

Working Scientifically Progression Map



| | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|-----------------------------|---|---|---|---|---|
| Planning | <ul style="list-style-type: none"> • Having their own ideas– thinking of ideas; finding ways to solve problems; finding new ways to do things • Making predictions • Planning making decisions about how to solve a problem and reach a goal | <ul style="list-style-type: none"> • Ask relevant questions when prompted • Set up simple and practical enquiries, comparative and fair tests • Set up comparative tests | <ul style="list-style-type: none"> • Ask relevant questions • Plan different types of scientific enquiries to answer questions • Set up simple and practical enquiries, comparative and fair tests | <ul style="list-style-type: none"> • With prompting, plan different types of scientific enquiries to answer questions • With prompting, recognise and control variables where necessary | <ul style="list-style-type: none"> • Plan different types of scientific enquiries to answer questions • Recognise and control variables where necessary |
| Conducting Experiments | <ul style="list-style-type: none"> • Testing their ideas • Children use everyday language as they explore to talk about size, weight, capacity. They explore characteristics of everyday objects and shapes • Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. | <ul style="list-style-type: none"> • Make systematic observations, using simple equipment <p>Use standard units when taking measurements</p> | <ul style="list-style-type: none"> • Make systematic and careful observations using a range of equipment, including thermometers and data loggers • Take accurate measurements using standard units, where appropriate | <ul style="list-style-type: none"> • Select, with prompting, and use appropriate equipment to take readings • Take precise measurements using standard units | <ul style="list-style-type: none"> • Take measurements using a range of scientific equipment • Take measurements with increasing accuracy and precision • Take repeat readings when appropriate |
| Recording Evidence | <ul style="list-style-type: none"> • Developing ideas of grouping , sequencing, cause and effect • Children represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories. | <ul style="list-style-type: none"> • Record findings in various ways • With prompting, suggest how findings may be tabulated • With prompting, use various ways of recording, grouping and displaying evidence | <ul style="list-style-type: none"> • Record findings using simple scientific language, drawings and labelled diagrams • Record findings using keys, bar charts, and tables • Gather, record, classify and present data in a variety of ways to help to answer questions | <ul style="list-style-type: none"> • Record data using labelled diagrams, keys, tables and charts • Use line graphs to record data and explain the events shown by each section of the line graph | <ul style="list-style-type: none"> • Record data and results of increasing complexity using scientific diagrams and labels • Record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables and bar charts • Record data and results of increasing complexity using line graphs |
| Reporting Findings | <ul style="list-style-type: none"> • Making links and noticing patterns • <u>Speaking</u>: Uses talk to organise, sequence and clarify thinking and ideas • Gives meaning to marks they make as the draw, write and paint • Children can make observations about plants and animals and explain why some things occur and talk about changes. | <ul style="list-style-type: none"> • With prompting, suggest conclusions from enquiries • Suggest how findings could be reported | <ul style="list-style-type: none"> • Report on findings from enquiries, including oral and written explanations, of results and conclusions • Report on findings from enquiries using displays or presentations | <ul style="list-style-type: none"> • Report and present findings from enquiries, including conclusions and, with prompting, suggest causal relationships • With support, present findings from enquiries orally and in writing | <ul style="list-style-type: none"> • Report and present findings from enquiries, including conclusions and causal relationships • Report and presents findings from enquiries in oral and written forms such as displays and other presentation • Report and present findings from enquiries, including explanations of, and degree of, trust in results |
| Conclusions and Predictions | <ul style="list-style-type: none"> • Checking how well their activities are going • Changing strategy as needed • Reviewing how well the approach worked • <u>Understanding</u>: Listens and responds to ideas expressed by others • Children can discuss similarities and differences between living things, objects and materials. | <ul style="list-style-type: none"> • Suggest possible improvements or further questions to investigate | <ul style="list-style-type: none"> • Identify differences, similarities or changes related to simple scientific ideas and processes • Use straightforward scientific evidence to answer questions or to support their findings • Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions | <ul style="list-style-type: none"> • Make predictions based on previous scientific knowledge. • Use results to draw conclusions and make suggestions for further questions to be investigated. • Suggest further comparative or fair tests | <ul style="list-style-type: none"> • Identify scientific evidence that has been used to support or refute ideas or arguments • Use test results to make predictions to set up further comparative and fair tests |