

Animal Coverings

Summary

Categorize animal pictures by their coverings.

Time Frame

1 class periods of 15 minutes each

Group Size

Large Groups

Materials

For the Teacher:

Animals or skin samples including: reptile and/or fish scales, fur, hair, feathers, frog/ amphibian skin.

Pictures of animals

Bulletin board divided into headings: Fur, Feathers, Skin, Hair, Scales, Shells.

Book: *Animals Should Definitely Not Wear Clothing*

Background for Teachers

Scales cover the bodies of most snakes, lizards, and bony fish and generally vary in size, shape, and arrangement. The age of a fish can be determined by counting the rings on the scales. The scales typically overlap and protect the skin underneath. Other animals, like the pangolin (a mammal of the anteater variety) are also covered with scales. The scaly tails of beavers, muskrats, and many rats and mice have hairs between the scales.

Feathers keep birds warm, help them to fly, and even act as a raincoat. Birds have three kinds of feathers. Down feathers are the smallest and the first to grow. They have a central shaft with thinner, fluffy strands called barbs on either side. Many birds have down over much of their bodies to keep them warm. Flight feathers are made up of a long, hollow shaft. The barbs on either side are held together by hundreds of tiny hooks. Semiplumes, or body feathers, are smaller and fluffier than flight feathers. Semiplumes are usually found under flight feathers.

Fur, hair, or bristles cover most mammals. Some mammals, such as elephants, have very little hair. Our ancestors had thick hair all over their bodies. Today, human beings have thick hair on parts of their bodies.

Shells are found on land and ocean animals. Mollusks are one type of invertebrate we commonly associate with shells, such as snails, clams, and oysters. Turtles and tortoises are the only reptiles with shells.

Use live animals whenever possible so students can observe behaviors as well as physical characteristics. If you are unable to obtain live animals, museums or universities may have samples of animal skins available on loan for classroom use. Be sure students wash hands thoroughly after handling animals or animal coverings. Be sensitive to potential ALLERGIES that students may have to any animals or animal products brought into the classroom.

Student Prior Knowledge

Key vocabulary for this lesson includes: fur, feathers, scales, skin, shell.

Intended Learning Outcomes

Apply prior knowledge and processes to construct new knowledge.

Observe, sort and classify objects
Make and interpret representations and graphs.
Make connections from content areas to application in real life.
Develop vocabulary.

Instructional Procedures

Step 1. Show photographs of animals. Ask students to give descriptive words as to how they think the animal's covering would feel if they could actually touch it.

Step 2. When students have developed their descriptive vocabulary, ask a child to attempt to describe a picture that he alone can see. Ask the class to try to identify the animal.

Step 3. Invite students to explore a science center display of animal skins, furs, shells, feathers, and magnifiers. Encourage students to discuss animals they have felt. Invite students to bring in animal coverings to share with the class. Pictures of animals can be matched to the actual animal covering. In small groups, show animals or animal skins and give students time to use tools, such as a hand lens or microscope, to examine the structure of the different body coverings. Encourage students to discuss the function of the specialized kinds of coverings and why they are suited to the particular animal. Compare and contrast feathers and scales, for example. Why would animals need different body coverings?

Step 4. As the class is coming or going, possibly to or from recess or on a walk to observe animals, discuss the purpose of the protective clothing students wear, such as shoes, sweaters, coats, hats, or raincoats. Ask the students why animals don't wear clothing. (An excellent book is *Animals Should Definitely Not Wear Clothing* by Judi Barrett.) Discuss the different kinds of animal coverings and how each covering protects the animal or keeps it warm.

Step 5. Categorize pictures of animals by their covering (e.g., fur, feathers, shells, skin, or scales). Tape the pictures into categories on a piece of chart paper with labels and, if possible, post on a bulletin board for reference.

Step 6. Give each student a picture of a different animal. Show animal pictures one at a time and ask students to categorize the pictures by placing them on the bulletin board under the appropriate heading. If students are unfamiliar with an animal and unable to determine the body covering from the picture, encourage and allow time for students to do research to find out enough about the animal to place it on the graph.

Strategies for Diverse Learners

Many students have limited experience with animals. A photograph may give the impression that an animal feels soft when in fact the covering may be rough. Invite students to share experiences of actually feeling an animal covering. A field trip to a pet store, petting zoo, or visiting pets can build essential background knowledge and vocabulary.

Extensions

Glue actual or simulated body covering samples on or next to pictures or drawings of animals (e.g., buttons for shells, craft feathers, fake fur, sequins for scales).

Students may make a representation of an animal by drawing the animal and gluing appropriate collage materials for the animal covering.

Collect feathers and attach them in a notebook by using staples or glue. Look at all the different types of feathers. Can you identify which bird they belong to? What type of feather is this sample? Where would it be located on the bird? How would it be used? Remember to wash hands after handling feathers.

Literature Resources: Barrett, J. (1970). *Animals Should Definitely Not Wear Clothing* NY: Scholastic Inc. ISBN: 0-590-44739-4.

Assessment Plan

Ongoing assessment enables teachers to note each student's ability to describe textures of animal coverings, identify animal names, and categorize animals by covering. Step 6 is particularly useful as assessment.

Teachers will also make note of the student's ability to identify sounds of words. This skill enables students who are not yet reading to sort accurately into written categories. For example the words fur and feathers both begin with "f". Shells, skin and scales all begin with "s". Students who do not know letter sounds may demonstrate their ability to sort orally.

Bibliography

Barrett, J. (1970). *Animals Should Definitely Not Wear Clothing* NY: Scholastic Inc. ISBN: 0-590-44739-4.

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