

/ The Cooler Test

This experiment will demonstrate how the Earth's atmosphere works to sustain life and maintain balance in the environment.

/ For this activity, you will need:

- 2 x coolers or cooler bags with closable lids
- 2 x cups of ice (or more)
- An outdoor area in the sun

/ Instructions:

1. Open the lids on the two coolers or cooler bags.
2. Pour a cup of ice to each of them.
3. Close the lid of one, and leave the lid of the other open.
4. Place the cool boxes or cooler bags next to each other in a room (or out in the sun).
5. After 1-2 hours, return to the coolers and observe what has happened to the ice.

/ Questions to think about:

- Why did the ice inside the cooler with the lid closed remain mostly the same, while the cooler with the lid open melted?
- How does the lid help maintain the temperature inside the cool box?

/ Reflection:

How does the lid of the cooler represent Earth's atmosphere?

/ Extension:

Ask your teacher or guardian to put a mug of boiling water inside the cooler that has had its lid closed during the experiment. Close the lid again. **Make sure your teacher/parent/guardian handles this boiling water!**

After 1 hour, open the lid and observe what has happened. Did the lid trap the heat from the boiling water? How did this trapped heat affect the ice?

This is how global warming occurs. The lid of the cool box acts like our atmosphere and keeps the temperature on Earth at the correct temperature. Global warming is when extra heat is trapped within the atmosphere and heats up Earth's surface (the ice, in this case), causing extreme weather and disruptions to the natural environment.