



Beaver Scout Meeting Schedule

Theme: World Scout Environment Programme – Natural Habitat

Objective: To help Beaver Scouts 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
5 mins	Gathering Activity	Bee Family	
5 mins	Opening Ceremony		
10 mins	Game	Bat and Moth	
30 mins	Theme Activities	Puzzling Habitats Amazing Webs What Belongs in a Habitat?	
5 mins	Song	<i>Five Green and Speckled Frogs</i>	
10 mins	Lodge Meeting		
5 mins	Spiritual Fellowship		
5 mins	Closing Ceremony		
15 mins	Leader Discussion Time		

Meeting Notes: _____

Beaver Scout 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

Bee Family

Objective:

Beaver Scouts will understand that adaptation allows a species to better survive in their habitat.

Background Information:

Bees “smell” many things. Guard bees sit or hover near the hive entrance and “smell” other bees trying to enter the hive. If the bees don’t have the correct odor of that particular hive they are expelled. Thus, bees use their sense of smell to identify members of their “family.”

Equipment:

- Film canister, one for each Beaver
- Cotton balls
- Essential oils or scented oils (at least four different ones)
- Four permanent markers, in different colours.
- Masking tape (optional)

Instructions:

Divide film canisters into four groups or “families” of equal size. Place a cotton ball in each film canister, and apply 1-2 drops of scented or essential oils, use one scent for each “family.”

Draw a dot or symbol on the bottom of each canister, a different one for each “family” (using masking tape to draw on if the canisters are black instead of clear). This will provide an answer key during the game, as sometimes our sense of smell can play tricks on us!

Explain the above information about bees. Tell the Beaver Scouts that that in this activity, they will smell each other to decide who belongs in each hive family. Once they find all the members of their family, they can sit on the ground in a group.

Mix the film canisters up and pass one out to each Beaver Scout. Once they think they have found all of the members of their family, have them turn the canisters over and look at the identifying dot or design – did they do this correctly? Do members of some families have to switch to another “hive”?

Ask the children why this is an important ability for bees to have. How can a good sense of smell help bees? How does this help bees survive in their habitat?

Game

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:

Beaver Scouts stand in a circle, holding hands. Choose one Beaver 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 Beaver 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 Beaver 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.

Theme Activity

Puzzling Habitats

Objective:

To understand the connections between adaptations and animal habitats, and how adaptations can enable animals to live in their habitat.

Equipment:

- Puzzle pieces (provided on following page), printed and cut out
- Playing area
- * ensure that there are enough sets to provide one puzzle piece per Beaver*

Instructions:

Explain that, just like in the Bee Family game, certain adaptations allow animals to live in their habitat.

Give each Beaver Scout a puzzle piece, and allow them to roam around the room to try to find their match. One side of the puzzle piece will list the animal, and the other will list the adaptation.

Puzzle Pieces

 <p>Polar Bear</p>	<p>white fur, to camouflage against snow</p>
 <p>Beaver</p>	<p>large front teeth, to chop down material for shelter</p>
 <p>Canada Lynx</p>	<p>two layers of fur on body to keep warm in winter</p>
 <p>White-tailed Deer</p>	<p>when alarmed, will raise tail like a flag</p>
 <p>Prairie Dog</p>	<p>front legs have long claws for digging tunnels</p>

 <p>Chameleon</p>	<p>long, sticky tongue to help catch food</p>
 <p>Koala</p>	<p>paws that are well suited for climbing trees</p>
 <p>Kangaroo</p>	<p>sharp, powerful paws that can dig for water</p>
 <p>Duck</p>	<p>flat bill, which acts like a strainer to draw in food</p>
 <p>Owl</p>	<p>ability to see at night time to hunt for food</p>

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 Beaver Scouts, across a circle, at least once)

Instructions:

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

Have Beaver 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 Beaver 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 Beaver 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. Beaver Scouts can be connected into the web through more than one ele-

ment. 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”!

