

FIFTH AND SIXTH CLASSES – MAGNETISM & ELECTRICITY

Teacher Guidelines:

- Pp. 96-106
- *Exemplar 4 p42*
- Heat - page 129
- Materials and Change - page 123

Linkage:

- Materials - Properties and characteristics
- Light
- Science and the environment

Integration:

- Oral Language Development – English and Gaeilge
- SPHE - Safety
- History

FIFTH AND SIXTH CLASSES – MAGNETISM & ELECTRICITY

Content Objective:

- **LEARN THAT MAGNETS CAN PUSH OR PULL MAGNETIC MATERIALS.**

Some suggested activities:

- Revise poles and their effects, relationship with compasses, magnets on Magnetic Field Window.

FIFTH AND SIXTH CLASSES – MAGNETISM & ELECTRICITY

Content Objective:

- INVESTIGATE HOW MAGNETS MAY BE MADE**

Stroking a piece of iron or steel with a magnet

Passing electricity through a coil around a piece of iron or steel

(electromagnet)

Some suggested activities:

- Refer to and build on activities completed in third and fourth class.
- How can I make an electromagnet, Exemplar 28, p104. Teacher Guidelines

Some suggested investigations:

- How can I make the electromagnet stronger?

FIFTH AND SIXTH CLASSES – MAGNETISM AND ELECTRICITY

Content Objective:

- EXPLORE THE USE OF MAGNETS TO LIFT AND HOLD OBJECTS**

How magnets can be used in cranes, door catches.

How magnets may be used to sort materials.

Some suggested activities:

- Separate materials using magnets e.g. ball bearings and marbles, nails and sand. What else could be separated using magnets?

Some suggested designing and making:

- A crane that uses an electromagnet

FIFTH AND SIXTH CLASSES – MAGNETISM AND ELECTRICITY

Content Objective:

- LEARN ABOUT ELECTRICAL ENERGY**

Some suggested activities:

- Refer to Science Teacher Guidelines p 98.

FIFTH AND SIXTH CLASSES – MAGNETISM AND ELECTRICITY

Content Objective:

- **INVESTIGATE CURRENT ELECTRICITY BY CONSTRUCTING SIMPLE CIRCUITS.**

Use wire, bulbs, motors and batteries

Use more than one bulb in a circuit

Use more than one battery in a circuit

Experiment with simple switches

Design and make a set of traffic lights using a simple circuit and switch

Some suggested activities:

- Refer to and build on activities for third and fourth class.
- Use circuit with motor to spin cardboard disk with the colours of the spectrum– to illustrate the mixing of light.

Some suggested investigations:

- Does the length, thickness or type of wire effect the brightness of the bulb?
- Do switches have to be made from magnetic materials?

Some suggested designing and making:

- Traffic lights
- Buzz off game
- Burglar alarm (pressure switch)
- Quiz board
- Tilt switch

FIFTH AND SIXTH CLASSES – MAGNETISM AND ELECTRICITY

Content Objective:

- **BECOME AWARE OF HOW SOME COMMON ELECTRICAL APPLIANCES WORK.**
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Some suggested activities:

- Discuss and examine what is inside a torch. What is the function of each part? Trace the path of the electricity through the bulb.

Some suggested designing and making:

- Make a torch using a plastic bottle as the body and kitchen foil as the reflector.

FIFTH AND SIXTH CLASSES – MAGNETISM AND ELECTRICITY

Content Objective:

- **BECOME AWARE OF AND UNDERSTAND THE DANGERS OF ELECTRICITY**

Dangers of mains electricity in the home and at work

The importance of fuses and circuit breakers for safety.

Some suggested activities:

- Refer to activities for previous content objective.
- Teacher demonstration of how fuse works with steel wool.
- Location of circuit breaker board in school.
- See also Exemplar 5, p. 43 – Unit of work on Electricity.