

Key Stage 3 Precise Learning Points



Unit Number	P1
Unit Title	Forces & Space
Chapter	Forces in Fluids

Key Scientific Points

1. In liquids, particles are able to move.
2. In gases particles are moving very fast and are far apart.
3. All particles move faster as they are heated.
4. Air pressure is the result of air particles colliding with a surface and applying a force.
5. Pressure is a measure of how much a force is spread over an area.
6. $\text{Pressure} = \text{force} \div \text{area}$
7. A solid will change the shape of another solid if the pressure is large enough.
8. Fluid resistance is a force opposing motion due to an object having to move particles of fluid out of the way.
9. Forces always come in opposing pairs. The action force and the reaction force (links to PLP 5).
10. In a fluid (liquid or gas) an object will experience an upward force called upthrust which opposes the downward force called weight.
11. Upthrust is greater in denser fluids
12. $\text{Density} = \text{mass} \div \text{volume}$
13. If the density of an object is less than that of the fluid it will float.
14. The greater the depth of a fluid (liquids & gases) the greater its pressure.

