

Now You See Them, Now You Don't

This packet is to help introduce your students to terms and ideas that will be discussed during your visit to the Peoria Zoo. It is designed to enhance your program experience, either through class prep or follow-up.

By using the vocabulary, activities, and ideas it will help reinforce the program and meet the State Standards listed on page 2.

Terms to introduce to students:

- Burrowing – when an animal digs a hole to hide and live in
- Camouflage – hiding by protective coloring, pretending to be part of the natural surroundings.
- Counter shading – a form of camouflage where there is darker coloring located on the top and a lighter shade on the bottom, making it difficult for it to be seen from either above or below.
- Exoskeleton – an organism whose support and protection is located on the outside
- Habitat – the environment where an organism usually lives
- Predator – is the organism who is doing the eating of another organism
- Prey – the organism that is being eaten by another organism

Ideas covered in program

- Explaining what camouflage is (ex. Camouflage is the "art of concealment." It involves disguising an object, in plain sight, in order to hide it from something or someone.)
- The uses of camouflage in nature and how it relates to the predator vs. prey relationship
- The advantages/disadvantages to using counter shading, exoskeletons, and burrowing as types of camouflage or survival.
- Help students identify some animals that use camouflage in their neighborhood, at the zoo, etc.
- Why it would be beneficial for animals to use camouflage (hunting, protection)
- How coloring, markings, and physical actions can make an animal better adapted to its environment.
- The different types of camouflage animals use (counter shading, mimicry, cryptic coloration, advertising coloration, etc)
- The coloration of an animal and how it compares to its habitat.

Activities for students:

PAPER MOTH

Items needed: paper
Crayons/markers
Scissors
Moth cut out

- The students will create a paper moth that is camouflaged with something in the classroom. Create a paper moth and color it to look like something in the room. Show students the paper moth shape and explain they must cut it out and color it to blend in with an area in the room. Rules are it has to be easily visible from the center of the room. (NO hiding it under or behind something) Either split the class into two groups or have another class come in and try to find the moths that the students have designed. Explain that in 10 minutes some "birds" from another class are coming to "eat" your moths. Students use masking tape on the back of the moth to attach it to the position they chose. Partner class "birds" are told the shape of the moth and the rules before they begin searching. Any survivors are taken down one at a time so that the "birds" also learn what they missed.

CAMOUFLAGE YOURSELF

- Have students come to school camouflaged (to match the classroom or schoolyard). Have a team of judges decide who is the hardest to find. Then discuss how easy/difficult it was to camouflage

BUTTERFLY CAMOUFLAGE

- Explain to the students that they are going to be conducting an experiment that will show how important camouflage is to certain types of animals. Tell the students that protective coloring often times helps animals hide from their predators. Have the students cut out 12 butterflies from patterned wrapping paper, 12 butterflies from one solid colored wrapping paper, and 12 butterflies from another solid colored wrapping paper. Have one student in the group place one full piece of patterned paper on the floor and place the 36 butterflies on it carefully. Set the timer to 10 seconds with one student's eyes covered. Start timer and have the student pick up as many butterflies as he or she can in the 10 seconds. Compare results from the camouflaged butterflies to the solid ones. Look at the results. Compare the camouflaged butterfly captures to the solid ones. Was there a difference? Why or Why not?

HABITAT CAMOUFLAGE

- Divide the class into small groups and give each a length of bulletin board paper. Invite them to choose an animal habitat to research, such as a forest, prairie, desert, polar region, or coral reef. (Or they might decide on a mini-habitat such as a bush, tree, or flower garden.) Have each group create a mural of its selected habitat, including drawings or cutouts of camouflaged animals. Next, ask each group to make a list of all the camouflaged animals found in its habitat. Display each mural with the corresponding list. Finally, challenge students to visit each of the habitats to search for the animals on the list. Can they find all the animals on each mural?

State Standards met by:

Listening to the program:

4.A.2b-c; 4.B.2b; 12.B.2a; 12.B.2a

Writing about the animals they saw:

3.A.2; 3.B.2a-d; 3.C.2a; 4.A.2a; 12.B.2a; 12.B.2b; 17.B.2b

Paper Moth:

11.A.2b; 11.B.2b; 12.A.2b; 12.B.2a-b; 12.B.2a-b; 17.B.2b

Camouflage yourself:

11.A.2b; 11.B.2b; 12.A.2b; 12.B.2a-b; 17.B.2b

Butterfly Camouflage:

11.A.2b; 11.B.2b; 12.A.2b; 12.B.2a-b; 17.B.2b

Habitat Camouflage:

4.B.2a; 5. A.2a-b; 5.C.2a-b; 17.B.2b; 26.B.2d



A narrow-headed frog native to Madagascar. The frog's brown and yellow coloring, as well as its rough texture, allows it to blend in with the mud and tree trunks in its environment.



Burrowing owls' camouflage is well suited for the American West.



The Gila monster's coloring helps it to hide in its natural habitat (Arizona, New Mexico and southern Utah)