

CHAPTER 7 THE THEORY OF EVOLUTION

7.1 BIOLOGICAL CHANGE OVER TIME p. 282

What is the source of genetic variation?

_____ Describe the three types of mutations.

Neutral _____

_____ Harmful

—

Beneficial _____

_____ Explain why harmful mutations do not accumulate over time and cause harm to populations.

ARTIFICIAL SELECTION:

How have modern genetic engineering methods changed artificial selection of potentially valuable traits?

The Power of Artificial Breeding

p. 287

#1-3

7.2 THE EVOLUTION OF AN IDEA p. 288

In the mid 1700s, what did Buffon question?

Explain Lamarck's principle of use and disuse.

Explain Lamarck's principle of the inheritance of acquired characteristics.

Explain why Lamarck's theory is flawed.

_____ Lamarck was a student of Buffon. List his three contributions to our understanding of evolution.

1 _____

2 _____

3 _____

What is a fossil?

How are fossils formed?

_____ Explain the famous paleontologist, Cuvier's (1769 – 1832) observations of the fossil record like the one depicted to the right.

Explain Cuvier's theory of **Catastrophism** which was his analysis of these observations.

Lyell (1797 – 1875) revolutionized geology with his principles of **uniformitarianism** in 1830:

_____ p. 293 #4, 5, 10