Earthquakes  *Feeling the Earth Move*

**Concept Overview**

**About the overview**

The diagram below shows the science concepts outlined in this book. The arrows show the links between concepts and how they might build in sequence. A "big idea" shows how a fully developed understanding of the concepts might look. Such an understanding might not be achieved until level 7 or 8. The big ideas are included to help you build appropriate concepts with your children, whatever their age.

---

**Big Idea**

Much of what happens to the surface of the Earth is determined by processes that occur within it.

---

**Big Idea**

Earthquakes may cause sudden, small changes, but in time, their effects may also result in large changes to the landscape.

---

**Big Idea**

New Zealand is located at the active boundary between two tectonic plates, and earthquakes play an important role in shaping our landscape.

---

Faults and other features shaped by earthquakes are common in many parts of New Zealand.

---

Seismographs detect many earthquakes that we don’t feel.

---

The location, size, and depth of an earthquake, and other key factors, determine whether we feel it and how much change it causes.

---

We experience an earthquake as a movement of the ground.

---

The spot on the Earth’s surface that is directly above the source of the earthquake is called the epicentre.

---

Cluster patterns of hypocentres (the “source” of earthquakes) can be used to locate fault lines and the associated changes in the Earth’s crust.

---

Earthquakes are caused by changes in the Earth’s crust.

---

Fault lines are dislocations that show where earthquakes have broken the hard rocks of the Earth’s crust.

---

Some places experience earthquakes more often than others do.

---

Earthquakes and their associated fault movements often cause observable patterns in the landscape.

---

Cluster patterns of hypocentres (the “source” of earthquakes) can be used to locate fault lines and the associated changes in the Earth’s crust.

---

Earthquakes are caused by changes in the Earth’s crust.