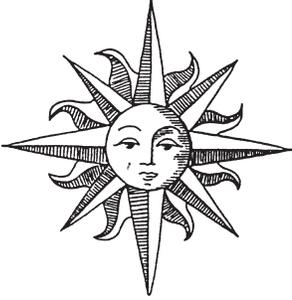
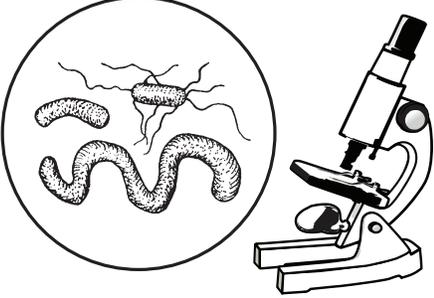
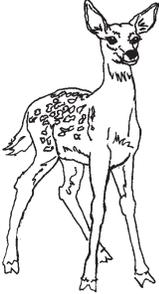
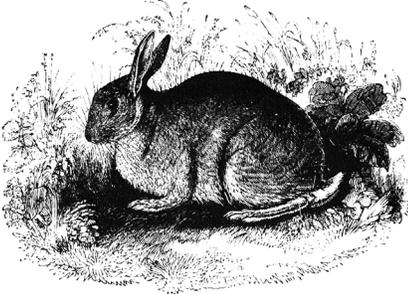
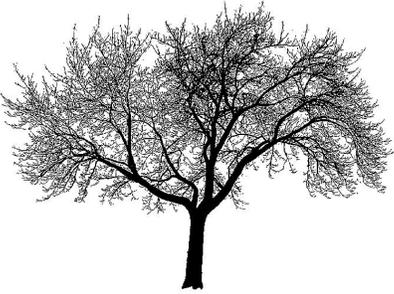
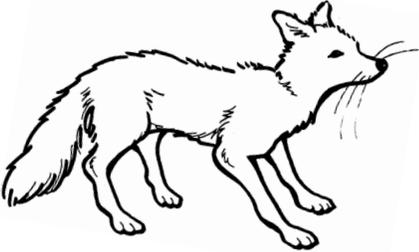
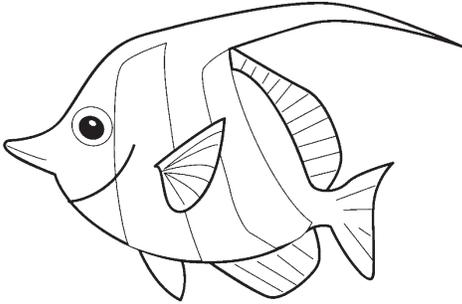
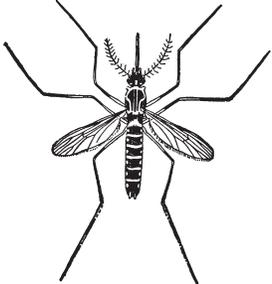
Next, introduce a change to the ecosystem. When a change happens, the organism affected must drop his or her section of the string. After the string is dropped, ask the rest of the group who felt the tension change in the string. Ask all of those affected to drop their string also, and so on, until everyone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

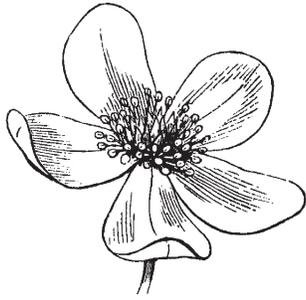
For example:

- 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.

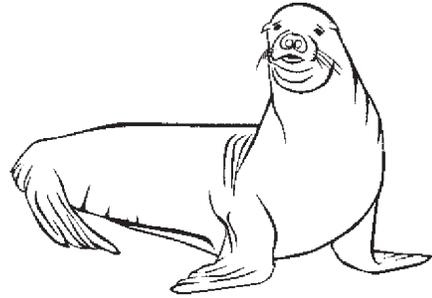
Ecosystem Element Cards

<p>SUN</p> 	<p>BACTERIA</p> 
<p>DEER</p> 	<p>RABBIT</p> 
<p>TREE</p> 	<p>FOX</p> 
<p>FISH</p> 	<p>HUMAN</p> 
<p>MOSQUITO</p> 	<p>HUMAN</p> 

