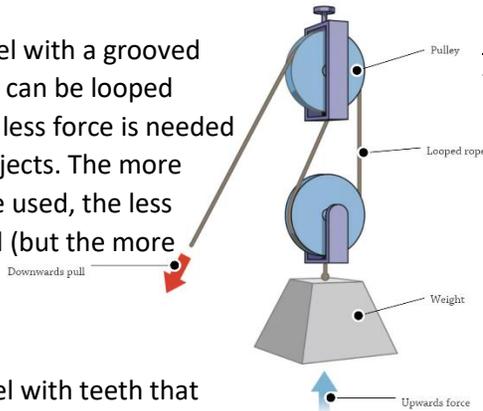


| | Term | Definition |
|----|------------------|---|
| 1 | Force | A push or pull on an object which can cause it to move, change speed, direction or shape. Measured in Newtons (N). |
| 2 | Magnet | A material or object that produces a magnetic field. It attracts or repels magnetic objects, including iron. |
| 3 | Contact force | A force that requires physical contact to occur e.g. kicking a ball. |
| 4 | Attract | To pull towards. Opposite of repel. |
| 5 | Repel | To push away. Opposite of attract. |
| 6 | Propel | The act of driving or pushing forward. |
| 7 | Friction | The resistance of motion when one object rubs against another. Friction causes objects to slow down and the energy becomes heat. |
| 8 | Weight | The force due to gravity on objects. This force pulls on all objects near the earth. Measured in Newtons (N). |
| 9 | Mass | The amount of matter contained in an object. Measured in units such as g, kg. |
| 11 | Gravity | The area around a large object when a weight can be felt. The sun's gravity keeps the planets orbiting around it. |
| 12 | Air resistance | The frictional force of air against a moving object. The faster an object moves, the greater the air resistance. |
| 13 | Water resistance | The frictional force of water against a moving object. The faster an object moves, the greater the water resistance. |
| 14 | Acceleration | Increase in the rate or speed of something. |
| 15 | Balanced force | Two forces of equal size acting in opposite directions on an object so that it will stay still or continue to move in the same way. |
| 16 | Unbalanced force | Two forces of unequal size acting in opposite directions causing an object to move, change speed, direction or shape. |

| Newton's Three Laws of Motion | |
|-------------------------------|---|
| First law | An object will continue in the state it is in (rest or motion) unless a force acts on it. |
| Second law | Acceleration depends on the magnitude of the force applied and the mass of the object. |
| Third law | "For every action, there is an equal and opposite re-action." |

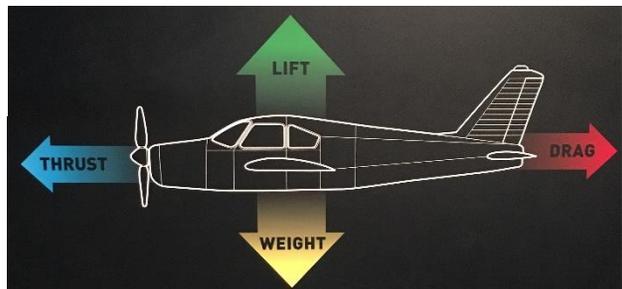
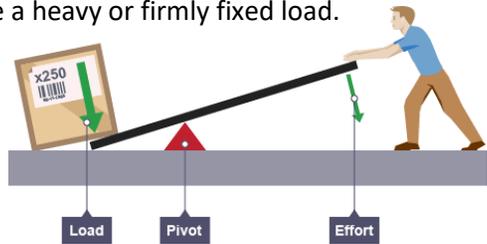
Pulleys: A wheel with a grooved rim that a rope can be looped around so that less force is needed to lift heavy objects. The more wheels that are used, the less force is needed (but the more rope!).



Gears: A wheel with teeth that works with other gears transmit power from one part of a machine to another. Bigger gears have more teeth so smaller gears have to go faster to keep up.



Levers: A rigid bar resting on a pivot that is used to move a heavy or firmly fixed load.



Bar Magnet Horseshoe Magnet Disc Magnet

Magnets have north and south poles. These attract each other but two north or two south poles repel each other.

