



CAMOUFLAGE: A STUDY OF STEALTH AND SURVIVAL

SUBJECTS:

science
language arts
art

TIME:

Preparation: 20 minutes
Teaching: 40 minutes
Evaluation: 10 minutes

VOCABULARY:

disguise
texture
camouflage
habitat
three dimensional (3D)

MORE IDEAS:

Modifications and more ideas are located at the end of this lesson.

MORE INFORMATION:

www.orkin.com
www.mnh.si.edu
www.insectsafari.com

Creative Module #2 - 3D Insect Model

SKILLS

Observation, creativity, artistic representation, writing, research

OBJECTIVE

Students will understand various types of insect camouflage. Students will design and create their own 3D insect models to blend into a specific type of habitat. Each student will write a description of an insect's camouflage and explain how size, shape, and color help an insect survive.

MATERIALS

- 4 construction paper (green, brown, gray, and black)
- 4 modeling clay
- 4 straws
- 4 paint
- 4 cardboard
- 4 scissors
- 4 pipe cleaners
- 4 craft sticks
- 4 tape
- 4 glue
- 4 colored pencils, crayons, or markers
- 4 thin craft wire
- 4 hand-held magnifying glasses
- 4 instant camera and film or digital camera
- 4 other miscellaneous craft supplies including: egg cartons, newspapers, foil, leaves and twigs, tissue paper, craft moss, foam, and other recycled materials
- 4 insect resources (see attached bibliography)

BACKGROUND

The word camouflage comes from the French word *camoufler*, which means "to disguise." Camouflage helps many insects. Not only does it help them avoid being detected by predators, but it helps insects sneak up on prey.

This lesson gives students the opportunity to study some master disguises of the insect world, and then try their own hand at insect stealth. At the same time, they will create a fascinating classroom display (a teaching tool in itself).





LESSON

As a class, study information about insect camouflage (This information can be found in *How to Hide a Butterfly* and *First Field Guide to Insects* and other resources in the attached bibliography). Look closely at the way insects blend in with their habitats. Some disguises are so detailed that the only way to detect the insect is by its movement. Look at the variety of insect habitats. Name some of them (e.g., bark, lichen, branches, leaves). For example, there are beetles whose coloring helps them blend in with the forest floor. They are dark and mottled like soil. Look through other resource materials or the internet for more examples.

Have students choose an insect that uses camouflage to avoid its predators. Explain that each student is to create a 3D model of the insect they chose. Have students research actual insects and create lifelike models. They can use any of the craft supplies you have provided. Encourage creativity and attention to detail. The closer the colors and textures match the insect's habitat, the better the disguise. If you have hand-held magnifying glasses, encourage students to really study the insect's habitat; this may mean heading out into the school yard or a local park.

Have students share their models with the class and discuss their camouflage features. Discuss whether the insects would blend well with their surroundings. Are the disguises successful? How could they be improved?

EVALUATION

Evaluate the students' 3D models for creativity and accuracy. As further evaluation have each student write an explanation of his or her insect's unique adaptations. Ask each student to identify the parts of the insect that help it to blend in with its environment. Make sure that students discuss size, shape, and color when writing about their insects' adaptations.

MORE IDEAS

Invite parents to a "Bug Museum" displaying the 3D insect models.

MODIFICATIONS

Beginning:

Work on creating well-disguised models as a class. You may want to come up with a simple pattern and let students color their models individually. Work through the writing evaluation together, making sure to highlight unique adaptations.

Advanced:

Challenge students to create dioramas that show their insects in their natural habitats.

NATIONAL SCIENCE EDUCATION STANDARDS

Develop an understanding of and the abilities necessary to do scientific inquiry

Develop an understanding of the characteristics of organisms

Develop an understanding of organisms and environments

Develop an understanding of diversity and adaptations of organisms

