Scouts Meeting Schedule

Theme: World Scout Environment Program – Natural Habitat

Objective: To understand the importance of natural habitats and the impact that humans have on the plants, animals, and other organisms that live in each habitat. It is important that we protect natural habitats so that they can continue to support native species.

Time	Activity	Program Details	Leader Responsible
10 mins	Gathering Activity	Bat and Moth	
10 mins	Opening Ceremony		
15 mins	Game	Shrinking Islands	
30 mins	Theme Activity	Amazing Webs Endangered Hoppit Oh, Deer	
10 mins	Theme Activity	Cookie Extraction	
20 mins	Game	Camouflage	
15 mins	Patrol/Troop Meeting		
10 mins	Closing Ceremony		
15 mins	Leader Discussion Time		

Meeting Notes: _____

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Scouts Meeting – Detail Planning

Introduction

All plants and animals (people, too!) have basic and specific requirements for survival. The area where an organism lives, in which these requirements are found, is called a habitat. The most basic needs of plants and animals are food, water, shelter, and space.

Particular organisms require particular types of food or shelter. For example, Koalas primarily eat leaves from the eucalyptus tree and many types of turtles must nest on beaches. What would happen to these organisms if they lost this food or shelter, an integral part of their habitat?

Everything on Earth is intricately connected in ways that we cannot even imagine or yet understand. One important example of this interconnectedness is the food chain, which examines how nutrients and energy are passed from organism to organism. Every living thing depends on nutrients and energy to survive and reproduce.

All organisms in a habitat have a certain role in the food chain: they are either producers, consumers, or decomposers. A food chain is really an energy chain. Energy from the sun is captured by the producers and passed on to the consumers. A producer is a green plant able to make its own food by photosynthesis. A consumer is an organism that depends on producers or other consumers for its food needs. Consumers that eat plants (producers) are called herbivores. Consumers that eat animals (consumers) are called carnivores. Carnivores that eat dead animals are called scavengers and help keep an ecosystem clean.

Consumers, like ourselves, that eat both plants and animals are called omnivores. An additional component of food webs is the decomposers. These organisms are bacteria, fungi, and small invertebrates that break down the remains of dead organisms into smaller molecules that are then available to plants and other organisms as nutrients. For example, fungi digest wood fibers into simple sugars as a food source. Nutrients and elements such as carbon and nitrogen recycled by decomposers are then available for the plant producers to turn back into food for themselves and the consumers. Without decomposers, plant material such as logs and leaves would pile up and choke the habitat.

Though each organism within an ecological system may only play one role, all organisms are part of complex webs that link organisms together. The relationship between plants, fungi, and animals that interact with one another is called interdependence. In some of these relationships both organisms benefit, and in others only one organism benefits.

When you think of a food chain, think of a route to get from your house to the grocery store. A food chain is one specific route to get from point A to point B. A food web is like a map of your city with all the possible ways to get from your house to the grocery store marked. For example, you may leave your house and turn left, go down the street, past the library, and come out next to the grocery store. On another trip, you may leave your house, turn right, cut through the park, go by the dentist's office and arrive at the grocery store. The total of these routes and all possible combinations is called a food web. On a diagram, it usually looks much like a spider web.

Most food chains and webs contain both plants and animals. Scientists generally use food chains to study the sources of food for larger species. An example could be a fox. The fox eats small rodents such as rabbits, and the rabbit eats plants. In turn, plants get their food by changing sunlight into food that is stored in its leaves. Here is what the food chain would look like:

SUN → PLANTS → RABBIT → FOX

The number of any one species that live in an area is a population. The number of people who live in your community is the population of that community. Populations vary for many reasons, but a major factor is the available food sources. If there is not enough food, a species will move on to another area in search of food. If not enough food is found, then the species' population will decline.

In any habitat, if all the individual populations are in balance, each species has enough food to live and reproduce. If the system gets out of balance, by the population of one species being too large or too small, the entire food web can be affected and possibly destroyed.

Human activities can cause severe impacts on natural habitats. As we have seen above, this can cause an imbalance in the habitat, and can lead to the endangerment of plant or animal species. Humans are often responsible for habitat destruction, the introduction of non-native species, overexploitation, disease, and pollution, all of which can affect habitats and the interconnected food webs.

