

(L9)

Notes: Properties of the Elements

TODAY'S
DATE

E.Q.: How is the periodic table organized?

Dmitri Mendeleev

- created one of the 1st periodic tables



Mendeleev

- he sorted elements based on their

 - > reactivity

 - > atomic mass

reactivity - a property that describes how easily an element will combine w/ other substances to form new compounds

atomic mass - the mass of a single atom of an element
- all atoms of the same element have approx. the same mass

atomic mass unit (amu) - a unit used to express atomic mass

- $1 \text{ amu} = 1.66 \times 10^{-24} \text{ g}$ (which is the mass of 1 H atom or $\frac{1}{12}$ the mass of carbon-12)

because atoms of the same element have approx. the same atomic mass, each element has an avg. atomic mass

Mendeleev's table

- organized the 63 known elements

- contained gaps for undiscovered elements

- became known as the periodic table of elements

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elements

Periodic table of elements → a
table w/ elements organized
in order of increasing atomic
+ grouped such that
elements w/ similar
properties are in vertical
columns

BIG IDEA: elements are
arranged in the periodic
table based on similarities
in their chem + physical
properties