**Ely St. John’s Primary**

**Science- Year 3**

**Plants**

Year 3 Key Vocabulary

roots, stem, leaves, flowers, plants, pollination, seed dispersal, seed formation, life cycle, investigate, predict, conclusion,

petals, sepal, stamen, anther, filament, stigma, style, ovary, ovule, pollen tube, pollen, fertilisation, transport, stem, evaporate, compare, observe, germination, life cycle

Our Science Journey

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| **EYFS** | **Y1** | **Y2** | **Y3** | **Y4** | **Y5** | **Y6** |
| Being updated 2020-2021 | Super Me  Into the Woods | Living things and their habitats  Animals including humans | Rocks and Soils | Electricity  Sound | Forces  Earth and Space | Living things and their habitats  Light |
|  | Bears  Sunshine | Uses of everyday materials  Plants | Light  Plants | States of matter  Digestion and Teeth | Properties of Materials | Evolution and inheritance  Electricity |
|  | Castles  Inspiring People | The Environment  Scientists and Inventors | Animals including humans  Forces and Magnets | Living things and their habitats | Living things and their habitats  Animals, including humans | Animals including humans |

**Science-Year 3**

**Plants**

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| **Key Knowledge** | · Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers.  · Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant.  · Investigate the way in which water is transported within plants.  · Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal.   |  |  | | --- | --- | |  |  | | | |
| **Key Vocabulary** | roots, stem, leaves, flowers, plants, pollination, seed dispersal, seed formation, life cycle, investigate, predict, conclusion,  petals, sepal, stamen, anther, filament, stigma, style, ovary, ovule, pollen tube, pollen, fertilisation, transport, stem, evaporate, compare, observe, germination, life cycle | | |
| **Key Skills** | **Understand and set up a fair test; make careful observations; take accurate measurements; record results.**   · Ask relevant questions and use different types of scientific enquiries to answer them  · Set up simple practical enquiries, comparative and fair tests  · Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers  · Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables  . Use results to draw simple conclusions  . Identify differences, similarities or changes to simple scientific ideas and processes  . Use straightforward scientific evidence to answer questions or to support their findings | | |
| **Lines of Enquiry** | 1. Observing over time  2. Pattern seeking  3. Identifying and classifying  4. Research (secondary sources)  5. Fair testing  6. Problem solving | | |
| **Main Unit Line of Enquiry** | 1. Observing over time | | |
| **By the end of this unit…**  **Include key skills and key knowledge** | ...all children should be able to:  Make careful observations.  Work together on an experiment or investigation.  Say what happened in their experiment or investigation.  Identify the different parts of flowering plants.  Predict what will happen in an investigation.  Identify the main stages of the life cycle of flowering plants. | **...most children will be able to:**  Make some accurate observations and conclusions.  Explain, using simple scientific language, how soil is formed.  Use scientific forms of language when communicating simple scientific ideas, processes or phenomena.  Describe what they have found out in experiments or investigations.  Explain the functions of the different parts of plants.  Set up an investigation and make predictions.  Identify different parts of a flower.  Identify and describe the stages of the life cycle of flowering plants.  Be able to answer questions based on their learning. | **...some children will be able to:**  Make systematic observations and conclusions.  Use scientific language when communicating scientific ideas, processes or phenomena.  Describe what they have found out in experiments or investigations, linking cause and effect.  Set up reliable and accurate investigations. Make and explain predictions.  Explain the functions of the different parts of a flower.  Be able to ask and answer questions based on their learning using scientific language. |

