

# Air Pollution



# Lesson objectives



- 1) Understand why clean air is important
- 2) Understand experiments we can do to prove air pollution exists
- 3) Understand where air pollution can come from

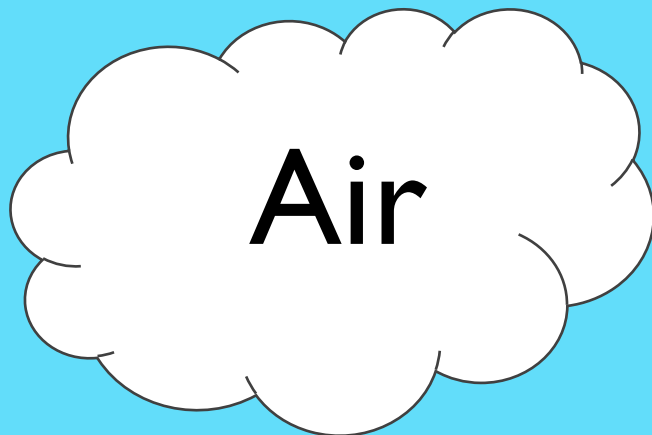
# ☁ What is air? ☁

- Air is a mixture of gases that surrounds us.
- We cannot see it, taste it, or smell it.



# ☁ Why is air important? ☁

- Our bodies need air so that we can breathe.
- Air is as important as food and water. We could not live without it.



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# Why is clean air important?

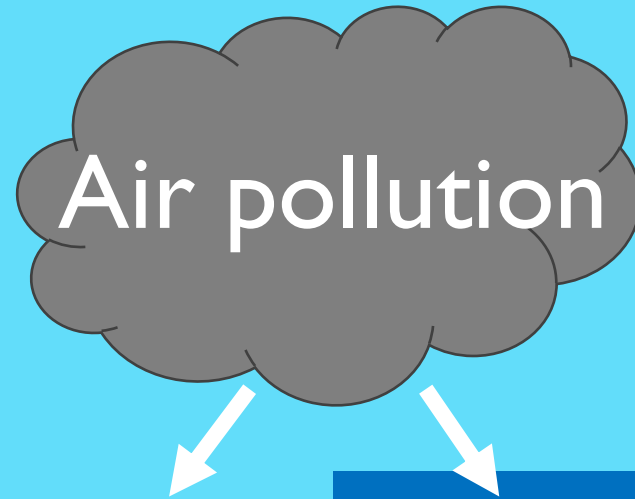
- Just like food and water, the air can get dirty.
- Something that makes the air dirty is called **air pollution**.
- Our bodies do not like air pollution, it is bad for our health.



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# ☁ Two types of air pollution ☁



## Small bits of dirt:

- This dirt is called particles.
- We can also call it PM.

## Gases:

- One of these gases is called Nitrogen Dioxide.
- We can also call it  $\text{NO}_2$ .

# Can we see air pollution?

- We cannot see air pollution when it is in the air.
- Particles are **5 times smaller** than a human hair!
- In order to see or measure air pollution, we have to do some science experiments.



# Science experiment: Nitrogen Dioxide ( $\text{NO}_2$ )

- We use a small tube called a **diffusion tube** to measure  $\text{NO}_2$ .
- Local councils use these to measure air pollution in their area.



Diffusion  
tube



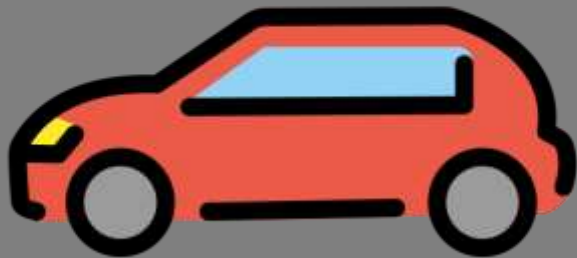
# Science Experiment: Particles (PM)

- It is more difficult to measure PM.
- We can wipe wet cotton pads on a surface to pick up PM, so that we can see them.



