



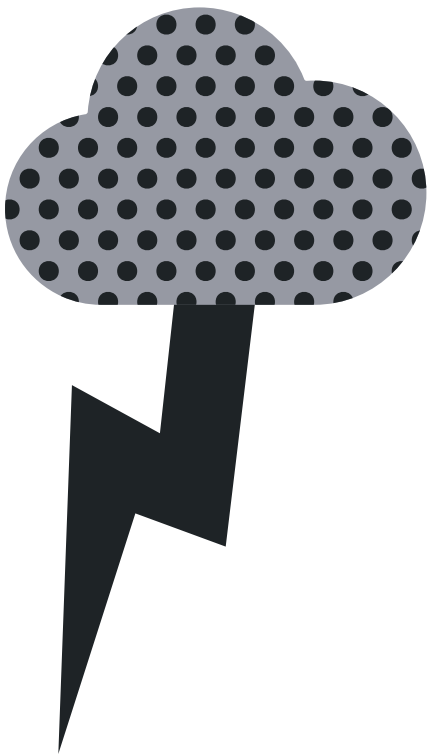
A clean air future



Introduction

Overview

This activity explores why clean air is important, the sources of air pollution and the actions we can all take to protect ourselves from the health harms of air pollution. Students will create a clean air action plan for themselves and their school community. They will identify one clean air action they think is important for their school and design an example communication tool for a target audience who could help make this change happen.



Introduction



Time required

60 minutes



Materials required

- Clean air future school – presentation slides
- Card sort activity: air pollution problems, health impacts and solutions
- My clean air promise - template
- My clean air future school – template
- Clean air communications – template

Learning outcomes

By completing this lesson, students will be able to:

- Understand some of the air pollution problems (sources & ways we contribute to air pollution), how these impact our health and possible solutions.
- Identify actions they could take independently or collectively, to reduce exposure and/or contribution to air pollution in and around their school and local area.
- Understand how they can become agents of change to improve air quality or protect themselves from polluted air; by taking action independently and/or getting support from peers, adults and others in their community.
- Understand what a target audience is, what power they hold (decision makers vs supporters and allies) and the importance of selecting appropriate communication methods for a target audience.
- Select and design one appropriate example communication method for a chosen target audience

Curriculum Links – Secondary

- Science / PSHE – understanding how air pollution can adversely impact human health and actions individuals can take to protect themselves from these harms.
- Geography – understanding how air pollution affects the natural environment.
- Citizenship - exploring air quality issues critically, debating and making reasoned arguments; preparing students to take their place in society as responsible citizens.
- Language and Literacy – conveying ideas confidently and clearly, using different forms of communication.

How to use this lesson:

It can be introduced to students as a standalone lesson or incorporated into other topics and initiatives e.g. climate change, global issues, sustainable cities, sustainable schools, citizen science, student leadership etc. Students or staff may also wish to look at their local air quality forecasts using the Met Office's website, enter "air quality news + location" into a search engine or look up their local authority's latest Air Quality Strategy.

Activity steps

01 Tell the group that they will find out why clean air is important, the sources of air pollution and the actions we can all take to protect ourselves from the health harms of air pollution. They will use this information to help them design a clean air action plan for themselves and their school community.

To get students thinking about these issues, play ‘true or false’ and ask the students to respond to the “Clean air, should we care?” T/F statements. At the end of the game, ask volunteers to share their initial reflections about whether we should care about the air around us and why.

02 Ask students what they already know about air pollution and ask volunteers to share any ideas they have with the class. Explain that pollutants are chemicals and substances that are harmful to our health or the natural environment. There are different types of pollution which cause damage to the land, air or water. Use the visuals on the slides as prompts to explain that air pollution is the release of pollutants into the air around us, both indoors and outdoors, for example dust, bacteria, mould, smoke and gases (e.g. carbon dioxide, carbon monoxide and nitrogen dioxide). These pollution particles are called particulate matter and are often not visible.



5 minutes



Individual task

A clean air future slides



10 minutes



Groupwork

A clean air future slides



Activity steps

03

Advance preparation: print and cut the card sort activity cards, so each pair or small group has one set.

Activity: Students categorise their cards under the 3 title cards (1) sources of air pollution (where it comes from), (2) how air pollution affects our health, (3) air pollution solutions.

