Chapter 14 Study Guide

# Important Ideas

* Organisms are categorized into species based on defined criteria. (Modules 14.1 – 14.3)
* Several evolutionary mechanisms drive the process of speciation over time and space. (Modules 14.3 – 14.11)

Learning Objectives

Upon successful completion of **Chapter 14** you will be able to

1. Differentiate between speciation and microevolution.
2. Define ‘species’ according to the biological definition of a species (the biological species concept).
3. Distinguish between the different ways scientists define a “species”.
   1. Biological species concept
   2. Morphological species concept
   3. Ecological species concept
   4. Phylogenetic species concept
4. Differentiate between and recognize examples of reproductive isolating mechanisms, and given a scenario, identify whether a barrier is pre-zygotic or post-zygotic.
5. Describe and illustrate the conditions necessary for sympatric, and allopatric speciation.
6. Explain how scientists can observe speciation in progress.
7. Compare and contrast the punctuated equilibrium and gradualist models of speciation.