

CALCULATING CLIMATE CHANGE CHALLENGE | TEACHER GUIDE



Activity Overview:

In this activity, students will be writing to a business or town building of their choice to encourage them to display a no-idling sign outside of their building. In their Change is Simple lesson, students learned that weather patterns and the overall climate is changing in part due to air pollution from electricity use, idling cars, and other carbon emission sources. By encouraging local businesses to display a no-idling zone sign, students are inviting their community to lessen their air pollution impact.

Prep Time: <5 minutes

Activity Duration: 30-60 minutes



STANDARDS ALIGNMENT

Common Core

- *W.3.2: Write informative/explanatory texts to examine a topic and convey ideas and information clearly*
- *W.3.4: . Produce writing in which the development and organization are appropriate to task, purpose, and audience.*

NGSS

- *5-ESS-3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.*

MA Comprehensive Health

- *5.7.CE.6: Use accurate information when discussing environmental health issues that impact people's health.*

MATERIALS NEEDED

- *No-Idling Poster*
- *Writing materials*
- *Student computers*
- *Glue*
- *Scissors*



BACKGROUND INFORMATION

Weather is the way that the atmosphere is behaving, or the immediate conditions. Climate, however, is the long-term patterns of weather over the course of history. In understanding how our climate is changing, it is important to recognize that the scope of change is far beyond daily weather and the weather reports we see on TV.

Today, cities are experiencing more natural disasters and higher temperatures than ever before in recorded history. Heat waves, sea level rise, drought, wildfires, flooding, and frequent hurricanes are all the symptoms of our warming climate. While not all of these events are directly correlated with a human driven climate change, data indicates that as temperatures warm, these events will become more intense and happen at a higher frequency.

A key to mitigating the damage of a warming climate is reducing our carbon footprint. By burning fossil fuels that produce mass amounts of carbon dioxide, humans are altering the composition of our atmosphere. Being a greenhouse gas, carbon dioxide traps heat in our atmosphere, meaning the more we produce the hotter it gets. Globally, energy production must shift away from carbon emitting fossil fuels to a cleaner energy source for us to reduce carbon dioxide. On an individual level; carpooling, buying an electric vehicle, or putting solar panels on your house are effective ways of reducing your personal carbon footprint.

ACTIVITY RUNDOWN



1. Go over the activity description with students. They will get to practice persuasive writing!
2. Decide whether you will write a letter as a class or individually.
3. Pick who you will be persuading to display a no-idling sign. We've included a few suggestions below.
4. Have students write their letter(s). Encourage them to use words from the vocabulary list on the letter template. Students can either type their letter or handwrite their letter.
5. Have students glue their letter onto the template.
6. Send your letter to your selected local business or town building!

Business/Town Building Examples:

- Library
- Local coffee shop
- Town Hall
- School
- Grocery store