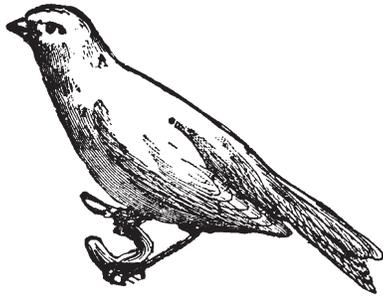
FLOWER



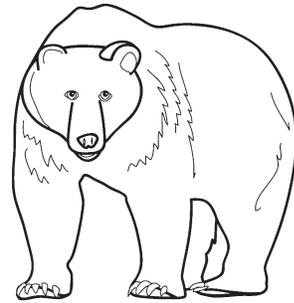
SEAL



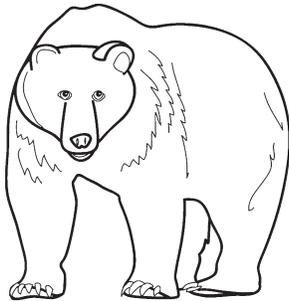
BIRD



BEAR



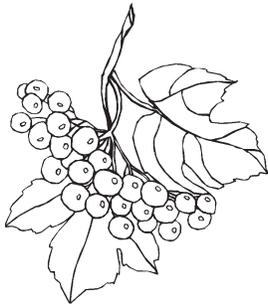
BEAR



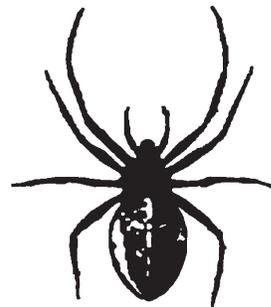
SQUIRREL



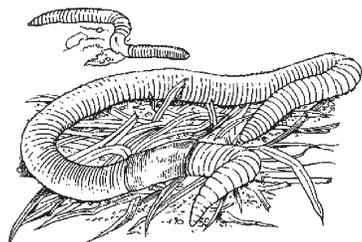
BERRIES



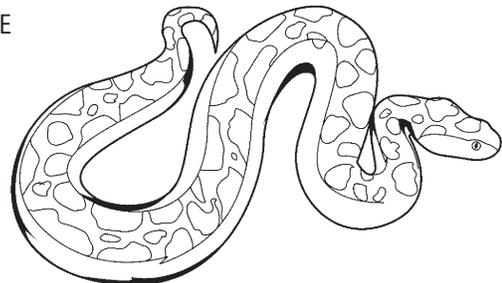
SPIDER



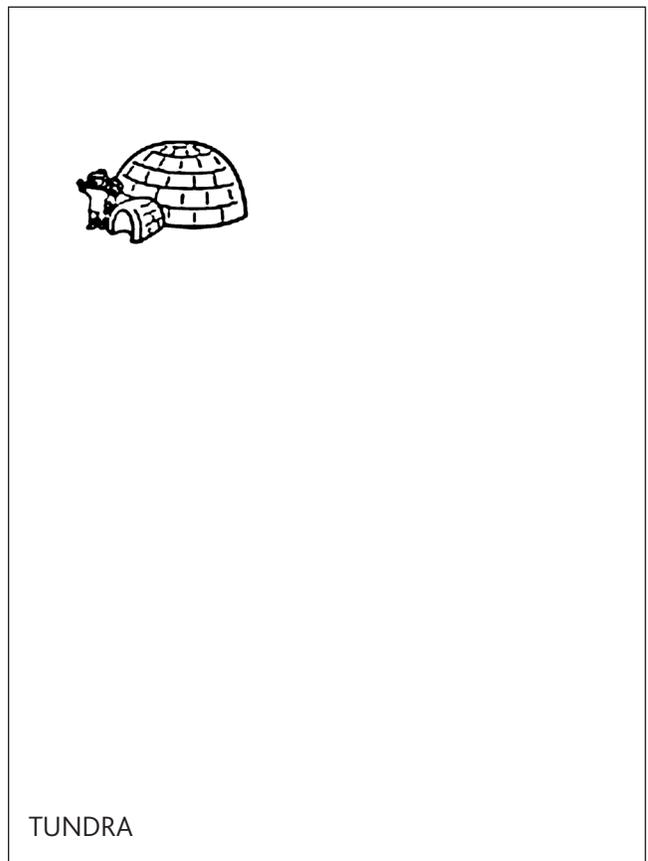
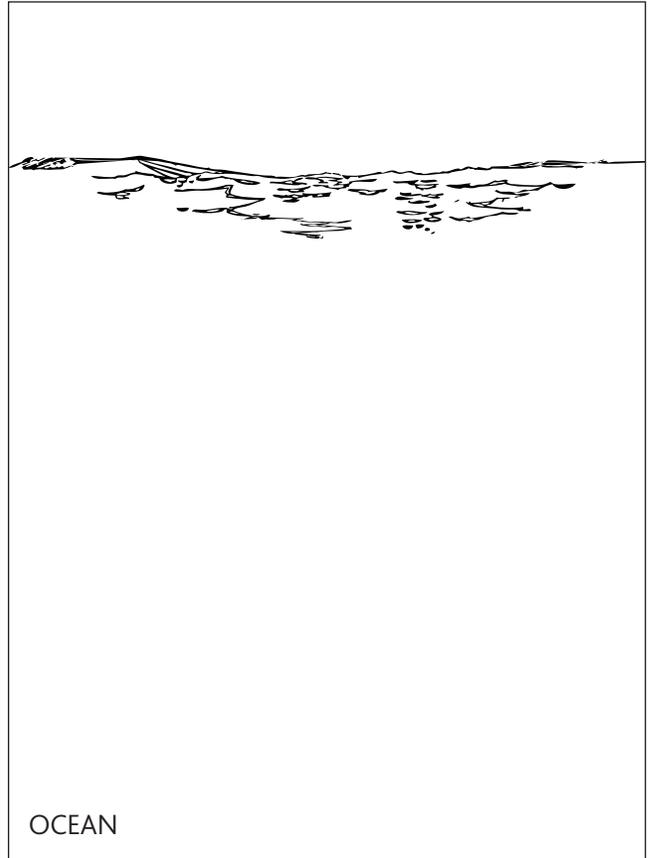
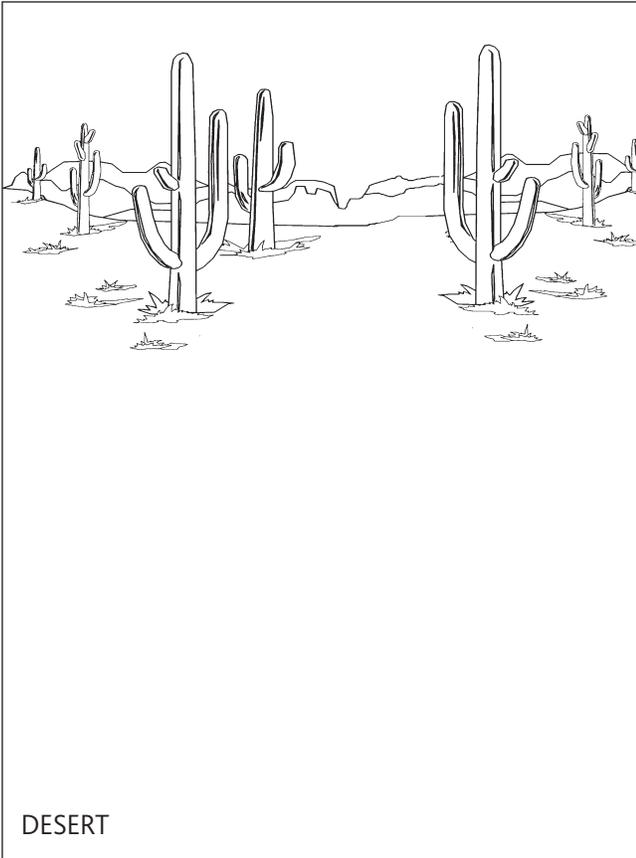
WORMS



