2. Chemistry is the study of matter

- Matter - anything that has a mass and volume.
- mass - number of particles that a substance contains. Weight describes how the particles are affected by gravity
Mass never changes, weight changes
- density

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- volume - the amount of space the particles occupy

-liquids - use a graduated cylinder
- Unit: litres, millilitres

- solids - "length x width x height"
Unit: cm x cm x cm
$= cm^3$

-Water- 1 gram occupies 1 ml of space

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3. Density

- Describes the amount of particles that occupies a certain amount of space

floating – things that have low density will float in stuff that has high density.

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formula: $\text{Density} = \frac{\text{Mass (g)}}{\text{Volume}}$

unit : $D = \frac{g}{ml}$ liquids

$D = \frac{g}{cm^3}$ solid

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GUESS method

G – given
U – unknown
E – equation
S – solution
S – statement

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Ex. #1 on worksheet

G = V = 4 cm³ m = 20 g

U = D

E = $D = \frac{m}{V}$

S = $D = \frac{20\ g}{4\ cm^3}$

$= 5\ \frac{g}{cm^3}$

S = The density of the mineral sample is $5\ g/cm^3$

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