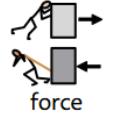
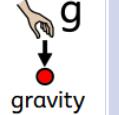
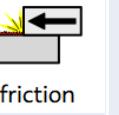


Year 5 Science Knowledge Organiser – Unit 4 - Forces

Key Vocabulary

	a push or pull that changes speed, direction, or shape.		A non-contact force pulling objects towards earth.
	A force that tries to stop something moving.		A contact force between surfaces that slows movement.
	The amount of matter in an object.		A frictional force acting against objects moving through air.
	The force of gravity acting on mass.		A frictional force acting against objects moving through water.
	The material or texture that an object moves across, affecting friction.		Aerodynamic means a shape that allows air to flow smoothly around it, reducing air resistance so it can move more easily and quickly through the air. Examples include planes, birds, and rockets.

Key Knowledge

Forces	<ul style="list-style-type: none"> A push or pull that can change an object's speed, direction or shape. Contact forces only work when objects touch (friction). Non-contact forces act at a distance (gravity).
Gravity	A non-contact force that pulls objects towards the centre of the Earth.
Air resistance	A force caused by air pushing against a moving object. The larger the surface area, the more air resistance. Shape affects air resistance, that is why Formula 1 cars, airplanes and parachutes are designed in a certain way.
Water resistance	A force that pushes against objects move through water. Certain shapes move more easily because they reduce resistance. Speed, shape and smoothness affect how much resistance an object experiences.
Friction	A contact force that acts in the opposite direction to movement. This happens when two surfaces rub together. Rough surfaces = more friction, smooth surfaces = less friction.
Galileo	He was a scientist who discovered that objects fall at the same rate , no matter their weight, unless air resistance affects them. He tested this by dropping objects from heights and carefully observing what happened. His work helped us understand gravity and how forces act on falling objects.