



## VERTEBRATES

Chordates (KOR dayts) are animals that have the following three characteristics—a notochord (NOH tuh cord), a nerve cord, and pharyngeal (fur RIN jee uhl) pouches at some time during their development.

The notochord is a flexible rod that runs the length of the developing organism. The nerve cord is made of nerve tissue. In most chordates, one end of the nerve cord develops into the organism’s brain.

Pharyngeal pouches are slitlike openings between the inside of the body and the outside of the body. They are present only in the early stages of the organism’s development. In some chordates, like the lancelet in the figure below, the pharyngeal pouches develop into gill slits.



### VERTEBRATES

Chordates are classified into several smaller groups. The largest group of chordates is made up of the vertebrates, which include humans. All vertebrates have an internal system of bones called an endoskeleton. The endoskeleton supports and protects the body’s internal organs. For example, the skull is the part of the endoskeleton that surrounds and protects the brain.



### Body Temperature

Vertebrates are either ectotherms or endotherms. Ectotherms (EK tuh thurmz) are cold-blooded animals. Their body temperature changes as the temperature of their surroundings changes. Fish are ectotherms.

Endotherms (EN duh thurmz) are warm-blooded animals. Their body temperature does not change with the surrounding temperature. Humans are endotherms. Your body temperature is usually about 37°C.



## ACTIVITY

You read about endotherms and ectotherms. Make a list below of animals that you think are endotherms and ectotherms.

Endotherms	Ectotherms