

**Potato**



**Water**

# Snow and Climate Change

## Classroom Activity

### Activity Objective:

To help students understand the impact of climate change on snowpack and encourage them to think about climate-friendly actions.

### Materials Needed:

- Access to the video: <https://m.youtube.com/watch?v=M6JBkx4Lyjk>
- Writing Materials and/or a device for recording notes

1. Ask students what they love about snow! Ask if they know how it's made and explain accordingly, include some interesting facts about snow such as:

Snow is made from water, but it's not just your typical water. When the temperature drops below freezing, which is 32 degrees Fahrenheit or zero degrees Celsius, water freezes and turns into ice crystals. These ice crystals cling together to form snowflakes that come in all sorts of beautiful shapes and sizes. Did you know that no two snowflakes are alike? That's right, each snowflake is unique just like you and me! So next time it snows, take a closer look and see all the amazing patterns and shapes that nature has created for us to enjoy. But here's something important to know: our world is changing, and that includes our beloved snow. Climate change is making the world warmer, and it's affecting our snowy adventures. So, let's find out how we can protect our snowy fun and make a difference.



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2. Ask the students: What does climate change mean to you? What is climate change? Following their responses, provide an overview about climate change, the greenhouse effect, and effects of climate change.

### **What is Climate Change?**

It is a Global Shift.

- Climate change refers to long-term shifts in the Earth's climate patterns.
- These shifts are happening because of various factors, with human activities playing a big role.

How does the Greenhouse Effect Play a Role?

- Our planet has a natural blanket of gases that trap some of the Sun's heat, keeping our world warm and cozy. But when we burn fossil fuels like coal, oil, and gas, we add extra blankets to our Earth.



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## Effects of Climate Change

### Hotter Temperatures

- It's making our world hotter, leading to more heatwaves, melting ice, and rising temperatures.

### Crazy Weather

- Climate change is like a master chef, cooking up weird weather. We're seeing stronger storms, more intense hurricanes, and even unexpected snow in unusual places.

### Changing Snow

- Remember that beautiful snow we talked about earlier? Climate change is messing with it. In many places, it's melting sooner and not sticking around as long, impacting winter fun.

### Thirsty World

- Climate change is making some places really dry. Droughts are becoming more common, which can affect water supplies and agriculture.

### Sea Level Rise

- The melting ice from polar regions and the warming oceans are causing sea levels to rise. This threatens coastal communities and the creatures that call the sea home.

### Oceans in Trouble

- Our oceans are like the Earth's lungs. They absorb a lot of the extra heat and carbon dioxide from climate change. But this makes the oceans warmer and more acidic, which can harm marine life.



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3. Cue up the video to play with an introduction:

Now, we're going to watch and reflect on a video about "Snow Science and Climate Change Action". This video will help us understand how climate change is transforming Canada's snow and affecting the way we live, work, and play in and on the snow. After that, you'll have a turn at becoming a climate expert. We'll brainstorm climate-friendly actions to protect our snow and winter adventures. From snowboarding for science to taking real steps towards a greener future, this activity is your chance to make a difference. So, gear up for a snowy adventure filled with discovery and action!

Press play on the video:

<https://m.youtube.com/watch?v=M6JBkx4Lyjk>





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4. Lead a Discussion or Split students into groups to answer the Questions:

- What did you learn from the video about how climate change is affecting snow in Canada?
- How is the changing snowpack impacting people's lives and activities, as mentioned in the video?
- Why do you think it's important to study and understand the impact of climate change on snow and the environment?
- What are some ways individuals and communities can adapt to the changing snow conditions described in the video?
- What actions can we take to reduce our impact on climate change and help preserve winter and snow in the future?

### **Group Brainstorming Option:**

- Ask each group to brainstorm and list climate-friendly actions that individuals, schools, or communities can take to reduce their impact on climate change and protect snow and winter activities.
- Encourage creativity and practicality in their ideas.
- What can YOU do?

### **Group Presentation Option:**

- Have each group present their list of climate-friendly actions to the class.
- Discuss the feasibility and potential impact of each action.



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### **Reflection and Action**

- Conclude the activity by asking each student to write down one climate-friendly action they can commit to implementing in their daily lives.
- This action should relate to preserving snow or addressing climate change.
- Encourage students to share their commitments with their peers.

