

Year 5 Science Knowledge Organiser Forces

Selected Vocabulary and Definitions

Forces

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| Air Resistance | A force that is caused by air with the force acting in the opposite direction to an object moving through the air |
| Force | A push or pull upon an object resulting from its interaction with another object |
| Friction | The resistance that one surface or object encounters when moving over another |
| Gears | A toothed wheel that works with others to alter the relation between the speed of a driving mechanism (e.g. engine) and the speed of the driven parts (e.g. the wheels) |
| Gravity | The force that attracts a body towards the centre of the Earth |
| Lever | A rigid bar resting on a pivot that is used to move a heavy or firmly fixed load |
| Mass | The weight measured by an objects acceleration under a given force or by the force exerted on it by gravity |
| Pulleys | A wheel with a grooved rim around that changes the direction of a force applied to the cord |
| Water Resistance | A force that is caused by water with the force acting in the opposite direction to an object moving through the water |

Curriculum Objectives

I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

I can demonstrate the effects of air resistance, water resistance and friction, which act between moving surfaces.

I can show that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Key Questions

- Name the force, which allows unsupported objects to fall towards the Earth.
- Describe the difference between mass and weight.
- Which force is acting against a swimmer, as they move through the water?
- Explain how a parachute, slows down the speed of the person jumping out of a plane?
- What are the purposes of levers, pulleys and gears?

