SCIENCE AND TECHNOLOGY CURRICULUM GUIDE

TREES FOR CITIES

AUTUMN	SPRING	SUMMER
Planting seeds and watching them grow, take photos and make a journal of your plants life cycle.	Observe the garden with magnifying glasses. Try to Identify the features of any creatures you find. How many legs do they have? Do they have wings, antenna etc	Create story prop boxes of garden materials and food growing activities. Read farming stories and act them out
Learn about the seasons and seasonal vegetables and what grows over autumn and winter in the UK. Create a winter soup recipe from harvested winter vegetables.	Show care and concern for living things, looking after seedlings, in the greenhouse and classroom to keep them warm and well-watered. Do they grow quicker than the same seedling planted outside?	Look at lifecycles of the bugs in the garden. Keep some ladybirds and their larvae and observe their changes.
Plants Collect a variety of leaves in your Edible Playground and identify which ones are deciduous and which are evergreen.	Animals Using spoons, magnifying glasses and petri dishes, go on a bug hunt. Can you find different types of invertebrates?	Working Scientifically Make a pile of natural materials from your Edible Playground and school grounds. Children have to sort them into different hoops based on different criteria. Can they come up with their own criteria for sorting?
Everyday Materials Collect a range of materials from your Edible Playground and sort them into natural and man-made and look at their properties.	Plants Investigate growing the same type of plant in different areas of the garden. Make predictions and conclusions based on what you have found.	Animals Make bird feed balls to hang in your Edible Playground.
Materials and their properties Plan and design a perfect bug hotel. Collect the materials needed and combine all the ideas bringing it to life.	Living Things Identify the weeds in your Edible Playground and create an ID guide for the class.	Habitats Compare and contrast animals in a harsh environment (e.g. Antarctica) and animals in your garden. Do you think they would they be able to survive in each other's habitats?
Plants Carry out an autumn harvest of fruit, nuts and seeds. Can you sort them into groups? .	Miniature Gardens Design your own perfect garden, then using small plant clippings from your Edible Playground, fill trays with soil and make a model of your garden.	Rocks Experiment with the different types of stones and rocks you can find in your Edible Playground/outside space.
Light Experiment the impact of light on plant growth by setting up an experiment which gives different plants varying amounts of light. Extend to vary the amount of water.	Forces and Magnets Investigate the forces at play in your Edible Playground. E.g. flat wheel on a wheelbarrow, pulling up weeds, pushing a trowel into the soil.	Working Scientifically Set up an experiment with celery and food colouring to demonstrate how water and nutrients are transported to the leaves.
Living Things and their Habitats Find an example of adaptations in mini beasts, snails vs slugs, ladybird elytra covering their fragile wings	Sound Explore and compare sounds in your Edible Playground. What materials would work best to create sound screens?	Plants Design an improved variety of fruit or vegetable. Describe what existing plants it will be 'bred' from. Create a seed packet for the new variety.

Design and Evaluation Design your own tool for use in your Edible Playground and evaluate your own against others.	**States of Matter** Create mini greenhouses in your Edible Playground using cloches made from upturned plastic drinks bottles. Compare the amount of condensation over wet or dry soil, with or without a plant inside, with or without a cup of water.	**Textiles** Project: Fruit and vegetable designed clothing range using recycled clothing (series of lessons).
Living Things and their Habitats List an example of a mammal and an insect found in your Edible Playground and compare and contrast their life cycles.	**Food Technology** Make pesto and other raw food mixes using a selection of herbs from your Edible Playground.	**Animals including Humans** • Discuss the role of diet in a healthy lifestyle. Plan a meal or weekly meal planner using produce from your Edible Playground, showing how it is a balanced diet in relation to the nutrients in the food.
Properties and Changes of Materials Conduct an experiment in your Edible Playground to investigate the changing states of different materials: separating soil matter, sieving, filtering, evaporating etc.	**Earth and Space** Create a sundial in your Edible Playground - research the day length required for growth by different plants and monitor changes in day length and changes in temperature to predict growing patterns.	***Forces*** *Collect seeds from your Edible Playground and other nature areas and identify different mechanisms for dispersal.*
Animals -including Humans Identify the different animals living in your Edible Playground and create different classifications, e.g. mammals, invertebrates.	**Electricity** Make solar panels and place in your Edible Playground. Design a scientific experiment to record where the panels work best. Provide equipment and leave groups to work out how to make a potato clock. Investigate with other vegetables. Will it work? Why? Why not?	**Forces** Design an experiment using a selection of leaves from your Edible Playground. Which leaves/seeds have the least/most air resistance? Why? How could this help seed dispersal? E.g. sycamore v's oak. Explore which fruits are rich in iron by conducting an apple (and other fruit) magnet experiment.
Living Things and their Habitats Identify birds in your playground. Design your own food chain with the chosen bird at the top. Can you see where the plants in your Edible Playground fit into this food chain? Research and observe the role of worms and mini-beasts in digesting organic matter and helping to create a nutrient rich soil.	**Evolution and Inheritance** Look at different varieties of fruit and vegetables in your Edible Playground and research breeding for resistance to pests. Find examples of adaptations in your Edible Playground and how they are an advantage to the plant, e.g. climbing tendrils on beans and peas.	**Health and Lifestyle** Create a healthy 'Green Man' made of fruit and vegetables for a harvest festival celebration Collect snails from your Edible Playground and give them a carrot purge to record the speed of their digestive systems (they will eventually have orange faeces).
Food Technology Project: Learn how to make an autumnal soup using produce from your Edible Playground. Explore different types of bread and learn how to make bread to accompany your soup. Make and use a solar powered oven to heat your soup.	**Design and Build** Design and build a solar-powered oven which you can put in your Edible Playground. See which ones are best at heating up water or wait until you have made soup from your own produce and see which ones heat up the quickest.	**Textiles** Using screen printing skills, sew and create a series of bunting to display in your Edible Playground with nature-inspired images.

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