

Fun Facts and Resources for

Feathers, Flight, & Song



FEATHERS



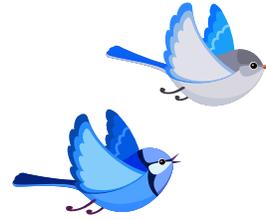
- Birds are the **only living animals with feathers**.
- Feathers are lightweight growths that cover a bird's body. They provide the color and texture that make each bird species unique.
- Like hair, fingernails, and claws, feathers are made of a substance called **keratin**. Keratin is both lightweight and strong.
- At least once a year birds shed their feathers through a process called **molting**. Then new feathers grow in.
- Birds **preen** by using their beak to straighten and clean their feathers. They apply a special oil or powder on their feathers that makes them waterproof.
- Feathers provide birds with **insulation** to keep them warm, dry, and protected from wind.
- Different kinds of feathers have different purposes:
 - Straight, stiff feathers give birds their ability to fly.
 - Tail feathers help with steering, balance, and braking.
 - Small, fluffy feathers, called down, keep a bird's body from getting too cold and its skin from getting wet.

For more information about **feathers** check out this website and find some photos of birds and their vibrant feathers.

<https://birdfact.com/articles/do-all-birds-have-feathers>

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FLIGHT



- Birds are one of **three groups of animals that fly**. The other two are insects and bats.
- Of these three groups, **birds are the most impressive flyers** due to the **speeds** they can attain and the **distances** they can travel.
- Aside from straight-forward flying, some birds can **hover and fly backwards**.
- Many bird species have the endurance to fly for several days and for long distances. This is called **migration**.
- There are two main types of flight that birds perform: **soaring/gliding** flight and **flapping** flight.
- **Gliding** flight is the simplest form of flying and simply requires a bird to hold its wings outstretched.
- Birds can **soar** by finding hot, rising pockets of air and use the currents to stay aloft, and fly higher.
- The **flapping** of wings in birds is a complex action that is controlled by around 50 different muscles. Each wing can beat independently which allows birds to steer and maneuver.

For more information about **flying** check out this website and watch some videos of birds in flight.

<https://basicbiology.net/animal/birds/flying>

Fun Facts and Resources for

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- Birds sing for a variety of reasons and different bird species sing at different times of the day: dawn, afternoon, and night.
- Birds sing to communicate. It's also an important part of their survival strategy.
- Birds sing to declare their territory and let other birds know when they have claimed a site where their food and nesting sites are located.
- Birds also sing to attract mates. Most singing birds are male, but some species of female birds also sing.
- Birds don't usually sing to alert other birds of danger, but when singing birds suddenly stop singing it can be a sign that there is a predator in the area.
- It is possible that birds also sing because they enjoy it!

For more information about bird **song** check out this website and listen to some recordings of birds singing.

<https://academy.allaboutbirds.org/birdsong/>