

ADOPT A BUSHLAND



City of
Joondalup

NAME

DATE

STUDENT ACTIVITY – YEARS FOUR TO FIVE

LITTER BACKGROUND



Rubbish is anything that is thrown away. It could be apple cores, plastic bottles, paper, lawn clippings, empty cereal boxes, lolly wrappers, cans, glass jars, old furniture, or tetra packs. All of these things can be rubbish.

Rubbish can be biodegradable or non-biodegradable. Biodegradable substances can be broken down by micro-organisms like bacteria and fungi. Food rots because bacteria and fungi are eating it and breaking down the food into nutrients. The nutrients return into the ecosystem through soil or air. Non-biodegradable substances cannot rot because bacteria and fungi cannot eat them. Even if they can break up into very small pieces they still stay the same.

Just because substances can biodegrade it doesn't mean you can just throw it on the ground. Many people think it is okay to throw apple cores into the bush. These food scraps are eaten by native animals like possums, bandicoots, birds, goannas and kangaroos. If they are not eaten by animals they breakdown into nutrients and return to the ecosystem. This is not always good for the environment.

Here are some reasons why food scraps should not be thrown on the ground.

1. Food that has been thrown out of a car window can attract animals to the side of the road where they could be hit by a car.
2. Human food is not native animal food. Native animals can get sick from eating human food because it's not part of their natural diet or may have germs on it.
3. Australian plants are familiar with not having fertiliser or nutrient rich soil. By adding nutrients to soil through rotting food, weeds are encouraged to grow. Weeds take up space and use nutrients that native plants need.

Non-biodegradable substances are harmful to the environment as well. Animals can become trapped in glass bottles, old tins, plastic bottles and aluminium cans. Animals don't have hands to pull themselves out of the container. If they get trapped they slowly die of starvation. Torn cans with jagged edges and broken glass can cut animals.

Animals often mistake cigarette butts for food. The filters in cigarette butts are made from a type of plastic called cellulose acetate. The filters are there to absorb chemicals such as cadmium, lead, zinc and arsenic. These chemicals do not breakdown and they can pollute the environment. These chemicals can be toxic to animals. The chemicals leak out into the soil and waterways. When animals eat cigarette butts, they can stay inside the animal's stomach because their bodies cannot digest it. The animals feel full so they cannot eat anymore and slowly starve to death. In Australia it is estimated that around 7 million cigarette butts are thrown away every year!

How long does the litter last in the bushland?

Many people think apple cores or banana skins breakdown very quickly. Look at the table below to see the actual length of time it takes for some items to breakdown. Plastic items are made out of petrochemicals which never really breakdown and stay in the soil forever.

Table 1: The time it takes for items to naturally breakdown

Litter item	Time to breakdown
Banana skin	3-4 weeks
Paper bag	1 month
Cardboard	2 months
Apple core	1-2 months
Orange peel	up to 2 years
Cigarette butts	up to 12 years
Plastic bags *	up to 20 years
Plastic bottle *	450 years
Glass	1-2 million years
Aluminium cans	more than 1 million years

* Petrochemical products never truly breakdown and remain in the environment forever.

References

Keep Queensland Beautiful, no date, *Fact Sheets*,
<http://www.keepqueenslandbeautiful.org.au/fact-sheets>