



High School Science Virtual Learning

**Environmental Science**

**Greenhouse Effect**

April 24, 2020



# High School Applied Biological Science

## Lesson: April 24, 2020

### **Objective/Learning Target:**

Students will understand how the greenhouse effect warms the Earth.



## Let's Get Started:

1. Name at least two greenhouse gases and where they come from.
2. What do greenhouse gases do in regards to heat?



## Let's Get Started: **Answer Key**

1. **Any 2 of the following: Carbon Dioxide, Methane, water vapor, nitrous oxide, ozone**
2. **Greenhouse gases trap heat and hold it in the atmosphere**



# Lesson Activity:

## Directions:

1. Watch the video linked below that shows how the Greenhouse Effect works
2. Answer the questions on the slides that follow.

**Links:** [Greenhouse Effect](#) stop the video at 6:45 for this lesson (if you would like to continue to the end of the video it introduces some effects of continued global warming).



# Practice

*Complete the following questions using the information you learned during the lesson activity.*



## Questions:

1. What is the purpose of a greenhouse?
2. What causes the natural greenhouse effect on Earth?
3. Why doesn't Mars support life?
4. Why doesn't Venus support life?
5. Our current greenhouse effect is out of balance. Explain why.



Once you have completed the practice questions check with the **answer** key.

1. The purpose of a greenhouse is to keep things inside of it warm.
2. The natural greenhouse effect on Earth is caused by the heat reflected from the surface hitting the greenhouse gases in the atmosphere & bouncing around, staying trapped in the atmosphere.
3. The atmosphere on Mars is very thin and thus does not trap as much heat and has very little heat in a greenhouse effect.
4. The atmosphere on Venus is very thick with huge amounts of carbon dioxide in the atmosphere. The atmosphere traps massive amounts of heat, causing Venus to be the hottest planet in the solar system.
5. The greenhouse effect is out of balance due to human actions. Nearly everything we do as humans requires the burning of fossil fuels, putting excess carbon dioxide into the atmosphere. Agriculture uses pesticides putting off nitrous oxide, over breeding livestock causes excess methane release, and deforestation removes massive amount of photosynthesizing trees which results in less carbon dioxide removal from the atmosphere.





## More Practice:

Follow the link below to access a virtual lab using a Greenhouse Effect simulation program. On your own paper, answer the questions from the lab document as you go through the simulation.

[Online Greenhouse Effect Simulation Lab](#)