**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_**

**Darwin and the Theory of Evolution**

**True or False**

*Write true if the statement is true or false if the statement is false. If false, correct the statement.*

\_\_\_\_\_ 1. As recently as 200 years ago, many people believed that Earth was only 6,000 years old.

\_\_\_\_\_ 2. Artificial selection occurs when nature selects for beneficial traits.

\_\_\_\_\_ 4. Malthus argued that human populations grow faster than their resources.

\_\_\_\_\_ 5. Lamarck was one of the first scientists to propose that species evolve by natural selection.

\_\_\_\_\_ 6. Lyell was one of the first to say that Earth must be far older than most people believed.

\_\_\_\_\_ 7. Lamarck's inheritance of acquired characteristics is has become a widely accepted scientific theory.

\_\_\_\_\_ 9. The term *fitness* to refers to an organism’s ability to outrun its hunters.

\_\_\_\_\_ 13. Galápagos tortoises have differently shaped shells depending on where they live.

\_\_\_\_\_ 14. Darwin's book changed science forever.

**Multiple Choice**

1. \_\_\_\_\_\_\_\_\_\_\_\_ developed the theory of evolution by natural selection.
   1. Alfred Russel Wallace
   2. Charles Darwin
   3. Jean Baptiste Lamarck
   4. Charles Lyell
2. The voyage of the *Beagle* circled the globe. This voyage lasted
   * 1. 5 months.
     2. 2 years.
     3. 4 years.
     4. 5 years.
3. Aboard the *Beagle*, Darwin served as
   1. a naturalist.
   2. the captain.
   3. the captain's first officer.
   4. the ship's doctor.
4. Where did Darwin make some of his most important observations that helped him develop his theory?
   1. England
   2. the Galápagos Islands
   3. South Africa
   4. South America
5. Who argued that human populations grow faster than the resources they depend on?
   1. Thomas Malthus
   2. Charles Lyell
   3. Jean Baptiste Lamarck
   4. Alfred Russel Wallace
6. Natural selection states that
   1. a change in a species occurs over time.
   2. nature selects the variations within a species that are most useful for survival.
   3. fitness is an organism’s ability to survive and produce fertile offspring.
   4. all of the above

**Vocabulary**

*Match the vocabulary word with the proper definition.*

**Definitions**

\_\_\_\_\_ 1. change in species over time

\_\_\_\_\_ 2. one of the first scientists to propose that species change over time

\_\_\_\_\_ 3. ship on which Darwin served as naturalist

\_\_\_\_\_ 4. his theory of evolution unifies all of biology

\_\_\_\_\_ 5. the process by which evolution occurs

\_\_\_\_\_ 6. argued that human populations grow faster than the resources they depend on

\_\_\_\_\_ 7. small volcanic islands where Darwin made many important observations

\_\_\_\_\_ 8. selecting for plants and animals with useful traits

\_\_\_\_\_ 9. argued that gradual geological processes have gradually shaped Earth’s surface

\_\_\_\_\_ 10. states that traits an organism develops during its own life time can be passed on to offspring

\_\_\_\_\_ 11. developed a theory of evolution at the same time as Darwin

\_\_\_\_\_ 12. an organism’s relative ability to survive and produce fertile offspring

**Terms**

a. artificial selection

b. Darwin

c. evolution

d. fitness

e. Galápagos Islands

f. HMS Beagle

g. inheritance of acquired characteristics

h. Lamarck

i. Lyell

j. Malthus

k. natural selection

l. Wallace

**Evidence for Evolution**

**True or False**

*Write true if the statement is true or false if the statement is false. If false, correct the statement.*

\_\_\_\_\_ 1. Fossils provide clear evidence that evolution has occurred.

\_\_\_\_\_ 2. Embryos of many different vertebrates look much more similar than the adult organisms.

\_\_\_\_\_ 3. Early horses were about the size of a fox.

\_\_\_\_\_ 4. Darwin's comparison of DNA sequences provided strong evidence of evolution.

\_\_\_\_\_ 5. Today's scientists compare the anatomy, embryos, and DNA of modern organisms to understand how they evolved.

\_\_\_\_\_ 6. Homologous structures are structures that are different in related organisms because they were inherited from a common ancestor.

\_\_\_\_\_ 7. Comparative anatomy is the study of the similarities and differences in the structures of different species.

\_\_\_\_\_ 8. Homologous embryology is the study of the similarities and differences in the embryos of different species.

\_\_\_\_\_ 9. Analogous structures are structures that are similar in related organisms.

\_\_\_\_\_ 10. Peter and Rosemary Grant were actually able to observe evolution by natural selection taking place.

\_\_\_\_\_ 11. The wings of bats and birds serve the same function and are homologous structures.

\_\_\_\_\_ 13. Biogeography is the study of how and why plants and animals live where they do.

\_\_\_\_\_ 14. The Galápagos finches have provided a tremendous amount of information about evolution.

\_\_\_\_\_ 15. DNA sequence similarities are the strongest evidence for evolution from a common ancestor.

