



*EQ: How is the periodic table arranged?*

## Overview

*Periodic* - Items are arranged in a \_\_\_\_\_

### I. History of the Periodic Table

A. \_\_\_\_\_ (1834-1907)

- 1) Arranged elements by \_\_\_\_\_.
- 2) Looked for \_\_\_\_\_ among properties of the different elements

Example: Li Be B C N O F Ne Na Mg Al Si

- 3) Left gaps in the table where there were elements yet to be discovered (Gallium, Scandium)

B. \_\_\_\_\_ (1887-1915)

Continued Mendeleev's work, but he arranged the elements by \_\_\_\_\_ instead of atomic mass.

Their work provided us with the periodic table.

### II. Parts of the Periodic Table

A. \_\_\_\_\_

- 1) \_\_\_\_\_ on the periodic table
- 2) \_\_\_\_\_  
\_\_\_\_\_

B. \_\_\_\_\_

- 1) \_\_\_\_\_ on the periodic table
- 2) \_\_\_\_\_

### III. Types of Elements

A. \_\_\_\_\_ - \_\_\_\_\_

B. \_\_\_\_\_ - \_\_\_\_\_

C. \_\_\_\_\_ - \_\_\_\_\_



## Metals

*EQ: What are the properties of the different periodic groups?*

### I. Properties of Metals

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

\_\_\_\_\_

D. \_\_\_\_\_

E. Ion Formation – \_\_\_\_\_

\_\_\_\_\_

## II. Metal Groups

A. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) Valence electrons? \_\_\_\_\_

5) Form ions with a charge of \_\_\_\_\_.

6) Uses: \_\_\_\_\_

B. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) \_\_\_\_\_

3) Valence electrons? \_\_\_\_\_

4) Form ions with a charge of \_\_\_\_\_.

5) Uses: \_\_\_\_\_

C. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) Uses: \_\_\_\_\_

## Metals (continued)

D. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) \_\_\_\_\_  
\_\_\_\_\_

3) \_\_\_\_\_

4) Uses: \_\_\_\_\_

### III. Alloys

A. Definition – \_\_\_\_\_  
\_\_\_\_\_

B. Examples

1) \_\_\_\_\_ (\_\_\_\_\_ & \_\_\_\_\_)

2) \_\_\_\_\_ (\_\_\_\_\_ & \_\_\_\_\_)

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## Nonmetals

### I. Properties of Nonmetals

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

D. Ion Formation – \_\_\_\_\_  
\_\_\_\_\_

# Nonmetals (continued)

## II. Nonmetal Groups

A. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) \_\_\_\_\_

3) Uses: \_\_\_\_\_

B. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) Uses: \_\_\_\_\_

C. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) Valence electrons? \_\_\_\_\_

3) Form ions with a charge of \_\_\_\_\_.

4) Uses: \_\_\_\_\_

D. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) Valence electrons? \_\_\_\_\_

3) Form ions with a charge of \_\_\_\_\_.

4) Uses: \_\_\_\_\_

## Nonmetals (continued)

E. \_\_\_\_\_ □

1) Examples: \_\_\_\_\_

2) \_\_\_\_\_

3) Uses: \_\_\_\_\_

F. \_\_\_\_\_ □

1) \_\_\_\_\_

2) \_\_\_\_\_

\_\_\_\_\_

## Metalloids

### I. Properties

A. \_\_\_\_\_

B. \_\_\_\_\_

C. \_\_\_\_\_

### II. Elements \_\_\_\_\_ □

A. Examples: \_\_\_\_\_

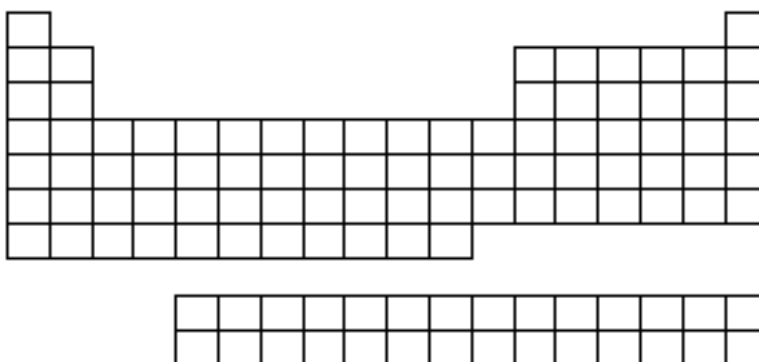
B. Uses: \_\_\_\_\_



# Trends

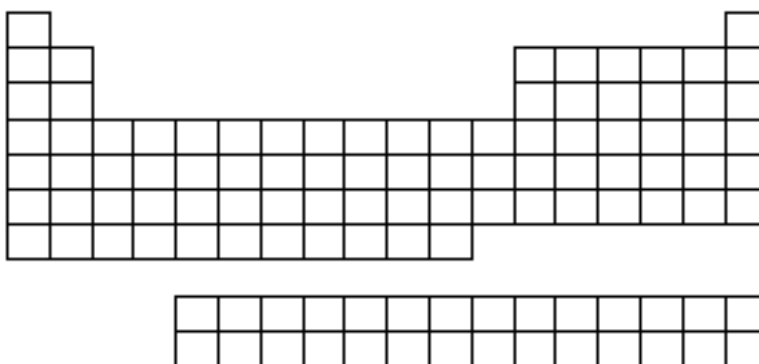
*EQ: How do we analyze periodic trends?*

## I. Atomic Size



# Trends (continued)

## II. Electronegativity



## III. Ionization Energy

