

Fens Primary School Knowledge Organiser



Science Focus:

Forces

Year 5

Term:

Light Sources

What is a force?	A force is either: A push or A pull
Forces can make things...	Speed up Slow down Change shape Change direction
A force that speeds something up	The child is pushing the car to speed it up. 
A force that slows something down	The girl is pulling the dog to slow it down. 
A force that changes the shape of something	The can is being squeezed so it becomes smaller 
A force that changes the direction of something	When the ball is hit with the racket, it will change direction. 

Working as a Scientist

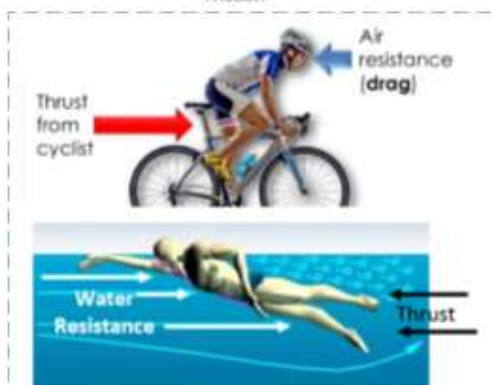
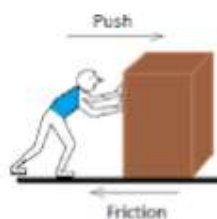
- Design, make and test parachutes (site manager to launch from water tower)
- Test water resistance when swimming (during Y5 swimming lessons)
- Recognise the impact of mechanisms on forces when using pulleys, levers and gears during technology lessons

Changing the movement of an object requires a force to be acting on it

Forces act in particular directions. Equal forces acting in opposite directions in the same line cancel each other and are described as being in balance.



How quickly an object's motion is changed depends on the force acting and the object's mass. The greater the mass of an object,

Diagrams of forces in action



Gravity pulls us towards the centre of the Earth.

Types of force

Magnetism Magnets attract or repel each other or other objects	Attract:  Repel:  North and South attract. But North and North or South and South will repel.
Air Resistance	Air resistance slows down moving objects, because air slows you down as you move through it. To travel faster through the air, things need to be streamlined.
Water Resistance	Water resistance slows down moving objects, because water slows you down as you move through it. To travel faster through the water, things need to be streamlined.
Friction	Friction happens when two surfaces touch each other. Friction gives us grip. Friction produces heat. Rougher surfaces slow things down a lot. Smoother surfaces don't slow things down as much.

Gravity

What is gravity?	Gravity is the forces that pulls objects down towards the centre of the Earth. Gravity stops things from floating away into space. When things go into the air (like a football)
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What? (Key Vocabulary)

Spelling	Definition/Sentence
Streamlined	A shape that presents least resistance to air or water
Surface	The top layer of something
Grip	To have a good connection with a surface
Drag	To cause to slow down