

CHAPTER REVIEW

CONTENT REVIEW

Multiple Choice

Choose the letter of the answer that best completes each statement.

1. Reptiles that lay eggs that develop outside the mother's body are
 - a. extinct.
 - b. ovoviviparous.
 - c. oviparous.
 - d. externally fertilized.
2. A reptile that slips out its sticky tongue to catch insects is the
 - a. chameleon.
 - b. monitor lizard.
 - c. iguana.
 - d. crocodile.
3. A type of grooming in which a bird pulls its feathers through its beak is called
 - a. shedding.
 - b. contouring.
 - c. preening.
 - d. perching.
4. An animal that generates most of its heat inside its body is a (an)
 - a. ectotherm.
 - b. endotherm.
 - c. reptile.
 - d. tuatara.
5. The pineal gland of the tuatara is sensitive to
 - a. touch.
 - b. vibration.
 - c. heat.
 - d. light.
6. The single most important characteristic that separates birds from reptiles is
 - a. endothermy.
 - b. feathers.
 - c. two legs.
 - d. wings.
7. Feathers on the wings and tail of a bird that provide a lifting force and balance are
 - a. down feathers.
 - b. barbs.
 - c. flight feathers.
 - d. powder feathers.
8. The muscular part of a bird's stomach that contains gravel used to crush food particles is the
 - a. cloaca.
 - b. barbule.
 - c. crop.
 - d. gizzard.

True or False

Determine whether each statement is true or false. If it is true, write "true." If it is false, change the underlined word or words to make the statement true.

1. Reptilian eggs are amniotic eggs that are named after one of the membranes that surround the embryo.
2. The changes in the Earth's surface and climate during the Permian Period made life difficult for reptiles.
3. A mass extinction of dinosaurs and many other animals and plants occurred at the end of the Triassic Period.
4. Birds warm up by basking in the sun.
5. Endothermy is a way of conserving energy in warm climates.
6. Down feathers are soft, fluffy feathers that trap warm air close to a bird's body.
7. The air sacs help make a bird more buoyant during flight.
8. Some migratory birds have a magnetic sense that helps them find their way.

Word Relationships

Replace the underlined definition with the correct vocabulary word.

1. Birds have large feathers that cover their bodies and wings.
2. The digestive system of a bird contains a structure where food is moistened before it enters the stomach.
3. Vertebrate animals that have lungs, scaly skin, and amniotic eggs have evolved from amphibians.
4. When a bird inhales, most of the air goes through the lungs into posterior structures that also make a bird's body more buoyant.

CONCEPT MASTERY

Use your understanding of the concepts developed in the chapter to answer each of the following in a brief paragraph.

1. What are three adaptations that enable reptiles to live entirely out of water?
2. Discuss two possible explanations for the mass extinction that occurred about 65 million years ago.
3. Identify the three main types of bird feathers.
4. Explain why the excretion of nitrogen-containing wastes in the form of uric acid is another successful adaptation to a land environment shown by reptiles.
5. Describe the special adaptations that have developed in bird species that have no source of fresh water.

CRITICAL AND CREATIVE THINKING

Discuss each of the following in a brief paragraph.

1. **Applying concepts** Reptiles developed efficient respiratory systems after they evolved from water-dependent amphibians. They then developed a more efficient circulatory system. Explain why these systems evolved in this order.
2. **Relating cause and effect** Most of the various species of modern reptiles have changed little since their great period of adaptive radiation about 200 million years ago. Explain why drastic changes have not occurred in reptiles since then.
3. **Making predictions** Suppose you came upon the shore of a tropical island. Predict the method of regulating body temperature that you would expect to find in the animals that live on the island. Explain how this method is an adaptation to this environment.
4. **Drawing conclusions** You are given the description of a certain animal and told that it is endothermic, has two legs, and modified front limbs. You are also told that it has a four-chambered heart, two separate circulatory loops, and a well-developed cerebellum. Describe at least three more characteristics you can add to this description.
5. **Making comparisons** Compare and contrast the characteristics of reptiles with those of amphibians. Explain how each is suited to a particular environment.
6. **Summarizing information** Discuss some of the characteristics of birds that enable them to fly.
7. **Using the writing process** Pretend you are a visitor to Earth from the fictitious planet Chillee. Your ancestors visited planet Earth about 300 million years ago and then again about 55 million years ago. Describe the changes that would have occurred on Earth from the details recorded in the logbook your people maintained on their voyages.

