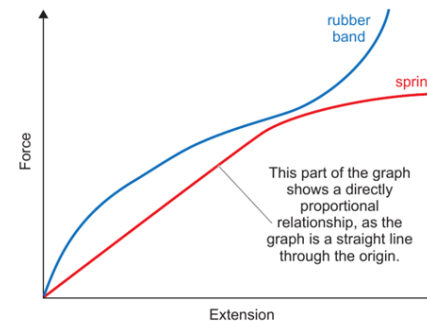
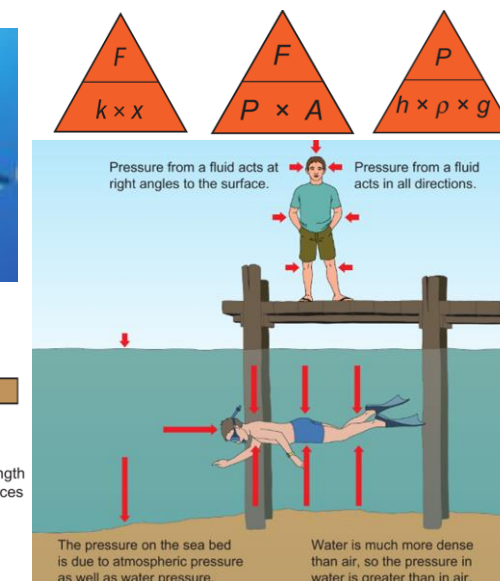
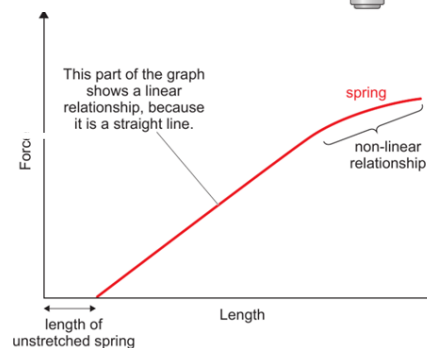
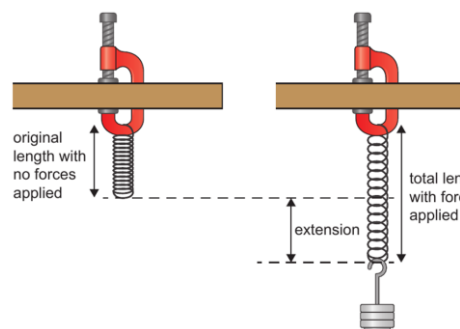
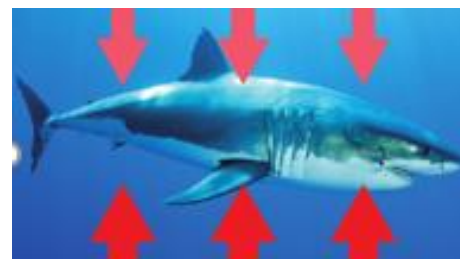




1	Forces can deform or change the shape of an object.
2	Elastic objects return to their original shape when the forces acting on them are removed.
3	Inelastic objects keep their new shape after the forces acting on them are removed.
4	Extension is the change in length of an object when a force is applied (positive if length increases)
5	Compression is the change in length of an object when the force applied makes it shorter
6	Hooke's Law : When an elastic object (e.g. a spring), is stretched, the extension is directly proportional to the force applied to it. i.e. doubling the force will double the extension as $F=k \times x$ F =Force, k = spring constant, x =extension
7	Spring constant is the force needed to produce an extension e.g. stiffness of a spring. For large spring constants a large force is needed for small extensions.
8	When energy is transferred to a spring this called work done . Energy transferred in stretching (J) = $0.5 \times \text{spring constant (N/m)} \times \text{extension}^2 \text{ (m)}^2$
9	Pressure is the amount of force per unit of surface area , measured in Pascals (Pa). 1 Pa = 1Nm²
10	Fluids (liquids and gases) can exert pressure. At sea level atmospheric pressure is about 100,000 Pa .
11	Pressure of a fluid depends on the depth of the fluid above and the density of the fluid. Atmospheric pressure is due to the depth of the whole atmosphere above you.
12	Pressure exerting by a fluid depends on the height of the Column, density of the liquid and the gravitational field strength.



16	Objects in a liquid experience a force called upthrust. The force is due to the difference in pressure above and below an object.
17	The size of upthrust is calculated by determining the weight of water displaced. An objects floats because it weighs less than the water displaced.

