A STEM in the Park Take Home Activity

STEM in the PARK™

Science, Technology, Engineering, and Mathematics

Ice Cube Curling: Let's Explore Friction

What You Need

- 2 players
- Ice Cubes (kept frozen until right before they are needed)
- A coin
- Kitchen counter top or 1 metal tray (cookie sheet)
- Small Hand Towel

What To Do

1. Start with a dry kitchen counter top or metal tray
2. Place a coin on the counter top or tray to act as your "house" (the target in curling)
3. Try to slide you ice cube as close as possible to the house.
4. Each player tries to get their ice cube closer to the house than the other player.
5. Predict what will happen as the ice cube is moved around on the tray with greater motion.

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What To Do cont.

6. Gently move the ice cube, rubbing it on the flat surface, increasing speed while still maintaining good self-control.
7. Slide your ice cube around and play again.
8. Compare how the ice cubes move as the surface gets wetter.
9. Experiment with different ideas…what happens if you put a sheet of wax paper on the tray or counter top?

Concepts

The ice cube on the counter top or tray should melt faster as it is moved because increased friction between the ice and the tray (while it is moving) causes heat that melts the ice.

Rub your hands together. Does that cause heat? That is friction!

How is your experiment like curling?

In a curling match, players sweep the ice in front of the moving rock, making the ice more slippery – that is less friction! So players can control how far the rock goes by sweeping. Can't do that in bowling!!

Can you think of other examples of friction?

This activity is brought to you by Bowling Green Curling Club