

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

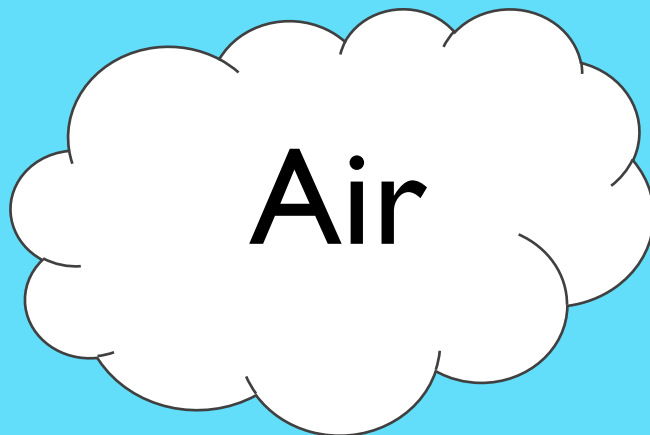
☁ What is air? ☁

- 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?

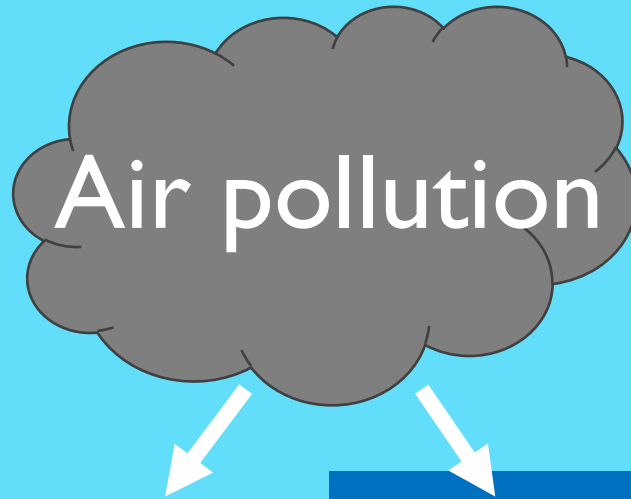
- Just like food and water, the air can get dirty.
- Something that makes the air dirty is called **air pollution**.
- Our bodies do not like air pollution, it is bad for our health.



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Two types of air pollution



Small bits of dirt:

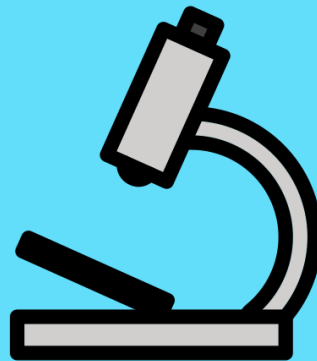
- This dirt is called particles.
- We can also call it PM.

Gases:

- One of these gases is called Nitrogen Dioxide.
- We can also call it NO₂.

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 (NO_2)

- We use a small tube called a **diffusion tube** to measure NO_2 .
- Local councils use these to measure air pollution in their area.



Diffusion
tube

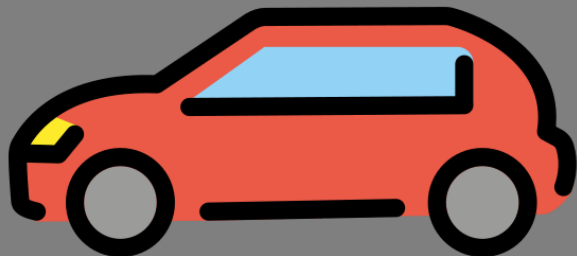
Science Experiment: Particles (PM)

- 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.



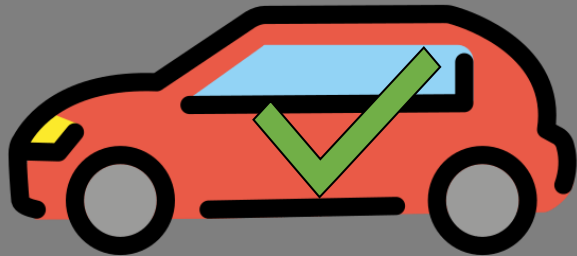
☁ Sources of air pollution ☁

- 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 ☁

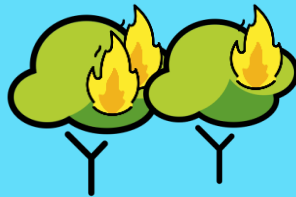
- Sources of air pollution are either:
Natural: caused by nature.
Man-made: caused by human activity.
- Below are some other sources of air pollution. Which are natural, and which are man-made?



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 (NO₂): 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 NO₂.