Whole School DT Overview 2024-2025

Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Product: Fruit salad		**Product:** Hand puppet			**Product:** Moving picture
	Food and Nutrition: **Eat more fruits and vegetables Plan bee.** The children will examine, taste and describe a variety of fruits and vegetables. They will learn how to handle and prepare a variety of fruits and vegetables. They will design, make and evaluate a food product.		**Textiles:** **Plan bee** Children learn how to sew and join fabrics using a running stitch. • about the simple working characteristics of materials and components			**Mechanisms:** **Plan bee/ D&T association** With some support, begin to explore and use simple mechanisms. For example, use sliders in moving pictures, hinges into models etc.
	Technical Knowledge:	**Across KS1 pupils should know:** • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking				

Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Product: Bendy bag		**Product:** Rockets	**Product:** Pizza		
	Textiles **D&T association** From design through to construction. Children learn how to thread a needle independently. Children begin to sew using a range of basic stitches.		**Structure** **In-house SOW** Begin to build structures with some independence exploring how they can be made stronger, stiffer and more stable. Explore vocabulary here: • Structure • Stable • Rigid	**Food and Nutrition** **In-house SOW/Plan bee** Know that food needs to be farmed, grown elsewhere (e.g. home) or caught. Understand how to name and sort foods into the five groups in 'The Eat well plate.' Begin to use techniques such as cutting, peeling and grating.		
	Technical Knowledge:	**Across KS1 pupils should know:** • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking				

Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Product: Healthy meal/snack		**Product:** CAMS toy			**Product:** Marble run
	Food and Nutrition: **Seasonal Food Plan bee** Begin to know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. Be able to use a range of techniques such as peeling, chopping, slicing and grating		**Mechanisms:** **Plan bee** Begin to develop an understanding that mechanical systems such as levers and linkages or pneumatic systems can create movement. Begin to incorporate levers and linkages into their products.			**Structures:** **Twinkl** • How to use learning from mathematics to help design and make products that work. • how to make strong, stiff shell structures • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics
	Technical Knowledge:	**Across KS2 pupils should know:** • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking		**In Lower KS2 pupils should also know:** • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed		

Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Product: Torch		**Product:** Packaging		**Product:** Aprons
		Mechanisms: **D&T association** Make a torch, using knowledge of how to create a circuit, to learn how to incorporate a switch and appropriate housing for the components. • that mechanical and electrical systems have an input, process and output • how simple electrical circuits and components can be used to create functional products		**Structures:** **D&T association** The children will learn about designing and making shell structures using sheet materials and additional strengthening for a particular purpose: transporting and displaying biscuits. • how to use learning from mathematics to help design and make products that work		**Textiles:** **D&T association** Children use a pattern and are introduced to making a prototype of a product. Sewing skills are becoming more accurate, increasing the range of stiches. • that a single fabric shape can be used to make a 3D textiles product • that materials have both functional properties and aesthetic qualities

	Key events and individuals	**Across KS2 pupils should know:** • about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products	
	Technical Knowledge:	Across KS2 pupils should know: • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking	In Lower KS2 pupils should also know: • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits and components can be used to create functional products • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed

Year 5	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
		Product: Fairground buzzer game		**Product:** Making Bread		**Product:** Purses
		Mechanisms and Structures: **Planbee** Investigate what alarm systems are used for and how different types of switches are activated. Investigate how to create circuits with a variety of different switches. Design an alarmed system for a particular purpose (entertainment game) and evaluate a finished product.		**Food and Nutrition:** **Plan bee** Understand that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking. Gain confidence in the skills of mixing, kneading and baking. • that a recipe can be adapted by adding or substituting one or more ingredients		**Textiles:** **In-house SOW/ Plan bee** Children can create products using pattern pieces and demonstrate an awareness of seam allowance. They are taught how to blanket stitch. • that a 3D textiles product can be made from a combination of fabric shapes
	Key events and individuals	**Across KS2 pupils should know:** • about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products				
	Technical Knowledge: Making products work	**Across KS2 pupils should know:** • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking		**In Upper KS2 pupils should also know:** • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients		

Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
		Product: Funky furnishings	**Product:** Planned meal		**Product:** Explorer buggies	
		Textiles: **Plan bee** The children will investigate and analyse different types of existing products. They will explore how to join different ways to join fabrics using sewing skills. They can explore different ways to create fastenings. Design, create and evaluate their own creation.	**Food and Nutrition:** **Great British dishes Plan bee** Creating a nutritious meal based on great British dishes. The children will understand and apply the principles of a healthy and varied diet They will learn how to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Learn that a recipe can be adapted by adding or substituting one or more ingredients.		**Mechanisms and Structures:** **In-house SOW** Children create a working circuit which moves a wooden buggy frame. Combining woodwork and electrical elements. • how more complex electrical circuits and components can be used to create functional products • that mechanical and electrical systems have an input, process and output	
	Key events and individuals	**Across KS2 pupils should know:** • about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products				
	Technical Knowledge: Making products work	**Across KS2 pupils should know:** • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking		**In Upper KS2 pupils should also know:** • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients	