



Case study 1.1

- 1 For a good map showing the Tambora volcano, see www.ga.gov.au/webtemp/image_cache/GA11271.gif
- 2 Tambora volcano sits on the edge of a subduction zone, where the Australian plate slips underneath the Eurasian plate. It lies very near the plate boundary.
- 3

| Impact of Tambora eruption | Importance of the impact on human populations |
|---|---|
| Earthquakes and tsunamis | Inundated low-lying coastal areas of populations close to Tambora |
| Ash build-up | This caused buildings to collapse, as well as difficulty breathing for populations close to Tambora |
| Shortage of food and uncontaminated water | Significant starvation and death for populations in close proximity to Tambora |
| Ash injected into the atmosphere | Climate impacts on the Northern Hemisphere – temperatures were colder than usual and it was wetter than usual. This affected growing seasons and caused crop failures. People also suffered from outbreaks of typhus. |
| Loss of life from the eruption | Significant effects on populations around Tambora; many people were killed. |



Case study 1.2

- 1 Examples may include the Buchan Caves in Gippsland, Victoria, the Jenolan Caves in New South Wales, the Naracoorte Caves in South Australia, Ngilgi Cave in Yallingup, Western Australia and Hastings Caves in Tasmania.
- 2 Students' work will differ according to what caves they research. An example is the Jewel Cave in the Margaret River region of Western Australia. It is the biggest show cave in Western Australia, measuring 42 m deep and 1.9 km long. The Jewel cave contains one of the world's largest straw stalactites.
- 3 Limestone caves are dissolved by solution. Limestone, principally made from calcite, is dissolved by carbonic, sulphuric and naturally occurring acids, which are in groundwater and rainwater. Limestone can be dissolved as well as precipitated by water. When precipitated, it makes calcium carbonate formations. However, limestone caves and their formations can be affected by changes in water temperature (when temperature increases, calcite becomes less soluble), pH levels and dissolved ion concentrates. Also, impurities such as clay and sand can also affect the colour of the limestone.



Note this down 1.1

Igneous

Originate from the solidification of magma

Sedimentary

Sediments deposited in layers (beds), which have later been compressed into solid rock

Metamorphic

Begin as igneous or sedimentary rocks, and have been subjected to extreme temperature or pressure