# Skelton School
# Science - Progression

| | | Explaining Science | Classification | Designing Experiments | Data, Tables and Graphs | Making Conclusions |
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| Nursery and Reception | EYFS | • Remember simple science facts within an activity.<br>• Use science words during an activity.<br>• Describe what is happening using words & actions<br>• Match appropriate pictures & words to label diagrams<br>• Begin to use science facts to explain my answer | • Sort using pictures or instructions.<br>• Group by familiar features.<br>• Use senses to identify properties of materials. | • Use experience to suggest what might happen next.<br>• Use a range of everyday items to investigate.<br>• Begin to know what it means to investigate safely.<br>• Use experience to suggest an idea to investigate.<br>• Be aware that variables change in an investigation.<br>• Follow short demo and spoken instructions with multiple parts. | • Position numbers on a number track up to 10 and beyond.<br>• Use non-standard units to measure and compare.<br>• Use a simple table by recording in pictures and words.<br>• Add to pictograms with help.<br>• Represent groups using resources, marks and numbers.<br>• Compare groups using comparative language. | • Recognise, create and describe simple patterns.<br>• Begin to use more or less to compare observations.<br>• Talk about changes through senses during activities.<br>• Explore 'what if' questions through talk and play. |
| Year 1 | KS1 | • Remember simple science facts within a topic.<br>• Use and remember relevant science words during an activity.<br>• Describe what is happening using science.<br>• Add science word labels to diagrams.<br>• Select science facts to use in an answer. | • Sort by using simple yes and no statements.<br>• Group by difference or similarity.<br>• Link properties of materials to a focus. | • Suggest what might happen in an investigation.<br>• Use a limited range of science equipment correctly.<br>• Notice risk and can list some common dangers.<br>• Suggest an idea to investigate and ask questions.<br>• Begin to identify the cause variable in an investigation.<br>• Follow short demonstration, spoken and picture instructions. | • Position numbers on a number track to 20 and beyond.<br>• Measure in non-standard and compare.<br>• Use a simple table by recording in words and numbers.<br>• Use a frame to add to pictograms and block charts.<br>• Add to block charts by counting up. | • Recognise, create and describe simple number patterns.<br>• Use more or less to compare numbers.<br>• Describe changes that happen.<br>• Explore different ways to do things. |
| Year 2 | | • Remember a range of science facts within a topic.<br>• Use and remember science words over time.<br>• Use science to recall and describe what has been seen.<br>• Add science labels and information to diagrams.<br>• Select relevant science facts within an answer. | • Use simple spider keys with obvious differences.<br>• Group by difference, similarity or change.<br>• Link properties of materials to an application. | • Suggest what might happen (simple prediction).<br>• Use a range of science equipment correctly.<br>• Notice risk in an investigation and know common dangers.<br>• Suggest an idea to investigate from observations.<br>• Identify the cause variable correctly.<br>• Follow short, spoken or written instructions in order. | • Measure labelled divisions on a number line.<br>• Measure standard units – length, mass, capacity.<br>• Use a simple table recording in words and numbers.<br>• Construct simple pictograms and block charts.<br>• Use the scale on a block chart to add the correct blocks. | • Describe simple features and patterns in data and charts.<br>• Notice obvious differences ins sets of numbers.<br>• Describe the changes that have happened.<br>• Suggest a different way to do things with help. |
| Year 3 | Lower KS2 | • Use pre-learning to build connected knowledge.<br>• Remember science words previously used.<br>• Begin to use science models to describe.<br>• Add science labels and information to diagrams. | • Use large spider keys with obvious differences.<br>• Create groups for sorting using own created criteria.<br>• Combine properties required for an application. | • Predict cause and effect.<br>• Select suitable equipment for a task.<br>• Predict obvious risk and act on safety suggestions.<br>• Identify cause and effect in an investigation.<br>• Suggest a suitable data range for a cause variable. | • Measure unlabelled divisions on a number line.<br>• Measure and compare values in standard units.<br>• Use a frame to construct a simple table of results.<br>• Use a frame to construct a bar chart.<br>• Draw bars on a bar chart. | • Describe simple patterns in data, charts and graphs.<br>• Notice subtle differences in sets of numbers.<br>• Describe results by linking cause and effect.<br>• Suggest improvements to methods. |

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| | | • Link relevant facts together in an answer. | | • Follow written instructions and write a simple method. | | |
| Year 4 | | • Connect knowledge within a topic and from pre-learning.<br>• Remember and use science words correctly.<br>• Use science models to describe.<br>• Annotate diagrams to help describe and explain.<br>• Recall related facts together into points. | • Use a range of spider keys with fine differences.<br>• Create appropriate groups for sorting using own created criteria.<br>• Describe combined properties required for an application. | • Predict a trend.<br>• Select and use suitable equipment for a task.<br>• Predict obvious risk and work safely.<br>• Plan investigations by selecting variables to change.<br>• Suggest a data range and interval for a cause variable.<br>• Design and write a simple ordered method from a plan. | • Measure unmarked divisions on a number line.<br>• Measure and convert values in standard units.<br>• Construct a simple table to compare cause and effect.<br>• Construct bar charts correctly.<br>• Plot coordinates on a graph in the first quadrant. | • Describe simple patterns, trends and relationships in data.<br>• See differences and errors reported in data.<br>• Describe trends and begin to use science models to explain.<br>• Suggest sensible improvements to methods. |
| Year 5 | Upper KS2 | • Connect knowledge between topics and from pre-learning.<br>• Begin to use complex science vocab clearly.<br>• Use science models to describe and begin to explain why and how.<br>• Begin to create and annotate own 2D/3D diagrams.<br>• Select and prioritise facts to create an argument or answer. | • Construct spider keys and use number keys.<br>• Group and sub-group through observation using own criteria.<br>• Explain how properties suit an application. | • Use knowledge and understanding to explain a relationship.<br>• Select equipment with the right scale for the task.<br>• Begin to plan to minimise risk and work safely.<br>• Plan investigations and ensure controlled variables are kept the same.<br>• Suggest a data range, interval and sufficient readings.<br>• Design and write an ordered method with controlled variables. | • Measure divisions on a number line past zero.<br>• Measure and convert values in standard units.<br>• Use a frame to construct a complex table of results.<br>• Use a frame to construct a graph and can scales axis.<br>• Join plotted coordinates with straight lines. | • Describe patterns, trends and relationships in data.<br>• Spot anomalous data that doesn't fit a pattern.<br>• Use data in conclusions and use science models to explain.<br>• Identify strengths, weaknesses and improvements. |
| Year 6 | | • Connect knowledge across science and the wider curriculum.<br>• Use complex science words correctly.<br>• Use science models to describe and explain.<br>• Create and annotate own 2D/3D diagrams.<br>• Present a clear and logical argument and answer. | • Construct both spider and number keys.<br>• Group and sub-group by fine observation using own criteria.<br>• Explain the science behind a range of properties. | • Use knowledge and understanding to make a hypothesis.<br>• Select and use equipment with the right scale for a task.<br>• Plan to minimise risk and describe the safe use of equipment.<br>• Plan reliable investigations.<br>• Plan to collect repeat readings and calculate the mean.<br>• Design and write an ordered reliable method. | • Scale up and down a number line and decide on limits.<br>• Measure and calculate with standard units.<br>• Construct a complex table to show repeated data.<br>• Construct graphs and can scale at least one axis independently.<br>• Plot mean values and draw a trend line for linear data. | • Describe changing patterns, trends and relationships.<br>• Spot anomalous data and explain from the method.<br>• Use primary and secondary data in conclusions.<br>• Suggest limitations and practical improvements. |