Teach, *continued*

Answers to Caption Questions

Figure 10: Some dogs may live on ranches and help with herding sheep or cows. Others may work as service dogs for people with disabilities.

READING TOOLBOX

Word Problems

27% of x = 475,000 kg

$0.27x$ = 475,000 kg

$x = \frac{475{,}000 \text{ kg}}{0.27}$ = 1,759,259 kg wool produced globally per year

Close

Formative Assessment

Which of the following describes the characteristics of monotremes?

A. They have a placenta and mammary glands. (Incorrect. Monotremes are not placental mammals.)

B. They have a cloaca and placenta. (Incorrect. Monotremes are not placental mammals.)

C. They have habits that are similar to monkeys. (Incorrect. Monotremes are more like reptiles. They do not have the agility to compare favorably to monkeys.)

D. They have hair and a cloaca. (Correct! Monotremes are the only mammals that lay eggs, which are expelled from the cloaca.)



Figure 10 Humans domesticated dogs (left) and sheep (right) thousands of years ago. **Other than companionship, how are dogs useful to humans?**

READING TOOLBOX

Word Problems Australia is the world's leading producer of wool, producing about 27% of the global total. If Australia produces 475,000 kg of wool per year, what is the global production of wool?

Domestic Mammals Domestic animals, such as those in **Figure 10,** are animals that have been kept and bred by people for special purposes. Domestic animals may provide work, food, clothing, or companionship. Most domestic animals are placental mammals whose association with humans dates back up to 15,000 years or more. These animals include dogs, cats, cattle, horses, donkeys, mules, rabbits, sheep, goats, pigs, camels, llamas, and alpacas.

Various breeds of domestic mammals have been developed through selective breeding. For example, some breeds of goats produce more milk than others. Their milk is used to produce a variety of dairy products. Other goats, such as angora goats, are bred for their fine hair, which is spun into yarn. Some domestic mammals are hybrids of two species. Mules, for example, are the offspring of a female horse and a male donkey.

Reading Check ***What are three ways in which humans use domestic mammals?***

Section 2 **Review**

KEY IDEAS

1. **Describe** how monotremes are like and unlike reptiles.
2. **Summarize** the importance of a marsupial's pouch in terms of development of young.
3. **Describe** how placental mammals differ from monotremes and marsupials in terms of development.

CRITICAL THINKING

4. **Forming Reasoned Opinions** You receive an e-mail from some friends who have taken a walk in the woods in Florida. They send you a grainy picture of a small animal, which they claim is a monotreme. Do you think that their claim is true? Why or why not?
5. **Relating Concepts** Speculate on why species of placental mammals make up almost 95% of mammalian species.

WRITING FOR SCIENCE

6. **Essay** Mammals are some of the most important animals to humans. Do some research on the Internet, and write an essay about domestic mammals and their close wild relatives. What characteristics do many domestic animals share?

Answers to Section Review

1. Like reptiles: lay eggs; limbs to side of body rather than directly under it; common passageway for digestive, urinary and reproductive systems. Unlike reptiles: have hair; produce milk.
2. Young marsupials spend most of their time developing inside the pouch as they nurse and grow.
3. The young of placental mammals develop inside the female's uterus, where they are nourished with nutrients from her blood.
4. Their claim is very unlikely because there are only three species of monotremes, and all are found in Australia and New Guinea.
5. Students should write about the reproductive advantages—young are much more developed when they are born as a result of the nourishment they receive from the mother during the gestation period.
6. Students should find that most domesticated animals come from groups that are herbivorous and are highly social. These characteristics make them more likely to be domesticated and thrive around people.