

Prediction

Before conducting the experiment of placing ice cubes in the sun for 2 hours, we can make an educated prediction about what will happen. Ice cubes are solid forms of water (frozen at 0°C or 32°F). When they are exposed to sunlight, they absorb heat energy. This heat causes the temperature of the ice to rise.

We can predict that:

- The heat from the sun will gradually warm the ice cubes.
- As the temperature rises, the ice will begin to melt and turn into liquid water.
- After 2 hours in direct sunlight, the majority if not all, of the ice cubes will have melted, resulting in a puddle of water.

Reflection on What Happened

After conducting the experiment and observing the ice cubes for 2 hours, we can reflect on the outcomes:

- The ice cubes indeed started to melt soon after being placed in the sun. The rate of melting depended on the intensity of the sunlight and the surrounding temperature.
- Throughout the 2-hour period, we noticed a decrease in the size of the ice cubes. As they absorbed more heat, they transformed from solid ice to liquid water.
- By the end of the experiment, most of the ice had completely melted, leaving behind a puddle of water. This confirmed our prediction that direct sunlight would cause the ice cubes to dissipate.
- Additionally, factors such as wind and the surface the ice was placed on (e.g., concrete vs. grass) might have affected the melting rate.

This experiment illustrates the basic principles of thermodynamics, particularly heat transfer and the phase changes of matter. Heat from the sun is a vital energy source that initiates the melting process of ice, showcasing how environmental conditions can directly impact physical changes in substances.