



- Experience different scientific processes
- Notice how things work / what something is
- Notice change, similarities and differences
- Use observation equipment (magnifying glasses, microscopes) & own senses
- Observe carefully and systematically over different lengths of time
- Adjust observation period or frequency (observations over time)



- Compare and find similarities and differences
- Use classification sheets to identify characteristics
- Sort, using sorting rings, tables, Venn and Carroll diagrams
- Test/ investigate, in order to classify or identify



- Measure length, weight, time, temp, capacity
- Use equipment – e.g. stopwatch, ruler, thermometer, measuring jugs, tape measure, trundle wheel, force meter, amp meter
- Use standard/ non-standard units of measure
- Compare measures – e.g. smaller/larger, hotter/colder, further/shorter
- Repeat readings (fair), increase sample size (pattern).



- Observe over time testing - how things change over minutes, hours, days, months
- Comparative and fair testing
- Pattern seeking testing
- Identify and Classify testing
- Understand variables – e.g. those that are controlled, changed, measured
- Use first results to extend enquiry with further questions or predict what might happen



- Record observations through photographs, videos, drawings, labelled diagrams, writing
- Collect and represent data - e.g. tables/ pictograms, tally charts, block graphs, bar charts, line graphs, scatter graphs, classification keys
- Present the same data in different ways



- Explain findings – what the data shows, patterns/ causal relationships, comparative statements / anomalies
- Conclude/ answer questions using evidence - observations, measurements, data, reading
- Communicate answers orally/written, using scientific vocabulary/ illustrations
- Evaluate test itself – control of variables/ precision of measurements/ limitations of test



- Read stories, linked to science units, to contextualise learning
- Read information texts to reinforce substantive knowledge taught
- Research secondary sources to answer things that can't be worked out with practical work
- Read classification sheets, completed data sets, scientific diagrams/ models