



School travel lesson plans Drive Another Way

What keeps the planet warm? - Assembly Plan (The Greenhouse effect)

Yr R,1,2,3,4,5,6
Duration: approx 30 mins

Objectives; by the end of assembly the children should be able to

- Understand what the greenhouse effect is
- Understand how pollution (especially from cars) upsets the greenhouse effect
- Suggest ways of travelling that do not pollute the environment

Introduction

Introduce yourself and explain briefly what the children are going to learn about using the objectives above

Pick two volunteers, one to tell the others about what a greenhouse looks like (and what it does) and one to tell the others about the shape and of the world and what is in it. Elicit what the children know about a greenhouse and relate this to the world using the following bullets

- **Rays of sunlight** pass through the glass of the greenhouse
- The plants and soil warm up and give out **heat**
- The greenhouse lets out some of the heat It doesn't let all the heat out so some of the heat is trapped inside the greenhouse and it warms up.

Ask year 5 and 6 what is the layer of air around the earth – it begins with A (atmosphere)

Explain that the atmosphere acts as a greenhouse around the earth keeping it at the right temperature.

You could draw the atmosphere on a picture of the world, or show slides 2 or 3 from the power point presentation

Main Presentation

What is happening in the atmosphere today?

Use slides from attached PowerPoint presentation to explain the process again

- Slide 2 - The **atmosphere** is made up of gases around the Earth. They are called **greenhouse gases**. The atmosphere lets sunlight pass through easily but stops some of the heat getting out.
- Slide 3 - Without the greenhouse gases, the Earth would be about 33°C colder.
It would not be warm enough for plants and animals to survive. The way that greenhouse gases keep the atmosphere at a nice temperature is called the **greenhouse effect**.
- Slide 4 - **Carbon dioxide** is the most important greenhouse gas
- Slide 5 - Why is this bad? **6 to 7 billion extra tonnes** of carbon dioxide each year

Use information on slide 4 to explain slide 5 about the levels of carbon dioxide in the environment.

Explain that increases in carbon dioxide upset the greenhouse effect so it doesn't work properly. This leads to global warming.

Explain the effects of global warming using slide 8

- Slide 7 - The average temperature around the world may go up by between 1.4°C and 5.8°C over the next 100 years. There may be fewer rainforests, so fewer trees to use up the carbon dioxide. Rainforests may start to die and give out more carbon dioxide, making it even warmer. The level of the sea could rise by 10 cm - 90 cm (almost 1 metre). This would mean that as many as 90 million people around the world could have their homes flooded every year

Summary

Ask children what **they** can do to decrease carbon dioxide in the atmosphere?

- Walk
- Cycle
- Use public transport
- Car share

Recommended Resources

PowerPoint presentation on global warming (CD or / and Resource Pack)