

What do you do?

Carbon scientist



Scribbly was on an excursion to his local landfill site looking out over a sea of household rubbish when...

What's that? He was amazed to find a man picking through a pile of old, rotting, and stinky rubbish. "That's Hamish. Would you like to meet him?" said the tour guide.

Scribbly was a bit scared but he had lots of questions. Did Hamish live at the dump? What was he looking for? Would he smell? He had to find out no matter how disgusting. Here's what Scribbly and his class discovered.

What are you doing?

I'm digging up rubbish dumped here about 50 years ago.

Why?

I'm a scientist and I collect what's left of timber and paper products to study back at the lab. My friends call me a rubbish archaeologist; rubbish has so much to tell us about the past and the future.

We understand how rubbish tells us about the past but how could it possibly tell us about the future?

The work I do is directly related to climate change, one of the greatest environmental challenges of our time.

No way. How?

Have you ever heard of carbon dioxide? It's one of the greenhouse gases which helps trap energy from the sun and keep the Earth warm. This is known as the greenhouse effect. Without the greenhouse effect Earth would be too cold to live on.

The trouble is increasing amounts of human-made carbon dioxide and other gases are making the Earth warmer than usual. This added warmth is starting to cause problems for people, plants and animals.



Mmmm, but what has it got to do with rubbish?

Plants carry out a process called photosynthesis. They take in carbon dioxide from the air through their leaves and use energy from the sun to make food. As part of this process carbon is stored within the stems, leaves and branches of the plant and oxygen released into the air. The carbon dioxide is only released again when the plant is burnt or decomposes.

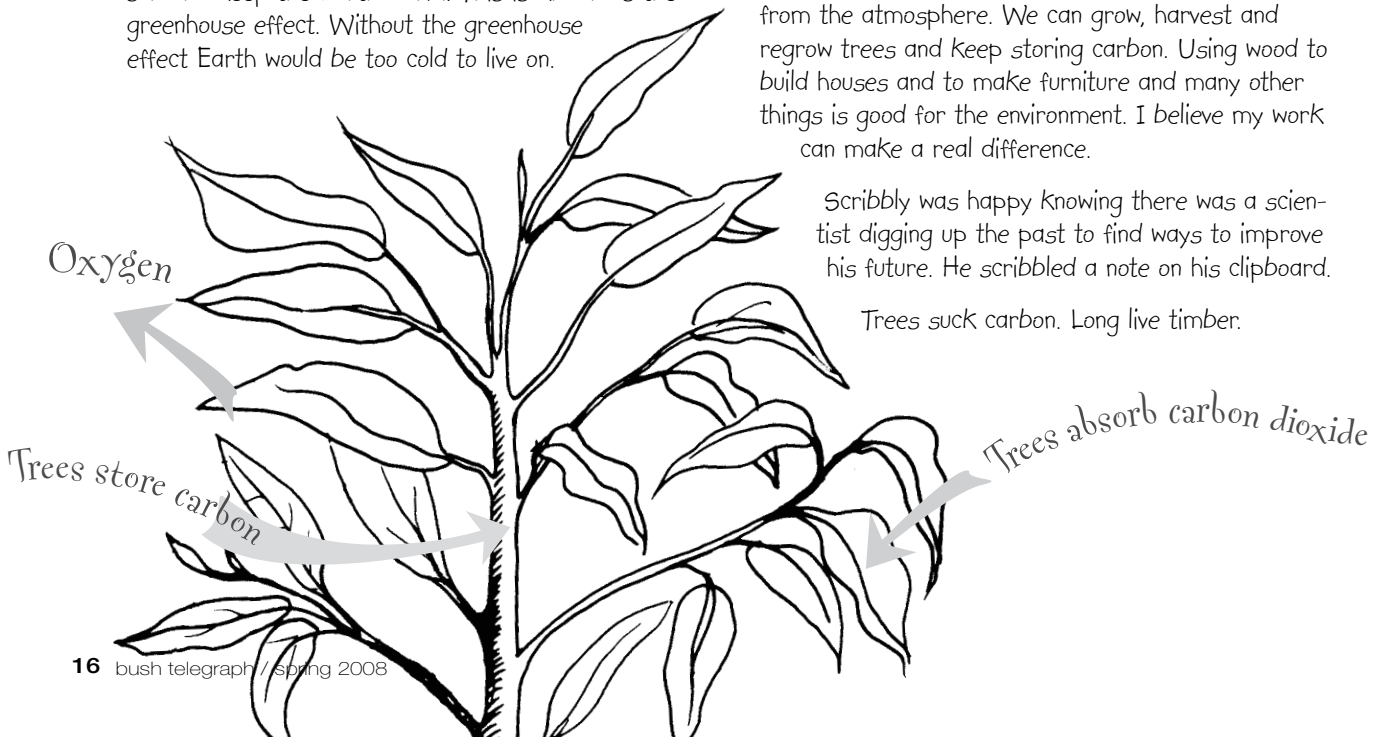
Timber products store the carbon dioxide they absorbed when they were part of a growing tree. The carbon stored in the timber will not be released even when a tree has been harvested and made into things.

By studying old bits of timber we've discovered that even after 50 years buried in rubbish most of the carbon originally stored when the timber was part of a growing tree is still stored. Amazing!

The more trees we grow the more carbon we remove from the atmosphere. We can grow, harvest and regrow trees and keep storing carbon. Using wood to build houses and to make furniture and many other things is good for the environment. I believe my work can make a real difference.

Scribbly was happy knowing there was a scientist digging up the past to find ways to improve his future. He scribbled a note on his clipboard.

Trees suck carbon. Long live timber.





Rottin' Rocket

Watch things rot or decompose before your very eyes.

Make it:

You will need:

- 3 x 2L soft drink bottles
- one bottle cap
- scissors • tape
- an adult to help cut the bottles
- optional – sieve (an old piece of stocking will do)

Fill it:

Fill your rocket about half way with rubbish. Try leaves, kitchen scraps, newspaper, timber, soil and a little water.

Watch it for two months. What happens? Write down your observations every week.

Figure it out:

Logs on the forest floor decompose faster than timber buried in landfill. Why?

