

**Welbourn C of E Primary School**

‘Believe, Excite, Succeed, Together’

R/Y1/Y2 Science Long Term Plan

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| Cycle A | Autumn | | Spring | Summer | |
| Science POS | ***Scientific knowledge:*** *It is vitally important that children develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. This allows children to avoid misconceptions and access higher-order content.*  ***Working scientifically****: Developing skills checking on pupils’ ability to, amongst other things, carry out research, ask questions and carry out tests.*  ***Working scientifically methods:*** *These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.* | | ***Scientific knowledge:*** *It is vitally important that children develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. This allows children to avoid misconceptions and access higher-order content.*  ***Working scientifically****: Developing skills checking on pupils’ ability to, amongst other things, carry out research, ask questions and carry out tests.*  ***Working scientifically methods:*** *These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.* | ***Scientific knowledge:*** *It is vitally important that children develop secure understanding of each key block of knowledge and concepts in order to progress to the next stage. This allows children to avoid misconceptions and access higher-order content.*  ***Working scientifically****: Developing skills checking on pupils’ ability to, amongst other things, carry out research, ask questions and carry out tests.*  ***Working scientifically methods:*** *These types of scientific enquiry should include: observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing (controlled investigations); and researching using secondary sources. Pupils should seek answers to questions through collecting, analysing and presenting data.* | |
| Key objectives | Chemistry | Biology | Biology | Chemistry | Biology |
| Topic | Materials Y1  Focus on toys | Plants Y2  (Bulbs) | Animals including humans  (Y2)  Plus the human element (y1) | Materials Y1 and 2  Focus on Great fire of |London | Plants Y2 |
| EYFS links | A unique child:  Look closely at similarities, differences, patterns and change.  Positive relationships  To speculate on the reasons why things happen or how things work.  Enabling environments: To examine a range of materials and objects to play with that work in different ways for different purposes,  ELG: To know about similarities and differences in relation to places, objects, materials and living things.  They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. | A unique child:  Look closely at similarities, differences, patterns and change.  Positive relationships  To examine change over time (bulbs)  To speculate on the reasons why things happen or how things work.  Enabling environments: To examine a range of materials and objects to play with that work in different ways for different purposes,  ELG: To know about similarities and differences in relation to places, objects, materials and living things.  They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. | A unique child:  Look closely at similarities, differences, patterns and change.  Positive relationships  To speculate on the reasons why things happen or how things work.  Enabling environments:  To create paintings, drawings and models of observations of known and imaginary landscapes.  To examine a range of materials and objects to play with that work in different ways for different purposes,  ELG: To know about similarities and differences in relation to places, objects, materials and living things.  They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. | A unique child:  Look closely at similarities, differences, patterns and change.  Positive relationships  To examine change over time (caterpillars/chicks)  To speculate on the reasons why things happen or how things work.  Enabling environments: To design practical, attractive environments  To create paintings, drawings and models of observations of known and imaginary landscapes.  ELG: To know about similarities and differences in relation to places, objects, materials and living things.  They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. | A unique child:  Look closely at similarities, differences, patterns and change.  Positive relationships  To examine change over time (bulbs)  To speculate on the reasons why things happen or how things work.  Enabling environments: To examine a range of materials and objects to play with that work in different ways for different purposes,  ELG: To know about similarities and differences in relation to places, objects, materials and living things.  They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes. |
| Science knowledge | To distinguish between an object and the material from which it is made  To identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock.  To compare and group together a variety of everyday materials on the basis of their simple physical properties | To observe and describe how seeds and bulbs grow into mature plants | To identify, name and draw and label the basic parts of the human body, and say which parts are associated with each sense.  To find out about and describe the basic needs of animals, including humans, for survival (water, food and air)  To describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene.  To notice that animals including humans have offspring which grow into adults | To describe the simple physical properties of a variety of everyday materials  To compare and group together a variety of everyday materials on the basis of their simple physical properties  To identify and compare the suitability of a variety of everyday materials, including different fabrics for different purposes. ( waterproof, warmth, cool)  To find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching | To identify and describe the basic structure of a variety of common flowering plants, including trees.  To observe and describe how seeds and bulbs grow into mature plants,  To find out and describe how plants need water, light and a suitable temperature to grow and stay healthy |
| Working scientifically skills | Observing closely, using simple equipment  Performing simple tests  Identifying and classifying  Using their observations and ideas to suggest answers to questions | Observing closely, using simple equipment  Performing simple tests  Identifying and classifying  Using their observations and ideas to suggest answers to questions | Observing closely, using simple equipment  Performing simple tests  Identifying and classifying  Using their observations and ideas to suggest answers to questions | Observing closely, using simple equipment  Performing simple tests  Identifying and classifying  Using their observations and ideas to suggest answers to questions | Observing closely, using simple equipment  Performing simple tests  Identifying and classifying  Using their observations and ideas to suggest answers to questions |
| Working scientifically methods | Observing changes over a period of time  Noticing patterns  Grouping and classifying things  Carrying out simple comparative tests  Finding things out using secondary sources | Observing changes over a period of time  Noticing patterns  Grouping and classifying things  Carrying out simple comparative tests  Finding things out using secondary sources | Observing changes over a period of time  Noticing patterns  Grouping and classifying things  Carrying out simple comparative tests  Finding things out using secondary sources | Observing changes over a period of time  Noticing patterns  Grouping and classifying things  Carrying out simple comparative tests  Finding things out using secondary sources | Observing changes over a period of time  Noticing patterns  Grouping and classifying things  Carrying out simple comparative tests  Finding things out using secondary sources |
| Working scientifically ongoing | To begin to use simple scientific language to talk about what they have found out and communicate their ideas to a range of audiences in a variety of ways.  Be curious and ask questions. | | | | |
| Key vocabulary | Hard  Soft  Stretchy  Stiff  Shiny  Dull  Rough  Smooth  Bendy  Not bendy Waterproof  Absorbent  Transparent  Plastic  Metal  Wood | Plants  Flowers  Vegetables  Deciduous  Evergreen  Leaves  Flowers  Blossom  Petals  Fruit  Roots  Bulb  Seed  Trunk  Branches  stem | Head  Neck  Arms  Elbows  Legs  Knees  Face  Ears  Eyes  Hair  Mouth  Teeth  Senses  Survival  Water  Food  Air  Exercise  Food  Hygiene  Nutrition  Growth | Hard  Soft  Stretchy  Stiff  Shiny  Dull  Rough  Smooth  Bendy  Not bendy Waterproof  Absorbent  Transparent  Plastic  Metal  Wood | Plants  Flowers  Vegetables  Deciduous  Evergreen  Leaves  Flowers  Blossom  Petals  Fruit  Roots  Bulb  Seed  Trunk  Branches  stem |
| **Ongoing**  At least 1 lesson every half term to look at similarities and differences in plants, trees, day length, weather etc.  **WS Methods ongoing** | Plants- bulbs  To observe and describe how seeds and bulbs grow into mature plants | | | | |
| Observing changes over a period of time  Noticing patterns  Grouping and classifying things  Finding things out using secondary sources | | | | |