

Key Learning

- 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

Working Scientifically

- 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 or increasing complexity using scientific labelled diagrams, tables, bar and line graphs.
- Use test results to make predictions to set up further comparative and fair tests.
- Identify scientific evidence that has been used to support or refute ideas or arguments.
- Use scientific language.
- Describe and evaluate their own and others' scientific ideas related to topics in the National Curriculum

newton	A unit used to measure force
gravity	The force that attracts objects towards one another, especially the force that makes things fall to the ground.
friction	The force that makes it difficult for one object to slide along the surface of another or to move through a liquid or gas.
resistance	The act of fighting against something.
upthrust	An object that is partly, or completely, submerged experiences a greater pressure on its bottom surface than on its top surface. This causes a resultant force upwards.
balanced	Forces where the effect of one force is cancelled out by another.
unbalanced	This means that the force applied in one direction is greater than the force applied in the opposite direction.
drag	A force acting opposite to the relative motion of any object moving.
thrust	A force that moves an object in the direction of the motion. It could be created with a propeller, jet engine, or rocket.
acceleration	Acceleration is the name we give to any process where the velocity (speed with direction) changes.
deceleration	The rate at which an object slows down.
Pulleys	A pulley is a wheel that carries a flexible rope, cord, cable, chain, or belt on its rim. Pulleys are used singly or in combination to transmit energy and motion.
levers	A lever is a simple machine made of a rigid beam and a fulcrum. When an effort is applied to one end of the lever, a load is applied at the other end of the lever.

