The Ups and Downs of Thermometers

Objective: _____
_____
_____

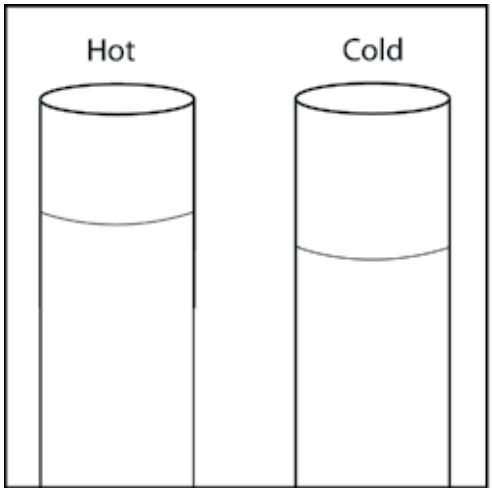
Key Concepts:

- **The way a thermometer works is and example of _____ and _____ a liquid.**
- **When heated, the molecules of the liquid in the thermometer _____, causing them to _____. This results in _____.**
- **When cooled, the molecules of the liquid in the thermometer _____, causing them to _____. This results in _____.**

THE UPS AND DOWNS OF THERMOMETERS, processing

EXPLAIN IT WITH ATOMS AND MOLECULES

You saw an animated molecular model of a thermometer at different temperatures. Now you will draw your own model.



The drawing shows two close-ups of a thin tube in a thermometer like the one you used. One picture represents the thermometer in hot water, while the other is the thermometer in cold water.

Based on what you know about the motion of molecules in a liquid and what you saw in the animations, draw circles to represent alcohol molecules in the liquid in the thermometer. Try to show the difference in distance between the molecules when the liquid is hot and cold. Use motion lines to represent their movement (fast or slow).