MEASURING

Recall

Measuring length, area, volume and mass

P.F.C. Page 44 – 48: Vernier calipers, micrometer screw gauge
Page 50 – 51: Measuring the volume of a liquid

Density (P.F.C. Page 52 – 54)

$$density = \frac{mass}{volume}$$

(units: g/cm³, kg/m³)

Relative Density (P.F.C. Page 54 – 55)

The relative density of a substance is the number of times it is denser than water. It can be calculated using the formula:

$$relative\ density = \frac{density\ of\ substance}{density\ of\ water}$$

OR

$$= \frac{mass\ of\ a\ certain\ volume\ of\ a\ substance}{mass\ of\ equal\ volume\ of\ water\ alone}$$

(has no units)

Simple Pendulum (P.F.C. Page 56 – 57: Measuring time)

Period (T)
This is the time it takes for the simple pendulum to complete one oscillation. We can calculate the period of a pendulum by using the formula:

$$T = 2\pi\sqrt{\frac{l}{g}}$$

where

l – length of the pendulum (units: metre)

g – acceleration due to gravity (units: 10m/s²)

T – period (unit: seconds)