



Electric Vehicles and Climate Change Lesson Plan

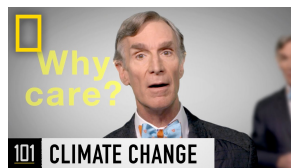
Essential Questions:

What factors are causing climate change?
How does internal combustion engine use contribute to climate change?
What effect would an electrification of transportation have on climate change?
What effect would electrification of transportation in addition to other changes have on the expected climate change of the Earth?

Time: 30-45 minutes

Resource Links:

Video: Why care? Climate Change 101



En-Roads climate change interactive simulator:

<https://en-roads.climateinteractive.org/scenario.html?v=21.10.0>

En-Roads user guide: [En-ROADS User Guide](#)

Overview: In this lesson students will explore the “why” of electric vehicles. Human activities, such as using internal combustion engines to power transportation, cause greenhouse gases to be released into the atmosphere resulting in climate change.

Procedure: Students will view the video about climate change from National Geographic “Why Care Climate Change 101” to learn more. Teacher led discussion using guiding questions. What human activities does the video tell us are causing climate change? What are fossil fuels? What happens when fossil fuels are burned in internal combustion engines? What things can we do to help?

Teacher will introduce the en-ROADS climate interactive simulator tool and model how it works. Students will create scenarios on the en roads climate interactive tool to identify the effect of electrification of transportation on climate. They can do this on their devices individually or in pairs. Alternatively, this can be projected/guided by teacher with the whole group. Students will choose combinations of electrification of transportation and other factors to see the results on the projected temperature of the Earth. Students will complete a worksheet sharing their findings and make a recommendation to adopt to support a change to help lower the temperature of the Earth. The electrification of transportation will link to your study of electric vehicles and the EV Challenge.