Gathering Activity

Bat and Moth

Objective:

A game that will allow children to learn about species' adaptations such as echolocation, which allows bats to catch prey such as moths.

Equipment:

- A large, defined playing space
- A blindfold

Instructions:

Scouts stand in a circle, holding hands. Choose one Scout to be the "bat" (predator) and the other to be the "moth" (prey).

The "bat" has to use echolocation to find and tag (eat) the "moth." Tell the campers that the bat emits high-pitched sounds, which bounce off surrounding objects and gives the bat a picture of its surroundings – including where dinner is!

To simulate echolocation, the "bat" claps. Every time the "bat" claps, the "moth" must clap back within two seconds. Both "bat" and "moth" must stay inside the circle of Scouts, and the circle must remain quiet in order for the bat to be able to hear. Once the "moth" is caught, he or she becomes the "bat" and the former "bat" chooses someone else to become the "moth."

After playing a few rounds of the game, it will become quite evident that some of your moths are very tricky! Discuss with the Scouts some strategies they think moths might use to escape a hungry bat. Ask them why bats might use echolocation and talk about other animals that might use such techniques to find food.

Game

Shrinking Islands

Objective:

Scouts learn about the importance of habitat.

Background Information:

Not only is a habitat necessary for survival, but that the elements of a habitat, including space, must be in balance for species to thrive. With a decrease in space comes a correlated decrease in the other necessary habitat components: food, water, and shelter.

Equipment:

- Several sheets of newspaper (enough for all of the players to stand on comfortably together – 1 or 2 to a sheet, if possible)
- A source of music

Instructions:

Scatter the newspaper around the room to form "islands." Tell the Scouts that they are all animals looking for food and water, while the music is playing.

When the music stops, they must try to find shelter for themselves and all of their fellow animals by making sure that everyone gets onto an "island."

If there are no empty islands, players must share with each other. You can decide whether the players need to have their whole bodies on the island, or just a part (a foot, a hand, etc).

Each round, gradually take away portions of islands (by ripping newspaper) or taking away whole islands. Tell the players that it is for one of the following reasons:

- Human development is encroaching on wildlife habitat.
- A drought has affected a habitat.

- An oil spill has left a habitat unable to support life.
- A fire has razed a forest to the ground.
- Water pollution has affected the water supply.
- Etc.

Continue removing islands until everyone is piled onto just a few islands and it's not possible to fit all of the players on what is left!

Theme Activity

Amazing Webs

Objective:

To fully understand the complexity and interconnectedness of a food web.

Equipment:

- Ecosystem element cards (provided), cut out, with one for each player.
  Please note that there are 20 cards provided. Prepare as many as needed for your group, but ensure that the food web connections can be made with the cards that you choose to use.
- Ball of string (long enough to be passed amongst all of the Scouts, across a circle, at least once)

Instructions:

Hand out food web cards, one to each Scout. It may be useful to poke a hole in each card and string it with yarn so that the Scouts can simply hang these around their necks.

Have Scouts stand in a circle, with one person in the center (this person is the "Sun"). Have everyone say who they are, ending with the Sun – the source of all life on Earth.

The "Sun" starts by passing the ball of string. Tell the Scouts that the ball of string must be passed to another ecosystem element in the circle only if you *need it to survive* or if *it needs you to survive*. While they pass the string, ask the Scouts to explain why they are making the connection. Make sure that the group agrees and understands. Make sure that each element is connected in the food web. Scouts can be connected into the web through more than one element. For example, a flowering tree could be connected to the sun, a bird, and a bee, as well as a decomposer.

Once each element is connected, ask the children to take a step back and pull the string taut (gently!). Talk about the pattern that has been created with the string. Explain that the pattern represents the complex interconnections that occur in any natural habitat or ecosystem. By looking at this pattern, it should become obvious why these interconnections are called a "food web"!

