

First Floor Exhibits

Science Standards: When water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled or as a solid if cooled below the freezing point of water. Water vapor in the air moves from one place to another and can form clouds or fog, which are tiny droplets of water, and can fall to the Earth as rain, hail, sleet, or snow.

Geyser: Watch as the water begins to heat in the bottom container. Record the temperature on the thermometer when the water is boiling: _____ degrees F. As water heats, it takes up more space than liquid water. The pressure inside the container increases with the rise in temperature, until eventually the geyser erupts. Record the pressure when the geyser erupts: _____ psi. After the eruption is over, record the temperature: _____ degrees F and the pressure: _____ psi. What is the difference? _____

Cloud Rings: Let the chamber fill with fog. Is the fog hot, like steam? _____ Fog and clouds are water in the liquid form, not in the gaseous form. If the water in the cloud was frozen, it would form snow (solid water). Try making a cloud ring. The fog forms a ring because the inside edge of the chamber exerts a frictional force on part of the liquid. The movement of the outermost edge of the fog is slower than the fog shooting out of the center of the hole, resulting in a doughnut-shaped cloud.

Tornado: This exhibit makes fog in the same way that the Cloud Rings exhibit does, by “shaking” or “exciting” the water into a vapor. When the relatively warm water vapor mixes with the cooler air, the water vapor condenses into a liquid fog. Move your hands along the inside edges of the black pipes. Can you feel the air blowing? _____ Wind helps gaseous and liquid water move from place to place. In this exhibit, wind from the pipes helps form the twisting shape of the tornado and the top fan pulls the air upward. Do you see the air with less movement in the center of the tornado? _____ Some people call this “the eye of the storm.”

Second Floor Exhibits



Cool Fact! In 1936, the longest game in NHL history included 116 minutes and 30 seconds of overtime. Including the 60 minutes of regular play, what was the total game time that was played? _____ How many typical games lasting 60 minutes would fit into this longest game time figure? (Hint: division is required.) Answer here: _____ How many hockey Cool Facts can you find? _____

Making Ice Rinks: Touch the ice. Water freezes at 32 degrees F. At which temperature do hockey players like their ice to be? _____ Do figure skaters like their ice to be colder or warmer than the hockey player's ice? _____ Why?

Slice the Ice: Find the three types of skates. The black knob follows some of the patterns sliced in the ice by each type of skate. As you move the knob, this action follows the pattern that the skate slices in the ice. Compare the “slice in the ice” to the skating actions on the videos to see if you can find the same pattern of sliced ice left by the skater.

When you move the black knob, listen carefully to the sound of each skate against the ice. Can you hear the “clap” of the clap skate and see how the blade releases from the boot? (Yes / No) Can you hear when the hockey skate “brakes” and see how the skater moves his blades sideways as he stops? (Yes / No) Can you hear when the figure skater digs into the ice with her toe pick to perform a jump? (Yes / No)