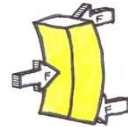


Year 10 Design and Technology – Vocabulary List

(Tier 2 and Tier 3)



Bending – applying a force at each end of an object causing it to bend. The top part will be in compression and the bottom part in tension.



Cam and Follower – a mechanism used to convert rotating motion to linear motion

Compression – a squashing force, where pressure is applied from 2 sides.



Conductivity – the ease with which heat or electricity can pass through the material (Thermal or electrical – metals conduct well, polymers don't,)

Corrosion Resistance – the ability of metal to withstand environment factors without degradation. (Iron rusts)

Density – mass (weight) per unit of volume. (Polystyrene foam has low density.)

Ductility – the ability to be pulled or drawn into a long length (Copper – able to be drawn into wires)

Environmental Resistance – the ability of materials to withstand environment factors without degradation. (Plastic in UV light, wood rotting)

Fusibility – how easily a material can be altered to become a liquid. (Solder)

Gears – toothed wheels that mesh together to transmit or amplify torque (force) and speed.

Hardness - the ability to withstand scratching, cutting and abrasion (melamine formaldehyde – kitchen worktops)

Linear – refers to motion in a single direction

Malleability – the ability to be permanently deformed or shaped by impact (Low carbon steel car body panels)

Oscillating – refers to motion in a curved path, going back and forth, like a pendulum.

Pulley – a wheel used with a belt or cable to transmit motion.

Reciprocating – refers to motion in a straight line, going back and forth, like a piston in a car engine.

Rotary – refers to turning motion

Shear – a linear force that acts parallel to a surface.



Strength – the ability to withstand constant force without breaking (Carbon Fibre Reinforced Plastic –CFRP)

Tension – a stretching force, where force is applied at each end in opposite directions



Torsion – a twisting force, where one half is turned one way and the other half is turned in the opposite direction



Toughness – the ability to withstand impact from a force (Titanium)