

Name: _____

Plant and Animal Homes

Know	Wonder	Learned

Name: _____

My Home

Like the Animal Homes	Different from the Animal Homes

Why are there differences?

HABITATS AND HOMES

Within biomes, plants and animals live in smaller areas, called habitats. In nature, a **habitat** is like a neighborhood. A habitat is the place where a particular living thing is normally found.

In the illustration on page 15, the oak tree is the habitat of many animals. Each animal's life is related to the oak tree.

The robin nests in the lower branches and feeds on insects and worms found on the ground.

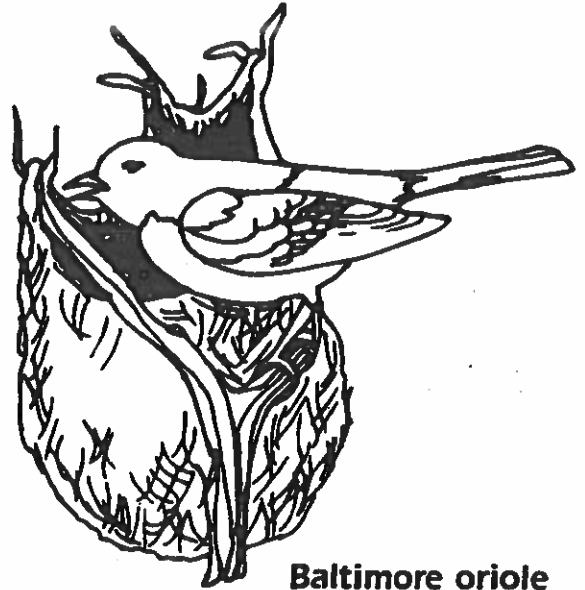
The gray squirrel nests in the upper branches of the tree and feeds on the acorns.

The downy woodpecker feeds on the insects and grubs that live in the bark of the tree. It may also nest inside a dead branch of the tree.

The caterpillar feeds on the leaves of the tree and spins its cocoon there.

The Baltimore oriole nests high in the branches of the tree and feeds on the insects that live on the tree.

The whitetail deer finds shelter under the tree and feeds on the acorns that drop to the ground. For these animals, the area around the oak tree is their home—their particular habitat.



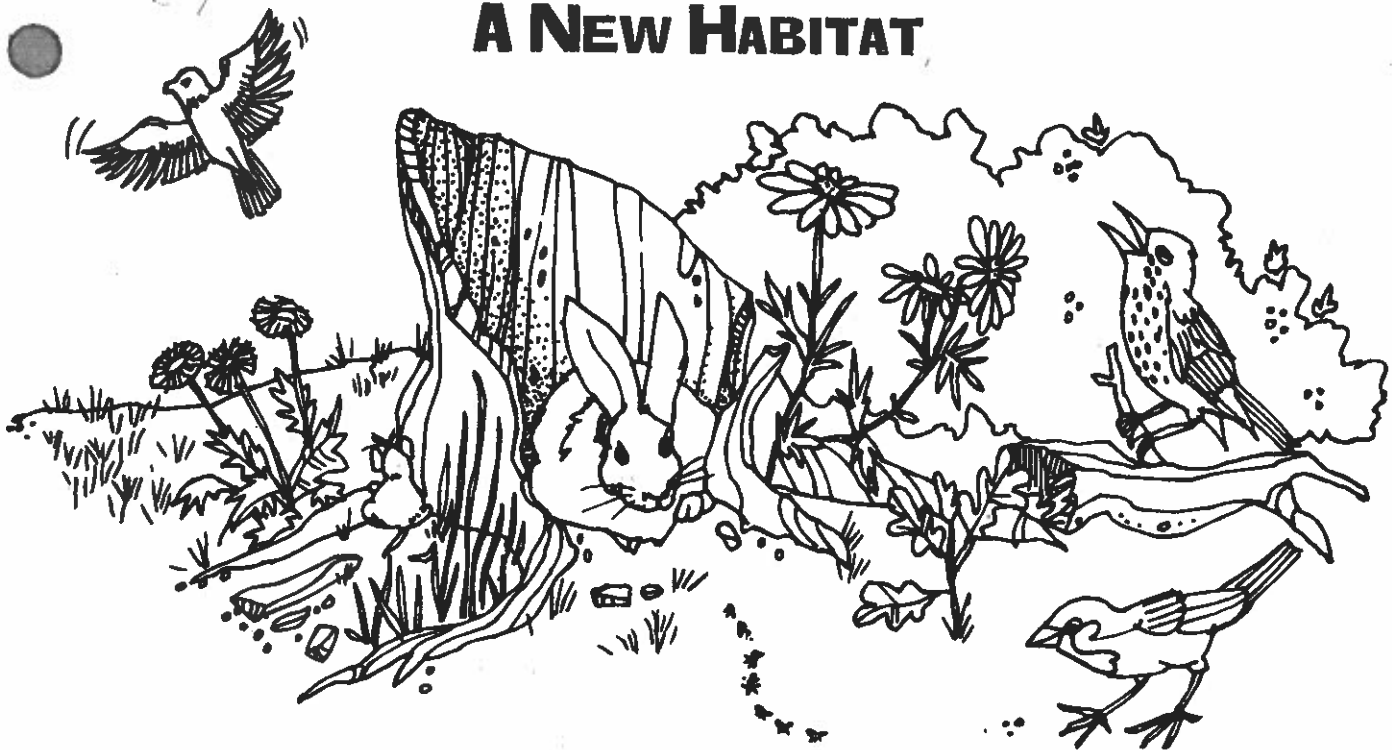
Baltimore oriole

1. What will happen if the oak tree dies or is destroyed?

2. Write about your habitat.

ANIMALS

A NEW HABITAT



When the oak tree dies or is destroyed, the animals that lived there must find a new home with a livable habitat. Until a habitat similar to the original oak tree is reestablished, a series of new and different habitats will develop to make food and shelter available to a variety of animals.