Once complete, they can sort the sources of air pollution further, into indoor and outdoor air pollution.

Students can check their answers against the answers on the slides.

04

In pairs or small groups, students think about who has the power to make change. They decide “who can help make our air cleaner” by looking at the different stakeholders on the slides. A short class discussion should highlight that different groups have different powers. Some people or groups of people are decision makers as they have the power to make a bigger systemic change happen (e.g. government, headteacher, business leaders). However, anyone can make a difference.

An individual can make changes that are within their own control (e.g. walking to school instead of driving) and they can also call on decision makers to help make change happen. They could do this as individuals, or with a group of supporters (e.g. a youth campaign group).

For example, they ask their headteacher to invest in some cycle parking to enable more children to cycle to school. they could either do this independently, or they could work to gain supporters who could speak to the headteacher with them (e.g. by signing a petition, joint letter/speech etc.) and lead a campaign to encourage more children to use active travel to get to school, so that the wider school community can benefit from the new cycle parking facilities and make bigger improvements to air quality and children’s health and wellbeing.



10 minutes



Groupwork

- A clean air future slides
- Card sort activity: air pollution problems, health impacts and solutions



5 minutes



Groupwork

- A clean air future slides

Activity steps

05

Students identify 1-3 actions they could take on an individual scale and complete their clean air promise, using the template.



5 minutes



Individual task

- A clean air future slides
- My clean air promise template

06

Students identify 3 actions their school could take that would improve air quality. They can work independently or in teams to develop an action plan for the one action they think is most important. Using the prompts on the templates, students should consider carefully who their target audience is and what power this person/group has, as well as an appropriate communication tool for that person or group of people.

For example, if they wanted to ask their headteacher to improve the cycle parking at the school, they could design a petition or flier for other students and teachers to support this ask. Another example could be to write a letter directly to a decision maker at the school or in the local community, asking for a specific change to happen, e.g. to change the way traffic circulates around their school, to improve safe walking and cycling routes to the school etc.

Ask some volunteers to share the designs and ideas they created. Finish by asking the class whether they could put their clean air action plans into practice at their school and how they might want to take their ideas forward.



25 minutes



Groupwork

- A clean air future slides
- My clean air future school template
- Clean air action plan for my school template

For further free practical tools to help schools take action on air pollution; with educational resources as well as information on how air pollution affects children's health, visit <https://www.actionforcleanair.org.uk/schools>

For further information about what air pollution is, how it affects your health, what you can do to protect yourself from it and the action you can take to tackle it – please visit:

- <https://uk-air.defra.gov.uk/>
- <https://www.who.int/health-topics/air-pollution>
- https://www.unicef.org/media/123156/file/Childhood_Air_Pollution_Key_Messages_2022.pdf

Card Sort Activity: Air pollution problems and solutions

Learning objective:

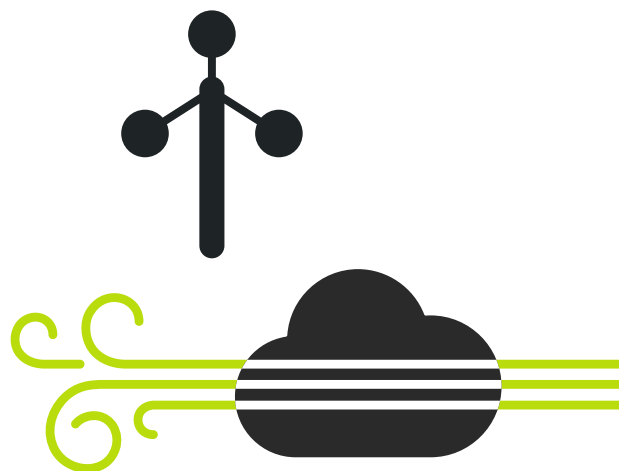
- To understand some of the air pollution problems (sources & ways we contribute to air pollution), how these impact our health and possible solutions.

Advance preparation:

- Print and cut the relevant cards.
- Students can work in pairs or small groups. They will need one set of cards per pair/group.