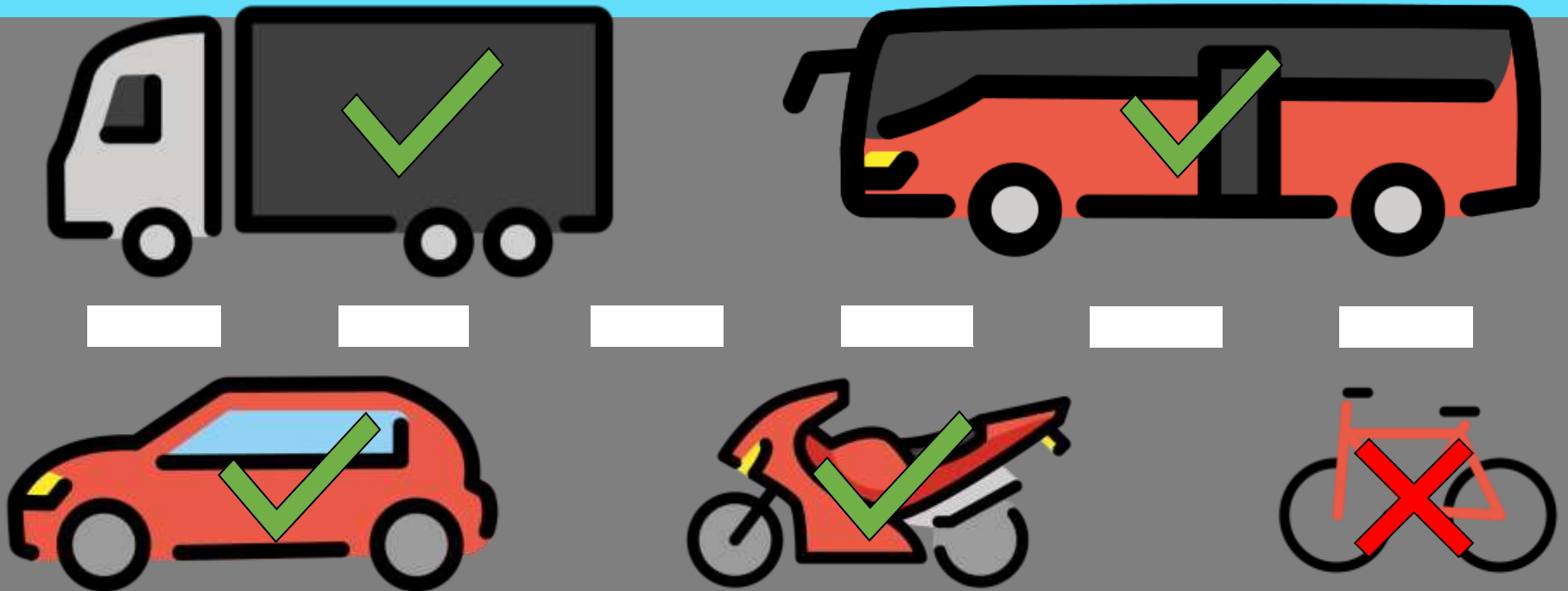
# ☁ Sources of air pollution ☁

- One cause of air pollution is **traffic**.
- Which of these vehicles do you think release air pollution?



# ☁ Sources of air pollution ☁

- **Answer:** the car, bus, motorbike and lorry.
- They cause air pollution because they have an engine which burns fuel.



# ☁ Sources of air pollution ☁

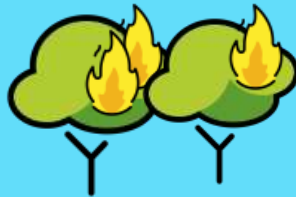
- Sources of air pollution are either:  
**Natural:** caused by nature.  
**Man-made:** caused by human activity.
- Below are some other sources of air pollution. Which are natural, and which are man-made?



Burning fuel  
at home



Industry



Wildfire



Volcanoes



Power stations

# ☁ Sources of air pollution ☁

Answer:



**Man-made**

Industry



**Natural**

Volcanoes



**Man-made**

Burning fuel  
at home



**Natural**

Wildfire



**Man-made**

Power stations

# ☁ Reflection ☁

- How could the ways we travel to school affect air pollution?
- How could we reduce air pollution at school?



# ☁ Activities ☁

- Test what you have learnt using the air pollution quiz!
- Find all the words on the word search!
- Design your clean air superhero!



# Key words

**Air pollution:** something that makes the air dirty.

**Nitrogen Dioxide (NO<sub>2</sub>):** a form of air pollution.  
It is a gas.

**Particles (PM):** a form of air pollution. It is small bits of dirt.

**Diffusion tube:** a small tube we use to measure NO<sub>2</sub>.



# Feedback

- If you are a parent or guardian, please offer any feedback you have about this lesson using the short 2 minute survey below:

<https://www.surveymonkey.co.uk/r/BXSJNKZ>