Vegetation that grows well in sunlight will take over the area that was once shaded by the tree. Field flowers will bloom.

Grasses and small bushes will grow larger, providing food and shelter for small animals. New animals will come to feed on the smaller animals.

Seedlings will sprout. One day, an oak tree will grow. In time, the original habitat will be reestablished. However, during the time the oak tree is growing, different habitats will have established themselves in this area.

Study the picture of one new habitat that has formed. What can you tell about the vegetation and animals that are found there? How are the animals in the new habitat different from the animals in the old habitat? (Think about differences in the food and shelter available to the animals.)

Habitats: Match That Biome

Directions: Place the letter of the correct biome on the blanks next to the plants or animals that are found in that biome. Use the Habitats bulletin board set and the Biomes of the World information pages as a resource.

A. Grassland

B. Tundra

C. Forest

D. Aquatic

E. Desert

_____ 1. kangaroo rat

_____ 2. zebra

_____ 3. reindeer moss

_____ 4. woodpecker

_____ 5. shrimp

_____ 6. orangutan

_____ 7. Arctic bumble bee

_____ 8. burrowing owl

_____ 9. chipmunk

_____ 10. quail

_____ 11. yucca

_____ 12. squid

_____ 13. kelp

_____ 14. hickory tree

_____ 15. marmot

_____ 16. bullfrog

_____ 17. wallaby

_____ 18. polar bear

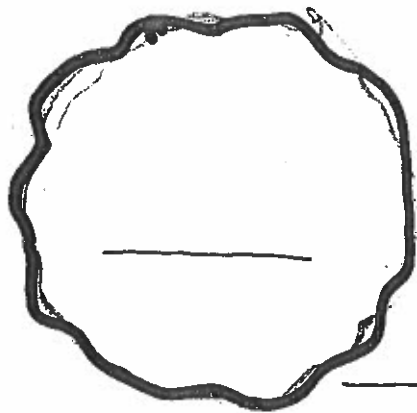
_____ 19. trout

_____ 20. sunflower

Food Webs

Directions: Select one of the plants or animals from the list above. Research that organism, and find out where it fits in a food web. Make a simple drawing of the food web in the space below or on your own paper.

Who
eats me



Who do
I
eat?

What do
I
eat?

which biome do I live?

BIOMES

Animals live everywhere—in the desert, the forest, the prairies, the sea, and seashore, and even in the cold Arctic regions. Each of these regions has its own type of vegetation because of the climate of that particular place. Animals that can grow and survive become a part of the community.

Communities that have their own kind of plant life are called **biomes**. Each biome has certain animals that have adapted to its special climate and vegetation.

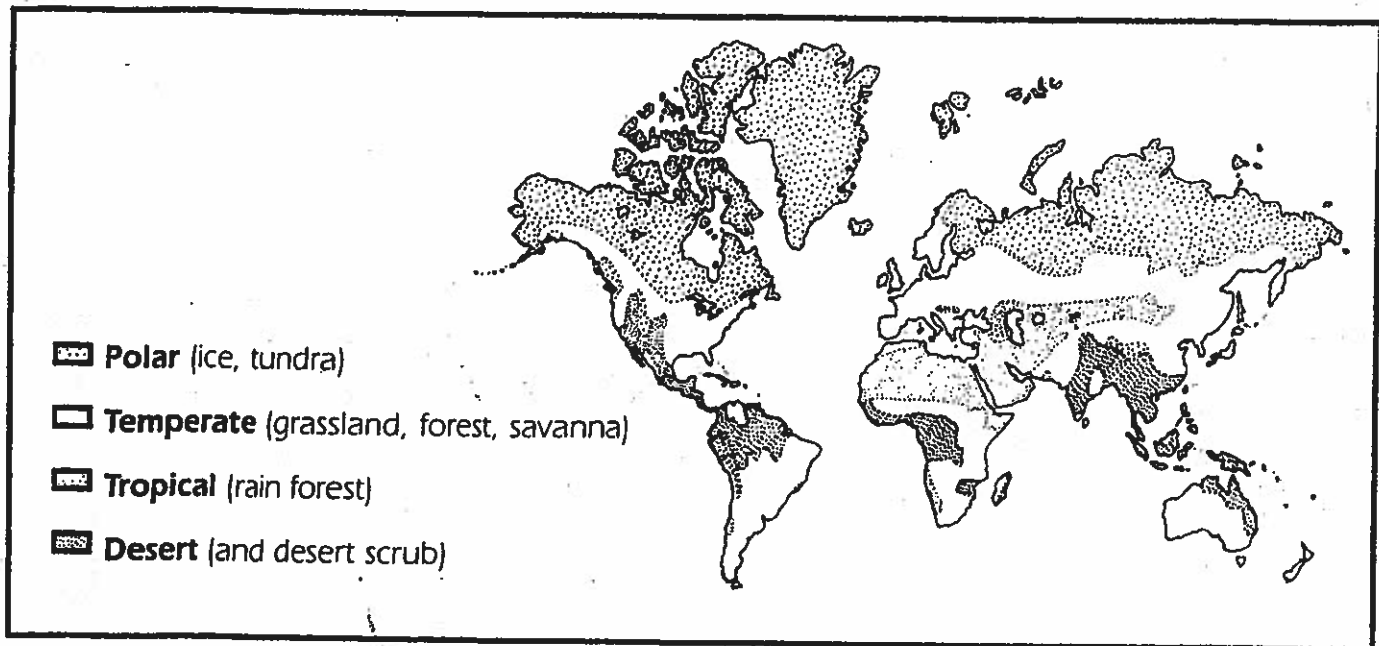
Rocky coastlines and sandy beaches along the edges of ocean waters have different plant and animal life. The oceans are home to many kinds of fish and animal life.

