



DHOLE CONSERVATION FUND
PRESENTS



Food Chains

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Dhole Conservation Fund

<http://www.dholes.org/education>



Food Chain Unit

Overview

The Earth's energy comes from the sun. All food chains start with the sun. Plants are known as producers. Producers get their energy by making their own food. Plants make their own food and store any extra energy in their roots, stems, leaves, and flowers (seeds.) Animals are known as consumers. They cannot make their own food and get their food by eating other living things. Decomposers return nutrients to the soil from dead plants and animals that they break down (worms, bacteria, mushrooms).

Food chains always begin with the source of energy – the sun; the next link is always a producer (which is usually a plant); the next link will be a consumer, which is usually an animal. Energy is passed through a food chain in the form of food from one link to the next. Food chains intermingle and blend together. When this happens, it is called a food web. Ecosystems (communities) have many food webs within them. There are many ecosystems on the earth and many habitats in each ecosystem. Each ecosystem has many plants and animals living there. If one link in a food chain is destroyed, the entire chain is threatened. Each link works together to keep the ecosystem in balance.

There are many types of ecosystems/communities. Some are:

- Ponds
- Forests
- Lakes
- Swamps
- Rivers
- Grasslands
- Deserts
- Oceans
- Rainforest



Food Chain Unit

Vocabulary

Food Chain is a group of living things in which the first is eaten by the second, the second is eaten by the third, and so on

Food Web Several food chains together

Producer A living thing that makes its own food

Consumer A living thing that cannot make its own food.

Decomposer is a living thing that breaks down dead plants and animals into simpler

Scavenger An animal that feeds on dead plants and animals

Trophic Level Each of the levels within a food chain, in which animals fill the same nutritional role.

Primary Consumer An organism that eats the producers (herbivores)

Secondary Consumer Organisms that eat the primary consumers (carnivores)

Tertiary consumer An animal that obtains its nutrition by eating primary consumers and secondary consumers. They are usually carnivorous predators but may also be omnivores.

Ecosystem A carefully balanced system where plants and animals live and work together; also known as a community.

Herbivore An animal that only eats plants; they have flat teeth for chewing plants.

Carnivore An animal that only eats meat; they have sharp teeth for tearing meat.

Omnivore An animal that eats plant AND meat

Predator An animal that hunts and eats other animals.

Prey An animal that is hunted and eaten by predators.

Apex Predators Species at the top of the food chain; the healthy adults have no natural predators.

Keystone Species One critical species upon which the entire system depends. If the keystone is removed, an entire food chain can collapse. Often, it is a predator that keeps the herbivores in check and prevents them from overconsuming the plants, leading to a massive die-off.

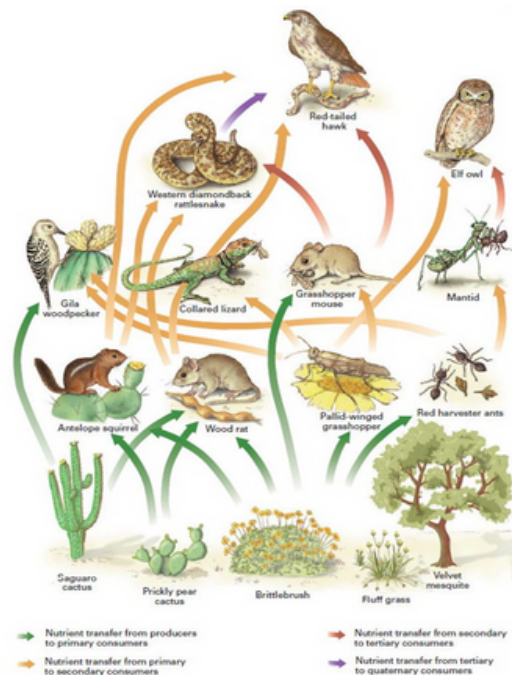


Food Chain Unit

Activity I Build A Food Web

Overview: Food webs portray how energy moves through a community of organisms. They show a single set of energy transfers. In turn, they may provide energy to many different organisms.

