



# Small Schools Partnership

# Science

## Curriculum Map Document

### Contents

1. Statement of Intent
2. Subject Overview
3. Whole School Long Term Plan
4. Progression of Skills
5. Assessment



## Birdsedge



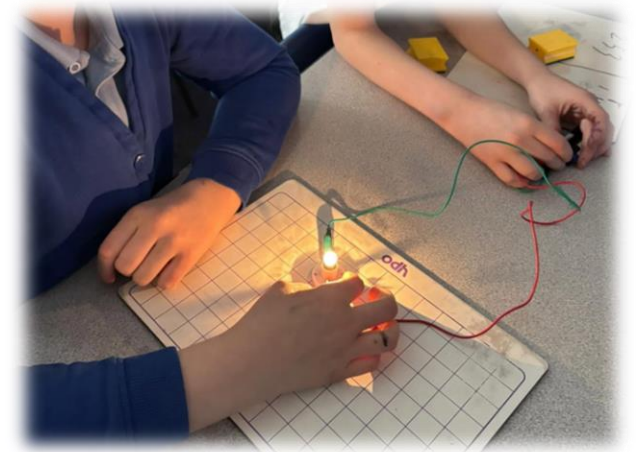
## BEST

# 1. Statement of Intent

In our Small Schools Partnership, our vision is to give children a science curriculum which enables them to confidently explore and discover the world around them, so that they have a deeper understanding of the world we live in. We aim to create fun and stimulating science lessons that nurture children's natural curiosity and their on-going development. We aim to develop within our children; the ability to think and learn independently and raise questions about working scientifically, confidence and competence in a full range of practical skills, excellent scientific knowledge and understanding, the ability to undertake practical work in a variety of contexts- using Outdoor Learning wherever possible, the ability to work collaboratively with others and a passion for Science and its application in past, present and future technologies.

As a school we are acutely aware of the importance of ensuring Science has a prominent position in our curriculum and children follow a clear progression of skills that enable them to become competent and confident scientists. The Science curriculum is arranged in the following areas:

- Planning and Communication and Sources
- Enquiring and Testing
- Observing and Recording
- Considering Evidence and Evaluating



## 2. Science in the Small Schools Partnership an Overview

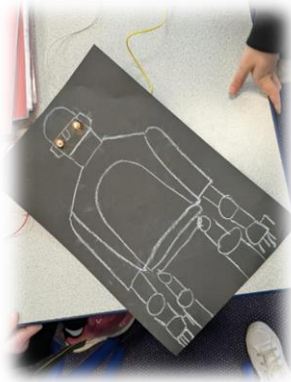
In our Small Schools Partnership we implement a curriculum that is progressive throughout school. We use 'Developing Experts' across school and this provides the structure and skill development for the science curriculum being taught. The Science topics are stand- alone units, but links between the overall class themes are made wherever possible. The units of work from Developing Experts are sometimes supplemented with lessons that draw on children's interests and fascinations and our Forest School lessons also complement our curriculum, enhancing learning in practical meaningful ways including knowledge of the natural world and of the impacts we can have on our environment.

The Science Curriculum is based on a two- year cycle and is taught within 3 mixed aged classes. Whilst Science is not explicitly taught within the foundation stage, children experience Science- based activities through their work on Understanding the World and the wider Early Years Curriculum.

Within Science lessons, Key scientific language is modelled and taught throughout, enabling our children to be familiar with and use vocabulary accurately. We are committed to providing exciting, hands on and practical experiences and children are encouraged to think about their own understanding of the world, to ask questions and to explore ways in which these questions can be answered through investigation. Children are taught how to make predictions, plan investigations, communicate effectively with others, keep tests fair, use equipment safely, measure and record their results and draw conclusions.

In addition to weekly Science lessons, the children also take part in an Annual Science Week, enabling children to immerse themselves with scientific experiences. We also plan visits and enrichment experiences, such as Space Workshops and Science Fairs to enhance our children's learning experience when possible.

The impact of the Science curriculum will be that our pupils are fully equipped with scientific knowledge and understanding ready to take with them once they complete their primary education.





