



PROJECT AREA: EARTH AND SPACE SCIENCES

ACTIVITY: **THEY'RE MELLLLLTING**

LEARNING OUTCOMES

PROJECT SKILL: Observe the melting of polar ice through experimentation.

LIFE SKILL: Prepare an experiment, and develop a conclusion

EDUCATIONAL STANDARD: 4-ESS2-1 Earth Systems

INTRODUCTION: Our planet and all its parts are constantly changing. Sometimes the change is as quick as a volcano erupting. Other changes are much slower such as iceberg drift or glacier melting. In this activity we will deduce if polar ice melting contributes to a raise in sea level.

BACKGROUND: Have you ever noticed that if you leave an ice cube out on the kitchen counter and come back to check on it in a while, you find a puddle? The same thing happens to ice in nature. If the temperature gets warm enough, the ice melts. Scientists continually observe the polar ice caps and have found that the melting of the Antarctic ice sheet could cause sea levels to rise and drastically increase flooding of coastal lands. At its current rate global sea level will rise approximately 60cm by 2100. One of the causes of this is the rapid global consumption of fossil fuels.



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WHAT TO DO: See the polar icecaps melting in action by creating an experiment of your own. Be sure to keep notes in your field journal.

DIRECTIONS:

1. Prepare your materials. You will need a permanent marker, a 4 inch deep aluminum pan, a 24 ounce plastic container.
2. Fill a 24 ounce plastic container with water and freeze overnight.
3. Add approximately 1 inch deep water into the aluminum pan, and mark with the permanent marker.
4. Take ice mold out of its container and place into aluminum pan.
5. Let sit in room temperature until completely melted.
6. Once completely melted observe the rise in water level. Record your observations in your field journal.



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MORE CHALLENGES: Discuss with your classmates ways to decrease your use of global fossil fuels that effect the melting of polar icecaps. Some starter ideas can include; Reduce Reuse Recycle, Drive less, Replace your light-bulbs, Planting a tree.

RESOURCES: Check out these resources for furthered learning

- <https://www.oddizzi.com/teachers/explore-the-world/global-knowledge/environmental-change/how-is-it-changing/ice-caps/>
- <https://www.oddizzi.com/teachers/explore-the-world/global-knowledge/environmental-change/how-is-it-changing/ice-caps/>
- https://www.youtube.com/watch?v=b6CPsGanO_U





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TALKING IT OVER:

Featured Career
Climatologist, a
scientist who
studies the earth's
climate through ice
cores, soil, water,
and air.

SHARE How did this experiment help you to understand the concept of icecap melting?

REFLECT If you could travel anywhere in the world to study geology, where would you go?

GENERALIZE What important points did you learn this year about the polar ice caps?

APPLY What can you do to educate others about the polar ice caps?
