Preparatory activity (optional)

1-2 hours

Children set up a test and observe plant growth in different substances. This is an optional activity that needs to done at least three weeks in advance of the other activities. alternatively, appropriate data is provided for children to interpret.

OBJECTIVES

- Y3 Explore the requirements of plants for life and growth (air, light, water, nutrients from the soil and room to grow).
- Set up simple practical enquiries, comparative and fair tests.

APPROXIMATE DURATION

1-2 hours (plus 15 minutes observation time per week for 3 weeks.)

RESOURCES

(Per group of 4 children unless otherwise stated)

- Activity sheet A-B (per child)
- 3 different plant growing substances, e.g. compost, clay, sand or 3 types of soil, e.g. sandy soil, clay soil or loam
- 3 small plant pots (or yoghurt pots)
- 3 equal sized seedlings, e.g. radish or sunflower
- *or* Activity sheet C-D (per child)

ADVANCE PREPARATION

This should be set up at least three weeks before starting the activities 1-4. Activity sheet 1c has been provided as an alternative route into the topic.

INTRODUCING THE ACTIVITY

Explain to the children that they are going to compare the growth of plants in different substances. The investigation has already been planned, so the children are going to carry out the activity, interpret the results and provide possible explanations for them.

ACTIVITY

The children use the investigation framework provided (Activity sheet A) to set up a fair experiment to compare plant growth in different soils. Discuss the sheet, explaining the investigation process. Start with the investigation question: 'Which soil is best for plant growth?' which the children need to complete the appropriate box. They then need to decide what they will change (the soil), and what they will measure (the height of the plant).

Next they need to consider what they will keep the same to make it a fair test (amount of soil, the times and measurements of watering, etc.) Following this, the children complete the diagram and set up three parallel investigations. After three weeks, they draw a conclusion as to the best type of soil for plant growth.

Note : If you are unable to complete this activity, the children could use Activity sheets C-D to plan an investigation and draw conclusions from the data provided. They answer questions about predictions, fair tests, graphic evidence and accuracy, and reliability.

PLENARY

Discuss the children's responses and ask them what they think makes certain soils better for plant growth than others, e.g. permeability, particle size, different nutrients/minerals in the soil, etc.