

## Life & Geologic Time (p. 392 – 399)

## I. Geologic Time

## **1. Define the term Geologic Time Scale.**

P. 392

Geologic Time Scale – division of Earth's history into time units based largely on the types of life-forms that lived only during certain periods

## **2. List the four major subdivisions of geologic time.**

1. Eons (Hadean, Archean, Proterozoic) Phanerozoic
  2. Eras Precambrian, (Paleozoic, Mesozoic, Cenozoic)
  3. Periods (Mnemonic Device → Next page)
  4. Epochs

**3. Match the geologic subdivision with the correct definition.**

P.393

- |                        |  |
|------------------------|--|
| 1. <u>D.</u> - Eons    | A. Second largest subdivision based on major changes in fossil types |
| 2. <u>A.</u> - Eras    | B. Smallest subdivision with a more accurate record of fossils       |
| 3. <u>C.</u> - Periods | C. Subdivision based on existing life-forms and geologic events      |
| 4. <u>B.</u> - Epochs  | D. Longest subdivision based on the abundance of certain fossils     |

Unit = Era  
Chapter = Period  
Lesson = Epoch

## **II. Organic Evolution**

## **1. Define the term organic evolution.**

Organic Evolution – process by which modern organisms have descended from ancient organisms

**2. Organisms not adapted to environmental changes are less likely to survive or reproduce.**

Circle One :       True       False

### **3. Define the term species.**

Species – group of organisms that normally reproduces only with other members of their group  
two different species mated, what would the offspring be like?

**4. If two different species mated, what would the offspring be like?**

Sterile (Horse + Donkey → Mule)

Science Vs. Religion

Next page over! ↗

5. Who developed a theory of evolution based on natural selection?

P. 395

Charles Darwin

On The Origin Of Species  
(1859) → Big Hit!

6. Define the term natural selection.

Reader's Digest Book

Natural Selection - organisms with adaptations that are well-suited for their environment will have higher chances of surviving + reproducing

7. Give an example of an organism that can produce more offspring than can survive.

Humans  
(Overpopulation!!!)

Lemmings

8. List four resources that an organism would compete for to survive.

1. Food
2. Water
3. Space / Territory
4. Sunlight (plants)  
↳ (Key for survival.)

Males → Lek Behaviors

9. Is genetic variation present before or after an environmental change? (Think giraffes.)

Circle One :

Before

After

Ex: Peppered Moths

P. 396

10. Define the term artificial selection.

Artificial Selection - human intervention to select desirable traits of organisms

11. What will humans evolve into in the future? (Not in the book.)

Depends on how the environment changes

Adapt or Die!

III. Plate Tectonics & Earth History

1. What supercontinent formed at the end of the Paleozoic and caused a mass extinction?

P. 399

Pangaea

2. Does the formation of supercontinents occur abruptly or slowly?

Circle One :

Abruptly

Slowly

99.9% of all  
organisms on Earth  
are extinct