

Year 3 Science Knowledge Organiser– Forces and Magnets

Subject Specific Vocabulary	
Still	No movement.
Force	A push or pull on an object which can cause it to move, change speed, direction or shape. Measured in Newtons (N).
Acceleration	Getting faster.
Deceleration	Getting slower.
Magnet	A material or object that produces a magnetic field. It attracts or repels magnetic objects, including iron.
Speed	How far something travels in a set amount of time (mph).
Velocity	Describes speed and direction.
Thrust	Increases velocity.
Drag	Decreases velocity.
Attract	To pull towards. Opposite of repel.
Repel	To push away. Opposite of attract.
Friction	The resistance of motion when one object rubs against another. Friction causes objects to slow down and the energy becomes heat.
Gravity	The area around a large object when a weight can be felt. The sun's gravity keeps the planets orbiting around it.
Mass	The amount of matter contained in an object. Measured in units such as g, kg.

Sticky knowledge

- All forces can be thought of as a push or a pull OR all forces can be thought of as attracting or repelling .
- Forces act on objects.
- Forces can cause movement and change of shape. They can also act on objects without causing movement or change of shape. Forces do not always have an obvious effect.
- Weight is a force, mass is the amount of matter. On the moon, your mass is the same, but your weight will be different because the amount of gravity acting on you is different. Less gravity means less weight, but it will not affect your mass.
- Magnets are objects that produce an area of magnetic force called a magnetic field.
- Magnetic fields by themselves are invisible to the human eye.
- Forces can be measured in Newtons (N).
- Force meters contain springs that stretch in proportion to the force being measured.
- The Earth is a giant magnet. Its magnetic field is like a bar magnet at its centre.

Different **surfaces** create different amounts of **friction**. The amount of **friction** created by an object moving over a **surface** depends on the roughness of the **surface** and the object, and the **force** between them.

