

## Ice and Salt



In the winter we put salt on the roads to stop them getting icy but why?

Usually water will freeze at 0 ° C. When you add salt this lowers the freezing point, which means that it has to get much colder before the water freezes. So if we add salt to the roads it needs to get much colder before they get icy and dangerous!

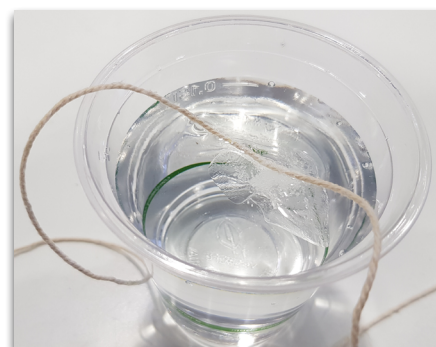
Try this experiment to see it happen for yourself!

Equipment:

- Glass of water
- Salt
- String
- Ice cube

Method:

1. Drop the ice cube into the glass of water
2. Lay the string over the top of it
3. Sprinkle salt on the ice cube (can you see the ice starting to melt?)
4. Leave for 60 seconds (You should see the ice start to refreeze)
5. Lift the string and the ice cube should lift with it!



### Why can you lift the ice with the string?

The salt is lowering freezing point of the ice so you would expect it to stay melted but the ice refreezes over the string and this is why you can pick it up.

This refreezing takes place because melting is something called an endothermic reaction. **An endothermic reaction is a reaction which takes place which uses up heat.** So as the ice melts, it uses up heat from the air around it making it much colder. So cold in fact, that it is now cold enough for the water to freeze again!