About Birds

Birds are **vertebrate** animals adapted for flight. Many can also run, jump, swim, and dive. Some, like penguins, have lost the ability to fly but retained their wings. Birds are found worldwide and in all habitats. The largest is the nine-foot-tall ostrich. The smallest is the two-inch-long bee hummingbird.

All birds have the same basic parts and functions, but are unique in their own ways. All birds are **warm-blooded**, which means they can control and maintain a constant body temperature even if the temperature around them changes.

All birds **lay eggs** – some birds lay eggs which are smaller than your fingernail, but others, like the ostrich, lay eggs which can weigh more than a kilogram. All birds **grow feathers**, making them different from all other animals. The different types of feathers help a bird survive. Feathers not only help a bird to fly or swim, they also protect its sensitive skin, help attract mates, serve as insulators to trap body heat and serve as camouflage.

Everything about the anatomy of a bird reflects its ability to fly. The wings, for example, are shaped to create lift. The leading edge is thicker than the back edge, and they are covered in feathers that narrow to a point. Airplane wings are modelled after bird wings.

Birds have a unique digestive system that allows them to eat when they can—usually on the fly—and digest later. They use their beaks to grab and swallow food. Even the way a bird reproduces is related to flight. Instead of carrying the extra weight of developing young inside their bodies, they lay eggs and incubate them in a nest.

Birds often see much better than other animals, including people. They have very **large eyes** that focus on near and far away objects. Birds use their keen eyesight to: find food; spot mates; keep an eye on enemies and find a place to live. A bird's eyes are usually located toward the front and/or sides of its head, and may point almost directly forward or in opposite directions, giving it one of two types of vision or a combination of both. Birds also have a very keen sense of hearing, and this is another way they can protect themselves from danger.

Birds have **adapted** in all sorts of ways, in order to survive in different climates and environments. For example, **seed eaters** like sparrows have short, thick conical bills for cracking seed. **Birds of prey** like hawks and owls have sharp, curved bills for tearing meat. Some ducks have long, flat bills that strain small plants and animals from the water. **Osprey** use their large curved claws to snatch fish from the water. **Pheasants** and other birds that scratch the soil for food have nail-like toes. **Robins** have a long back toe, which lets them grab a perch tightly and many fast-running birds have three toes rather than four.

