

Model a Desert Food Web Answer Key

Food webs show how organisms interact with each other; animals must consume food, while plants can make their own food using energy from the sun. Look at the glossary on page 5 for definitions of different kinds of interactions. In this activity, you will use photos of organisms from the Chihuahuan Desert Nature Park in Las Cruces, New Mexico to create a model of a desert food web.

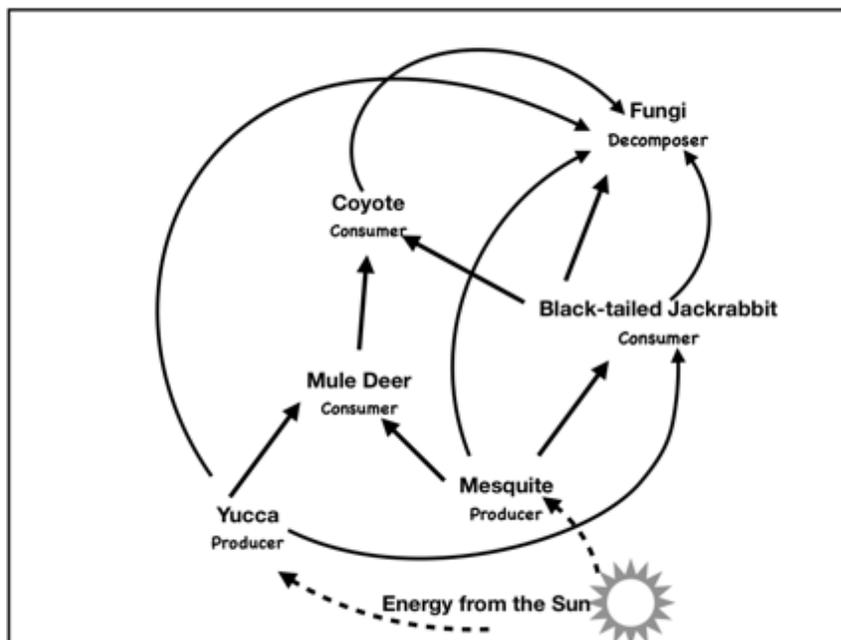


Many of the photos were taken using a “game camera,” a camera that is left in one place outdoors for days or weeks. Anything that walks past the camera triggers it to take a picture. These cameras allow wildlife biologists to collect information about animals without disturbing the animals and without the biologists having to be physically present.

Directions

1. Create a model of a desert food web using the pictures and information on pages 3-5. You have two options for creating your model:
 - a. Write the names of the organisms in the box at the top of page 2 (like in the sample below).
 - b. Cut out the organism cards on pages 3-5 and arrange them on a piece of paper, drawing arrows between the organisms.
2. Label each organism in the food web as a consumer, producer or decomposer. Include a key.

Sample Desert Food Web

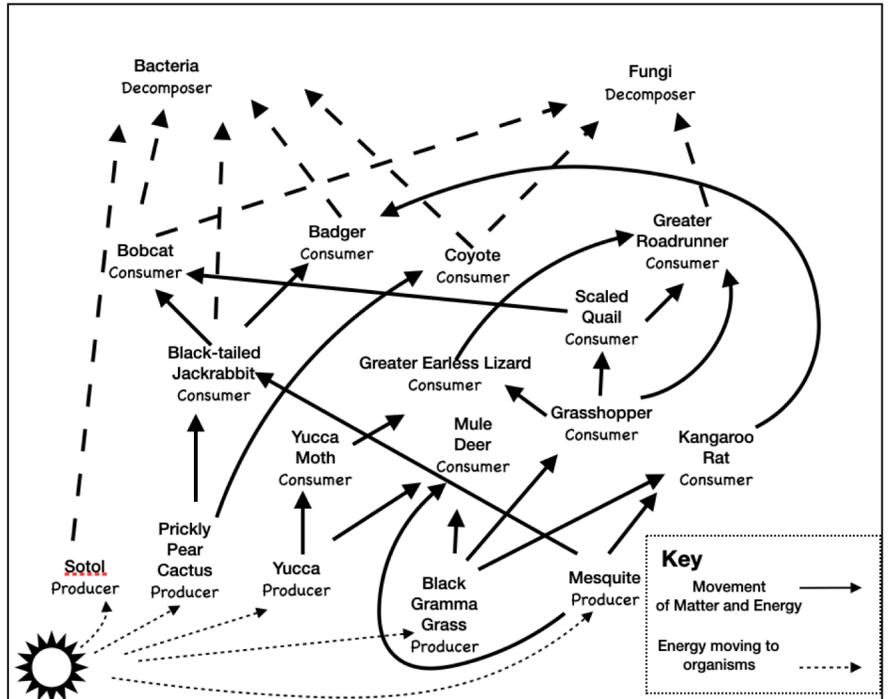


Tips for Creating Your Food Web

- Arrows point towards the organism that is consuming another organism and show the movement of matter and energy. For example, the arrow from the jackrabbit to the coyote in the sample means that coyotes eat jackrabbits.
- Every organism in your food web must have at least one arrow pointing towards it.
- Every food web has at least one producer.
- Every food web has at least one decomposer.

