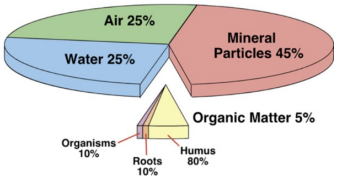
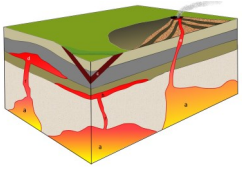
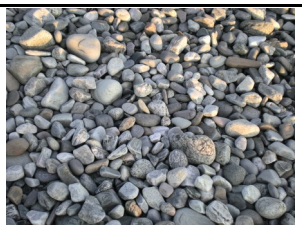
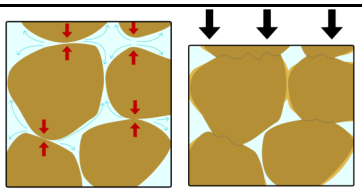
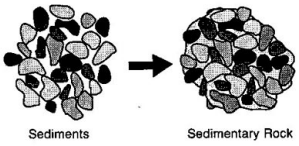
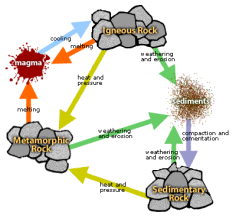
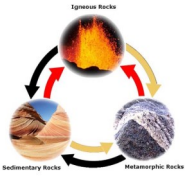
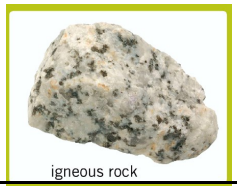
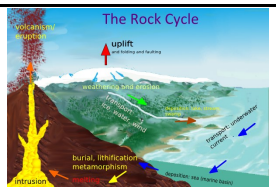
Rock Classification and Formation Processes

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.

Term	Info	Picture
composition	The makeup; what the rocks are made of; the ingredients.	
texture	The visual quality of a surface, and how the surface feels when you touch it.	
igneous rock	Rocks formed by the cooling and solidifying of molten material. Formed when lava or magma cool.	
magma/lava	Molten (melted) rock. Magma is found underground and lava is on the Earth's surface.	
extrusive	Rocks that cool on the outside of Earth's surface.	
fine-grained	Having tiny particles; a smoother texture.	
intrusive	Rocks formed inside Earth's surface. They cool slowly and as a result have coarse grains.	
coarse-grained	Rougher grains; larger particles and grains in a rock.	

Term	Info	Picture
coarse-grained	Rougher grains; larger particles and grains in a rock.	
sedimentary rock	Rock that is formed when sediment is deposited, and pressed together over time to form rock.	
sediments	Loose material made of rock fragments, chemical particles and salts, mineral fragments.	
compaction	Process where sediments are deeply buried, placing them under pressure because of the weight of other layers.	
cementation	When the sediments get GLUED together. Cement=natural glue.	
weathering	Destructive processes that break large rocks down into smaller rocks and sediments.	
erosion	Wearing away of rock or other solid materials by wind, water, glacial activity, etc.	
deposition	When sediments are dropped off and piled up by means of erosion.	
metamorphic rock	Rock that forms when existing rock such as igneous and sedimentary are subjected to extreme heat and pressure.	

Term	Info	Picture
Non-foliated	Metamorphic rocks that are subjected to equal pressure from all sides and do not have a striped/layered appearance.	
foliated	Metamorphic rocks that have more pressure in one direction, which causes sheets and layers; visible striped appearance.	
fossil	The preserved remains of an animal or plant from long ago; the tissues have been replaced by minerals.	
rock cycle	Cycle of processes that rocks undergo when they change from one type of rock to another.	
heat and pressure	High temperature and high pressure inside Earth cause rocks to become metamorphic rocks.	
granite	Light-colored intrusive igneous rock with large crystals that are visible to the naked eye.	
basalt	Commonly an extrusive igneous rock that is dark in color, has fine grains.	
Paleontology	The branch of science that studies fossils.	
Clastic	Sedimentary rocks composed of broken pieces of older rocks. Look like a bunch of rock chunks glued together.	

Term	Info	Picture
Chemical sedimentary	Sedimentary rocks that form when minerals dissolved in water become solid.	
Organic sedimentary	Sedimentary rocks that include organic matter and fossils.	
Extinct	A species that does not have any living members.	
Uplift (force)	Process by which Earth's crust slowly rises.	

Learning Targets:

1. I can describe 3 things are used to classify/identify a rock and apply this knowledge by correctly identifying rocks.
2. I can explain how minerals (elements or compounds) make up rocks.
3. I can describe rocks as mixtures of minerals and explain how some rocks may contain organic matter.
4. I can classify the 3 types of rocks and describe HOW they form.
5. I can describe the process of formation of metamorphic rocks pressure and relate the heat and pressure to crystal formation.
6. I can differentiate between the subcategories of igneous rocks and describe how they form (intrusive and extrusive)
7. I can differentiate between foliated and non-foliated metamorphic rocks and compare/contrast them.
8. I can classify sedimentary rocks as clastic, chemical or organic and illustrate the differences in formation.
9. I can relate crystal size of igneous rocks to speed of cooling. (fine and coarse-grained)
10. I can relate granite and basalt to Earth's processes, composition, and history
11. I can describe why fossils are found mainly in sedimentary rock and explain why this is so.
12. I can evaluate the age of rock based on its position and fossil content.

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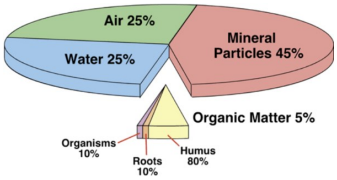
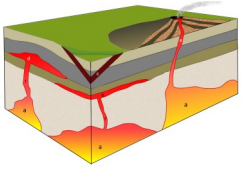
composition		
texture		
igneous rock		
magma/lava		
extrusive		
fine-grained		
intrusive		
coarse-grained		

Term	Info	Picture
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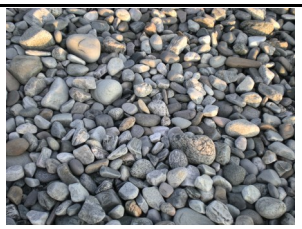
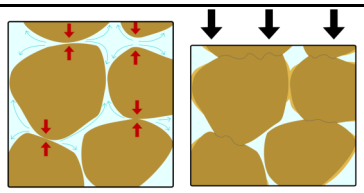
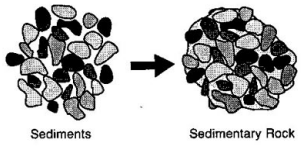
sedimentary rock		
sediments		
compaction		
cementation		
weathering		
erosion		
deposition		
metamorphic rock		

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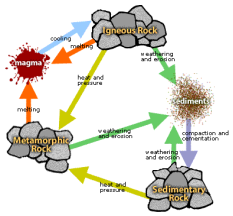
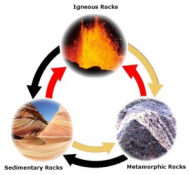
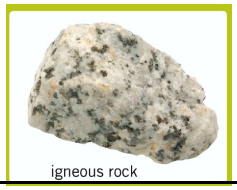
foliated		
fossil		
rock cycle		
heat and pressure		
granite		
basalt		
Paleontology		
Clastic		

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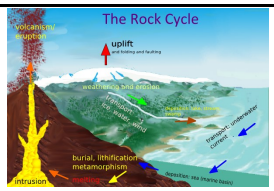
Uplift (force)		

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