

Science (4-Day)

Extra Activity Sheets

By The Sonlight Team

*"I have hidden your word in my heart that I might
not sin against you."*

Psalms 119:11 (NIV)



4-Day Program

GSG41 Science G "Geology, Physics,
and Origins" Student Activity Sheets
(04.2019)



What's Science All About?

1. Summarize what chemists study. (p. 98) _____

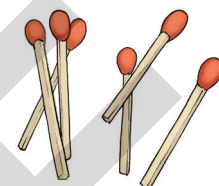
2. What was the biggest problem with early matches? (p. 100) _____

3. How is Teflon® unique as a substance? (p. 101) _____

4. The smallest particle that can have the properties of an element is called what? (p. 104) _____
 Atoms that stick together in groups of two or more are called _____.
5. Oxygen gas is an element because... (pp. 104–105) _____

6. Do reactions always happen when you mix substances together? Explain. (p. 105) _____

7. **Challenge!** Draw an "X" in the appropriate column to classify each substance as a mixture, element, or a compound.
 Feel free to use the Periodic Table of Elements on pp. 124–125 if you get stuck. (pp. 106–107)

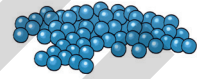
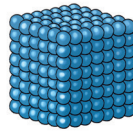
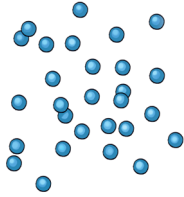


	Mixture	Compound	Element
hydrogen			
water			
table salt (sodium chloride)			
granola			
nitrogen			
hydrogen peroxide			



What's Science All About?

- 1 Compare the molecules in the pictures below, then label each as either **solid, liquid** or **gas**. (p. 108)



2. What is the difference between the three states of matter? (p. 108)

3. How does temperature affect the three states of matter? (p. 108)

4. Solve the puzzle using the terms in the box. (pp. 108–109)

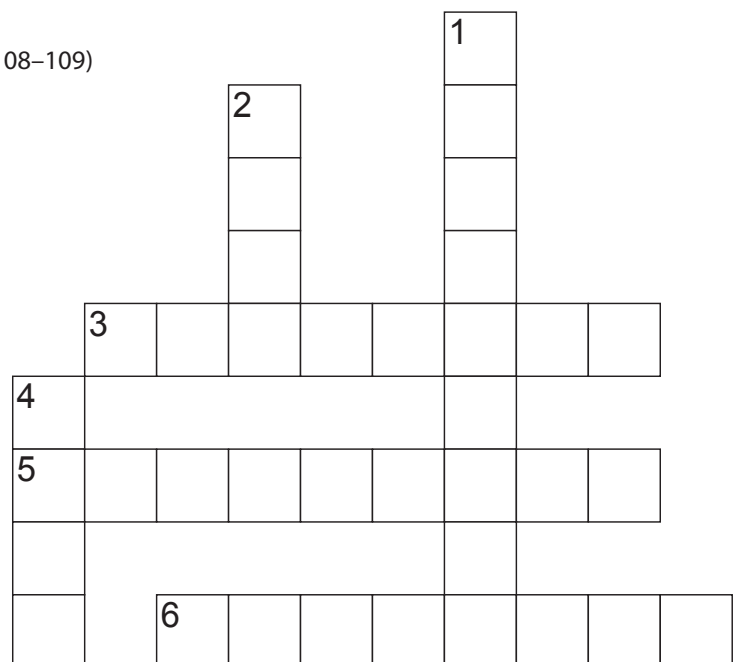
condense	boil	solidify
evaporate	melt	sublimate

Across

- 3) to change state from a liquid to a solid
 5) to change state from a liquid to a gas
 6) to change state from a gas to a liquid

Down

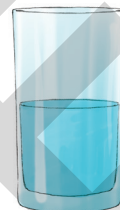
- 1) to change state directly from a gas to a solid, or from a solid to a gas
 2) the agitated state of a liquid when it is at the temperature where it changes from a liquid to a gas
 4) to change state from a solid to a liquid





5. Why does pressure affect a substance's current state? (p. 110) _____

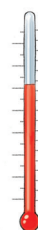
6. Describe some of the physical properties of pure water. (p. 112)



7. How do chemical properties differ from physical properties? (p. 112)

8. How is baking a cake an example of a chemical reaction? (p. 112)

9. Why won't tap water boil at 100°C? (p. 113) _____



10. **Challenge!** When you dissolve sugar in water at room temperature, there will come a time when the sugar stops dissolving—no matter how long you stir. At this point, we say the solution is saturated—the water has been loaded to capacity. Based on your reading, can you think of a way to get more sugar to dissolve? (p. 113)



What's Science All About?

1. Describe a method you might use to separate a mixture of... (pp. 114–115)

... gravel and water: _____

... iron filings and baby powder: _____

... salt and water: _____



2. Why is it possible to separate substances in a mixture? (p. 114–115)

3. Briefly describe each separation technique. (pp. 115–117)

Distillation: _____

(Paper) Chromatography: _____

Centrifugation: _____

4. How does a chemical reaction differ from a mixture? (pp. 105, 114–118)

Chemical Reaction	Mixture
_____	_____
_____	_____
_____	_____
_____	_____



5. Briefly describe the electrolysis process. (p. 118) _____
