

EARTH SCIENCE SERIES

FREEZING POINT

As temperatures get warmer in the Northern Hemisphere, temperatures fall in the Southern Hemisphere. In relation to the Sun, our planet tilts on its axis at an angle of 23.5 degrees. Because of this tilt, the Northern and Southern Hemispheres are closer to the sun at different times of year. This means that around the time we celebrate winter holidays and think about snow in New England, the weather in Australia is hot! While we start to dream of summer weather, people in the highlands of Australia are preparing their snow shovels and skis.

Whether you live near Springfield, Massachusetts, in the United States, or Melbourne, Victoria, in Australia, you can try this experiment to learn more about melting ice. The observations require about 20 minutes for checking in on the melting progress.

MATERIALS AND STEPS

- 2 small plates or saucers
- 2 ice cubes
- A teaspoon
- Salt

Place an ice cube on each plate. Measure out a teaspoon of salt and gently sprinkle it on one of the ice cubes. Observe what happens next and keep checking back. Which ice cube is melting faster?

Salt lowers the freezing point of water, and should cause the salted ice cube to melt faster. This is why we use salt in the winter to help clear ice off our roads and sidewalks. What would happen if you tried this experiment again using vinegar instead of salt? How about lemon juice? What else could you try?

VOCABULARY

To **tilt** means to lean, incline, or slant.

An **axis** is a real or imaginary line on which something rotates.

The **equator** is an imaginary line drawn around the Earth exactly between the North and South poles. The area North of the equator is known as the Northern Hemisphere and the area South of the equator is known as the Southern Hemisphere.

FUN FACT

While the highlands and mountains in Australia get snow regularly, most of the country's population lives in lower elevation that does not see much snow. The largest city in Australia is Sydney, and it hasn't snowed there since 1836!

