**Identify requirements to be a species**

Grab a book, turn to page 411. Read pages 411-414 and answer the following questions:

1. Identify two definitions of species used in evolutionary biology.
2. Summarize a general process by which one species can evolve into two species.
3. Relate extinction to changes that occur in the numbers and types of species over time.
4. Would the biological species concept be using for classifying bacterial species? Explain.
5. Describe the relationship between speciation and extinction in terms of a family “tree” of descent.

**Explain shared evolutionary relationships between organisms**

Grab a book, turn to page 427. Read pages 427-431. Answer the following questions:”

1. Identify the kinds of problems that arise when scientists try to group organisms by similarities.
2. Relate classification to phylogeny.
3. Describe the method of cladistics.
4. Identify the kids of evidence used to infer phylogenies.
5. Explain how the outgroup in a cladogram relates to the difference between ancestral and derived characters.