

# Worksheet: Water

1. Susan found a bottle of clear liquid in the science laboratory. She decides to test the liquid to find out if it contains water. She uses two chemicals found in the science laboratory. Both chemicals showed positive results when testing with the unknown liquid.

The table below shows the results of her testing. Choose from the following words and drag the correct word to the blank space to fill in the missing information on the table. [4]

Anhydrous cobalt chloride      White      Anhydrous copper (II) sulphate

Pink      Anhydrous copper (II) chloride      Clear

Name of Chemical	Color at the Beginning	Color at the End
	Blue	
		Blue

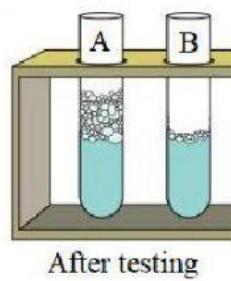
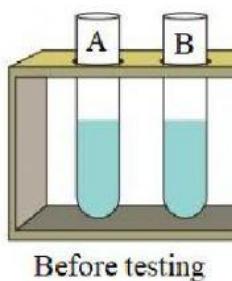
2. Susan then performs another test on the water samples to determine if any of the samples are pure water.

She tests the boiling point, freezing point, pH, taste, color and smell of the two liquids.

Complete the table below by typing in the results she would have received **IF** the samples were pure water.

Property	Test Result with Pure Water
Boiling Point	_____ ° C
	_____ ° F
Freezing Point	_____ ° C
	_____ ° F
pH	
Taste	
Color	
Smell	

3. Susan decides to perform one more test on the samples to determine if the water samples are hard water or soft water. She uses a small amount of soap to test each sample. The results are shown below.



a. Which water sample is hard water? \_\_\_\_\_

b. Which water sample is soft water? \_\_\_\_\_

c. Which water sample contains few dissolved minerals? \_\_\_\_\_

d. Which water sample contains lots of dissolved minerals? \_\_\_\_\_

After determining which water sample was hard, Susan decides to soften the hard water sample before repeating the soap test.

e. What is one method Susan can use to soften the sample of hard water in the lab?

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Susan repeats the soap test on the softened water sample, but the results do not change.

f. What two types of dissolved minerals salts must be present in this water sample to cause this result?

1. \_\_\_\_\_ 2. \_\_\_\_\_

g. Would this water sample be classified as having temporary hardness or permanent hardness?

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4. Name the two elements that make up a single molecule of water.

1. \_\_\_\_\_ 2. \_\_\_\_\_

5. Type in the correct symbols needed to complete the drawing of the water molecule below.