Deserts have little rainfall and few plants. Animals that have made the desert their home have adapted and require less water than other animals.

The Arctic has snow and ice all year. In spite of the cold, Arctic waters have many fish which provide food for animals in this community. The tundra, the treeless area with frozen subsoil, offers a small amount of vegetation for grazing animals.

The forest communities provide food for many different kinds of animals. Because there is a lot of underbrush, animals with small bodies are able to move about more freely than larger animals. The vegetation in forests provides food and shelter for smaller animals. These smaller animals provide food for larger animals.

The prairies, often called grasslands, are large stretches of open country. There, grasses provide food for many animals.



ACTIVITY

Choose a particular biome to study in greater detail. Your teacher will give you additional information to help in your research.

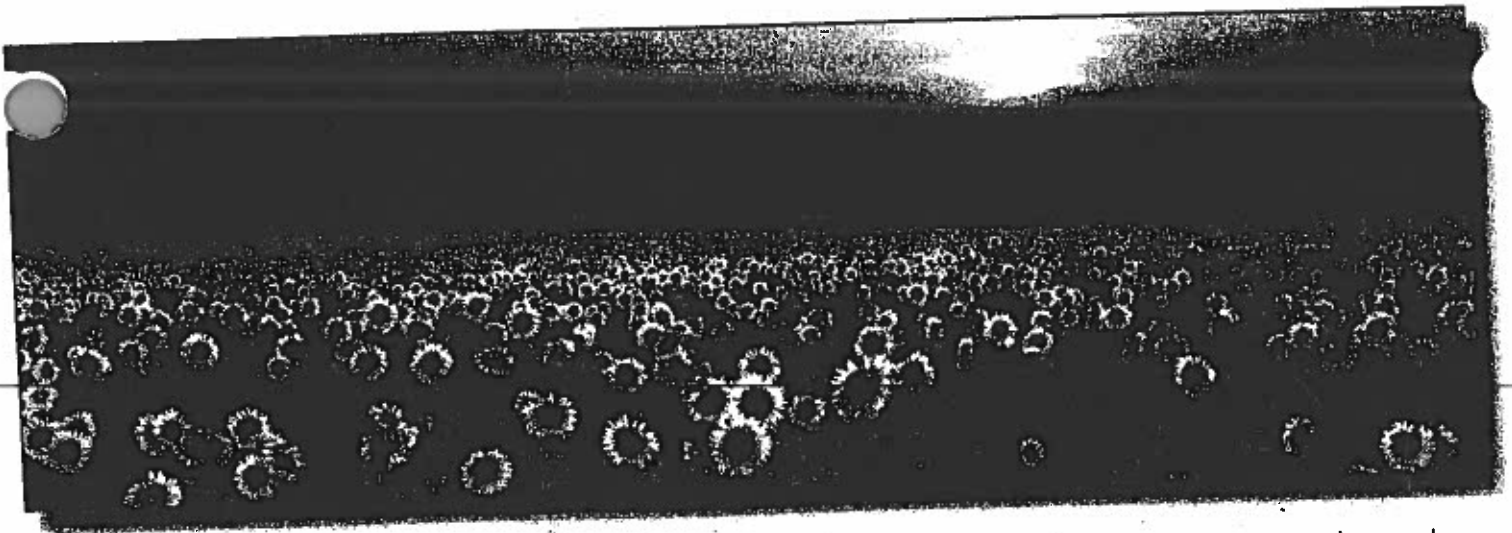


Producers, Consumers & Decomposers

All organisms in an ecosystem get energy from the same place. All energy comes from the Sun. Green plants absorb this energy. This energy is then shared with all parts of an ecosystem. Every organism in an ecosystem gets their energy and food a different way. This divides all organisms into three kinds: **producers**, **consumers**, and **decomposers**. The difference between these three kinds of organisms is the way they find food and energy. Let us now look at the three different kinds now.

Think about your favorite food. Explain how the Sun played an important role in its growth.





A **producer** is an organism that produces its own food. An example of a producer is a green plant. It takes in energy from the Sun and makes food which is then passed on to **consumers**. A **consumer** is an organism that cannot make its own food. It is called a **consumer** because it depends on others. It gets food by eating other organisms. **Decomposers** play a very important role too. **Decomposers** break down materials in dead organisms. Humans recycle certain things so that we can use them again. **Decomposers** do the same thing. They recycle nutrients from dead organisms and return them to the soil. They can then be used again by **producers**. Imagine that these three kinds of organisms all live in a cycle. They all depend on each other for energy and food. Without each other, they would not survive.

Producers, Consumers & Decomposers

1. Draw a line between two circles to match up the words with their definitions.

producer

A
To reuse something once it has died or has been thrown away

consumer

B
The main source of energy for everything living on Earth.

C
An organism that breaks down materials in dead organisms.

decomposer

D
An organism that depends on others for food.

recycle

E
An organism that produces its own food

the sun

Answer the questions in complete sentences.

