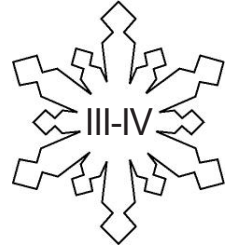


Greenhouse Effect Scavenger Hunt

Levels



Grades 5-8

Overview:

Students identify key information about Earth's greenhouse effect by navigating the *Global Climate* DVD and searching for answers to questions about Earth's greenhouse effect.

Objectives:

The student will:

- interact with the *Global Climate* DVD;
- create a model of the carbon cycle; and
- answer questions related to the greenhouse effect.

Materials:

- *Global Climate* DVD
- scissors
- glue or tape
- STUDENT WORKSHEET: "Greenhouse Effect Scavenger Hunt"
- STUDENT INFORMATION SHEET: "Carbon Cycle"

GLEs Addressed:

- [6] SD4.1 The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by contrasting characteristics of planets and stars (i.e., light reflecting, light emitting, orbiting, orbited, composition)
- [7] SD4.1 The student demonstrates an understanding of the theories regarding the origin and evolution of the universe by comparing and contrasting characteristics of planets and stars (i.e., light reflecting, light emitting, orbiting, orbited, composition)

Activity Procedure:

1. Distribute the *Global Climate* DVD and the STUDENT WORKSHEET: "Greenhouse Effect Scavenger Hunt." Ask students to complete the worksheet by navigating through the DVD.

Critical Thinking Activity: Concept Mapping Method: A concept map illustrates connections between terms or concepts. Divide students into pairs. Provide each pair of students with a copy of the STUDENT INFORMATION SHEET: "Carbon Cycle" and a pair of scissors. Instruct students to cut out each phrase from the Student Information Sheet. Next, have students construct concept maps by arranging the phrases on a blank sheet of paper, glue or tape them down and then draw lines to connect the concepts.

Answers:

1. *greenhouse gases*
2. *three of the following: burning of fossil fuels, respiration from animals, bubbles in soda, forest fires, erupting volcanoes, soil organic decay*
3. *water vapor*
4. *<1%*

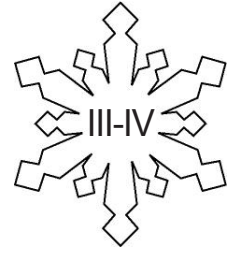
5. *Earth's surface could become so warm that Earth's climate changes.*
6. *nitrogen*
7. *Venus, Earth, Mars, Uranus, Neptune*
8. *Venus and Earth*

Name: _____

Student Worksheet

Greenhouse Effect Scavenger Hunt

Levels



Directions: Explore the “Greenhouse Effect” unit on the *Global Climate* DVD to find the answers to the questions below.

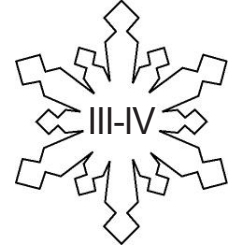
1. Earth’s atmosphere is made up of a mixture of gases, including gases that can absorb heat called _____.
2. List three sources of carbon dioxide.
_____, _____, and _____
3. Which greenhouse gas is the most common in Earth’s atmosphere? _____
4. What percentage of Earth’s atmosphere is composed of greenhouse gases? _____
5. What is the result of the enhanced greenhouse effect? _____

6. What gas comprises 78% of Earth’s atmosphere? _____
7. List the five planets in our solar system that have both an atmosphere and greenhouse gases. _____, _____,
_____, _____ and _____.
8. Which planets in our solar system could support a greenhouse effect?
_____ and _____

Carbon Cycle

Student Information Sheet

Levels



- Carbon dioxide is released from the oceans through the process of evaporation.
- Cold water, which contains carbon dioxide, sinks to the bottom of the ocean.
- Convection currents in the ocean circulate warm and cold water.
- Plants absorb carbon dioxide from the air.
- Many dead plants and animals decay and become mixed within Earth's soil.
- Dead plants within the soil form layers of fossil fuels, such as coal, natural gas, and oil, after millions of years of pressure from the ground above them.
- Animals expel carbon into the air when they breathe.
- Carbon dioxide is drawn from rocks and soils by water and is carried to the oceans by rain, streams, and rivers.