# A Living Earth..... Plate Tectonics

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<td>The earth is not a static, unchanging place. Scientists have spent many years uncovering how our planet was formed and how it is continually undergoing change. The theory of plate tectonics unifies many of the ideas about our changing planet. The earth’s crust consists of many broken up pieces that fit together like jigsaw pieces. These pieces are called plates. These plates are constantly in very slow motion, like rafts on a pool. They jostle against each other, and at their boundaries, we see the results of this powerful movement as mountains, rift valleys, volcanoes, earthquakes and volcanic islands.</td>
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| Benchmark | SC.7.E.6.5 Explore the scientific theory of plate tectonics by describing how the movement of Earth’s crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building. |

| Objective | Student will be able to describe how the movement of tectonic plates causes changes in earth’s surface. |

| Duration | 1-2 hours. |

| Materials | 1. Plate tectonics diagram (attached)  
2. Science Notebook and pencil or pen. |

| Procedures | 1. Look at the diagram of the earth’s tectonic plates  
2. Note the directional arrows that help you see which direction the plates are moving. Notice that the plates extend far beyond the coastlines of the continents.  

**Discussion Questions:**
1. Are the Eurasian plates and North American plates moving towards or away from each other? How do you know?  
2. What kind of movement is happening between the Pacific and North American Plates?  
3. What do you think ocean floor might look like at the boundary of the North American and Eurasian Plates?  
4. How would this be different at the boundary between the North American and Pacific Plates?  
5. Compare the Atlantic and Pacific Oceans. Imagine you could leap forward in time 200 million years. What do you think the oceans will look like if the tectonic plates continue to move in this pattern? |

| FCAT Practice | 1. At a mid-ocean ridge, two tectonic plates are moving apart. What would you most likely find at a mid-ocean ridge?  
A. a transform boundary with many earthquakes  
B. new seafloor created by cooling magma  
C. folded mountain ranges  
D. subduction zones  

Answer: B |