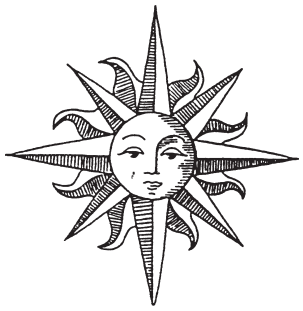
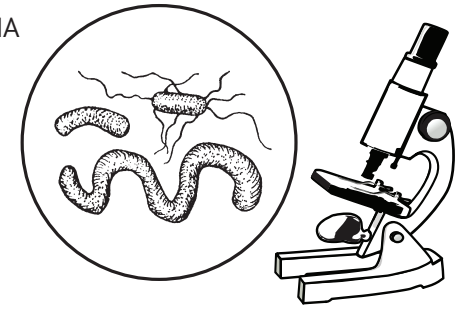
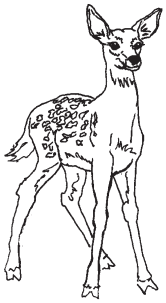
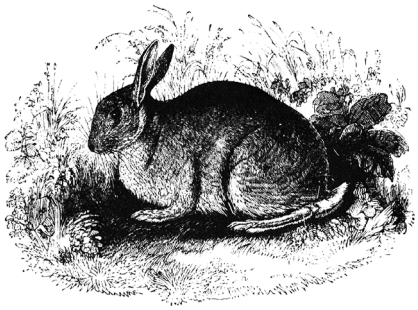
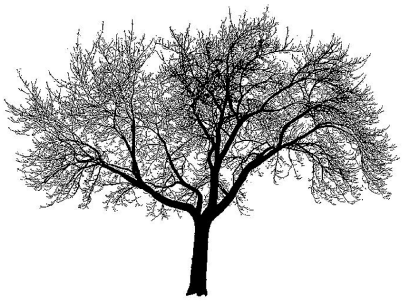
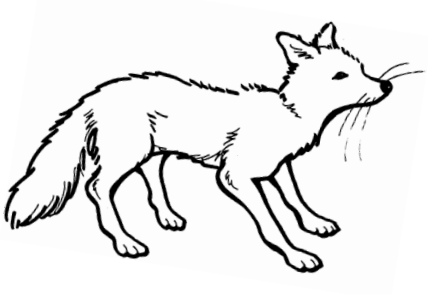
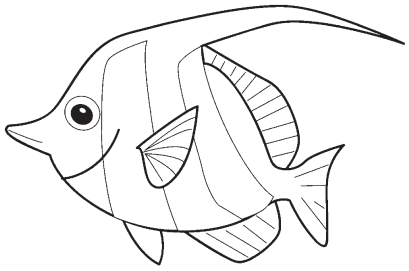
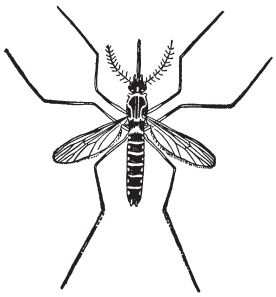
Next, introduce a change to the ecosystem. When a change happens, the organism affected must drop his or her section of the string. After the string is dropped, ask the rest of the group who felt the tension change in the string. Ask all of those affected to drop their string also, and so on, until everyone has dropped their string. Discuss how any change to the ecosystem, whether small or large, is felt throughout the entire ecosystem.

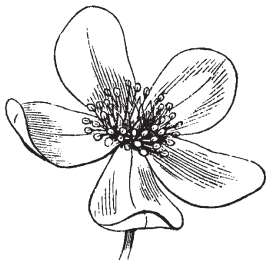
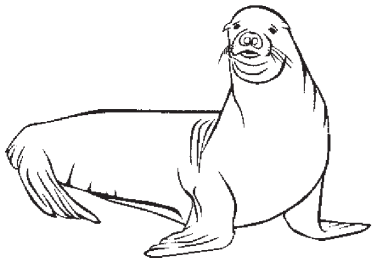
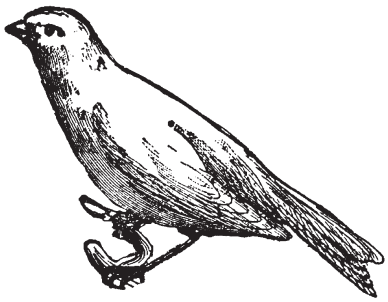
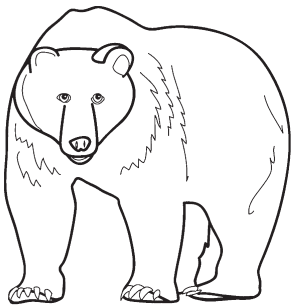
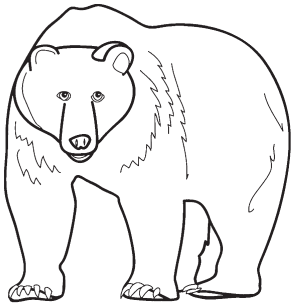
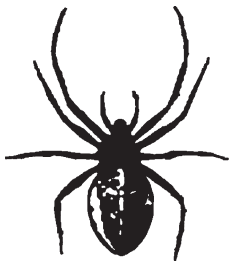
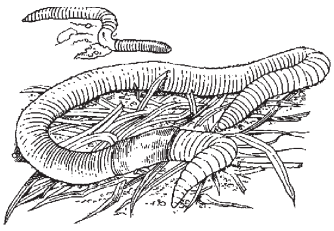
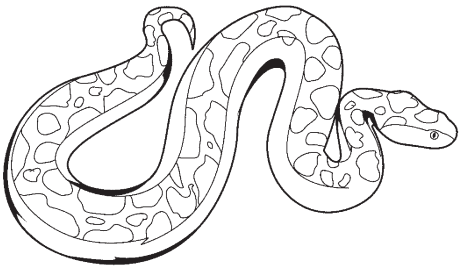
Please note that there are two "human" cards, because of the huge effect that we have on any ecosystem. The cards are also quite generic, in order to allow more connections to be made.

