

Dam - What does a dam do?



Fact

- A dam like the Clyde Dam in Central Otago is a Hydro (meaning water) Power Station for making electricity.
- A dam is a manmade barrier across a river, which blocks the water and directs it down huge pipes called penstocks into machines called turbines.
- The water pushes the turbines round really fast and the turbines turn big spinning shafts, which are connected to generators.
- Inside the generators is a ring of magnets and the spinning shafts turn a rotor that works with the magnets to make electricity.

Do you know

- Clyde Dam is the largest concrete gravity dam in New Zealand.
- The Clyde Hydro Power Station can make enough power in one year to supply Christchurch and Dunedin with electricity.
- Electricity made at the dam leaves through huge power lines.
- Dams are not the only way to make electricity. All you need is something to turn the turbines like steam, or wind.
- New Zealand has steam powered Power Stations that use natural Geothermal steam – steam that occurs naturally under the ground and Power Stations that use man made steam.

Experiments you can do

In a sandpit or next time you're at the beach make a dam.

Make a small riverbed by digging out some sand about as long as your leg and deep enough to put your foot inside it. Pour a bucket of water into the "river" from one end and watch how the water runs to fill it up before it drains into the sand.

Push a piece of wood across the "river" so that it sits in the sand really well and push sand around it so there are no gaps. Pour water into one side of the piece of wood. Some water might get through to the other side because it's not a real dam but most of the water will be trapped behind the piece of wood.

Other Investigations

Make a windmill out of the cover of a glossy magazine by following the instructions or use a bought windmill. Blow on the windmill and hold it up in the wind to see how it turns.

Now turn it on its side and pour water over it from a watering can to make it turn. That's how water works inside a hydro power station to make the turbines turn.