SNAKE



Habitat Template | Colouring Sheet



Theme Activity

What Belongs in a Habitat?

Objective:

Beaver Scouts will use the templates provided to create a habitat for the animal of their choice.

Equipment:

- A copy of at least one habitat template per child.

Instructions:

There are four different habitats provided, and Beaver Scouts can choose a habitat and an appropriate animal, and draw the essential items that the animal would need to live there.

Alternatively, Beaver Scouts could use the template provided to create a new animal that could live in the habitat.

Song

Five Green, Speckled Frogs

Five Green & Speckled Frogs
(Hold five fingers (frogs) on top of your other arm (log)
Sat on a bumpy log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool (jump a finger off the log
into the pool)
Where it was nice and cool
Now there are Four green speckled frogs
(Hold up four fingers)
(Fold arms and say in a deep voice:) Glug, Glug

Four Green & Speckled Frogs
Sat on a bumpy log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool

Where it was nice and cool
Now there are Three green speckled frogs
(Fold arms and say in a deep voice:) Glug, Glug

Three Green & Speckled frogs
Sat on a bumpy log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool
Where it was nice and cool
Now there are Two green speckled frogs
(Fold arms and say in a deep voice:) Glug, Glug

Two Green & speckled frogs
Sat on a bumpy log
Eating the most delicious bugs. Yum! Yum!
One jumped into the pool
Where it was nice and cool
Now there is one green speckled frog
(Fold arms and say in a deep voice:) Glug, Glug

One Green & speckled frog
Sat on a bumpy log
Eating the most delicious bugs. Yum! Yum!
It jumped into the pool
Where it was nice and cool
Now there is no more speckled frogs
(Fold arms and say in a deep voice:) Glug, Glug