



# Waste - The Final Frontier

## Fact Sheets For Schools and For Home

### What a Load of Rubbish!

- ◆ Australia generates an estimated 22.7 million tonnes of waste annually. This is more than one tonne for every man, woman and child.
- ◆ 21.2 million tons of waste annually goes to landfill and only 1.5 million tonnes is recycled.
- ◆ The garbage we dump each year is enough to cover the State of Victoria to a depth of 10cm.
- ◆ We use 6 billion plastic bags every year. Glued end to end these would circle the earth 73 times and reach the moon and back 4 times.
- ◆ At the rate we are producing and burying rubbish, the land fills in our Australian capital cities will be full by 2010. Plans are in place to send train loads of rubbish into old mines. How much fuel will be needed for that new exercise?
- ◆ One third of waste we produce at home is packaging materials such as cans, bottles and boxes.
- ◆ Every year Sydneysiders bury enough steel to rebuild the Harbour Bridge.
- ◆ Australia produces three million tonnes of sewage sludge each year.
- ◆ Food & garden waste makes up a whopping 59.3% of all Australian council waste.
- ◆ On average, each Australian household is still throwing out over 15.7 kg of waste every week
- ◆ Only Americans produce more rubbish per person that we do. This is not a silver medal to be proud of!

### Who Cares?

- ◆ Only 25% of our population is committed to recycling. 25% couldn't care less.
- ◆ After air quality, the Australian public thinks waste management and minimisation is the next most important environmental issue.

### So What!

- ◆ Organic waste in landfill emits greenhouse gases, such as methane, into our atmosphere accelerating global warming.
- ◆ If we recycled the resources, we would not have to mine so much of our planet.



### We are not alone ... yet!

- ◆ One third of the world's arable land has been lost in the past 40 years, largely because farming and other human activities have dramatically accelerated soil erosion, which is removing 75 billion tons of topsoil and destroying 20 million acres of farmland per year.
- ◆ Since 1950, the area used to grow grain has increased 25%, but chemical fertiliser use is up 1,000%. Nutrient pollution is poisoning our rivers and lakes.
- ◆ 1.5 acres of Amazon rain forest is lost every second. 600,000 square miles of forest have been cut and 26 billion tons of topsoil have been lost in this area alone in the last 10 years. In the time it has taken you to read this paragraph 45 more acres of rain forest have been destroyed.
- ◆ 6,600 bird species are in decline. 1,000 are in imminent danger of extinction. 10-20,000 species of plants and animals are lost each year, mostly due to human development.

**"It is only in the moment of time represented by the present century that one species has acquired the power to alter the nature of the world."**

Rachael Carson (1962)

# Your Planet Needs You!

What *you* can do.

## *Reduce, Re-use, Recycle*

### Reasons to Recycle

1. We are running out of easily accessed landfill space to dump our waste.
2. It will cost more and do more environmental damage if we ship our rubbish further and further away.
3. With over 6 billion people on the planet, we are using up the planet's resources at an every increasing rate. Reusing and recycling is one way you can conserve resources for future generations.
4. The processes of making the goods we buy have much more environmental impact than the disposal of the same things in landfill.
5. By using recycled material when making a product, in comparison to its virgin equivalent, we will reduce the amount of energy and water and the level of industrial emissions (some of which are toxic),

In making recycled paper, the process uses astoundingly 99% less water and around 40% less energy. Last year, Australia recycled over 443,271 tonnes of newsprint and magazines - that's equivalent to more than 1 billion newspapers!

6. Using recycled materials also stops the extraction and transport of new materials, which also has high environmental impacts.

**One person living in a rich city requires 4-5 hectares of productive land.**

**If the world's present population were to live at the same standards of living as we enjoy in Australian cities we would need more than 3 times all the world's productive land.**



### Making a meal of your rubbish?

#### *Did you know....*

- ◆ Worms are nature's recycler. Working with bacteria and fungi they break down all sorts of organic wastes so plants can use the nutrients and minerals tied up in the waste.
- ◆ There are more than 3,000 types of worms, each of which has adapted to its own unique living conditions. Some live in the Arctic, other in the boiling water, under water volcanoes. Each species has adapted for the conditions and type and quantity of food available.
- ◆ For recycling waste where there is a huge quantity of "food" special super hungry worms are used.
- ◆ The worm poo, created by worms, is full of yummy bacteria. It is bought by farmers and used to help to grow crops (Consequently, fewer chemicals are required in their fields).
- ◆ Worms aren't the only critters with a big appetite for waste. Microbes - tiny invisible organisms, also like to dig in when they can.
- ◆ There are 1000's of species of microbes. Scientists think microbes may be the oldest life forms on Earth. They devour just about anything that's biodegradable (materials that can be broken down by living things); discarded food, paper and even some chemicals.
- ◆ But microbes can't eat everything you throw away. Plastic, for example, takes decades to disintegrate in a landfill. Glass takes much longer...we are still digging up glass bottles created back in the Roman era.

**Diamonds are forever? So is most Rubbish!**