



1-17-93 You Can
 Universal Press Syndicate
 65 lpi Black & White



YOU CAN
 by JOK CHURCH
 With **beakman & jax**
 Send your question to: Beakman or Jax,
 P.O. Box 30177, Kansas City, MO 64112

Dear Beakman,
 What are feathers made from?
 Marie Schumacher
 Kenosha, Wisconsin

Dear Marie,
 Last week we talked about animal protein and how it can be turned into glue. The week before, we talked about zippers. Well, feathers have lots to do with both protein and zippers. An amazing coincidence!

Feathers are made of the same protein our hair is made from, **keratin** (CARE-eh-tin). Feathers are pretty much *hair with zippers*.

experiment #1
 Kinds Of Feathers - A Closer Look

WHAT YOU NEED: Feather - feather pillow

WHAT TO DO: *You Can* find a feather on sidewalks or in yards. They're all over the place because birds lose them. Compare one to the tiny fluffy feathers that leak out of a pillow. If you live near a farm, these fluffy feathers can be found near chicken coops or duck ponds. *You Can* even find them leaking out of down sleeping bags or down jackets. Both the feather and the fluff are feathers. But what's the difference? Examine both closely. Compare what's different and the same.

MORE STUFF: Take the larger feather and pull apart the side. Now use your fingers to zip it back together again. Start at the quill and *zipper* out to the edge of the feather.

so what:
 Feathers are a lot like hair and fish scales. All are made of keratin. But only feathers have branches that we call *barbs*. Each barb looks like a tiny feather itself. These barbs have smaller branches called *barbules* (BAR-byools). Birds have two different kinds of feathers. The big ones are called *contour feathers*, and the fluffy ones are called *down*. The big difference between them is their barbules. Diagrams A & B are *not* feathers; they are the branches of feathers. Diagram A is a contour feather barb. Diagram B is down. Down doesn't hook onto itself. It's soft and fluffy. Contour feathers are different. They have hooks on their barbules. The hooks make feathers like hair with zippers. Those hooks are why *You Can* repair a split feather with your fingers.

Hooked barbule

A

Barbule

b

Barb

P.S. from Jax: When you see a bird combing itself with its beak, what it's really doing is zipping its feathers back together again.

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