

Climate Change Cause and Effect[ME]

Adapted from Smithsonian Institute Ocean Portal

Grades: 6-8

Time: 45 minutes to 1 hour

Goals: To demonstrate the cause and effects of global climate change by using metaphors.

Objectives:

Students will be able to: define global climate change; use metaphors to describe climate change causes and effects; examine ways humans can alter, slow down, or end climate change.

Key Words:

Global warming

Entanglement

Deforestation

Energy use

Climate change

Agriculture

Sea level rise

Emissions

Cause and effect

Fossil fuels

Recycling

Background Information:

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Since the Industrial Revolution, scientists have been calculating the rate of change in our global temperatures and the rise of sea level along our coasts. They have given their explanations, placing blame on human activities such as burning fossil fuels, not recycling plastics, deforestation, and the over-consumption of energy. Greenhouse gases, especially carbon, remain in the atmosphere and keep solar radiation from reflected out to space.

Sea level rise, due to the melting of polar glaciers, can be catastrophic if it continues at the rate it is going. The majority of the world's population lives around or near coastal environments and as sea level rises, these ecosystems become vulnerable to erosion, flooding, and major tidal influences that could put a lot of species, including humans, in danger. As temperatures increase, the severity and frequency of storms, such as hurricanes and tsunamis, will also increase. This will also alter the precipitation patterns across the globe.

It is imperative that humans do everything they can to curb the causes of global climate change so that it creates less of a global effect. Some examples of simple changes can be switching to energy efficient light bulbs and turning lights off when not in use, recycling plastics, carpooling or using public transportation, purchasing locally grown foods, and planting more trees. By using alternative energy, less fossil fuels are burned, created less greenhouse gases, allowing more radiation to reflect instead of remain in our atmosphere.

Directions: Answer the follow questions about non-renewable and renewable resources as True or False.

- _____ 1. Renewable resources cannot be overused.
- _____ 2. Both plastic and rubber are made from petroleum.
- _____ 3. Elements that are used to produce nuclear power are renewable resources.
- _____ 4. Oil reserves beneath land are running out.
- _____ 5. When we conserve resources we also produce less trash.
- _____ 6. We use fewer fossil fuels today than we did in the 1970s.
- _____ 7. China use more paper per person than any other country.
- _____ 8. It costs more to recycle resources than to use new resources.
- _____ 9. Recycling used products is the same as reusing them.
- _____ 10. Recycled plastic water bottles can be made into t-shirts.