Name_____ Class_____ Date_____

Section 33–2 Controlling Body Temperature (pages 854–856)

TEKS FOCUS: 12C Compare variations, tolerances, and adaptations of animals in different biomes

This section explains how controlling body temperature is important for maintaining homeostasis. It also describes the differences between ectotherms and endotherms.

Body Temperature and Homeostasis (pages 854–855)

1. Circle the letter of each sentence that is true about body temperature.

a. Essential life functions in animals can be carried out most efficiently at any temperature.

b. If muscles are too cold, they may contract slowly.

c. If an animal gets too hot, its muscles will work more efficiently.

d. The control of body temperature is important for maintaining homeostasis.

2. List three features that vertebrates need in order to control their body temperature.

a. _____

b. _____

c. _____

Match each description with the method of controlling body heat. Methods may be used more than once.

	Description	Method
_____	**3.** An animal whose body temperature is controlled from within	**a.** Ectotherm
_____	**4.** Examples include reptiles, fishes, and amphibians	**b.** Endotherm
_____	**5.** Warm up by basking in the sun	
_____	**6.** High metabolic rates that generate a significant amount of heat	
_____	**7.** An animal whose body temperature is mainly determined by the temperature of its environment	
_____	**8.** Have feathers, body fat, or hair for insulation	
_____	**9.** Easily lose heat to the environment	
_____	**10.** Low metabolic rate	
_____	**11.** Cools off by panting or sweating	

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Comparing Ectotherms and Endotherms (page 856)

12. Name one advantage and one disadvantage of endothermy.

Advantage: _____

_____

Disadvantage: _____

_____

13. Is the following sentence true or false? Ectothermy is a more energy-efficient way to live in cold environments. _____

Evolution of Temperature Control (page 856)

14. Circle the letter of each sentence that is true about the evolution of temperature control.

a. The first land vertebrates were ectotherms.

b. Scientists know when endothermy evolved.

c. Some biologists hypothesize that dinosaurs were endotherms.

d. Evidence suggests that endothermy evolved more than once.