

Let's keep the air healthy

Activity - The air around our city

The RAC Air Health Monitor is a network of sensors that measure the levels of pollution in the air hour-by-hour. In this activity, you will investigate how clean the air is in the Perth metro area by using the live air sensor network and map.

Using 3 adjectives, describe what the air is like around your neighbourhood. Use a thesaurus to help you find interesting words.

What is your home address? _____

What landmarks do you live near? (e.g name the beaches, shops, parks, etc)



How clean is the air around you?

Did you know that we can now find out how clean and healthy the air is in different areas around Perth. Here is a map of our city. Get a teacher, parent or guardian to help you locate roughly where your house is on this map.

If you live outside of this map, pick a location you have visited or choose a random location.

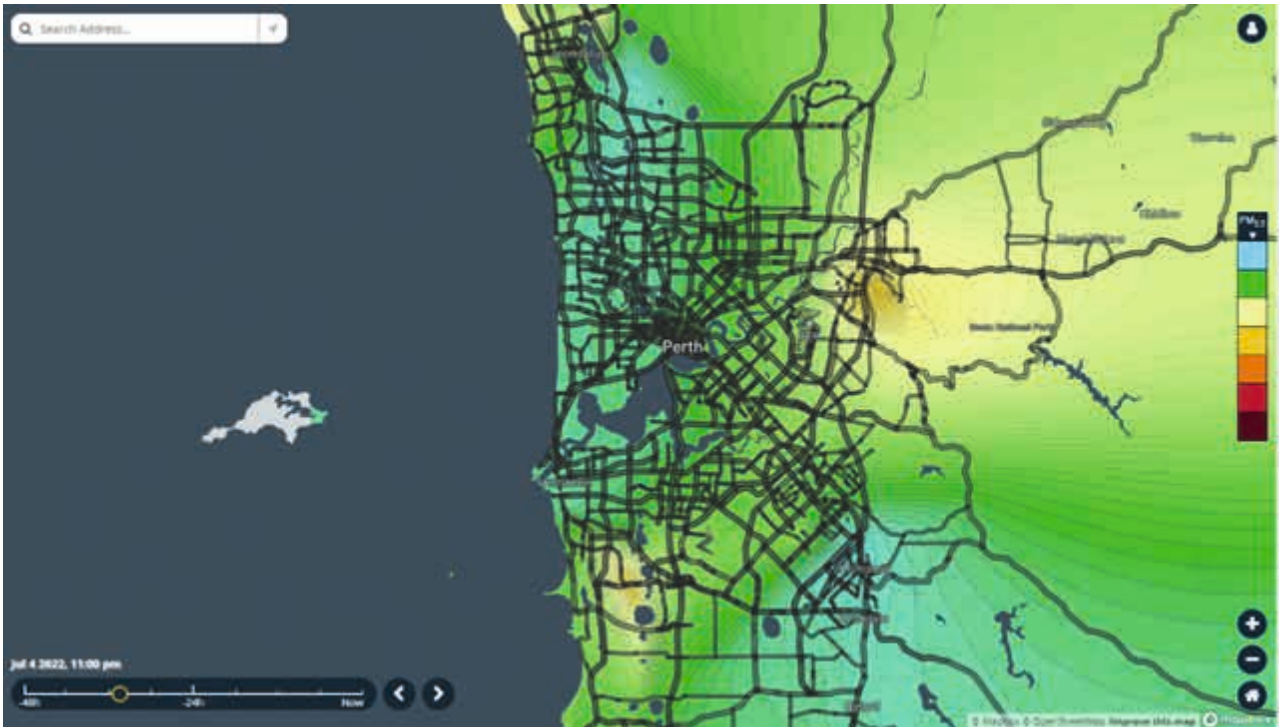


For the better

Online Investigation - Using the RAC Air Health Monitor website

Make sure you have a teacher or guardian supervising you

1. Visit the RAC Air Health Monitor website - rac.com.au/airhealth and view the full map.



What colours do you see on your map? _____

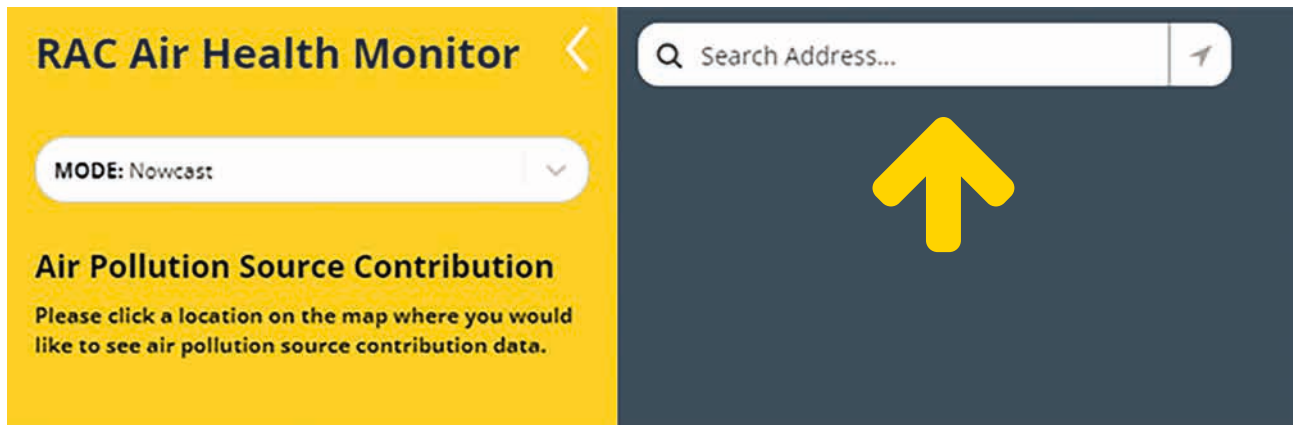
What colour is the sea, river and other bodies of water? _____

The map has a 'key' or a 'legend' on the right hand side with PM 2.5 at the top. What do you think the colours represent?

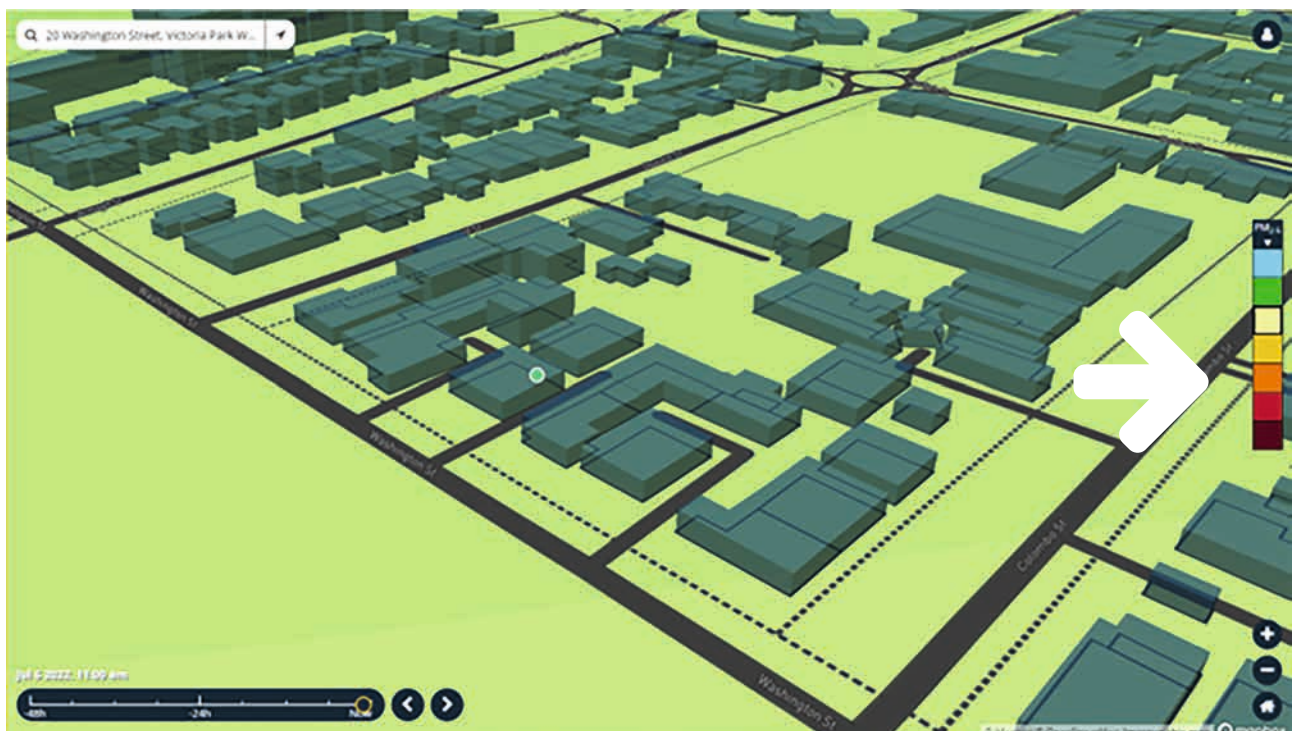
PM 2.5 (Fine Particulate Matter 2.5)

Air health monitors measure the harmful particles in the air. PM 2.5 is the name of one of the tiny particles that contribute to polluted air. Each particle is smaller than 2.5 micrometres. This is 100 times thinner than a piece of human hair.

