

## Satellites (Episode 1)

How does TV show us something that's happening on the other side of the world?



### Fact

- The information is bounced to us by satellites.
- The signal from a television transmitter on one side of the world is sent to a satellite up in space which bounces that signal down to a waiting television signal transmitter on the other side of the world
- The signal is then sent to your television aerial on top of your roof.
- Then the signal goes down wires into your TV where it's changed into pictures and sound.
- A television signal travels in a straight-line. A signal won't curve around the world so satellites are used to bounce the signal around the world.

### Do you know

- There are thousands of satellites orbiting around earth doing different jobs.
- Some receive and transmit television signals.
- Some receive and transmit telephone calls
- Some are weather satellites that take pictures of the earth and send back information on what the weathers doing.
- All these satellites can become space gunk.

### Experiments you can do

- You can use the internet to find out about satellites.
- Have a look at the television programme listing in your newspaper and see if you can work out what programmes are received by your TV "live". Which programmes are showing you pictures and sound as they happen in another part of the country or the world? If they're not "Live" the programmes are pre-recorded and put on to tapes for the TV channel like TV3 to play when they want to.  
(Here's a hint Suzy's World is pre-recorded. TV3 get given the tapes of Suzy's World)

### Other Investigations

Next time you watch a "live" sports game on TV find out where the game is being played. If it's in another part of New Zealand look at what the weather is like and compare it with the weather where you live at that same time.

If the game is being sent via satellite from another part of the world find out what time it is there.

### Jokes

What kind of light also gives you pictures? A satellite (sate-light)