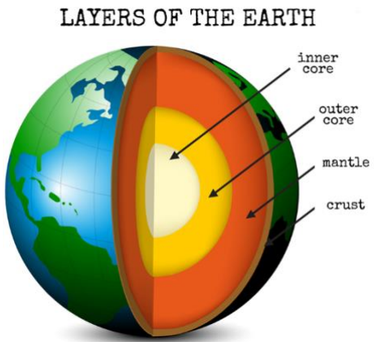
TREMORS

Tremors. Overwhelming and mighty, Mother Nature's awesome energies hiss and roar deep within the Earth. Plates collide, spewing lava. Rocks rain down and mud slides in torrents. Towns and cities vanish under ash clouds.

Discover the dangerous and ferocious world of natural disasters, and glimpse their savage and deadly effects. Visit the ancient city of historic Pompeii, frozen in time, then create your own blistering explosions that fire foamy lava. Discover the properties of rocks shaped by the Earth's breath-taking power.

Earth

The earth is made of different layers. The inner core is made mostly of solid iron, and the outer core is made of liquid iron and nickel. The mantle is made of solid rock and liquid rock called magma. The crust is a thin layer of solid rock that is broken into pieces called tectonic plates.



Volcanoes

When a volcano erupts, liquid magma collects in an underground magma chamber. The magma pushes through a crack in the earth, called a vent and bursts out onto the earth's surface. Lava, hot ash and mudslides from volcanic eruptions can cause severe damage.

Rocks

The Earth's crust is made up of many kinds of rock that have formed over millions of years. There are three main types of rock:

Igneous rocks are made from cooled lava. The usually contain crystals.

Sedimentary rocks are made from mud, sand and particles that have settled in water. They have been squashed down for a very long time to eventually form a rock.

Metamorphic rocks are formed when existing rocks are heated by the magma under the Earth's crust or squashed by the movement of the earths tectonic plates. They are usually very hard.

Pompeii and Mount Vesuvius

Mount Vesuvius, a volcano in Italy, erupted in AD 79, covering the town of Pompeii with volcanic ash. Archaeologists are still excavating Pompeii to this day.

24th August 79 AD

8am: Small puffs of ash are seen from the volcano.

1pm: Mount Vesuvius erupts.

3pm: Hard pieces of cooled lava rain down on Pompeii.

5-6pm: Large pieces of pumice stone rain down.

25th August 79 AD

4am: The eruption of smoke and gas reaches 30km into the sky.

5am: Violent earthquakes shake the whole area.

7am: The eruption column collapses, sending rock, gas, ash and heat into Pompeii. Anyone still in the town dies and the eruption continues for days.

September 79 AD

The whole area is now buried in rock and ash. The crater of Vesuvius has collapsed and the volcano is 200m shorter than before the eruption.

1860

A famous Italian archaeologist called Guiseppe Fiorelli makes the famous plaster cast bodies of Pompeii by filling in spaces left in the volcanic ash with plaster.

View of Mount Vesuvius from Pompeii

Plaster cast body of a body found in Pompeii

TREMORS GLOSSARY

Epicentre: the exact location on the Earth's surface that is directly above an earthquake.

Eruption column: a cloud of super-heated ash and gas produced during a volcanic eruption.

Fault line: a break in the earth's crust.

Lava: hot, molten rock that comes out of a volcano or the solid rock formed when it cools.

Magma: hot molten rock found in the Earth's mantle.

Pumice stone: a very lightweight igneous rock produced by a volcano.

Richter scale: a mathematical scale (1-10) used to describe the size of an earthquake. 1 describes the weakest earthquake and 10 describes the strongest.

Seismometer: a device used to measure and record the strength and duration of an earthquake.

Tectonic plate: a large, moving piece of rock that makes up the Earth's crust.

Vent: an opening in the Earth's crust through which lava escapes.

Volcanic ash: tiny pieces of jagged rock and volcanic glass.

Volcanic eruption: the sudden and violent explosion of lava, gas, ash and rock out of a volcano.