



High School Science Virtual Learning

Environmental Science

Climate Change

April 29, 2020



High School Environmental Science

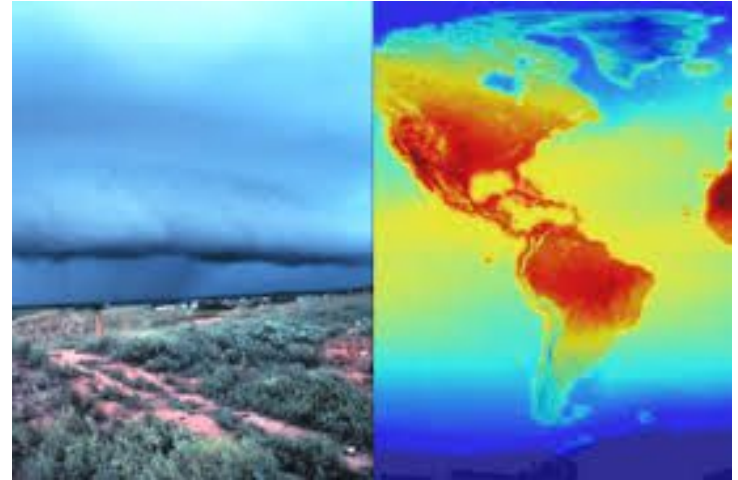
Lesson: April 29, 2020

Objective/Learning Target:

Students will identify and explain instances of climate change.

On a sheet of paper you will want to write your responses to these questions:

1. What is the difference between Global Warming and Climate Change?
2. What is the difference between weather and climate?





1. Global warming is the increase in average temperatures since 1970, while climate change is the long-term change in weather patterns that determine biomes.
2. Weather can change hourly to weekly, while climates change over several hundreds to thousands of years.



Lesson Activity:

Directions: You will be watching the two short videos highlighting the causes and consequences of climate change. As you are watching you will take notes, to guide yourself you can use this template:

What is climate change?	Effects on Oceans	Effects on Weather	Effects Food Sources	Effects on Health
....				

Link(s): [Climate Change 101](#) [Bill Nye explains Climate Change](#)



Practice

You will use the notes and 101 video from the activity on slide 5 to answer the following questions.



Practice Questions

1. What two generic human issues are causing Climate change?
2. What is the main cause of Climate change?
3. What happens to the weather when the average temperatures increase?
4. If temperatures are rising, what happens to the agricultural crops that require certain conditions to grow?
5. Are humans immune to the changes in climate? Why or Why not?



Answer Key

Once you have completed the practice questions check with the work.

1. Human activities (burning fuels) and overpopulation.
2. Rapid increase of Greenhouse gasses through CO₂ increase.
3. Weather becomes more extreme like stronger storms and longer droughts.
4. Picky crops that are only able to grow in certain conditions are no longer able to grow in previous areas.
5. Humans are affected through loss of homes and health effects from increased smog, like asthma, heart disease, and lung cancer.



More Practice

You will use the notes and Bill Nye video from the activity on slide 5 to answer the following questions.



More Practice Questions

1. How was previous climate change different from climate change today?
2. According to the pie graph, what are the 4 main components of the Greenhouse gasses?
3. What happens with ocean acidification?
4. What are the two reasons for the rise in Ocean levels?
5. What are some things we can do to help slow the effects?



Answer Key

Once you have completed the practice questions check with the work.

1. Historical change was caused by orbital variation, while current was due to abrupt increase in the Earth's temperature from human activities.
2. Carbon Dioxide, Methane, Nitrous Oxide, and Fluorinated Gases.
3. Rise of acidity in the ocean's chemistry causes corals to suffer and unable to function properly.
4. As ocean water temperatures rise the water expands and the glaciers and ice structures are melting.
5. Recycle, walk or public transit, turn off electronics, eat less meat, and eat more local foods.



Additional Practice

If you are interested in learning more about the various studies and effects of Climate Change you can start with these resources:

[What is Climate Change?](#)

[Climate Change Explained](#)

[United Nations Climate Issue](#)

[NASA coverage on Climate Change](#)