2. In what way can we divide all organisms? Use words from the reading passage in your answer.

3. What is the difference between a **producer** and a **consumer**?

Name _____ Date _____

For the student:

1. Write a definition for each of the following words:

producer _____

consumer _____

predator _____

prey _____

scavenger _____

2. Why is photosynthesis an important process for ALL living organisms?

3. Why is decomposition an important process?

4. Sometimes scavengers, such as Turkey Vultures, are known as "nature's cleanup squad." Explain this statement.

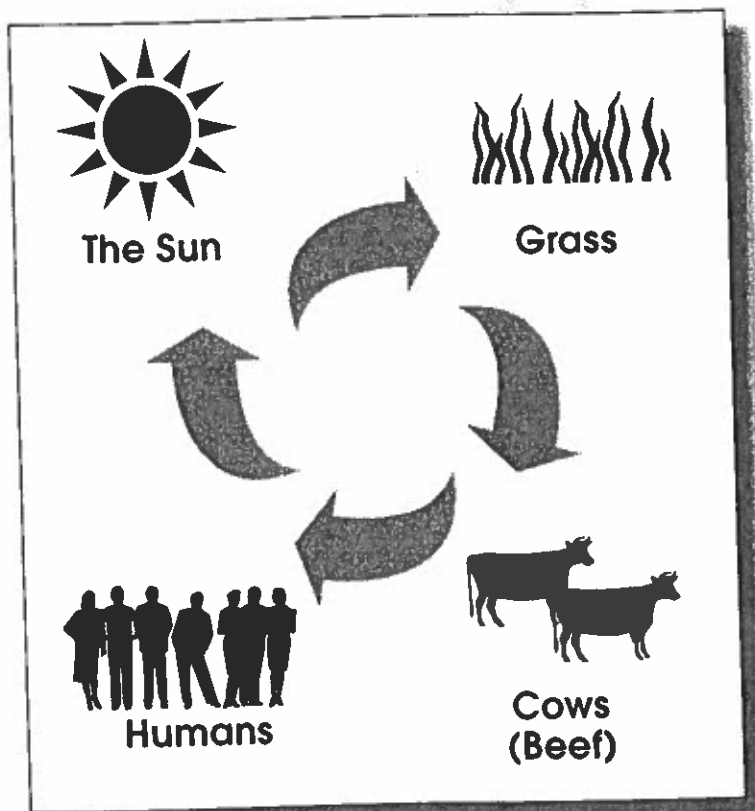
5. Suppose you sit down to eat a hamburger for lunch. Explain the food chain responsible for bringing the meal to you.



Food Chains & Food Webs

What Is a Food Chain?


We just learned that all organisms depend on each other for food and energy. We also learned that all food is produced using the Sun's energy. Some organisms use the Sun's energy directly for food (for example, plants). Others eat other organisms because they cannot make their own food. And others break down nutrients in dead organisms to make food for others. We call these producers, consumers, and decomposers. If you look at the drawing to the right, you will see many arrows. These arrows show how each organism is dependent on another organism. It looks like a long chain. We call this the **food chain**. Each part is linked or dependent on another part. It looks like a chain-linked fence in a backyard or a necklace!



Draw a diagram like a food web using different people in your family. How are you dependent on each other?

Do humans only eat one type of food? Of course not. There are no organisms that eat only one type of food. Every organism depends on more than one other organism for food. That is why the **food chain** looks very busy. In a food chain diagram, every organism would have more than one arrow coming towards it or going away from it. The arrows overlap each other. Have you ever looked closely at a spider's web? The many arrows in a food chain look very similar to a spider's web. That is why we call the busy interactions between organisms a **food web**.

NAME: _____

 Before You Read



Food Chains & Food Webs

1. In the square below, draw what you think a chain looks like.
Fill the whole square!

a) How does the chain stay together?

b) What would happen if you took out one of the chain links?

2. Complete each sentence with a word from the list. Use a dictionary to help you.

organism

web

chain

interaction

nutrients

- a) A is a complicated structure. Spiders spin them!
- b) A relationship between two or more things is called an .
- c) are the healthy things found in food that helps things grow.
- d) An is any individual form of life, for example, a plant or an animal.
- e) A has links in it that are connected. These links hold the chain together.



Food Chains & Food Webs

1. **Circle T** if the statement is **TRUE** or **F** if it is **FALSE**. If it is false, rewrite the sentence to make it true.

- T F** a) All organisms use the Sun's energy directly for food.

- T F** b) Some organisms eat other organisms because they can not make their own food.

- T F** c) Arrows in a food web diagram show how organisms depend on other organisms.

- T F** d) Not all parts of a food chain are linked.

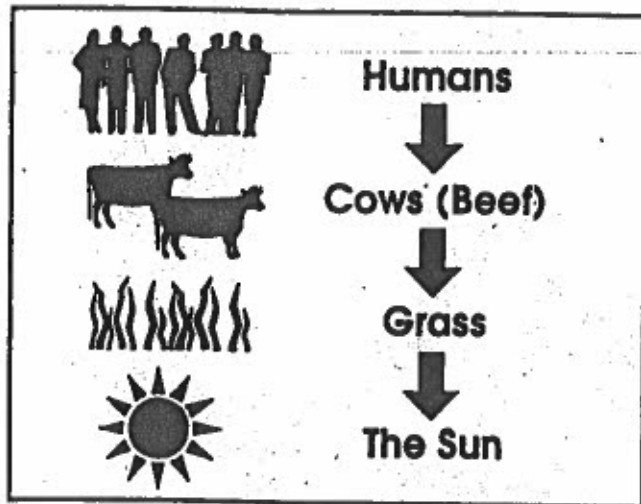
- T F** e) Organisms depend on only one other organism for food.

2. Draw a straight line from the word on the left to its definition on the right. Which word is left over? Use the reading passage or a dictionary to help you write out its definition.

1 nutrients	A relationship between two or more things	A
2 food chain	Healthy things found in food that helps things grow	B
3 organism	Any individual form of life	C
4 food web	A diagram showing many food chains. The many arrows show the busy interactions between organisms.	D
5 interaction	_____	E

Food Chains & Food Webs

3. A **food chain diagram** shows how organisms depend on each other for food. Look at the food chain diagram below. Explain in your own words how these organisms depend on each other.



Extension & Application

4. SPIN YOUR OWN FOOD WEB!

Food webs look like spider webs. They show how **EACH** organism depends on **MANY** organisms for food. Many arrows criss-cross over each other. This shows how complicated their interactions are.



