

Lower Key Stage Two Working Scientifically Overview

Asking Questions and Carrying Out Fair and Comparative Tests

Asking relevant questions and using different types of scientific enquiries to answer them. Setting up simple practical enquiries, comparative and fair tests.

Children can:

- a start to raise their own relevant questions about the world around them in response to a range of scientific experiences;
- b start to make their own decisions about the most appropriate type of scientific enquiry they might use to answer questions;
- c recognise when a fair test is necessary;
- d help decide how to set up a fair test, making decisions about what observations to make, how long to make them for and the type of simple equipment that might be used;
- e set up and carry out simple comparative and fair tests.

Observing and Measuring Changes

Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.

Children can:

- a make systematic and careful observations;
- b observe changes over time;
- c use a range of equipment, including thermometers and data loggers;
- d ask their own questions about what they observe;
- e where appropriate, take accurate measurements using standard units using a range of equipment

Identifying, Classifying, Recording and Presenting Data

Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables.

Children can:

- a talk about criteria for grouping, sorting and classifying;
- b group and classify things;
- c collect data from their own observations and measurements;
- d present data in a variety of ways to help in answering questions;
- e use, read and spell scientific vocabulary correctly and with confidence, using their growing word reading and spelling knowledge;
- f record findings using scientific language, drawings, labelled diagrams, keys, bar charts and tables

Drawing Conclusions, Noticing Patterns and Presenting Findings

Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions.

Children can:

- a draw simple conclusions from their results;
- b make predictions;
- c suggest improvements to investigations;
- d raise further questions which could be investigated;
- e first talk about, and then go on to write about, what they have found out;
- f report and present their results and conclusions to others in written and oral forms with increasing confidence.

Using Scientific Evidence and Secondary Sources of Information

Identifying differences, similarities or changes related to simple scientific ideas and processes. Using straightforward scientific evidence to answer questions or to support their findings.

Children can:

- a make links between their own science results and other scientific evidence;
- b use straightforward scientific evidence to answer questions or support their findings;
- c identify similarities, differences, patterns and changes relating to simple scientific ideas and processes;
- d recognise when and how secondary sources might help them to answer questions that cannot be answered through practical investigations.