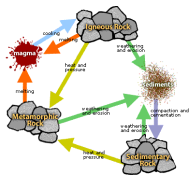
Weathering, Soil, Erosion, and Deposition

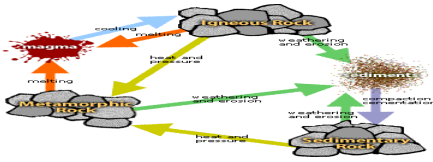
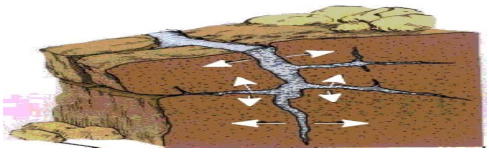
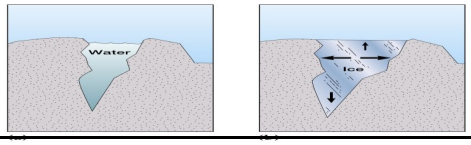
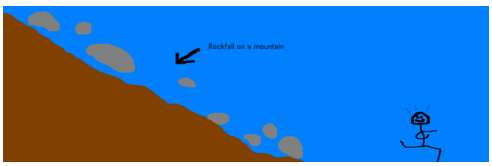


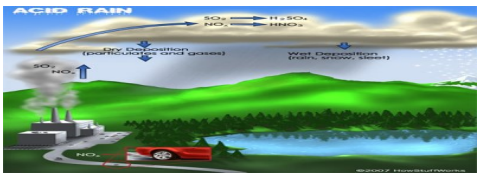
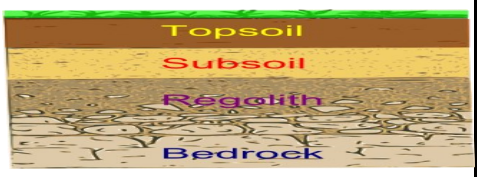
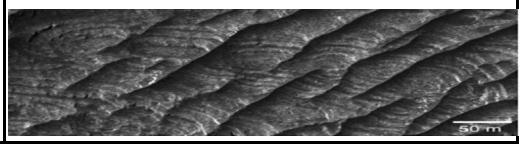
S6E5: Obtain, evaluate, and communicate information to show how Earth's surface is formed.

C. Construct an explanation of how to classify rocks by their formation and how rocks change through geologic processes in the rock cycle.

D. Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition.

E. Develop a model to demonstrate how natural processes (weathering, erosion and deposition) and human activity change rocks and the surface of the Earth.

Term	Info	Picture
rock cycle	a continuous series of events through which a rock is transformed from one type to another.	
weathering	the breakdown of rock due to rain, wind, ice, sunlight, and plants.	
erosion	the transport of fragments of rock by water, wind, ice, or gravity.	
deposition	the process in which material is laid down	
mechanical weathering (ex: water freezing or roots)	the process by which rocks break down into smaller pieces by physical means	
abrasion	the grinding and wearing away of rock surfaces through the mechanical action of other rock or sand particles	
ice wedging	mechanical weathering caused by the freezing and thawing of water that seeps into cracks in rocks	
gravity	a force of attraction between objects that is due to their masses and that decreases as the distance between the objects increases	
chemical weathering	the process by which rocks break down as a result of chemical reactions	

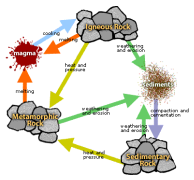
Term	Info	Picture
acid rain	precipitation that has a pH below normal and has an unusually high concentration of sulfuric or nitric acids, often as a result of chemical pollution of the air from sources such as automobile exhausts and the burning of fossil fuels	
soil	a loose mixture of rock fragments and organic material that can support the growth of vegetation	
(soil) horizons	the line where the sky and the Earth appear to meet; also a horizontal layer of soil that can be distinguished from the layers above and below it; also a boundary between two rock layers that have different physical properties	
topsoil	the surface layer of the soil, which is usually richer in organic matter than the subsoil is	
organic matter	is anything that contains carbon compounds that were formed by living organisms	
bedrock	the layer of rock beneath soil	
(soil) conservation	prevention of soil loss from erosion or reduced fertility caused by over usage, acidification, salinization or other chemical soil contamination	
contour plowing	plowing along the contours of the land in order to minimize soil erosion.	
terracing	To make or form (sloping land) into a number of level flat areas resembling a series of steps	
no-till farming	A system for planting crops without plowing, usi ng herbicides to control weeds and resulting in reduced soil erosion and the preservation of soil nutrients.	

