

# SCIENCE FUN AT HOME



Have some fun at home with these science activities from **Science Sparks** and the **Primary Science Teaching Trust**



**BEFORE YOU START!** Please read through this with an adult:

- \* Make sure you have read the 'IMPORTANT NOTICE' on the back of this page.
- \* If you have a space outside that you can use safely, then you can do the 'Try this outdoors' activity outside. Don't worry if not as you could still do it indoors.
- \* Talk to your adult about sharing the science you have done and if they want to share on social media, please tag **@ScienceSparks** and **@pstt\_whyhow** and use **#ScienceFromHome**

## SCIENCE WITH ICE

### 1 TRY THIS INDOORS .... ICE RESCUE

Place a small plastic toy or figure (Lego works well) into the container and fill to almost the top with water. Leave in a freezer or ice compartment in the fridge until the water is frozen. Remove the container and leave for 5-10 minutes until the ice loosens and then tip it out onto a plate or tray.

#### You will need

- \* A container
- \* Small plastic toy
- \* Water
- \* Freezer (or ice compartment in the fridge)
- \* Salt
- \* Warm water
- \* Ice cubes

### WHAT DO YOU NOTICE?

#### Things to talk about ...

What happens when you pour a little bit of warm water onto the ice? What happens if you put salt onto the ice? What do you think would be the fastest way to rescue your toy from the ice? What could you do to find out? Are bigger toys easier to rescue from the ice than smaller toys?



## 2

## TRY THIS OUTDOORS .... MELTING ICE

Freeze several small ice cubes or shapes of the same size. Put them in separate containers and choose different places to leave them. If you can go outside, you could put one in the shade, one in the sunshine and also leave one inside. You could also try making ice cubes out of different liquids like milk, vinegar or cooking oil.

### WHAT DO YOU NOTICE?

#### Things to talk about ...

Where does the ice cube melt the most quickly? Why might that be? Can you find the place where the ice cube will take the longest time to melt? Or the shortest time to melt? What happens with frozen cubes made from different liquids?



## 3

## WHAT IS THE SCIENCE?

Water can be a solid, liquid or a gas. A liquid turns into a solid (freezes) when its temperature drops below its freezing point. For water this is at zero degrees Celsius. Ice melts when its temperature rises above its freezing point. Ice melts faster when salt is added as the salt makes the freezing point of the ice lower. Different liquids have different freezing points. Oil freezes at a lower temperature than water, so an 'ice cube' made of oil will melt faster than one made of water.

**Did you know?** Fresh ice feels sticky because it immediately freezes the moisture in your skin, making it feel sticky to touch.

## 4

## MORE ACTIVITIES YOU COULD TRY

**MAKE ICE CREAM IN A BAG!** <https://www.science-sparks.com/how-to-make-ice-cream-with-ice-and-salt/>

**WATCH A VIDEO ABOUT HOW PLANTS SURVIVE IN ICY CONDITIONS**

<https://wowscience.co.uk/resource/adaptation-of-plant-life-to-extreme-cold-temperatures/>

**FIND OUT ABOUT ICEBERGS AND WHAT HAPPENED TO THE TITANIC**

[http://www.nicurriculum.org.uk/docs/key\\_stages\\_1\\_and\\_2/areas\\_of\\_learning/the\\_world\\_around\\_us/activity5.pdf](http://www.nicurriculum.org.uk/docs/key_stages_1_and_2/areas_of_learning/the_world_around_us/activity5.pdf)

**TAKE A SCIENCE SELFIE!** Maybe you could show other people what you have been doing?

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These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.