Name: _____ **Date:** _____

Water Cycle Student Pre- or Posttest (Answer Key)

1. A water puddle seems to dry up on a hot day. Imagine you could see the smallest parts of the water (the molecules) as the puddle dries up.

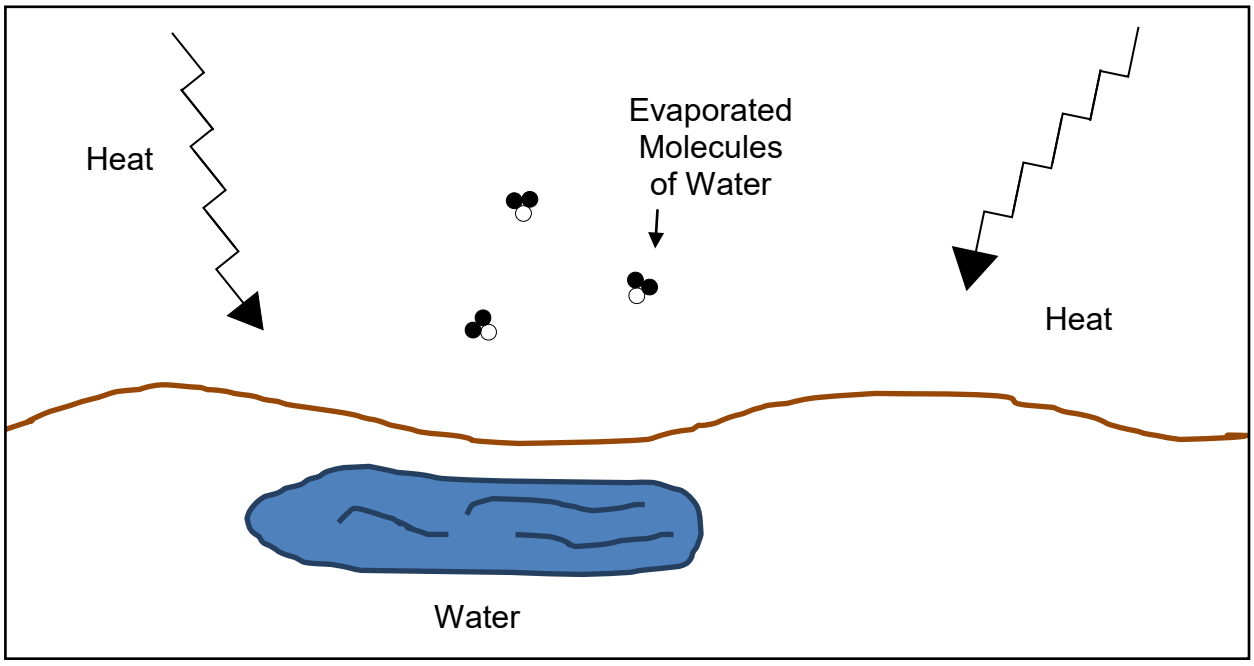
Photo courtesy of Pixabay.com

a. Explain what is happening when the puddle dries up. In your explanation, you might also write about what happens to the water molecules, and what the hot day has to do with what happens.

Ideal response:

As the puddle dries up on a hot day, the water evaporates, meaning that the heat energy causes the water molecules to move faster and separate from each other. This is called a *phase change* (liquid to gas).

b. Draw a picture of what happens when a puddle dries up.



2. Liquid water appears on the outside of a cold soda can when it sits on a table for a while. Imagine you could see the smallest parts of this water (the molecules) as it appears on the can.

Photo courtesy of Pixabay.com

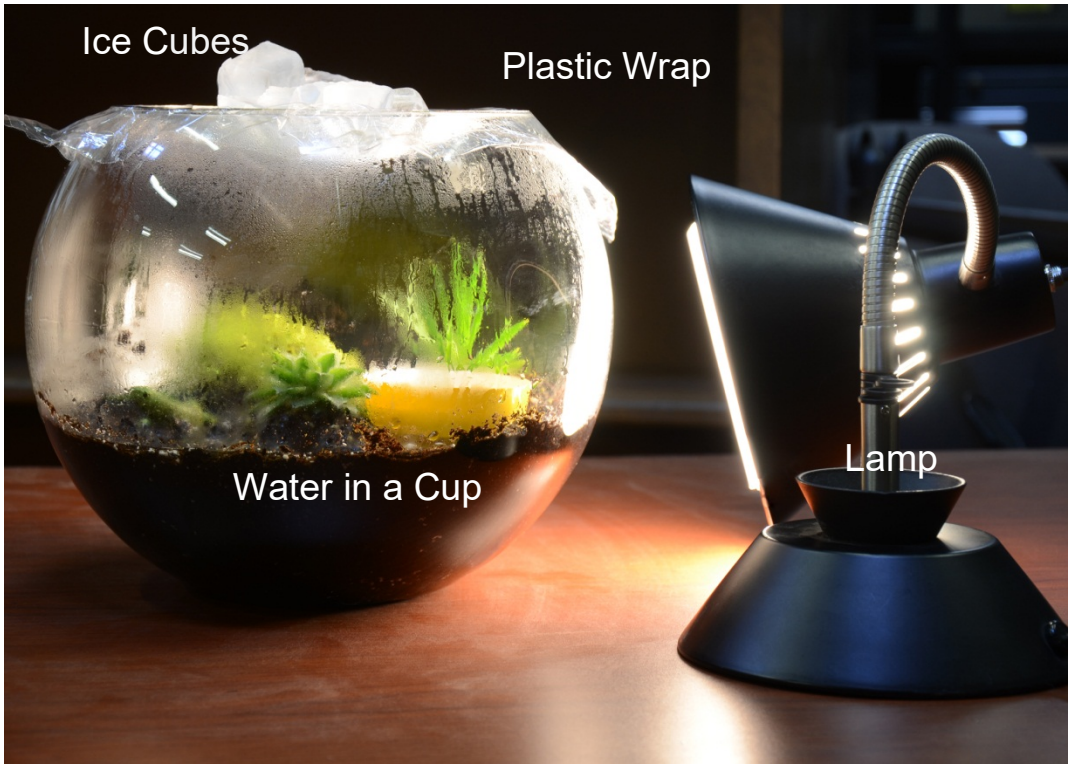
a. Explain what is happening when liquid water appears on the can. In your explanation, you might also write about what happens to the water molecules, and what the cold can has to do with what happens.

Ideal response:

The cold soda can has moisture on the outside because of condensation. There are individual water molecules in the air in the form of water vapor (gas). These molecules are moving quickly and are spread out. When some of these water-vapor molecules come close to the cold soda can, they lose heat energy, which causes them to slow down and move closer together. When the water molecules in the gaseous state cool and become attracted to each other, they form droplets of liquid water that can be seen as moisture on the outside of the can.

b. Draw a picture of what happens when liquid water appears on a cold soda can.

3. Look at the picture of a terrarium and describe what you think is happening to the water.



Ideal response:

The water in the terrarium is constantly recycled, passing from liquid to gas and back again. As the terrarium heats up, water will be pulled from the soil to the top of the container, where it will condense into liquid-water droplets (that looks like mist) and drip.