

High School Science Virtual Learning

Environmental Science Coronavirus Environmental Impacts May 22, 2020



High School Environmental Science Lesson: May 22, 2020

Objective/Learning Target:

Students will be able to identify the different effects that stay at home orders in relation to the Coronavirus affect the environment.



Give me a quick explanation of two of the following laws:

- 1. Desert Protection Act
- 2. Surface Mining Control and Reclamation Act
- 3. Kyoto Protocol



- 1. The Desert Protection Act designated 69 wilderness areas within the California Desert Conservation Area, established several national parks including Death Valley National Park, and includes provisions for these areas.
- 2. The Surface Mining Control and REclamation Act of 1977 provides the primary federal laws that regulate the environmental effects of coal mining within the United States. It has two programs within it, one for regulating active coal mines and the other for reclaiming abandoned ones. It also created the Office of Surface Mining.
- 3. The Kyoto Protocol is an international treaty that commits parties to reduce greenhouse gas emissions based upon the consensuses that global warming is occurring and is being caused mostly from carbon dioxide emissions from humans.



Lesson Activity:

Directions:

- 1. Read the articles and watch the video linked below. As you do so, take careful notes about the different environmental impacts that are happening in relation to COVID-19.
- 2. Create a PSA that details the various environmental impacts that are now occurring in relation to COVID-19. Your PSA should be no more than 5-7 paragraphs long and take about 10 minutes to read through.

Link(s):

<u>Article</u> <u>Article</u> Video



Practice

You will use the information from the activity on slide 5 to answer the following questions.



Practice Questions

- 1. How has covid 19 affected air pollution?
- 2. How much less energy will we use in 2020 due to the impacts of covid-19?
- 3. How much will the use in global coal decrease due to covid-19?
- 4. How much has road activity fell compared to 2019?
- 5. Due to the change in road activity how will oil consumption be affected?



Answer Key

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

- 1. Covid-19 has caused air pollution to decrease dramatically.
- 2. Roughly 6% less energy usage which is equivalent to losing the entire energy demand of India
- 3. Global coal demand fell 8% this year.
- 4. Road activity has decreased roughly 50% when compared to 2019 at the same time.
- 5. We are set to average 10 million barrels per day less oil in 2020 than in 2019.



More Practice

You will use the information from the activity on slide 5 to answer the following questions.



More Practice Questions

- 1. A major contributor to ocean acidification is air travel. How has covid-19 helped fix ocean acidification?
- 2. How does the impact on CO₂ emissions compare between America and France?
- 3. Due to lack of vehicle usage, what has happened to the air in New Delhi?
- 4. What seems to be the animal reaction to covid-19?
- 5. What is the concern for our environment with getting back to "business as usual"?



Answer Key

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

- 1. Global jet fuel consumption is down 60% which means lower levels of ocean acidification because of the lower emissions falling into the ocean.
- 2. America only decreased CO_2 emissions by 10% compared to France who decreased theirs by 72%
- 3. Skies turned from a hazy brown to blue again due to lack of pollution.
- 4. Animals seem to be recapturing area's that their ancestors probably once roamed.
- 5. With lower gas prices it is a major concern that people may use that as an excuse to drive more than they usually would causing a sharp increase in CO_2 emissions.



Additional Resources

Here is more information about the impacts of Coronavirus on the Environment: <u>Coronavirus Impacts</u>

This is another video that looks at the different environmental impacts that we are seeing due to more people staying at home in relation to COVID-19: <u>COVID-19</u> <u>Impacts</u>

With more people staying inside due to the pandemic, skies have began to clear. This article explains how: <u>COVID and Clearer Skies</u>