

Knowledge Organiser - Year 3 - Spring 2



Different types of rocks	
Igneous rocks	Made through cooling of magma from either beneath the surface (intrusive) or on the surface (extrusive) of a volcano.
Metamorphic rocks	Made through a chemical reaction or change by heat/pressure of an igneous or sedimentary rock.
Sedimentary rocks	Made through erosion of rock that falls into the sea and makes layers and compacted together to form pieces of rock.

Mary Anning

She was a famous palaeontologist who spent time searching the coasts looking for fossils. She made some incredible discoveries in her lifetime including a dolphin-like marine reptile called an ichthyosaur.

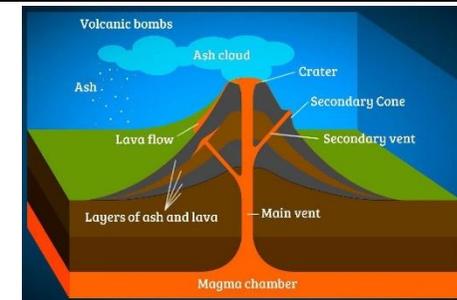
TYPES OF ROCKS



Vocabulary	
Fossil	The remains of a prehistoric plant or animal embedded in rock.
Subsoil	Layer of soil in the earth containing rocks, stones and clay - commonly where fossils can be found.
Bedrock	A mass of rock such as granite or basalt at the bottom layer of soil.
Topsoil	The top layer of soil where plants grow their roots and there are very few rocks.
Tectonic plates	Parts of the earth's crust that move around made of solid rock.
Man-made	Rocks that have been created by humans.
Natural	Rocks that are found naturally in the earth's environment.

Properties of rocks
Permeable/impermeable - rocks are permeable if they let water pass through them and impermeable if they do not allow water to pass through.
Durability - durability is how hard-wearing a rock is, how easily it is broken down by weathering and erosion.
Density - rocks with a high density (particles close together) will sink in water. Rocks with a low density (particles spread apart) will float in water.

Natural Disasters	
1.	Volcano - a mountain or hill, typically conical, having a crater or vent through which lava, rock fragments, hot vapour, and gas are or have been erupted from the earth's crust.
2.	Earthquake - a sudden violent shaking of the ground, typically causing great destruction, as a result of movements within the earth's crust or volcanic action.
3.	Tsunami - a long, high sea wave caused by an earthquake or other disturbance.
4.	Tornado - a mobile, destructive vortex of violently rotating winds having the appearance of a funnel-shaped cloud and advancing beneath a large storm system.



The Mercalli Scale

The Mercalli scale is used to measure the intensity of earthquakes.

LEVEL	DESCRIPTION
I	Not felt except by a very few under especially favorable circumstances.
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.
III	Felt quite noticeably indoors, especially on upper of buildings, but many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibration like passing of truck. Duration estimated.
IV	During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.
VI	Felt by all, many frightened and run indoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motor cars.
VIII	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motor cars disturbed.
IX	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rail bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown into the air.