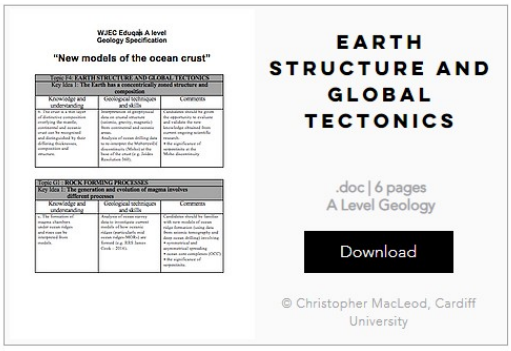
UPDATE: Recent research in plate tectonics

In place of our usual new ELI activity this time, we are referring you to websites giving updates on current research into the nature of the Earth. Both websites provide activities or investigations for students. Our notes in “Useful Links” below refer to relevant existing Earthlearningidea activities.

Many Earthlearningidea activities relate to plate tectonics and to investigating the evidence for the theory (see **Useful links** below). Continuing research, especially at sea, is resulting in fresh evidence and the need to revise some of our earlier-held interpretations. Much of this is difficult for schools to access, even though the specifications for Geology courses in the UK at aged 16 (GCSE) and at 16+ (A Level) have been updated.
Recently, Professor Chris McLeod of Cardiff University has produced a website, www.seafloorspreading.com with PowerPoint presentations and papers aimed at explaining current thinking to students. The site includes: *Recent research in plate tectonics and relevance to the new National Curriculum*.

This outlines the nature of the oceanic lithosphere and discusses the evidence for large scale faulting being responsible for sea floor spreading at slower spreading centres, such as in the Atlantic Ocean (a very large PowerPoint file):

What is the Moho? Featuring a five page practical exercise in the interpretation of seismic data, related to the serpentinisation of the mantle.



Earth structure and global tectonics - a 6 page paper version of the PowerPoint above, written to cover part of the specification of the Eduqas Examining Body for A Level Geology in the UK.

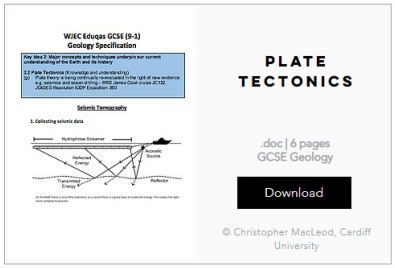


Plate tectonics – a simpler 6 page paper explanation aimed at 16 year-old students studying for the GCSE examinations of Eduqas.

Teacheratseablog – a blog providing links with the research work of the *RRS James Cook* in the Atlantic Ocean.

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Topic: Web-based material aimed at updating our understanding of the nature of the oceanic lithosphere and the processes involved in sea-floor spreading in different oceans.

Age range of pupils: 16 and over

Useful Links: Earthlearningidea activities**:** https://www.earthlearningidea.com/PDF/81_Magnetic_stripes.pdf https://www.earthlearningidea.com/PDF/217_Slab_pull.pdf https://www.earthlearningidea.com/PDF/278_Plate_margins_movement.pdf https://www.earthlearningidea.com/PDF/326_Plate_driving_mechanisms.pdf

Source: Prof Chris MacLeod, Cardiff University
www.seafloorspreading.com summarised by the Earthlearningidea Team (accessed 22nd November 2019).