2. Type in your home address or any Perth location in the address search bar. If you live outside the Perth metro area, have a teacher or parent identify an address you can use for this part of the activity.



3. Your house or chosen location will now be located on the map. Use the key on the right hand side to see if the colour in the neighbourhood around your house or chosen location is healthy or unhealthy.










Hint: In the above map, we can see the colour around the streets is a light green colour. The light green colour in the key says 'unhealthy for sensitive groups'. People represented in sensitive groups can include children or people with health problems such as asthma.

Collect the information

The colours represented in the key indicate the level of air quality.

The unit of measurement you see on the right hand side is called 'micrograms per cubic metre'.

In maths, you would have learnt how light 1 gram (1g) is. Now imagine that to be 1 million times smaller. That is a microgram.

PM _{2.5} ▼		
	Good (better than WHO thresholds)	0-5 µg/m ³
	Moderate (not ideal, but better than WHO 24-hr average threshold)	5-15 µg/m ³
	Unhealthy for sensitive groups (worse than WHO threshold)	15-25 µg/m ³
	Unhealthy	25-50 µg/m ³
	Very unhealthy	50-100 µg/m ³
	Hazardous	100-300 µg/m ³
	Extreme	300+ µg/m ³

What colour do you see around the neighbourhood

Do you think this could mean the air around the neighbourhood is healthy?

If the colours you see on your map are green or blue, it means the air is healthy in those areas. If it is another colour, it means the air may not be as healthy!

Sort and compare

Use the address of your school to see if it shows the same colour as the neighbourhood from the previous activity. If your school is located outside of the map, have a teacher or parent help you identify the address of a school you can use for this activity.

Does it show the same colour? _____

Now zoom out so you can see the whole of Perth. Does the map show different colours in different areas? _____

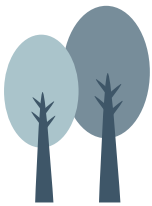
Can you colour in the different colours you see on the map?



Let's think about it!

Now that you have used the map to help you find out how healthy the air is in different locations, imagine what life would be like if the colours on the map were in orange, red or brown.

Below are some pictures of what we see around our city. Which of these things help keep the air healthy and which of these can pollute the air? Draw a line to match the right pictures to the right sentence.



Helps keep the air healthy

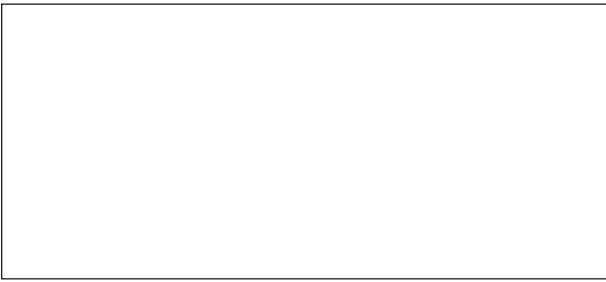
Can pollute the air

Smog - A mix of smoke and other pollutants in the air. Different places around the world with high levels of pollution have smog in the air. This is caused by high amounts of traffic, power plants and wood burning over a period of time.

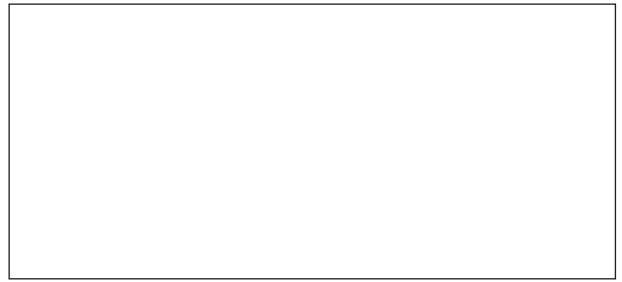
Circle the pictures that could fill the air with smog



Think about what life would be like if we lived with high amounts of smog everyday. It could be very hard to breathe and the air would not be fresh! Draw your pictures below:



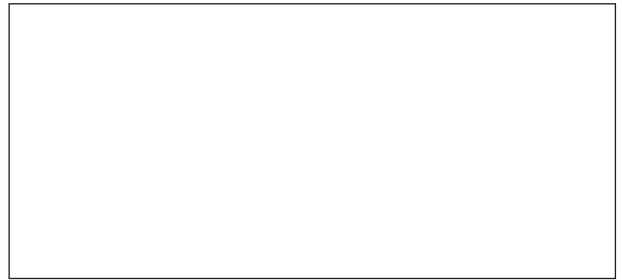
Walking to school in smog



Playing sports outside with smog



Traffic on the roads



Power plants and wood fires causing air pollution

What have we learnt? Fill in the blanks below.

Cars, trucks power plants and fires can fill the air with _____

Smog is a mix of _____ and other pollutants in the _____

We can _____ or ride more and use the car _____ to help keep the air clean.

Answers: smog, smoke, air, walk, less

