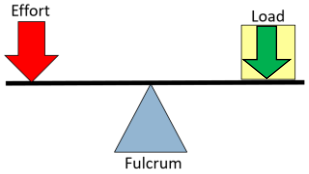
GCSE PHYSICAL EDUCATION – MOVEMENT ANALYSIS

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

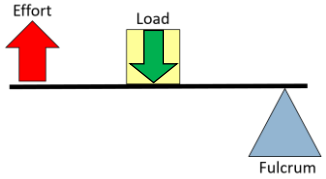
Fulcrum (F)	Effort (E)	Load (L)
A fixed pivot point 	The source of energy that will be applied 	The weight/resistance to be moved 

Classes of lever **Drawing** **Example** **A**

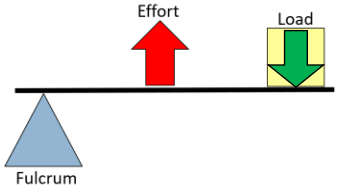
First class lever:



Second class lever:

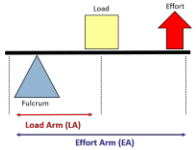


Third class lever:



Mechanical Advantage **A**

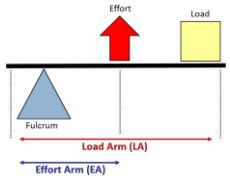
This is where a lever's **effort arm** is greater than its **load arm**.



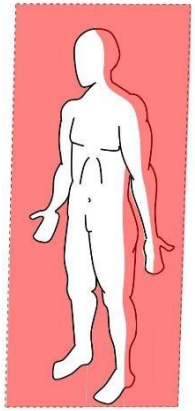
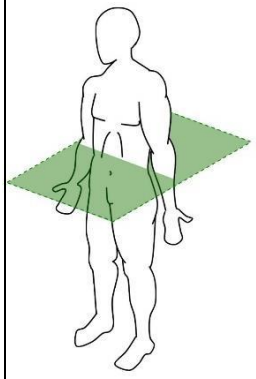
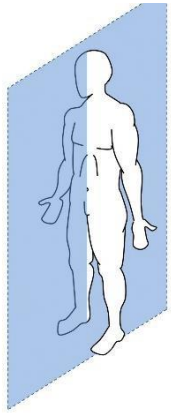
Large loads can be moved with limited effort.

Mechanical Disadvantage **A**

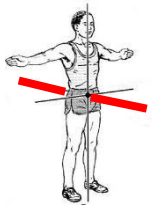
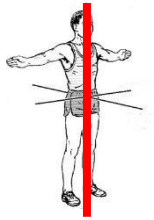
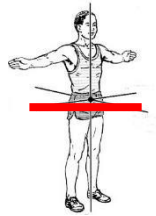
This is where a lever's **load arm** is longer than its **effort arm**.



Planes – imaginary lines that divide the body into two. **B**

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. **B**

Frontal Axis	Longitudinal	Transverse Axis
Runs through the body horizontally from the back to front. 	Runs through the body vertically from the top to bottom. 	Runs through the body horizontally from the left to right. 
Example: Cartwheel 	Example: Full twist 	Example: Somersault