

Earth/Environmental Science Homework & Test Review

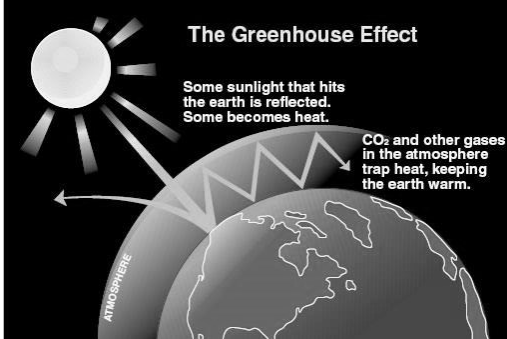
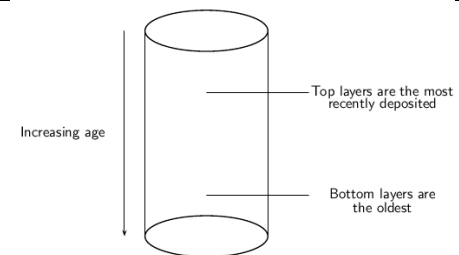
Week 2: April 13th to April 17th

DUE DATE: Friday, April 17th

Weekly Reminders Checklist:

- Modules 1, 2 and 3 from the computer lab on the Friday before Spring Break are due on Wednesday April 15th
- Quiz on vocabulary and concepts from Homework 1 and 2 is on Thursday April 16th
- Have you checked PowerSchool to see if you have any missing assignments?

Vocabulary: Fill in the missing areas on the table below using your textbook, class activities and any other resources you find helpful.

Vocabulary Word	Definition	Example/Application/Diagram
Greenhouse Effect	Natural heating of Earth's surface by certain atmospheric "greenhouse" gases which helps keep Earth warm enough to sustain life	 <p style="text-align: center;">The Greenhouse Effect</p> <p>Some sunlight that hits the earth is reflected. Some becomes heat.</p> <p>CO₂ and other gases in the atmosphere trap heat, keeping the earth warm.</p>
Greenhouse Gas (GHG)	Any gas that absorbs infrared radiation in the atmosphere	Carbon Dioxide
Carbon Dioxide Gas	A non-poisonous gas that is a normal part of our atmosphere. Also made by burning fossil fuels	Naturally part of photosynthesis
Methane Gas	Produced through decomposition of waste in landfills and from animals, animal digestion, and fossil fuels	Cows produce a large amount of methane through belching and flatulence
Nitrous Oxide Gas	Naturally made from bacteria. Also made by use of fertilizers and fossil fuels.	Broken down by UV radiation
Global Warming	The progressive gradual rise of the earth's surface temperature in recent decades	See question #3
Ice Core	A cylindrical section of ice removed from a glacier or an ice sheet in order to study climate patterns of the past	 <p>Increasing age</p> <p>Top layers are the most recently deposited</p> <p>Bottom layers are the oldest</p>
Carbon Sinks	Reservoirs for carbon in the environment that store more carbon than they release	The forests, soil, atmosphere and oceans

Key Questions from the Week: Answer the questions below pertaining to this week.

1. How are the terms global climate change and global warming different?

Global climate change refers to any major changes in temperature, rainfall, snow or wind across the Earth whereas global warming is an average increase in temperatures near the Earth's surface. Global warming can be considered part of global climate change.

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2. There are many different types of greenhouse gases. What are the top six greenhouse gases?

1. Water Vapor H ₂ O	4. Nitrous Oxide N ₂ O
2. Carbon Dioxide CO ₂	5. Ozone O ₃
3. Methane CH ₄	6. Chlorofluorocarbons CFCs

3. How much will the Earth warm if emissions of greenhouse gases continue to rise?

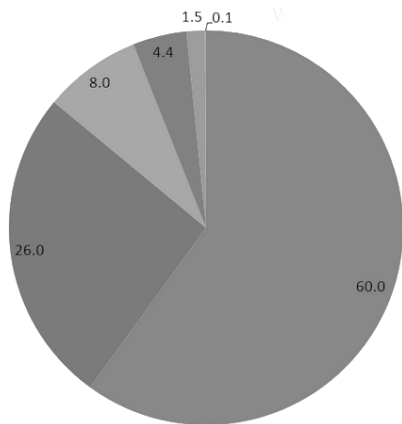
We will probably see an average global increase of 3 to 7°F by 2100, and greater warming after that.

4. How does deforestation, burning of fossil fuels and large-scale development contribute to global climate change?

Deforestation	Plants absorb carbon dioxide from the atmosphere and give off oxygen (photosynthesis). If you destroy forests, more carbon dioxide remains in the atmosphere. Plus destroyed plants give off carbon dioxide when they decompose.
Burning of Fossil Fuels	Releases more GHG into the atmosphere (mainly carbon dioxide), warming the climate.
Large-Scale Development	Paved surfaces absorb sunlight and produce heat. Pollution and buildings also contribute.

Chart for the Week: Please fill out the key for the chart below showing the percent contribution of different gases to the greenhouse effect

Percent Contribution of Different Gases to the Greenhouse Effect



Key

60.0 % : _____ **Water Vapor** _____

26.0 % : _____ **Carbon Dioxide** _____

8.0 % : _____ **Ozone** _____

4.4 % : _____ **Methane** _____

1.5 % : _____ **Nitrous Oxide** _____

0.1 % : _____ **Other Gases** _____

Word Bank

Ozone
Water Vapor
Methane

Other Gases
Nitrous Oxide
Carbon Dioxide

Humans and Global Warming: Complete the table below using this week's foldable origami.

Product	Raw Material	How You Can Slow Global Warming
Paper	Trees	Recycle used paper and buy paper made from recycled materials. Bring cloth bags to the grocery store and use both sides of a sheet of paper as often as possible.
Metal & Glass	Minerals	Reusing and recycling used metal and glass. Clean out, decorate, and reuse cans and jars as pencil, crayon or toy holders
Compost	Yard Trimmings & Food Scraps	Making less waste. Don't throw away grass clippings and food scraps from your kitchen. Compost them to make mulch for your garden. Your town may collect yard trimmings to make compost, too.
Plastic	Oil	Recycling plastic containers and buying things made from recycled plastic. Look for ways to reuse plastic containers or to use less plastic. One way is to use economy-size containers.

Research Question for the Week: Conduct your own research using the library and internet resources to answer the following question.

How can an increase in air pollution influence global warming?

Air pollution is generally any substance that people introduce into the atmosphere that damages living things and the environment. One popular air pollutant is carbon dioxide, a greenhouse gas. As more carbon dioxide is released into the atmosphere some scientists claim that this in turn increases global temperature. Therefore, in summary, an increase in air pollution, increases the effects of global warming.