**Scented Garden Medium Term Plan**

**Subject/ Topic:** Science – Plants and growing **Year Group:** 1/2 **Date**: Spring II 2017

Key questions are differentiated - orange = basic, turquoise = advancing and Purple = deep (HOTS)

Objectives and success criteria are colour coded – black = all children, green = most children (AAPs and HAPs) and pink a few (HAPs)

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| **Learning Objective** | **Lesson/Activities/ Differentiated Questions/Key Vocabulary** | **Success Criteria** | **Resources** | **Cross Curricular**  **Links** |
| Lesson 1 – what plants need to grow  SCP2 observe and describe how seeds and bulbs grow into mature plants  SCP2 find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. | **Introduction:** Show the children a variety of seeds – tomatoes, basil, onion, rocket, spinach, peppers and oregano. What are these? Explain what you think they might grow into? Justify why you think this… Show the children images of what the seeds will grow into. In groups children have to match the seed to the image and explain why they have matched it in that way. Is it the size of the seed? The biggest seed becomes the biggest plant etc. If we were to plant the seeds How would we do it? What do plants need to grow? Why do they need these things to grow? What would happen if they didn’t have these things? Read through the PowerPoint of what plants need to grow and watch video clip for how to plant the seeds (<http://www.bbc.co.uk/education/clips/zc62tfr>)  **Pupil activity**: Each group of children to plant a different seed. Once they have finished planting the seeds they are to write instructions for how to plant seeds reminding the reader what plants need to grow.  **Cool** – Label step by step photographs using key words such as ‘pot’, ‘soil’, ‘food’ etc  **Mild** – Using writing frame children to complete simple ‘what you need’ and instructions with simple explanations e.g. Put soil in the pot for food.  **Spicy** – Write a simple set of instructions for how to plant seeds and how to look after them.  **Hot** – Children to write detailed set of instructions that explain how to plant seeds but also what they need to grow. Children to include an introduction, equipment list, method, conclusion and diagram.    **Extension:** <http://www.firstschoolyears.com/science/living/interactive/growing-plants.swf> Can you help the seed grow?  <http://resources.hwb.wales.gov.uk/VTC/plants_light_water_to_grow/eng/Introduction/MainSession.htm> Which plant will grow the best and why? Justify why you think this…  **Plenary AFL**: As a class create a daily job list for looking after the plants. What jobs do we need to do? Explain why we need to do these jobs. Can you justify why we need to do these jobs?  **Key vocabulary:** germination, photosynthesis, food, nutrients, reproduction, | I can say what a plant needs to grow.  I can explain why plants need things to grow.  I can use scientific vocabulary related to growing such as germination, photosynthesis. | Plant pots  Compost  Tomato seeds  Basil seeds  Onion seeds  Rocket seeds  Spinach seeds  Pepper seeds  Oregano seeds  Watering can  PowerPoint – what plants need to grow  Video clip  Instruction writing frames. | Literacy – Writing instructions |
| Lesson 2 – identify herbs  SCP1  identify and name a variety of common wild and garden plants, including deciduous and evergreen trees | **Introduction:** Have a variety of different herbs in Tupperware boxes (thyme, lavender, parsley, basil, rosemary, mint, tarragon, sage). Pass each box around and allow children to smell and feel. Share ideas back. In the middle of the circle place the herbs and name cards. Ask children if they can match the herb to their name. Children to give reasons for their answers and choices. Encourage a debate… I disagree that is lavender because….  Show the children the PowerPoint of herbs on the IWB. Check labels for the herbs – do we need to change any?  **Pupil activity:** Children to draw (LAPS cut and stick) an image of the herb under the correct heading and then write adjectives describing the herbs.  **Cool** – Cut and stick the correct image under a herb name. Write one adjective from a given 3 for each herb.  **Mild** – Draw the herb under each heading. Write one adjective from a given 3.  **Spicy** – Draw the herb under the heading and write 3 adjectives to describe the herb.  **Hot** – Draw the herb and label, give 3 adjectives for each herb and list one of the herbs uses.  **Extension -** **Cool, Mild, Spicy** - Explain what each herb could be used for.  **Hot -**    **Extension –** Make herby playdough in small groups (2 cups flour, 1 cup salt, 2tbsp vegetable oil, 2tbsp cream of tartar, 1.5 cups boiling water, squeeze of liquid food colouring, mix. Add herb at kneading stage.)  **Plenary AFL:**  **Key vocabulary:** Herbs, thyme, lavender, parsley, basil, rosemary, mint, tarragon, sage, cooking, evergreen, | I can name some herbs.  I can name lots of herbs and some of their uses.  I can name herbs, describe them and name their uses. I can say whether they are evergreen. | Variety of herbs – thyme, lavender, parsley, basil, rosemary, mint, tarragon, sage  Plastic tubs  Play dough ingredients  Powerpoint  Work sheets  Herb name cards. | Literacy – adjectives |
| Lesson 3 Comparing bulbs and seeds  SC P1  observe and describe how seeds and bulbs grow into mature plants | **Introduction:** Show the children seeds and bulbs – what are these? What do we think will grow from these? Explain how they are they different from each other. Why do some plants have bulbs and some plants have seeds? Justify which you think would produce the largest plant.  **Pupil activity:**  **Cool -**  **Mild -**  **Spicy -**  **Hot -**    **Extension:**  Plenary AFL:  Key vocabulary: |  |  |  |
