KNOWLEDGE ORGANISER BIG IDEA: FORCES TOPIC: FORCES INTRO

Key Word	Definition	
force	A force is a push or pull betwee objects that cause change in speed, direction and/or shape	
contact force	Contact forces act between two objects that are physically touching.	
non-contact force	Non-contact forces act between two objects that are <u>NOT</u> physicall touching.	
Newton	Unit for measuring forces (N).	
magnitude	The size or amount of a quantity	
resultant force	Single force which can replace all the forces acting on an objec and have the same effect.	
equilibrium	State of an object when opposing forces are balanced.	
stationary	State of motion where the objec is not moving	
Newton meter	Instrument used to measure the magnitude of a force	
accelerate	Increasing speed	
decelerate	Decreasing speed	

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	Type of force	Definition		Contact / non- contact	
	tension	a pulling force exerted on an object by a string, rope or rod.		contact	
	friction	a force that acts between two touching surfaces and prevents or resists them moving against each other		contact	
	upthrust	an upwards force that acts on an o	contact		
-	thrust	a driving force exerted by an engin	contact		
,	weight	experienced by a mass when it is su pulls two objects towards each oth	non-contact		
	air resistance	An object experiences this force as direction to movement and increas	contact		
	magnetic	experienced by a magnet or a mag magnetic field.This force can pull th	perienced by a magnet or a magnetic material, eg iron, when placed in a agnetic field.This force can pull the two objects together or push them apart.		
	normal contact	When an object pushes on a surface like a table, wall or the ground, the surface pushes back on the object with a balancing force.		contact	
	electrostatic	experienced by a charged particle in an electric field. This force can be either attractive or repulsive .		non-contact	
	moving r 5 N moving r 10 N	ight 10 N 10 N ight Object accelerates ight 5 N left	 Free Body Force Diagrams We use arrows to represent force: The direction of the arrow represent the direction of the force The size of the arrow represent the magnitude of the force We simplify scenarios by focusing on one object 		
	moving ri 10 N Stationa 10 N	ght • Resultant = 0 N 10 N Constant speed ry • Resultant = 0 N 10 N • stationary	 We simplify scenarios by focusing of one object at a time becomes Ball weight Force arrows must be drawn from the centre pointing away from the object 		
		Resultant Force			