### 3. Whole School Long Term Plan. Grange Moor

| Cycle 1     |                                             |                                                   |                                         |                                              |                                       |                                                                  |
|-------------|---------------------------------------------|---------------------------------------------------|-----------------------------------------|----------------------------------------------|---------------------------------------|------------------------------------------------------------------|
| CLASS       | AUTUMN 1                                    | AUTUMN 2                                          | SPRING ONE                              | SPRING TWO                                   | SUMMER ONE                            | SUMMER TWO                                                       |
| <b>R</b>    | Weather and Seasons                         | Materials                                         | The Senses                              | Food                                         | Forces                                | Plants                                                           |
| <b>Y1/2</b> | Animals including Humans- All About Me (Y1) | Animals, including Humans- All About Animals (Y1) | Animals Including Humans 1- Growth (Y2) | Animals, including Humans 2- Lifecycles (Y2) | Living Things and Their Habitats (Y2) | Living Things and Their Habitats- Habitats Around the World (Y2) |
| <b>Y3/4</b> | Scientific Enquiry (Y3)                     | Electricity (Y4)                                  | States of Matter (Y4)                   | Sound (Y4)                                   | Light (Y3)                            | Rocks (Y3)                                                       |
| <b>Y5/6</b> | Earth and Space                             | Animals, including Humans (Y5)                    | Animals, including Humans (Y6)          | Living Things and Their habitats (Y5)        | Living Things and Their Habitats (Y6) | Evolution and Inheritance (Y6)                                   |

| Cycle 2 |                               |                                     |                                     |                                       |                                                      |                                    |
|---------|-------------------------------|-------------------------------------|-------------------------------------|---------------------------------------|------------------------------------------------------|------------------------------------|
| CLASS   | AUTUMN 1                      | AUTUMN 2                            | SPRING ONE                          | SPRING TWO                            | SUMMER ONE                                           | SUMMER TWO                         |
| R       | Weather and Seasons           | Materials                           | The Senses                          | Food                                  | Forces                                               | Plants                             |
| Y1/2    | Seasonal Changes (Y1)         | Exploring Everyday Materials 1 (Y1) | Exploring Everyday Materials 2 (Y1) | Plants Y1)                            | Uses of Everyday Materials (Y2)                      | Plants (Y2)                        |
| Y3/4    | Animals including Humans (Y3) | Forces and Magnets (Y3)             | Animals including Humans (Y4)       | Living Things and their Habitats (Y4) | Living Things and their Habitats – Conservation (Y4) | Plants (Y3)                        |
| Y5/6    | Electricity (Y6)              | Changes of Materials (Y5)           | Forces (Y5)                         | Properties of Materials (Y5)          | Light (Y6)                                           | Looking After Our Environment (Y6) |



# Whole School Long Term Plan. Birdsedge.

| Cycle 1      |                                             |                                                   |                  |                                       |                                                      |                                |
|--------------|---------------------------------------------|---------------------------------------------------|------------------|---------------------------------------|------------------------------------------------------|--------------------------------|
| CLASS        | AUTUMN 1                                    | AUTUMN 2                                          | SPRING ONE       | SPRING TWO                            | SUMMER ONE                                           | SUMMER TWO                     |
| <b>R/Y1</b>  | Animals including Humans- All About Me (Y1) | Animals, including Humans- All About Animals (Y1) | Plants           | Exploring Everyday Materials 1        | Seasonal Changes                                     | Exploring Everyday Materials 2 |
| <b>Y2/Y3</b> | Living Things and Habitats (Y2)             | Light (Y3)                                        | Rocks (Y3)       | Animals and Skeletons (Y3)            | Forces and Magnets (Y3)                              | Animals Growth and Diet (Y3)   |
| <b>Y4/Y5</b> | Animals, including Humans (Y4)              | Sound (Y4)                                        | Electricity (Y4) | Living Things and their Habitats (Y4) | Living Things and Their Habitats – Conservation (Y4) | States of Matter (Y4)          |

