

## Activity 2: Climate Change Mind Map

### Summary

In this activity, students will draw a conceptual map showing 1) the physical impacts of climate change on the environment, and 2) their socio-economic consequences. Following the activity on Adaptation and Mitigation (p. 20), they will revisit the map to offer 3) adaptation strategies to address those consequences.

**Duration:** Two 60-minute sessions

### Learning outcomes

After participating in the activity, students will be able to:

- Identify physical impacts of climate change on the environment, and
- Discuss the consequences of climate change on society and the economy.

### Competency outcomes

During this activity, students will develop or improve these abilities:

- Critical thinking
- Collaboration
- Communication

### Set-up and materials

- Computer and projector (for video capsules)
- Climate Change and the Environment** infographic
- Climate Change and the Economy** infographic
- Climate Change: Health and Urban Living** infographic
- Copies of **Mind Map Rubric** for students
- Copies of the **Climate Change and Society Mind Map** student worksheet
- Chart paper (one sheet per group of two to three students)
- Coloured markers or pencils

**Tip:** Some students may find it easier to put their ideas on sticky notes so they can move them around during the planning phase.

### What to do

1. Brainstorm some impacts of climate change and their socio-economic consequences. If you like, show this helpful video to fuel the discussion: The Impacts of Climate Change (Climate Commission), found at [www.youtube.com/watch?v=lhkgmKXOM1A](http://www.youtube.com/watch?v=lhkgmKXOM1A).
2. Hand out a large sheet of chart paper to teams of two to three students and ask them to write “Climate change and society” at the centre of the sheet.

From the centre of the map, ask students to creatively build three distinct concept levels as in the example below (see Figure 1).

**Tip:** Tell students to use the **Climate Change and Society Mind Map** worksheet to sketch out their ideas.

- Level 1:** Physical impacts of climate change, e.g., rising temperature or increased precipitation (two to three per map)
- Level 2:** Consequences of these impacts on society and the economy, e.g., longer growing seasons, damaged roads (one to two per impact)

The next level will be filled out later, following the **Adaptation and Mitigation** activity (p. 20), so ask students to leave some room for this:

- Level 3:** Adaptation measures that could be taken to deal with these consequences, e.g., expand agriculture northward, reroute main transportation arteries (one to two per consequence)

3. Students should feel free to unleash their creativity and represent the concepts with shapes, text and drawings, using connecting lines between concepts to justify the link.

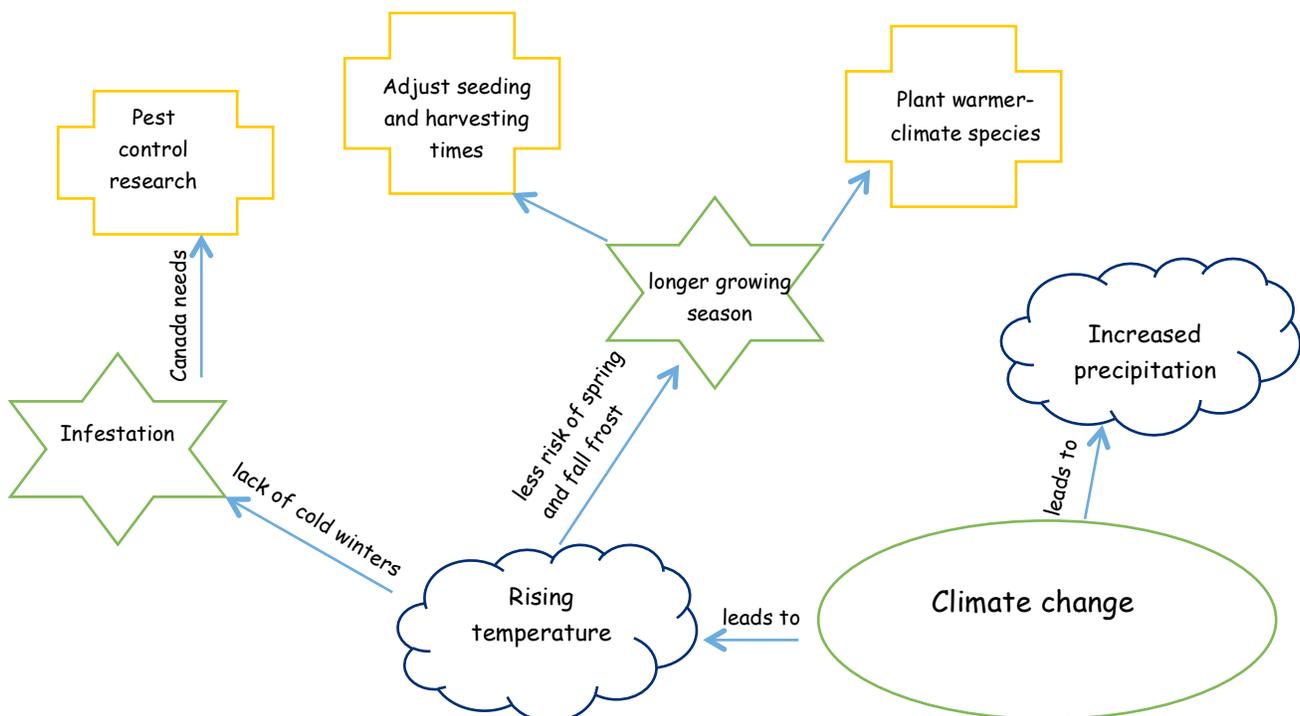
**Tip:** Students can use **Climate Change and the Environment**, **Climate Change and the Economy**, and **Climate Change: Health and Urban Living** infographics as tools to help complete their mind maps.

