



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

Build a birdfeeder to help birds have a food source.



Supplies Required:

- Plastic bottle (water bottle or 2 Liter bottles are fine!)
- Skewer (chopstick, unsharpened pencil)
- Scissor or knife
- Twine
- Funnel
- Birdseed
- Glue gun

Video

What are food chains? <https://tinyurl.com/o9snq3o>

Overview

Living things need energy in order to keep on living. The sun provides that energy, which is transformed into food by plants through photosynthesis. Herbivores (plant-eating animals) eat the plants and receive energy. When the herbivore is eaten by a carnivore (an animal that eats herbivores), the energy from the herbivore is transferred to the carnivore. The transfer of energy from one organism to another makes up a food chain. Food chains start with organisms that make their own food, called producers. Plants are the most common producers. Animals are called consumers because they do not make their own food – they eat, or consume, other organisms. Birds are consumers because they eat things like worms, nuts, seeds, and insects. When birds eat, they use up energy, and that energy is released as heat. When another organism eats a bird, they receive the energy that was in the bird, and the food chain continues on!



Instructions

1. One inch above the bottom of the bottle, have an adult use scissors or knife to cut two pinky-wide, inch-tall rectangles on two sides of the bottle.
2. One pinky-width above the rectangle, have an adult cut a hole for the skewer.
3. Poke the skewer through the hole that was just cut. Have an adult cut another hole on the opposite wall of the bottle that the skewer can poke through.
4. Have an adult use the glue gun to secure the skewer against the bottle. Let glue dry before moving on.
5. Untwist bottlecap. Have someone cover other open holes. Use funnel to pour in birdseed. Twist bottle cap back on. The bottlecap will be the bottom of the birdfeeder.
6. Tie enough twine around the top of the birdfeeder/bottom of the bottle that it can wrap around and hang it somewhere outside. Use glue gun to secure twine if necessary.
7. Place bird feeder on a tree or somewhere outside for birds to access!
8. Observe your birdfeeder once a day to see if birds are there!

Additional Resources

Think About It! What are the birds eating? Is their food a producer or a consumer? Did you see anything eat a bird? What was it? What are other food chains you see in your neighborhood?

1. Extra information and steps! <https://tinyurl.com/y98wlcsz>
2. Download the app in the "Seek and Find" STEMbook page at <https://projectexploration.org/stemhome/> to identify the birds you see!
3. Guide to North American birds: <https://www.audubon.org/bird-guide>

Share It Out

Share on social media: Take pictures of birds at your birdfeeder! Can you ask people on social media to identify these birds? Tag the Audubon Society on social media and show them your bird feeder! Share your pictures using the hashtags:

#BottleBirdfeeder
#ProjectExploration
#StemAtHome

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 308. Learn more at www.projectexploration.org/explore-store

Join PE's character contest!

Design a STEM character who will lead kids through activities and be featured on our website and in our STEMbooks. Cash prizes will be awarded to the top 3 finalists. Learn more at: www.projectexploration.org/character-contest.



Call or text us for help: 312-772-6634

www.projectexploration.org