

1. Darwin's famous book, *Origin of Species*, was published in:

- 1659 1709 1759 1809 1859 1909 1959

2. Charles Darwin knew his own theory was incomplete because it lacked explanations both of how inheritance was not blending, and of why:

- A. dominant genes were more common. B. variation did not disappear. C. all mammals have nipples.
 D. human anatomy was similar to that of apes. E. evolution was slow and gradual.

3. Which one was NOT part of Darwin's theory of evolution?

- A. Inheritance of acquired characteristics B. Natural selection
 C. Descent from a common ancestor D. Adaptation of a species to environmental change
 E. Variation among members of a species D. Differential reproduction

4. Which is true about natural selection?

- A. Many people are uncomfortable with the idea because it suggests that evolution is a random process.
 B. Both Darwin and Wallace thought of it C. by itself it tends to reduce variation
 D. It cannot work if there is no variation E. ALL of these are true

5. The factor for shortness in peas ('dwarf') is 'weak' or recessive. When Mendel crossed pure-bred tall, normal pea plants with short dwarf ones, the hybrids were:

- A. all tall B. all short C. in the ratio of 3 tall to 1 short
 D. two-thirds tall, one third short E. All intermediate

3 points Match the name to the idea: (each is used once)

- T Malthus C Lyell Herbert Spencer T H Huxley G Mendel Cuvier

- _____ was Darwin's "Bulldog", who defended his ideas against those who opposed evolution
 _____ geology, uniformitarianism, gradualism, anti-catastrophism; Darwin read his book at sea
 _____ each physical characteristic of an individual is determined by two factors, one from the female parent and one from the male; only one or the other of these two can be passed to an offspring
 _____ catastrophism explains the strata and the fossils in them
 _____ used the term 'evolution', meaning social change, before Darwin wrote about it
 _____ *On Population*, species over-reproduce leading to a struggle for survival

2 points: Darwin's idea of natural selection was based on two ideas: variation and differential reproduction: use these two ideas to explain how giraffes could evolve a longer neck over many generations. (Note: there should be no genetics in your answer).

Print your first name _____ Last Name _____

BONUS: how was Lamarck's theory different from what you answered above?

