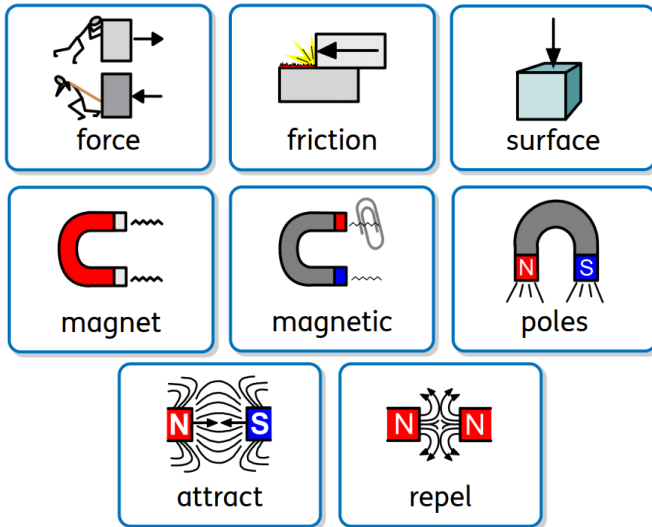


Key vocabulary

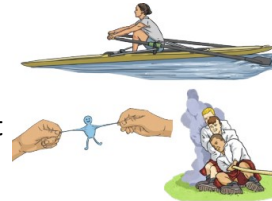


A **force** is the push or pull of an object in a particular direction. They make things move or stop moving.

**PUSH** A push is the force that moves an object away from something.



**PULL** A pull is the force that brings an object towards something.



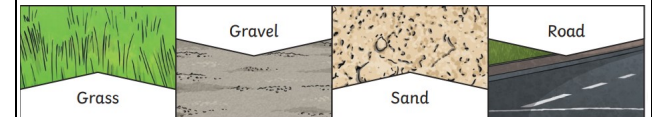
Different surfaces

Different surfaces create different amounts of **friction**. The amount of friction created by an object moving over a surface depends on the roughness of the surface and the object, and the force between them.

The driving **force** pushes the bicycle, making it move.



**Friction** pushes on the bicycle, slowing it down.

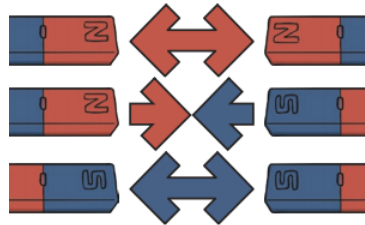


Magnets

**Magnets** create a '**magnetic force**' - this is a force that causes objects to **attract** (pull closer together) or **repel** (push further apart).

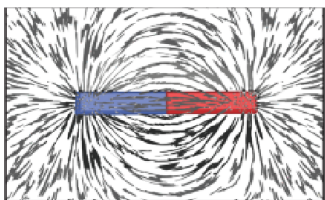
A 'magnetic force' does not need objects to touch one another. It can act at a distance.

Magnets have **2 poles**—a north pole and a south pole.



If you put the same poles together, they will repel.

If you put opposite poles together, they will attract.



A **magnetic field** is the area in which a magnetic force can be felt. This is invisible. However, spreading iron filings over the magnetic field allows us to see that magnetic field, as the filings cling to it.

Magnetic ✓



These objects contain iron, nickel or cobalt. Not all metals are **magnetic**.

Non-magnetic ✗



These objects do not contain iron, nickel or cobalt.

Knowledge objective

Self-assessment (✓)

I can compare how things move on different surfaces.

I can notice that some forces need contact between 2 objects, but magnetic forces can act at a distance.

I can observe how magnets attract or repel each other and attract some materials and not others.

I can compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials.

I can describe magnets as having 2 poles.

I can predict whether 2 magnets will attract or repel each other, depending on which poles are facing.