

# Who Survives: Squirrels or Acorn Woodpeckers

## Objective

Students learn that when more than one wildlife species live in the same habitat or community, such as woodpeckers and squirrels in oak woodlands, they often compete for the same food source.

## Background Information

Usually more than one species of wildlife share a habitat. In order to survive, reproduce, and care for their young, these species may need to compete for the same resources within the habitat. They may compete for the same food source, water, and places to find shelter.

## Materials:

100+ acorns (or clay acorn models), 3 one-dozen capacity egg cartons to make the acorn granaries, picture or sample of tree limb, blackboard or chart paper, scissors, timer, paper and pencil for recording, 3 pots with 2 inches of potting soil, 3 plastic spoons.

## Preparation and Planning Tips

- Make sure you have enough acorns before beginning this activity. Students can collect acorns or make clay models if real acorns are not available.
- Make an acorn granary from an egg carton by closing the egg carton and turning it upside down. Use a scissors to poke holes in the bottom of each individual section (the part that holds the egg). Test the size of the hole with an acorn before beginning the game. Make three granaries; each should hold at least one dozen acorns.

## Set up the game as follows:

- Establish the playing area. In an open field or playground mark off two parallel lines, 20 yards apart. Place the three acorn granaries on one line and place the 3 pots of soil with spoons on the other line.
- Spread out the 100 acorns in the area between the two lines.
- Designate a starting line for the players perpendicular to the parallel lines 5 yards away from the nearest acorns. Designate a starting line for the squirrels an additional 5 yards away. (Woodpeckers have an advantage because they can fly. However, they have a disadvantage because they have to put the acorn into a tiny hole.)

## Opener

Ask students where they think squirrels and woodpeckers store their acorns, noting their responses on a blackboard or chart paper. If available, show them a picture or sample of a tree limb or trunk where woodpeckers have drilled holes and stored the acorns.

## Procedure:

- 1) Form teams of six and assign each participant the role of an acorn woodpecker or a squirrel (three each per team).
- 2) Explain that the woodpeckers will pick up individual acorns with their index finger and thumb and then place them in the holes in the granary. Each woodpecker must deposit at least six acorns, one in each hole, to survive and reproduce.
- 3) Explain that real squirrels gather acorns in their pouches and store them in a crevice or hole in the ground. For the game, the squirrels will pick up one acorn at a time with their hands, go to the pot of soil, use the spoon to dig a hole, and bury the acorn. They need to gather at least three acorns; since they feed on other sources of food, they don't need as many as the woodpeckers.
- 4) Before starting the game, ask students to form a hypothesis about which animal will gather more acorns. Ask them to phrase it such as, "Because the woodpecker has \_\_\_\_\_, it will \_\_\_\_\_."

- 5) Each team plays one round that lasts for only two minutes. Before the round begins, explain that the game begins with all the players of the first group standing on the line opposite from the granary. Start the timer for two minutes and say, “Start.” Students play until you say, “Stop.”
- 6) After each round, have the six players count and record the number of acorns placed in the holes. Repeat the same for the pots. Determine who survived and who died.
- 7) Let each new team repeat steps 5 and 6.

### **Wrap-Up**

After the final round, gather all the students and discuss the activity. Ask them to describe how easy or difficult it was to collect acorns. Which organism seemed to be better adapted to gathering acorns? What happens to those who cannot compete for food?