

# Healthy Planet, Healthy Plants, Healthy People



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## **Enviro-Stories**

Enviro-Stories is an innovative literacy education program that inspires learning about natural resource and catchment management issues. Developed by Peekdesigns, this program provides students with an opportunity to publish their own stories that have been written for other kids to support learning about their local area.

[www.envirostories.com.au](http://www.envirostories.com.au)

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# Healthy Planet, Healthy Plants, Healthy People

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Hi, my name is Sarah and I'm a scientist. I do not mix chemicals or invent amazing things; I am a scientist who studies air pollution.

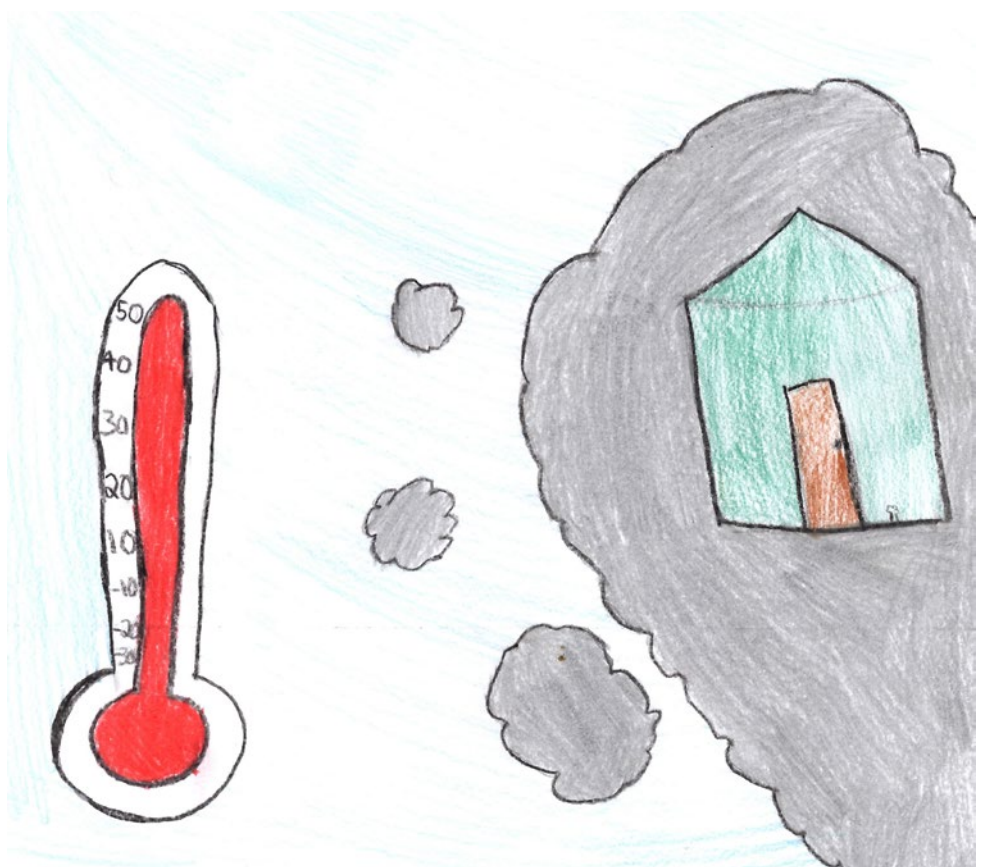
Sounds boring to you, right? Well, my job is very significant in minimising the Earth's carbon footprint, which helps give us fresh air to breathe.

