



NC OBJECTIVES	KEY KNOWLEDGE AND VOCABULARY
<ul style="list-style-type: none"> Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water Develop geographical knowledge, understanding and skills to enhance their locational and place knowledge 	<ul style="list-style-type: none"> Know that the Earth is made up of mantle, inner core, outer core and the crust Know that the mantle is approximately 2897km thick and is made of a solid, rocky substance called molten rock or magma. This is what escapes when a volcano erupts. Know that the inner core is a solid layer and is made of iron and nickel. It is the hottest part of the earth and can reach temperatures of up to 5500°C Know that the outer core is a liquid layer made out of molten iron and nickel. This liquid metal creates the earth's magnetic field. Know that the outer layer is the outer layer of the earth. It varies in thickness from 0 – 60km thick. It is not even and is made up of pieces which overlap to cover the entire planet. These pieces are called 'tectonic plates'. Know that tectonic plates fit together like a jigsaw puzzle and they sometimes move Know that the 'Ring of Fire' is an area of the Pacific Ocean that is shaped like a horseshoe. It is home to 90% of the world's earthquakes and 75% of the world's volcanoes Know the Ring of Fire contains a string of 452 volcanoes, which stretches from the southern tip of South America, up along the coast of North America, down through Japan, and into New Zealand. Know there are more than 1500 active volcanoes on Earth Use an atlas to locate significant volcanoes around the world Know when significant volcanic eruptions occurred and place on a timeline Know that a volcano is formed deep in the earth, where it is extremely hot. Know that rocks actually melt and form magma, which makes up the mantle of the earth. Know that the upper mantle mixes and moves, which creates pressure underneath the crust. This pressure can sometimes cause the mantle to leak out onto the surface of the earth, which is the volcano Know that over time, as magma leaks out, the volcano will get bigger and bigger. Know the parts of a volcano – magma reservoir, conduit, vent, ash cloud, crater and throat Know that the magma reservoir is a large underground pool of liquid rock found beneath the surface of the Earth Know that the conduit is an underground passage which magma travels through Know that the vent is an opening in the surface of the Earth through which volcanic materials, such as magma, can escape Know that the ash cloud is a cloud of ash. It is formed by volcanic explosions Know that the crater is the mouth of a volcano. It surrounds the vent Know that the throat is the entrance of a volcano. It ejects lava and volcanic ash Know the difference between magma and lava Know that there are three categories of volcano – active, dormant and extinct Know that an active volcano is one that has erupted recently, and there is the possibility that it may erupt again Know that a dormant volcano is one that has not erupted for a long time, however, it may still erupt in the future Know that an extinct volcano is one which has erupted thousands of years ago, but it will probably never erupt again Know that the movement of the tectonic plates causes friction which causes earthquakes and volcanic eruptions near the edges of the plates.

- Know that the plates are moving in different directions and at different speeds. Sometimes they collide or brush past each other and cause these earthquakes and volcanic eruptions
- Know that the edges of plates are called **faults**. Faults can rub together, push toward each other, or pull away from each other
- Know that the plates can move in three different ways – rubbing together, towards each other and away from each other
- Know that earthquakes happen frequently in the Ring of Fire
- Know that there are two ways to measure the power of an earthquake. Machines called **seismographs** measure the power of an earthquake at its epicentre on a scale called the **Richter scale**. Another measure is the **Mercalli scale**, and this is based on people's observations during an earthquake
- Use an atlas to locate **significant earthquakes** around the world
- Know when significant earthquakes occurred and place on a timeline
- Know the damage to the **physical and human environment** that can occur due to a volcano and earthquake
- Use **satellite images** and **aerial photographs** to identify the effects of a volcano and earthquake