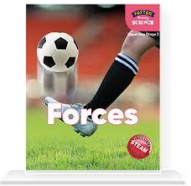

St Bartholomew's Knowledge Organiser	Class 4	Science Summer Term – Year A	Forces

What we will learn:

In this unit you will learn:

- About the force of gravity and the difference between mass and weight.
- How to measure forces using a force meter.
- About the force of friction and effects in everyday life.
- To carry out a class investigation about friction.
- Investigate the effects of water resistance in a range of contexts e.g. dropping shapes through water and pulling shapes, such as boats, along the surface of water.
- Investigate the effects of air resistance in a range of contexts e.g. parachutes, spinners, sails on boats.
- Explore how levers, pulleys and gears work.
- Make a product that involves a lever, pulley or gear.
- Research how the work of scientists such as Galileo Galilei and Isaac Newton helped to develop the theory of gravitation.

Important Vocabulary

Force, gravity, force meter, newtons, mass, weight, Earth, air resistance, water resistance, friction, mechanisms, simple machines, levers, pulleys, gears.

Science Knowledge:

- 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, water resistance and friction that act between moving surfaces.
- Recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Scientific Skills we will develop:

- Identify scientific evidence that has been used to support or refute ideas or arguments.
- Plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- Take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- Record data and results of increasing complexity using scientific diagrams and labels, and tables.
- Use test results to make predictions to set up further comparative and fair tests.
- Report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral form.