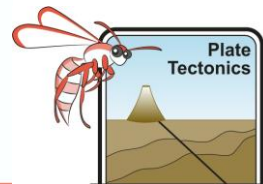


Year 9 WASP – Teacher Introduction



The WASP (Woodside Australian Science Project) is an initiative supported by Woodside and Earth Science Western Australia (ESWA).

These activities are designed to provide support for the Earth Science part of the Earth & Space Sciences and part of the Physical Sciences topic required by the Year 9 Australian Curriculum.

Copies of this and other supporting materials can be obtained from the WASP website <http://www.wasp.edu.au> or by contacting Julia Ferguson, julia@wasp.edu.au

Topic 1	Continental Drift and Plate Tectonic Theory
Topic 2	Relating Earthquakes and Volcanic Activity to Plate Boundaries
Topic 3	Great Iron Catastrophe (GIC) and Planetary Differentiation
Topic 4	Can Humans Move the Earth?

Year 9 Australian Curriculum Science

Earth & Space Science

The theory of Plate Tectonics explains global patterns of geological activity and continental movement (ACSSU180)

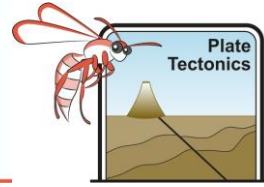
- Recognising major plates on a world map
- Modeling seafloor spreading
- Relating the occurrence of earthquakes and volcanic activity to constructive and destructive plate boundaries
- Considering the role of heat energy and convection currents in the movement of tectonic plates
- Relating the extreme age and stability of a large part of the Australian continent to its plate tectonic history

Physical Sciences (part)

Energy transfer through different mediums can be explained using wave and particle models (ACSSU182)

- Exploring how and why the movement of energy varies according to the medium through which it is transferred
- Investigating the transfer of heat in terms of convection,...., and identifying situations in which each occurs
- Exploring the properties of waves, and situations where energy is transferred in the form of waves, such as sound and light

Year 9 WASP – Teacher Introduction



Topic 1 Continental Drift and Plate Tectonic Theory

1. Continental Drift

- Plate Jigsaw - Student Activity
- Primary & Secondary Data Collection - Student Activity
- Continental Drift – Student Review

2. Plate Tectonics

Evidence for Seafloor Spreading

1. Seafloor Model - Student Activity
2. Rock Age Data - Student Activity
3. Rock Magnetism
 - Earth's Magnetosphere- Student Activity
 - Magnetic Stripes – Student Activity
 - Make Your Own Compass – Student Activity
 - Polar Reversal - Student Activity
4. Plate Tectonics - Review

Folding and Faulting

1. Three Types of Fault - Student Activity
2. Fold Movement – Student Activity
3. Folding and Faulting - Review

Heat Energy

1. Convection Currents – Teacher Demonstration
2. Reconsidering Convection Cells – Teacher Notes

Topic 2 Relating Earthquakes and Volcanic Activity to Plate Boundaries

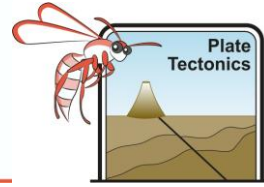
1. Plate Boundaries

- Science of Plates - Teacher Demonstrations
- Plate Boundaries - Student Activity
- Plate Boundaries - Review

2. Earthquakes

- Australian Earthquakes & Faults – Student Activities
- Wave Energy Transfer - Student Activities
- Body Waves (S&P) – Student Activities
- Surface Waves (L&R) – Student Activity
- Locating an Earthquake – Student Activities
- Seismic Waves - Review

Year 9 WASP – Teacher Introduction



Topic 3 GIC (Great Iron Catastrophe) and Planetary Differentiation

- GIC - Our Hollow Earth - Student Activities
- Planetary Differentiation – Student Activities
- GIC and Rock Density - Student Activities
- GIC - Review

Topic 4 Can Humans Move the Earth?

- Beaconsfield Disaster – Student Activity
- Basel's Fault – Student Activity
- Fracking Simulation – Student Activity
- Geothermal Stimulation & Porosity – Student Activity
- Create a Cavern – Student Activity