

Rangely RE-4 Curriculum Development
5TH Grade Science

Unit Title	As the Earth Changes		Length of Unit	4 weeks
Focusing Lens(es)	Transformation	Standards and Grade Level Expectations Addressed in this Unit	SC09-GR.5-S.3-GLE.2 SC09-GR.5-S.3-GLE.3	
Inquiry Questions (Engaging-Debatable):	<ul style="list-style-type: none"> How do changes on the Earth's surface impact humans? (SC09-GR.5-S.3-GLE.2; IQ.2) 			
Unit Strands	Earth Science			
Concepts	process, force, change, impact, technology, tectonic, erosion, earth' surface			

Generalizations My students will Understand that...	Guiding Questions	
	Factual	Conceptual
Tectonic and erosional forces change the earth's surface. (SC09-GR.5-S3-GLE.2-EO.a)	What are some tectonic and erosional forces that can change surface of the earth?	How do tectonic and erosional forces work together to form the surface features of the earth? How does Earth's surface change? (SC09-GR.5-S.3-GLE.2; IQ.1)
Sudden changes as well as changes over geologic time have profound impacts on humans. (SC09-GR.5-S3-GLE.2-EO.a)	What are the forces that cause the Earth's surface to change? (SC09-GR.5-S3-GLE.2; IQ.1)	How have humans learned to adapt to changes to the earth's surface. (SC09-GR.5-S3-GLE.2-I.2) What are the benefits and dangers to humans as the earth's surface changes? (SC09-GR.5-S3-GLE.2; IQ.2)
Technology can predict changes in the earth's surface. (SC09-GR.5-S3-GLE2; RA.4)	What instruments are used to predict changes in the earth's surface?	How can predicting changes in the earth's surface benefit humans?

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Critical Content: My students will Know...	Key Skills: My students will be able to (Do)...
<ul style="list-style-type: none"> • How plate tectonics, erosion, deposition, solar influences, climate, and human activity change the earth's surface (SC09-GR.5-S.3-GLE.2-EO.a) <ul style="list-style-type: none"> ○ a. Analyze and interpret data identifying ways Earth's surface is constantly changing through a variety of processes and forces such as plate tectonics, erosion, deposition, solar influences, climate, and human activity (DOK 1-2) CMAS • The benefits and dangers to humans as Earth's surface constantly changes (SC09-GR.5-S.3-GLE.2; RA.1) • Examples of how communities compensate for the effects of our changing Earth (SC09-GR.5-S.3-GLE.2; RA.2) • Details of emergency plans that cities create in order to plan for earthquakes, flooding, volcanic eruptions, tornadoes, and other natural events (SC09-GR.5-S.3-GLE.2; RA.3) • The development of technology that led to tools and the establishment of measurement standards (SC09-GR.5-S.3-GLE.2; RA.3) 	<ul style="list-style-type: none"> • Analyze and interpret data (SC09-GR.5-S.3-GLE.2-EO.a,b) <ul style="list-style-type: none"> ○ a. Analyze and interpret data identifying ways Earth's surface is constantly changing through a variety of processes and forces such as plate tectonics, erosion, deposition, solar influences, climate, and human activity (DOK 1-2) CMAS ○ b. Develop and communicate an evidence based scientific explanation around one or more factors that change Earth's surface (DOK 2-3) CMAS • Develop and communicate an evidence based scientific explanation (SC09-GR.5-S.3-GLE.2-EO.b) (SC09-GR.5-S.3-GLE.3-EO.a) <ul style="list-style-type: none"> ○ a. Develop and communicate an evidence-based scientific explanation for changes in weather conditions (DOK 1-3) CMAS • Ask testable questions (SC09-GR.5-S.3-GLE.2; N.1) • Assess and provide feedback on a peer's scientific explanations (SC09-GR.5-S.3-GLE.2; N.3) <ul style="list-style-type: none"> ○ Ask testable questions about how the earth surface changes. (DOK 2) CMAS ○ Assess and provide feedback on other's scientific explanations about factors that change Earth's surface, pushing for reasoning based on evidence and scientific principles (DOK 2-3) CMAS ○ Utilize a variety of media sources to collect data for analysis regarding Earth processes and the changing surface. (DOK 1-2) CMAS

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<p>Critical Language: includes the Academic and Technical vocabulary, semantics, and discourse which are particular to and necessary for accessing a given discipline. EXAMPLE: A student in Language Arts can demonstrate the ability to apply and comprehend critical language through the following statement: <i>“Mark Twain exposes the hypocrisy of slavery through the use of satire.”</i></p>	
<p>A student in _____ can demonstrate the ability to apply and comprehend critical language through the following statement(s):</p>	<p><i>The earth is constantly changing because of the motion of the tectonic plates, erosion, deposition, and human activity.</i></p>
<p>Academic Vocabulary:</p>	<p>forces, processes</p>
<p>Technical Vocabulary:</p>	<p>plate, tectonics, erosion, deposition, earthquake, eruption, lava, magma</p>