

Key Concept Builder 

LESSON 3

Phylum Chordata

Key Concept How do the classes of vertebrates differ?

Directions: Complete the chart with the correct terms in the space provided.

Classes of Vertebrates	
Characteristic	Vertebrate Class
fluid-filled eggs with leathery shells	1.
mammary glands	2.
feathers	3.
water-proof skin	4.
eggs without hard protective covers	5.
gills and paired fins	6.
fur or hair on body	7.

Directions: On each line, write two examples of each vertebrate class.

- 8. fish
_____ and _____
- 9. amphibians
_____ and _____
- 10. reptiles
_____ and _____
- 11. birds
_____ and _____
- 12. mammals
_____ and _____

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Enrichment**LESSON 3**

The Perplexing But Perfectly Plausible Platypus

The platypus is truly unusual in just about every way. It isn't a duck, a beaver, an otter, a mole, or a reptile. Yet, incredibly, it has some characteristics of each of these animals.

The Amazing Platypus

The platypus is about the size of a small dog or a grown cat. It is covered with two layers of molelike, waterproof hair except for its bill and feet. It has a bill similar to a duck's bill, but the platypus's bill is more pliant. It has five claws on each foot, and its feet are webbed. Its legs are positioned to the sides of its body like a lizard's legs.

A platypus has a broad, flat tail like a beaver. It is used to carry things like nest-building materials, as a rudder when it is swimming, to curl around young to keep them warm, and to store fat for when food is scarce. Adult males have a venomous spur on their hind feet.

Reproduction

The platypus is a monotreme, meaning "an egg-laying mammal." After mating, the female incubates her eggs (usually two) internally for about 28 days while she extends and reinsulates her burrow. The

burrow is on the riverbank with the entrance about a foot above the water level. Then she lays her eggs and curls around them to keep them warm for another 10 days before they hatch. The young are born blind and hairless and are fed their mother's milk.

Platypuses have mammary glands but no teats. The mother has grooves on her abdomen where milk puddles so the babies can lap it up. The young are usually fed in this manner for three or four months. The mother leaves the nest to forage briefly, and then for longer periods. Finally, the young leave the nest to forage for themselves at about four months of age.

Habitat and Conservation

The platypus has an extensive range along the eastern coast of Australia. Its distribution inland is not well known, but it is known to be extinct in South Australia. It does not appear to have an immediate ecological threat, but its habitats and traditional range have been impacted by human construction of dams, irrigation, netting, and trapping. Because their nesting burrows and breeding environment are difficult to simulate, captive breeding programs have had limited success.

Applying Critical-Thinking Skills

Directions: Answer each question.

- 1. Analyze** What is one practical result of mother platypuses having no teats for baby platypuses to feed from?
- 2. Classify** If you were looking at a platypus for the first time, how would you determine its biological classification?