On the worksheet provided, create your own **food web**. The first box is filled in for you (the Sun). Fill in the rest of the boxes using organisms from the list below. **CHOOSE EIGHT** from the list of twenty organisms. Use research tools to find out what each organism eats. Remember, each organism is dependent on more than one other organism! Use **arrows** to show how these organisms are dependent on each other.

- Humans
- Worm
- Rabbit
- Grass
- Chicken
- Cow
- Rice

- A Deer
- Seaweed
- Lettuce
- Wheat
- Beetle
- Dog
- Mouse

- Corn
- Ant
- Fish
- Carrot
- Potato
- Shark

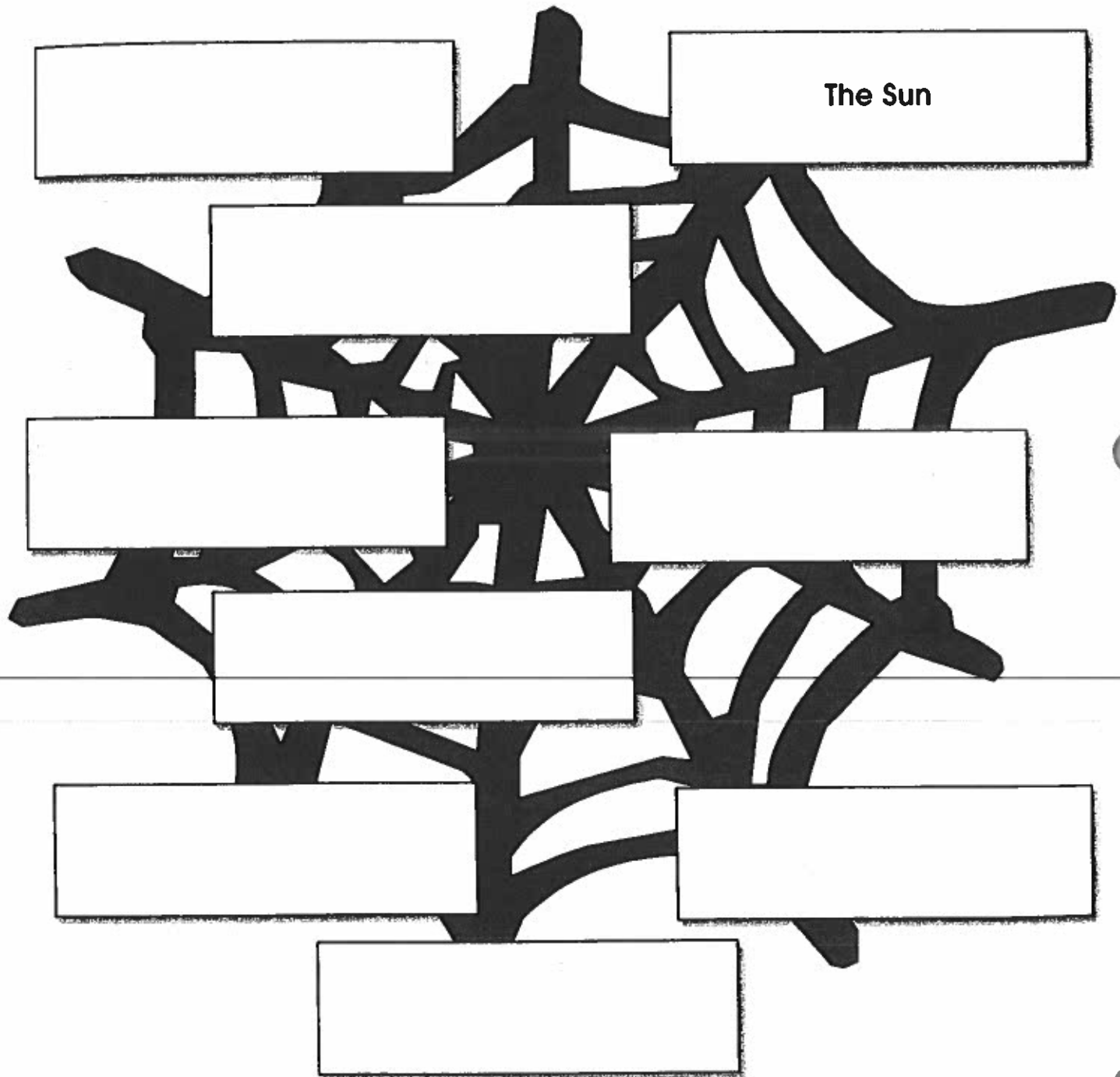
NAME: _____

After You Read 



Spin Your Own Food Web!

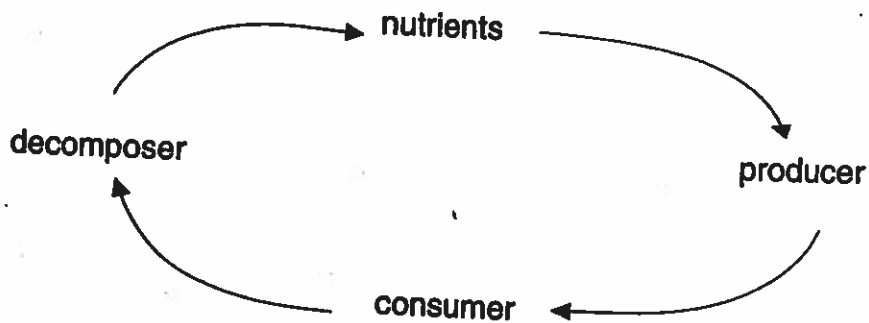
Fill in the boxes using **organisms** from the list (page 28). Find out what each organism eats. Use arrows to show who each organism is dependent on for food. Remember, there should be many arrows. Each organism is dependent on more than one other organism!



