Knowledge Organiser Science Year 3 Autumn *Forces and magnets*



Prior knowledge

Year 1

- Describe the simple properties of a variety of everyday materials.
- Compare and group together a variety of everyday materials based on their properties.

Year 2

Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Knowledge and skills covered



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- Children will know some examples of contact and non-contact forces.
- Children will recognise the effects and uses of forces.
- Children will interpret how and why things move differently on different surfaces.
- Children will describe the effects of magnets.
- □ Children will compare the properties of different types of magnets.
- Children will explain the uses of magnets.



Scientific skills developed in this topic



- □ To label a diagram using arrows and scientific vocabulary.
- □ To write a scientific conclusion identifying cause and effect.
- □ To plan an investigation using variables.
- □ To write a method.
- To display data using a bar chart.
- To research the uses of magnets.

Key words



Contact force: A force caused by contact between two surfaces; when two surfaces touch. **Conclusion:** A summary of what happened, using evidence and scientific knowledge. **Friction:** A force between two surfaces in contact that opposes motion. **Variable:** Something that can change and cause an effect.

South Pole: The point in the southern hemisphere about which the Earth rotates. **Force:** A push, pull, twist or turn caused when two objects make contact or interact with each other.

Attract: To pull towards.

Compass: A device that aids navigation by pointing to Earth's North and South poles. **Contact:** Touching.

Iron: A metal that can be made into a magnet.

Magnet: An object that has a magnetic force around it. It attracts magnetic materials, e.g. iron.

Magnetic material: A material that is attracted to a magnet.

Magnetic North: The direction of the Earth's magnetic North pole.

Magnetism: A non contact force coming from a magnet.

Non-contact force: A force that acts at a distance. It does not need to touch an object to work, e.g. a magnetic force.

Non-magnetic: A material that is not attracted to a magnet.

North pole: The end of a magnet that attracts the south pole of another magnet.

Pole: The area of a magnet where the magnetic force is strongest.

Prediction: What you think might happen in a scientific test.

Repel: To push away.

South pole: The end of a magnet that attracts the north pole of another magnet.