



Activity Theme: Wildlife Conservation

Activity Type: Active Recreation 

Grade 4

On Thin Ice

Activity Overview: Elementary students will learn about climate change and how it is impacting the environment. Students will participate in a game of musical chairs using hula-hoops. The hula-hoops will represent ice caps, the polar bears habitats, and the students themselves will be the polar bears. As the music stops each student will have to rush to get to on an ice cap. As the game goes on and climate change worsens hula-hoops will be removed from the game. When there is only one polar bear left, students will discuss ways to help reduce their impact on the environment and help combat climate change.

Objectives:

The elementary students will learn that:

- Climate change can affect and change natural habitats.
- Climate change includes global warming which can cause temperatures to go up and ice to melt.
- There are things we can do in our everyday lives that can help combat global warming.

Materials:

- 10 hula hoops
- Musical instrument
- Polar bear signs

Setup:

- Place all 10 hula hoops around the polar bear signs, leaving enough room for a group of students to run around.
- Position yourself off to the side of the hula hoops with the musical instrument.



Takedown: At the end of the day place the instruments and hula hoops away as directed by your steward.

Safety:

- Spread out the hula-hoops far enough where the students will not bump into each other.
- Please be careful that the students do not trip over the hula hoops as they run around them.

What will I be doing? (Procedure)

Before you start your presentation, check with the teacher or chaperone that the entire group is present, ready to start and if there is anyone who may have any mobility issues.

*Remember that kids have more fun when they are **doing** an experiment and **discovering** the answer, rather than watching and listening.*

Part 1: Engage the students into a conversation about climate change.

- **Say:** “Welcome to On Thin Ice! Today you will be learning about how climate change is affecting the environment.”
- **Ask:** “Does anyone know where polar bears live? (Answer: The Arctic)”
- **Ask:** “What is the environment of the polar bear like?” (Wait for answers).
 - **Say:** “That’s right! It is cold, snowy and icy. That’s because since the last ice age a portion of the arctic has remained covered in ice.”
- **Ask:** “Has anyone heard about Climate Change?” (They may have heard about this from other activities).
 - **Say:** “Climate Change is the long-term changes in our weather patterns. Climate change is caused by gases that are created by our day-to-day activities such as driving cars. These gases get trapped by the Earth’s atmosphere and cause the Earth to get warmer. This is called Global Warming.”
- **Ask:** “What would happen if the Arctic, home of the polar bear, started to get warmer?” (Wait for answers).
 - **Say:** “Right. Polar bears spend most of their life on the ice hunting for seals and other animals to eat. As the ice melts they lose their hunting grounds and use lots of energy to swim large distances. If the polar bears don’t get enough food, they starve and can’t have babies.”
- **Say:** “The arctic is getting warmer. Scientists have found that now more ice is melting every year in the summer, and less ice is forming in the winter. This means less ice for the polar bears and other animals that depend on it.”

Part 2: The Activity

- Explain to the students that everyone is going to play a similar game to musical chairs.
- Inform the students that they are all polar bears and the hula-hoops on the floor are ice caps.
- Music will play and when the music stops, the polar bears (students) must get on an ice cap.

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- One polar bear per ice cap; if there are more than 10 students, invite others to play the musical instrument – whoever plays the instrument will need to be instructed on when to stop.
- Each time the music stops, an ice cap will have melted due to climate change and will be taken away.
- Any polar bear (student) not on an ice cap is eliminated to the zoo!
- When there is only one student left, invite the others to suggest a way they can help the environment; when they do, they can bring a hula hoop and come back to the activity area (this demonstrates climate change prevention by making environmentally conscious choices)

**Students who cannot participate in the running portion of the game can play the musical instrument.

Specific Reminders for Students:

- Climate change is causing the Earth's temperature to go up. This causes ice caps to melt.
- Climate change can affect animals as well as humans. Our example was how when it gets hotter ice melts and animals that use the ice as their home are put in danger.
- We can help prevent climate change by making wise environmental choices. These choices can be as simple as riding your bike or walking to school instead of getting a ride.
- Many animals depend on the ice to live – not just polar bears. Walrus and seals also depend on the ice.

Background Information:

Climate Change changes the Earth's natural ability to function. It is most known for changing weather patterns. In some areas climate change is causing temperatures to go up and because temperatures are going up, ice caps are melting. When the world gets warmer this is called Global Warming. Global warming is caused by greenhouse gases that are created by many things that we do such as driving cars and creating electricity.

Ice caps are massive pieces of ice that are present all year round in our north and south poles. Ice caps are home to many animals, such as polar bears and penguins. This type of environment is essential to their survival. Rising temperatures will cause the ice caps to melt and destroy these animals' homes.

When ice melts it turns into water. When ice melts on land, the water can flow into the sea and cause the sea levels to rise. Many cities and towns are on the coastline and could be flooded with water. The water will ruin homes and other buildings and could contaminate the water that we drink.

To prevent these dangerous changes (rising temperatures, melting ice, sea level rise, loss of habitat), we need to fight climate change. We can fight climate change by reducing our individual impacts on the environment by making smart choices about how we live our lives and use energy.

Vocabulary:

- Climate Change: Long-term shifts and changes in weather patterns as a result of human activities, such as burning fossil fuels.
- Climate: The meteorological conditions, including temperature, precipitation and wind that characteristically prevail in a particular region. Climate is what you expect a region to be like.
- Global Warming: Earth's rising surface temperature.