

DT Curriculum 2023/24 – Years 5 & 6

	Autumn 1	Autumn 2
Topic	<u>No Focus</u>	<p><u>Circuits and Programming – Iz Wiz Robotics</u> Children will use Lego WeDo kits to program Milo the Science Rover. They will use Milo the Science Rover – set of 4 lessons – Education.Lego.com website</p>
Knowledge		<ul style="list-style-type: none"> • Know about different ways in which scientists and engineers can reach remote places using modern technology to support their investigations (link to the explorations of the tombs in Ancient Egypt– how engineers today would use technology to support explorers in their work • Know how to create and program Milo the Science Rover. • Know how to document how Milo can help them to discover a special plant specimen • 4 lessons—Part A: Milo the Science Rover <ul style="list-style-type: none"> • Part B: Milo's Motion Sensor • Part C: Milo's Tilt Sensor • Part D: Collaborat
Vocab		Scientist, engineer, rover, explore, smart hub, program, motor



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	Spring 1	Spring 2
Topic	<u>No Focus</u>	<p>Structures– Bird hides</p> <p>Children will extend their knowledge of structures through the brief of designing and making a small scale bird hide. The main outcome of this unit will be the design and construction of a framework-type shelter for an identified purpose.</p>
Knowledge		<ul style="list-style-type: none"> • Know about a range of shelters – portable e.g tents and playhouses and permanent e.g bus shelter, football stadium and consider how they are built • Know about techniques for strengthening and reinforcing structures • Know about different techniques for joining different materials together • Know how to produce a design for a bird hide, using a range of methods such as 3D pictures, exploded diagrams, flat pack diagrams. • Know how to consider design requirements when developing product ideas (e.g type of bird, location—school wildlife garden/park/local care home) • Know how to read and measure dimensions • Know how to build a mock-up of a bird hide • Know how to use wood working tools, dowel, square section wood, art straws or cardboard to construct their product. • Know how to use cardboard corners to stabilise a structure • Know the names and functions of the DT equipment used, and do so appropriately and safely • Know how to select resources considering their aesthetic properties, durability and functionality • Know how to evaluate and promote a finished product <p><i>In addition – children should know about key architects/structures from a range of eras and cultures (e.g Sydney Opera House– Jorn Utzon; The Shard - Renzo Piano; Taj Mahal - Ustad Ahmad; Heydar Aliyev Centre— Zaha Hadid; St Paul's Cathedral— Sir Christopher Wren)</i></p>
Vocab		<p>Architect, architecture, design criteria, structure, joint, T joint, cardboard corner, aesthetic, functionality, sketches, prototype, build, sustainability, environmental impact, innovation, exploded diagram, outcome, end user/consumer</p>



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	Summer 1	Summer 2
Topic	<u>No Focus</u>	<u>Food Technology – Energy Bars/Flapjacks</u> Children will research ingredients and recipes for flapjacks/energy bars and will make an energy bar or flapjack which would be ideal for the residential trip.
Knowledge		<ul style="list-style-type: none"> Know how to read recipes and identify key ingredients in flapjacks or energy bars and why these are used Know how to evaluate packaging of energy bars, considering the nutritional values fo ingredients Know how to develop their own recipe, working in groups to create their product Know how to use appropriate cooking techniques to make their flapjack/energy bar Know how to evaluate the taste and aesthetic appeal of the finished product Know about cost effectiveness of food products and how this impacts the ingredients used and price Know how to design appealing packaging including appropriate nutritional information Know how to produce an advertising campaign/poster for their new flapjack or energy bar
Vocab		Flapjack, energy bar, flavour, aesthetic appeal, packaging, recipe, ingredients, nutritional value, method, mix, combine, fold, bake, centigrade, Fahrenheit, utensils, cost effective,



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	Spring 1	Spring 2
Topic	Food Technology Children will use the prepare and cook a variety of savoury spring rolls by baking. Seasonality etc	No Focus
Knowledge	<ul style="list-style-type: none"> • Know how to research chefs (eg Ken Hom) • Know how to find out the key ingredients in different cuisines • Know how to research different recipes by using recipe books, online recipe websites, YouTube videos • Know how to evaluate food by tasting • Know how to identify the ingredients contained in different foods (spring rolls) • Know how to use different slicing techniques safely • Know how to use different chopping techniques safely • Know how to use different grating techniques safely • Know how to produce their own recipes • Know how to create and bake a savoury dish (spring rolls) • Know how to evaluate the taste of food • Know how to evaluate the aesthetic appeal of food 	
Vocab	flavour, aesthetic appeal, recipe, ingredients, vegetables, dressing, method, chop, grate, slice, bake, Fahrenheit, Centigrade, utensils	



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	Summer 1	Summer 2
Topic	<p><u>Pulleys and Levers – Bridges Topic – linked to Whitby swing bridge and residential trip.</u> Children will investigate and construct a model of a bridge with moving parts.</p>	<u>No Focus</u>
Knowledge	<ul style="list-style-type: none"> Know about different iconic bridges in the UK and around the world (such as London Tower Bridge, Grand Canyon glass bridge, Sydney Harbour Bridge, Clifton suspension bridge) Know about key designers and engineers of famous bridges e.g Isambard Kingdom Brunel Know about different types of bridge structure (e.g truss bridge, suspension bridge, arch bridge) Know about Whitby swing bridge and how swing bridges work, using books, video sources and first hand experience when visiting Whitby on residential Know how to create a bridge design, including exploded diagrams of pivots/levers Know how to make small scale mock-ups of pivots Know how to produce a bridge structure with moving parts using a range of materials—cardboard/paper; spaghetti; wooden structures (PlanBee website + resources) Know how to program Lego WeDo 2.0 Kits to design, construct and programme a bridge which could lift and drop in order for vehicles to pass over and to allow ships to pass underneath <p><i>Teacher information - In its closed position, a swing bridge carrying a road or railway over a river or canal, for example, allows traffic to cross. When a water vessel needs to pass the bridge, road traffic is stopped (usually by traffic signals and barriers), and then motors rotate the bridge horizontally about its pivot point.</i></p>	
Vocab	<p>Engineer, designer, iconic, viaduct, truss, arch, suspension, swing, pivot, lever, load bearing, construct, diagram, exploded diagram, small scale, mock-up, program, materials – steel, brick, glass, wood</p>	

