



Core Samples

Scientists can learn a lot from core samples, which are long plugs of earth drilled from the ground.

Core samples can reveal:

- what the climate was like thousands of years ago
- levels of gases such as carbon dioxide over time
- natural resources such as gas and oil
- when major events occurred on Earth, such as meteor showers
- ancient fossils or DNA showing how life has evolved or
- how Earth's landscape has changed with oceans forming and receding.

Core samples are taken by drilling many metres deep into the ground and removing a plug of earth. Samples can be taken on the ocean floor, on dry land and in icy regions such as Antarctica.

The three core samples in the Earth Quest exhibit *Core Samples* were taken from Antarctica, the ocean floor (near Victoria, Australia) and Canberra (Australia).

1. The Antarctica sample shows layers of ice and sediment, with a microscopic cross section showing bubbles from the core sample.
2. The ocean floor on the East Tasman Plateau, known as the K/T boundary. This sample shows a layer created by a meteorite that is thought to have wiped out the dinosaurs tens of thousands of years ago.
3. The land sample from an area near Canberra shows layers of sediment laid down over thousands of years.

More Information

PBS Stories in the Ice <http://www.pbs.org/wgbh/nova/warnings/stories/>

Antarctic CRC & Australian Antarctic Division, Dr Tas Van Ommen

<http://www.antcrc.utas.edu.au/antcrc/>

Scientific American News 18 September 2000

Himalayan Ice Cores

http://www.sciam.com/print_version.cfm?articleID=000D4E78-7113-1C61-B882809EC588ED9F

Scientific American News 18 September 2000

Moving Impurities Muddy Some Ice Core Analyses

http://www.sciam.com/print_version.cfm?articleID=000416C3-EC04-1C5E-B882809EC588ED9F

Scientific American News 18 April 2003

Sediment Cores Yield Oldest DNA Yet Discovered

http://www.sciam.com/print_version.cfm?articleID=000DFC3D-1546-1E9F-A9B3809EC588EEDF