| Cycle 2      |                                          |                                               |                                 |                                |                                                      |                                                                   |
|--------------|------------------------------------------|-----------------------------------------------|---------------------------------|--------------------------------|------------------------------------------------------|-------------------------------------------------------------------|
| CLASS        | AUTUMN 1                                 | AUTUMN 2                                      | SPRING ONE                      | SPRING TWO                     | SUMMER ONE                                           | SUMMER TWO                                                        |
| <b>R/Y1</b>  | Animals including Humans – All about Me  | Animals Including Humans – Growth             | Plants                          | Exploring Everyday Materials 1 | Seasonal Changes – also to be taught across the year | Exploring Everday Materials 2                                     |
| <b>Y2/Y3</b> | Animals Including Humans 1 – Growth (Y2) | Animals Including Humans 2 – Life Cycles (Y2) | Uses of Everyday Materials (Y2) | Plants (Y2)                    | Plants (Y3)                                          | Living Things and their Habitats – Habitats around the World (Y2) |
| <b>Y4/Y5</b> | Forces (Y5)                              | Earth and Space (Y5)                          | Properties of Materials (Y5)    | Changes of Materials (Y5)      | Animals Including Humans (Y5)                        | Living Things in their Habitats (Y5)                              |

## 4. Progression of Skills

|    | Planning and Communication and Sources                                                                                                                                                                                                                                                                                                                | Enquiring and Testing and Obtaining and Presenting Evidence                                                                                                                                                                                                                                                                                                                 | Observing and Recording                                                                                                                                                                                                                                                                                                                                                    | Considering Evidence and Evaluating                                                                                                                                                                                                                                                                    |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Y1 | <ul style="list-style-type: none"> <li>draw simple pictures</li> <li>talk about what they see and do</li> <li>use simple charts to communicate findings identify key features</li> <li>ask questions</li> </ul>                                                                                                                                       | <ul style="list-style-type: none"> <li>test ideas suggested to them</li> <li>say what they think will happen</li> <li>use first hand experiences to answer questions</li> <li>begin to compare some living things</li> </ul>                                                                                                                                                | <ul style="list-style-type: none"> <li>make observations using appropriate senses</li> <li>record observations</li> <li>communicate observations orally, in drawing, labelling, simple writing and using ICT</li> </ul>                                                                                                                                                    | <ul style="list-style-type: none"> <li>make simple comparisons and groupings</li> <li>say what has happened</li> <li>say whether what has happened was what they expected</li> </ul>                                                                                                                   |
| Y2 | <ul style="list-style-type: none"> <li>describe their observations using some scientific vocabulary</li> <li>use a range of simple texts to find information</li> <li>suggest how to find things out</li> <li>identify key features</li> <li>ask questions</li> </ul>                                                                                 | <ul style="list-style-type: none"> <li>use simple equipment provided to aid observation</li> <li>compare objects, living things or events</li> <li>make observations relevant to their task</li> <li>begin to recognise when a test or comparison is unfair</li> <li>use first hand experiences to answer questions</li> </ul>                                              | <ul style="list-style-type: none"> <li>put forward own ideas about how to find the answers to questions</li> <li>recognise the need to collect data to answer questions</li> <li>carry out a fair test with support</li> <li>recognise and explain why it is a fair test with help, pupil</li> <li>begin to realise that scientific ideas are based on evidence</li> </ul> | <ul style="list-style-type: none"> <li>say what has happened</li> <li>say what their observations show and whether it was what they expected</li> <li>begin to draw simple conclusions and explain what they did</li> <li>begin to suggest improvements in their work</li> </ul>                       |
| Y3 | <ul style="list-style-type: none"> <li>use pictures, writing, diagrams and tables as directed by their teacher</li> <li>use simple texts, directed by the teacher, to find information</li> <li>record their observations in written, pictorial and diagrammatic forms</li> <li>select the appropriate format to record their observations</li> </ul> | <ul style="list-style-type: none"> <li>put forward own ideas about how to find the answers to questions</li> <li>recognise the need to collect data to answer questions</li> <li>carry out a fair test with support</li> <li>recognise and explain why it is a fair test</li> <li>with help, pupils begin to realise that scientific ideas are based on evidence</li> </ul> | <ul style="list-style-type: none"> <li>make relevant observations</li> <li>measure using given equipment</li> <li>select equipment from a limited range</li> </ul>                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>begin to offer explanations for what they see and communicate in a scientific way what they have found out</li> <li>begin to identify patterns in recorded measurements</li> <li>suggest improvements in their work</li> <li>evaluate their findings</li> </ul> |
| Y4 | <ul style="list-style-type: none"> <li>record observations, comparisons and measurements using tables and bar charts</li> </ul>                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>with help, pupils begin to realise that scientific ideas are based on evidence</li> <li>show in the way they perform their tasks how to vary one</li> </ul>                                                                                                                                                                          | <ul style="list-style-type: none"> <li>carry out measurement accurately</li> <li>make a series of observations, comparisons and measurements</li> </ul>                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>predict outcomes using previous experience and knowledge and compare with actual results</li> </ul>                                                                                                                                                             |

