



Edenfield C E Primary School

Medium Term Plan - Sequence and Progression

Subject: Science

Unit: Year 5 – Forces

Key Vocabulary

- Friction, air resistance, water resistance, force-meter, Newtons, surface area, gravity, movement, between surfaces
- Lots of friction: gripping, stuck, don't slide or move easily, lots of surfaces touching, not slipping, like they are glued together.
- Not much friction: slippery, sliding over each other, hard to grip onto, liquids stopping the surfaces touching each other easily).

Lesson Sequence

1. LO: To investigate how friction changes on different surfaces.
2. LO: To group and classify times when friction slows down or speeds up.
3. LO: To test how gravity affects objects.
4. LO: To investigate air resistance
5. LO: TO design and make parachutes.
6. LO: To investigate how levers and pulleys change forces.
7. LO: To create a design using forces – Assessment task.
- 8.
- 9.

By the end of the unit pupil will know:

- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Friction, air resistance and water resistance are forces which slow down moving objects.
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
- There are different types of forces (push, pull, friction, air resistance, water resistance, magnetic forces, gravity).
- Gravity can act without direct contact between the Earth and an object.
- Friction, air resistance and water resistance can be useful or unwanted.
- The effects of friction, air resistance and water resistance can be reduced or increased for a preferred effect.
- More than one force can act on an object simultaneously (either reinforcing or opposing each other).

Skills

Working Scientifically

- By exploring falling paper cones or cup-cake cases.
- By designing and making [exploring] a variety of parachutes.
- By carrying out fair tests to determine which designs are the most effective.
- By exploring resistance in water by making and testing boats of different shapes.
- By designing and making [creating/inventing/designing] artefacts that use simple levers, pulleys, gears and/or springs and explore their effects.