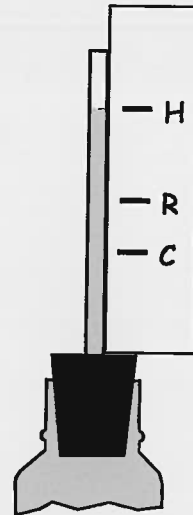


HEATING AND COOLING WATER B

2. What happened when you placed your bottle system in hot water? Draw and explain.

Water in the bottle warmed and expanded. It took up more volume, so the water moved up higher in the pipe.



3. What caused the water to go up in the pipe when you put the bottle in hot water?
Water heated up and expanded. When water expands, its volume increases.

When the volume of the water in the bottle system increases, the water is pushed farther up the clear pipe.

4. What caused the water to go down in the pipe when you put the bottle in cold water?
Water cooled down and contracted. When water contracts, its volume decreases.

When the volume of the water in the bottle system decreases, the water is pulled farther down the clear pipe.

5. Describe what you think happened to the water particles in the bottle system when it was placed in hot water. Discuss kinetic energy and expansion.

When water heated up, the kinetic energy of the water particles increased. More kinetic energy resulted in more and harder collisions between particles. Harder hitting pushed the water particles farther apart, causing the volume of the water to increase, or expand, and push up the pipe.