

## Section 14.1, 14.2, & 14.3 Guided Reading Questions

Read sections 14.1, 14.2, & 14.3 in your textbook. While you are reading answer the questions below.

### Section 14.1 – Summarize the historical significance and findings of other scientists and Darwin’s travels on the development of the modern theory of evolution.

1. How did the work of Jean Baptiste Lamarck, Charles Lyell, Thomas Malthus and Alfred Russell Wallace influence Darwin as he developed his theory of evolution?

	<b>Jean Baptiste Lamarck</b>	<b>Charles Lyell</b>	<b>Thomas Malthus</b>	<b>Alfred Russell Wallace</b>
What subject did this scientist study?				
Which ideas influenced Darwin?				
How did Darwin incorporate this scientist’s ideas into his theory of evolution?				

2. What observations did Darwin make about organisms living on the Galapagos Islands compared to the organisms living on the mainland of South America?

### **Section 14.3** –

3. Describe the two main points of Darwin's theory → Natural Selection and Decent with Modification:  
Natural Selection -  
Decent with Modification -

4. Describe the purpose of artificial selection. How is it different than Natural Selection?

### **Section 14.2 – Explain the evidence for evolution with regards to the fossil record, geographic distribution of organisms, anatomical structures, embryology, and molecular biology**

5. Why are older fossils generally found in deeper rock layers than younger fossils?
6. According to evolutionary theory, why is Australia home to more marsupial mammal species than placental mammal species?
7. Explain the difference between homologous and vestigial structures. Which type of structure indicates that some species are more closely related?  
Homologous Structures -  
Analogous Structures -
8. What is embryonic development? How does embryonic development show evolutionary relationships between organisms?

9. What can you infer about the relationship between organisms that differ significantly in their DNA sequences compared to organisms that have very similar DNA?