Assignment: Students will create their own food webs. First, use the diagram below as an example. As a class, complete a food web for the Dhole. Next, they will need to figure out the habitat and organisms they want to represent in their web. The food web should include at least one producer, three primary consumers, two secondary consumers, and one tertiary consumer. The relationships should be true to real life. Creativity is key! They can make a poster, diagram, 3-d model, or diorama... anything that shows their uniqueness. It should include arrows showing the relationship between the organisms that they depict and a description under each representative. Pass out various food web graphic organizers to help them get started.





Food Chain Unit

Activity 2 Food "Chains"

Assignment: Students will be using strips of paper to create actual food “chains”. Each student will be given 5–7 strips for their chains (depending upon their ability). Have one strip about the sun completed for each student. The other 5–6 strips of paper given to each student should be blank. They will write a short sentence on each of the strips based on who is eating whom in the ecosystem that they choose. They will also need to draw a picture of the organism on each one. Then, they should connect each strip to make a chain in the order in which it is consumed. The chains should eventually connect back to the sun. Be sure to tell them NOT to connect them until every strip in the chain is done. It also may be helpful to number the back of each one.

Strip #1. The sun is shining.



Examples:





Food Chain Unit

Activity 3

Who's for Dinner?

Assignment: Using index cards, write a variety of different organisms on them. Producers, consumers, decomposers, predators, and prey. Be sure to include complete food chains. You can find varied food chains online or for dholes see the one at the end of the packet. Pass out one to each student or have each one pick a card out of a basket. Allow them to write as much information about their selection on the back of the card to help them. In a separate jar have situation cards. Have every student stand up. One at a time, read the situation cards. Students will follow directions until only one is left standing, or no moves are left.

Examples of index cards:

- Sun
- Plants: algae, flowers, dandelions, grass, mushrooms
- Animals: grasshopper, leaf bug, turtle, rabbit, lizard, mouse, chipmunk, snake, hawk, owl, leopard cat, muntjac deer, dhole, worm

Examples of Situation cards:

- Every animal that may get eaten by a hawk, sit down.
- Anything that eats grass stays standing.
- Any animal eats insects sit down.
- All predators stand up.
- Consumers sit down.
- Producers stand up.
- Decomposers sit down.



This is a muntjac

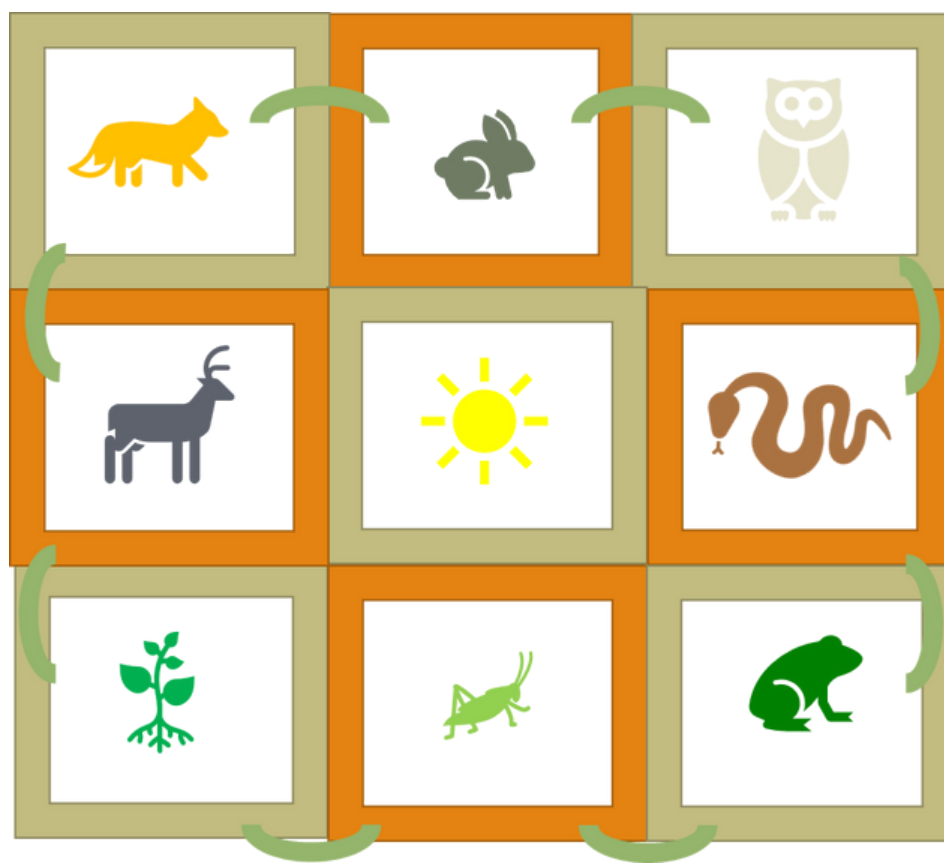


Food Chain Unit

Activity 4 Food Web Quilt

Assignment: Students will make quilts with various panels and yarn (if applicable).

