

Dear 8th Graders,

Science is the method of investigation and explaining the world around us by means of natural causation and providing evidence. Your learning will not be limited to simply reading about science. You will be an active participant in this process. You will have hands-on experiences while learning how to make scientific observations, formulate hypotheses, analyze data, and draw conclusions.

The content that will be covered throughout the year is extensive. The standards are rigorous and the expectations are high. These standards are derived from NYS Science Intermediate Level Core Curriculum, NYC Scope and Sequence, and the National Common Core Learning Standards. By teaching toward these standards you will emerge more prepared for high school and college. By the end of this year, you will have a greater appreciation for science and a more sophisticated ability to inquire about the world around you.

I look forward to an exciting year of science exploration with you! Sincerely,

Ms. Cardo

Students will conduct a research report using at least one reputable source (ex: NY Times, Discovery Kids) on the following topics: Plate tectonics and Natural Selection

Questions:

1. Describe, in 3 paragraphs AND with reputable sources, how scientists show evidence that organisms change over time and how this connects with the theory of plate tectonics.
2. Name at least two scientists who have made major contributions to describe how organisms change over time.
3. Describe the scientists' contributions.
4. How does this affect the way you view all the organisms that are in existence today?

Standards

Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to permit its survival. Extinction of species is common. Fossils are evidence that a great variety of species existed in the past. (3.2b)

The Theory of Plate Tectonics explains how the "solid" lithosphere consists of a series of plates that "float" on the partially molten section of the mantle. Convection cells within the mantle may be the driving force for the movement of the plates. (2.2e)

Rubric

	4	3	2	1
Student Response and Citing Reputable Sources	Student thoroughly describes response in 4 or more paragraphs and cites more than 1 reputable source.	Student describes response in 3 paragraphs and cites 1 reputable source.	Student states response in less than 3 paragraphs and cites 1 reputable source.	Student unclearly states response in less than 2 paragraphs with no reference of any sources.
Connection between the theory of plate tectonics and natural selection	A clear connection is made between the theory of plate tectonics and natural selection.	A connection is made between the theory of plate tectonics and natural selection.	A vague connection is made between the theory of plate tectonics and natural selection.	An unclear or no connection is made between the theory of plate tectonics and natural selection.