

Geology Power Standards by Quarter (6/5/09)

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Goal 1 Inquiry	1. Conduct experiments, collect, organize and analyze data	1. Conduct experiments, collect, organize and analyze data	1. Conduct experiments, collect, organize and analyze data	1. Conduct experiments, collect, organize and analyze data
Goal 2 Content	<p>Unit 1: Introduction to Geology 1. Describe the four spheres of the Earth system and how they interact and change.</p> <p>Unit 2: Cartography 2. Use map coordinates and locate designated areas on a map. 3. Calculate elevation from the contour lines on a map. 4. Describe how location is determined using a GPS system. 5. Analyze information related to computer mapping and data systems (GIS mapping).</p>	<p>Unit 3: Geochemistry 1. Recognize the chemical composition of common rocks and minerals. 2. Identify characteristics and properties of minerals. 3. Compare and contrast igneous, sedimentary and metamorphic rocks. 4. Identify the environmental conditions that formed igneous, sedimentary and metamorphic rocks. 5. Interpret and summarize the rock cycle.</p>	<p>Unit 4: Constructional Forces 1. Analyze the theory of plate tectonics. 2. Summarize the cause and effects of earthquakes. 3. Compare different characteristics of magma and lava.</p> <p>Unit 5: Destructional Forces 4. Differentiate between chemical and mechanical weathering. 5. Compare and contrast the basic types of erosion.</p>	<p>Unit 6: Resources 1. Compare and contrast renewable and non-renewable resources. 2. Identify ways to conserve groundwater.</p> <p>Unit 7: Earth's History 1. Interpret the rock record in terms of correlation of rock strata. 2. Compare and contrast various absolute and relative dating methods. 3. Construct a geologic time line with significant tectonic and biological events.</p>
Goal 3 Connections	1. Describe how scientific knowledge may change with new information over time (e.g., plate tectonics, early warning systems for earthquakes and volcanoes)	1. Identify careers that require the knowledge of geology.	1. Recognize the contributions of scientists (of various ethnic and gender groups) have added to our understanding of geology.	1. Describe the role of humans in management of the Earth's resources.