Year 3: Forces and Magnets
Knowledge Organiser

Careers connected to this unit: mechanical engineer, maglev engineer, train driver, product designer

PHYS

Lesson Sequence

1. Explore contact and non-contact forces

2. Investigate how things move on different surfaces

3. Explore different types of magnets

4. Explore everyday objects that are magnetic

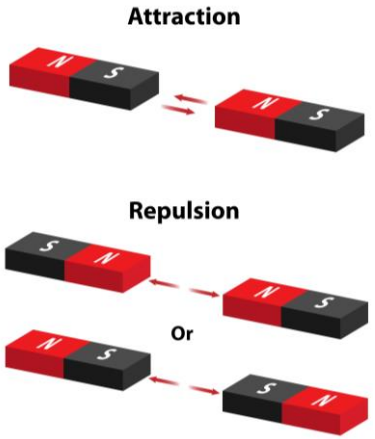
5. Understand that magnetic forces can act at a distance

6. Explore the everyday uses of magnets

Forces

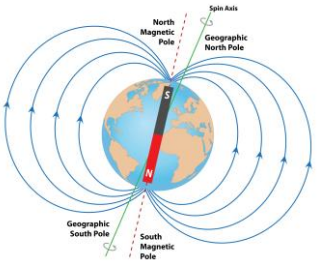
- Forces are pushes and pulls
- Forces cause things to move, or to stop moving
- Forces can be contact (friction) or non-contact (gravity, magnetism)

Magnetic Forces



Magnetic Metals

Magnetism



- Magnets are made of metal or rock
- They have a magnetic field around them which attracts magnetic materials, pulling them towards the magnet
- All magnets have two poles: north and south
- The Earth also has a magnetic field

Friction

- 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.
- The rougher the surface, the more friction it creates.