

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



Key Concepts

- How is the control of body temperature an important aspect of vertebrate life?
- What is the difference between ectotherms and endotherms?

Body Temperature and Homeostasis (pages 854–855)

- Circle the letter of each sentence that is true about body temperature.
 - Essential life functions in animals can be carried out most efficiently at any temperature.
 - If muscles are too cold, they may contract slowly.
 - If an animal gets too hot, its muscles will work more efficiently.
 - The control of body temperature is important for maintaining homeostasis.
- List three features that vertebrates need in order to control their body temperature.
 - _____
 - _____
 - _____

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 b. Endotherm
_____ 4. Examples include reptiles, fishes, and amphibians	
_____ 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	

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.