

WINTER OLYMPICS STEM CHALLENGES

Save the Ice Rink

The ice rink is starting to melt, can you find a way to save it?

Wrap one ice cube in insulating materials such as bubble wrap, black paper or kitchen foil.

Leave another ice cube on a plate uncovered.

Check the ice cubes every 2 minutes and record which one melts first.



Learn about THERMODYNAMICS

COOL CURLING

Test different materials on the underside of a paper plate to find out which makes the plate (curling stone) move the fastest?

Try rough and smooth materials to investigate which reduces friction between the plate and the floor the most.



Learn about FRICTION

SUPER SPEEDY LUGE

Place a coin on one end of a craft stick. This is your luge. Record how long the luge takes to go down a ramp, with the coin at the front.

Move the coin to the middle of the stick and record the time again.

Move the coin to the back of the craft stick and record the time taken to go down the ramp again.

Which coin position makes the luge travel the fastest?



Learn about AERODYNAMICS AND CENTRE OF GRAVITY

BRILLIANT BOBSLEDS

Build a bobsleigh track using kitchen foil, and use a marble or small ball as the sled.

Record how long the marble takes to complete the track.

Change the gradient (steepness) at the start of the track and record the time taken again.



Learn about POTENTIAL AND KINETIC ENERGY