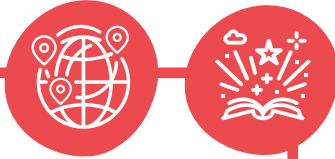


Activities suitable for KS2 (7-11 Year olds)



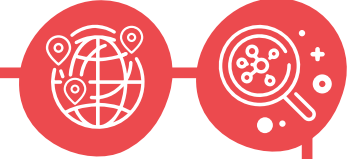
Activity one

Class based map work

Use this [Google Maps link](#) to access a map of Colchester, then move the image around until you have your school location in the centre. You might want to zoom in to ensure you can clearly see the local roads and parks around your school. Print off the selected image or display on the white board if you have one.

Ask pupils to outline the areas they think will be most polluted from car exhaust fumes with a red line, then outline the areas where they think the air is cleanest with a green line.

Ask each group in turn to discuss their observations with the rest of the class and explain why they have chosen these areas. Ask what they think could be done to improve air quality in the worst areas. Do the other groups agree? Discuss any issues that arise and ask the pupils how they might be resolved.



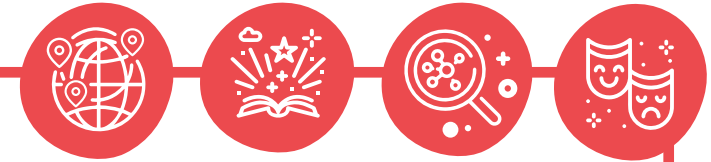
Activity two

Clean routes

As an extension to activity one, ask pupils to mark on a map the cleanest possible route they could use to travel to school and the different modes of transport they could use.

If distance means they have to travel by car, ask them to mark on the map the places where they could switch off the engine to help reduce air pollution. If walking, cycling or scooting, mark routes away from the main roads where there is less traffic. Are there any green spaces you could use for example parks, river walks or other green spaces?

This activity could be extended further by linking with activity five and considering the health implications of air pollution and how traveling to school via clean routes will benefit the health of pupils and those accompanying them to school.



Activity three

Field work to measure local air quality

Once pupils have an understanding of air pollution and its primary causes, encourage them to take part in a field experiment to monitor, record and analyse air quality levels in the area around the school.

Pupils can draw on knowledge already gained about air pollution locally via the factsheet, quiz and activities one and two. This activity will also help them to develop analytical skills, recognise patterns in data and learn how to interpret and communicate results.

To support this activity, Colchester Borough Council has a supply of portable air quality monitors available for schools to borrow free of charge.

Firstly, ask pupils to formulate a hypothesis as a starting point for further investigation, for example, 'Air quality in the area around the school is worse at drop off and pick up'.

Next, pupils can use the portable air monitors to gather their evidence. We suggest the activity is undertaken at morning drop off, afternoon pick up and mid-morning/lunchtime when traffic should be lighter over a two week period. This will provide three distinct times to compare.

Pupils can also record the number of cars they can see sitting stationary with their engines running. An air quality monitoring data sheet is provided on page 26 to record the information.

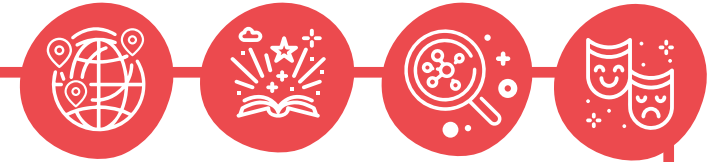
Back in the classroom, pupils can discuss their results:

- What did you notice about the results?
- Was there a variation in the quality of air at different times of the day?
- Was there a variation in the quality of air depending on the weather?
- Why do you think any variations occurred?
- Was there anything surprising about the results?
- Did the results prove or disprove your hypothesis?

This can lead to a discussion about what could be done to improve air quality during the times when pollution is highest. This could include:

- Asking their parents or carers, and their wider family to switch off their engines while stationary
- Encouraging people they know to walk, cycle or scoot to school

Finally, discuss how the results can be presented, who you are going to present them to and what your recommendations will be. We recommend pupils draft a persuasive letter including the results of their investigation and recommendations for how we can all work together to improve air quality in our town.



Activity three

Field work to measure local air quality

Recipients of the letter could include:

- Your local MP – you can search for your local MP <https://members.parliament.uk/FindYourMP>
- Your local Councillor – you can search for your local Councillor <https://www.gov.uk/find-your-local-councillors>
- The Head Teacher of your school
- Your school Governors
- Your school PTA
- Car manufacturers – you can search for local car manufacturers here

Recommendations could include:

- Promoting the use of alternative fuel vehicles e.g. electric
- Asking parents to switch off car engines while they are stationary outside school
- Encouraging parents and pupils to use a different mode of transport to get to school e.g. bicycle or walking. Could you ask pupils to submit the number of steps they take when walking to school and set up inter-class, year group or school competitions?

Supplementary activity 1 - Drama

Work in pairs or small groups to develop a role play activity, persuading car drivers to switch off their engines. How would you start a conversation? What important messages would you need to include? How would you respond if the driver said no?

Supplementary activity 2 – English

Encourage the class to set up a debate, for example 'This house believes that all private and commercial road use vehicles should be electric'. Would it make a difference to local air pollution? If yes, why? If no, why not? The debate can be linked to the Government announcement in November 2020 that by 2030 there will be a ban on the sale of new petrol and diesel cars.



