

Section 3

Understanding Matter and Energy

EXPLORATION
1

Magic Salt

Discover how salt interacts with ice.



You might have noticed the road sign shown here while riding in a car on an icy road.

It warns drivers of the dangers of driving on slippery, icy roads.

You might have also seen salt trucks spreading salt on the roads to melt the snow and ice and keep water from freezing. Why does salt have such magical powers? Would you like to see how salt can make ice disappear?



Section 3

Understanding Matter and Energy

EXPLORATION 1

Magic Salt

Try this activity to see how salt interacts with water.

Materials:

- an ice cube tray
- water
- a spoon
- salt
- 2 plates
- food colouring (optional)

Steps:

1. Fill an ice cube tray with water and add a few drops of food colouring. Leave it in a freezer overnight.
2. Put three ice cubes on each plate.
3. Sprinkle a spoonful of salt onto the ice cubes on one plate.
4. Observe and note which ice cubes melt first.



Through this activity, you should have noticed that the ice cubes with salt melted first. This is because salt lowers the melting point of ice. Normally, ice melts at 0°C , but when salt is added, the temperature at which ice melts is lowered. This makes the ice melt at temperatures below 0°C .

Section 3

Understanding Matter and Energy

EXPLORATION 1

Magic Salt

Further Inquiry

Although you now know the benefits and magic effects of salt on ice, did you know that using road salt can also have negative impacts? Go online or go to your local library to learn about some of these and write them below.

A more environmentally friendly alternative to make roads safer on snowy days is to add sand instead of salt.



Negative Impacts of Using Road Salt:

1. _____

2. _____
