



## OUR FEATHERED FRIENDS

All birds have feathers, and birds are the only living animals that do!

### What's a Feather For?

**FLIGHT FEATHERS** are found on the tail and wings. They are shaped to move smoothly through the air. They are lightweight yet stiff enough to hold their shape to help the bird fly.



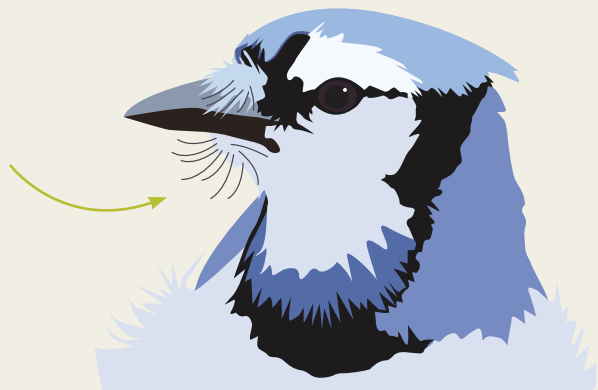
**CONTOUR FEATHERS** cover the bird's body. The outer part is like a rain jacket and protects the bird from wind, rain, and snow. The inner part is soft and fluffy like a sweater for warmth. Contour feathers can come in bright colors and patterns to attract mates or dull-colored camouflage to help birds hide.



**DOWN FEATHERS** are soft and fluffy to provide insulation, keeping the bird warm and dry. Sometimes birds will pluck their own down feathers to line their nest to help keep their eggs and babies warm, too.



**BRISTLES** are actually tiny feathers that are usually found on the head near the eyes and beak. They help some birds sense nearby objects, including food in some cases.



### Fun Facts About Feathers

- The shaft of the feather is like the trunk of a tree, with tiny barbs coming off of it like branches. Each barb is lined with even smaller barbules that interlock with other barbules to make the surface of the feather smooth.
- Songbirds have 3,500 to 5,000 feathers, while waterbirds may have as many as 12,000 feathers.
- Most birds drop and grow new feathers every year—a process called “molting.”
- Although very lightweight, a bird's feathers usually weigh two to three times as much as its skeleton, because birds have hollow bones.
- Owls have feathers with special edges that allow them to silently fly just inches from their prey without being noticed.

### Be a Plumologist

**Plumology is the science of studying feathers.**

1. With a magnifier, look at the colors, patterns, and designs on a clean feather from a craft store or a chicken farm. What do you notice? Can you see the shaft or barbs?
2. Birds constantly clean and repair their feathers by “preening.” You can try preening by splitting the barbs apart and then combing them back together with your fingers or a pencil.
3. Experiment with how fast (or slow) different types of feathers float to the ground. What makes some feathers fall through the air more quickly or slowly? Does each feather move differently through the air?