

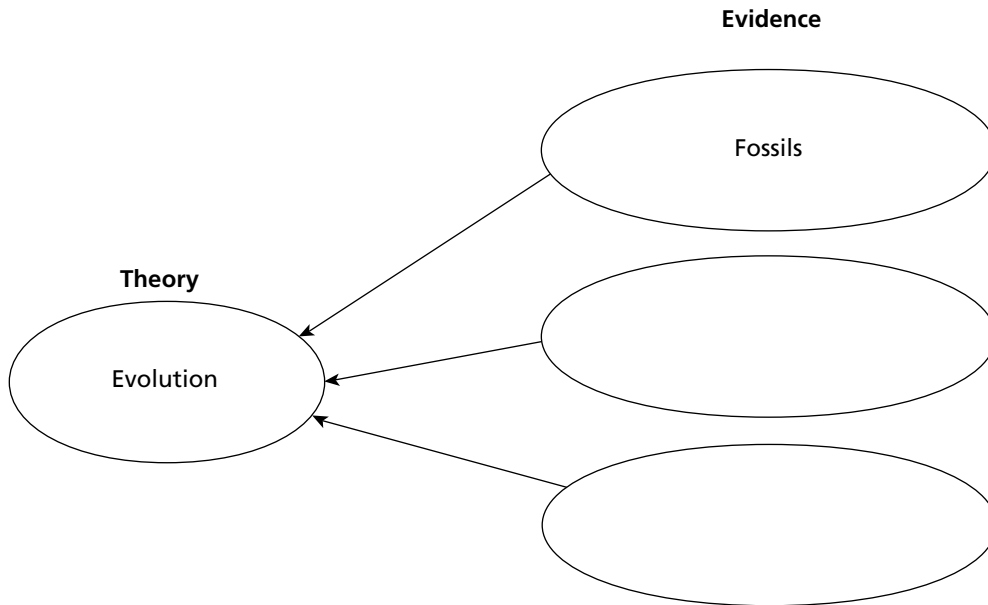
Changes Over Time ▪ *Guided Reading and Study*

Evidence of Evolution

This section tells how scientists decide which living things are related.

Use Target Reading Skills

As you read, identify the evidence that supports the theory of evolution. Write the evidence in the graphic organizer.



Interpreting the Evidence

1. What three things provide evidence that organisms have changed over time?

Changes Over Time

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Evidence of Evolution *(continued)*

2. Similar body structures that related species have inherited from a common ancestor are called _____.
3. What similarities in development lead scientists to infer that opossums, chickens, salamanders, and fish share a common ancestor?

4. Why do scientists classify fish, amphibians, reptiles, birds, and mammals together in one group?

Inferring Species Relationships

5. Is the following sentence true or false? The more closely related species are, the more similar their DNA sequences. _____
6. What have scientists learned about the elephant shrew based on DNA evidence?

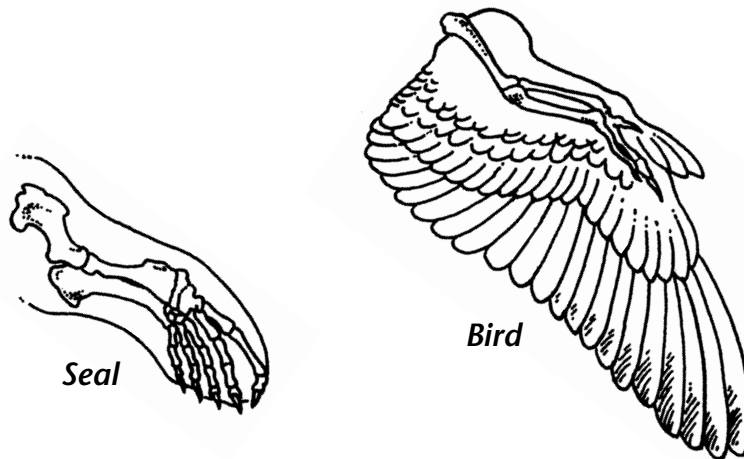
7. Circle the letter of each sentence that is true about evolutionary relationships of organisms.
 - a. DNA comparisons show that dogs are more similar to coyotes than to wolves.
 - b. Scientists had already made good conclusions about the evolutionary relationships of dogs, wolves, and coyotes based on their similar structures and development.
 - c. A branching tree shows how scientists think different groups of organisms are related.
 - d. DNA evidence shows that giant pandas are more closely related to raccoons than to bears.

Changes Over Time ▪ *Review and Reinforce*

Evidence of Evolution

Understanding Main Ideas

Use the figures below to answer the questions that follow. Write your answers on a separate sheet of paper.



1. Compare and contrast the bones of a bird's wing and a seal's flipper.
2. What do scientists infer from the similarities between these two structures?
3. What do scientists call such similar structures?
4. Describe how DNA evidence might be used to confirm scientists' conclusions about any relationship between birds and seals.

Answer the following questions on a separate sheet of paper.

5. What types of evidence do scientists use to determine evolutionary relationships among groups?
6. What do similarities in the early development of organisms suggest?

Building Vocabulary

Fill in the blank to complete each statement.

7. Similar structures that related species have inherited from a common ancestor are called _____ structures.
8. A(n) _____ is a diagram that shows how scientists think different groups of organisms are related.