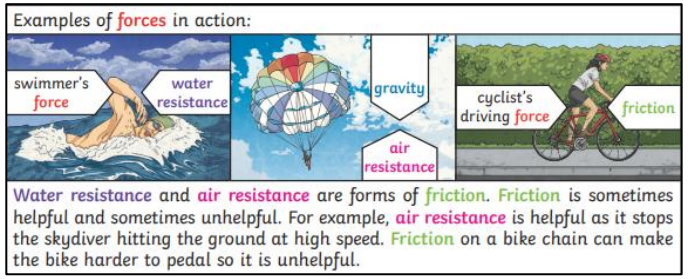
Year 5/6: Forces Knowledge Mat

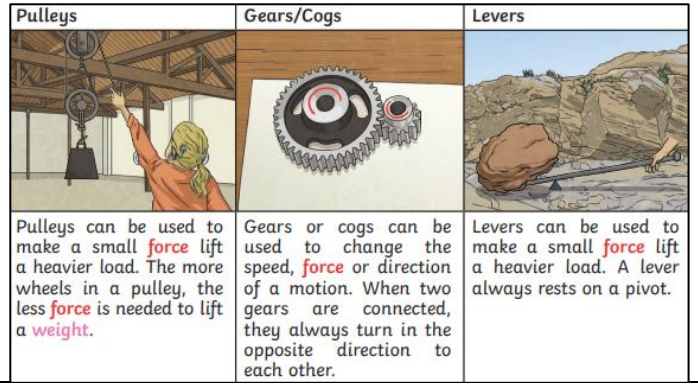
Subject Specific Vocabulary Dozen

force	A force is a push or a pull. Forces can change an object's speed, its direction, and even its shape.
gravity	A force which pulls things down towards the centre of the Earth.
air resistance	The force that slows down objects that move through air.
water resistance	A force that slows down objects moving through water.
up thrust	An upward push or thrust.
friction	When one surface moves against another, the rubbing force that tries to stop them is called friction. It gives us grip.
weight	Is the force of gravity on an object. This changes whether you are on Earth or in space. Measured in Newtons
mass	A measure of how much matter (or 'stuff') is inside an object.
mechanisms	Mechanisms are simple machines with moving parts that change input forces and movement into a set of useful output forces. Examples of mechanisms are pulleys, gears and levers.
levers	A rigid bar that rests on a fulcrum. It is used to lift/move heavy objects.
pulleys	A machine with a wheel and a fixed axle (pin).
gears	A toothed wheel that works with others to increase speed.

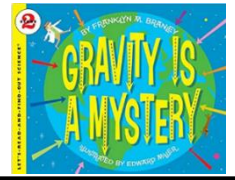
What I will know at the end of the unit:

- Unsupported objects fall towards the Earth because of the force of gravity
- Identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- Recognise that some mechanisms, including levers, gears and pulleys, allow a smaller force to have a greater effect.





Exciting Books



Sticky Knowledge about forces?

- A force causes an object to start moving, stop moving, speed up, slow down or change direction.
- Gravity is a force that acts at a distance. Everything is pulled to the Earth by gravity. This causes unsupported objects to fall.
- Air resistance, water resistance and friction are contact forces that act between moving surfaces. The object may be moving through the air or water, or the air and water may be moving over a stationary object.
- A mechanism is a device that allows a small force to be increased to a larger force. The pay back is that it requires a greater movement. The small force moves a long distance and the resulting large force moves a small distance, e.g. a crowbar or bottle top remover.
- Pulleys, levers and gears are all mechanisms, also known as simple machines.