




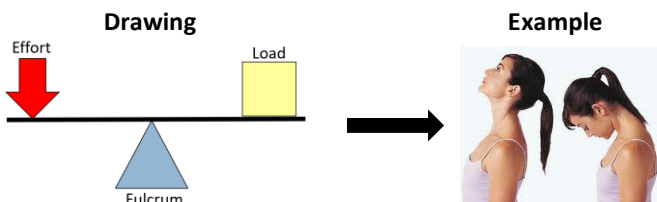
GCSE Physical Education – Movement analysis

Levers – a rigid bar that moves around a pivot point with force applied to it.

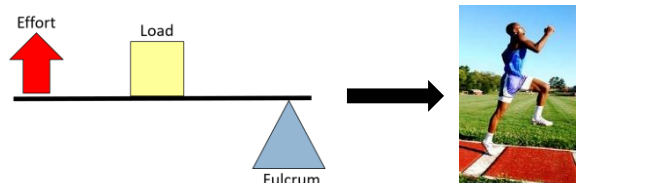
Fulcrum (F)	Effort (E)	Load (L)
A fixed pivot point 	The source of energy that will be applied 	The weight/resistance to be moved 

Classes of lever

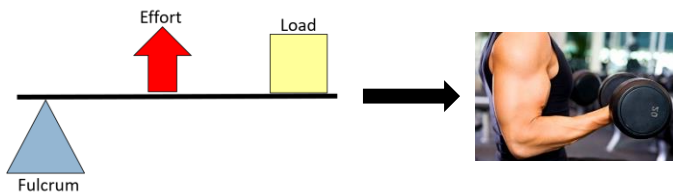
First class lever:



Second class lever:

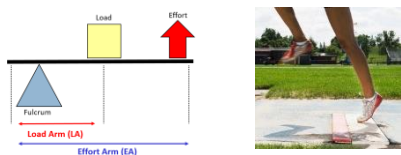


Third class lever:



Mechanical advantage

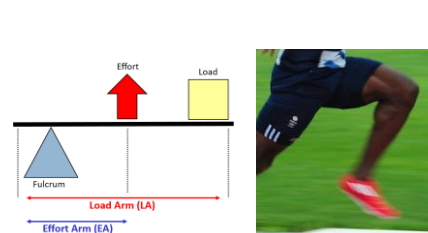
This is where a lever's **effort arm** is greater than its **load arm**.



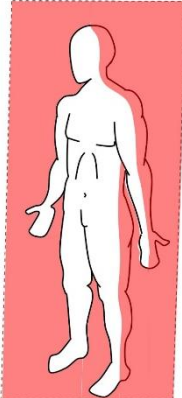
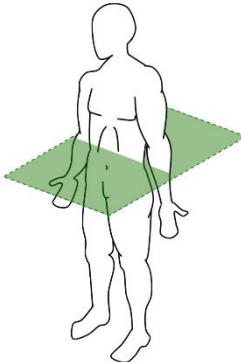
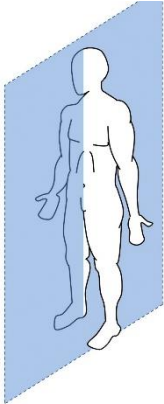
Large loads can be moved with limited effort.

Mechanical disadvantage

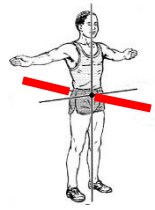

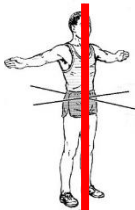

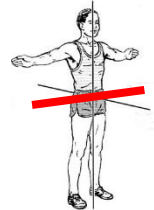
This is where a lever's **load arm** is longer than its **effort arm**.



Planes – imaginary lines that divide the body into two.

Frontal plane	Transverse plane	Sagittal plane
A vertical plane but this divides the body into front and back . 	A horizontal plane that divides the body into upper and lower halves . 	A vertical plane that divides the body into right and left sides . 

Axes – imaginary lines that the whole body turns around.

Sagittal axis	Vertical axis	Frontal axis
Runs through the body horizontally from the back to front.  Example: Cartwheel 	Runs through the body vertically from the top to bottom.  Example: Full twist 	Runs through the body horizontally from the left to right.  Example: Somersault 