



Hunton

C of E Primary School

Life in all its fullness - John 10:10

Progression of Skills in Science

| Topics | | | | | | | | | |
|--|----------------------------|----------------------------------|--------------------------|----------------------------------|-------------------|----------------------|----------------------------------|---------------------------|-------------------------------------|
| Devas | Bannerman | | | Porteous | | | Borton | | |
| Fantastic Me! - I can name the main parts of my body! - What are our 5 senses? - What part of our body do we use for each sense? - Why is dental hygiene important? - Seasons- Autumn Let's celebrate! Polar Regions - Changing states- freezing and melting - Life cycle of a penguin - Seasons- winter Growing - Investigate different mini-beasts - Life cycle of a butterfly - Where do mini-beasts live? (Make a wormery) - Parts of a plant - What do plants need to grow? - Look at different seeds and grow different plants - Why do we need to have a healthy diet? London Beside the seaside - How can we protect sea creatures? (single use plastic) - What is a circuit? - How can I make a lightbulb work? - Seasons- Summer | Cycle A | | | Cycle A | | | Cycle A | | |
| | Autumn | Spring | Summer | Autumn | Spring | Summer | Autumn | Spring | Summer |
| | The human body | Planting A | Plants | Skeletons | Fossils | Plants A | Forces | Properties of materials | Reproduction A |
| | Seasonal changes | Animals | Planting C | Movement | Soils | Forces | Space | Animals including humans | Reversible and irreversible changes |
| | Materials | Caring for the planet | Growing and cooking | Nutrition and diet | Light | Magnets | Global warming | Life cycles | Plastic pollution |
| | Seasonal changes | Seasonal changes | Seasonal changes | Food waste | | Plants B | | | Reproduction B |
| | | Planting B | | Rocks | | Biodiversity | | | |
| | Cycle B | | | Cycle B | | | Cycle B | | |
| | Autumn | Spring | Summer | Autumn | Spring | Summer | Autumn | Spring | Summer |
| | Animals needs for survival | Plants (light and dark) | Plants (bulbs and seeds) | Group and classify living things | Sound | Data collection C | Living things and their habitats | Light | Variation |
| | Humans | Living things and their habitats | Growing up | Data collection B | Data collection B | Habitats | Light pollution | | Adaptations |
| | Materials | | Bulbs and seeds | Data collection A | Electricity | Deforestation | Electricity | The circulatory system | Fossils |
| | Plastic | Light and dark | Growing up | States of matter | Energy | The digestive system | Renewable energy | Diet, drugs and lifestyle | |
| | | | Wildlife | | | Food chains | | | |

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Compassion

Respect

Perseverance



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| Ask questions | | | | | | |
|--|---|---|---|---|---|---|
| Devas | Bannerman | | Porteous | | Borton | |
| 40-60+ months I can ask simple questions. ELG Communication and Language; Listening, Attention and Understanding: <ul style="list-style-type: none"> - Listen attentively and respond to what they hear with relevant questions, comments and actions when being read to and during whole class discussions and small group interactions. - Make comments about what they have heard and ask questions to clarify their understanding. | Year 1 I can ask simple questions and recognise that they can be answered in different ways | Year 2 I can ask simple questions and recognise that they can be answered in different ways. I can communicate my ideas, what I can do and what I can find out in different ways | Year 3 I can ask questions and understand there are different enquiry types I could use to answer them. I can ask questions surrounding patterns I have found in data. | Year 4 I can ask relevant questions and use different types of scientific enquiries to answer them. I can ask questions surrounding patterns I have found in data. | Year 5 I can ask scientific questions and begin to understand which questions would be best suited to each enquiry type. I can observe over time, asking pertinent questions about similarities and differences. | Year 6 I can plan different types of scientific enquiries to answer my own or others' questions, including recognising and controlling variables where necessary I can recognise things change over time, and can ask pertinent questions and suggest reasons for similarities and differences over time |
| Plan | | | | | | |
| Devas | Bannerman | | Porteous | | Borton | |
| 40-60+ months I can say verbally explain what I would like to investigate. I can verbally explain how I might solve a problem. ELG Personal, Social and Emotional Development; Self-Regulation: | Year 1 I can verbally state what I am going to investigate. | Year 2 I can make simple predictions based on a question. I can identify what I will change and keep the same. | Year 3 I can make relevant predictions. I can identify what I will change, observe and keep the same. I can set up simple practical enquiries with support. | Year 4 I can make predictions based on simple scientific knowledge. I can identify what I will change, observe or measure and keep the same. I can set up simple practical enquiries, | Year 5 I can make predictions based on scientific knowledge. I can plan different types of scientific enquiry with support. I can identify the dependent, independent and | Year 6 I can make predictions based on scientific knowledge. I can plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. |

