Grange Moor Primary School

Progression of skills – Science

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 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
 |