

# Winter Fun!

Make tracks to these snowy activities



Colour me!



# Shapely Snowflakes

**Have you ever looked at a snowflake up close?** Snowflakes are ice crystals that form when moisture in the clouds gets cold and freezes. Did you know that no two snowflakes are the same? When snowflakes experience different temperatures and bump into each other as they fall, each snowflake becomes unique in shape.

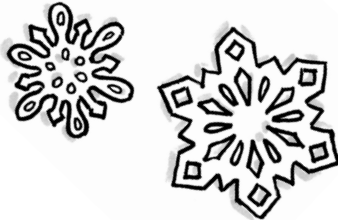
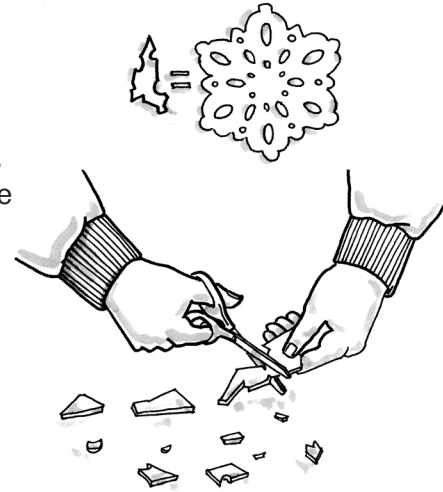
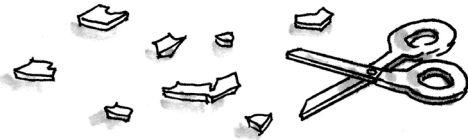
## Create your own beautiful snowflake:

### What you need:

- Scissors with short blades are best (ask for a grownup's permission before using)
- Square piece of white paper

### Instructions:

1. Fold one corner to another to make a triangle. Fold a few more times, always staying with the triangle shape.
2. At the open end of the triangle shaped paper, cut out the corners in an arc, making them rounded.
3. Make many small cuts in different spots.
4. Open the paper to show a unique snowflake designed just by you!



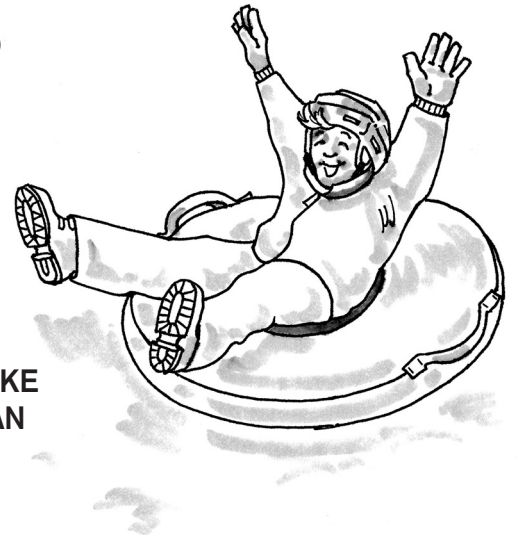
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## Winter Word Search

**Find words related to winter.**

What's your favourite winter word?

BLIZZARD  
BOOTS  
COLD  
FROST  
HAT  
ICICLES  
MITTENS  
SHOVEL  
SKATING  
SNOWFLAKE  
TOBOGGAN  
WINTER



# amAZEing Winter Boots

It's important to wear a good pair of boots in winter, so that you stay warm and don't slip on ice or fall. Your winter boots should be:

- Waterproof and warm on the inside
- Non-slip, with a thick sole and a good tread
- Easy to stand in with a low heel
- Light enough that you can walk easily through snow