Activity four

I need clean air because...

Drawing on the information pupils have learnt from the fact sheet and quiz, ask them to consider why having clean air is important. This can be in the form of a leading statement such as ‘I need clean air because...’

Ask them to draft their own action plan for improving air quality to achieve their aim of clean air. Points to consider include:

- The impact of poor quality air on our own health
- What happens to our lungs when we breathe in polluted air
- What measures could be taken in Colchester to improve our air quality
- Who is responsible for cleaning up our air - the Council? Local businesses? Parents? All of us?

Write a persuasive letter to the Mayor of Colchester, or the Leader of the Council, setting out your action plan.

Alternatively, turn the activity in to a role play exercise for two people where one person is the Mayor and the other has to develop a convincing argument about how pollution in Colchester is a problem and how they would like the Mayor to take action. Use ambitious, persuasive language. Then switch roles.



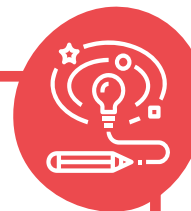
Activity five

Health consequences of air pollution for children

Children are one of the vulnerable groups who are at risk from breathing in poor quality air, because it can affect their lung development. Ask pupils to think about the health consequences of air pollution (there is information in the fact sheet to help with this). They could consider the following questions:

- How could poor quality air make you feel physically and mentally?
- Do they know anyone who has asthma or another lung condition? How could air pollution affect them?
- How could air pollution affect you and your family? What impact does poor quality air have on our health care services?
- Apart from children, who else is vulnerable to air pollution in the community and how could you help them?
- What measures could be taken to reduce air pollution locally?

Discuss different modes of transport that you could use to travel to school that help reduce air pollution – this links with activity two about developing ‘clean’ routes to school.



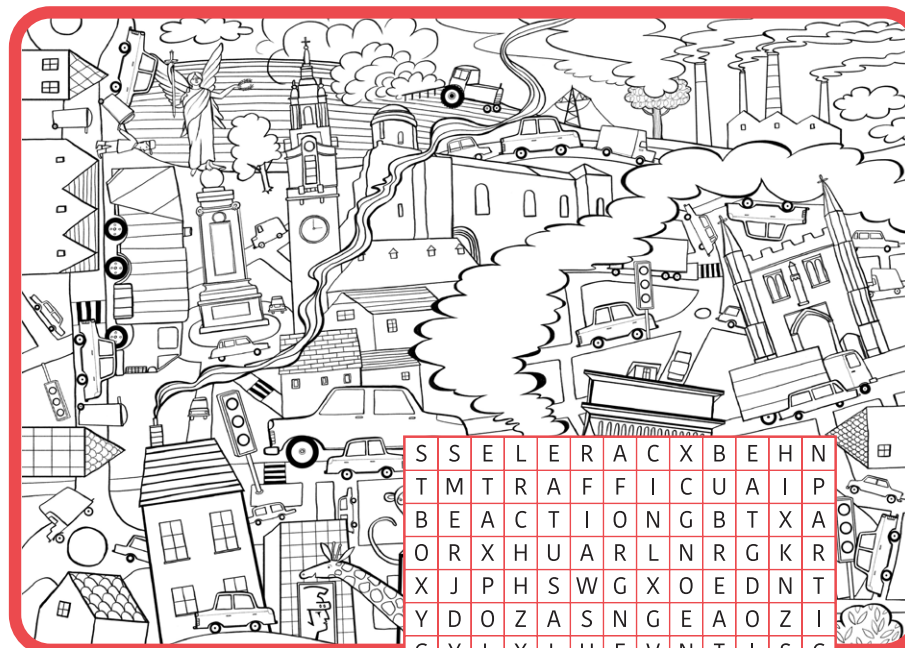
Activity six

Colour and seek

Print the colouring-in poster and wordsearch included in this toolkit and use them as a class-based activity. Ask pupils to find the following within the colouring-in poster:

- Six possible sources of pollution
- Six local landmarks
- Ten hidden cars

The colouring-in poster can be provided to pupils for them to colour in either at school or at home, similarly with the wordsearch. Encourage pupils to show the colouring-in poster to their parents or carers and discuss with them how switching off the car engine while stationary helps reduce air pollution.



S	S	E	L	E	R	A	C	X	B	E	H	N
T	M	T	R	A	F	F	I	C	U	A	I	P
B	E	A	C	T	I	O	N	G	B	T	X	A
O	R	X	H	U	A	R	L	N	R	G	K	R
X	J	P	H	S	W	G	X	O	E	D	N	T
Y	D	O	Z	A	S	N	G	E	A	O	Z	I
G	Y	L	X	L	U	E	V	N	T	I	S	C
E	T	L	W	A	N	S	F	I	H	Q	E	U
N	K	U	P	O	C	F	T	G	E	J	M	L
O	I	T	X	L	U	N	B	N	A	L	U	A
A	X	I	D	L	I	N	G	E	T	O	F	T
I	D	O	X	F	A	B	R	E	A	T	H	E
E	K	N	F	F	O	H	C	T	I	W	S	S