

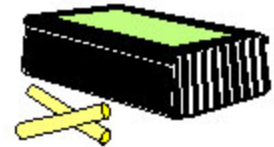
Lesson Title: Summary of the Major Concepts

Lesson Description: This lesson helps the students summarize the key cognitive concepts covered in the modules up to this point. The summary includes a discussion of ten key points and an optional team task creative activity.

Learning Outcomes:

Students will be able to:

- Summarize the ten key concepts
- Define the key terms given
- Work in a cooperative group to complete a task
- Use a variety of media sources to present the teams information



Materials Needed:

Summary sheet per student
 Assessment activity sheet per student
 Camera
 Tape Recorder
 VCR
 Other optional media devices

Time Requirements: 20 minutes for the class discussion

90 minutes for the team task

40 minutes to show the completed task work to the class

MST standards: See overview chart for MST standard correlation

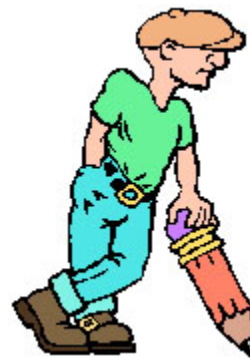
Assessment: The sound bites





Synthesis of the Major learning Concepts for Global Warming, Green House Effect and Climate Changes Key Points

After completing the Venn diagram packet, Global Warming, Green House Effect and Climate Changes computer lesson, and experience with the Terrarium lab the students should have the following basic knowledge and concepts.



- 1) The sun is the source of earth's energy supply
- 2) The sun gives off energy of various electromagnetic wavelengths
- 3) The sun's energy is absorbed, reflected, transmitted and refracted as it enters our earth's atmosphere and reaches the surface.
- 4) When the electromagnetic waves called ultra violet rays strike the surface of the Earth many are absorbed by the plants.
- 5) The trees and plants re-radiate this energy in a lower energy form called infrared rays. These are also known as "heat rays".
- 6) The infrared rays are just the right size (frequency) to be absorbed by the greenhouse gases (Carbon Dioxide, methane, ozone, etc)
- 7) The absorption of the infrared rays by the gases adds to the warming effect of the atmosphere.
- 8) The greater the level of greenhouse gases in our atmosphere the greater the temperature rise.
- 9) A rise in global temperature would have far reaching consequences for our world.
- 10) A great deal of research is underway to help figure out how to supply the world's need for energy without making the global temperatures rise.

Note: A discussion on the above 10 items would be an easy form of assessment or check for knowledge. A creative activity for assessment is provided below, but will require more time, energy and resources.



Assessment Activity:

Using teams of 4, give the students the task of creating a two to three minute educational sound bite, for a radio or television broadcast, which would include the key scientific knowledge and thought regarding Global Warming and the Greenhouse Effect. They should keep a list of resources used and jobs completed by each team member.

Team Task Card

Task: As a team you are to create an educational television or radio sound bite that will last two to three minutes. It should include information about Global Warming and the Green House Effect. Rely on your notes and your previous experiences with this unit. You may find the library, computer lab, experts in the field to be of help.

The following materials are available: (Instructor should list if there are video cameras, tape recorders, computer lab, library resources, phone numbers of experts etc.)

Due Date: _____

Evidence of everyone’s involvement must be presented with your sound bite.

Rubrics: 10 points

2 pts: Use of notes, outside resources, experts

3 pts: a tape, video, role play, written version of the sound bite that meets requirements listed above

3 pts: Evidence of all the teams’ involvement is presented or is obvious

2 pts: accuracy and depth of information, completed on time

