|  |  |  |  |
| --- | --- | --- | --- |
| **Know the facts** | | **Key words** | |
| 1 | Pressure acts in a fluid in all directions. | 1 | **Fluid:** A substance with no fixed shape, a gas or a liquid. |
| 2. | Objects sink or float depending on whether the weight of the object is bigger or smaller than the upthrust | 2 | **Pressure**: The ratio of force to surface area, in N/m2, and it causes stresses in solids. |
| 3 | Pressure (N/m2) = force (N) / area (m2). | 3 | **Upthrust:** The upward force that a liquid or gas exerts on a body floating in it. |
| 4. | Objects either sink or float depending upon their weight and the upthrust acting on them. | 4 | **Atmospheric pressure**: The pressure caused by the weight of the air above a surface. |
| 5. | The larger the surface area, the greater the dispersion of the resultant force. | 5 | **Density**: The mass of a material in a certain volume. |
| 6. | The law of moments states that when an object is in equilibrium the clockwise moment is equal to the anti-clockwise moment. | 6 | **Moment**: The turning effect of a force. |
| 7 | The centre of gravity is the point at which all the weight of an object appears to act. | 7 | **Equilibrium**: When opposing forces are balanced. |
| 8 | The weight of an object acting through the centre of mass can produce a turning force. | 8 | **Centre of gravity:** The point in an object where the force of gravity seems to act. |
| 9 | Gas pressure is produced by the collision of air particles against a surface. | 9 | **Centre of mass**: The point in an object where the mass of the object seems to act. |
| 10 | Gas pressure can be affected by a change in volume or temperature. | 10 | **The Law of moments** : Moment (Nm) = Force (N) X Distance (m) |
| 11 | Liquids are incompressible due to the particles being in contact with each other. | 11 | **Speed**: How much distance is covered in how much time. |
| 12 | You can show what is happening to the position of an object on a distance time graph. The slope of thei graph is the speed. | 12 | **Average speed**: The overall distance travelled divided by overall time for a journey. |
| 13 |  | 13 | **Relative motion**: Different observers judge speeds differently if they are in motion too, so an object's speed is relative to the observer's speed. |
| 14 |  | 14 | **Acceleration**: How quickly speed increases or decreases. |

**Motion and Pressure Year 8**