**Science-Year 3 – Plants**

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|  | **Session 1** | **Session 2** | **Session 3** | **Session 4** | **Session 5** |
| **LO and SC** | LO: To name the different parts of flowering plants and explain their jobs  1. I can name the different parts of a plant.  2. I can explain the jobs that the different parts of a plant do. | LO: To set up an investigation to find out what plants need to grow well  1. I can think about what plants need to grow well.  2. I can think of a question to investigate.  3. I can predict what will happen in my investigation.  4. I can plan what I will do to set up my investigation.  5. I can set up my investigation carefully. | LO: To record my observations  LO: To present the results of my investigation using scientific language  1. I can describe what I have observed.  2. I can record what I observe.  3. I can answer my original question using my observations.  4. I can think about whether my prediction was accurate.  5. I can explain my results using scientific language. | LO: To investigate how water is transported in plants  1. I can explain the function of the stem.  2. I can explain how water is transported in a plant.  3. I can set up a comparative investigation.  4. I can suggest ways to find answers.  5. I can make a prediction.  6. I can make a conclusion. | LO: To name the different parts of a flower and explain their role in pollination and fertilisation  1. I can identify the different parts of a flower.  2. I can explain what each part of a flower does.  3. I can explain the process of pollination.  4. I can explain how pollination leads to fertilisation. |
| **Key Knowledge** | Identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers. | Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. | Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant. | Investigate the way in which water is transported within plants. | Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. |
| **Key Vocab** | |  | | --- | | Roots, stem, trunk, leaves, flowers, anchor, nutrients, transport, seeds, carbon dioxide, sunlight, absorb. | | |  | | --- | | Air, light, water, nutrients, soil, investigate, explore, predict, observe. | | Observation, prediction, conclusion. | |  | | --- | | Transport, stem, evaporate, compare, temperature, leaves, flower, observe, prediction, conclusion. | | Petals, sepal, stamen, anther, filament,  stigma, style, ovary, ovule, pollen tube,  pollination, fertilisation. |
| **Key Skills** | Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables | Ask relevant questions and use different types of scientific enquiries to answer them  Set up simple practical enquiries, comparative and fair tests | Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment, including thermometers and data loggers  Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables  Use results to draw simple conclusions  Identify differences, similarities or changes to simple scientific ideas and processes  Use straightforward scientific evidence to answer questions or to support their findings | Set up simple practical enquiries, comparative and fair tests  Use results to draw simple conclusions  Use straightforward scientific evidence to answer questions or to support their findings | Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables  Use straightforward scientific evidence to answer questions or to support their findings |
| **Lines of Enquiry** | 3. Identifying and classifying | 1. Observing over time | 1. Observing over time | 1. Observing over time | 3. Identifying and classifying  4. Research (secondary sources) |
| **Session Notes**  **+ Resources** | Introduce the new topic-plants.  Show children different flowers (on the power point)  Do you recognise any of these plants?  Next in book children create mind map around the question-Do you know what the different parts of the plants are called and their function?  Then work through the power point, discuss the parts of a plant and their job. In purple pen add to the mind map. Children then complete sheet, parts of a plant.  LA- choose one part of the plant and write what its function is.  MA: choose two parts of the plant and write what their function is.  HA: choose three parts of the plant and write what their function is.  **Resources:**  lesson 1: Parts of a plant  power point  sheet-parts of a plant | Using the power point to explain the 7 life process that tell us something is alive-plants do all 7 of these things. Next ask the question-what do plants need to grow?  Next tell the children that they are going to become scientists and plan, predict and conduct an experiment. Work through the power point and then complete the sheet-what do plants need to grow well? Remind children that in their pairs it is their responsibility to record what is happening to their plant on a daily basis. (reminders needed throughout the week from teacher)  **Resources:**  lesson 2: What do plants need to grow?  power point  Sheet-what do plants need to grow?  plants  tape measures  recording results sheet | Remind children of their experiments. Now they are going to record onto sheets what they have found out. (answer their question)  All children write their conclusion in full sentences and once complete share their findings.  MA/HA-add a diagram to their results.  Do not complete the sheet-the good growing guide. We could maybe do this if we have time at the end of the unit.  R**esources:**  lesson 3: What have you found out?  power point  Sheet-what do plants need to grow?  plants  tape measures  recording results sheet | This lesson will need to be done AM-first lesson so children can record results through the day. Set a timer-every hour, for example.  On the power point move straight to slide-water transportation and discuss the function of the stem.  Work through the power point and introduce the transportation investigation. Next question children- Can anyone think of how we could use this idea to compare the speed of water transportation in different temperatures?  Explain to the children they are going to conduct the same experiment. Onto sheets (prediction puzzle) children work with their table group to make predictions. Do they agree/disagree with others? MA/HA-give reasons for choices.  Then complete the experiment. Remind children this is a comparative test.  Children record onto sheet-activity sheet observing changes what they find out. Complete throughout the day-check every hour.  **Resources:**  Lesson 4: Moving water  power point  sheet-prediction puzzle  sheet-activity sheet observing changes | Look at the diagram of a flower and talk through what you can see as a class.  Then in table groups handle real flowers and draw the different parts onto the flower dissection mat. Give children 15 minutes to complete. Continue to work through the power point. Children watch video and make notes into books. Once children have watched the video, work through the power point and add to their notes using purple pen.  **Resources:**  lesson 5: Fantastic flowers  power point  sheet- the pollination process  purple pens |

**Science- Year 3 – Plants**

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|  | **Session 6** | **Session 7** | **Session 8** | **Session 9** | **Session 10** |
| **LO and SC** | LO: To understand and order the stages of the life cycle of a flowering plant  1. I can understand the process of seed dispersal.  2. I can understand the processes of pollination, fertilisation and germination.  3. I can order the different stages of the life cycle of a flowering plant. |  |  |  |  |
| **Key Knowledge** | Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. |  |  |  |  |
| **Key Vocab** | Dispersal, pollination, fertilisation,  germination, life cycle, stages. |  |  |  |  |
| **Key Skills** | Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts and tables  Use straightforward scientific evidence to answer questions or to support their findings |  |  |  |  |
| **Lines of Enquiry** | 3. Identifying and classifying  4. Research (secondary sources) |  |  |  |  |
| **Session Notes**  **+ Resources** | Introduce the word-life cycle. What do the children already know? Tell the children the 5 parts of a flowering plants life cycle and look at what happens at each stage in more detail using the power point. Next children complete sheet-life cycle of a flowering plant, then check work using the power point.  **Resources:**  Lesson 6: Life cycle  power point  sheet-life cycle of a flowering plant |  |  |  |  |