

Science Knowledge Organiser

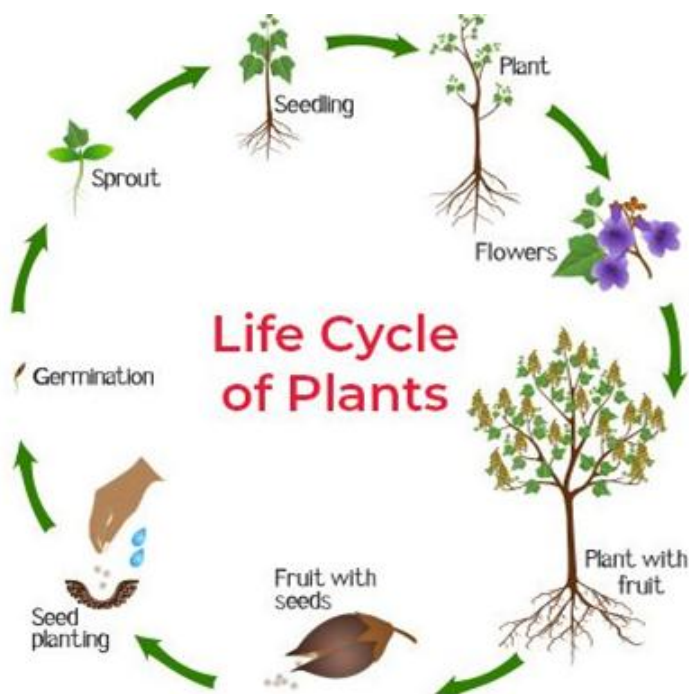
Year 3 Spring (ii)

How can we use magnets?

Substantive Knowledge- Horseshoe magnets are stronger than ring and bar magnets but electromagnets are the strongest. Magnets are used for televisions, microwaves and computers.

Pre-teach opportunity- can you do this?

How is water transported in plants?

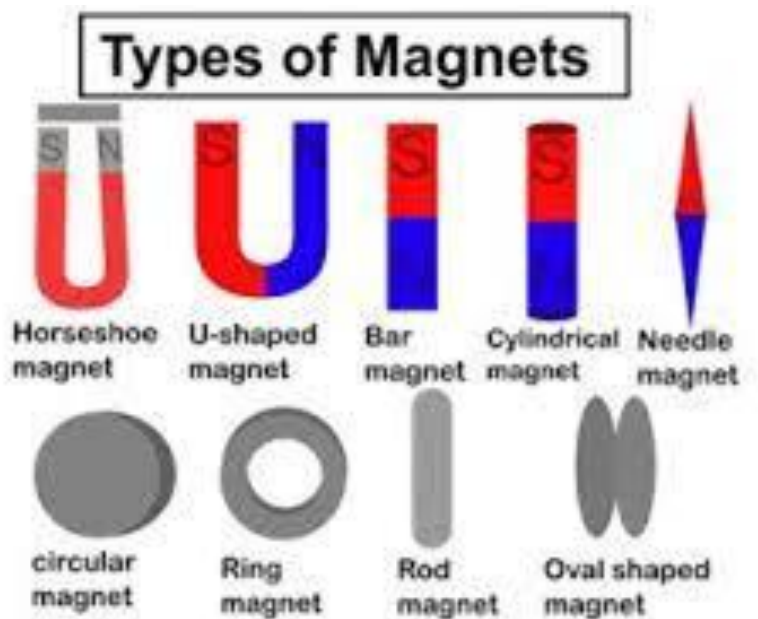


Disciplinary Knowledge – How will we learn?

- 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

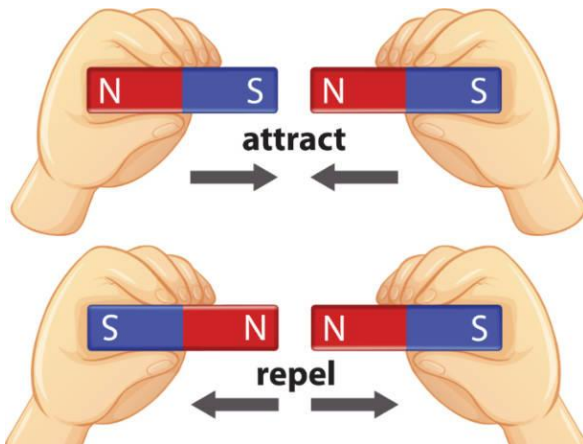


Horseshoe magnets are stronger than ring and bar magnets but electromagnets are the strongest.

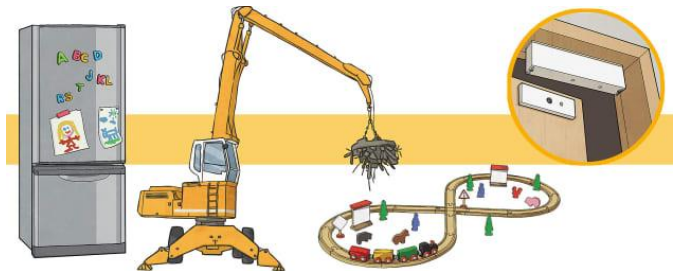
Magnets are used for televisions, microwaves and computers.

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 know that magnetic forces can act without direct contact, unlike most forces, where direct contact is necessary (e.g. opening a door).



To know and explain the behaviour and everyday uses of different magnets (e.g. bar, ring).



To know magnets have two poles



Prediction:

Result:



Prediction:

Result:



Prediction:

Result:

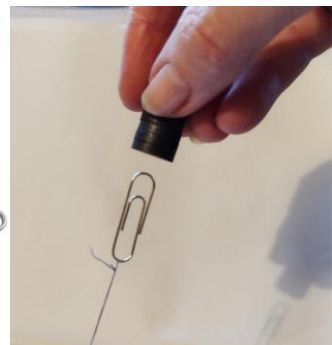


Prediction:

Result:

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

Describe the process within investigative study related to magnet strength compared to size and friction.



Core Vocabulary

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

Electromagnets – A type of magnet where the magnetic field is produced by an electric current.

Direct contact – Objects are touching.