

Camouflage

5th Grade

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References:

- Mary Gilstrap's "Camouflage" Lesson
- <http://www.learnnc.org/learnnc/lessonp.nsf/0/661DFCBE6FB9AF66852569740062B879?openDocument>
- <http://sftfc.cas.psu.edu/LessonPlans/Wildlife/AnimalCamouflage.html>
- <http://www.zoosociety.org/pdf/GuidedTours/AnimalAdap.pdf>

Benchmarks:

- SLC 15: Compare and/or contrast the diversity of ways in which living things meet their needs.
 - CPS Benchmark A: Students will identify the specific basic needs of all living organisms.
 - CPS Benchmark B: Students will explain the relationship between physical characteristics and actions, and the way basic needs are met for living organisms.

Objectives:

Students will do activities to understand that camouflage is an adaptation.

Materials:

- For each group: Colored hole punch circles: 20 of each of the following colors: white, green, yellow, brown, black.
- Plastic bags for each student
- Copy of the data sheet for each student
- Chart or poster paper: One blue (Water), one green (forest), one white (Snow), one black (night) (If there are more than 4 groups, you can repeat the colors).
- Colored pipe cleaners.

Preparation: For each group, use a hole punch to punch out 20 circles of each color. Alternatively, pick toothpicks or paperclips. These may be harder to get in "natural" colors though. Cut the pipe cleaners in half and hide them around the room while the students are at lunch or before school. Wind them around objects. Don't make them too hard to find or you might forget where they are!

Initial Demonstration:

Ask the students how animals protect themselves from predators. List the ways they suggest. Students may list hard shells, spikes, running fast, shelter, or camouflage. When the students list camouflage, ask the students what colors are best for animals to hide from their prey.

Target Observation:

- Animals protect themselves from predators in a variety of ways.

Target Model:

- Animals protect themselves from predators in a variety of ways. One of these is color. The best color is the color of trees (brown or green).

Procedure:

Introduce the term **camouflage**. Explain that many animals have colors or markings on their fur, feathers, scales, or skin that enable them to blend into their **habitat** (the place where an animal lives). Ask students: How might camouflage help an animal to survive? Can they think of any examples?

Tell the students they are going to pretend to be birds. They are going to hunt for mice. They will be given 20 seconds to pick up mice (one at a time) and put them in a plastic bag. Have the students predict which mice will survive the best in the environment at their table. Which mice will survive best in all environments. If there are many students at one chart paper, divide it into territories, so that only one or two students is hunting in the same area. Scatter 100 paper holes (20 of each color) into each territory. Time the students for 20 seconds and then have them count their mice and record it on the data sheet. If there is time, allow the groups to switch to new environments to see if they catch the same number of mice.

Once the students have hunted several times, ask the students which mice were easiest to find. Were there any mice that were always easy to find? Always hard to find? Ask students to discuss what made effective camouflage. Again, why is camouflage important? Make sure they make use of the words predator and prey in this discussion. You can use this as an opportunity to discuss adaptations like changing fur color (some arctic animals have brown fur in the summer and white fur in the winter). Also, some animals in the water are dark on top, because the ocean looks dark from above, and light on bottom, because looking up into the sky the water is lighter colored.

Also make a note to the students of the fact that sometimes an animal's coloration does the opposite of camouflage. Instead, its markings or color patterns may call attention to the animal. Coloration may issue a warning to other species. (Example: poison arrow frogs), or help advertise for a mate (Example: male peacocks).

Target Revised Model:

- The coloring of animals is for a reason.
- Camouflage helps animals blend into their surroundings.
- Camouflage helps protect animals from predators.

Procedure:

Now tell the students there are wooly worms loose in the classroom. Show them a pipe cleaner to illustrate what a wooly worm looks like. Ask them to collect the wooly worms, but warn them that some of them are poisonous! Give the students five minutes to search the room for wooly worms. Make a list on the board of all the colors that they have found. Then write down the numbers of each color that were hidden. Tell the students which color are poisonous (chose a color that does not blend well with the classroom, a bright red or yellow). Ask them if these are well camouflaged. Why might they be poisonous?

Target Revised Model:

- Sometimes an animal's coloration does the opposite of camouflage.
- Instead, its markings or color patterns may call attention to the animal.
- Coloration may issue a warning to other species. (Example: poison arrow frogs)
- It may help advertise for a mate (Example: male peacocks).

Summary:

Appearance is an adaptation for animals. Some animals adopt camouflage to hide from predators. Others use bright colors to help find a mate, or to warn other animals that they are poisonous. It is one of many adaptations that help an organism survive over time.

Hunting for Field Mice

Name _____ Room _____ Date _____

What environment are you hunting in?

What color mouse will be easiest to find?

What color mouse will be hardest to find?

What color mouse will do best in all the environments?

Color	Number	Number found	Number left over
White			
Green			
Yellow			
Brown			
Black			

Round 2: Environment _____

Color	Number	Number found	Number left over
White			
Green			
Yellow			
Brown			
Black			

Round 3: Environment _____

Color	Number	Number found	Number left over
White			
Green			
Yellow			
Brown			
Black			