



Topic/Objective CHAPTER:

NAME:

Chemistry

Pd: 1 2 4 5 other

DATE

Essential Question

What are Atoms & Subatomic Particles


Cue: Review:
Thoughts: Main idea

NOTE Taking AREA:

Matter

↳ is anything that has mass & takes up space
↳ and volume

Atoms

↳ is the basic building block of ALL matter.
e.g. Lego block ↳ smallest particle of matter having ALL of that element's characteristics.↳ CAN NOT be broken down any further and still have the properties of that matter.

What MAKES up an Atom?

↳ Atoms are made up of 3 sub-atomic particles

Sub Atomic Particles

↳ 3 Types

Protons (p^+) neutrons (n) electrons (e^-)

Nucleus

↳ Center of the Atom which holds in it the protons and neutrons. $[p^+ + n = \text{MASS number}]$

mass #

Atomic weight

NOTES CONTINUE ON OTHER SIDE



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Cue: Review:
Thoughts: Main Idea

NOTE Taking AREA:

Protons
 p^+

- ↳ written w/the symbol (p^+)
- ↳ Positively charged particles
- ↳ found in the nucleus
- ↳ has a mass of 1.675×10^{-24} g that is equal to 1 A.M.U.

Atomic
Mass Unit

$$1.675 \times 10^{-24} \text{ g} = 1 \text{ Atomic Mass Unit}$$

$$0.000000000000000000000000001675 \text{ g}$$

Amu = to $\frac{1}{12}$ the mass of the most abundant isotope of Carbon. A.K.A. Dalton

Atomic #

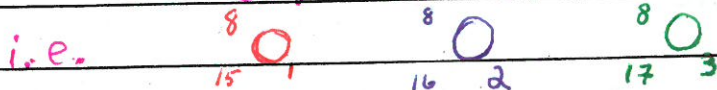
of p^+ (positively charge) must = the same
of negatively charged particles or the number of e^-

Neutrons
(n) or (n^0)

- ↳ written w/the symbol (n) or (n^0)
- ↳ NO charge or neutral
- ↳ found in the nucleus along w/the p^+
- ↳ Has a mass (ATOMIC MASS) = 1.675×10^{-24} g

SUMMARY:

ISOTOPE: Atoms of the same element BUT have a different MASS # due to the different number of Neutrons.



*ISOTOPES \rightarrow *



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NAME:

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Chemistry

1

Essential Question

Atoms & Subatomic Particles pt 1


Cue: Review:
Thoughts: Main Idea

NOTE Taking AREA:

Matter

↳ is any thing that has mass

Atoms

↳ smallest particle of matter having all that element's characteristics
 ↳ is the basic building block of matter
 e.g. lego block 

↳ Can not be broken down any further and still have the properties of that matter.

AKA ↳ smallest particle of matter having ALL that element's characteristics.

What makes up an Atom?

↳ Atoms are made up of 3 sub-Atomic Particles

Sub-Atomic Particles

↳ 3 types

Protons (p) neutrons (n) electrons (e)

Nucleus

↳ center of the Atom which holds in it the Protons and neutrons and determines the chemical behavior of elements.

Protons plus neutrons equal Mass Number

Mass #

$$\text{mass\#} = P + n$$

Atomic weight = $P + n$

NOTES CONTINUE ON OTHER SIDE



Topic/Objective CHAPTER:

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Cue: Review:
Thoughts: Main Idea

NOTE Taking AREA:

Protons

(P^+)

- ↳ written with the symbol (P^+)
- ↳ positively charged particles
- ↳ found in the nucleus
- ↳ have a mass of $1.675 \times 10^{-24} \text{ g}$
 - ↳ That is equal to 1 A.M.U.

↳ $1.675 \times 10^{-24} \text{ g} = 1 \text{ Atomic Mass Unit}$
 $0.0000000000000000000000001675 \text{ g}$

Need to Know
Atomic #

of P^+ (positive charge) must = the same number of negative charge or the # of e^-

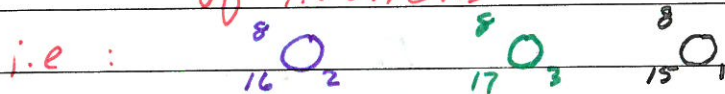
Neutrons

(n) or (n^0)

- ↳ written with the symbol (n) (n^0)
- ↳ NO charge or neutral
- ↳ found in the nucleus along with the P^+ .
- ↳ Has a mass (Atomic Mass) = $1.675 \times 10^{-24} \text{ g}$
or 1 A.M.U. → A.K.A. MASS number
MASS #

SUMMARY:

Isotope : Atoms of the same element BUT have a different Mass# due to the different number of neutrons



Normal on Periodic table ISOTOPES