For example:

- People come and hunt all of the deer.
- The forest is in a park, which is too small to preserve large carnivores.
- The water in the river becomes polluted, which kills all of the fish.
- There is a drought, and the trees die.
- There is a lot of rain, which increases the mosquito population.

Ecosystem Element Cards

SUN 	BACTERIA 
DEER 	RABBIT 
TREE 	FOX 
FISH 	HUMAN 
MOSQUITO 	HUMAN 

FLOWER 	SEAL 
BIRD 	BEAR 
BEAR 	SQUIRREL 
BERRIES 	SPIDER 
WORMS 	SNAKE 

Theme Activity

The Endangered Hoppit

Objective:

To understand the dangers and disadvantages that face animals as they try to survive. Scouts will learn about the impact that changes to food/water supply or access to shelter might have on an animal. Scouts will also begin to understand what it means to be an endangered species, how it can happen, and what they can do to help minimize or prevent such a situation.

Background Information:

Hoppits are imaginary creates that hop around gathering food from the ground. Hoppits need a shelter to rest and store their food.

Equipment:

- Large, defined playing area
- Popsicle sticks
- Paper
- Buttons
- Marbles
- Rope

Instructions:

Mark out a large circles to act as a "shelter" area with the rope. Scatter the popsicle sticks, pieces of paper, buttons, and marbles around the playing area to represent food.

All of the Scouts are Hoppits. As the game begins, the Hoppits hop around on two legs, gathering material from the ground, which they transport to their shelter. Each Hoppit builds his or her own pile, but every Hoppit must have the same size pile, so they must keep hopping and gathering. When a Hoppit is tired, he or she can stop in the shelter area to take a rest.

After about five minutes, tell the Scouts that bad weather has struck, which has unfortunately decreased their food supply. Life is now so much harder for the Hoppits, and to represent this, they can now only hop on one leg. This makes collecting "food" much slower and more laborious. The Hoppits must continue gathering food. If a Hoppit rests outside the shelter area, or accidentally hops on two legs, he or she "dies," and is out.

After a few minutes of one-legged hopping, tell the Hoppits that people have not built a shopping mall on their home. Although they can leave their piles in their home and continue gathering to increase their piles, they can no longer rest. The Hoppits must continue hopping on one leg. How many are left after a minute? Two minutes? Five minutes? How long can Hoppits survive?

Discuss how human actions and development can cause habitat destruction, which can lead to endangered species. What can we do to reduce our impact?

Theme Activity

Oh, Deer!

Objective:

Provides understanding of the demands on natural resources such as food, water, shelter, and space.

Equipment:

- A large, defined playing area

Instructions:

Define the boundaries of your playing area and divide the group in half. One half stands in a line on one side of the playing area and the other half of the group stands in a line on the other side.

One group represents available resources (food, water, and shelter) and the other group represents the deer (who need food, water, and shelter).

Explain that each resource has an action symbol associated with it. For food, the Scouts place both hands on their stomachs. For water, the Scouts place their hands on their mouths. For shelter, the Scouts raise their hands above their heads to make a "roof."