Activity:

- In pairs or small groups, students categorise their cards under the 3 title cards:
 - Sources of air pollution (where it comes from)
 - How air pollution affects our health
 - Air pollution solutions
- Once complete, students categorise the sources of air pollution further, under the 2 title cards:
 - Sources of indoor air pollution
 - Sources of outdoor air pollution



ANSWERS - Card Sort Activity: Air pollution problems, health impacts and solutions

Sources of air pollution (where it comes from)	How air pollution affects our health	Possible solutions (how we can reduce the harms of air pollution)
Vehicles such as cars, vans, ships and planes release harmful gases and tiny particles into the air.	Air pollution can damage your lungs and impact your breathing.	Active travel - walk, cycle or scoot to school and other places.
Factories and power stations release harmful gases into the air.	Air pollution can affect your brain and therefore your ability to learn and your mental health.	Get the bus, tram or train to school and other places.
Farming often has a lot of animal waste and uses fertilisers and pesticides (chemicals) to help food grow. These can all cause air pollution.	Air pollution affects everyone! Any amount of air pollution can damage our physical and mental health.	Discover quieter routes to school and other places. Avoid busy roads and find quiet side streets, when possible.
Idling is when the engine is left on when the car or vehicle is not moving.	Air pollution is more dangerous for children and adults with health conditions – especially if they have problems with their heart, brains or lungs.	Walk on the side of the pavement that is furthest away from the road, especially if you can't avoid walking near a busy road!
Cooking - gases and particles are released into the air when food is cooked.	Air pollution can impact your heart and cause future heart problems.	Ask adults to turn the car engine off when it is not moving.
Dust, mould and bacteria are made up of small particles that get into the air.		Ask adults to open windows when cooking.
Chemicals in personal care products (e.g. shower gels, body sprays), cleaning products or craft materials are released into the air. These harmful gases are called volatile organic compounds (VOC).		Ask adults to open windows when cleaning.
Burning things indoors releases gases into the air, e.g. burning wood and coal to heat homes, smoking, or burning candles and incense sticks.		Ask adults to choose personal care and cleaning products that are milder and fragrance-free (no strong smells).
		Raise awareness about air pollution at school and at home - help others find out what they can do.
		Ask an adult at home or school to help you speak to important decision makers. Let them know what action and changes you would like them to help you with.
		Remind children with health conditions that they can get extra support, for example: <ul style="list-style-type: none"> ▪ a nurse or doctor can help them find ways to stay safe from air pollution; ▪ an adult could help them find out more about their health condition or to sign up to air pollution alerts.
		Ask adults to not smoke indoors or near you, and to not burn things indoors e.g. candles and log burners.
		Ask adults to avoid non-essential deliveries or chose the low pollution option when shopping online.

Card sort activity: air pollution problems, impacts and solutions

Sources of air pollution
(where it comes from)

How air pollution affects our
health

Air pollution
solutions



Vehicles such as cars, vans, ships and planes release harmful gases and tiny particles into the air.



Factories and power stations release harmful gases into the air.



Farming often has a lot of animal waste and uses fertilisers and pesticides (chemicals) to help food grow. These can all cause air pollution.



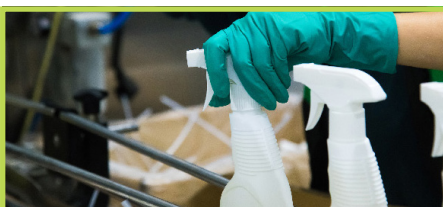
Idling is when the engine is left on when the car or vehicle is not moving.



Cooking - gases and particles are released into the air when food is cooked.



Dust, mould and bacteria are made up of small particles that get into the air.



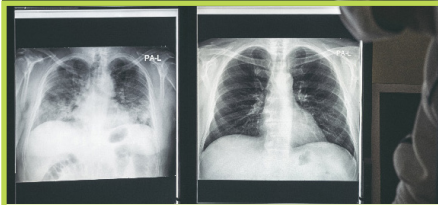
Chemicals in personal care products (e.g. shower gels, body sprays), cleaning products or craft materials are released into the air. These harmful gases are called volatile organic compounds (VOC).



Card sort activity: air pollution problems, impacts and solutions



Burning things indoors releases gases into the air, e.g. burning wood and coal to heat homes, smoking, or burning candles and incense sticks.



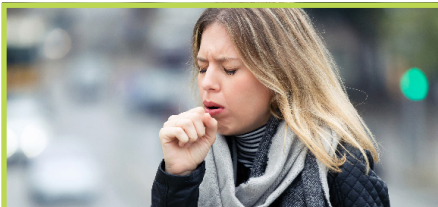
Air pollution can damage your lungs and impact your breathing.



