*Use the information provided in Chapter 22 (p.452-467) to answer the following questions. You may find the following Bozeman podcasts helpful:* [*Natural Selection*](http://www.bozemanscience.com/001-natural-selection)*,* [*Examples of Natural Selection*](http://www.bozemanscience.com/002-examples-of-natural-selection)*,* [*Behavior and Natural Selection*](http://www.bozemanscience.com/026-behavior-and-natural-selection)*,* [*Evolution Continues*](http://www.bozemanscience.com/evolution-continues)*,* and[*Scientific Evidence for Evolution*](http://www.bozemanscience.com/004-evidence-for-evolution)*.*

1. **Discuss** the two definitions of evolution and **explain** why it can be viewed as both a pattern and process.
2. **Discuss** how the work of the following individuals set the stage for the Darwinian revolution.

* Carolus Linnaeus
* Georges Cuvier
* Charles Lyell
* Jean-Bapiste Lamarck

*During his voyage on the HMS Beagle, Darwin collected many specimens and made many observations that led him to propose the mechanism by which species change over time.*

1. **Define** the terms “adaptation” and “natural selection” and **explain** the relationship between the two.
2. **Summarize** the process of evolution, as proposed by Charles Darwin.
3. **Explain** how Darwin used artificial selection in his arguments to support natural selection.

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| **Evidence** | **How does this evidence support the claim that species change over time?** |
| Direct Observations of Evolutionary Change |  |
| Anatomical Homology |  |
| Molecular Homology |  |
| Convergent Evolution |  |
| The Fossil Record (Transitional Fossils) |  |
| Biogeography |  |

*Complete the following table by describing how each piece of evidence supports the claim that species change over time.*

1. Discuss why we continue to refer to evolution as a “theory”.
2. How does the concept of descent with modification explain both the unity and the diversity of life?
3. Explain how the following statement is inaccurate: “Antibiotics have created drug resistance in MRSA.”