

LESSON PLAN FOR



WHAT IS THE MOST DANGEROUS FORM OF AIR POLLUTION

Geography/PSHE

National curriculum learning objectives

- KS3: Urbanisation, challenges of urban environments, understanding of the interaction of human and physical processes to influence and change landscapes and environments, map work, data skills.
- GCSE: Human and Physical field work, urbanisation, fieldwork skills, data skills.

Skills development

- Sharing thoughts and opinions
- Interrogating sources of information
- Justifying opinions



Resources needed

- What is the most dangerous form of air pollution? Lesson Presentation
- Air Pollution Information Sheet
- Plenary Sheet
- Home Learning Activity Sheet, if required

Key vocabulary

Particulate matter, nitrogen dioxide, pollutants, respiratory, microns, fossil fuel, ozone, exposure, significance, vulnerable, data, nitrogen oxide, sulphur dioxide, carbon monoxide.

Prior learning

No prior learning is strictly necessary although some pupils will undoubtedly be aware of the respiratory system, 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 pupil's understanding of lung health and pollution.

Time	Teacher Activity	Adaptations
5 mins	<p>Introduce the title and move straight on to the starter activity. Students are to attempt to identify the hazards depicted by the five hazard triangles displayed on slide 2. Share answers and display the correct ones on slide 3.</p>	<p>Explain vocabulary in the presentation as required. Invite and answer questions throughout to ensure pupils' understanding.</p>
10 mins	<p>Introduce the learning objectives for this lesson.</p> <p>Use slide 4 to explain how air pollution represents a real danger to the health of people in Britain today.</p> <p>Set the students the task of creating a mind map with a partner of possible contributors towards air pollution (based on existing knowledge).</p> <p>Share answers and use slide 6 cover the major causes of air pollution if they don't come up in the students responses.</p>	<p>Ascertain students' current knowledge on this topic, relating to the learning objectives.</p> <p>Students might work in pairs to create their mind maps.</p>
30 mins	<p>Hand out the Air Pollution Information Sheet and enable the students to identify the key features of particulate matter pollution by completing the comprehension tasks on slide 8. Check the answers together as a class.</p> <p>Enable the students to identify the key features of nitrogen dioxide pollution by completing the comprehension tasks on slide 9. Check answers.</p> <p>Enable the students to identify the key features of other pollutants by completing the comprehension tasks on slide 10. Discuss the answers.</p> <p>Use slide 11 to set the students the task of placing the three types air pollution in order of significance.</p>	<p>Random name selectors could be used here to elicit responses from the students.</p> <p>The information contained on the sheet is not in the same order as the questions on the slide for deliberate reasons. Encourage the students to interrogate the whole text to find the relevant information.</p> <p>Stress that there is no 'correct' answer to the 'most serious' question but students must be able to justify their choices.</p>

10 mins	Explain the importance of air monitors in the struggle against air pollution by using slide 12. Set the students the task of summarising the information in a single sentence, then share their responses.	Emphasise the importance of selecting the most important and pertinent information for their summary sentence.
5 mins	Hand out the Plenary Sheets for students to create an icon for a hazard to triangle to warn people of the existence of high levels of air pollution.	Emphasise the importance of incorporating some of what they have learned in today's lesson in their design.



Lesson reflections / teacher assessment

Assessment opportunities

- Can students describe the key features of the three main types of air pollution?
- Have the students made a judgement over which is the most dangerous type of air pollution and given reasons for their decisions?
- Can students explain why air monitors are so important in improving air quality and reducing lung disease?

Suggestions for future learning

- Research how air pollution can lead to greater inequalities in societies.
- 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.
- Research the impact of air pollution globally to identify the most and least polluted areas and the respective reasons for their pollution levels.