KNOWLEDGE ORGANISER

SCIENCE	GRAVITY AND RESISTANCE	KS2

Cross curricular links

History – Link to famous scientists such as:

- **Leonardo Da Vinci -** First person to plan and carry out tests on friction
- **Archimedes –** Mathematician who developed theories about how levers and pulleys can lift and move heavy objects
- **Galileo Galilei** – First person to use the scientific method to test theories about gravity and the solar system
- **Isaac Newton** – Mathematician and physicist who developed theories about gravity
- **Brahmagupta** – Mathematician and astronomer who was the first scientist to talk about gravity

Pictures/photos relevant to topic

Key skills

- Identify the effects of friction that acts between moving surfaces
- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- Identify the effects of air resistance that acts between moving surfaces
- Identify the effects of water resistance that acts between moving surfaces
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect

Key Vocabulary/definitions

Force: A force is a push or a pull on something that can make it move, stop or change direction

Friction: Friction is a force that happens when two things rub against each other, slowing them down or stopping them

Gravity: Gravity is the force that pulls everything down towards the ground or towards the centre of a planet

Vacuum: A vacuum is a space with no air or any other matter inside it. For example, outer space is a vacuum.

Air Resistance: Air resistance is a type of force that pushes against something moving through the air, like when you feel the wind push back as you ride a bike.

Water Resistance: Water resistance is a force that pushes against something moving through the water, making it harder to move.

Key facts

https://www.bbc.co.uk/bitesize/topics/znmmn39

https://www.youtube.com/watch?v=XAJUzs46nJQ

https://www.youtube.com/watch?v=n40OmR6Rvpo