

Science Knowledge Organiser

Year 3 Spring (i)

What materials are magnetic and how do you know?

Substantive Knowledge- What will we learn?

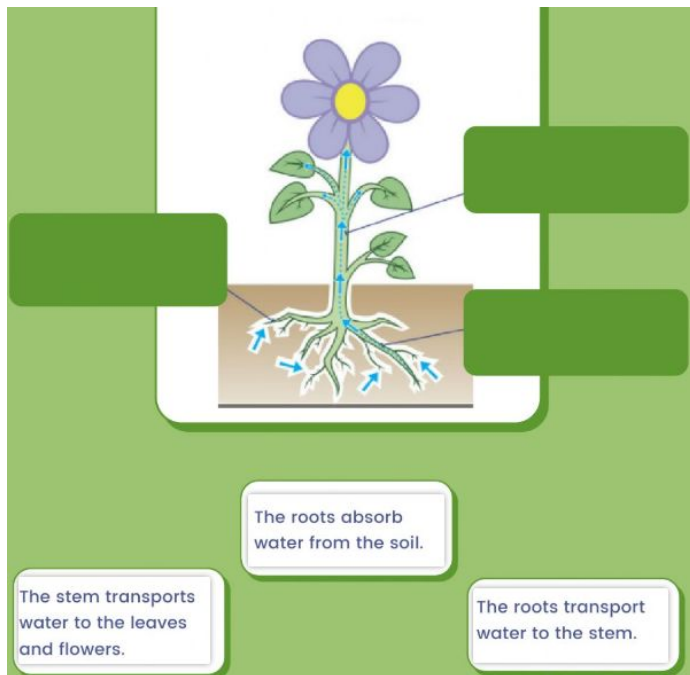
All magnets have a North and South Pole.

Magnets attract magnetic materials.

When we have 2 magnets, the North and South Poles will attract one another but a North and North Pole will repel and a South and South Pole will repel one another.

Pre-teach opportunity- can you label this?

How is water transported in plants?



Disciplinary Knowledge – How will we learn?

- Describe and compare
- Observe similarities and differences
- Identify structure and function
- Find patterns
- Observe over time
- Draw conclusions based on evidence seen

A reminder from Year 2, linked to this learning:
To compare how things move on different surfaces

- Friction is a force
- The smoother the surface, the less friction there is.
- Friction makes heat, which is a form of energy

Which of these surfaces would cause a **lot of friction** for a toy car and which would cause **little friction**?



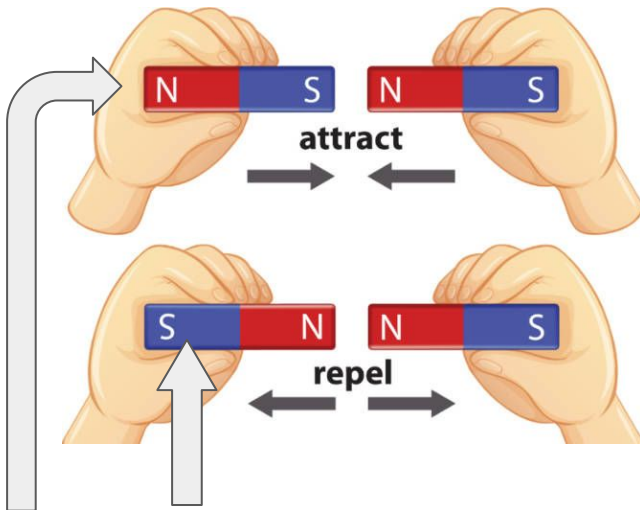
Talk about your answers with a friend- do you agree or disagree? Can you explain your reasons?

Magnetism is another type of force... turn over to find out what we will be learning about magnets...

Some forces need contact between two objects- like the toy car travelling over the different materials on the other side of this sheet, or hands being rubbed together to create heat.,Magnetic forces however, can act at a distance.



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



To 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.

To know magnets have two poles

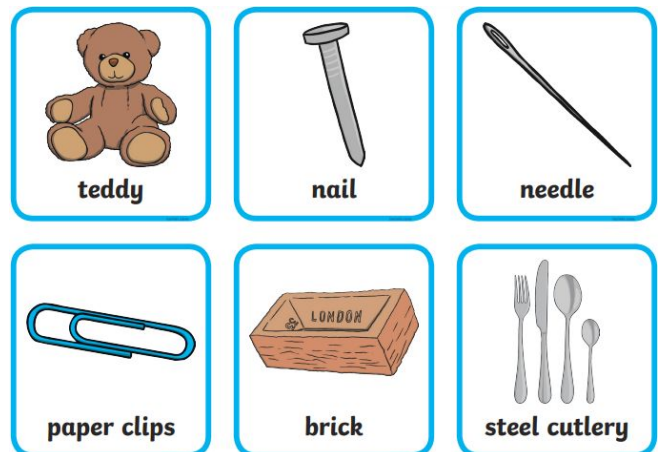
1)
 Prediction:
 Result:

2)
 Prediction:
 Result:

3)
 Prediction:
 Result:

4)
 Prediction:
 Result:

To predict whether two magnets will attract or repel each other, depending on which poles are facing



What other objects would you collect to group together to show whether they are magnetic or not?

Core Vocabulary

force - a push or pull that acts upon an object as a result of that objects interactions with its surroundings

magnetic force - attraction or repulsion that arises between electrically charged particles because of their motion

attract - when an object is pulled in by the magnet's magnetic field

repel - when magnetic fields push each other away.