Term	Info	Picture
Cover crop	a crop planted to keep nutrients from leaching, soil from eroding, and land from weeding over, as during the winter.	
crop rotation	the system of varying successive crops in a definite order on the same ground, especially to avoid depleting the soil and to control weeds, diseases, and pests.	

Learning Targets:

1.I can understand the rock cycle. I can explain how rocks recycle. I can describe how one rock can become a different rock under the right conditions.
2. I can analyze soil composition and explain how soil is formed.
3.I can list the main layers/horizons of soil in order. I can identify that topsoil (horizon A) is more organic, darker, better for farming (more fertile) and holds more water.
4.I can describe how soil can be conserved. (ex: trees slow down the wind and hold in the soil)
5.I can explain the processes of weathering, erosion, and deposition. I can demonstrate how these processes change what the earth looks like.
6.I can compare and contrast chemical and mechanical/physical weathering..
7.I can describe the causes and effects of erosion (example: more erosion means more sediments in the water which makes it difficult for the fish to live). I can observe that more weathering and erosion of rocks means they will become smaller and rounder

Weathering, Soil, Erosion, and Deposition

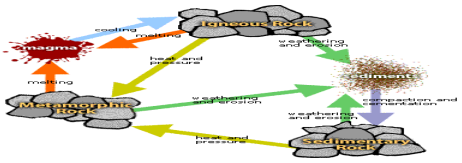
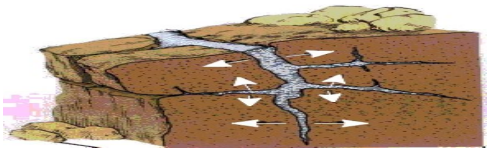
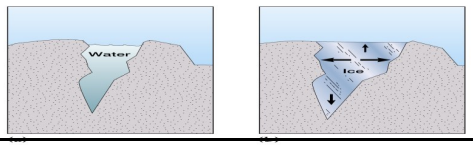
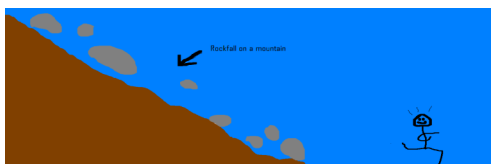


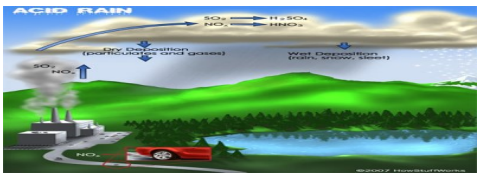
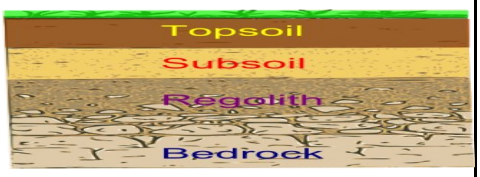
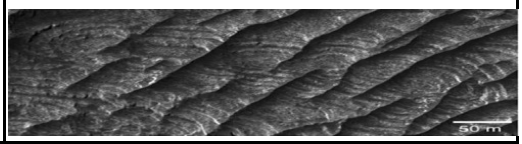
S6E5: Obtain, evaluate, and communicate information to show how Earth's surface is formed.

C. Construct an explanation of how to classify rocks by their formation and how rocks change through geologic processes in the rock cycle.

D. Ask questions to identify types of weathering, agents of erosion and transportation, and environments of deposition.

E. Develop a model to demonstrate how natural processes (weathering, erosion and deposition) and human activity change rocks and the surface of the Earth.

Term	Info	Picture
rock cycle		
weathering		
erosion		
deposition		
mechanical weathering (ex: water freezing or roots)		
abrasion		
ice wedging		
gravity		
chemical weathering		

Term	Info	Picture
acid rain		
soil		
(soil) horizons		
topsoil		
organic matter		
bedrock		
(soil) conservation		
contour plowing		
terracing		
no-till farming		

Term	Info	Picture
Cover crop		
crop rotation		

Learning Targets:

1.I can understand the rock cycle. I can explain how rocks recycle. I can describe how one rock can become a different rock under the right conditions.
2. I can analyze soil composition and explain how soil is formed.
3.I can list the main layers/horizons of soil in order. I can identify that topsoil (horizon A) is more organic, darker, better for farming (more fertile) and holds more water.
4.I can describe how soil can be conserved. (ex: trees slow down the wind and hold in the soil)
5.I can explain the processes of weathering, erosion, and deposition. I can demonstrate how these processes change what the earth looks like.
6.I can compare and contrast chemical and mechanical/physical weathering..
7.I can describe the causes and effects of erosion (example: more erosion means more sediments in the water which makes it difficult for the fish to live). I can observe that more weathering and erosion of rocks means they will become smaller and rounder