BIRD AND FEATHER FEATURES

An activity to identify the body parts of a bird and parts of a feather.

ARIZONA SCIENCE STANDARDS

SC02-S4C1-02, SC03-S4C1-01, SC03-S4C4-01, SC01-S1C1-02, SC01-S1C3-01, SC02-S1C1-01&02, SC01-S5C1-01

OBJECTIVES

Students should:

- Identify the parts of a bird.
- Realize that birds have different kinds of beaks, wings and feet.
- Observe and identify the parts of a feather.

MATERIALS

- Pictures of birds (from magazines or provided in this packet).
- *Bird Features* handout for each student.
- Feathers, contour and down (from a poultry farm or Ward's Biology catalog; they should not be gathered from the wild. All parts of birds are protected, except game birds).
- *Feather Diagram*, made into transparency
- Overhead projector
- Magnifiers, 1 for each student
- Velcro

VOCABULARY

Adaptation
Ornithology
Contour feather
Down feather
Preen

GETTING READY

Prepare the materials listed in the left margin of this page. Photocopy the feather diagram on acetate to make an overhead transparency

DOING THE ACTIVITY

SETTING THE STAGE

1) Tell students that they will be studying birds . The study of birds is called **ornithology**. Ask if anyone knows what scientists who study birds are called? (ornithologists)
2) Show your students a variety of pictures of birds. Ask students what makes a bird different from other animals? (wings, feathers, eggs, etc.)
3) Ask students to name parts of a bird. Pass out the handout *Bird Features* and have students complete this. You may want to put the words needed to fill in the blanks on the board: crest, head, beak, wing, leg, foot, tail.
4) Review the answers to *Bird Features*: 1. wings; 2. beak; 3. feathers; 4. two; 5. two; 6. no

FEATHER DEMONSTRATION

1) Point out that one major characteristic of birds is feathers. Explain that there are two main types of feathers: **contour** feathers and **down** feathers. If possible, give each student a contour and down feather. Tell them to look closely at the contour and down feathers with their magnifiers. Explain that the hard center tube is called the **shaft** and the rest of the feather is called the **vane**.
2) Display the *Feather Diagram* transparency on the screen. Point out the barbs and tiny barbules. Explain that the vane is made up of barbs that look like skinny hairs coming off the shaft in parallel rows. Explain that the barbules have tiny hooks on one side that interlock side by side and hold the barbs together like velcro. The flat, flexible vane stays locked during flight, helping the bird keep its smooth, streamlined shape and allowing each feather to firmly fan the air. But, if the vane does split apart between two barbs, the bird can "zip" its feathers back into shape by pressing the barbs together with its beak. This is one reason birds **preen**. It helps them fix their feathers and get them back into shape for flying.
3) Place a large contour feather on the overhead projector. Point out the parts identified in the diagram. Next, place a down feather on the projector. Ask the children what differences they notice between the contour and down feather. (It doesn't stick together like the contour feather. This fluffy feather doesn't have interlocking barbs and barbules.) Down feathers help keep a bird warm or cool.

EXTENSION

Have each student draw a diagram of his or her contour feather and down feather and label the vane and the shaft.