

Name: _____

Introduction to Flow of Energy in Ecosystems - Answer Key

Step 1: Read information about how energy flows in ecosystems

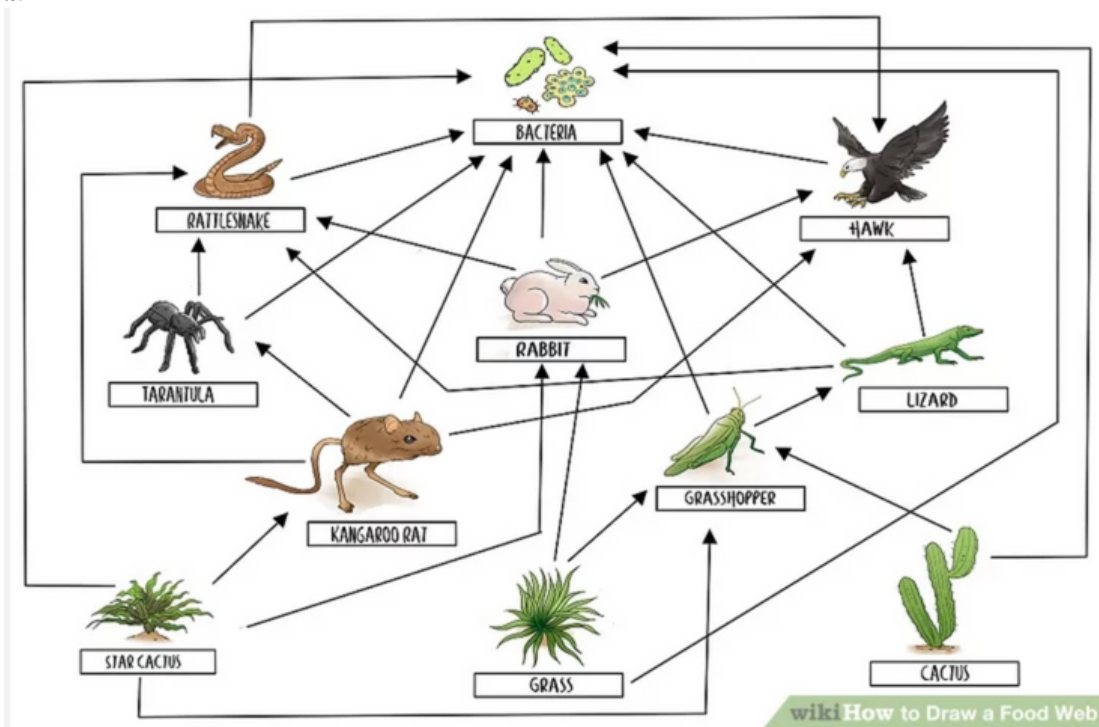
1. All of the energy in an ecosystem originally came from the sun.
2. If there aren't any primary consumers to eat, the secondary consumers won't have any food so they won't grow and reproduce. The tertiary consumers will eventually eat all the secondary consumers. This means the secondary consumers will eventually all die or get eaten and the tertiary consumers won't have any food left to eat. Eventually, all of the tertiary consumers will also die or get eaten. But, in a real ecosystem, both the secondary and tertiary consumers could travel outside their ecosystem to look for other sources of food. Some might also be able to adapt and survive on producers (plants).
3. The grasshopper is the primary consumer because it eats producers (plants).
4. Eagles are quaternary consumers because there are three levels of consumers below them, they are the fourth level.
5. Answers will vary. Decomposers can eat dead plants, animals or other material that used to be part of a living thing, like poop.

Step 2: Read information about threats to ecosystem

1. Answers will vary. Examples include: floods, droughts, earthquakes, volcanoes.
2. Answers will vary. Examples include: draining wetlands to build a town, polluting the air near a forest, dumping sewage (poop) into a river.
3. Answers will vary. Examples include: plants dying during a drought and causing all of the higher levels to not have enough food, frogs catching an illness that decreases their population and causing all of the higher levels not to have enough food, snakes being caught by poachers who want to sell their skin and causing the highest level not to have enough food.

Step 3: Create a food chain

Answers will vary. Use the food web below to track appropriate food chains. Then, use the rubric on the next page to score students. Tip: rubric can also be provided to students.



Name: _____

Introduction to Flow of Energy in Ecosystems - Rubric

	3	2	1	0
Food Chain	All organisms in the food chain are connected to correct other organisms, based on the information provided. (e.g., a hawk is not connected to grass because hawks don't eat grass)	There is one mistake in the arrangement of organisms.	There are two mistakes in the arrangement of organisms.	There are more than two mistakes in the arrangement of organisms.
Food Chain Labels	Each organism is properly labeled as producer or a specific type of consumer.	One organism has either a missing label or an incorret label.	Two organisms have either a missing label or an incorrect label.	More than two organisms have either a missing label or an incorrect label.
Organism Labels	Each organism is labeled with its name. (e.g., grass, hawk, etc.)	All organisms but one are labeled with their names.	Half of the organisms are labeled with their names.	One or none of the organisms are labeled with their names.
Pictures	Each organism has a picture.	All organisms but one have a picture.	Half of the organisms have a picture.	One or none of the organisms have a picture.
Number of Organisms	n/a	n/a	There are at least four organisms in the food chain.	There are not at least four organsims in the food chain.

Total Points: ____ / 13