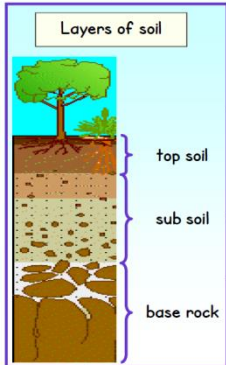







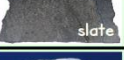


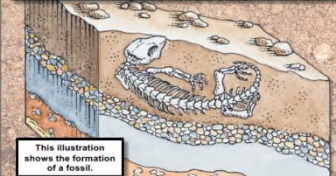


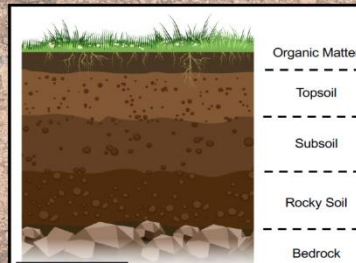



Colney Heath School ~ Science					
Topic: Rocks and Fossils		Year: 3		Chemistry and Earth Science	
What should I already know?		Diagrams		Vocabulary	
A rock is hard substance. Some materials are used for certain purposes because of their properties. Some materials are natural and some are man-made.		<div><h3>Rocks and Soils Fact Sheet</h3><div><div><h4>Layers of soil</h4><p>top soil</p><p>sub soil</p><p>base rock</p></div><div><h4>Non-permeable rocks</h4><p>has no spaces between the particles, so water cannot pass through</p><p>granite</p><h4>Permeable rocks</h4><p>have spaces between the particles that allow water to pass through.</p><p>sandstone</p><h4>Acid test</h4><p>you can drop a little acid on a rock to see if it fizzes.</p><h4>A scratch test</h4><p>will tell you how hard a rock is</p><h4>A permeability test</h4><p>will tell you how much water a rock will absorb</p><h4>Types of rock</h4><p>granite</p><p>sandstone</p><p>slate</p><p>marble</p><p>chalk</p></div></div></div>		Igneous	Rocks that are formed by volcanic action or intense heat.
				Imprint	A mark or outline made by the pressure of one object on another.
				Magma	Molten rock that is formed in very hot conditions inside the earth.
				Metamorphic	Rocks that have had their original structure changed by pressure and heat.
Decayed	Gradually being destroyed by a natural process.			Mineral	Something that is formed naturally in rocks and in the earth.
Bedrock	The solid rock in the ground which supports all the soil above it.	<div><h3>FOSSILS</h3><p>Fossils can be found in some types of sedimentary rock. A fossil is formed when a dead animal or plant becomes buried in sediment. The soft tissue decomposes, but the skeleton remains. As the layers build up, rock is formed. Water seeps through the rock, dissolving the bones of the skeleton and replacing them with minerals. Over time, a rock copy of the original skeleton is formed. It remains hidden in the rock until it is exposed by erosion.</p><p>This illustration shows the formation of a fossil.</p><p>This fossilised seedfern leaf was found in the Grand Canyon.</p><p>This small ammonite fossil was found on the Jurassic Coast, near Lyme Bay in the UK.</p></div>		Molten	Molten rock, metal, or glass has been heated to a very high temperature and has become a hot, thick liquid.
Permeable	If a substance is permeable, something such as water or gas can pass through it or soak into it.			Palaeontology	The study of fossils as a guide to the history of life on Earth.
Porous	Something that is porous has many small holes in it, which water and air can pass through.			Sedimentary	Rocks that are formed from layers of sediment (little pieces of rocks that have been weathered and can be found at the bottom of lakes, seas and rivers).
Properties	the qualities or features that belong to something and make it recognisable	<div><h3>SOIL</h3><p>Soil is composed of different layers. The top layer is known as topsoil, which we can easily see. The topsoil is full of rotting plants and microorganisms. It is very important because most plant roots are found in this layer. Topsoil takes a few hundred years to form. Beneath the topsoil is the subsoil which is usually paler and has much less organic matter. Further down, we find the rocky soil, where the rock is starting to break down and form soil. The last layer is bedrock, which is solid rock.</p><p>The layers of the soil.</p><p>Organic Matter</p><p>Topsoil</p><p>Subsoil</p><p>Rocky Soil</p><p>Bedrock</p><p>An earthworm in the soil.</p><p>Soil is home to many different animals. Earthworms, for example, play a very important role in the soil – they mix and aerate the soil, and water can drain down their long, thin burrows.</p></div>		Pressure	Force that you produce when you press hard on something
Rock	A solid mass made up of minerals. Rock forms much of the earth's outer layer, including cliffs and mountains			Fossils	The remains or impressions of a prehistoric plant or animal embedded in rock.
Volcano	A mountain from which hot melted rock, gas, steam, and ash from inside the Earth sometimes burst.				

The Big Picture	By the end of our project we will know that
<p><u>Chemistry</u></p> <p>C1: All matter (stuff) in the universe is made up of tiny building blocks.</p> <p>C2: The arrangement, movement and type of the building blocks of matter and the forces that hold them together or push them apart explain all the properties of matter (e.g. hot/cold, soft/hard, light/heavy, etc).</p> <p>C3: Matter can change if the arrangement of these building blocks changes.</p> <div data-bbox="112 462 1451 885"> <p><u>Earth science</u></p> <p>E1: The Earth is one of eight planets that orbit the sun.</p> <p>E2: The Earth is tilted and spins on its axis leading to day and night, the seasons and the climate.</p> <p>E3: The Earth is made up of several layers, including a relatively thin rocky surface which is divided into tectonic plates, and the movement of these plates leads to many geologic events (such as earthquakes and volcanoes) and geographical features (such as mountains.)</p> </div>	<p>There are three kinds of rocks: igneous, sedimentary and metamorphic. The Earth has a solid crust made up of tectonic plates with molten rock beneath. Granite and basalt are types of igneous rock and igneous rocks form from molten rock below the Earth's crust. Limestone and sandstone are types of sedimentary rock which form when small, weathered fragments of rock or shell settle and stick together, often in layers. Marble and slate are types of metamorphic rock which form when rocks in Earth's crust get squashed and heated in processes such as when tectonic plates press against each other.</p> <p>Fossils form when a plant or animal dies and is quickly covered with silt or mud so that it cannot be rotted by microbes or eaten by scavenging animals. In time layers of sediment build, squashing the mud and turning it to stone around the dead plant or animal. The materials in the body are replaced by minerals that flow in water through the rock, leaving a rock in the shape of the animal or plant that was once there. Soil is made from tiny particles of rock broken down by the action of weather (weathering).</p>