|    |                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <ul style="list-style-type: none"> <li>begin to plot points to form a simple graph</li> <li>use graphs to point out and interpret patterns in their data</li> <li>select information from a range of sources provided for them</li> </ul>                                                                                                    | <ul style="list-style-type: none"> <li>factor while keeping others the same</li> <li>decide on an appropriate approach in their own investigations to answer questions</li> <li>describe which factors they are varying and which will remain the same and say why</li> </ul> | <ul style="list-style-type: none"> <li>select and use suitable equipment</li> <li>make a series of observations and measurements adequate for the task</li> </ul>                                                                                                                                            | <ul style="list-style-type: none"> <li>begin to relate their conclusions to scientific knowledge and understanding</li> <li>suggest improvements in their work, giving reasons</li> </ul>                                                                                                                                                                                                                                 |
| Y5 | <ul style="list-style-type: none"> <li>record observations systematically</li> <li>use appropriate scientific language and conventions to communicate quantitative and qualitative data</li> <li>select a range of appropriate sources of information including books and the internet</li> </ul>                                            | <ul style="list-style-type: none"> <li>use previous knowledge and experience combined with experimental evidence to provide scientific explanations</li> <li>recognise the key factors to be considered in carrying out a fair test</li> </ul>                                | <ul style="list-style-type: none"> <li>make a series of observations, comparisons and measurements with increasing precision</li> <li>select apparatus for a range of tasks</li> <li>plan to use apparatus effectively</li> <li>begin to make repeat observations and measurements systematically</li> </ul> | <ul style="list-style-type: none"> <li>make predictions based on their scientific knowledge and understanding</li> <li>draw conclusions that are consistent with the evidence</li> <li>relate evidence to scientific knowledge and understanding</li> <li>offer simple explanations for any differences in their results</li> <li>make practical suggestions about how their working methods could be improved</li> </ul> |
| Y6 | <ul style="list-style-type: none"> <li>choose scales for graphs which show data and features</li> <li>effectively identify measurements and observations which do not fit into the main pattern</li> <li>begin to explain anomalous data</li> <li>use appropriate ways to communicate quantitative data using scientific language</li> </ul> | <ul style="list-style-type: none"> <li>describe evidence for a scientific idea</li> <li>use scientific knowledge to identify an approach for an investigation</li> <li>explain how the interpretation leads to new ideas</li> </ul>                                           | <ul style="list-style-type: none"> <li>measure quantities with precision using fine – scale divisions</li> <li>select and use information effectively</li> <li>make enough measurements or observations for the required task</li> </ul>                                                                     | <ul style="list-style-type: none"> <li>make reasoned suggestions on how to improve working methods</li> <li>show how interpretation of evidence leads to new ideas explain conclusions, showing understanding of scientific ideas</li> </ul>                                                                                                                                                                              |

Also see hyperlink below to the progression of knowledge and progression of skills and progression of vocabulary documents from Developing Experts.

[Curriculum Documents | School | DE](#)

## 5. Assessment

Assessment of Science in our Small Schools Partnership is teacher based. The children are assessed on both their knowledge of the topic studied and their scientific enquiry skills using the Developing Experts platform.

**Markbooks | School | DE**