



Written Language:

Storing knowledge

Investigating paper properties / Teachers notes

Focus

This activity introduces students to the properties of paper and requires them to plan and carry out their own scientific enquiry to test the properties of different types of paper.

Objectives

Students will:

- learn about the properties of paper
- carry out a scientific enquiry to test the properties of different types of paper.

Outcomes

All students will:

- carry out a scientific enquiry.

Most students will also:

- be able to plan most of the scientific enquiry themselves with a little help
- identify the properties of different types of paper.

Some students will also:

- plan their and carry out their own scientific enquiry with no help
- be able to identify the properties of different types of paper and explain why their properties are different.

Equipment

- 250ml beakers.
- 10ml measuring cylinders.
- 250ml measuring cylinders.
- Dropping pipettes.
- Elastic bands.
- Tape.
- Retort stands, bosses and clamps.
- Petri dishes.
- Worksheet: *Investigating paper properties* (1 copy per student).

- Pencils.
- Rulers.
- Stop clocks.
- Hole punch.
- 10g masses with hanger.
- Scissors.
- A selection of different types of paper, such as, photocopy paper, tissue paper, paper towels, exercise book paper, grease proof paper, sugar paper.

Running the activity

Ask the students to list four things they use paper for. What properties do the different papers need for those tasks? For example what properties would they want for a paper towel or writing paper or grease proof paper? Draw out three main properties absorption, strength and water resistance. Give the students the *Investigating Paper Properties* worksheet. Introduce the equipment they can use. Emphasise the things to think about and how they are going to communicate the outcomes of their investigations. You could brainstorm some ideas with regard to fairness, safety, accuracy, precision and reliability.

Each group should communicate the outcomes of their investigations through an exhibition stand. You may choose a different method of communication depending upon your personal aims and objectives, resources available or the group with which are working.