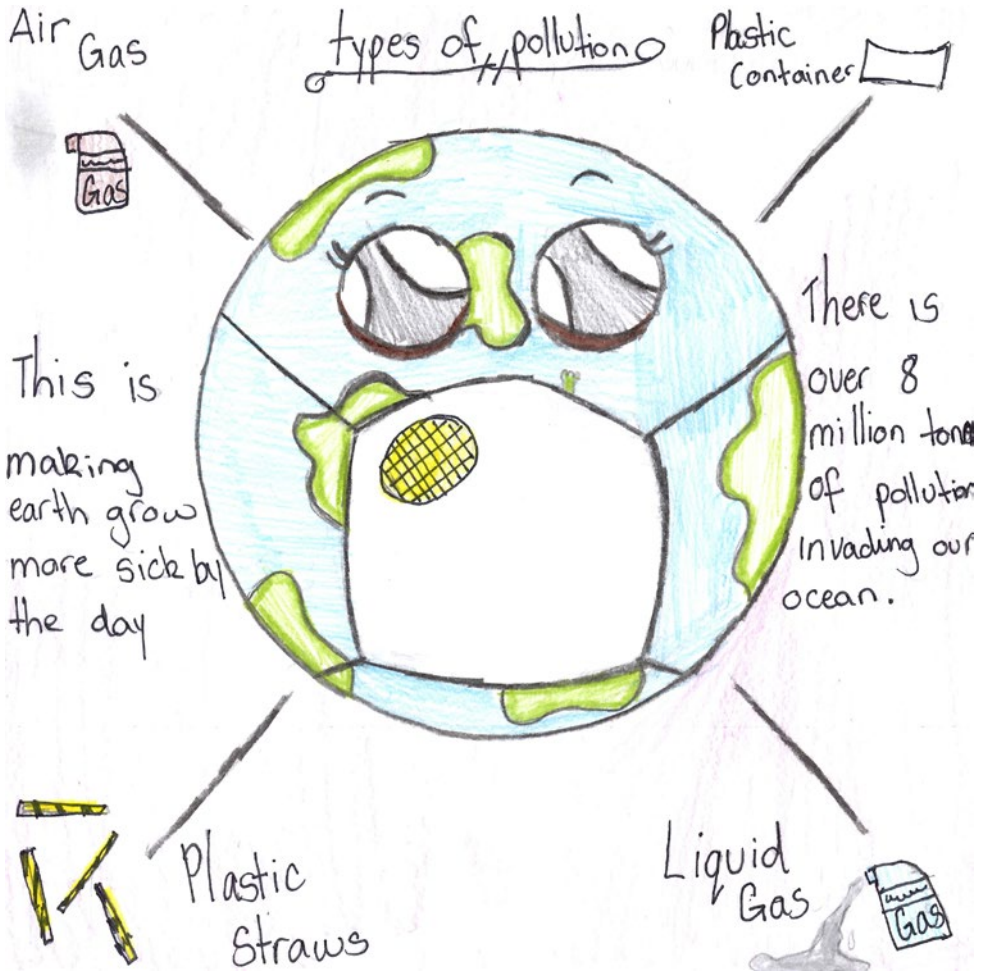


‘What exactly is air pollution?’ I hear you asking.

Air pollution is any harmful gas that is released into our atmosphere, such as carbon dioxide, carbon monoxide, nitrogen oxide, methane and CFC’s (chlorofluorocarbons).

These gases are commonly referred to as Greenhouse Gases because they can stop heat leaving the atmosphere. This results in rising global temperatures that can lead to more frequent severe weather events, such as long droughts, massive storms and huge floods. These events can be very harmful to plants, animals and even us.

