INSIDE THE EARTH

Earth is made up of different layers, which formed when the planet was young and extremely hot. The main layers are the core at the centre, the mantle, and finally the crust on which we live. Earth is still very hot today. The heat creates flow in the inner molten rock layers, causing plates – pieces of the brittle crust – to slide about over them. Evidence of this active, changing planet can be seen at the surface: the movement of the plates creates volcanoes and earthquakes. In fact, it was through studying earthquake tremors that scientists discovered the existence of Earth’s layers.

EARTH’S LAYERS

Earth was originally a fusion of hot, molten gas and dust. Lighter elements floated to the surface and cooled to form the crust. Heavier elements, such as iron and nickel, sank to the core. Mantle rocks have a basalt-like composition. The upper mantle is near melting point and flows slowly. Greater pressure deeper down makes the lower mantle more solid. Likewise, metallic molten in the outer core, but are solid in the inner core as a result of immense pressure.

CRUSTAL LANDSCAPE FEATURES

The lithosphere is Earth’s rigid shell, combining the crust with the uppermost mantle layer. It is broken into many separate plates. Heat from deep inside Earth creates currents in the mantle below, which cause the plates to slide around in different directions. In some places they collide head-on, and in others they grind alongside one another or drift apart.