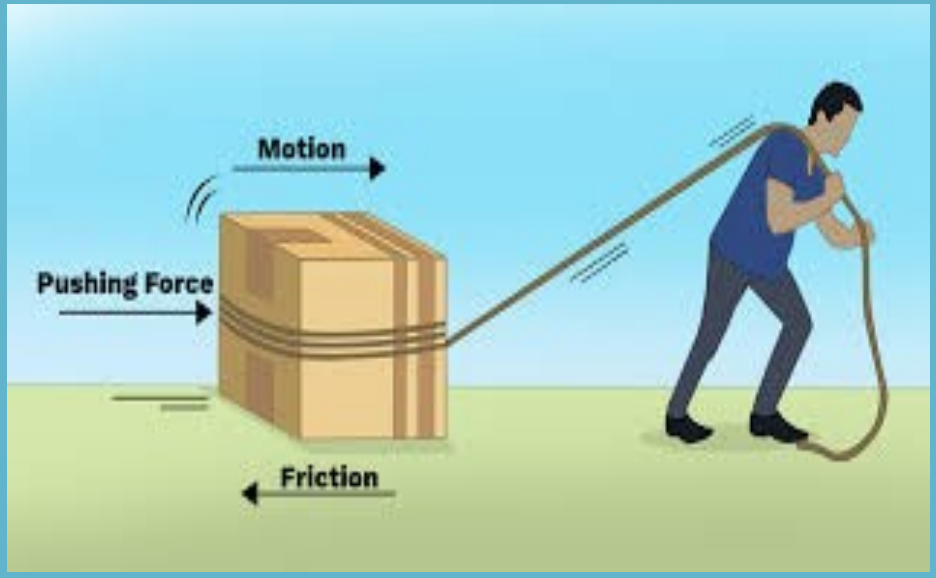
Science—Year 5—Forces

Key Knowledge

- Unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
- Gravity is a force holds objects on the Earth's surface and stops them from floating into the atmosphere
- Air resistance is a type of force that uses friction to slow things down that are moving through air.
- Water resistance is a type of force that uses friction to slow things down that are moving through water.
- Friction is a force that tries to stop the movement of an object causing it to slow down.
- Friction can be reduced by using a smoother surface or using a lubricant.
- The bigger the surface area the greater the air resistance/water resistance and friction.
- Levers, pulleys and gears, allow a smaller force to have a greater effect.
- Increasing the number of pulleys decreases the force needed to lift an object.
- Increasing the length of the lever decreases the force needed to lift an object and size of gears can effect the effort needed to lift and object.
- Increasing the size of the gear decreases the force needed to lift an object

Vocabulary

force	lever	Lubricant—oil, water
gravity	pulley	
air resistance	gear	
water resistance	surface area	
friction	mechanisms	



Key People

Isaac Newton published a comprehensive theory of gravity in 1687. Though others had thought about it before him, Newton was the first to create a theory that applied to all objects, large and small, using mathematics that was ahead of its time.