

# 15. Magnetism and Static Electricity

**Classroom Activity:** Design and construct a system that uses magnetic force to move an object.

The topic of magnetism is no longer explicitly addressed in the revised elementary science and technology curriculum. This activity has now been categorized as OTHER

This task addresses the following learnings:

- Demonstrate an understanding of materials that can be charged or magnetized.
- Identify uses for magnets.
- Give examples of static electrical charges that are found in the home and school.
- Predict, verify and describe the difference between two charged objects.

## Assessment Categories:

- Knowledge and Understanding
- Communication
- Application

**Type of Activity:** Classroom (individual or small groups)

**Preparation:** (approx. 60 minutes)

Procuring materials

Time needed to complete task: 180 minutes

## Materials and Resources for Teachers:

information on magnets and magnetism from the Teacher's Guide

metal and non-metal objects iron filings

## Materials and Resources for Students:

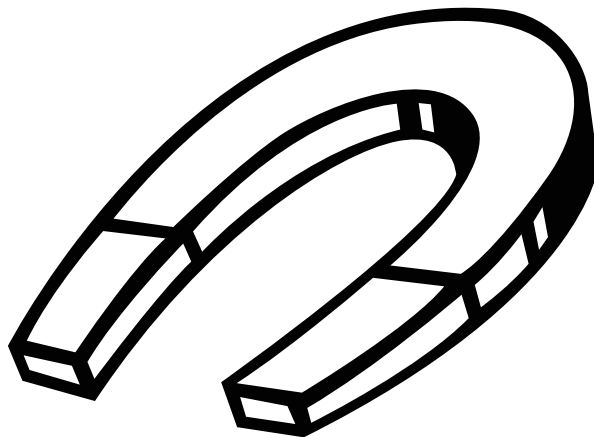
Materials for projects obtained from home/school

## Activity Description:

Explain the theories behind magnetism and conduct demonstrations to give students an understanding of magnetic and charged materials.

As a class discuss:

- uses for magnets



- Examples of static electricity at school and at home

Summarize the results on a chart or the blackboard

Set the task: build a system that uses magnetic force to move an object. Suggest to the students that they may create games, toys or duplicate everyday objects.

The students are instructed to plan a system on paper and then discuss it with their peers, the EIR and the teacher. The plan may be modified or improved. Once a design is finalized, they build their system using materials from school and home. Students will present their completed project to the class.

## Tips:

- The engineer and teacher should circulate to facilitate learning and to assist with construction.

## Grade Extensions:

This task can be modified and used for:

Grade 9-12 Physics by demonstrating magnetic levitation