

# Embark on an **ICE** excavation

Can you free these Lego explorers from a frozen trap?



## What you need

- An ice tray with segments big enough to hold the toys, or a larger container that can be frozen, like an old ice cream tub
- Lego minifigures, or any other small plastic toys
- Tap water
- Freezer
- Plate
- Salt
- Hot water
- Toothpicks or chopsticks
- Other excavation tools

## How does it work?

This activity brings the adventures of archaeologists indoors, without the need to trek into the Arctic Circle. Fossils are often found trapped in glaciers or in permanently frozen ground near the north and south poles. One way to melt ice is to use salt. Ice usually forms when water reaches 0°C, its freezing point. Adding salt takes the freezing point below the temperature of the ice, so the ice turns back into water. Warm water has the same effect. Many fossil remains are found when deep-freeze conditions begin to thaw and they are dug out of the ground.

**WARNING!**  
Use warm water to melt ice. Boiling water can scald your skin.



**1** To trap a toy in ice, half-fill a tray with water, lay the toy in the water and freeze. Once it has frozen, top up with more water and freeze again.



**2** Once frozen solid, pop the ice onto a plate and sprinkle salt over it. Watch what happens. Is this a good way of extracting the "fossil" toy?



**3** Another option is to put the ice in warm water. Is this method more effective or would it damage a delicate fossil?



**4** How about chipping at the ice with your toothpick "tools"? Try combining techniques to see which work best, while protecting the fossil.

If you've enjoyed these activities, share the fun with other readers. Send your photos and videos to [scienceandnature@dennis.co.uk](mailto:scienceandnature@dennis.co.uk)  
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