

## Chapter 15 - The Theory of Natural Selection

Name \_\_\_\_\_

*This chapter introduces us to a theory on the mechanisms for evolution, the evidence used to support the theory, and how it is refined as new evidence is discovered.*

**I = Individual**

**P = Pair**

**G = Group of three or four**

- I** 1. Read pg. 418 and 422. Who developed the basis for modern evolutionary theory, when did this theory come out, and what was the title of his book that explained his theory?
- I** 2. Read page 420 and 421. What did Darwin call his theory and what four basic principles were proposed that explain this? Also, give a brief summary sentence explaining each principle.
- I** 3. Section 5.2, pages 423 - 428 give five evidences used to support evolution. List the evidence.
- P** 4. Read pp. 424 - 425. Compare and contrast homologous structures with vestigial structures and give an example of each.

- P** 5. Darwin suggested that “adaptations” were important for natural selection to work. Read pp. 428 - 429 and list three types of adaptations with a brief description of what they are.
- P** 6. Modern scientists attribute five mechanisms of evolution. Scan pages 431 - 434, skip the heading on Population Genetics, and jot down the five mechanisms.
- G** 7. On page 438, each person read one paragraph to the others, aloud. Discuss and define *Speciation* (pg. 437), jot down the two types of speciation, and a brief explanation of each type.
- G** 8. Student 2 read aloud the paragraph on “Rate of Speciation”, page 440. Student 4 read aloud the paragraphs on page 441. As a group, discuss and write down “What is the rate of speciation?” “What are the two theories related to this rate?” and “Briefly explain the differences between each of these theories.”