Forces and Magnets

Pushes

Pulls

Magnetic

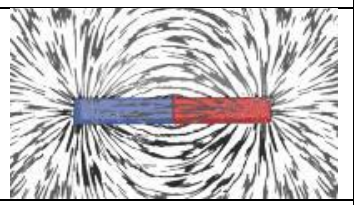
Non-Magnetic

Key knowledge

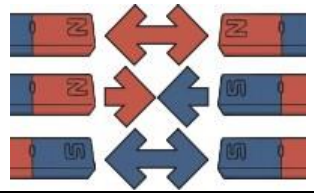
Different ***surfaces*** create different amounts of ***friction***. The amount of ***friction*** created by an object moving over a ***surface*** depends on the roughness of the ***surface*** and the object, and the ***force*** between them.

Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop.

A ***magnetic field*** is invisible. You can see the ***magnetic field*** here though. This is what happens when iron filings are placed on top of a piece of paper with a ***magnet*** underneath.



Like ***poles repel***.
Opposite ***poles attract***.



The needle in a compass is a **magnet**.A compass always point north-south on Earth.

Investigations to do at home

- Use a magnet to test what is magnetic and non-magnetic at home. What do you notice about the objects that are magnetic?
- Using a toy car push it on different surfaces. What do you notice about the speed and distance the car travels?

Key Vocabulary

forces	Pushes or pulls
newton	The SI unit of force – named after Sir Isaac Newton
friction	A force that acts between two surfacesor objects that are moving, or trying to move, across from each other
surface	The top layer of something
magnet	An object which produces a magneticforce that pulls certain objects towards it
magnetic	Objects which are attracted to a magnetare magnetic.
magnetic field	The area around a magnet where there isa magnetic force which will pull magnetic objects towards it
poles	North and South poles are found at different ends of a magnet.
repel	Repulsion is a forcethat pushes objectsaway. E.g. when a north pole faces another north pole, they repel
attract	Attraction is a forcethat pulls objects together.

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