

Investigating the maths inside:

Modelling climate changes

Activity 3

What might happen if…….?

**

What food crops are grown in your area? What animals are farmed?

What are the major recreational activities?

How would you describe the climate of your local area?

# Introduction

What kind of agriculture exists in your local area? Think about food crops that are grown and animals that are farmed. What about food that is ‘wild’?

What is the difference between climate and weather? How would you describe the climate of your local area?

# Build a picture of your climate

There are thousands of places all over Australia in which people collect information about temperature, rainfall and other aspects of climate. The data is published by the Bureau of Meteorology on their website: <http://www.bom.gov.au/?ref=hdr>

Choose the tab for your state, then click on <Past Weather> then <Climate averages> then <Maps> then <Average conditions>

What information do you think you need to build a good picture of your climate, especially in regards to agricultural activities?

Write a short report on your understanding of the climate in your local area. Be prepared to justify your choices.

# How much change?

# Go to the <Climate change> then <Trend maps>. Find out how much the rainfall and temperature has changed in your area.

How much do you think it will change in the next 30 years?

Go to the website link below and find your town/city (or one very close), either by clicking on the map or using the drop-down menu.

[www.climatechangeinaustralia.gov.au/en/climate-projections/climate-analogues/analogues-explorer/](http://www.climatechangeinaustralia.gov.au/en/climate-projections/climate-analogues/analogues-explorer/)

The map will show you other places that have a climate similar to yours. Where are they? Do you recognise any of the names?

Now make your changes (note that the temperature change is given in OC but the rainfall is given as a percentage change). What places are now similar in climate? Where are they? What do the seasons look like?

Try varying just one factor at a time. What differences do you notice?

How could these changes affect the agricultural activities? Could everything still be grown or farmed or would there need to be other interventions?

# Disaster scenarios

What is the worst possible scenario? Try some combinations with extreme changes. Look at other places of interest as well as your local area. How bad does it get?