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| <ul style="list-style-type: none"> - Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate. <p>Understanding the World; The Natural World:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals and plants. | | | | comparative and fair tests. | controlled variables when appropriate. | |
| Make observations | | | | | | |
| Devas | Bannerman | | Porteous | | Borton | |
| <p>40-60+ months</p> <p>I can watch something over a short period of time.</p> <p>ELG</p> <p>Understanding the World; People, Culture and Communities:</p> <ul style="list-style-type: none"> - Describe their immediate environment using knowledge from observation, discussion, stories, non-fiction texts and maps. <p>Understanding the World; The Natural World:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals and plants. | <p>Year 1</p> <p>I can observe something closely.</p> | <p>Year 2</p> <p>I can observe something closely using simple equipment.</p> | <p>Year 3</p> <p>I can use scientific equipment to make observations.</p> | <p>Year 4</p> <p>I can make systematic and careful observations.</p> | <p>Year 5</p> <p>I can use a range of scientific equipment to make systematic and careful observations.</p> | <p>Year 6</p> <p>I can use a range of scientific equipment to make systematic and careful observations with increased complexity.</p> |
| Take measurements | | | | | | |
| Devas | Bannerman | | Porteous | | Borton | |
| <p>30-50 months</p> <p>40-60+ months</p> <p>ELG</p> <p>Personal, Social and Emotional Development; Managing Self:</p> | <p>Year 1</p> <p>I can carry out simple tests using non-standard measurements when appropriate.</p> | <p>Year 2</p> <p>I can perform simple tests using standard units when appropriate.</p> | <p>Year 3</p> <p>I can carry out tests and simple experiments and take measurements using standard units.</p> | <p>Year 4</p> <p>I can take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.</p> | <p>Year 5</p> <p>I can take accurate measurements using a range of scientific equipment.</p> | <p>Year 6</p> <p>I can take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking</p> |

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|---|--|--|--|--|---|-----------------------------------|
| <ul style="list-style-type: none"> - Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices. <p>Understanding the World; The Natural World:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals and plants. | | | | | I can start to take repeat readings when appropriate. | repeat readings when appropriate. |
|---|--|--|--|--|---|-----------------------------------|

Gather, record and classify data

| Devas | Bannerman | | Porteous | | Borton | |
|--|---|--|---|---|---|--|
| <p>40-60+ months</p> <p>I can record observations in ways that are important and meaningful to me.</p> <p>ELG</p> <p>Understanding the World; The Natural World:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals and plants. | <p>Year 1</p> <p>I can gather and record simple data.</p> <p>I can use simple scientific language to record my findings with help.</p> <p>I can sort objects and living things into groups based on simple properties.</p> | <p>Year 2</p> <p>I can gather and record data to help in answering questions.</p> <p>I can identify and classify different objects and living things.</p> | <p>Year 3</p> <p>I can gather, record, classify and present data in a variety of ways to help answer questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> | <p>Year 4</p> <p>I can gather, record, classify and present data in a variety of ways to help in answering questions.</p> <p>I can record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables</p> | <p>Year 5</p> <p>I can gather, record and classify data with increasing complexity to help in answering questions.</p> <p>I can record data using scientific diagrams and labels, classification keys, tables, bars and line graphs.</p> <p>I can use test results to set up further comparative and fair tests.</p> | <p>Year 6</p> <p>I can record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.</p> <p>I can use test results to make predictions to set up further comparative and fair tests.</p> |