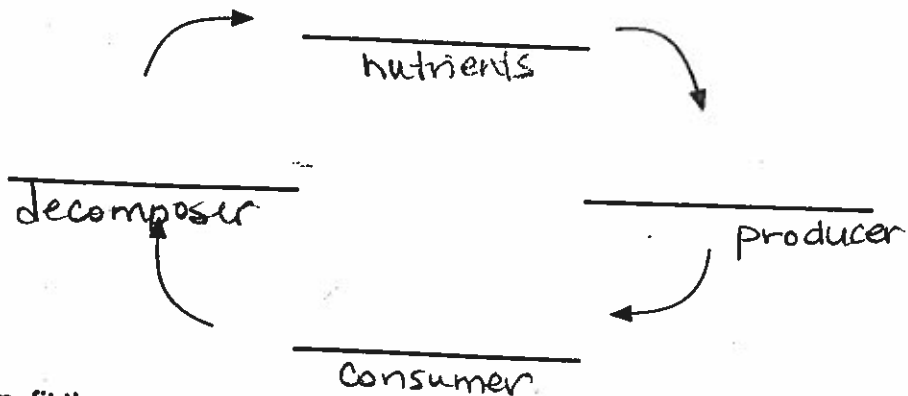
Name _____ Date _____

Food Chains A Diagram

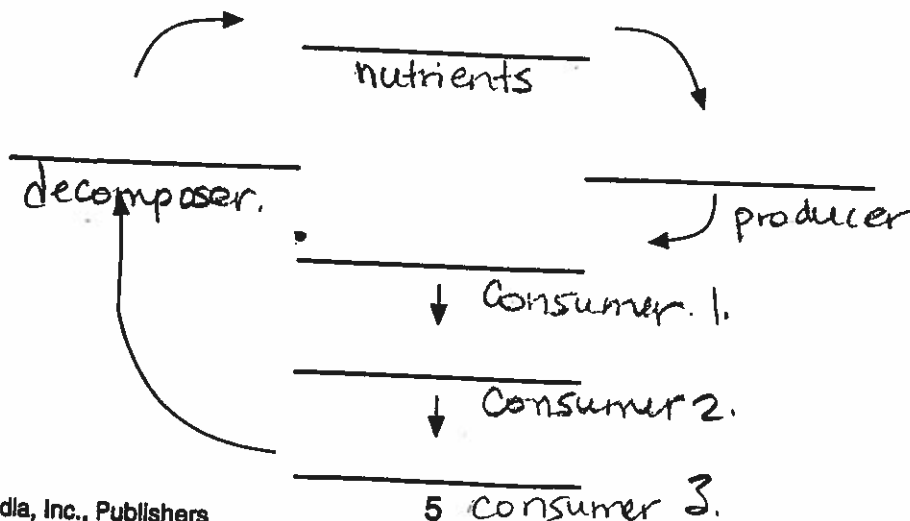
The following diagram illustrates a simple food chain.



1. Place the following organisms in their proper places in the food chain diagram started below: microorganisms, nutrients, Cottontail Rabbit, grasses.



2. Once again, fit the organisms into the diagram. This one is just a bit more complicated. microorganisms, Red-tailed Hawk, nutrients, coyote, grasses, Cottontail Rabbit



ANIMALS**ANIMAL BEHAVIOR**

Animal behavior is everything an animal does—the way it eats, sleeps, hunts, or rears its young. Behavior includes the many responses or reactions of an animal to various stimuli. A

stimulus is a signal from the animal's body or its surroundings. A stimulus could be hunger, thirst, an odor, a noise, bright lights, or touch.

Some behavior is instinctive. That is, it is inborn or is something an animal does without learning how. For example, a bird could be separated from its parent at birth, and it would still build the same kind of nest as its parent. Nest building is an instinctive behavior. Migration of birds and hibernation of animals are inborn instincts.

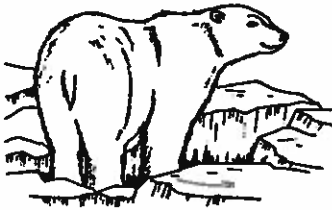


Some behavior is learned. For example, dogs may learn how to do tricks, obey commands, or learn to help people who are handicapped. Other animals may learn survival skills and how to hunt.

Much human behavior is learned, but some human responses are instinctive. Think about how people react. Which actions do we learn? Which might be instinctive?

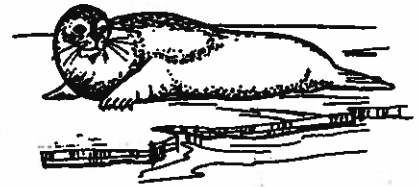
Give five examples of human behavior. Then, decide if each is an example of learned behavior or instinctive behavior.

ANIMALS



Habitats

Adaptations

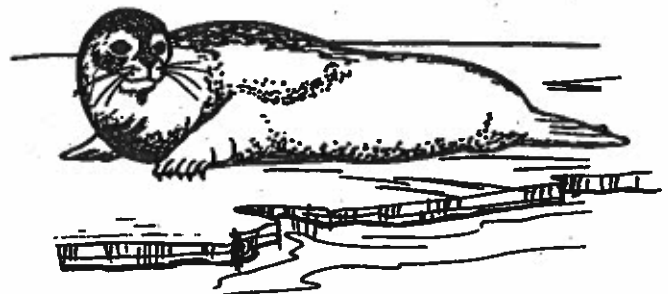
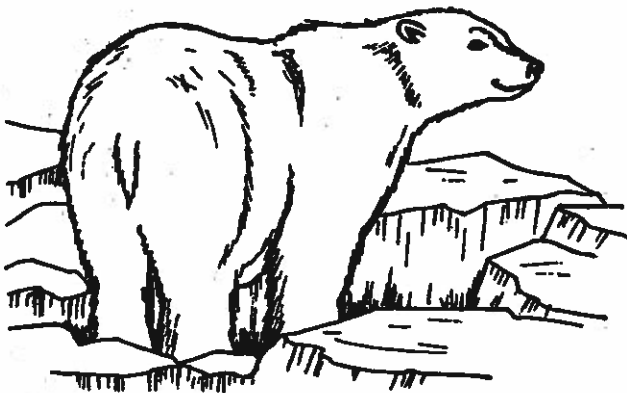


