Question 1.

What Happened on February 22 2011 in Christchurch?

Introduction:

I have asked this question because I have heard a lot about the Christchurch earthquake and I was wondering what actually happened.

Answer:

At 12.51pm on February 22 2011 Christchurch and the Canterbury region was struck by a 6.3 magnitude earthquake. The earthquake was centred 10 KM from the central city at a depth of 5 KM. The earthquake, although not large by earthquake standards caused severe damage to the city and surrounding areas. Up to 100 000 buildings were damaged of which 10 000 needed to be demolished. 185 people were killed and thousands injured, 164 seriously. Most of those killed were in two buildings in the middle of the city, Canterbury Television Building (CTV) and Pyne Gould Corporation (PGC) building which both collapsed. Throughout the city water and sewage pipes, roads, bridges, power lines and phone lines were damaged or broken. Much of the city was affected by liquefaction, thick grey muddy slush and silt that flooded everywhere.

Within hours of the earthquake Urban Search and Rescue (URS) teams from Japan, Australia, United States, United Kingdom and Taiwan were on their way to help find and free people trapped in wrecked buildings. In terms of New Zealand earthquakes, the February 2011 Christchurch ranks second for loss of life but a clear first in terms of damage and rebuild costs.

Question 2.

What is an earthquake? What causes them?

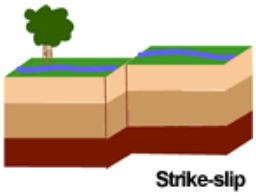
Introduction:

I am asking this question because the Christchurch earthquake caused a lot of damage and loss of life. I wanted to know what an earthquake is, why they occur and what causes them.

Answer:

The surface of the Earth is like a huge cracked egg shell. It is made up of approximately 20 huge sections called plates that are constantly moving at about the rate your finger nails grow. This is called plate tectonics. Since the plates are all moving they rub against each other, sink below each other or spread away from each other. In places the plates get stuck at the edges but the rest of the plate keeps moving which means pressure builds up until it eventually cannot bend any more. With a lurch, the rock breaks and the two sides move. An earthquake is the shaking that radiates out from the breaking rock. The edges of the tectonic plates are marked by faults (or fractures). Most earthquakes occur along the fault lines when the plates slide past each other or collide against each other.

An earthquake may be powerful enough to change the surface of the Earth, pushing up cliffs, opening big cracks in the ground or causing significant damage on the surface such as the collapse of buildings and other man-made structures, broken water, power, phone and gas lines, landslides, avalanches, tsunamis or volcanic eruptions.



Because New Zealand is right on a plate boundary, we have a lot of earthquakes. Every year there are over 14000 earthquakes, although only between 150 and 200 are big enough to be felt.