

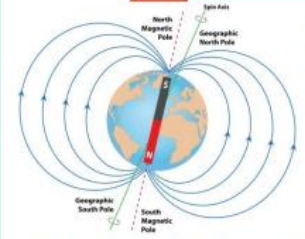
### What will we be learning?

- Explore contact and non-contact forces.
- Compare how things move on different surfaces.
- Explore different types of magnets.
- Explore the properties of magnets and everyday objects that are magnetic.
- Understand that magnetic forces can act at a distance.
- Explore the everyday uses of magnets.

### Key vocabulary:


- **Observe:** use our senses to gather information and collect data from the natural world.
- **Describe:** write in words or give someone a verbal explanation of your observations.
- **Record:** put down findings in writing or creating a permanent way to show your findings.
- **Compare:** measure or note the similarities and differences between things that are being observed.
- **Force:** a power or strength that can cause an object to move.
- **Friction:** a force that pulls backwards when objects rub against each other.
- **Motion:** the process of movement.
- **Texture:** the feel or look of a surface.
- **Magnet:** an object that can pull some metal items towards it.
- **Attract:** to pull towards.
- **Repel:** to force back or push away.
- **Magnetic field:** the force that surrounds a magnet and attracts magnetic objects.
- **Non-contact force:** a force that occurs without objects touching each other.
- **Magnetism:** the force of a magnet.

#### How do magnetic poles work?



The ends of a magnet are called poles. One end is called the north pole and the other end is called the south pole. Opposite poles attract; similar poles repel. If you place two magnets so the south pole of one faces the north pole of the other, the magnets will move towards each other. This is called attraction. If you place the magnets so that two of the same poles face each other, the magnets will move away from each other. They are repelling each other.


#### Friction




#### Forces

- Forces act in opposite directions to each other.
- When an object moves across a surface, **friction** acts as an opposite force. Friction is a force that holds back the **motion** of an object.
- Some surfaces create more friction than others, meaning that objects move across them more slowly.
- On a ramp, the force that causes the object to move downwards is gravity.
- Objects move differently depending on the **surface** of the object itself and the surface of the **ramp**.

#### non-magnetic

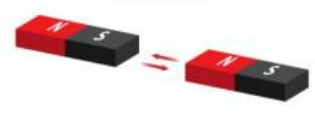


#### magnetic

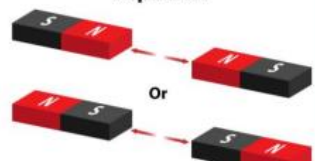


#### Magnetic Forces

##### Attraction



##### Repulsion



Which of the following materials are magnetic?	
Objects attracted to a magnet.	
Objects repelled by a magnet.	
Objects that are unaffected.	

What does resistance mean?

Which force pulls objects towards the ground?	
Resistance	
Gravity	
Repel	

Which of these surfaces would create the most friction for a cyclist riding their bike?	
Sand	
Polished wood	
Carpet	