In extremely hot and cold biomes, certain animals cannot stand their environments all year. They escape the heat or cold by going to sleep for long periods of time. In the desert, some animals sleep during the hottest months until the rains come. This sleep during the summer is called **aestivation**. In colder regions animals sleep in winter, when there is little food to be found. This sleep is called **hibernation**, and it allows the animal to conserve energy.

Birds are able to escape their harsh environments by flying to a more suitable climate during cold winter months. This escape is called **migration**.

Plants cannot move to escape the environment, so they must be perfectly suited to their environment. Like animals, plants need water to survive. All plants lose some water through their leaves, so when water is scarce plants must find ways to keep from losing it. Cactus plants have shallow, wide-spreading roots. They are able to soak up large amounts of water and store it for long periods of time in their thick, fleshy trunks and branches. They haven't any leaves but have a thick, waxy coating that helps keep the water inside. Coniferous trees have needle-like leaves with a waxy coating which prevent the trees from losing water. Deciduous trees drop their leaves in autumn to keep from losing water.

We can see that the shape and size of a plant or an animal's body helps it to survive in its environment. These characteristics are called adaptations. If the environment of a plant or animal slowly changes, then the plant or animal must change or adapt itself to the new environment or die out. If the environment changes too quickly, the plant or the animal will sometimes die.



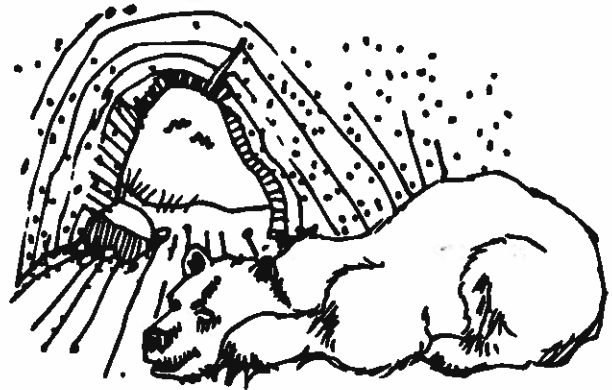
ANIMALS**HIBERNATION**

Some animals seem to sleep through cold weather. Their inactive state is called **hibernation**. Hibernating is instinctive for certain animals. Ground squirrels burrow six feet underground when the weather gets cold and food is scarce. A long underground tunnel lined with grass keeps the squirrel warm and comfortable through the winter. Toward the end of the summer and early fall, a squirrel will eat more seeds and grain than usual and build up a layer of fat on its body. In late October, the squirrel will go

underground to hibernate for the winter. The entrance of its burrow will be sealed off with earth, and the burrow itself will be below the frost line. A squirrel will stay inactive until spring when the earth begins to warm.

Frogs hibernate by digging into the soil. Bears and bats find caves in which to hibernate. Bats gather in groups in the cave and hang upside down by their claws. Hibernating animals may wake now and then or sleep until spring.

When animals are in hibernation, they do not respond to sound or touch. Most of them roll into a ball with their heads between their hind legs and their tail wrapped around them for warmth.



Complete the table to identify what animal behavior matches what North American animals do in winter:

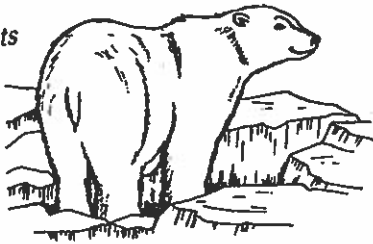
rabbit squirrel grizzly bear Canada goose frogs caribou grey whale deer mice
 hedgehogs chipmunks squirrels bats snakes bees deer sparrows salmon coyote
 fox ducks crows shrews skunks raccoons moose elk monarch butterfly

Animal: mammal, bird, reptile, fish, or amphibian	Hibernation/Torpor	Migration	Adapted for cold

me: _____

How Do Habitats Change?

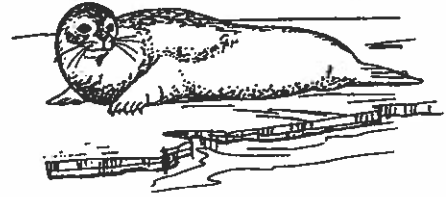
Natural Changes	Human Changes



Name: _____

Adaptations

Adapt an Animal



Create your own animal. Give it a name.
Label the parts of the animal which help it to survive in its environment.

Describe your animal's habitat and how your animal is suited to its environment.

Skill: Describing the structural adaptations of plants and animals that demonstrate a response of living things to their environment.

CLASSIFICATION

ENDANGERED SPECIES

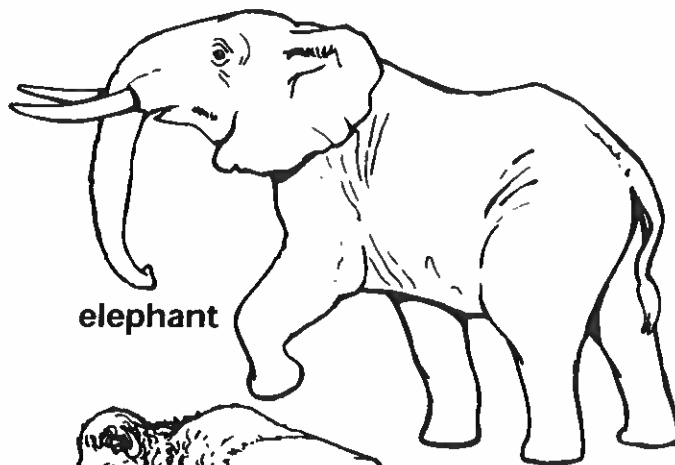
Today hundreds of plants and animals are in danger (**endangered**) of becoming extinct; that is, no longer living as a species. People continue to change the wilderness into cities. This often leaves plants and animals homeless. People pollute the air and water and this kills thousands of living things before they can reproduce more of their own kind. Too many species are being killed for sport and profit. Plants are taken from the desert and forest to be sold as houseplants to people in the cities.

