Chemistry	**Lesson 9: Global warming – is it real?**		
Curriculum Key:	AQA 12.6	Gateway P1h, P2c	Edexcel Topic 7

Objective(s)

1. Analyse graphs and interpret tables.
2. Select relevant scientific evidence to support an opinion.
3. Work as part of a team.

Resources needed:

PowerPoint presentation

Optional data-logging opportunity – see guidance notes.

Starter: *15 minutes*

PowerPoint – 'A Journey to Venus'
(Including a quick recap of the Greenhouse Effect).
Students may be encouraged to note the possible signs to support the theory of global warming, as shown in the PowerPoint.

Teacher input/assessment

Teacher-led discussion (**Note:** the PowerPoint activity has an audio track).

Main Activity 1: *5 minutes*

Split class into groups of 3. Each group is one of five roles. Students read their brief and decide upon the evidence that they may want to find in the data to support their argument. Teacher to prompt with suggestions (see teaching notes)

Teacher input / assessment

Teacher-led (the teacher may read each role to the class).

Main Activity 2: *25 minutes*

Students analyse the data (suggest that 3 copies of all the data be laminated; each group uses the small tracking sheet to ensure that they have seen everything). In groups, decide upon the evidence that best supports their group's argument. Record on the 'Evidence Recorder' sheet.

Teacher input / assessment

Teacher guidance for each group may be dependent upon ability.

Plenary: *15 minutes*

Each group presents their 3-6 statements to the rest of the class.
(Then the teacher may discuss the idea that all students had the same evidence but reached different conclusions dependant upon their bias.).
Students are asked what they have learned during the lesson.

Teacher input / assessment

Discussion at the end.

Learning Outcomes:

All students must: work as a group to produce 3-6 statements that are supported by scientific evidence.

Most students should: understand that the same data can be used to produce different conclusions.

Some students could: analyse the evidence that contradicts their argument to look at ways that it can be discredited/ignored or explained.

Key Skills: Communication, presentation skills

Key words: aluminium, smelting, environmental factors

Homework: Write their opinion on whether after analysing the data they believe the Greenhouse effect is real, and whether the Kyoto agreement will make a difference.

Differentiation:

More able: should choose appropriate graphs and statistics to support their argument.
Are given a more challenging group (eg MP).

Less able: Interpret graphs.
Are given an easier group such as member of the public.