# UKS2: Forces and Magnets Knowledge Mat

## Subject Specific Vocabulary

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| **attract** | To pull towards. |
| **contact** | When objects touch. |
| **distance** | The length between two objects. |
| **force** | A push or pull that acts upon an object, that can cause it to move, change shape or change direction. |
| **friction** | The force that acts upon one surface when it moves against another. |
| **gravity** | A pull force that acts at a distance. |
| **pull** | To move something towards. |
| **push** | To move something away. |
| **repel** | To push away. |
| **resistance** | An opposing or slowing force. |

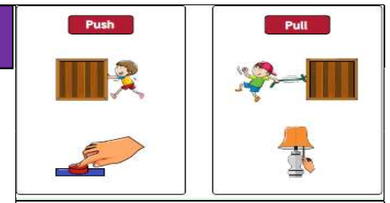
## Sticky Knowledge

- A **force** is a **push** or **pull** that acts upon an object. We can't see forces, but they are an important part of our everyday lives. We **push** and **pull** objects to do many different things. When we **push** or **pull** objects we can move the object, change the shape of the object or make the object change direction.
- **Gravity** is a force which acts at a distance. It is a pull force that pulls objects towards the centre of the Earth. The planets and the Sun do not touch, yet the planets stay in orbit around the Sun due to the force of gravity.
- **Issac Newton** was a scientist who developed the first description of the force of gravity. Newton said that he started thinking about gravity after watching an apple fall from a tree.



- **Friction** is a force created between two surfaces when they rub together. Friction creates heat and always slows down an object. Rough surfaces create more friction than smooth surfaces.
- **Air resistance** is a force that acts in the opposite direction to gravity. It acts between a moving object and the air molecules around it, slowing the object down. Air resistance is a type of friction. Parachutes are used to increase air resistance and slow down the parachutist, so they can land safely. Modern cars and planes are **streamlined** in design to reduce air resistance, allowing them to move faster.
- **Water resistance** is the force responsible for making it difficult for us to move through the water. It acts between a moving object and the water molecules around it, slowing the object down.






## Crucial Connections

www.bbc/bitesize

## Recommended Text







## Aspirations

Scientist, teacher, physicist, builder, engineer, physiotherapist