

<u>Nursery</u> - Experiments with ways to enclose a space and create shapes - Uses 3D and 2D structures to explore materials and/or to express ideas - Uses everyday materials to explore, understand and represent their world – their ideas, interests and fascinations - Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces - Uses tools for a purpose	<u>Reception</u> - Uses various construction materials to build on prior knowledge and adding more complex construction materials such as small parts and stacking in various manners - Balancing, making enclosures and creating spaces - Uses tools for a purpose to create representations of increasing complexity - Uses their increasing knowledge and understanding of tools and materials to explore their interests and enquiries and develop their thinking - Creates representations of both imaginary and real-life ideas, events, people and objects - Responds imaginatively to art works and objects - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; - Share their creations, explaining the process they have used - Children use what they have learned about media and materials in purposeful and original ways, thinking about users and purposes. They represent all their own ideas, thoughts and feelings through design and technology and art	<u>Year 1</u> Cooking & Nutrition: - Understand the difference between fruits and vegetables - Know that a blender is a machine which mixes ingredients together into a smooth liquid - Know that a fruit has seeds and a vegetable does not - Know that fruits grow on trees or vines - Know that vegetables can grow either above or below ground - Start to understand how to name and sort the foods into the five groups in 'The Eat Well Plate' - Begin to understand that everyone should eat at least five portions of fruit and vegetables every day - Begin to know how to prepare simple dishes safely and hygienically without using a heat source Structures: - Understand what a frame structure is - Know how to make freestanding structures stronger, stiffer and more stable and that they must stand on their own - Begin to understand that different structures are used for different purposes have been made and put together - Know the three main parts of a Ferris Wheel are the wheel, axle and structure/A-frame Mechanisms: - Know that a mechanism is the parts of an object that move together - Know that wheels need to be round to rotate and move - Understand that for a wheel to move it must be attached to a rotating axle - Know that an axle moves within an axle holder which is fixed to the structure and makes parts turn in a circle - Know that a slider mechanism moves an object from side to side - Know that a slider mechanism has a slider, slots, guides and an object - Know that bridges and guides are bits of card that purposefully restrict the movement of the slider
<u>Year 2</u> Cooking & Nutrition: - Understand that all food comes from plants or animals - Know that food has to be farmed, grown elsewhere eg home or caught - Know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar - Know that everyone should eat at least five portions of fruit and vegetables every day - Demonstrate how to prepare simple dishes safely and hygienically without using a heat source	 <u>DT Knowledge Path</u>	<u>Year 3</u> Cooking & Nutrition: - Start to know about a range of fresh and processed ingredients appropriate for their product and whether they are grown, reared or caught in the UK, Europe and the wider world - Understand how to prepare and cook a variety of mainly savoury dishes safely and hygienically including where appropriate the use of a heat source - Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking - Start to understand that a healthy diet is made up from a variety

- Demonstrate how to use techniques such as cutting, peeling and grating Textiles: - Know that 'joining technique' means connecting two pieces of material together - Know that there are various temporary methods of joining fabric by using staples, glue or pins - Understand that different techniques for joining materials can be used for different purposes - Understand that a template (or fabric pattern) is used to cut out the same shape multiple times Mechanisms: - Know that mechanisms are a collection of moving parts that work together as a machine to produce movement - Know that there is always an input and output in a mechanism - Know that an input is the energy that is used to start something working - Know that an output is the movement that happens as a result of the input - Know that a lever is something that turns on a pivot - Know that a linkage mechanism is made up of a series of levers		and balance of different food and drink as depicted in 'The Eat Well Plate' - Begin to know that to be active and healthy, food and drink are needed to provide energy for the body Structures: - Develop and use knowledge of how to construct strong, stiff shell structures - Develop and use knowledge of nets of cubes and cuboids and where appropriate, more complex 3D shapes Mechanisms: - Understand how pneumatic systems work - Understand that pneumatic systems can be used as part of a mechanism - Know that pneumatic systems operate by drawing in, releasing and compressing air
<u>Year 4</u> Cooking & Nutrition: - Understand that food is grown, reared or caught in the UK, Europe and the wider world - Know that a healthy diet is made up from a variety and a balance of different food and drink, as depicted in 'The Eat Well Plate' - Know and use relevant technical and sensory vocabulary appropriately Textiles: - Know how to strengthen, stiffen and reinforce existing fabrics - Understand how to use a range of different stitches for different purposes - running stitch, back stitch, over stitch - Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT Electrical systems: - Understand that in programming a 'loop' is code that repeats something again and again until stopped - Know that a Micro:bit is a pocket-sized, codeable computer - Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm	<u>Year 5</u> Cooking & Nutrition: - Understand about seasonality in relation to food products and the source of different food products - Understand how food is processed into ingredients that can be eaten or used in cooking - Begin to understand that different food and drink contain different substances – nutrients, water and fibre that are needed for health Textiles: - Understand how fabrics can be strengthened, stiffened and reinforced where appropriate using over sewing, back stitch, blanket stitch or machine stitching (closer supervision) - Know that using a template (or clothing pattern) helps to accurately mark out a design on fabric - Understand the importance of consistently sized stitches Electrical systems: - Understand and use electrical systems in their products linked to science coverage - Understand that mechanical and electrical systems have an input, process and an output and know how each is achieved	<u>Year 6</u> Cooking & Nutrition: - Understand that seasons may affect the food available and use this to adapt recipes by adding or substituting one or more ingredients - Know how a healthy diet is important to health and apply this in their ingredient choices/substitutions Structures: - Understand different ways to strengthen, stiffen and reinforce 3D frameworks using permanent joining techniques - Know that structures can be strengthened by manipulating materials and shapes - To understand how triangles can be used to reinforce structures Mechanisms: - Understand how pulleys can be used to speed up, slow down or change the direction of movement - Understand that the mechanism in a pulley uses a system of a cam, an axle and a follower - Understand that different shaped cams produce different outputs