

## Unit 3: Ch 6.1-Development of Periodic Table & Ch 6.2-Classification of Elements

**ANTOINE LAURENT LAVOISIER:** Late 1790's - \_\_\_\_\_ known elements. By 1970 - \_\_\_\_\_ elements.

**JOHN NEWLANDS:** 1865 - \_\_\_\_\_

- Similar \_\_\_\_\_ and \_\_\_\_\_ properties *recur* every \_\_\_\_\_ element.

**DMITRI MENDELEEV:** 1869 – Ordered periodic table by \_\_\_\_\_.

- WHY? → \_\_\_\_\_ not yet discovered.
  - Not until 1869 – Eugen \_\_\_\_\_.
- Most \_\_\_\_\_ periodic table.
  - \_\_\_\_\_ - Noted similar \_\_\_\_\_ or \_\_\_\_\_ in \_\_\_\_\_ and \_\_\_\_\_ properties of future elements.
  - Left \_\_\_\_\_ for undiscovered elements.

**HENRY MOSELEY:** 1913 - \_\_\_\_\_ periodic table.

- Ordered the periodic table by \_\_\_\_\_.
  - Columns = \_\_\_\_\_ ; Rows = \_\_\_\_\_

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## Unit 3: Ch 6.2 – Classification of Elements

**CLASSIFICATION OF ELEMENTS:** \_\_\_\_\_ elements attempt to reach \_\_\_\_\_ status.

### HYDROGEN:

- Very \_\_\_\_\_ *gas* ; \_\_\_\_\_ valence electrons ; \_\_\_\_\_

### GROUP 1: ALKALI METALS

- *MOST* \_\_\_\_\_ metals ; \_\_\_\_\_ valence electron ; ALL \_\_\_\_\_

### GROUP 2: ALKALINE EARTH METALS

- Still reactive, but \_\_\_\_\_ than alkali metals ; \_\_\_\_\_ valence electrons ; ALL \_\_\_\_\_

### GROUP 3-12: TRANSITION METALS

- Varying \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
- \_\_\_\_\_ → \_\_\_\_\_ (*left-to-right*)
- LANTHANIDES & ACTINIDES
  - \_\_\_\_\_
    - Lanthanides: \_\_\_\_\_ earth metals.
    - Actinides: \_\_\_\_\_ radioactive and \_\_\_\_\_.

### METALLOIDS

- \_\_\_\_\_ of \_\_\_\_\_ metals and non-metals, except \_\_\_\_\_.
- Electrical \_\_\_\_\_.

### GROUP 13: BORON GROUP

- Aluminum– Most \_\_\_\_\_ metal in crust ; \_\_\_\_\_ valence electrons ; ALL \_\_\_\_\_ except \_\_\_\_\_

### GROUP 14: CARBON GROUP

- Varying \_\_\_\_\_ and \_\_\_\_\_ ; \_\_\_\_\_ valence electrons

### GROUP 15: NITROGEN GROUP

- \_\_\_\_\_ valence electrons ; ALL \_\_\_\_\_ except \_\_\_\_\_ and \_\_\_\_\_.

### GROUP 16: OXYGEN GROUP

- AKA \_\_\_\_\_ ; Reactive \_\_\_\_\_ ; \_\_\_\_\_ valence electrons ; ALL \_\_\_\_\_

### GROUP 17: HALOGENS

- \_\_\_\_\_ reactive \_\_\_\_\_ ; \_\_\_\_\_ conductors ; \_\_\_\_\_ valence electrons ; ALL \_\_\_\_\_

### GROUP 18: NOBLE GASES

- \_\_\_\_\_ - \_\_\_\_\_ gases → Most \_\_\_\_\_.
- \_\_\_\_\_ valence electrons ( \_\_\_\_\_ ) ; \_\_\_\_\_ charge