Unit E: Planet Earth

Name:_____ Date:_____

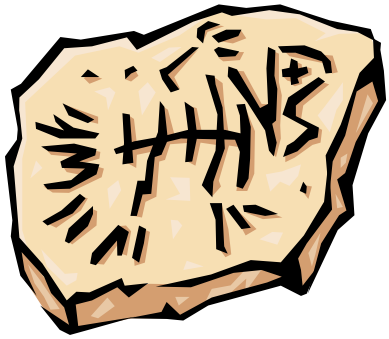
PLANET EARTH

UNIT OVERVIEW

During the planet earth unit, you will look at three major areas that have influenced our understanding of the formation of the planet.

1. The first area, which deals with minerals, rocks and the rock cycle, and erosion, has you focus on the manipulation and formation of the different materials.

2. The second area deals with how volcanoes, earthquakes, and mountains are created and how this process has changed and shaped the surface of the planet. Are these random events? Can you identify patterns where these events will occur on the Earth? What could be the driving force behind these natural phenomenons?



3. The final area in the unit has you look into how fossils are formed and what they can tell us about Earth's history. Can you use what you have learned to predict how and where to search for fossils?

As you work this unit, you will need to provide evidence of your understanding of concepts that related to environmental chemistry. Use this table to keep track of your progress and where you have shown clear understanding of each concept.

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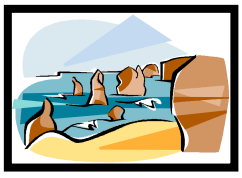
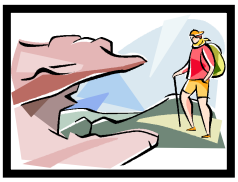
Science 7 Planet Earth Knowledge Outcomes	Still Learning	On My Way	With Ease
1. Describe and demonstrate methods used in the scientific study of Earth and in observing and interpreting its component materials.			
The big ideas/Enduring Understandings (Rocks)	**Include evidence.**		
Can I explain the need for common language and strategies in describing rocks and minerals?			
Can I apply suitable terms and strategies in describing sample materials? *(e.g. lustre, transparency, cleavage/fracture, Mohs' hardness scale)*			
Can I interpret models and provide evidence for a layered structure of Earth's interior?			
Can I investigate and interpret evidence that Earth's surface undergoes both gradual and sudden change? *(e.g. earthquakes, volcanoes and landslides--sudden change; glacial and river erosion--gradual change)*			
Important to know and be able to do (Sand)	**Include evidence.**		
Can I identify and explain the purpose of different tools and techniques used in the study of Earth? *(e.g. seismographs, coring drills, methods used in oil and gas exploration)*			



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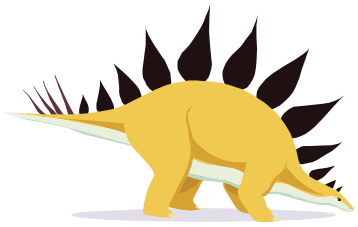
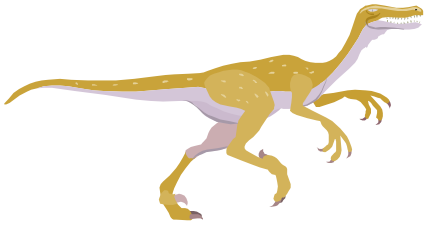
Science 7 Planet Earth Knowledge Outcomes	Still Learning	On My Way	With Ease
2. Identify evidence for the rock cycle, and use the rock cycle concept to interpret and explain the characteristics of particular rocks.			
The big ideas/Enduring Understandings (Rocks)	**Include evidence.**		
Can I distinguish between rocks and minerals?			
Can I describe characteristics of the three main classes of rocks—igneous, sedimentary and metamorphic?			
Can I investigate and interpret examples of weathering, erosion and sedimentation?			
Important to know and be able to do (Sand)	**Include evidence.**		
Can I describe local rocks and sediments, and interpret ways they may have formed?			





Science 7 Planet Earth Knowledge Outcomes	Still Learning	On My Way	With Ease
3. Investigate and interpret evidence of major changes in landforms and the rock layers that underlie them			
The big ideas/Enduring Understandings (Rocks)	**Include evidence.**		
Can I describe evidence for crustal movement patterns? *(e.g. earthquakes and volcanic action along the Pacific Rim; evidence of the movement of the Pacific plate relative to the North American plate)*			
Important to know and be able to do (Sand)	**Include evidence.**		
Can I investigate and interpret patterns in the structure and distribution of mountain formations?			
Can I interpret the structure and development of fold and fault mountains?			
Can I predict the results of gradual changes over extended periods of time? *(e.g. erosional change over a year, century, etc.; continental drift over one million years)*			

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4. Describe, interpret and evaluate evidence from the fossil record.			
The big ideas/Enduring Understandings (Rocks)	**Include evidence.**		
Can I describe the nature of different kinds of fossils, and hypothesize how they were formed? *(e.g. kinds of rocks where fossils are likely to be found; portions of living things most likely to be preserved; means of preservation)*			
Important to know and be able to do (Sand)	**Include evidence.**		
Can I describe patterns in the appearance of different life forms, as indicated by the fossil record? *(e.g. .interpret a geological time scale)*			
Can I identify uncertainties in interpreting individual items of fossil evidence?			
Can I explain and apply methods used to interpret fossils?