

LESSON
8
FOLLOW-UP

What Goes Around Comes Around

Conservation of Matter

Name _____

Date _____ Period _____



Purpose

To use the symbols for the elements to track an element as it goes through various chemical changes.

Instructions

Work as a group to figure out where the copper was during each stage of the lab. Use your observations from Lesson 7: Now You See It and the worksheet from Lesson 6: A New Language.

Part I: Steps of the Copper Cycle

Translate each sentence into symbols and formulas. The first one is done for you.

Step 1

“Colorless nitric acid is added to solid orange-brown copper powder, resulting in a blue-green solution, a brown gas, and liquid water.”

$\text{HNO}_3(aq)$ is added to $\text{Cu}(s)$, resulting in $\text{Cu}(\text{NO}_3)_2(aq)$ and $\text{NO}_2(g)$

and $\text{H}_2\text{O}(l)$.

Step 2

“Clear, colorless sodium hydroxide solution is added to the blue-green solution, resulting in clumps of dark blue solid and clear, colorless sodium nitrate solution.”

_____ is added to _____, resulting in _____
(blue-green solution) (dark blue solid)

and _____.

Step 3

“The dark blue clumps are heated, resulting in a black solid and liquid water.”

_____ is heated, resulting in _____ and _____.
(dark blue solid) (black solid)

Step 4

“Clear, colorless hydrochloric acid is added to the black solid, resulting in a clear blue solution and liquid water.”

_____ is added to _____, resulting in _____
(black solid) (clear blue solution)

and _____.

Step 5

“Solid, silver-gray aluminum foil is added to the clear blue solution, resulting in a brownish powder and clear, colorless aluminum chloride solution.”

_____ is added to _____, resulting in _____
(clear blue solution) (brownish powder)

and _____.