We can protect these living things by enforcing laws which make it a crime to pollute the environment. We can set up animal refuges, bird sanctuaries, and plant preserves to protect the species we have. People of all ages must care enough about our wildlife to help protect it from extinction.

There are many things you can do to help endangered species. Complete the suggestions below and add more of your own.

1. Talk to _____
 2. Distribute information _____
 3. Help _____
 4. Stop _____
- _____
- _____

List 4 steps you would need to take to create a bird sanctuary.



elephant



bison



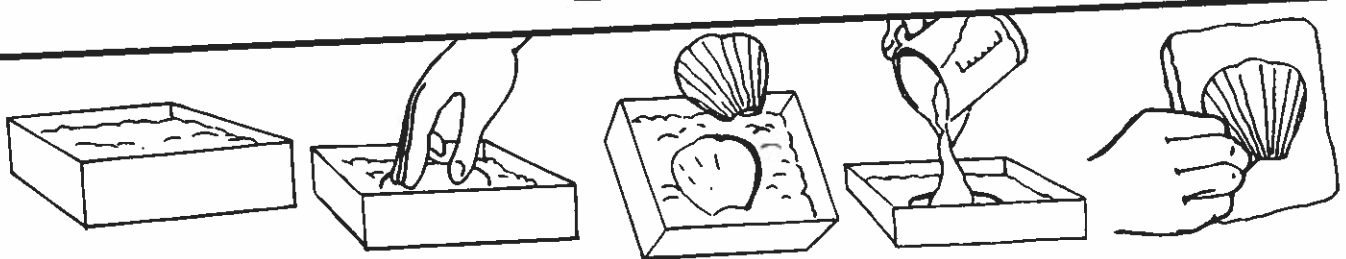
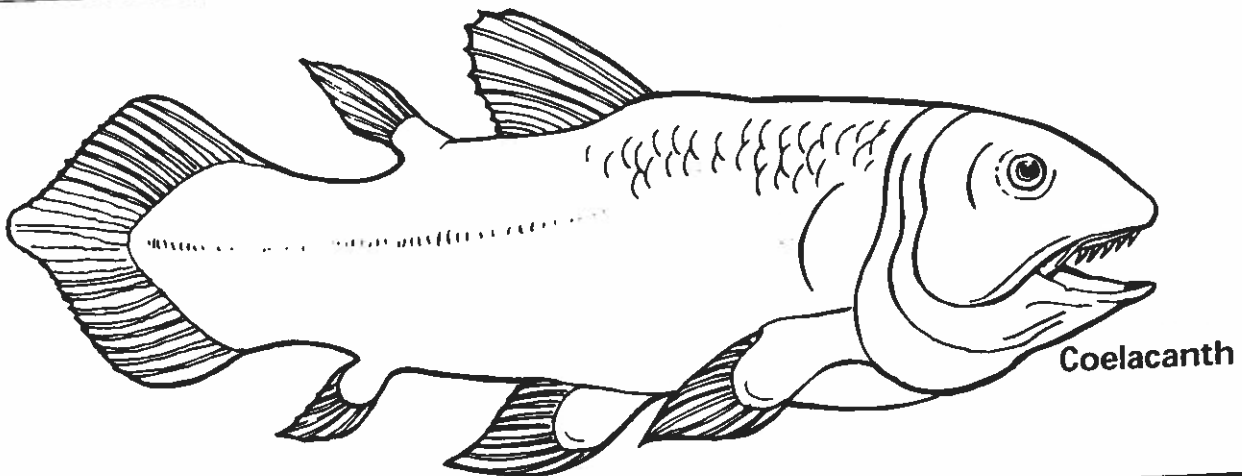
tiger

CLASSIFICATION**EXTINCT SPECIES**

From a continuous study of the fossil remains of living things, scientists have learned that most of the species living on Earth in prehistoric times are **extinct** today. Extinct species of living things are placed in the classification system by their characteristics. In 1938, the Coelacanth, a fish thought to be extinct, was found off the coast of Africa. Scientists were able to identify it by comparing it to its fossil remains in museums. It is one of the few species of lung fish alive today.

Scientists know about dinosaurs from the fossils of their bones, footprints, and eggs found in very old rocks. Dinosaurs are classified as reptiles because many had bony plates on their bodies, four limbs, laid their eggs on land, and spent some time in or near water. Reptiles are usually classified as cold-blooded, but a species of dinosaurs thought to be warm-blooded has also been discovered. The passenger pigeon, hairy mammoth (prehistoric elephant), and tyrannosaurus rex are examples of extinct animals.

Research and name other extinct animals.

**ACTIVITY**

Make your own fossil. Smooth a layer of modeling clay into a sturdy box top or plastic lid. Press bits of leaves, shells, or bone into the clay. Remove after the impression is made. Pour a plaster of Paris over clay and let harden. Remove the box and clay from the plaster to see your fossil.

Name: _____

Field Trip Observations

Habitat	Description of Habitat	Plants and Animals	Special Features of Living Things

Leaf Samples:

Draw / Colour each leaf

And identify what tree it came from