

**Science Learning Progression**  
**FOSS Water**      **Grade 3**

**Prerequisite knowledge:** *Liquids* take the shape of the part of the container they occupy. *Solids* retain their shape regardless of the container they are in. **K-1 PS2A and PS2B**

Develop explanations using *observations (evidence)*, and prior knowledge about the world.

**I can** record observations of *properties* of water on wax paper and other surfaces. I can use my observations to explain what I see.

Science notebooks

Draw conclusions about where water goes when it seems to disappear.

I can *predict* what will happen over time to water in an open container and water in a closed container. I can perform an *investigation* to see what happens to water in an open container over time compared to water in a closed container over time.

**Probe response -- Explain** that when *liquid* water disappears it becomes a *gas* in the air.

Develop an *explanation* for what happens to water when it is heated.

**I can** use words and pictures to explain what happens when water is heated.

**Draw and label a diagram** that shows water in a pot; the pot being heated; the *liquid* water turning into steam; and the steam going into the air as the *gas: water vapor*.

Explain what happens to *water vapor* in the air when it is cooled.

I can observe what happens in the following situations: breath on a mirror; the outside of a container of ice. I can identify where the water come from. I can identify why water appeared.

**Probe response -- Explain** that the *liquid* water came from *water vapor*, a *gas*, in the air. Water vapor in the student's breath was cooled by the mirror and turned to liquid. Water vapor in the air was cooled by the cold glass and turned to liquid.

Measure the *temperature* of water to learn how cold it has to be to freeze.

**I can predict** the freezing *temperature* of water. I can perform an investigation to determine the freezing *temperature* of water.

**Whiteboard evidence.** Groups record their *temperature* data on a whiteboard. Each group presents their data as *evidence* that water freezes at 0° Celsius.

**Water changes state (solid, liquid, gas) when the temperature of the water changes. When water becomes water vapor (gas) it seems to disappear, but it is really in the air. 2-3 PS2C and PS2D**

**Later big ideas that build on this big idea include:**  
 The water cycle  
 Many substances can be changed from one state to another. **4-5 PS2A**  
 Air is a *gas*. **4-5 PS2B**  
 Conservation of matter **4-5 PS2C**