THE WINTERTON FEDERATION MEDIUM TERM PLAN SCIENCE Summer 1 YEAR 2

Young Gardeners	Learning Objective	Activity – Switched On Science	STEM Activities	Success Criteria
Session 1	**Identify and name a variety of plants and animals in their habitats, including micro habitats. Identify and classify using simple equipment.**	In Science books, children to write the word plants in the middle of the page. Ask them to write in blue pen what they already know about plants. Then in red pen, ask the children to write questions they would like to find the answers to. Take feedback. **What is growing in our school grounds?** Challenge children to go on a plant hunt and to find and name as many plants as they can. Children, in groups of 3/4 to have a hoop. They place their hoop on the grass and focus on what they can see in their hoop. Provide identification sheet to identify common flowers. Children to record their work using iPad. Use PowerPoint slide 5 to talk about how to identify plants e.g. colour, leaves, petals.	**Explorify: Mellow Yellow (odd one out)**	**I can identify common plants using an identification chart and talk about features of the plant.**
Session 2	**Perform simple tests. Observe closely, using simple equipment. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.**	**What shall we grow?** Bring in a plant that we are going to take care of and watch grow over the Summer Term. Set up a rota for the children to take care of. Give each group a selection of seed packets that they will be using. What kind of information is on the seed packet? Ask children to make a list of words on the seed packets that they don't know and share these. Examples of vocabulary shared could include germinates, germination, propagator, sow, intervals. Bring children back together and share what they have found out and what they think they have to do to plant the seeds.	**Explorify: Curious Crown (zoom in zoom out)**	**I can ask questions about how to grow plants and make decisions about how to grow my own plants.**

		Use PowerPoint slide 8 and collect questions. Children to plant their seed and put in a suitable place in the classroom. Set up a rota for children to water the plants. Children could show what they did using the 'story map' idea to sequence what they did. Step By Step Guide To Planting Nasturtiums - video Dailymotion		
Session 3	**Perform simple tests and use observations and ideas to suggest answers to questions. Observe closely using simple equipment.**	**What do seeds need for germination?** Give each group with cress seeds, cotton wool and plastic cups ask them to think about what they would need to make them germinate. In this case, the answer is water so agree that ALL the seeds need to be watered. Ask each group how they would find out if their seeds need air, light and warmth to germinate. Tell the children the cotton wool is going to be the soil substitute as we are only investigating the conditions in which seeds grow the best. Children to make a simple plan and share it with others. They could demonstrate and explain what they plan to do to the rest of the class. Remind them that scientists need to listen to each other's ideas and offer suggestions and improvements. Then let the children carry out their plan. Children to record their plan through photographs, drawing and labels. Over the next week, children to record when their seeds begin to germinate and measure their growth (recording sheet provided)	**Explorify: Seeds of life (odd one out)** **Shooting Sprouts (video clip)**	**I can predict what seeds need to grow and stay healthy.** **I can predict and observe what happens over time to seeds.**

		Groups to feed back what they have observed. Has the experiment answered any of our questions that we asked at the beginning of the topic? Which new questions have they got about growing seeds?		
Session 4	**To observe closely using simple equipment. Perform simple tests. Use observations and ideas to suggest answers to questions. Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy.**	**What do plants need to grow?** PowerPoint slide 9 – discus the question 'What do you think plants need to grow?' In this activity the focus is on plants not seeds because seeds do not need light to grow. The activity is to show that too much / too little water can affect how a plant grows, plants need light to grow and temperature can affect how the plant grows. Use slides 10,11,12 as starting points for discussion. Children are offered two options (comparative test). Set up 3 experiments: Light / no light – set up outside by placing an opaque container over a patch of grass with daisies. Water / no water – two plants Hot / cold place in the classroom – two plants Set up experiment for the week.	**Explorify: What if plants could move from one place to another?** In pairs, discuss what might be a Plus, Minus and Interesting way to think about the question. Stuck for ideas? They could think about: • How could plants move? • What would moving allow the plants to do? • How would different kinds of plants move?	**I can carry out a simple test and make observations.** **I can describe what plants need to grow and stay healthy.**
Session 5	**As above**	Children to conclude what has happened in session 4 using observational skills. (Leave for another week if no real difference is noted) They could draw to show the two plants in the different conditions and label. iPads to record photos.		
Session 6	**Observe and describe how seeds and bulbs grow into mature plants. Observe closely.**	**Growing bulbs** Introduce the children to bulbs and say a bulb is next year's plant inside the bulb with scale leaves on the outside, it can have some immature leaves and flower stems, and sometimes even flower buds. Give each group an onion and explain they are bulbs.	**Explorify: Brill Gills (zoom in zoom out)**	**I can observe and describe how a bulb grows into a plant.**

		Talk about which way up they think an onion should be planted – which is the base, which is the top? Whilst we usually grow bulbs in soil, they can be grown in jars or cut down plastic water bottles so that children can see the roots and shoot forming. Take a glass of water and place an onion bulb on the jar. Children to observe the growth of roots over the week (leave over half term). Measure the length of the roots over the days. **Make sure children wash hands after handling any bulbs.**		