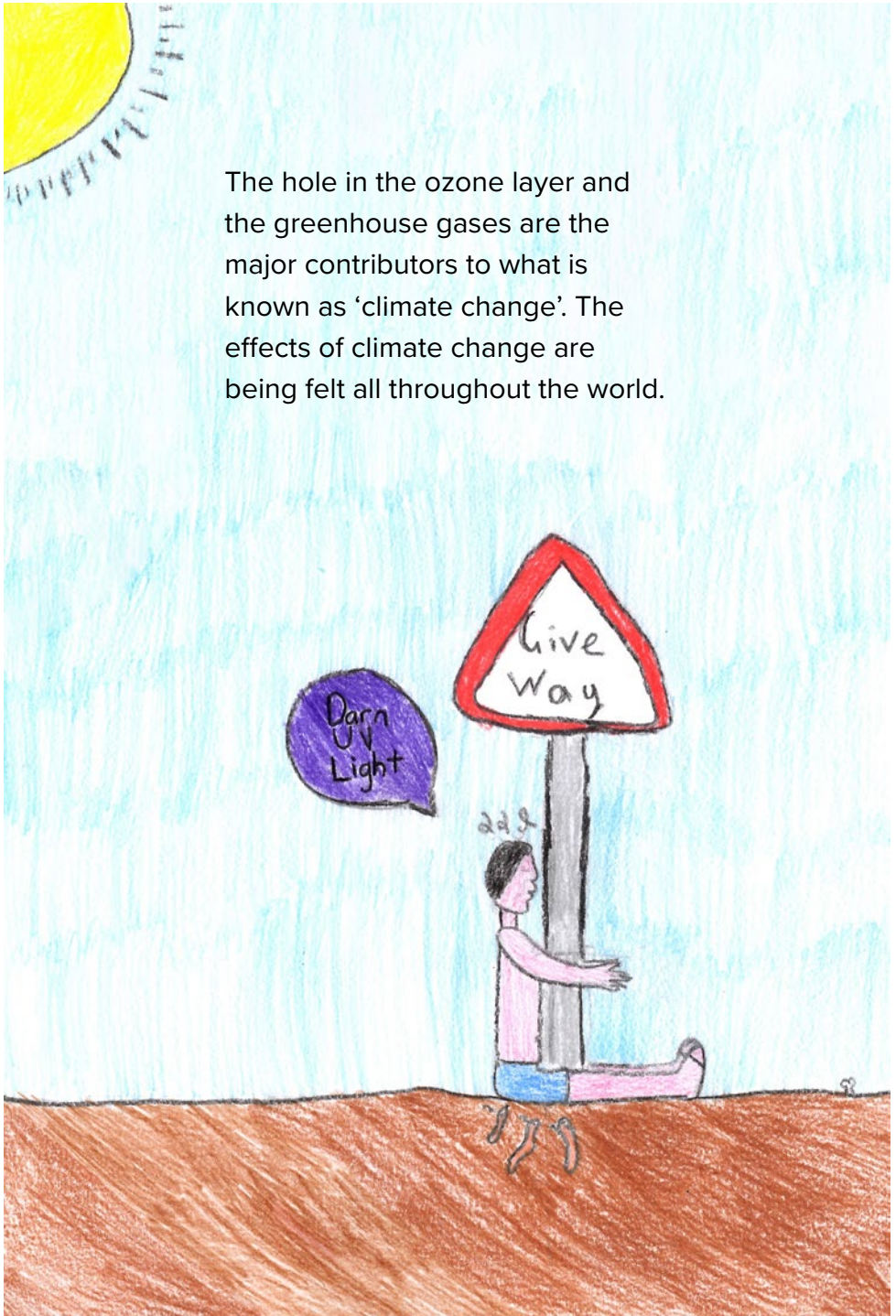


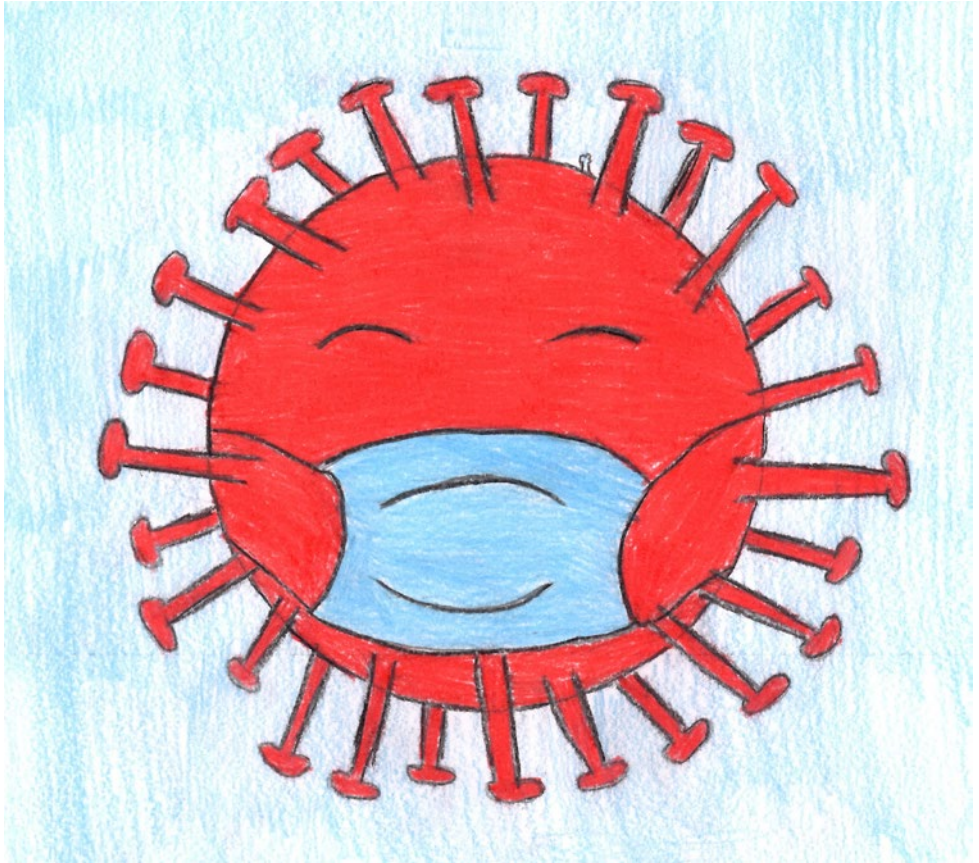


Some of these air polluting gases, like CFC's, can even make holes in the ozone layer. The ozone layer is like a shield around the planet that protects us from harmful ultra-violet (UV) radiation.

If extra ultra-violet radiation gets through, then it makes the planet warmer. Plants, humans and other animals' health can also suffer more from exposure to the Sun's harmful rays.

The hole in the ozone layer and the greenhouse gases are the major contributors to what is known as 'climate change'. The effects of climate change are being felt all throughout the world.





I am pretty sure you have heard of the COVID-19 or Coronavirus, right? Well, while everyone was in lockdown and staying home, an awesome side effect has been that air pollution on our planet has decreased.

In China alone, levels have fallen by 60%. As a scientist, I think that is amazing and you should too! We have given our planet a chance to breathe but as we get back to normal, pollution levels will most likely return to normal, which is not so amazing.



Human activity is the major contributor to pollution on our planet. Activities like mining, logging, land clearing, running power stations and our transport all release noxious chemicals into the atmosphere.

Scientists like me want to come up with ways to minimise this pollution through environmentally friendly options. You too can make choices that minimise the pollution you produce.

