fly. The fish line prevents this. It also interferes with their swimming. Birds with long bills often get line wrapped around their bills and cannot open them to eat. They starve to death. The line also gets tangled in their wings, preventing the birds from flying.

Sometimes fish or birds get into the loop portions of plastic six-pack can holders. The animal continues to grow, but the loop won't stretch. A slow death results. These loops can also get tangled around the feet of waterfowl.

Half-open cans are a problem. Animals, like deer, can cut their tongues on the cans. Sometimes smaller animals get their heads stuck inside such cans and they can't eat. Starvation is the result. Mice and chipmunks crawl into opened bottles and get trapped inside, unable to get a footing on the slippery glass to push themselves out through the small opening.

Shiny bottle caps or pop tops may be eaten by wildlife, including fish, injuring or killing them. Cigarette butts, cellophane wrappers, and styrofoam cups, eaten by deer, can cause internal problems. Broken glass from bottles and other glass objects can injure people, pets and wildlife.

You can contact local fish and wildlife agencies or other agencies for additional information about problems resulting from litter, including local examples. Such personnel and others, including representatives of private environmental, conservation, and animal welfare organizations may also be available to assist you in considering alternatives for reducing litter problems.

The major purpose of this activity is to alert youth to the dangers of litter pollution and to consideration of responsible actions people can take to minimize consequences of litter pollution.

Equipment:

- Large sheets of paper for mounting collages, glue, different types of litter

How to Play:

(Part 1)

1. Divide the pack into sixes or three to four teams.
2. Ask each team to bring a collection of litter to the meeting in a paper bag. Suggest they look in parks, camping areas, or school grounds. NOTE: They should not take items out of garbage cans.
3. Have the teams make and display collages of these items.

GAME: Oh Deer / Oh Muskrat

READ THIS FIRST

Topics: Habitat, predator, prey, population dynamics, limiting factors

Objectives:

1. Introduce Cubs to the three essential components of habitat: food, water, and shelter.
2. Show that certain factors may limit animal populations and that some fluctuations in wildlife populations are natural, as ecological systems are constantly changing.

Background:

A variety of factors affects the ability of wildlife to successfully reproduce and maintain their populations over time. Disease, predator/prey relationships, varying impacts of weather, accidents, pollution and habitat destruction and degradation are some examples. Some naturally caused and human induced limiting factors serve to prevent wildlife populations from reproducing in numbers greater than their habitat can support. The most fundamental of life's necessities for any animal are food, water, shelter and space in a suitable arrangement. Without these essential components, animals cannot survive. Wildlife populations are not static. They continuously fluctuate in response to a variety of stimulating and limiting factors.

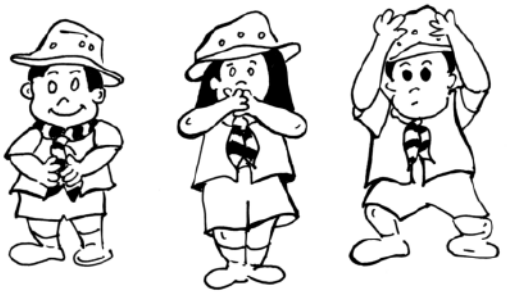
This activity is intended to be a simple but powerful way for Cubs to grasp some basic concepts. Everything in natural systems is interrelated, populations of organisms are continuously affected by elements of their environment. Populations of animals do not stay at the same number year after year in their environment and are continually changing in response to the availability of resources. The main purpose of this activity is for Cubs to understand the importance of suitable habitat, as well as factors that may affect wildlife populations in constantly changing ecosystems.

Equipment:

- Four pylons, playing field, whiteboard and markers.

How to Play:

1. Tell the Cubs that they are about to participate in an activity that emphasizes the most essential things that animals need in order to survive. Review the essential components of habitat (food, water, shelter and space). This activity emphasizes three of those components of habitat (food, water, and shelter) but the Cubs should not forget the importance of the animals having sufficient space to live.
2. Ask the Cubs to count off in fours. Have all the "ones" go to an area, and the rest go to another area. Using the pylons, establish two lines about 20 metres apart and have the "ones" line up along a line and the remaining Cubs along the other line.



