

Greenhouse Effect



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ENVI-MOBILE: Integration of mobile learning into environmental education fostering local communities' development

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Activity No. 1

Part of the lesson: EVOCATION

The aim of the activity: To find out what children know about Green House Effect, how can affect people and the Earth, vocabulary and ideas about the issue.

Step 1

Brief description of the activity:

The teacher will use a "Brainstorming" activity to ask children what they know about green house effect, how can affect people and the Earth, vocabulary and ideas about the issue. The teacher will write all the vocabulary and ideas that the children say. Each child can take part in this activity by raising his/her hand to talk.

Instruction (what you need to tell the students):

What do you know about green house effect?

Have you heard about it already?

How it can affect people and Earth?

Any other comments?

Tools for the activity (everything you need to take to the classroom): Blackboard, chalks

Estimated time (max. 40 min.): 5 minutes

Activity No. 2

The aim of the activity: To go deeper into the topic by undertaking an experiment to enhance children' knowledge about the issue, that is, how the Green House Effect affects and works.

Step 1

Brief description of the activity:

The teacher will conduct an experiment about Green House Effect to demonstrate how it warms the Earth.

The teacher will bring two alcohol thermometers, grassy surfaces, clear glass bowl, big enough to cover one of the thermometers (a large, empty glass jar can work as well), high brightness light bulb, stopwatch, and notebook.

A glass bowl placed upside down on a grassy surface and exposed to sunlight represents gases and clouds in the Earth's atmosphere and the high brightness light bulb represents the sun; the grassy surface represents the Earth's land surface. By measuring the air temperature inside and outside the bowl over 5 minutes, you can observe any differences caused by covering part of the grass with a glass bowl. You can work in groups of at least two or three on this project.

Instruction (what you need to tell the students):

Work in groups. Each group needs pen and paper. Now follow the instructions:

Put the grassy surface on the window place to expose the sunlight. Place glass bowl upside down on a grassy surface and put one thermometer inside the glass bowl. Place another thermometer outside the bowl. Do you know what this experiment means?

Now wait for 5 minutes to measure the temperature inside and outside the bowl.

Step 2

Brief description of the activity:

While the teacher is waiting to measure temperature, he will discuss with the children and try to explain (if needed) which gases are harmful for the Earth and what people can do to avoid and to mitigate the sudden increase of the Greenhouse Effect due to human activities.

Play the video from YouTube for inspiration (see link in NOTES).

Instruction (what you need to tell the students):

(meanwhile) Watch the video carefully.

Do you know which gases are harmful for the Earth? Discuss in the groups. Think what people can do to avoid and to mitigate the sudden increase of the Greenhouse Effect due to human activities.

Now observe the differences.

Tools for the activity (everything you need to take to the classroom): Blackboard, stopwatch, high brightness light bulb, technique for video presentation, internet

FOR EACH GROUP: two alcohol thermometers, clear glass bowl, big enough to cover one of the thermometers (a large, empty glass jar can work as well), grassy surfaces

Estimated time (max. 40 min.): 25 minutes

Notes: If you do not have enough thermometers or other tools for each group, you can do only one experiment all together. In such a case, let each group to write down the measured results on their own, as well as making and noting down the conclusions of the measurements.

Relevant videos about Greenhouse effect (or use any other from YouTube):

CZ: <https://www.youtube.com/watch?v=ZYZUhZtS6PA>

EN: https://www.youtube.com/watch?time_continue=19&v=VYMjSule0Bw

Source: <http://www.planetseed.com/laboratory/greenhouse-effect-warming-earth>

Part of the lesson: APPRECIATION

Activity No. 3

Part of the lesson: REFLECTION

The aim of the activity: The children will enhance and structure their knowledge about Green House Effect and holding a debate.

Step 1

Brief description of the activity:

The teacher will ask how Green House Effect can affect not only animals but also people and plants, that is, the whole Planet. Moreover, the students will have to provide solutions about reducing greenhouse gases to solve some big global natural problems, for instance, melting poles.

Instruction (what you need to tell the students):

Work in your groups. Try to answer following questions:

How the Greenhouse Effect can affect animals?

How can it affect plants?

And how can it affect people?

Do you know any solutions about reducing greenhouse gases to solve some big global natural problems, for instance, melting poles?

Use all the information you gained during this lesson or you already knew. . .

Step 2

Brief description of the activity:

Discuss the results of workgroups. Teacher can write on blackboard important facts from discussion.

Tools for the activity (everything you need to take to the classroom): Pen and paper, blackboard, chalks

Estimated time (max. 40 min.): 10 minutes

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