Awesome Earth (Gallery 5) exhibits

Exhibits in the *Awesome Earth* gallery may vary from time to time, but the exhibits noted here are usually on display.

Exhibit name	Exhibit themes	Exhibit description
At Fault	Plate tectonics Earthquake Volcano	Grind the Perspex 'tectonic plates' against each other and see stress lines. Stresses between Earth's tectonic plates cause earthquakes and volcanoes.
Awesome Earth Globe	Tsunami El Niño Hurricanes	Satellite data animations are projected onto a globe, showing: ▪ the 2004 Boxing Day Tsunami (wave heights over a 40 hour period) ▪ where most hurricanes occur on Earth and ▪ 1997 water temperatures during an El Niño period.
Black Hole	Gravity Vortex Energy	Release a ball into a vortex dish and watch the ball spin around the bowl due to gravity and changing energy (potential and kinetic).
Bushfire graphic panels	Bushfire	Graphic panels about bushfires, their prevention, control (firefighting) and how to survive them.
Caged Lightning	Electricity Lightning Tesla	A Tesla coil (towering to ceiling height) gives a spectacular demonstration of electricity that we fondly call caged lightning.
Convection Current graphic panels	Convection Currents Density Heat	Graphic panels show how heat circulates and causes currents in ocean waters, air in the atmosphere and Earth's magma.
Cyclone Shelter	Cyclone Humans and natural disasters	Stay snug and safe inside a cyclone shelter as you watch video footage of how people deal with cyclones hitting parts of Australia.
Earth Patterns	Earthquake Drought	Tap the dish to create patterns in the sand, representing how wind, flooding waters, droughts and earthquakes shape our planet.
Earthquake House	Earthquake Humans and natural forces	An earthquake simulator lets you experience an earthquake while sitting inside a house and seeing its impact on building structures.
Earthquake graphic panels	Earthquake	Graphic panels about Australian earthquake causes, detection and survival.

AWESOME EARTH The Power and Beauty
Australian Government Department of Education, Science and Training
Questacon The National Science and Technology Centre

Awesome Earth (Gallery 5) exhibits

El Niño	Normal weather patterns El Niño and La Niña	Graphic panels about Australia's climate of drought and flooding rains and how air pressure differences can cause dramatic changes in weather conditions.
El Niño and La Niña	Flooding Convection Wind Ocean currents	An animated movie introduces you to Llama, Albatross and Wallaby who explain normal weather patterns and the factors involved in producing La Niña/El Niño weather conditions.
Epicentre	Earthquake Measurement	Find the epicentre of an earthquake on a map of Australia by using ropes and the method of triangulation.
Eruptor	Volcanoes	Choose a volcano (based on magma type and temperature) and watch footage of real volcanoes erupting.
Get the Drift	Plate tectonics Continental drift	Move the modern continents around to form land-masses that existed millions of years ago. The Earth's crust is made up of continental plates which are moving due to convection in the Earth's mantle.
Hot Air	Air pressure Convection Density Wind	The hot air in the tank can be seen shimmering in the light. Heat emitted by the Earth's surface and the Sun generate convection currents within the atmosphere, which contributes to Earth's weather patterns.
Landslide	Landslides Fluid movement	A model landscape lets you see a small scale landslide, caused when the ground becomes fluid.
Lava Lumps	Volcano Lava Magma	Discover the different types of lava produced by volcanoes. Feel different volcanic rocks and find out how we can use volcanic products in everyday life such as obsidian, pumice and scoria.
Lava Tube	Tot spot exhibit (<6 years) Volcano Lava	Younger children can crawl through a large volcano tube model. Adults can read information on lava tubes, volcano types, their benefits and how to predict them.
Make and Shake	Earthquake Building construction	Test how building and bridge designs would shake during a simulated earthquake.
Moving Magma	Convection Fluid movement Plate tectonics Volcanoes	Watch convection currents in the simulated 'magma' fluid and try different heat points to see if the convection current changes. Convection in the Earth's liquid mantle causes tectonic plate movement and volcanic activity.

AWESOME EARTH
The Power and Beauty

Australian Government
Department of Education, Science and Training

Questacon
The National Science and Technology Centre

Awesome Earth (Gallery 5) exhibits

Mud Pool	Fluid movement Viscosity	Release bubbles of air through a tank of glass beads to simulate a viscous, bubbling mud pool. Mud pools have underground water (heated by magma) rising through the mud to make it bubble.
Pipe Wrenched	Earthquakes	A section of buckled gas pipe shows the strength of an earthquake measuring 6.8 on the Richter scale and its impact on human structures.
Quakemaker	Earthquake Measurement Seismometer	Jump up and down in front of a seismometer and watch a projection showing how earth tremors are measured by seismometers.
Raise the Roof	Wind Air pressure Cyclone	Change the direction of the wind and see how it affects a model house roof. Watch the Venturi meters to see how high-speed winds change the air pressure so a roof can be lifted off a building.
Richter Rumbler	Earthquake Measurement	Place your hands on a plate and feel an earthquake's movement at different levels on the Richter scale (a logarithmic measurement).
Shifting Sands	Erosion Fluid movement	Watch sand form mountains and valleys as the base plate vibrates. Vibrations in the earth can shape the landscape and can make soils behave like a liquid (such as during landslides).
Slow Flow	Viscosity Gravity	In 1982, synthetic rubber was placed in an hourglass shaped window. Even though the synthetic rubber appears to be solid, it has very slowly flowed over time and continues to flow today. Can you predict when the rubber will completely drop?
Tornado	Tornado Air pressure Wind	Watch a tornado of water vapour spin in front of you. See if you can affect its movement by standing around the column. Real tornadoes are formed by pockets of very low pressure in the atmosphere.
Tsunami	Tsunamis Wave motion	Generate a model tsunami (small or large) and watch its effect on a model coastline. Tsunamis are caused by earthquakes or volcanoes on the sea floor.
Turbulent Orb	Wind Air pressure Turbulence	Spin the globe and watch the fluid inside form random swirling patterns.The patterns look random but they are following mathematical rules. Weather systems and ocean currents are also random, but are affected by the spinning of the planet and temperature differences, making weather forecasts difficult.
Waves and Wobbles	Earthquake Seismic waves	Crank the handles to see how the ground moves during an earthquake. Earthquakes generate three types of seismic waves.

AWESOME EARTH
The Power and Beauty

Australian Government
Department of Education, Science and Training

Questacon
The National Science and Technology Centre