

**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 relationshipsTo 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 relationshipsTo 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 relationshipsTo examine change over time (caterpillars/chicks)To speculate on the reasons why things happen or how things work.Enabling environments: To design practical, attractive environmentsTo 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 madeTo 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 materialsTo compare and group together a variety of everyday materials on the basis of their simple physical propertiesTo 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 equipmentPerforming simple testsIdentifying and classifyingUsing their observations and ideas to suggest answers to questions | Observing closely, using simple equipmentPerforming simple testsIdentifying and classifyingUsing their observations and ideas to suggest answers to questions | Observing closely, using simple equipmentPerforming simple testsIdentifying and classifyingUsing their observations and ideas to suggest answers to questions | Observing closely, using simple equipmentPerforming simple testsIdentifying and classifyingUsing their observations and ideas to suggest answers to questions | Observing closely, using simple equipmentPerforming simple testsIdentifying and classifyingUsing their observations and ideas to suggest answers to questions |
| Working scientifically methods | Observing changes over a period of timeNoticing patternsGrouping and classifying things Carrying out simple comparative testsFinding things out using secondary sources | Observing changes over a period of timeNoticing patternsGrouping and classifying things Carrying out simple comparative testsFinding things out using secondary sources | Observing changes over a period of timeNoticing patternsGrouping and classifying thingsCarrying out simple comparative testsFinding things out using secondary sources | Observing changes over a period of timeNoticing patternsGrouping and classifying things Carrying out simple comparative testsFinding things out using secondary sources | Observing changes over a period of timeNoticing patternsGrouping and classifying things Carrying out simple comparative testsFinding 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  | HardSoftStretchyStiffShinyDullRough SmoothBendyNot bendy WaterproofAbsorbentTransparentPlastic MetalWood | PlantsFlowersVegetablesDeciduous EvergreenLeavesFlowersBlossomPetalsFruitRootsBulbSeedTrunkBranchesstem | HeadNeckArmsElbowsLegsKneesFace EarsEyesHairMouthTeethSensesSurvival WaterFood AirExerciseFoodHygieneNutritionGrowth | HardSoftStretchyStiffShinyDullRough SmoothBendyNot bendy WaterproofAbsorbentTransparentPlastic MetalWood | PlantsFlowersVegetablesDeciduous EvergreenLeavesFlowersBlossomPetalsFruitRootsBulbSeedTrunkBranchesstem |
| **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 timeNoticing patternsGrouping and classifying things Finding things out using secondary sources |