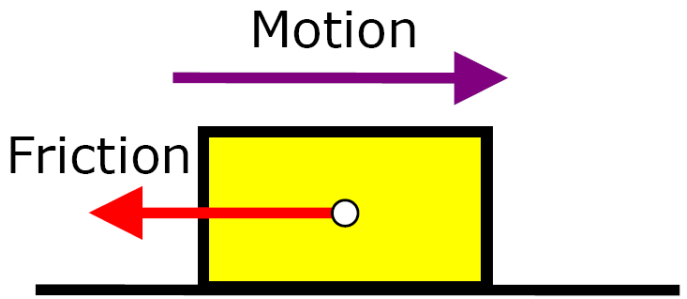
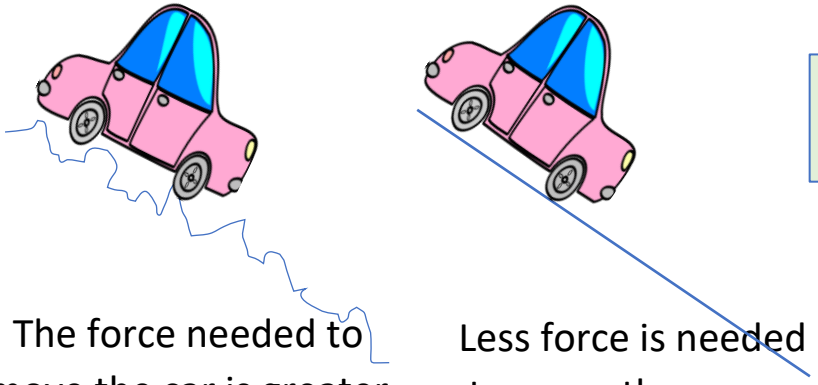
Knowledge Organiser – Forces and Magnets

Key Vocabulary	Definition
Force	A push or a pull.
Contact force	A force where objects need to touch each other to push or pull.
Non-contact force	A force where objects do not have to touch each other to push or pull.
Magnetic force	A force between magnets.
Magnet	A material that produces a magnetic field.
Attract	To pull together.
Repel	To push away.
Magnetic pole	Where the magnetic field is strongest.

Friction is the force which acts in the direction opposite to the motion.



Friction always slows a moving object down.



The force needed to move the car is greater on rough surfaces (so it is harder to move).

Less force is needed to move the car on smooth surfaces (it is easier to move).

Examples of contact force

Applied force

Tension (pull)

Friction

Air resistance

Water resistance

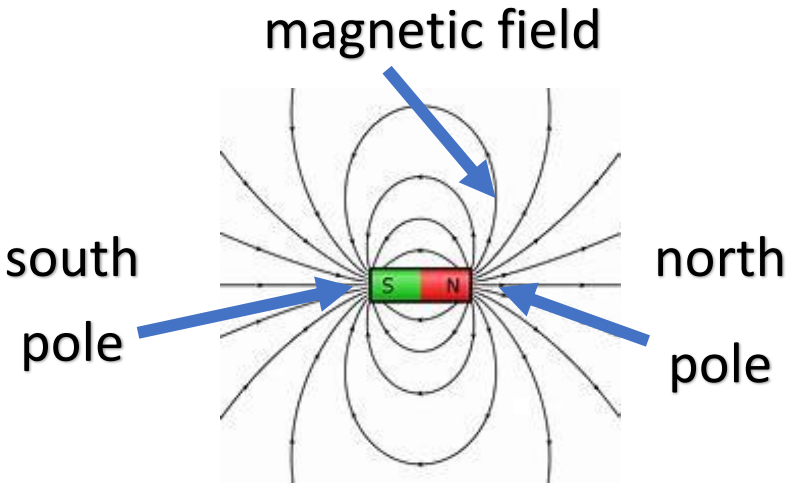
Examples of non-contact force

Gravity

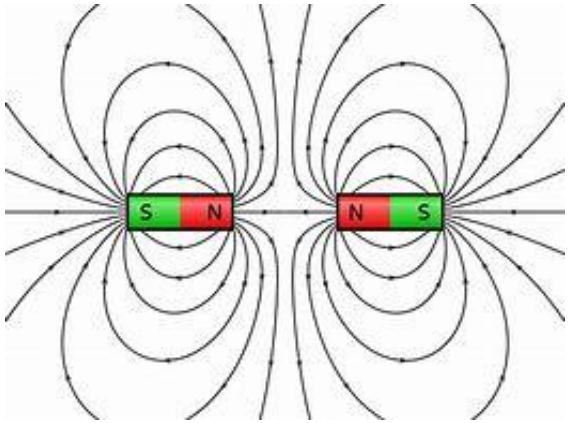
Magnetic force

Static Electricity

Magnets produce an area of magnetic force called a magnetic field.

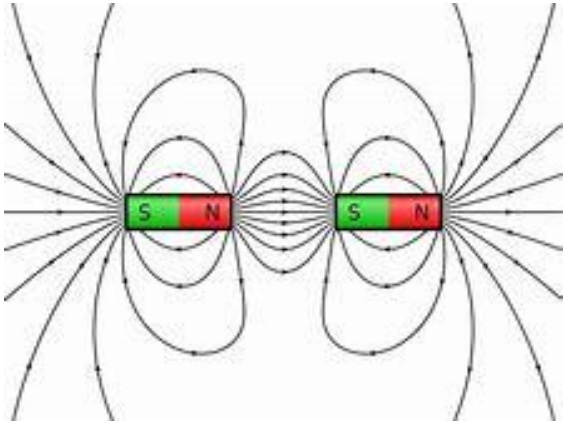


Repel



If north poles or south poles face each other, field lines move away from each other.

Attract



If a north pole is next to the south pole, then the field lines go straight from the north pole to the south pole.

Magnetic materials	Non-magnetic materials

Iron

Cobalt

Nickel

Aluminium

Gold

Copper

Steel contains iron so it will be magnetic.