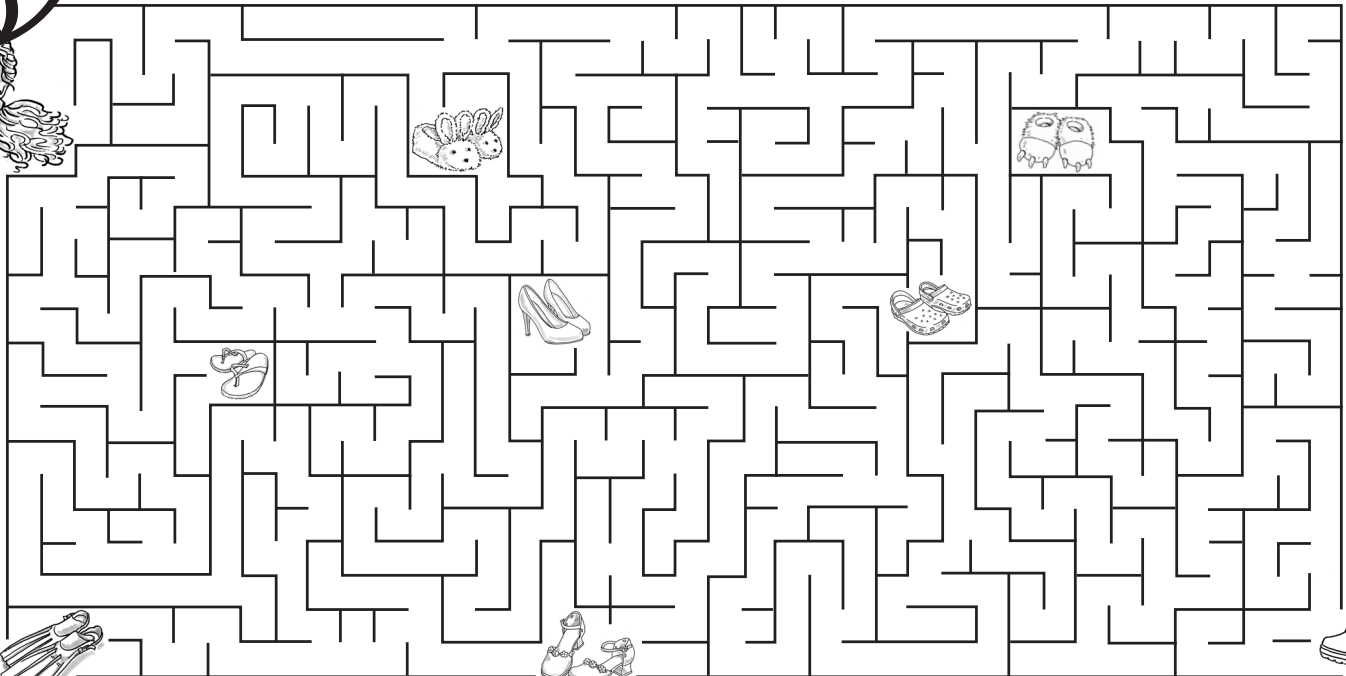
Reference: Canada Safety Council



Help me find my winter boots so I can go outside and play in the snow.



Start here



You did it!  
Remember to wear your winter boots too!

## Make a promise.

### Will you help protect our drinking water?

The salt we use to make our roads and sidewalks less slippery can end up in our drinking water, which isn't a good thing. We can use less salt and still stay safe. But we need you to pitch in too. Wear good boots that are made for our Canadian winters. They'll keep your feet warm and dry and help you walk easier on snow and ice.

**Will you help us?** Sign your name below as your promise to wear boots this winter. Tell your parents they can help too by shoveling first when it snows and using less salt. When you do, you're being good to our water!

**I promise to wear good winter boots this winter.**



\_\_\_\_\_  
Your name

# Ice Cream Experiment

## A Tasty Lesson on Lowering the Freezing Point

**Who would have thought making ice cream could demonstrate how road salt works?** Actually, both do work in the same way. In the winter we put salt on our roads to melt ice. Salt helps ice absorb heat energy, lowering its freezing temperature. Instead of water freezing at 0°C, the freezing temperature is much lower. In this experiment, you'll see how salt is used to lower the freezing temperature turning milk, sugar and vanilla into a frozen ice cream treat.

**Start with a sandwich-sized plastic bag with a seal. Put these ingredients into the bag, and then seal it tightly:**

- 20 to 30 ml (1.5 to 2 tbsp) sugar
- 250 ml (1/2 cup) whole milk or table cream
- 1.25 ml (1/2 tsp) vanilla

**Now get a larger plastic bag (4 litre or 1 gallon) with a seal and put the following inside the large bag:**

- the filled sandwich bag from above (double check to make sure it is completely sealed)
- 90 ml (6 tbsp) of table salt
- Two trays of ice cubes to nearly fill the bag



Put on a pair of oven mitts or winter gloves (the bag will get cold!) and shake and roll the big bag over and over. In a few minutes, the mixture will thicken and start to freeze. In about 10 to 20 minutes, the mixture will be frozen and – voila, you have ice cream.

### So – do you know what happened?

For the milk mixture to freeze it needs to lose heat energy. Salt added to the ice lowers the freezing temperature of ice. This allows the ice to absorb additional heat from the milk mixture.

If there were no salt added to the ice, it would melt at 0°C and eventually the ice water and mix would both come to rest at a temperature of 0°C. Adding salt to the ice creates the rapid cooling and freezing essential to making creamy frozen ice cream.

Now you've seen for yourself how salt works to lower the freezing temperature. Kick back, relax, and enjoy the results of your sweet experiment!

