1. Define Evolution:
2. The key idea in natural selection is that individuals with advantageous traits will:
3. What are Darwin’s 4 postulates?
4. Be able to define the following terms AND be able to relate them to the image below:



* 1. Speciation
	2. Adaptive radiation
	3. Descent with modification
1. **True or False:** A(n) mutation always aids an organism in its environment. If false, what word should replace the underlined one?
2. **True or False:** Most mutations are harmful. If false, explain why you think so.
3. Explain how the following forms of evidence demonstrate/prove evolution:
	1. Fossils
	2. Homologous Structures
	3. DNA
	4. Vestigial Structures
	5. Biogeography
	6. Comparative Embryology
4. Define Convergent Evolution and provide an example.
5. When looking at sedimentary rock, the layers (strata) closest to the center of the earth are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than those strata closest to the earth’s surface.
6. Which pair of organisms probably has the most similar DNA?
	1. Fish and humans
	2. Snakes and chickens
	3. Oak trees and elephant
	4. Cats and dogs
7. Explain Lamarck’s idea of Evolution and give an example.
8. Who is the “father of Evolution” and author of “The Origin of Species”?
9. Describe the set-up and result of the Miller & Urey “early life“ experiment.
10. Which is used to provide evidence for the theory of evolution?
A. fossils
B. anatomy and embryology
C. biochemistryD. all of the above
11. Explain how antibiotic resistance relates to evolution.
12. Describe the endosymbiont theory of eukaryotic cells. What organelles provide evidence to support this theory?
13. Describe how reproductive isolation contributes to speciation. What are the 3 mechanisms of reproductive isolation?
14. The most recent common ancestor for K and M is: (choose a letter from the diagram below)



1. Evolution takes place more rapidly among organisms that reproduce sexually rather than those that reproduce asexually. This is true because:

A. sexual reproduction is more hazardous than asexual reproduction, and only the fit survive.

B. asexual reproduction occurs only in one celled organisms.

C. sexual reproduction in more likely to produce a variety of offspring.

D. sexual reproduction is slower than asexual reproduction in producing offspring.

1. Provide at least 2 examples of vestigial structures currently present in the human body.
2. Explain what type of natural selection each of the following examples describes:
	1. peppered moth:
	2. human birth weight:
	3. finch beak size:
3. What conditions must be met in order to establish Hardy-Weinberg Equilibrium?
4. What is the difference between punctuated equilibrium and gradualism?
5. Draw what the graph for ideal (Hardy-Weinberg) allele frequencies in a population would look like. Then, draw the graphs for stabilizing, directional, and disruptive selection. (you can use another sheet if you run out of room)