

Name: \_\_\_\_\_



## 2. HOW TO MEASURE AIR POLLUTION

Is your school near a busy road? When it's time to go home, do school buses wait in a line to pick up students with their engines running? Do parents wait for their children in the school carpark with their engines running?

To find out how these activities are affecting you and your fellow students, it's a great idea to measure the air quality - the amount of air pollution - around your school

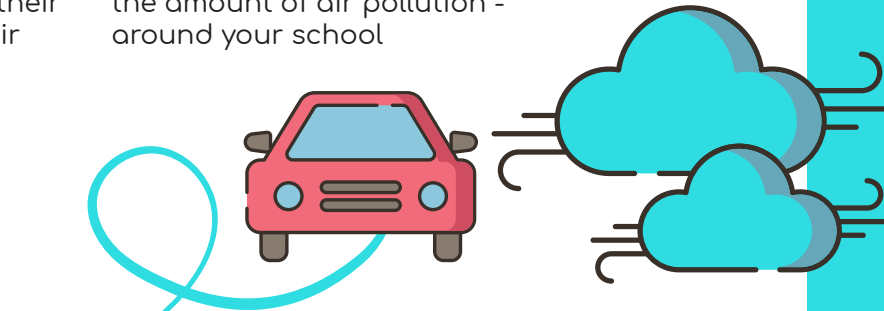
### HOW TO CATCH POLLUTION

#### Using classroom-based tools

You'll need:

- ✓ Paper plates or ice cream lids
- ✓ Hole punch
- ✓ String or ribbon
- ✓ Vaseline

- 1 Take a paper plate (or ice cream lid) and punch two holes about 5cms apart.
- 2 Using a piece of string or ribbon, make a loop by tying ends to the holes in the plate.
- 3 The gooey part! Smear Vaseline on one side of your plate. Repeat process to make as many pollution catchers as you need.
- 4 Hang your plate pollution catcher/s up in a spot around your school where you'd like to measure pollution. Leave it for one week to one month.
- 5 When you're ready, take your pollution catcher/s to a well lit place and use a magnifying glass or microscope to count the number of visible particles. Combusted particulate is BLACK.
- 6 Keep track of your results for each location you place a pollution catcher.



#### Observe, see & smell

You need:

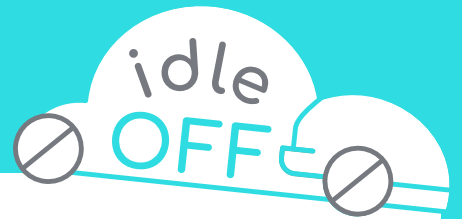
- ✓ Pen and paper

- 1 Brainstorm time. How many vehicles do you think idle their engines around your school at pick up time?
- 2 Half an hour before school finishes, find a safe place near your school car park.
- 3 Make a note of the number of vehicles that are parked and stationary.
- 4 Are any of them idling? What type of vehicles are they; large 4WDs, vans, utes or small hatchbacks?
- 5 Are your school buses also idling their engines while parked?
- 6 See and smell the air. Does it seem more polluted than usual at pick up time?

### Did you know!

10 minutes of idling per day over one year = 110g of noxious fumes (that you're breathing in!) + 60kg of Co2 emissions + \$35 of fuel (plus more in wear and tear on the car)

IN SOME CITIES, BREATHING URBAN AIR IS AS BAD FOR YOU AS SMOKING.



# FIND OUT MORE ABOUT AIR QUALITY

As part of your IDLE OFF project, what else can you learn about air quality around your school?

Some questions you might like to consider...or ask your own!

Does air quality worsen at school pick up and drop off times?

In which areas of your school is air quality worst?



Most of children's exposure to transport emissions occurs on the way to and from school. What are some of the ways to reduce this exposure?

In which areas is the air least polluted?



## RESOURCES

[Pollution catcher video tutorial](#)

[World Health Organisation outdoor air quality and health](#)

[Real time air pollution in Australia](#)

[Australian Government, Department of Agriculture, Water and the Environment](#)

## BEFORE YOU MOVE ON..

What surprised you about your air pollution observations?

How do you think you could change the behaviour of idling drivers around your school?

What else would you need to know to confidently tell your school community to Idle Off?

