

# Air Quality and Climate Change Scheme of Works (SoW)

The following SoW contains two modules, each with four lessons:

- Air Pollution Module
- The Impacts of Climate Change

**Each of the following lessons are designed to last one-hour. Throughout the modules, the following curriculum links are covered:**

## **Geography Programme of Study: Key Stage 3**

- Human and Physical Geography
  - Understand how human and physical processes interact to influence and change landscapes, environments and the climate; and how human activity relies on the effective functioning of natural systems.
- Understand, through the use of detailed place-based exemplars at a variety of scales, the key processes in:
  - Physical geography relating to geological timescales and plate tectonics; rocks, weathering and soils; weather and climate, including the change in climate from the ice age to the present; and glaciation, hydrology and coasts.
  - Human geography relating to population and urbanisation; international development; economic activity in the primary, secondary, tertiary and quaternary sectors; and the use of natural resources.
- Geographical Skills and Fieldwork
  - Use Geographical Information Systems (GIS) to view, analyse and interpret places and data.
  - Use fieldwork in contrasting locations to collect, analyse and draw conclusions from geographical data, using multiple sources of increasingly complex information.

## **Science Programme of Study: Key Stage 3**

- The composition of the atmosphere.
- The production of carbon dioxide by human activity and the impact on climate.
- Interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions.
- Present reasoned explanations, including explaining data in relation to predictions and hypotheses.
- Identify further questions arising from their results.
- The role of diffusion in the movement of materials in and between cells.

- The mechanism of breathing to move air in and out of the lungs, using a pressure model to explain the movement of gases, including simple measurements of lung volume.
- How organisms affect, and are affected by, their environment, including the accumulation of toxic materials.
- The impact of exercise, asthma and smoking on the human gas exchange system.
- Ask questions and develop a line of enquiry based on observations of the real-world, alongside prior knowledge and experience.
- Earth as a source of limited resources and the efficacy of recycling.

## Sequence of learning

### Air Pollution:

- **What is Air Pollution?**  
Examine what air pollution is and where it comes from.
- **Gathering and Measuring Particulates.**  
Discover methods of measuring air pollution.
- **How do we Identify Air Pollution?**  
Pinpoint areas of poor air quality.
- **How do we Combat Air Pollution?**  
Explain how we can reduce air pollution.

### Climate Change:

- **What is Climate Change?**  
Understand climate change and the effects it has on our planet.
- **How is Climate Change Linked to Air Pollution?**  
Examine the ties between air pollution and climate change.
- **How is Climate Change Impacting Wigan & Leigh?**  
Uncover the impacts of environmental change, in your local community.
- **What Mitigation and Adaptation can we do in Wigan & Leigh?**  
Discover the locality of the effects of climate change and air pollution.



Thank you for incorporating our resources into your teaching. Your feedback is valuable to us as we strive to improve and enhance our materials. We kindly ask that you take a few moments to complete the online feedback questionnaire. Your insights and suggestions will help us better support you and your students in the future.