

Episode 5: Ice Fishing



What else can cause ice to melt? Luke is fishing for answers in the Science Time Lab. Join him to discover the effect that salt can have on ice and catch an icy swishy fish or two along the way!

Scientific concepts:

1. Melting is the process of changing something from a solid to a liquid.
2. Some physical changes are reversible.

Science process skills:

Observing, comparing and predicting.

Let's investigate:

Can salt help to melt ice?

Materials

- Ice cubes (plain and fish shaped)
- Cold water
- String or twine
- Salt
- Shallow container
- Blue food colouring

Experiment procedure

1. Place one ice cube in a container of cold water. Lay the string over the ice cube and observe if it sticks to the ice. It shouldn't attach at this stage.
2. Lay the string over the ice cube again and sprinkle salt on top. Wait 1-2 minutes and then gently pull the string. The ice cube should stick to the string.
3. Refill the container with cold water, colour it blue and place a few 'fish shaped' ice cubes inside. Sprinkle some salt over the top of the ice cubes. Wait 1-2 minutes and gently pull the string, with the fish ice cubes attached. You've just caught some ice fish!



How it works: Adding salt to ice lowers its melting point. Salt causes a physical change by altering the properties and temperature of the ice cube. However, when the surrounding temperature is still freezing, the ice will re-freeze (reversible change) and it freezes the string along with it.

Early Education links

Episode themes relate to [EYLF Learning Outcomes](#) 4.2, 4.3, 5.1 and 5.2. Encourage investigation and reflective thinking skills by asking children to consider reasons why the string attaches to the ice. Model scientific language to explain how the ice changes from a solid into a liquid, by changing its temperature. Use a thermometer to measure the cold temperature of the water. Invite children use a digital timer or stopwatch to record how long it takes for ice to re-freeze, with the string attached.

Follow-up learning

- [Wonder Gang: Wonder Cards](#) suggest ideas to extend children's knowledge about interesting questions such as - 'Why does ice melt?', 'What is an Ice Age', 'How is snow made?' through play-based STEM.
- Extend children's understandings about solids, liquids and *reversible changes* by melting and then cooling other substances such as chocolate, candle wax and liquid jelly.