Present findings

| Devas | Bannerman | | Porteous | | Borton | |
|---------------|-----------|--------|----------|--------|--------|--------|
| 40-60+ months | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |

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| <p>I can record observations in ways that are important and meaningful to me.</p> <p>ELG Understanding the World; The Natural World:</p> <ul style="list-style-type: none"> - Explore the natural world around them, making observations and drawing pictures of animals and plants. | <p>I can explain what I found out to an adult or partner.</p> | <p>I can talk about what I have found out and how I found it out.</p> | <p>I can report on findings from enquiries, including oral and written explanations.</p> | <p>I can report on findings, including oral and written explanations, displays or presentations of results and conclusions.</p> | <p>I can report and present findings from enquiries, including conclusions.</p> <p>I can identify casual relationships in oral and written forms such as displays and other presentations.</p> | <p>I can report and present findings from enquiries, including conclusions and casual relationships.</p> <p>I can use oral and written forms such as displays and other presentations to present findings.</p> |
|---|---|---|--|---|--|--|

Answer questions and make conclusions

| Devas | Bannerman | | Porteous | | Borton | |
|--|---|--|--|---|--|---|
| <p>40-60+ months</p> <p>I can answer simple questions with some support.</p> <p>ELG Communication and Language; Speaking:</p> <ul style="list-style-type: none"> - Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. - Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. | <p>Year 1</p> <p>I can answer simple questions.</p> <p>I can use my observations and ideas to suggest answers to questions</p> | <p>Year 2</p> <p>I can use my observations and ideas to suggest answers to questions.</p> | <p>Year 3</p> <p>I can make simple conclusions.</p> <p>I can use results, findings or observations to answer questions.</p> | <p>Year 4</p> <p>I can use straight-forward scientific evidence to answer questions or to support my findings.</p> <p>I can use results to draw simple conclusions.</p> <p>I can begin to identify differences and similarities or changes related to simple ideas or processes.</p> | <p>Year 5</p> <p>I can use scientific evidence to answer questions.</p> <p>I can make conclusions based on scientific evidence and from my own testing and findings.</p> <p>I can identify differences, similarities or changes related to simple ideas or processes.</p> | <p>Year 6</p> <p>I can use scientific evidence to answer questions.</p> <p>I can make conclusions based on scientific evidence and from my own testing and findings.</p> <p>I can identify scientific evidence that has been used to support or refuse ideas or arguments.</p> |

Evaluate

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|--|-----------|--|---|--|---|---|
| ELG Communication and Language; Speaking: - Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate. | | | Year 3 I can suggest questions for further investigation. | Year 4 I can begin to make predictions for new values, suggest improvements and raise further questions. | Year 5 I can make predictions for new values, suggest improvements and raise further questions. | Year 6 I can use test results to make predictions to set up further comparative and fair tests. I can suggest investigation improvements including accuracy of results. I can provide some simple examples of how to extend an investigation. |

| Progression of Vocabulary- Working Scientifically | | | | | |
|--|--|--|---|---|---|
| KS1 | | LKS2 | | UKS2 | |
| Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Compare Sort and group Similar, different Change Plan What...? How...? Why? Equipment Explore Find out | Investigate Observe Describe Identify Label Measure Record Pattern Predict Explain Notice Same, different What did you find out? | Recognise Prediction (What do you think will happen?) Test Investigation Record Units Table Fair What do we change, what do we keep the same, what are we measuring? Evidence | Gather Record Present Classify Data Practical Comparative Fair test Conclude/conclusions Evaluate Systematic Measurements Bar graph Table Tally | Systematic observations Variables Constants Controlled variables (What do we keep the same?) Independent variable (What do we change?) Dependent variable (What do we measure?) Relationship Analyse Interpret Repeat readings Report and present | Scientific enquiries Hypothesis Degree of trust Accuracy Support Refute Evaluate Justify Scatter graph Categorise Comparative Control Accuracy of results |

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|--|--|--|--|---|--|
| | What happened? Questions Answers Classify | Standard Units Key Conclusion (What have we found out?) | keys Vary/keep the same Scientific evidence Report Similarities/differences | Causal relationship Scientific evidence Line graph | |
|--|--|--|--|---|--|