



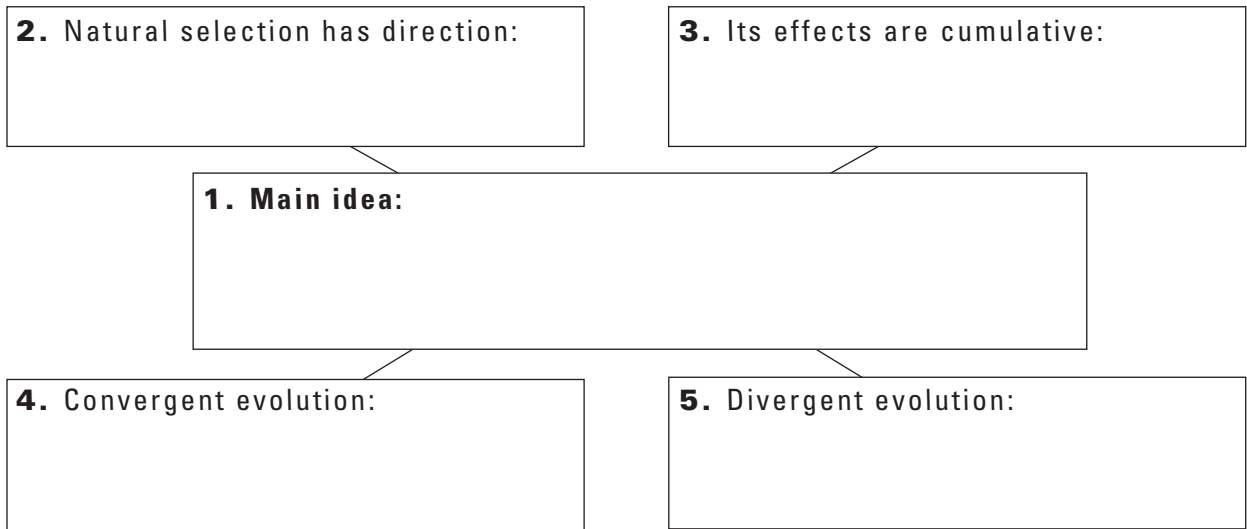
SECTION 11.6 PATTERNS IN EVOLUTION Study Guide

KEY CONCEPT Evolution occurs in patterns.

VOCABULARY table with terms: convergent evolution, coevolution, punctuated equilibrium, divergent evolution, extinction, adaptive radiation.

MAIN IDEA: Evolution through natural selection is not random.

Fill in the Main Idea in the center of the Main Idea Web below. Then take notes based on the phrases in the surrounding boxes.



MAIN IDEA: Species can shape each other over time.

In the table below, take notes about two ways in which species can coevolve.

Table with 3 columns: Type of Coevolution, How It Works, Example. Rows include: 6. beneficial relationship, 7. evolutionary arms race.

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## STUDY GUIDE, CONTINUED

**MAIN IDEA:** Species can become extinct.

In the table below, take notes about background and mass extinctions.

Type of Extinction	Possible Causes	Outcome
8. background extinction		
9. mass extinction		

**MAIN IDEA:** Speciation often occurs in patterns.

- 10.** The theory of punctuated equilibrium states that relatively brief episodes of \_\_\_\_\_ are followed by long periods of little evolutionary \_\_\_\_\_.
- 11.** Adaptive radiation is a process in which one ancestral species diversifies into many \_\_\_\_\_ species.
- 12.** Adaptive radiation occurred after the extinction of the dinosaurs, because they left a wide range of \_\_\_\_\_ into which mammals could diversify.

**Vocabulary Check**

- 13.** *Converge* means “to come together” and *diverge* means “to branch out.” How do these meanings apply to the terms *convergent* and *divergent evolution*?

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- 14.** The prefix *co-* means “together.” How does this meaning apply to the term *coevolution*?

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- 15.** *Punctuate* means “to interrupt periodically.” How does this meaning apply to the term *punctuated equilibrium*?

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