Directions: Draw a sun in the center panel. At the top corners, they should start with two different predators. Going down each side, their panels should be in order and based on the chain it pertains to. Across the bottom of the quilt, the chain should also match. The panels connecting to each predator should be food items that they both eat. Students may use a computer model, construction paper/yarn, fabric...the possibilities are endless!





Food Chain Unit

Activity 5

Dhole Predator and Prey Game

Assignment: This activity is designed to teach students about how Dholes use pack communication to locate prey in the wild. Remind them, that there is typically one lead dog in charge of the pack.

Dholes are also good at hunting solo. They will prey on smaller items when hunting alone, and larger game items when they are in a group. This game will be played in two ways. Print/cut out pictures of prey items of different sizes. (If you can print the animals out in color, then the students can also learn about camouflage at the same time).

For solo: bugs, rabbits, lizards, wild berries

For pack: wild sheep, reindeer, deer, muntjac deer, wild goats, wild pigs, and buffalo.

Place the prey pictures around the room with tape at different levels. Put them on walls, windows, chair legs, the floor, etc. You can try to camouflage them with other items around your classroom. All photos should be in plain sight. Not in a cabinet, under a desk, etc. It is best to set the room up with the prey items “hidden” before students come in. Try doing this when they are at a special, at lunch or recess. It is best to play this in two parts on two separate days.

Day 1: Solo game--students should start by sitting in their seats. Their seats are their “territory” and they are the “dholes.” While they are sitting, they can only use sight to locate the hidden food items. Give them a certain amount of time to locate as many food items as they can. As the students locate prey items have them record what they find. (Remind them its ok if they find the same ones as another “dhole”–right now they are individuals). When time is up, have the students compare lists and discuss if it was easy to locate prey? Since Dholes really rely more on their sense of smell, for the next part, they can walk around the room to see if they find anything easier. Discuss why it was easier to locate food while walking around the room instead?



Food Chain Unit

Activity 5 cont

Dhole Predator and Prey Game

Day 2: Pack game—this time choose one student to be the “pack leader”. Have he/she hid the prey items with you. Since Dholes hunt different prey depending on what region they are found, choose prey photos from one region, and only use those photos first. Before the students start, let them know that they are on a “hunt”. Choose 5–12 students to be the “pack”. They will need to work together, and their pack leader will be whistling as they get near a particular prey source ex. buffalo or wild pigs. (clapping or another sound works if the student cannot whistle). If a “dhole” gets near a food source they should whistle too. This will alert the others that they found something too. Give them a certain amount of time to locate as many food items as they can. As the students locate prey items have recorded what they find for the class to see. As an extension, you can time each “pack” to see how long it takes them to work as a group. You can also allow other students to be the pack leader after time is up and use different food sources.

Discussion Questions:

- What made it harder or easier to locate prey?
- Did you find the camouflaged animal? (ex. Brown lizard on wood in the room)
- What other ways might a dhole use to locate prey?
- How would this activity have changed if it were outside? (Trees, grass, would be in the way/prey would be moving.)





Food Chain Unit

Writing Prompts

1. Write about the day in the life of a dhole. Be sure to include diet, habitat, family life and more.
2. Imagine you are given the option to create your own biosphere. What would you choose to bring in it? Why? Remember to include animals, plants, decomposers etc. You also need to make sure it is sustainable.
3. What is your favorite predator? Why? Be sure to include examples of its prey, habitat, adaptations and more,
4. What is your favorite prey species? Why? Be sure to include examples of its predators, food, habitat, adaptations and more,
5. If you could be any animal in the world, what would you be? Where would you live? What would you need to survive?



Food Chain Unit

Decomposers



Dhole Food Web

