

Unit outcomes

Science outcomes

Earthquake explorers is a Stage 3 unit. Unit outcomes have been identified for Level 3 and Level 4 of the *National Scientific Literacy Progress Map*, allowing teachers to cater for the range of abilities in the sixth and seventh years of schooling. Summative assessment will need to take account of the levels of achievement expected for a cohort of students. Summative assessment of conceptual learning outcomes (c) occurs in the *Evaluate* phase and summative assessment of the investigating outcomes (i) occurs in the *Elaborate* phase.

Level 3

- c Explain that the Earth's surface is composed of tectonic plates that move.
- c Identify how tectonic plates push into each other, pull apart from each other and slide past each other.
- c Describe the scales that are used to measure earthquake magnitude and intensity.
- i Analyse and compare data of earthquake magnitude for Australia and neighbouring countries to investigate patterns in data.
- i Use a physical model to represent, investigate and describe how to measure the magnitude of earthquakes.

Level 4

- c Explain that when tectonic plates push into each other, pull apart from each other and slide past each other energy builds up as stress in the plates.
- c Explain how the sudden release of energy causes movement of the ground which results in damage to buildings and structures.
- c Explain why most large earthquakes occur at the edges of tectonic plates.
- i Use secondary data to represent, investigate and describe the movement of the Earth's tectonic plates.
- i Draw evidence-based conclusions about the location of large earthquakes at the edges of tectonic plates.

Literacy focuses

Earthquake explorers engages students in activities that reflect the mutually supportive relationship between science and literacy. Learning activities are designed to explicitly introduce the literacy focuses and provide students with the opportunity to use them as they think about and represent their understanding of science.

The interdependence of science and literacy is demonstrated throughout the unit when students participate in discussions and use talk to: inquire, report on observations, clarify understanding and reflect on experience. The use of gestures and oral, written and visual language to relate science to students' personal worlds is another important aspect.

The literacy focuses identified for *Earthquake explorers* are:

- science journals
- storyboards
- TWLH charts
- glossaries
- word walls
- factual recounts
- drawings
- *optional*: cutaway diagrams
- factual texts
- timelines
- *optional*: graphs
- oral presentations.