



## Bird Basics

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Some scientists believe that the birds' earliest ancestors may have been a group of dinosaurs that lived 150 million years ago. They range in size from the 300-pound ostrich to the smallest of hummingbirds. But all of these birds share some similar characteristics.

Birds have one characteristic that distinguishes them from other animals:

1. Body is covered with feathers

Other traits, that are not distinguishing characteristics, that they possess are:

2. Two pairs of limbs—one that has been modified into wings and the other adapted for swimming, walking or perching.
3. Produce hard-shelled eggs that are incubated externally to produce young.

Let's look a bit closer at some general characteristics of birds:

Feathers: All birds grow feathers. They are made from the same material our nails, skin and hair are made of—keratin. The two types of feathers are the contour and the down feather. The strong, lightweight contour feather covers the body and wings, and aids the bird in flying. The fluffy down feather helps to insulate the bird and keep it warm. Feathers are also used to help protect a bird's sensitive skin, streamline the body and are important in courtship displays.

Wings: All birds possess wings, even the flightless birds like the ostrich and penguin. They are streamlined, like an airplane's wing, and move through the air easily. Wings are not only used for flying, but can also be used for balance, and some birds utilize them as flippers to aid them in swimming underwater.

Skeleton: Birds have a very strong skeleton with relatively few, small bones. Some of these bones are hollow, thin, or flat which helps make them flexible and light. Some are even fused, or joined together, to give the skeleton extra strength. This lightweight frame allows the bird to be light enough to get off the ground and stay in the air.

## **FEEDING STRATEGIES**

Swim underwater with feet

- Dive from the surface and use their feet to propel them
- Cormorants, grebes and loons

Plunging from the air

- Plunges headfirst towards its prey from as high as 330 feet
- Brown pelican, terns

Feeding while on the surface

- Gulls use their bills to capture food on, or beneath the surface
- Larger gulls scavenge on dead or dying organisms on the surface
- Some birds filter or pick plankton from the surface

Capturing prey at the surface while flying

- This method is used by small, agile birds
- Birds pick prey from the surface, or just below, while in flight
- Terns, some gulls