Have both groups turn away from each other, in opposite directions. The "deer" each decide what resource they are looking for, while the "resources" each decide whether he or she will represent food, water, or shelter. Both deer and resources will make the appropriate symbol when it is time to play, so have them practice it briefly.

On the count of three, have both lines turn around and face each other while making their symbol. The resource line does not move. The deer line, while making their symbol, has to run across the playing area and tag a "resource" that is representing the resource they are looking for (water and water, etc).

If a "deer" is successful in tagging a "resource," they bring it back with them to the starting line. The "resources" now become deer, which indicates that the plentiful supply of food, shelter, and water have caused the population to increase.

However, a deer that does not meet it's resource needs dies, therefore an animal that cannot tag its habitat requirement must join the resource line and become food, water, or shelter.

Play several rounds, keeping a quick pace. Discuss what happens to each group after a few rounds. The Scouts should notice that the resource line becomes depleted as the deer population increases. In contrast, once the demand is bigger than the supply, the deer population can no longer support itself and the population decreases, which allows resources to build again. This is an example of natural balance.

Discuss the natural balance of supply and demand as observed during the game. Ask Scouts what could cause a habitat to become endangered.

Some examples include:

- Land development (roads, buildings, farming)
- Water development (dams, wetland drainage)
- Acid rain
- Climate change
- Oil spills
- Forest fires
- Rockslides
- Etc.

Theme Activity

Cookie Extraction

Objective:

Scouts will begin to understand the impact of mining, oil drilling, and land development may have on the Earth.

Equipment:

For each Scout:

- 2 chocolate chip cookies
- Toothpick

Instructions:

Give each Scout a cookie and ask them to guess how many chocolate chips might be in their cookie. Pass out the toothpicks and tell the Scouts that they have three minutes to extract as many chocolate chips as they can, using only their hands and the toothpicks.

After the time is up, ask them to count how many chocolate chips they collected. Ask them to look at what is left of their cookie. How did mining the chocolate chips affect the environment of the cookie? Can fix the cookie? Is there a way to make it the same as before? (Generally, the cookie is in pieces)

Discuss mining resources such as coal and ore, and how this might negatively affect the environment.

Second round: give each Scout another cookie. This time, they must mine while trying to preserve the environment of the cookie. After another three minutes, ask the Scouts how many chocolate chips they have this time – is it more or less than the first round? What does the environment of the cookie look like this time? Is it better or worse than the first round?

Discuss the differences between the two mining rounds. What do they think about energy resources and the potential effect that their usage might have on the environment? Are there any alternatives?

Game

Camouflage

(a version of Hide and Seek*)*

Objective:

To better understand the relationship between predator and prey.

Equipment:

- A large, defined outdoor playing area

Background Information:

Ask the Scouts what "predators" and "prey" are. Talk about some ways that prey would try to get away from the predator (hiding, freezing to blend into the surroundings, etc).

Instructions:

One person is the "predator," and stands in the middle of the defined playing area (it is important to define the playing area or else the game will not work as well).

The other Scouts are "prey." The "predator" closes his or her eyes and counts to ten while the "prey" finds "shelter" (a hiding spot). The "predator" cannot move, and must only stay in one spot while looking for its "prey." If the "predator" sees one of the "prey," he or she will call out their name and that particular prey has been "eaten" and is now out of the game.

If the "predator" cannot see any more of its prey, he or she can call out "Food and Water, ____ seconds!" put their hands out, close their eyes, and start counting (five or ten seconds are usually enough). The prey must leave their "shelter," run to the "predator" to touch their hand, and run back to another hiding place before the "predator" finishes counting and opens his or her eyes. If the "prey" does not succeed in finding shelter before the "predator" opens his or her eyes, that person is out of the game.

Another option is for the "predator" to call out "Fingers!" while holding up a certain number of fingers on one or both hands. The "prey" must peek out to see the number of fingers, and then call out what they have seen. Anyone that the "predator" sees peeking has been caught and is now out of the game.

Variation:

Prey can "hide" in the open playing area by freezing. Anyone not moving cannot be seen by the predator and thus cannot be caught. If they move at all, for example, by losing their balance, itching, or changing positions, they can be caught.