

**Background:** Insects use camouflage as a way to blend into their environment and avoid any predators that may be looking for a meal. This lesson will teach the concept of natural selection to students using the well-known adaptation, camouflage. Furthermore, students will be able to learn about cause/effect and its relationship to scientific concepts.

**Grade level:** 1-3

**Academic Standards**:

*NextGen Science*

*Standards:* Construct an

argument with evidence

that in a particular

habitat some organisms

can survive well, some

survive less well, and

some cannot survive at

all (3-LS4-3)

*Common Core:* Describe

the relationship between

a series of scientific

concepts using language

that pertains to cause and

effect (RI.3.3)

**Time:** 45-60 minutes

**Logistics**: Split the class into two groups

**Materials**:

- PlayDough, Model Magic, or pipe cleaners

- Queue the “Insect Mimicry” video on the Insect Discovery website

**Preparation:** Obtain various colors of clay or pipe cleaners and scope out a suitable place for the hide and seek activity. Also queue the “Insect Mimicry” video on the Insect Discovery website:

<https://extension.arizona.edu/arizona-insect-videos>

**DO - Activity**:

**1.)** *Setting the stage* Show students an image of the Giant Arizona Hairy Scorpion (see last page of this lesson plan). Ask the students what special features the scorpion has on its body to help it catch its food and defend itself. Allow the students to provide a variety of answers (i.e., stingers, claws, venom, coloration). Introduce them to the word **adaptation**. Define the term as features that make an animal better suitable to survive in an environment just like those they just described. Inform the students today they will be playing a game to learn more about adaptation.

**2.)** *Preparing the activity* Split the class into two groups. Assign the two groups different sides of the classroom or two small outdoor areas. Provide students with the clay and have them roll out little ‘caterpillars’ in colors that match the predominate color of the “habitat” of their side of the classroom, or their group’s outdoor area. Instead of clay caterpillars, you can use pipe cleaners. Also encourage students to make caterpillars in colors that contrast with their environment. When working with younger students, guide them in color choices (ex. green caterpillars will be better camouflaged in green grass). Allow each group to hide their insects in their assigned space. Make sure students know the total number of insects they hid.

**3.)** *The experiment* Have the two groups switch “habitats” and give them a few minutes to find all of the hidden caterpillars. Propose to them that they are birds or some other insect predator searching for their food in the wild. At the end of the experiment have students count see if they found all of the caterpillars. Ideally, they will have collected more of the contrasting colored insects and fewer camouflaged ones.

**REFLECT**

Ask students which color of caterpillars were easiest to find and which were the hardest to find. Use the word adaptation again. Ask students if they can define the word again. What kind of adaptation was this? How would camouflage protect animals in their natural habitats?

**APPLY**

Show the “Insect Mimicry” video on the Insect Discovery website. The video discusses many different ways that insects can hide in plain sight. At the end of the video, there are several pictures of camouflaged insects. Pause the video if necessary for all the students to see the insects in each picture. Are there any no one can find?