Connecting to the *Next Generation Science Standards* (NGSS Lead States 2013):

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| 3-LS4-1Biological Evolution: Unity and Diversity  <https://www.nextgenscience.org/dci-arrangement/3-ls4-biological-evolution-unity-and-diversity>  The chart below makes one set of connections between the instruction outlined in this article and the *NGSS*. Other valid connections are likely; however, space restrictions prevent us from listing all possibilities. The materials, lessons, and activities outlined in the article are just one step toward reaching the performance expectation listed below.  Performance Expectation:  3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. | |
| Dimension | Connections to Classroom Activity |
| Science and Engineering Practice |  |  |
| Analyzing and Interpreting Data  *Compare and contrast data collected by different groups in order to discuss similarities and differences in their findings.*  Constructing Explanations  *Use evidence (e.g., measurements, observations, patterns) to construct or support an explanation.*  Developing and Using Models  *Develop and/or use models to describe and/or predict phenomena.* | * Students use their Cliff Treasures Data Sheet to compare and contrast their fossil data with other groups to find similarities and differences in their findings. * Students write a letter to describe what the environment was like and what organisms existed in the Mid-Atlantic region during the Miocene. * Students develop a model to explain what the environment was like and what organisms existed in the Mid-Atlantic region during the Miocene. |  |
| Disciplinary Core Idea |  |  |
| [LS4.A: Evidence of Common Ancestry and Diversity](http://www.nap.edu/openbook.php?record_id=13165&page=162)   * Some kinds of plants and animals that once lived on Earth are no longer found anywhere. * [Fossils provide evidence about the types of organisms that lived long ago and also about the nature of their environments.](http://www.nap.edu/openbook.php?record_id=13165&page=162) | Students will work to identify marine fossil specimens and use evidence to make inferences about what the environment was like in the past. |  |
| Crosscutting Concepts |  |  |
| Scale, Proportion, and Quantity  *Observable phenomena exist from very short to very long time periods.*  Patterns  *Patterns can be used as evidence to support an explanation.* | * Students will use the geologic time scale to compare when biological events happened in the past. * The patterns found in fossil distribution are used as evidence that the climate in the area has changed. |  |

**Connections to the *Common Core State Standards* (NGAC and CCSSO 2010):**

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| **ELA**  [CCSS.ELA-LITERACY.W.3.2.D](http://www.corestandards.org/ELA-Literacy/W/3/2/d/) Provide a concluding statement or section.  [CCSS.ELA-LITERACY.W.3.2](http://www.corestandards.org/ELA-Literacy/W/3/2/) Write informative/explanatory texts to examine a topic and convey ideas and information clearly.  [CCSS.ELA-LITERACY.W.3.2.B](http://www.corestandards.org/ELA-Literacy/W/3/2/b/) Develop the topic with facts, definitions, and details.  [CCSS.ELA-LITERACY.W.3.2.C](http://www.corestandards.org/ELA-Literacy/W/3/2/c/) Use linking words and phrases (e.g., *also*, *another*, *and*, *more*, *but*) to connect ideas within categories of information. | * Students will provide a concluding statement in their letter * Students will write an informative text to explain what the environment was like during the Miocene * Students will develop their description of past environments with details of what species were present. * Students will use linking words and phrases to connect ideas in their letters. |