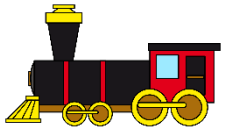
Knowledge Organiser: Year 8 'Motion & Mechanisms'

Types of motion



Linear
moves something in a straight line

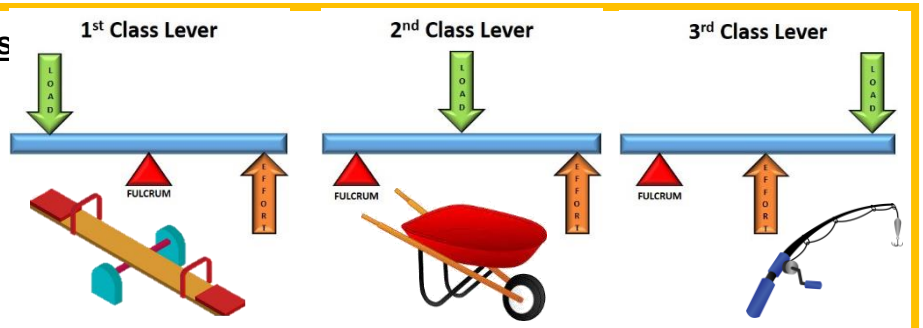
Oscillating
movement that swings backwards and forwards

Rotary
moves around a point

Reciprocating
repeated up and down motion or back-and forth motion

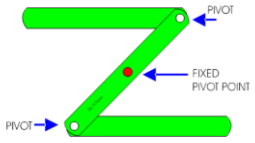
Types of levers

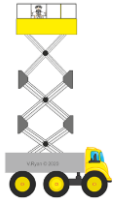
F L E
1 2 3



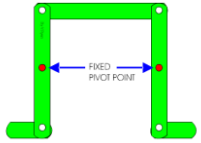
Types of linkages

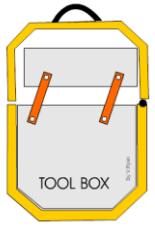
Reverse motion



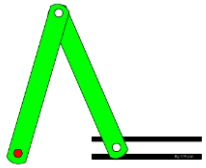


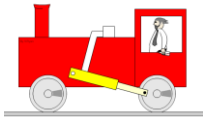
Parallel motion



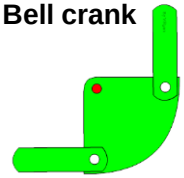


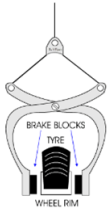
Crank and slider





Bell crank

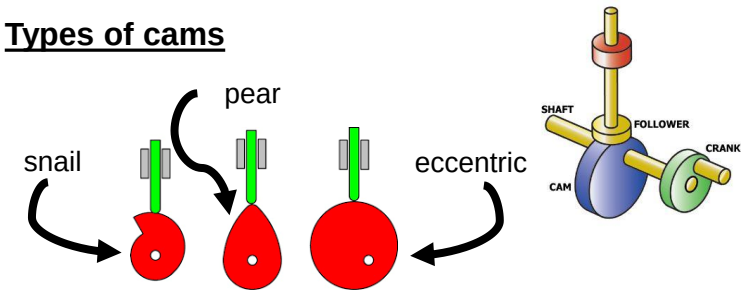




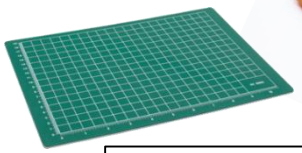
Key words

mechanism	a system of parts that work together
levers	a lever is a simple machine used to make applying force easier to lift or move something. There are three parts to a lever: load, fulcrum and effort
load	the object you're lifting or moving
fulcrum	point at which the lever pivots
effort	force applied to make the object move
linkage	simple linkages change the direction of motion and the amount of force needed to move something. Levers can be joined together to form linkages.
cam	shaped pieces of materials that are attached to the cam shaft.
follower	touches the cam and follows the shape, moving up and down
iterative design	a circular design process that models, evaluates and improves designs based on the results of testing.

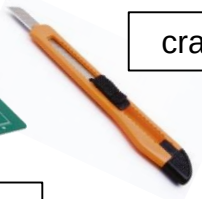
Types of cams



Modelling tools



cutting mat



craft knife

metal safety ruler