

Race for survival

All animals have features that help them survive. Some animals use camouflage to hide from predators or to lure unsuspecting prey. In this activity, kids are predators in search of prey. Find out just how important camouflage is in the true race for survival!

Prepare Ahead

- Make the habitats. Use two equal-sized rectangles (at least 3' x 4' each). Make one with newspaper, the other with a multicolored, patterned wrapping paper. Tape them to the floor a few feet apart.
- Make five kinds of prey. Cut small squares (roughly 1" x 1") of each of the following:
 - Newspaper—made from the same paper as the habitat (60 pieces)
 - Wrapping paper—made from the same paper as the habitat (60 pieces)
 - Color #1 (120 pieces, 60 per habitat)
 - Color #2 (120 pieces, 60 per habitat)
 - Color #3 (120 pieces, 60 per habitat)
- Sprinkle the newspaper squares in the newspaper habitat, and the wrapping paper squares in the wrapping paper habitat. (Make sure the wrapping paper pieces are pattern-side up. If the white side shows, the results of the game will be inaccurate.) Sprinkle 60 squares of each color in both habitats. (See photo on next page.)
- Mark a starting line. Run a line of masking tape across the floor, about 12 feet away from each habitat.
- Find examples of camouflage. Use pictures in books or images printed from the Internet.
- Make a Group Data Table for each habitat. Include a column for each team so you can record the results of both races. (See example at right.)

Lead the Activity

1 Introduce Ruff's challenge. (5 minutes)

Tell kids that today's challenge is to learn about animal habitats and survival. Explain that they are going to be predators in search of prey in two different habitats. Ask:

- What is a habitat? (*An environment in which an animal can find food, water, and shelter, and can raise its young*)
- What is a predator? (*An animal that hunts and eats other animals*)
- What is prey? (*An animal hunted and eaten by another animal*)
- Can an animal be both predator and prey? (*Yes: a frog is a predator that hunts insects, but it's also the prey of snakes and birds.*)

Habitat #1

Prey	# Collected	
	Team A	Team B
Newspaper		
Color #1:		
Color #2:		
Color #3:		

Habitat #2

Prey	# Collected	
	Team A	Team B
Wrapping paper		
Color #1:		
Color #2:		
Color #3:		

Materials

- Activity sheet for each kid
- Group Data Tables (see "Prepare Ahead")
- Chart paper and marker
- Pencils (one per kid)
- Newspaper (black and white with few images, e.g., the classified section)
- Patterned wrapping paper (approx. 3' x 4' piece, plus extra)
- Colored paper (a few sheets of three colors—they should stand out from the pattern of the wrapping paper and newspaper)
- Cups (two per team, labeled "Habitat #1" and "Habitat #2")
- Masking tape
- Examples of camouflage from books or the Internet

National Science Education Standards

Grades K-4

Life Science: characteristics of organisms

Grades 5-8

Life Science: diversity and adaptations of organisms

2 Race for prey in Habitat #1: Newspaper. (10 minutes)

Explain that this is a relay race. The goal is for each team to collect as much prey as possible. Hand out the activity sheet and review the rules under “Here’s How to Play.” Divide the group into two teams and give each team a cup marked “Habitat #1.” Say, “Go!,” and give teams three minutes to collect as much food as possible.

3 Race for prey in Habitat #2: Wrapping Paper. (10 minutes)

Have teams set aside the prey collected in Habitat #1. Run the race again using Habitat #2.



Detail of Habitat #2 with prey

4 Share results and discuss what happened. (10 minutes)

Gather as a group. Have teams sort and count their prey from the first race and fill in the data table for Habitat #1 on their activity sheets. Record each team’s data on the Group Data Table (see “Prepare Ahead”). Ask these questions about Habitat #1:

- Which pieces of prey were the easiest to see from a distance? (*The colored paper*)
- Which pieces were the hardest to see? (*The newspaper*)

5 Make a prediction. (5 minutes) Based on results from Habitat #1, ask kids to make a prediction: What do you think the results will be for Habitat #2? (*More pieces of colored paper, fewer pieces of wrapping paper*) Now have teams sort and count their prey from the second race and fill in the data table for Habitat #2 on their activity sheets. Record all data on the Group Data Table. Ask: Do the results reflect our prediction? (*Answers will vary.*)

6 Explore camouflage. (15 minutes) Find out what kids already know about animal survival and write answers on a sheet of chart paper. Ask:

- Can you name some predators? (*Answers will vary.*)
- What prey do they eat? (*Answers will vary.*)
- How does an animal’s color help it or make it harder to survive? (*If an animal is easy to see, it becomes a target for predators.*)
- Does anyone know what camouflage is? (*The way in which an animal blends in with its surroundings*)

Tell kids that in the Race for Survival, they were predators, preying on different types of animals. The paper that blended in to the habitat was harder to see and less likely to be collected—just as animals who are able to camouflage themselves are harder to see and have a better chance of surviving. Using chart paper, record and discuss some of the different ways an animal’s appearance helps it hide from predators.

- **Concealing coloration** (*An animal’s color matches its surroundings; e.g., fish that are gray or blue are difficult to see in glistening water.*)

- **Disruptive coloration** (*An animal has a pattern that confuses its predators; e.g., when zebras run in herds, their stripes confuse predators.*)
- **Disguise** (*An animal looks like something in its environment; e.g., a walking stick looks just like a twig.*)
- **Mimicry** (*A harmless animal resembles a dangerous animal; e.g., a type of fly that looks just like a stinging honeybee.*)

7 Award points. (5 minutes)

Time to rack up some points! Review the activity’s key ideas by asking the following questions, worth 50 points each:

- What pieces of prey were hardest to see, and why? (*The prey that matched the background was hardest to see because it blended into the habitat.*)
- Name two types of camouflage and explain how they work, using examples. (*Concealing, disruptive, disguise, mimicry; examples will vary*)
- When did you make a prediction? What was it? (*After analyzing results from Habitat #1, we predicted we’d have fewer pieces of wrapping paper than colored paper in the second cup.*)
- Name three habitats and animals that live in them. (*Answers will vary.*)
- If you were to set up another relay race, what kind of paper would you choose for the habitat and prey? (*Answers will vary.*)