Tectonics Lesson Pack
Teaching Ideas

Lesson Objective:	To understand what happens at plate boundaries
Success Criteria:	• To understand why the tectonic plates are moving • To be able to explain the differences between the plate boundaries

Context

This lesson should be taught after students have learned about the structure of the earth in **Journey to the Centre of the Earth**, but before going into detailed examples of earthquakes and volcanoes. During this lesson, students will learn about the main types of plate boundary and what happens at each one. There are supporting resources that cover each of the main plate boundaries, along with convection currents.

Starter

Ask students what the earth has got in common with a hard-boiled egg. Take suggestions from the class before moving onto the following slides, which draw comparisons between the earth's crust, mantle and core and the egg's shell, white and yolk. Ask students if there is anything missing from the comparison.

Main Activities

Introduce the next egg picture slide, which aims to show how the earth's crust is split up into different plates. Explain that the crust is not one smooth shell around the surface, but is broken up into different areas, which we call plates. The slide has a picture of a world map, showing the plates.

The next slides explain the process of convection currents, firstly drawing a comparison with hot water inside a pan and then relating this to what happens inside the mantle.

Students are then shown how plate movement has changed the surface of the earth over millions of years. An activity sheet showing the different stages of the movement of earth's continents can be used – this will help students to see how the continents arrived in their present positions.

The lesson then goes on to look at plate boundaries, examining what happens at each plate boundary in detail. When looking at the convergent plate boundary, there is an option to complete an **Earthquake Timeline – Card Sort Activity**. After the three main boundaries (convergent, divergent, conservative) have been covered, there is a separate activity sheet for students to complete.

Another task available to help learning about this topic is the **Plate Boundary – Card Sort Activity**, which has 12 statements that can be given to students as cards. Students then sort the cards into three groups, accurately showing what happens at each of the plate boundaries.

The collision boundary slides follow the three main plate boundary slides and the activity sheet is separate so that you can decide whether or not you wish to cover this with your class at this stage.

To complete the learning about plate boundaries, give students the differentiated **Which Plate Boundary – Activity Sheet**, which introduces three characters from around the world. Each one lives at a different plate boundary and the students have to work out which is which.

Plenary

On the PowerPoint there is a What is the Name of the Plate Boundary? quiz, along with a Fill in the Blanks activity. Either of these would work well as plenary activities.

Challenge/Extension Task

A research task (**Tectonics – Homework Project**) is included in the pack. This asks students to look into a recent earthquake or volcano and write a report on it. There are tips on the sheet, along with a checklist.

The pieces of work handed in for this homework task will vary in length and quality. Allow students to choose either a volcano or an earthquake, preferably from recent history but if it is a few years old that's fine as well. The main aim is to get students researching the impacts of an event linked to tectonic movement.

Use the checklist when marking the work. Any aspect of the checklist that is not covered in detail could provide any "wishes" given in feedback. The best pieces of work will cover all aspects of the checklist, including mention of the processes leading to the earthquake/volcano. Diagrams may be included to support the explanation. Reward students who have taken time to separate the social, economic and environmental impacts, as well as identifying short term and long term impacts.

Geographical Music

Move Any Mountain, by The Shamen.