



Year 5 Spring - How do forces impact our everyday lives?

Key Vocabulary	
force	What changes the direction, speed or shape of an object.
gravity	A force that pulls objects towards each other.
Newton meter	Equipment used to measure the forces acting on an object.
newtons	The unit of force.
pulley	A machine with a wheel and rope that changes the direction of a force making it easier to exert.
mass	The amount of 'stuff' something is made up of: it is measured in grams (g) or kilograms (kg).

Forces are pushes, pulls, or twists.

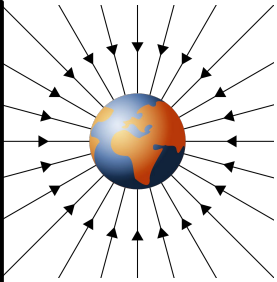
Forces can:

- cause an object to start moving or change its speed
- change the direction an object is moving
- change the shape of an object.

Friction is the force that acts when two objects rub against each other.

Friction:

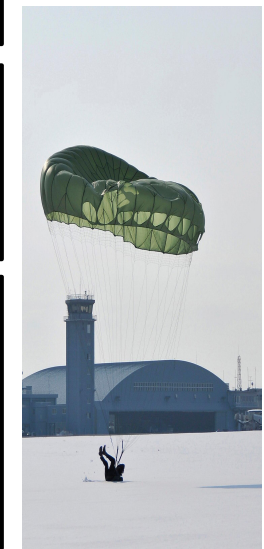
- produces heat
- always slows objects down
- is sometimes useful but at other times it is not useful.



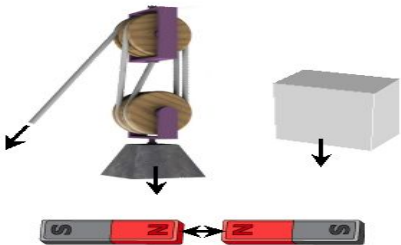
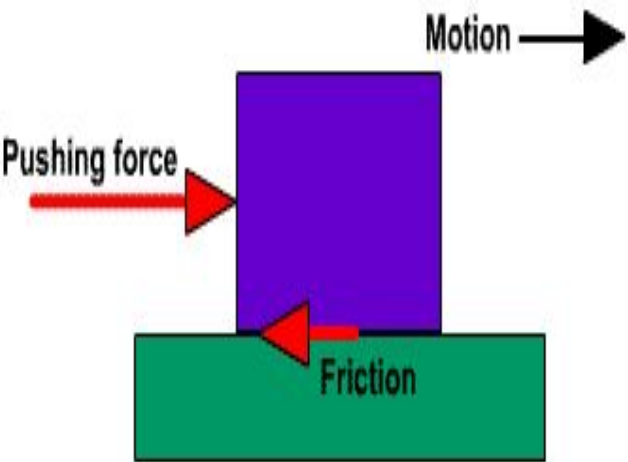
Gravity...

- is the pull of objects towards Earth. This is also called weight and measured in Newtons (N).
- was first described by Isaac Newton.
- keeps planets in orbit around the Sun.

Water resistance is a type of friction that slows down objects moving through water. Streamlining reduces the effects of water resistance.

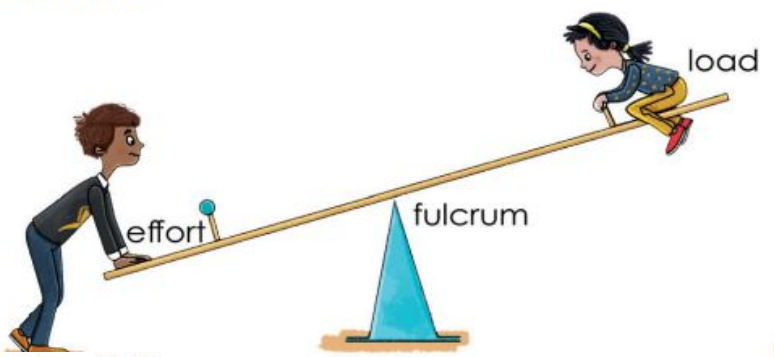


Air resistance is a type of friction that slows down objects moving through air. Friction always acts in the opposite direction to the way you are moving. If you are moving downwards, then the friction (air resistance) acts upwards.

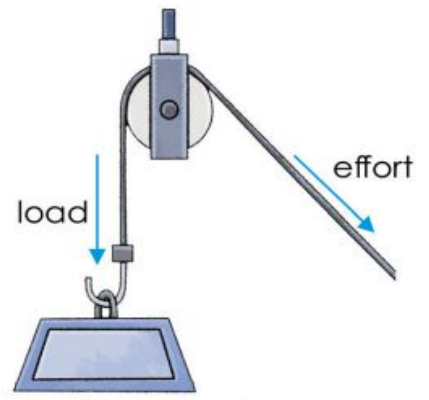


**Simple machines**  
**Levers**

Levers make a small force bigger



**Pulleys**



Pulleys can change the direction of a force.

**Gears**



Cogs can turn to change the direction of a force.

Machines can make a force bigger.  
Machines can change the direction of a force.