Air pollution can impact your heart and cause future heart problems.



Air pollution can affect your brain and therefore your ability to learn and your mental health.



Air pollution affects everyone! Any amount of air pollution can damage our physical and mental health.



Air pollution is more dangerous for children and adults with health conditions – especially if they have problems with their heart, brains or lungs.



Active travel - walk, cycle or scoot to school and other places.



Get the bus, tram or train to school and other places.



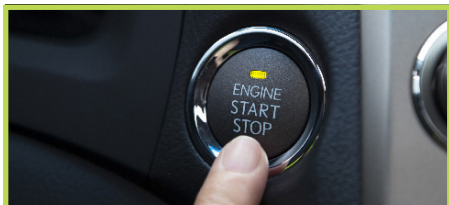
Discover quieter routes to school and other places. Avoid busy roads and find quiet side streets, when possible.



Walk on the side of the pavement that is furthest away from the road, especially if you can't avoid walking near a busy road!



Card sort activity: air pollution problems, impacts and solutions



Ask adults to turn the car engine off when it is not moving



Ask adults to open windows when cooking



Ask adults to open windows when cleaning



Ask adults to choose products that are milder and fragrance-free (no strong smells)



Raise awareness about air pollution at school and at home - help others find out what they can do.



Ask an adult at home or school to help you speak to important decision makers. Let them know what action and changes you would like them to help you with.



Remind children with health conditions that they can get extra support, for example:

- A nurse or doctor can help them find ways to stay safe from air pollution;
- An adult could help them find out more about their health condition or sign up to air pollution alerts.



Ask adults to not smoke indoors or near you, and to not burn things indoors e.g. candles and log burners.



Ask adults to avoid non-essential deliveries or chose the low pollution option when shopping online.

Indoor sources of air pollution

Outdoor sources of air pollution

My clean air promise

I promise to:

- Walk, cycle or scoot to school
- Get a bus, train or tram to school
- Use quiet side roads that have less air pollution
- Remind adults to turn the engine off when the car is not moving
- Remind adults to open windows when they are cooking
- Remind adults to open windows when they are cleaning
- Ask adults to choose things with no strong smells (e.g. paints, shampoo, cleaning products)
- Help other children at my school find out about air pollution
- Ask adults at my school or at home to help me have cleaner air

I have a different idea:

My clean air promise

I promise to:

- Walk, cycle or scoot to school
- Get a bus, train or tram to school
- Use quiet side roads that have less air pollution
- Remind adults to turn the engine off when the car is not moving
- Remind adults to open windows when they are cooking
- Remind adults to open windows when they are cleaning
- Ask adults to choose things with no strong smells (e.g. paints, shampoo, cleaning products)
- Help other children at my school find out about air pollution
- Ask adults at my school or at home to help me have cleaner air

I have a different idea:

My name is: _____ Class: _____

My clean Air Future School

The most important clean air action for my school is (choose 1):

Helping children walk, cycle or scoot to school

Helping children find less polluted ways to get to school

Helping children and adults learn about air pollution

Reminding adults to turn the engine off if they are waiting in the car

Ask an adult school to help you speak to important decision makers.
Use your voice to let them know what you would like them to help you with.

I have some different ideas:

To make my clean air action happen, I would need help from:

	Supporter ✓	Decision maker ✓
Children in my classes / year group		
Children in other classes / year groups		
My class teachers		
Other teachers at my school		
My headteacher		
The caretaker / site manager		
Other school staff		
Parents and carers		
Local / national businesses		
Local / national community leaders		
Local / national government		
Someone else:		

My name is: _____ Class: _____

Clean Air Communications

Design one type of communication that you would use to make the most important clean air action happen

My audience - who I will communicate with, to make my clean air action happen (choose one person or group from the list above to focus on):

Chose and design **one** of the communication methods in the space below:

A good way to communicate with this person (or group of people) could be to:

- Write a letter
- Design a poster or a banner
- Run an assembly
- Write a song or a poem
- Write something for the school newsletter
- Write a speech
- Have a conversation / meeting (plan what you'd say)
- Make a podcast script
- Design a social media post for your school to post
- I have some different ideas:*