| **Lesson 4 – Investigation – Do all plants grow from bulbs and seeds?**  Ask simple questions.  Use their ideas to suggest answers to questions.  Gather and record data.  To conduct a fair test. | **Introduction:**  **Pupil activity:**  **Cool** – Adult to scribe child’s prediction on their sheet. Children to complete a simple tick box for their results and adult to scribe the child’s conclusion.  **Mild** – Children to complete a scaffold sheet where they have to write a prediction and then complete the results box where they have investigated whether items in the windowsill garden have grown. They have then complete the conclusion by using the starter prompt “My prediction was right because…” An adult can scribe underneath if necessary.  **Spicy** – Children to write the question, prediction/ hypothesis, equipment, method, results, conclusion in their books. Children to link the conclusion back to their prediction.  **Hot** – Children to write the question, prediction/ hypothesis, equipment, fair test, method, results, conclusion in their books. Children to link the conclusion back to their prediction.  Extension  Plenary AFL:  Key vocabulary: |  |  |  |
| **Lesson 5** - **Forest school lesson**  SCP1  identify and name a variety of common wild and garden plants, including deciduous and evergreen trees | Introduction:  Pupil activity:    Extension  Plenary AFL:  Key vocabulary: |  |  |  |
| **Lesson 6** – sorting plants based on what part you eat. | Introduction:  Pupil activity:    Extension  Plenary AFL:  Key vocabulary: |  |  |  |
| **Lesson 7** - Investigation “Do plants really need light and water to grow?”  Ask simple questions.  Use their ideas to suggest answers to questions.  Gather and record data.  To conduct a fair test. | **Introduction:** Recap what plants need to grow (light, air, water). Justify what would happen if plants didn’t get these things? How do you know? How can we prove it? Help children to devise the investigation.  **Pupil activity: Cress investigation**  **Cool** – Adult to scribe child’s prediction on their sheet. Children to complete a simple results box where they draw what happened to each cress investigation and adult to scribe the child’s conclusion.  **Mild** – Children to complete a scaffold sheet where they have to write a prediction and then complete the results box where they have investigated whether items in the windowsill garden have grown. They have then complete the conclusion by using the starter prompt “My prediction was right because…” An adult can scribe underneath if necessary.  **Spicy** – Children to write the question, prediction/ hypothesis, equipment, method, results, conclusion in their books. Children to link the conclusion back to their prediction.  **Hot** – Children to write the question, prediction/ hypothesis, equipment, fair test, method, results, conclusion in their books. Children to link the conclusion back to their prediction.  **Extension:**  Plenary AFL:  Key vocabulary: |  |  |  |
| **Lesson 8 -** Naming different parts of a flower. | **Introduction:** Read through the PowerPoint discussing new vocabulary and fastest finger first to find the different parts of flowers. Look carefully at flowers through magnifying glasses.  **Pupil activity:**  **Cool:** Children to cut and stick the labels of a flower into the correct area.  **Mild:** Children to write the correct label on the correct part of the flower.  **Spicy:** Children to label parts of a flower and give a reason why a flower has this part and what the purpose is.  **Hot:** Children to label the parts of a flower, explaining the purpose of each part and then label the inside of a flower.  **Extension:** Can you justify why bees are important for flowers?  **Plenary AFL:** Fastest finger first when naming parts  **Key vocabulary:** stem, leaf, root, petal, stigma, style, ovary, ovule, sepal, filament, anther, pollen, photosynthesis, nutrients, soil, anchor, pollination | I can name the different parts of a flower.  I can name the parts of a flower and give a purpose for each part.  I can label the parts of a flower and inside a flower, explaining the purpose of each element. | powerpoint  sheets  flowers for close up investigation  magnifying glasses. |  |
| **Lesson 9 –** Investigation “Can we turn white flowers a different colour?”  Ask simple questions.  Use their ideas to suggest answers to questions.  Gather and record data.  To conduct a fair test. | **Introduction:**  **Pupil activity:** Using white carnations split the stem into 2 or 4 and place each part of the stem in a different jar of water with a different food colouring in. Over time the food colouring travels up the stem and dyes the petal leaves.  **Cool** – Adult to scribe child’s prediction on their sheet. Children to complete a simple tick box for their results and adult to scribe the child’s conclusion.  **Mild** – Children to complete a scaffold sheet where they have to write a prediction and then complete the results box where they have investigated whether items in the windowsill garden have grown. They have then complete the conclusion by using the starter prompt “My prediction was right because…” An adult can scribe underneath if necessary.  **Spicy** – Children to write the question, prediction/ hypothesis, equipment, method, results, conclusion in their books. Children to link the conclusion back to their prediction.  **Hot** – Children to write the question, prediction/ hypothesis, equipment, fair test, method, results, conclusion in their books. Children to link the conclusion back to their prediction.  **Extension**  **Plenary AFL:**  **Key vocabulary:** stem, leaf, root, petal, stigma, style, ovary, ovule, sepal, filament, anther, pollen, photosynthesis, nutrients, soil, anchor, pollination |  |  |  |
| On-going | Caring for plants that children have planted.  Investigations in science will be on going through out the topic.  Use different herbs to make scented playdough.  Arial photographs of a fantasy garden. |  |  |  |
| Art | Careful observational drawings of plants, seeds, bulbs in pencils and pastels.  Leaf and flower printing  Sewings of tree leaves, plants etc.  Use soft wire to make giant leaves and flower heads. Lay coloured tissue over the wire frame. Finally coat with PVA. Tear, cut, stick and layer paper to create interesting and colourful effects. |  |  |  |
| Homework | Plant own seeds and bulbs in the garden – bring in photographs to show how they are growing.  Grow own sunflower and keep track of its height.  Make your own weird and wonderful plant book – search the internet for odd plants. An adult will need to help you!  Grow your own herb garden  Draw or paint the flowers and plants you have in your garden.  Press flowers between the pages of a book and use to make gifts of cards for your family and friends. | | | |