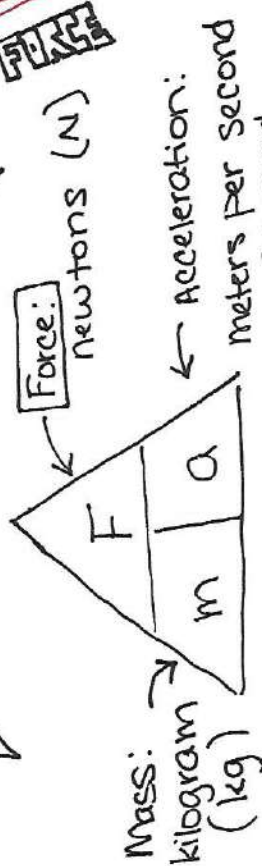
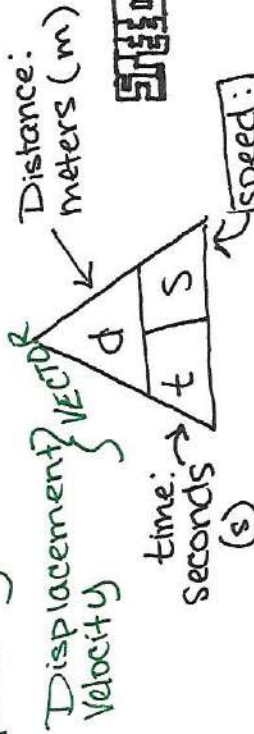


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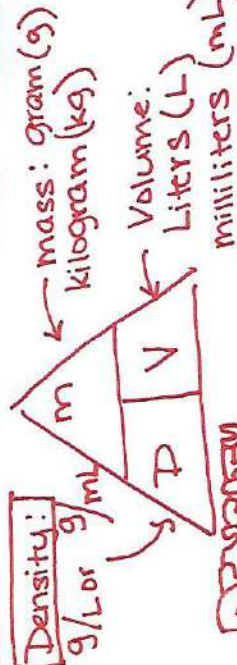
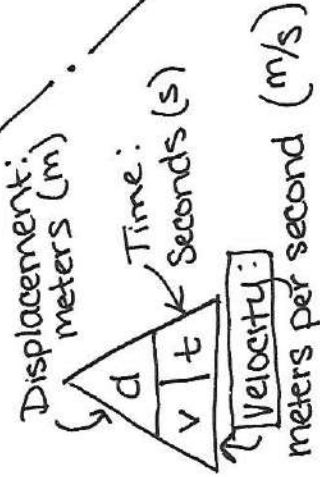
Motion, Forces, Acceleration



Distance } SCALAR
Speed }



Speed: meters per second (m/s)



GREEK ALPHABET

" Δ ": greek letter 'delta' means 'change in'

To find Δ :

$$\Delta = \text{final} - \text{initial}$$

Periodic Table:

- GROUPS
1. ALKALI METALS
 2. ALKALINE EARTH METALS
 - 3-12. TRANSITION METALS
 17. HALOGENS
 18. NOBLE GASES
- PERIODS
- A. LANTHANIDES
 - B. ACTINIDES



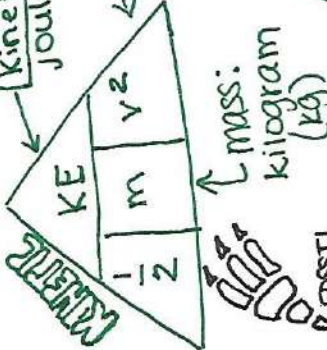
GROUP FAMILY

PERIOD

ENERGY

Kinetic energy: joules (J)

velocity: meters per second (m/s)

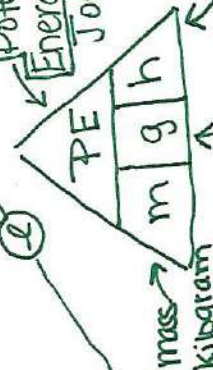


FOSSIL FUELS

Potential Energy: joules (J)

height: meters (m)

acceleration: meters per second squared (m/s^2)



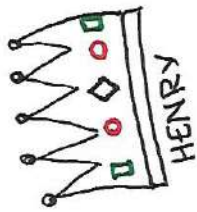
CHEM-IS-TRY!

Synthesis: $A + B \rightarrow AB$

Decomposition: $AB \rightarrow A + B$

Single displacement: $A + BC \rightarrow AB + C$

Double displacement: $AB + CD \rightarrow AC + BD$



K h da - u - d c m

METRIC PREFIXES

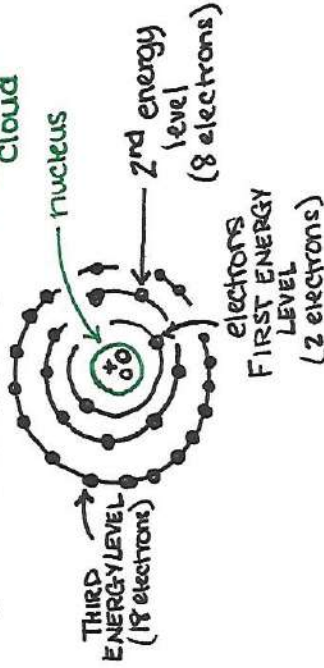
↓ · →

← · · ↑



Subatomic Particles

- (+) Protons } NUCLEUS
 (0) Neutrons }
 (-) Electrons ← electron cloud



NATURAL ATOM: $e^- = p^+$

METALS:

- Good conductors of heat + electricity
- Ductile (wire)
- malleable (sheets)
- Solid at room temp
- Lustrous (metallic)
- High melting + boiling points

NON-METALS:

- Poor conductor
- Brittle
- Dull
- Low melting + boiling point

METALLOIDS:

- Properties of both metal + non-metals

ELEMENTS:

Atomic Number	Symbol	Element Name	Atomic mass
1	H	Hydrogen	1.008

ION: Charge in the number of electrons



CATION (+)

NUMBER OF ELECTRONS:

$2n^2$



ANION (-)

VALENCE: outermost shell of electrons determined by the Group # on the periodic table.

MASS = # of neutrons + protons

ATOMIC # = # of protons

ISOTOPE: change in the number of neutrons

NEWTONS LAWS:

- 1 An object at rest will stay at rest, an object in motion will stay in motion unless acted upon by an outside force
- 2 $F=ma$
- 3 for every action there is an equal and opposite reaction