3. The “ones” become deer. Deer need good habitat to survive. Tell the Cubs that the four essential components of habitat are food, water, shelter and space in a suitable arrangement. For this activity we will assume that deer have enough space in which to live. The deer need to find enough food, water and shelter in order to survive. When a deer is looking for food, it holds its hands over the stomach. When it is looking for water, it puts its hands over the mouth. When looking for shelter, it holds its hands together over the head. A deer can choose to look for any one of its needs during each round or segment of the activity. However, once it has chosen something it cannot change what it’s looking for after it sees what is actually available. It can change what it’s looking for in the next round, if it survives.
4. The other group (twos, threes and fours) are food, water and shelter, components of habitat. Each Cub chooses at the beginning at each round which component they will be during that round. The Cubs depict which component they are in the same way the deer show what they are looking for.
5. The game starts with all players lined up on their respective lines (deer on one side; habitat components on the other side) and with their backs to the Cubs on the other line. The leader begins the first round by asking all the Cubs to make their signs; each deer deciding what it is looking for, each habitat component deciding what it is. Give the Cubs a few moments to get their hands in place and when they are ready, count them down and when you say “Go” they both turn to face each other, continuing to hold their hands in place.
6. When deer see the habitat component they need (the same hand sign), they run to it. Each deer must hold the sign of what it is looking for until getting to the habitat component person with the same sign. Each deer that reaches its necessary component takes the food, water or shelter back to the deer side of the line. This is to represent the deer successfully meeting its needs and reproducing as a result. Any deer that fails to find its food, water or shelter dies, and sits down to become part of the habitat. In the next round, the deer that died is a habitat component and is available as food, water, or shelter to the deer who are still alive.

   When more than one deer reaches a habitat component, the Cub who gets there first survives. Habitat components stay in place on their line until a deer needs them. If no deer needs a particular habitat component during a round, the habitat component just stays where it is. However, the habitat person can change which component it is from round to round.
7. The leader keeps track of how many deer there are at the beginning of the game, and at the end of each round. Continue the game for approximately 15 rounds. Keep the pace brisk.
8. At the end of the game gather the Cubs to discuss the activity. Encourage them to talk about what they experienced and saw. They may have watched a small herd of deer begin by finding more than enough of its habitat needs. The population increased over two or three rounds, until the habitat was depleted and there was not sufficient food, water, and shelter for all the members of the herd. At that point, deer starved or died of thirst or lack of shelter and they returned as part of the habitat. Just like in nature.
9. Use the whiteboard to graph the data on deer population size which you collected during the game. The number of deer at the beginning of the game and at the end of each round represent the number of deer in a series of years. That is, the beginning of the game is year one and each round is an additional year. This becomes a visual reminder of what the Cubs experienced during the game and the deer population fluctuated over a period of years. This is a natural process, as long as the factors that limit the population do not become excessive to the point where the animals cannot successfully reproduce. The populations will tend to peak and rebuild, peak and rebuild as long as there is good habitat and sufficient numbers of animals to successfully reproduce.
10. In discussion, ask the Cubs to summarize some of the things they have learned from this activity. What do animals need to survive? What are some of the limiting factors that effect their survival? Are wildlife populations static or do they tend to fluctuate as part of an overall balance of nature? Is nature ever really in balance or are ecological systems involved in a process of constant change?
11. Variation: Do the activity in the same fashion, except substitute a species which is common in a wetland environment (frog, muskrat, or garter snake).

THEME ACTIVITY: Litter We Know *(Part II)*)

4. Discuss the effects of litter. OPTIONAL: Ask a wildlife expert to join the Pack for the discussion. If available, show a film or read brochures on the subject.
5. Ask the Cubs to assign a numerical value to each kind of litter. The item potentially most harmful to wildlife has the highest score, least harmful has the lowest score.
6. Have the team figure a total score for their collage based on the numerical values of each piece of litter.
7. Propose and evaluate ways that people can eliminate litter pollution. Can manufacturers make cans with openings other than poptops? Could they devise another method of packaging six-packs? How could people fishing have more control over losing their fishing line? How can individuals be instructed about the dangers as well as the unsightliness of littering? What can the students do personally - as individuals, as groups, or as family units - to eliminate or reduce their own litter?

Aquatic Extensions

1. Focus specifically on litter that can be potentially harmful to aquatic wildlife.

Evaluation

1. Name four ways that litter can harm wildlife. List three things you can do to eliminate these dangers.
2. Propose what you consider to be one of the most effective ways to eliminate or reduce litter.

SONG

A Fish Song

Tune: On the First Day of Christmas

On the first day of summer, my muskie brought to me...

Some algae to put in my tea,
Two duckweed plants,
Three fish larvae,
Four fing-er-lings,
Five caddis flies,
Six shiners swimming,
Seven darters darting,
Eight brook trout leaping,
Nine catfish splashing,
Ten walleye diving,
Eleven pike a-dancing,
Twelve lake trout chasing.

Make up your own fishy song, using fish or plants from your area.