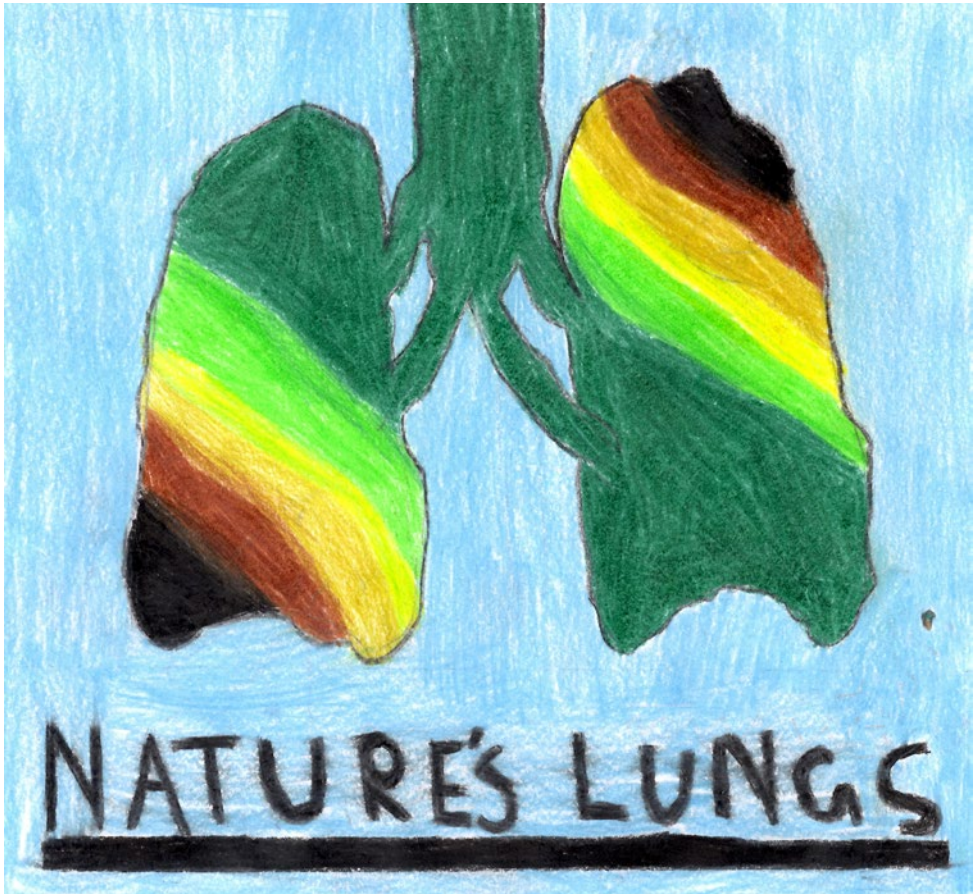


Human transport is a major cause of air pollution from our vehicles including cars, buses, trucks, diggers, trains and planes. They release chemicals, like carbon monoxide, from their exhaust systems, which goes into the atmosphere.

The good news is that we can change our behaviour to try and help. Walking, riding and running are all healthy activities for us and do not release emissions. Car-pooling and using public transport also help limit emissions.

New technology is also providing more environmentally friendly options. We now have options to choose fuel efficient, hybrid and electric cars to help us get around.





Land clearing doesn't directly create air pollution, but it is a major problem. Not only does land clearing and logging destroy native habitats, it also destroys nature's lungs.

Trees, bushes, grasses and other plants are our friends as they use photosynthesis to remove lots of Greenhouse Gases from our atmosphere and convert them into oxygen for us to breathe.

We need to protect our forests as without their help we would die because we need the oxygen they produce to survive.

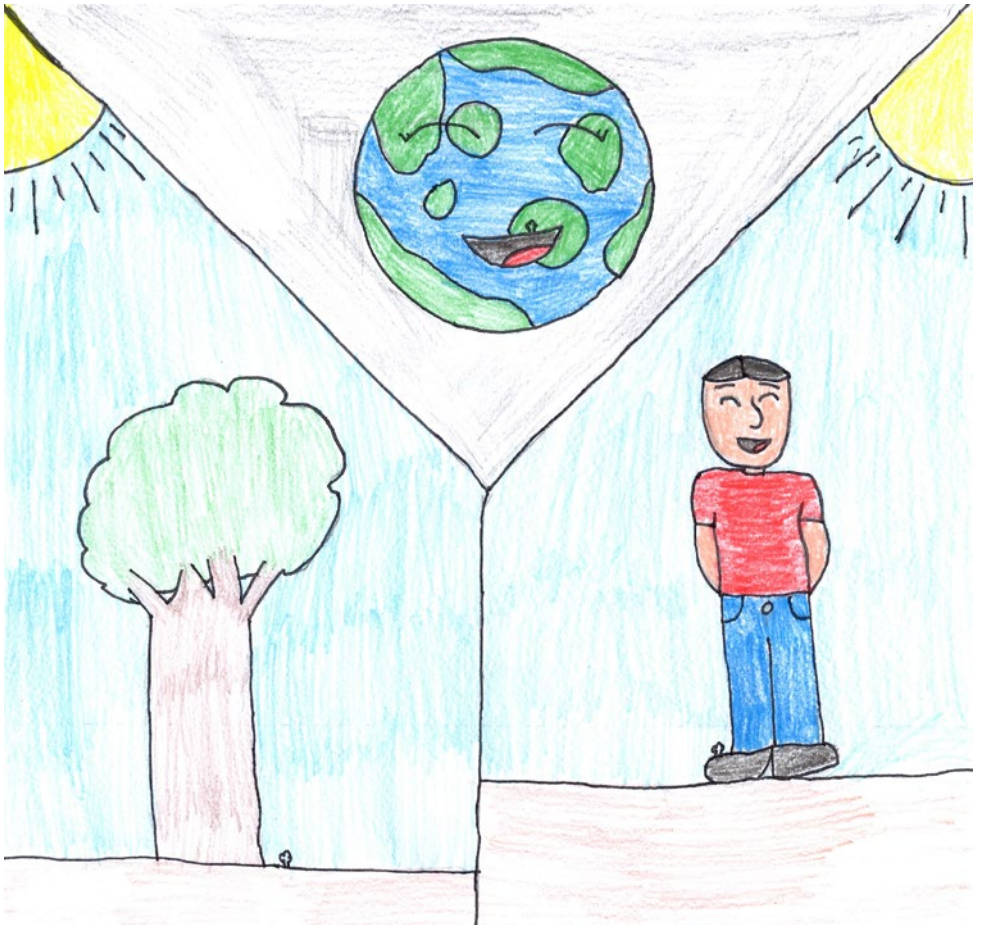
I figure you may want to know a little more about photosynthesis. Plants are pretty simple and only need three things for photosynthesis to work: sunlight, gases and water.

