# \_\_\_\_ Introducing the Periodic Table

Engage

#### What To Do:

- 1. Study the element cards below.
- 2. Observe them closely.
- 3. Answer the questions below.

1	2	3
Н	He	Li
1.008	4.0026	6.941
Hydrogen	Helium	Lithium
10	11	16
Ne	Na	S
20.175	22.990	32.066
Neon	Sodium	Sulfur

#### **Ouestions:**

- a. What types of information does each card have?
- b. What patterns do you observe about the numbers?
- c. What patterns do you observe about the letters?
- d. What do you observe about the words on each card?

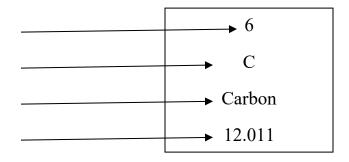
**Explore** 

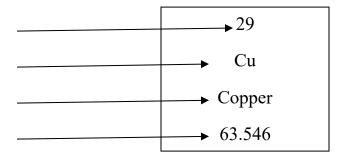
Materials: Copy of The Periodic Table

#### Part 1

### What To Do:

- 1. Your teacher will give you a copy of the Periodic Table of Elements.
- 2. Use the key at the top of the sheet to fill in the information below.
- 3. Find each one on your periodic table.





Part 2

Materials: Personal copy of the Periodic Table, colored pencils

#### What To Do:

- 1. Read through the directions/questions on the next page.
- 2. Answer the questions
- 3. Use the colored pencils to color your personal periodic table.

- 1. Element symbols are written with the first letter a capital letter and any other letters as lower case letters. Write the symbols for 5 different elements.
- 2. Find the numbers across the top. These vertical columns are called groups because the elements in them tend to have the same chemical and physical properties. How many groups are on the periodic table?
- 3. Find the numbers down the left side. These horizontal rows are called periods because they fall in order like a calendar. How many periods are on the periodic table?
- 4. Find the zigzag line that starts in the group 13. These seven elements (Boron, Silicon, Germanium, Arsenic, Antimony, and Tellurium) are the metalloids. They sometimes act like metals and at other times like nonmetals. Color them purple.
- 5. On the right side of the zigzag line are the nonmetals. Color them yellow.
- 6. Another group of elements are called rare earth elements. They can be found on the left side and bottom of the table. Color Scandium 21, Yttrium 39, Lanthanum -57 and from 58-71 at the bottom of the page blue.
- 7. Most of the elements are known as metals. Metals are located on the left side of the periodic table. The only element on the left side of the periodic table that is **NOT** a metal is hydrogen. Color hydrogen yellow.
- 8. Use a colored pencil to color the metals green. (Don't color them so dark that you can't read the information.)
- 9. Use your colored pencils to make a key at the top of the page to show what the colors mean.

### Explain

## What To Do: Do Not Glue until teacher says.

- 1. Cut out each rectangle and glue them on the page only across the top.
- 2. Draw something representing each topic on the rectangle.
- 3. Under each flap write information from the previous activity and any notes your teacher wants you to copy.

notes your teacher wants you to copy.
THE PERIODIC TABLE
4 KINDS OF ELEMENTS
GROUPS
PERIODS

Elaborate
What To Do: Use your periodic table to find the following information.

1. What element is found in group 1 and period 4?
2. What element is found in group 16 and period 5?
3. What element is found in group 17 and period 2?
4. In what group will you find copper?
5. In what group will you find krypton?
6. In what group will you find mercury?
7. What is the symbol for copper?
8. What is the symbol for gold?
9. What is the symbol for krypton?
10. What is the symbol for mercury?
11. What is the symbol for oxygen?
12. In what period will you find gold?
13. In what period will you find silver?
14. In what period will you find oxygen?
15. In what groups will you find metalloids?
16. What element has the symbol H?
17. What element has the symbol He?
18. What element has the symbol Ca?
19. What element has the symbol La?
20. What element has the symbol C?
21. What type of element is Helium?
22. What type of element is Boron?
23. What type of element is Calcium?
24. What type of element is Cesium?

Evaluate	
Name	period
I	EXIT TICKET introduction to the Periodic Table
	these element symbols?
1. CA .	
2. mg .	
3. aT	
How should these el	lement symbols be written?
4. NE	
5. hg	
6. sn	
metalloids, rare eart	al, metals, lower case, symbol, nonmetals, h) ssified as,
	elements. Each element has a
	. The first letter of a symbol is always a
and the	ne second letter of a symbol is always a

letter.