Draw your food web here or on another piece of paper if you want more space.

For simplicity, this key does not show the movement of matter from all organisms to the decomposers – but students should demonstrate this understanding. The dashed arrows going to the decomposers are for emphasis only. Students should use the same type of arrow for showing the movement of matter from consumers to decomposers.



Questions:

1. *In the Chihuahuan Desert Food Web Diagram, producers were represented by _____ boxes.
 - a. Green
 - b. Purple
 - c. Blue
 - d. White
 - e. Grey

This question will only be available to students taking the Canvas quiz (Option B).

2. What do you think would happen to your food web if the populations of all producers decreased because of a disease? Would you expect changes in consumer populations?

If the populations of the producers decreased, the consumer population would be negatively affected because the producers represent the food source for herbivores. In addition, the carnivore population would also be negatively affected because of the changes in the herbivore populations.

3. Revise your food web by adding an omnivore that feeds on one producer and a consumer. Name this as “New Omnivore” and decide what it eats (at least one producer and one consumer). What changes would you predict in the populations of producers and other consumers?

The addition of a new organism in the food web could result in a change in the populations of the organisms consumed by this new omnivore. In addition, this new omnivore would compete with other consumers so it’s possible that their populations would change as well.

4. Take your understanding further! Share what you've learned about desert organisms and food webs with someone else. Who did you teach about food webs? What questions did they have?

Students answers will vary.

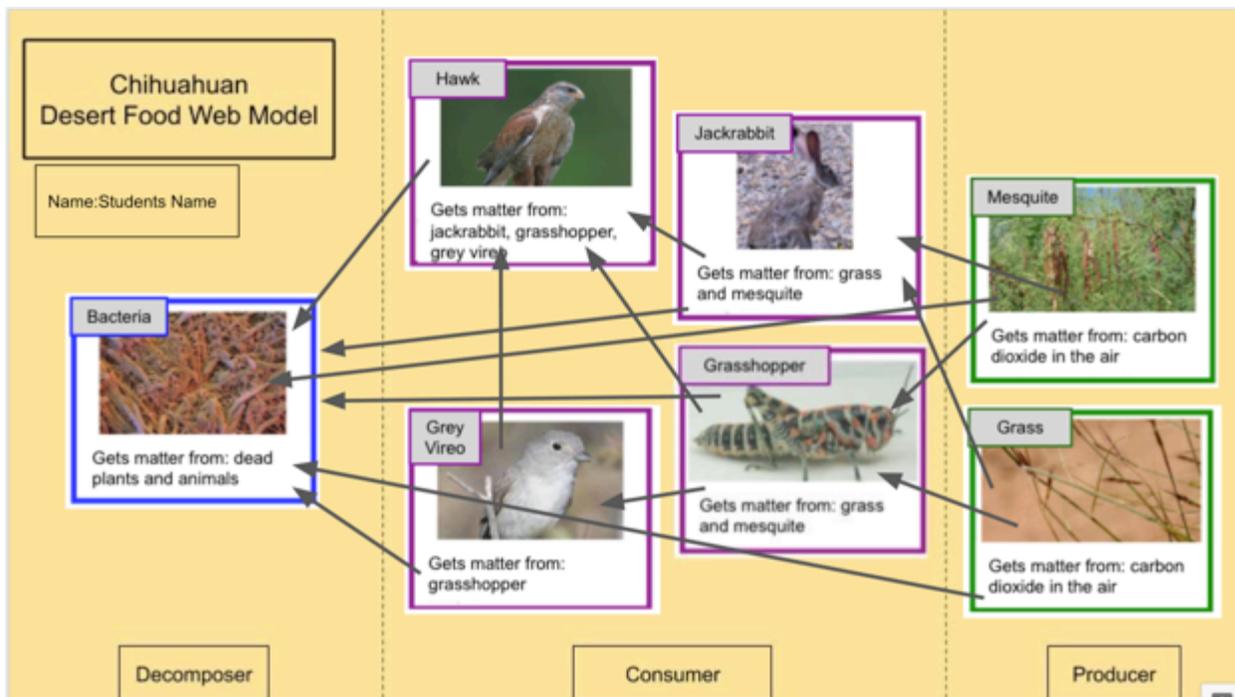
5. The arrows in the Chihuahuan Desert Food Web Diagram represent _____.

- a. **The movement of energy and matter**
- b. The movement of energy
- c. What an organism eats

This question will only be available to students taking the Canvas quiz (Option B).

6. Turn in your Chihuahuan Desert Food Web diagram by pasting the google slide link in the answer space provided.

Students' placement of organisms may vary, but the following image shows the correct connections between the organisms.



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