

Name: \_\_\_\_\_

## The Periodic Table

<https://learner.org/series/interactive-the-periodic-table/>

### Introduction: The Periodic Table

*(Read through this section... you will not need to write anything down)*

### Atom Basics: In the Beginning

1. Who was the person that first presented the idea of the atom? \_\_\_\_\_
2. What does the Greek word 'atomos' mean in English? \_\_\_\_\_
3. Who was the person that argued against the idea of the atom? \_\_\_\_\_

### Atom Basics: The Atom

4. Who reintroduced the idea of the atom in 1808? \_\_\_\_\_
5. Define: *element*- \_\_\_\_\_  
\_\_\_\_\_
6. True or False (\_\_\_\_): Molecules can only form from whole number ratios.  
All atoms are composed of a set of subatomic particles: \_\_\_\_\_, \_\_\_\_\_,  
\_\_\_\_\_. They have \_\_\_\_\_ arrangements for any given element.

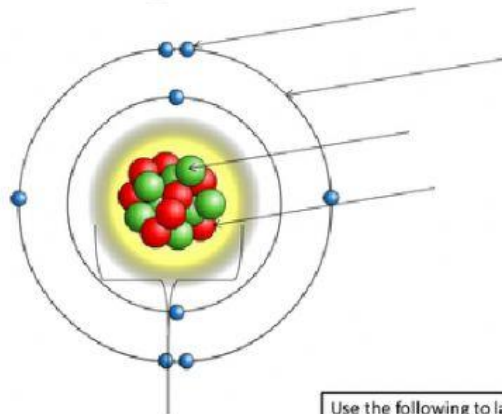
### Atom Basics: Atomic Structure

7. Define: *protons*- \_\_\_\_\_  
*neutrons*- \_\_\_\_\_  
*electrons*- \_\_\_\_\_
8. Protons and neutrons are located in the \_\_\_\_\_ of an atom while electrons are located in \_\_\_\_\_.
9. 1 proton= \_\_\_\_\_ electrons
10. True or False (\_\_\_\_): We do not count the mass of the electrons in calculating the mass of the atom because electrons weigh so much less than protons.

Name: \_\_\_\_\_

### Labeling an atom

Name: \_\_\_\_\_



Use the following to label the atom:

Nucleus   Proton   Neutron   Shell   Electron

#### Atom Basics: Periodicity

11. The tendency to show a regular repeating pattern is known as \_\_\_\_\_. This explains why we organize our periodic table of elements.
12. \_\_\_\_\_ of an element is equal to the number of protons in the nuclei of its atoms.
13. An \_\_\_\_\_ is an atom in which the number of protons differs from the number of electrons.
14. If an atom has more electrons than protons, the ion is known as an \_\_\_\_\_ (It is negatively – charged).
15. If it has fewer electrons than protons, it is known as a \_\_\_\_\_ (It is positively + charged)
16. An \_\_\_\_\_ is an atom in which the number of protons and neutrons differ.
17. The number of \_\_\_\_\_ in an atom determines what element it is.

#### Atom Basics: The Periodic Table

*(Read through this section... you will not need to write anything down)*

#### Atom Basics: Interactive

→ You will need to go back through your notes to be able to answer these questions.

18. Name That Atom Challenge: \_\_\_\_\_/12 (MUST SCORE AT LEAST 10/12; TAKE A PICTURE OF YOUR SCORE AND POST IT ON CLASSROOM)

Name: \_\_\_\_\_

**SKIP TO THE TAB CALLED "WHAT'S IN THE BOX."**

**What's In the Box: Periods**

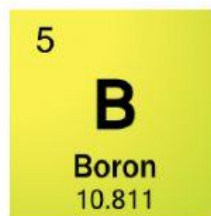
19. Define: *periods*- \_\_\_\_\_
20. Periods tell us how many \_\_\_\_\_ there are in that element. For example, the first row has one energy level.

**What's In the Box: Groups**

21. Define: *groups*- \_\_\_\_\_

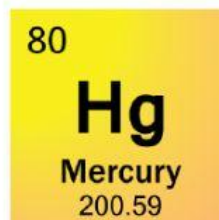
**What's In the Box: Atomic Number**

22. What does the atomic number represent?  
\_\_\_\_\_
23. True or False (\_\_\_\_): Every element has their own special number of protons.
24. Label the atomic number on this element Boron:



**What's In the Box: Symbol**

25. Label the symbol on this element Mercury:



**Name That Element Challenge**

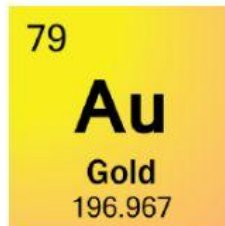
26. Use the periodic table to name the following elements using their symbols or their atomic number
- a. Ge: \_\_\_\_\_
- b. Li: \_\_\_\_\_
- c. K: \_\_\_\_\_

Name: \_\_\_\_\_

- d. Cs: \_\_\_\_\_
- e. Atomic Number-72: \_\_\_\_\_
- f. Atomic Number-110: \_\_\_\_\_
- g. Atomic Number-79: \_\_\_\_\_
- h. Atomic Number-10: \_\_\_\_\_

**What's In the Box: Relative Mass**

- 27. Define: *relative mass*- \_\_\_\_\_
- 28. Label the relative mass on this element Gold:



**What's In the Box: Interactive**

- 29. Which One of These Elements Doesn't Belong? Challenge: \_\_\_\_\_/10 (*MUST SCORE AT LEAST 8/10; TAKE A PICTURE OF YOUR SCORE AND POST ON CLASSROOM*)