

# LESSON PLAN FOR



# ALL ABOUT AIR POLLUTION

## Geography

### Lesson objectives

- To understand what air pollution is.
- To understand what causes air pollution.
- To understand the effects of air pollution.

### National curriculum learning objectives

- To name and locate counties and cities of the United Kingdom.
- To use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies

### Skills development

- Critical thinking
- Using evidence to support explanations



### Resources needed

- All About Air Pollution Lesson Presentation
- Access to the internet (as a class, or devices for pupils)
- Emissions in the UK Activity Sheets
- Keywords, if required

You may find it beneficial to familiarise yourself with the [National Atmospheric Emission Inventory interactive map](#) ahead of the lesson. Decide whether you will view this as a class on an interactive whiteboard, or whether pupils will use devices to use this UK emissions interactive map.

Key vocabulary	Prior learning
Air pollution, pollutants, air quality, oxygen, carbon dioxide, particulate matter, methane, fossil fuels, ozone, emissions, transport, manufacturing, industrial, agriculture and farming, harmful substances, urban, rural.	No prior learning is strictly necessary although some pupils will undoubtedly be aware of the air pollution, and the impact people are having on the planet and the environment. Make links to prior knowledge, where appropriate, to help provide a wider context and build on pupils' existing knowledge of air pollution.

Time	Teacher Activity	Adaptations
5 mins	<p>Use the <a href="#">Lesson Presentation</a> to introduce the title of the lesson, then read through the learning objectives for the lesson and introduce the key vocabulary.</p> <p>Use slide 3 to ask pupils what they already know about air pollution. Go on to explain what air pollution is.</p>	<p>Invite and answer questions throughout to ensure pupils' understanding.</p> <p>Display or hand out the key vocabulary.</p>
10 mins	<p>Use the following slides to learn about different types of air pollutants and where they come from. Encourage pupils to read the definitions of pollutants to match them to their name.</p>	<p>You might ask pupils to make notes in their books about the names of pollutants and where they come from.</p>
5 mins	<p>Explore air pollution in urban and rural areas. Ask pupils to name cities and towns they are familiar with, then any rural areas they know of. This might link to the local area and places they have visited.</p> <p>Ask pupils to consider what the air quality might be like in towns and cities compared with rural areas.</p>	<p>Ensure pupils understand the terms urban and rural, as explained in the <a href="#">Lesson Presentation</a>. Try to use places pupils are familiar with to give examples of urban and rural areas.</p>

Time	Teacher Activity	Adaptations
20 mins	<p>Move on to explain that the different emissions (pollutants) in the air can be measured around the UK. Again, relate emissions to urban and rural areas.</p> <p>Hand out the <a href="#">Emissions in the UK Activity Sheets</a> and show pupils the <a href="#">UK Emissions Interactive Map</a>. Explain that today, they will be finding out about the levels of two emissions (lead and methane) around the UK.</p> <p>Filter the information on the map, according to the instructions in the Lesson Presentation. Pupils can then use the information they see on the map to label and colour-code their own maps.</p>	<p>You may choose to use the interactive map on the whiteboard as a class or pupils could access this on their devices.</p> <p>Pupils could work individually or in pairs.</p>
5 mins	<p>Recap what has been covered in this lesson and ask pupils to share their knowledge using the prompts on the slide. Use the last two slides to remind pupils that polluted air is bad for our health and that A+LUK and other organisations are working hard to improve air quality for a better, cleaner future.</p>	



## Lesson reflections / teacher assessment

### Assessment opportunities

- Can pupils describe what air pollution is and its effects?
- Can pupils identify causes of air pollution and identify places in the UK that have the worst air pollution?
- Can pupils explain the difference between urban and rural areas, and give examples of each?

### Suggestions for future learning

- Research how air pollution affects major cities in other countries and what measures have been put in place to try to deal with the issue.
- Install air quality monitors in the school to identify the levels of pollution at various sites on the school grounds. Engage students in taking readings and analysing the results.

### Home learning opportunities

- Research the history of air pollution in the UK and the reasons for the improvement of air quality in many areas in recent decades.
- Make a poster about air pollution to show different types of emissions and sources of various pollutants.