



High School Science Virtual Learning

Environmental Science

Consequences of the Greenhouse Effect

April 28, 2020



High School Applied Biological Science

Lesson: April 28, 2020

Objective/Learning Target:

Students will learn several consequences of the greenhouse effect.



Let's Get Started:

1. How does the greenhouse effect cause climate change?
2. How much have greenhouse gases increased in the last 200 years?



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

1. **The greenhouse effect causes an increase in temperature which in turn causes climate change.**

2. **40%**



Lesson Activity:

Directions:

1. Read the article at the link below. Stop when you get to the picture of the sea ice.
2. Answer the questions on the following slides.

Links: [consequences of the greenhouse effect](#)



Practice

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



Questions:

1. What are some of the main consequences of the greenhouse effect?
2. Humans are increasing the amount of which two greenhouse gases in the atmosphere?
3. In the section on consequences, what are the 6 consequences of global warming that are discussed? List them and explain why each is bad.

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

1. Flooding in coastal cities, an increasing number of droughts, food shortages and devastating hurricanes are just some of the main consequences.
2. Carbon Dioxide and Methane
3. 6 consequences:
 - a. Thawing of glacial masses
This reduces percentage of solar radiation reflection/return to the atmosphere, rise in sea level, and the release of large methane columns are some of them.
 - b. Flooding of islands and coastal cities
estimates that by 2100 the sea level will be between 15 and 90 centimetres higher than it is now and will threaten 92 million people. (property destruction, displacement, etc)
 - c. Hurricanes will be more devastating
The intensification of the greenhouse effect can increase their intensity because hurricanes are connected with sea temperature- they need warm water and higher global temps mean more warm water



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

d. Migration of species

Many animal species will be forced to migrate in order to survive the changes in climatic patterns due to increasing temperatures. Human beings will also have to move due to extreme droughts or violent floods.

e. Desertification of fertile areas

Global warming is impacting soil degradation and is contributing to the desertification of the most arid areas on the planet. Desertification destroys all the biological potential of affected regions, turning them into barren and unproductive land.

f. Impact on agriculture and livestock

Global warming has already altered the length of the growing season in large parts of the planet. Similarly, changes in temperatures and seasons are influencing the proliferation of insects, invasive weeds and diseases that can affect crops. The same is happening with livestock: climatic changes are directly affecting important species in multiple ways: reproduction, metabolism, diseases, etc



More Practice:

Follow the links below to do more practice. Start at the and stop at the picture of the corn field.

1. List and describe two consequences for human health.

Links: [consequences of the greenhouse effect](#)

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

1. **Human health consequences:**

a. **Food shortages**

a decline in agricultural production would result in food shortages, most severely affecting sub-Saharan Africa and South Asia.

b. **The spread of diseases and pandemics**

The World Health Organization (WHO) states that global warming will cause infectious diseases that thrive in heat such as malaria, cholera or dengue to spread to many more areas of the planet. Extreme heat will also increase and aggravate cardiovascular and respiratory problems.



Additional Practice and Resources:

Click on the link below for additional practice and resources. Read from the picture of the corn field to the end.

Links: [consequences of the greenhouse effect](#)