Plants use a green substance in their leaves called chlorophyll to capture the energy from sunlight. This energy drives the photosynthesis process that reacts carbon dioxide with water. Carbon dioxide is absorbed through holes in a plant's leaves called stomata, while water is sucked up through the roots into the leaves.



When the sunlight, carbon dioxide and water react together they create oxygen and sugar (glucose). The sugar feeds the plant, and the oxygen replenishes our atmosphere.

Plants are the biggest weapon we have against air pollution and global warming.





Now you know how you can help our planet? One of the big solutions to helping lower air pollution levels is plants!

You can be a Secret Earth Superhero right from home. Every small effort makes a difference, so plant more trees, flowers or any vegetation that loves to absorb air pollution.

It is really crazy how important plants are in helping us clean the air. We need to look after them, so they can look after us.

The work that plants do can also help us indoors as well. I'm sure you have a plant or two in your home for decorations, but they do so much more than look pretty.

Humans breathe in oxygen and breathe out carbon dioxide, while plants absorb carbon dioxide and release oxygen. So, having plants indoors will replenish the oxygen which helps keep us feeling good, awake and healthy. If you have plants indoors, give them some love.





There are many ways that scientists are working to help save the planet.

They have made smart technologies like scrubbers to remove gas particles from vehicle exhausts and similar things to limit emissions from factories. The development of battery powered electric cars and hybrids also helps us reduce emissions. Warning! Do not try scrubbing your own exhaust, leave that to the professionals.

Scientists are also finding more ways for us to use natural energy resources, such as wind and solar and improve on the ones we already have.



Other things you can do if you want to stop air pollution are:

- Ride your bike or walk on short trips instead of driving.
- Wear a jumper or snuggle up in a blanket instead of turning on the heater.
- Encourage your parents to buy natural cleaning products.
- Recycle plastics, metal and cardboard.
- Don't burn your waste but dispose of it properly.
- Have shorter showers.

There are so many ways to help to reduce your carbon footprint and live in a more natural manner.





I wish air pollution would go away and I hope you do too. If we all try to reduce pollution our Earth will slowly improve.

Maybe you will be an air pollution scientist like me and save our planet one step at a time. Maybe you'll just do your bit to help by recycling and minimising your waste. Maybe you will grow more plants and look after them better or support organisations that plant lots of trees.

If you do choose to help, then I offer you a great big 'THANK YOU!' You are a 'Secret Earth Superhero!' by helping create a healthy planet, with healthy plants, healthy animals and healthy people.





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