4. Ask students to present their conceptual maps to the class. Encourage dialogue by asking students with similar concepts to add their interpretations to the discussion.

#### Extension

- Ask students to cut out their concepts to make a large classroom concept wall. Use different cardboard backdrops (attached with glue) to identify the three levels — this will keep the hierarchy visible.

**Figure 1.** Example of a multi-level mind map



Name: \_\_\_\_\_

Date: \_\_\_\_\_

### Activity 2—Student BLM: Climate Change and Society Mind Map

Draw a sketch of your mind map including 1) the impacts of climate change and 2) the consequences of these impacts on society and the economy.

What I learned from my classmates' presentations:

Names: \_\_\_\_\_

Date: \_\_\_\_\_

**Activity 2–Teacher BLM: Mind Map Rubric**

	<b>Exemplary</b>	<b>Proficient</b>	<b>Satisfactory</b>	<b>Unsatisfactory</b>
<b>Concepts and terminology</b>	Shows an understanding of the topic’s concepts and principles and uses appropriate scientific terminology	Makes some mistakes in terminology or shows a few misunderstandings of concepts	Makes many mistakes in terminology and shows a lack of understanding of many concepts	Shows no understanding of the topic’s concepts and principles
<b>Relationships between concepts</b>	Provides highly relevant and original links between concepts	Provides adequate links between concepts	Provides some/few links between concepts	Provides no links between concepts
<b>Adaptation solutions</b>	Provides highly relevant and realistic solutions	Provides relevant solutions	Provides few relevant solutions	Provides no solutions
<b>Work ethic</b>	Plans the concept map in a highly effective manner	Plans the concept map in an effective manner	Plans the concept map in an adequate manner	Does not plan the concept map
<b>Communication</b>	Presents the concept map in a highly effective manner and provides examples to support the analysis	Presents the concept map in an effective manner	Presents concept map in an adequate manner	Presents the concept map in an ineffective manner
<b>Design and layout</b>	The design and layout contribute greatly to the flow and clarity of the map in an original manner. An original and effective design is used to denote the hierarchy of levels.	The design and layout contribute to the clarity of the map in an effective manner. The hierarchy of levels is evident.	The design and layout contribute to the clarity of the map in an adequate manner. The hierarchy of levels is present.	The design and layout do not contribute to the clarity of the map. Attention has not been paid to the hierarchy of levels.
<b>Collaboration skills</b>	Consistently works toward group goals and encourages people to work well together	Frequently works toward group goals and encourages people to work well together	Adequately works toward group goals and encourages people to work well together	Rarely works toward group goals