

Lesson 5: Community climate walk

Duration

90 minutes depending on local context

Lesson overview

Students go for a walk to identify factors and actions in their community that affect the causes of climate change. Back in the classroom, students brainstorm thoughts or questions about climate change and add them to their mind maps before reflecting on their learning in the module.

Objectives

Students will be able to:

- observe and record local human activities that affect the climate
- explain how activities in the community affect greenhouse gas emissions
- generate solutions to address factors that increase the causes of climate change

What you'll need

- Community Climate Walk Student Handout
- clipboards and pencils
- cell phones, camera or tablet for taking pictures or video (optional)
- Climate Change Mind Maps
- Climate Change Reflection Student Handout

Preparation

- Select a route in the community that takes students through the school, areas of traffic, natural spaces, along sidewalks, past homes/apartments and businesses.
- Make a class set of the Community Climate Walk Student Handout and the Climate Change Reflection Student Handout.
- Gather a clipboard for each student.
- Invite parents or other staff members to accompany the class on the walk.



Lesson notes

The community walk reinforces the connection between activities in the community and the factors related to climate change. Students are encouraged to make observations about things that contribute to climate change as they walk through the community. The following examples are typical to most communities:

- cars/trucks/motorcycles/boats
- chimneys
- building or construction
- biking
- malls and other retail stores
- garbage
- forests
- industries
- recycling
- farming
- electric vehicles
- buses
- airplanes
- gas stations
- cleared land

The length of the walk is at the teacher's discretion. It may be warranted to spend less time outside and do more observation debriefing when returning to class. Ensure there's enough time back in the classroom for students to share their work, take additional notes and brainstorm actions that reduce the causes of climate change.

Word list

carbon dioxide methane climate change place greenhouse gas reflectivity



Lesson activities

Activity 1: Getting ready! (10 minutes)

- Explain to students they are going on a community walk to identify activities and factors in the community that contribute to climate change.
- Have students brainstorm the type of activities they may see on the walk that relate to greenhouse gas emissions and climate change. Some of their ideas may include:
 - vehicles, planes, boats and trains create emissions
 - electric or hybrid vehicles create no or fewer emissions
 - sidewalks, roofs and road surfaces reflect sunlight (heat energy)
 - pollution from smoke stacks goes up into the atmosphere
 - hard surfaces don't absorb water (they dry out and heat up faster)
 - leaving doors or windows open allows heat to escape and results in more heat needing to be produced
 - cycling or walking to school/work causes no emissions
 - recycling reduces waste and the need to manufacture new goods
 - evidence of deforestation
 - trees absorb carbon dioxide
 - energy used to heat buildings
- Provide each student with a clipboard and copy of the Community Climate Walk Student Handout.
- Review the handout with students and have them bring a pen or pencil on the walk.
- Review class expectations and safety considerations when in the community. Outline the route and timing.
- If students are bringing recording devices, discuss how they might be useful.

Activity 2: Community climate walk (40 minutes)

- During the walk, have students record their observations on their Community Climate Walk Student Handout. They can sort their observations into two categories: actions and factors that increase the causes of climate change and actions and factors that reduce the causes of climate change.

Activity 3: Personal action and reflection (40 minutes)

- In their mind map groups, have students share their observations from the walk.
 - Reflecting on their observations, have students add ideas to the Solutions branch of their mind maps, including personal choices they can make to reduce the causes of climate change.
 - Have each student draw a star or check mark beside one action they'll commit to doing for the next week or two.
 - Share ideas as a class.
- Have students post the mind maps around the classroom and then complete the Climate Change Reflection Student Handout.

Assessment

- Note student participation during the walk and small group discussions.
- Collect Community Climate Walk Student Handout and assess for thoroughness (based on the route/



activities observed). Students should be able to add some notes from listening to others.

- Collect the Climate Change Reflection Student Handouts to assess student understanding of content from the module and their development of competencies.

Extensions

- Review the images and video captured during the community walk if taken and have students add to their initial observations.
- Have students review their mind maps. Add a page in their Science Journals to explore their questions and research one that is of interest.
- After two weeks, check in with students to see how they did on their commitment to take action (Activity 3). Follow-up with a journal entry or further commitment to action.
- Download and use the grade 6/7 Action Planning Module from Energy Leaders (available fall 2017) for students to develop their ideas around energy conservation.
- Have student make observations at home of what their families are doing to take action in reducing the causes of climate change.

Definitions

carbon dioxide: a colourless, odourless, non-combustible greenhouse gas that is formed during respiration, combustion and the decomposition of organic matter

climate change: a change in average weather patterns caused by both natural processes and human activities

greenhouse gas: any of the gasses whose absorption of solar radiation is responsible for the greenhouse effect, including carbon dioxide, methane, ozone, and the fluorocarbons

methane: a colourless, odourless, combustible greenhouse gas widely distributed in nature; a primary component of natural gas; released during the decomposition of plants in marshes

place: any environment within which people interact to learn, create culture, reflect on history and establish identity; the connection between people and place is essential to First Peoples' perspectives of the world

reflectivity: land mass, oceans and ice sheets have different abilities to reflect solar radiation back into space depending on their colour, texture and sheen; light coloured, shiny surfaces reflect better and dark coloured, non-shiny surfaces tend to absorb light and heat energy

