

Trophic Training

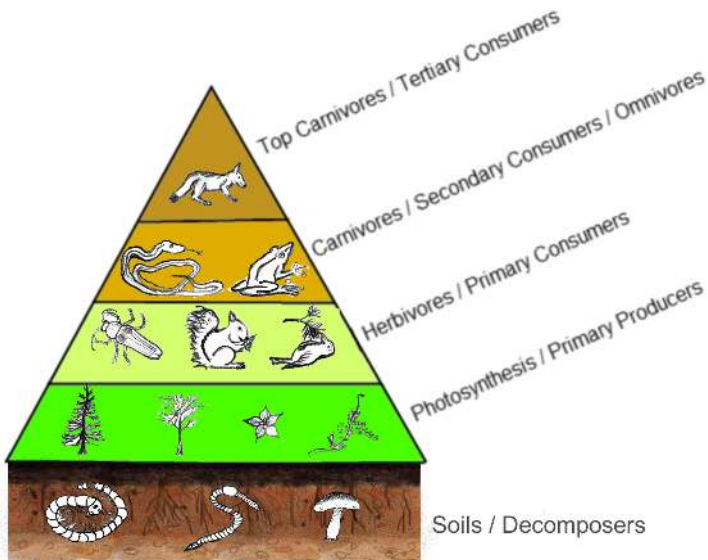


Image by: Swiggity.Swag.YOLO.Bro CC BY-SA 4.0

A trophic level is a way of classifying where an animal falls on the food web in their environment. In other words, it describes what type of foods a plant or animal eats and where they fit in their environment. Today we are looking at five primary classes of consumer: producers, primary consumers, secondary consumers, tertiary/apex consumers, and decomposers. Most plants fall in the producers category, as they photosynthesize their own food from the energy they get from the sun. Primary consumers eat the plants, they are generally herbivores like giraffes, cows, gazelle, and

similar creatures. Secondary consumers tend to fit in the middle of their food webs,

like otters, foxes, and peccaries to name a few. Secondary consumers can be omnivores or carnivores but are also prey for larger predators. Tertiary or apex consumers sit at the top of their food webs, and have very few, if any, natural predators. A few examples of tertiary consumers are bald eagles, Sumatran tigers, Mexican grey wolves, and alligators. Lastly, decomposers are animals that consume and break down dead or dying organic materials. Vultures, cockroaches, and mushrooms are a few examples of decomposers. Let's act out different behaviors that demonstrate how energy moves through the trophic levels!

Time needed: 5-10 mins

What You'll Need: All you need for this activity is your imagination!

Directions

1. First, pretend to be a mesquite tree (producer). With your feet together stretch your arms up, and then to the sides as if you were growing branches, and absorbing energy from the sun.
2. Then the wind starts blowing, wave your branches (arms) around as if the wind is blowing. The wind has blown some seed pods from your branches.



3. Now, pretend to be a kangaroo rat (primary consumer), and while hopping around like a kangaroo, gather up the imaginary seedpods that fell off your tree.
4. Spend a minute looking for a place to hide the imaginary seeds you have gathered.



5. Now, imagine you are a rattlesnake (secondary consumer) that smelled that kangaroo rat. Get on your belly and crawl around, while flicking your tongue out to smell the kangaroo rat.
6. When you think you are close, pull your head back, rear up, and strike at that kangaroo rat.



7. Imagine you are a bald eagle (tertiary or apex consumer) that spots that rattlesnake. With your arms (wings) outstretched, slowly circle your rattlesnake. Then when the snake comes out in the open, swoop down and try to pluck it up with your sharp talons (toes).



8. Imagine you are a California condor (Decomposer) with a ten-foot wingspan. With great big exaggerated flaps of your wings slowly descend to the remains of the rattlesnake that the eagle leaves behind and clean its skeleton for your meal.



9. Congratulations. You have worked your way through one string of a desert food web!

Take it further

- Using the Internet to find out what kind of consumer your favorite animal is, and what the rest of their food web looks like. Then act out the food web that involves that animal.
- Investigate other types of environments and learn where the animals in that environment fall on the trophic scale.
- While on a hike, choose a bit of wildlife you see, and see if you can find any clues that will tell you where it might fall on the food web. Then research the answer when you get home.
- Think about what would happen if any one of the organisms was removed from the food web.
- Think about how different disasters like a wildfire, flood, or water pollution would affect the food web.