

M - 7

Mass:

How much matter (stuff) is in something. How much "stuff" is packed into something.



A lot of mass



little mass

Inertia: The more mass → the more inertia

The resistance of an object to move or stop.

Same
number on
← Earth →



Weight:

Measure of gravitational pull.

Bigger weight → more gravitational pull

Santa Claus phenomena
(if Santa come into a mall the kids would be drawn to him.)

Gravity: the
force of
attraction
between ALL
things

Different from
mass on
other planets



Matter:

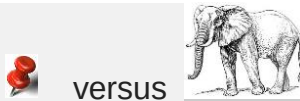
(stuff)
Anything with mass,
weight, volume and
density

M - 7

Volume:

How much space an object takes up

You can see how much space something takes up.



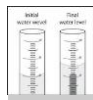
versus

1. **Liquids:** Graduated cylinder  Read the bottom of the meniscus (curve). Must read at eye level.

2. **Regular Solids:** $L \times W \times H = V$



3. **Irregular Solids:** Water Displacement



Density:

Mass in a given volume.



Rock – VERY dense



Cloud – not too dense

Density of water = 1 g/ml

Something **more** dense than 1 will **sink**

Something **less** dense than 1 will **float**

To find density you need mass and volume

Mass ÷ volume

$$\frac{\text{Mass (g)}}{\text{Volume (ml)}}$$

Mass = 178 g

Volume = 35 ml

Density = $178 \div 35 = 5.1 \frac{\text{g}}{\text{ml}}$