**Multiple Choice**

1. Evidence of evolution includes
   1. DNA sequence analysis.
   2. the fossil record.
   3. anatomical evidence.
   4. all of the above
2. Examples of analogous structures are
   1. the tails of mice and rats.
   2. the limbs of humans and apes.
   3. the wings of bats and birds.
   4. all of the above
3. An example of a vestigial structure is the
   1. kangaroo pouch.
   2. human tail bone.
   3. cat forelimb.
   4. all of the above
4. The strongest evidence for evolution from a common ancestor is
   1. similar DNA sequences.
   2. similar body structures.
   3. similar embryological structures.
   4. similar fossils.
5. Island biogeography
   1. provides information on the migration and evolution of the camel.
   2. provides information on the migration and evolution of the finch.
   3. provides information on the migration and evolution of the ape.
   4. none of the above

**Vocabulary**

*Match the vocabulary word with the proper definition.*

**Definitions**

\_\_\_\_\_ 1. the strongest evidence for evolution from a common ancestor

\_\_\_\_\_ 2. shows how organisms are related by descent from common ancestors

\_\_\_\_\_ 3. structures that are similar in related organisms because they were inherited from a common ancestor

\_\_\_\_\_ 5. structures that are similar in unrelated organisms

\_\_\_\_\_ 6. provide clear evidence that evolution has occurred

\_\_\_\_\_ 7. reduced structures that are no longer used

\_\_\_\_\_ 8. the process by which a single species evolves into many new species to fill available niches

\_\_\_\_\_ 9. the study of the similarities and differences in the embryos of different species

\_\_\_\_\_ 10. the study of how and why plants and animals live where they do

\_\_\_\_\_ 11. the study of the similarities and differences in the structures of different species

**Terms**

b. analogous structure

c. biogeography

e. comparative anatomy

f. comparative embryology

g. DNA sequences

h. fossils

i. homologous structure

k. vestigial structure

**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_**

**Darwin and the Theory of Evolution**

**True or False**

*Write true if the statement is true or false if the statement is false. If false, correct the statement.*

\_T\_\_\_\_ 1. As recently as 200 years ago, many people believed that Earth was only 6,000 years old.

\_\_F\_\_\_ 2. **Artificial** selection occurs when nature selects for beneficial traits.

\_\_\_T\_\_ 4. Malthus argued that human populations grow faster than their resources.

\_\_\_\_\_ 5. Lamarck was one of the first scientists to propose that species evolve by natural selection.

\_\_T\_\_\_ 6. Lyell was one of the first to say that Earth must be far older than most people believed.

\_\_F\_\_\_ 7. Lamarck's inheritance of acquired characteristics is has become a widely **accepted** scientific theory.

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   3. fitness is an organism’s ability to survive and produce fertile offspring.
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**Vocabulary**

*Match the vocabulary word with the proper definition.*

**Definitions**

\_C\_\_\_\_ 1. change in species over time

\_\_\_H\_\_ 2. one of the first scientists to propose that species change over time

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\_\_\_K\_\_ 5. the process by which evolution occurs

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\_\_\_E\_\_ 7. small volcanic islands where Darwin made many important observations

\_\_\_A\_\_ 8. selecting for plants and animals with useful traits

\_\_\_I\_\_ 9. argued that gradual geological processes have gradually shaped Earth’s surface

\_\_\_G\_\_ 10. states that traits an organism develops during its own life time can be passed on to offspring

\_\_\_L\_\_ 11. developed a theory of evolution at the same time as Darwin

\_\_D\_\_\_ 12. an organism’s relative ability to survive and produce fertile offspring

**Terms**

a. artificial selection

b. Darwin

c. evolution

d. fitness

e. Galápagos Islands

f. HMS Beagle

g. inheritance of acquired characteristics

h. Lamarck

i. Lyell

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k. natural selection

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\_\_T\_\_ 5. Today's scientists compare the anatomy, embryos, and DNA of modern organisms to understand how they evolved.

\_\_\_F\_\_ 6. Homologous structures are structures that are **different** in related organisms because they were inherited from a common ancestor.

\_\_T\_\_\_ 7. Comparative anatomy is the study of the similarities and differences in the structures of different species.

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   1. provides information on the migration and evolution of the camel.
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**Vocabulary**

*Match the vocabulary word with the proper definition.*

**Definitions**

\_\_G\_\_\_ 1. the strongest evidence for evolution from a common ancestor

\_\_\_\_J\_ 3. structures that are similar in related organisms because they were inherited from a common ancestor

\_\_B\_\_\_ 5. structures that are similar in unrelated organisms

\_\_\_H\_\_ 6. provide clear evidence that evolution has occurred

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\_\_C\_\_\_ 10. the study of how and why plants and animals live where they do

\_\_E\_\_\_ 11. the study of the similarities and differences in the structures of different species

**Terms**

b. analogous structure

c. biogeography

e. comparative anatomy

f. comparative embryology

g. DNA sequences

h. fossils

i. homologous structure

k. vestigial structure