

## ICE CUBE TEST

You know that ice is the solid state of water. You also know that ice is cold and that if the temperature falls below freezing, the ice will begin to melt. When the ice starts to melt, the ice uses energy to do so in order to turn from a solid to a liquid.

Let's take a look at how this works.

### Here is what you need:

- 3 ice cubes
- 3 pieces of string — about 8 inches long
- Plate
- Salt
- Sugar
- Flour



### Here is what you do:

- Lay one end of a piece of string on top of the ice cube and leave it there for about 30 seconds
- Lift the string off the ice cube and take note of what happens
- Lay a fresh piece of string over each ice cube.
- Sprinkle about 1/8 of a teaspoon of salt on top of ice cube 1; making sure you sprinkle the salt over the string, as well. Do the same for ice cubes 2 and 3 with the sugar and flour.
- Count to 30 slowly, lift each piece of string, and take note of what happens

In your red book, can you record your results and conclusion. In your conclusion, have a go at explaining what you think is happening. Why did different things happen when different materials were sprinkled on the ice? Remember to use as many different scientific words as you can (use your knowledge organiser to help).

If you are struggling to explain your findings, there is a video to help and some pointers on the next page. Do try and have a go before reading this though, as I would love to hear what you think.

[https://www.youtube.com/watch?v=OnEJ\\_FN46NQ&t=114s](https://www.youtube.com/watch?v=OnEJ_FN46NQ&t=114s)

### **What happened:**

The chemical makeup of the salt breaks down the bonds of the ice faster and with more intensity than the other items. Because more energy was used to melt the ice with the salt on it, the quicker the ice cooled itself—refreezing around the string. That is why you were able to pick up the ice with the string after salting the ice.