Grange Moor Primary School

Progression of skills – Science

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|  | Planning and Communication and Sources | Enquiring and Testing and Obtaining and Presenting Evidence | Observing and Recording | Considering Evidence and Evaluating |
| Y1 | * draw simple pictures * talk about what they see and do * use simple charts to communicate findings identify key features * ask questions | * test ideas suggested to them * say what they think will happen * use first hand experiences to answer questions * begin to compare some living things | * make observations using appropriate senses * record observations * communicate observations orally, in drawing, labelling, simple writing and using ICT | * make simple comparisons and groupings * say what has happened * say whether what has happened was what they expected |
| Y2 | * describe their observations using some scientific vocabulary * use a range of simple texts to find information * suggest how to find things out * identify key features * ask questions | * use simple equipment provided to aid observation * compare objects, living things or events * make observations relevant to their task * begin to recognise when a test or comparison is unfair * use first hand experiences to answer questions | * put forward own ideas about how to find the answers to questions * recognise the need to collect data to answer questions * carry out a fair test with support * recognise and explain why it is a fair test with help, pupil * begin to realise that scientific ideas are based on evidence | * say what has happened * say what their observations show and whether it was what they expected * begin to draw simple conclusions and explain what they did * begin to suggest improvements in their work |
| Y3 | * use pictures, writing, diagrams and tables as directed by their teacher * use simple texts, directed by the teacher, to find information * record their observations in written, pictorial and diagrammatic forms * select the appropriate format to record their observations | * put forward own ideas about how to find the answers to questions * recognise the need to collect data to answer questions * carry out a fair test with support * recognise and explain why it is a fair test * with help, pupils begin to realise that scientific ideas are based on evidence | * make relevant observations * measure using given equipment * select equipment from a limited range | * begin to offer explanations for what they see and communicate in a scientific way what they have found out * begin to identify patterns in recorded measurements * suggest improvements in their work * evaluate their findings |
| Y4 | * record observations, comparisons and measurements using tables and bar charts * begin to plot points to form a simple graph * use graphs to point out and interpret patterns in their data * select information from a range of sources provided for them | * with help, pupils begin to realise that scientific ideas are based on evidence * show in the way they perform their tasks how to vary one factor while keeping others the same * decide on an appropriate approach in their own investigations to answer questions * describe which factors they are varying and which will remain the same and say why | * carry out measurement accurately * make a series of observations, comparisons and measurements * select and use suitable equipment * make a series of observations and measurements adequate for the task | * predict outcomes using previous experience and knowledge and compare with actual results * begin to relate their conclusions to scientific knowledge and understanding * suggest improvements in their work, giving reasons |
| Y5 | * record observations systematically * use appropriate scientific language and conventions to communicate quantitative and qualitative data * select a range of appropriate sources of information including books and the internet | * use previous knowledge and experience combined with experimental evidence to provide scientific explanations * recognise the key factors to be considered in carrying out a fair test | * make a series of observations, comparisons and measurements with increasing precision * select apparatus for a range of tasks * plan to use apparatus effectively * begin to make repeat observations and measurements systematically | * make predictions based on their scientific knowledge and understanding * draw conclusions that are consistent with the evidence * relate evidence to scientific knowledge and understanding * offer simple explanations for any differences in their results * make practical suggestions about how their working methods could be improved |
| Y6 | * choose scales for graphs which show data and features * effectively identify measurements and observations which do not fit into the main pattern * begin to explain anomalous data * use appropriate ways to communicate quantitative data using scientific language | * describe evidence for a scientific idea * use scientific knowledge to identify an approach for an investigation * explain how the interpretation leads to new ideas | * measure quantities with precision using fine – scale divisions * select and use information effectively * make enough measurements or observations for the required task | * make reasoned suggestions on how to improve working methods * show how interpretation of evidence leads to new ideas explain conclusions, showing understanding of scientific ideas |