



WORKSHEET

Topic: Carbon Footprint Activity

Target group: : Middle school and high school

Number of lessons: 50 minutes

Option B (students watching the video at home) 15 - 20 minutes in first lesson 30 - 40 minutes homework 20 - 30 minutes in second lesson

Goal of the lesson.

Students will discover how their life choices influence their carbon footprint and how they can lower it.

Material: • Computer with internet access • Worksheet(s). See Carbon Footprint worksheet document.

1. 1. Start with a discussion about carbon footprints and the evidence linking it to increasing global temperature. Make sure students understand that it is neither good nor bad to have a large carbon footprint, that the type of life they want to live is a personal choice, and that they won't be judged upon that.
2. Students should hypothesize what activities in their daily lives have the largest carbon footprint and fill out the page 1 of the attached document to calculate their personal carbon footprint.
3. Have students discuss and compare their calculations. What surprised them?
4. Have students brainstorm things that they and/or their families can change in their lifestyle to lower their carbon footprint.
5. Students should fill out page 2 of the carbon footprint worksheet document and follow through with their plan. They should have their parents help them fill out the household questionnaire on page 3. Teacher can also send a letter home to ask the parents to help the students determine how much their household spends on the things asked and ensure them that their information will remain confidential. Students fill out page 3 of the attachment.
6. Students estimate the calories they eat from meat, dairy, etc.
7. Each student should use the Berkeley carbon calculator to determine his or her household's carbon footprint. (Click link) <https://coolclimate.org/calculator>
8. Students reflect on this activity on page 4 of the attachment. Explain
 - Define in your own words: Mitigation, global warming and greenhouse effect.
 - Discuss with the students and make a list of what alternatives are available for them to mitigate their carbon footprint in your community.
 - Why might some of these alternatives not be convenient or possible for some students?
 - What activities or behaviors in your daily life are having the greatest impact on climate change? Which activities or behaviors in your daily life have the least impact?
 - Do you think someone in a larger city such as New York City would have a harder or easier time changing their life to have a lesser carbon footprint than someone from a rural community?
 - Do you think your friends and family are aware of actions to take to reduce climate change? What do you think you can do to inform them?
 - How did this assignment change how you feel about the issue of climate change?



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- Students can experience the climate time machine <https://climate.nasa.gov/interactives/climate-time-machine> and write how higher sea levels and temperatures might present a problem for life on planet earth.
- Discuss how the energy demands of your community might differ from those of a larger city. What might be the differences in the primary uses of energy? Watch this video. <https://www.youtube.com/watch?v=Z9Ctt7FGFBo>
- How might our country compare to others in carbon emissions and energy use? What are possible causes?
- What are carbon credits? How might these help mitigate an individual's carbon footprint? Do you think this is an effective method of combating global warming?
- Calculate the carbon footprint of one of your school lunches. Estimate the carbon footprint if everyone at your school ate that lunch every day for a year. Perform calculations if the lunch was changed to a nutritious salad. What do you think you can do to influence to what food your school offers you?

ECOART PROJECT

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