








Science – Forces – Autumn Term 2

Prior Knowledge

- Motion and Speed: Objects can move and change speed depending on pushes and pulls.
- Pushes and Pulls: We can make things move by pushing or pulling them.
- Magnetism: Magnets can attract or repel some materials without touching them.
- Gravity: Things fall down because of the pull of gravity.
- Friction: Rough or smooth surfaces can slow objects down or make them stop.

Key Vocabulary

force		A push or pull that can make something move, stop, or change direction.
gravity		The force that pulls things down.
friction		A force that occurs when two surfaces rub against each other.
mass		The amount of matter in an object.
weight		A force that occurs when two surfaces rub against each other.
resistance		The amount of matter in an object.
acceleration		The force of gravity acting on an object's mass.

Core Knowledge

- Forces can make objects start moving, stop moving, or change direction. Pushes and pulls are examples of forces we use every day.
- Friction is a force that slows objects down. Rough surfaces create more friction, smooth surfaces create less. Friction can be useful, like stopping a bike, or something to overcome, like sliding a heavy box.
- Air and water resistance are forces that slow objects moving through them. Bigger surfaces experience more resistance. Streamlining helps objects move more easily through air or water.
- Mass is the amount of matter in an object, and weight is the force of gravity acting on that mass. Heavier objects are harder to move than lighter ones.
- Mechanisms help us move objects more easily. Levers, pulleys, gears, and inclined planes can change the size or direction of a force to make work easier.

Diagrams

