

## Choc Chip Mining

(Adapted from a Chamber of Minerals & Energy of Western Australia Inc. activity)

### Background Information:

Alcoa mines bauxite in the Darling Ranges at two mines. Alumina is extracted from bauxite at three WA refineries. Most alumina gets turned into aluminium by a process called smelting. Aluminium is unique as it is endlessly recyclable.



190t Haul Truck



Excavator

As a mining company Alcoa is committed to operating in ways that minimise the effects of mining on the environment. Alcoa, for example, do not allow muddy or oily water to run off site, use appropriate techniques to minimise dust and reduce noise pollution.

YOU also need to make sure that you don't damage the environment as you run your **Choc Chip MINE....**

### You Will Need:

- Choc chip biscuits (at least one per person)
- Toothpicks (at least two per person)
- A4 paper
- Pencil

### What You Need To Do:

- Put your biscuit on the middle of the page and draw a big area around it. This is your mining lease.

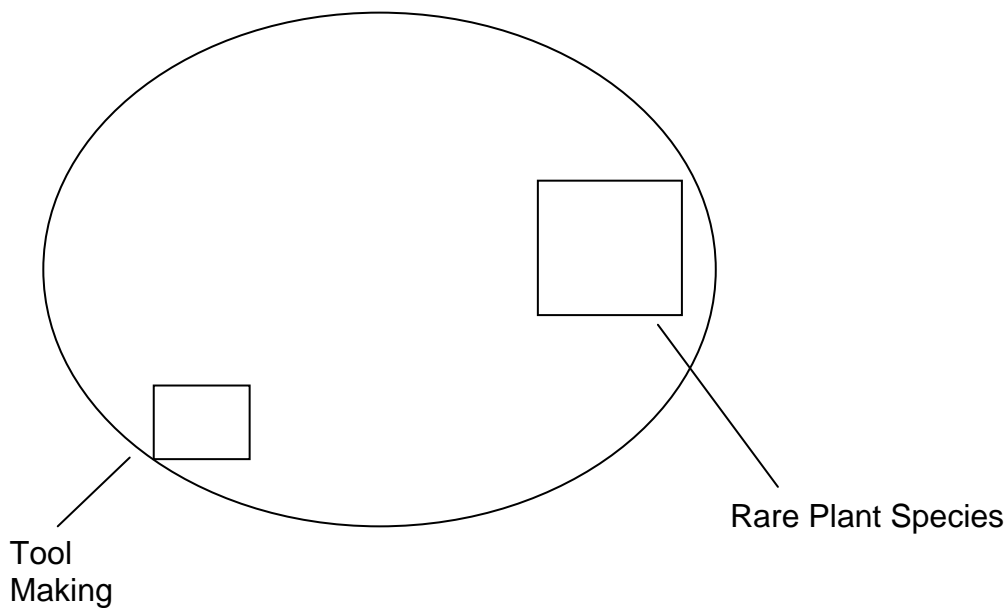
## mining and rehabilitation

- Somewhere on your mining lease draw on a small area that contains a rare plant species
- Somewhere else on your lease, draw on a small area that contains an important Aboriginal tool making site

You will need to be careful to protect these areas while you mine.

Below is an example of a mining lease BUT be creative, make your own!

### Mining Lease example:



- On the outside of your lease, draw on a **dam** (water storage) and two **farms**
- Choose your two mining tools (toothpicks)
- Start **exploring** and **mining** for choc chips with your tools (do not touch the biscuit with your hands!). **Stockpile** the choc chips within your lease (put them in a pile)

**Make sure that you stay within your mining lease at all times** – no dust or spills into surrounding areas!!! Are you keeping the noise down?

## mining and rehabilitation

- **Rehabilitate** your mine site as best you can (try and put the biscuit back together so it looks like it did before you started mining)
- **Export** the choc chips to market (eat the biscuit!!!)

### Discussion:

Which was the most difficult step in the **Choc Chip Mining** process?



A bauxite mine pit (1980)



The same pit 20 years after mining and rehabilitation has taken place (2001)

### Curriculum Links

**Society and Environment:** Place and Space, Resources, Active Citizenship - Ecological Sustainability

**Science:** Life and Living, Earth and Beyond

### Values

5. Environmental Responsibility