IGCSE Physics (9-1) Specification 5(b)

(b) Density and pressure

Students should:

5.3 know and use the relationship between density, mass and volume:

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

$$\rho = \frac{m}{V}$$

5.4 practical: investigate density using direct measurements of mass and volume

5.5 know and use the relationship between pressure, force and area:

$$pressure = \frac{force}{area}$$

$$p = \frac{F}{A}$$

5.6 understand how the pressure at a point in a gas or liquid at rest acts equally in all directions

5.7 know and use the relationship for pressure difference:

pressure difference = height × density × gravitational field strength

$p = h \times \rho \times g$