



At West Bridgford Junior School we aim to ensure that Design and Technology is an inspiring, rigorous and practical subject. Teachers use their creativity and imagination to enable pupils to design and make products that solve real and relevant problems. Through a range of engaging activities, they will acquire a broad range of subject knowledge drawing on disciplines such as Mathematics, Science, Engineering, Computing and Art. Our aim is to inspire both girls and boys to engage in a life-long love of STEM subjects and to open future learning and career pathways. We believe that high-quality STEM education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Designing	Making	Evaluating	Technical Knowledge	Food Technology
<p><i>use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</i></p> <p><i>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</i></p>	<p><i>select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</i></p> <p><i>select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</i></p>	<p><i>investigate and analyse a range of existing products</i></p> <p><i>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</i></p> <p><i>understand how key events and individuals in design and technology have helped shape the world</i></p>	<p><i>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</i></p> <p><i>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</i></p> <p><i>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</i></p> <p><i>apply their understanding of computing to program, monitor and control their products.</i></p>	<p><i>understand and apply the principles of a healthy and varied diet</i></p> <p><i>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</i></p> <p><i>understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed</i></p>



Year 3

Designing	Making	Evaluating	Technical Knowledge	Food Technology
<p>Prove that a design meets a set criteria</p> <p>Design a product and make sure that it looks attractive</p> <p>Choose a material for both its suitability and its appearance</p>	<p>Follow a step-by-step plan, choosing the right equipment and materials</p> <p>Select the most appropriate tools and techniques for a given task</p> <p>Make a product which uses both electrical and mechanical components</p> <p>Work accurately to measure, make cuts and make holes</p>	<p>Explain how to improve a finished model</p> <p>Know why a model has, or has not, been successful</p>	<p>Know how to strengthen a product by stiffening a given part or reinforce a part of the structure</p> <p>Use a simple IT program within the design</p>	<p>Describe how food ingredients come together</p> <p>Weigh out ingredients and follow a given recipe to create a dish</p> <p>Talk about which food is healthy and which food is not</p> <p>Know when food is ready for harvesting</p>

Autumn Term	Spring Term	Summer Term
<p>Structures (Linked to shell structures including computer aided design)</p> <p>Building bridges</p>	<p>Structures (Linked to shell structures including computer aided design)</p> <p>Designing and building Stone Age house</p> <p>Textiles (Linked to 2D and 3D products) Stone Age jewellery</p>	<p>Food (Linked to English Instruction writing)</p> <p>Design and make salad dressing</p>



Year 4

Designing	Making	Evaluating	Technical Knowledge	Food Technology
<p>Use ideas from other people when designing produce a plan and explain it</p> <p>Persevere and adapt work when original ideas do not work</p> <p>Communicate ideas in a range of ways, including by sketches and drawings which are annotated</p>	<p>Know which tools to use for a particular task and show knowledge of handling the tool</p> <p>Know which material is likely to give the best outcome</p> <p>Measure accurately</p>	<p>Evaluate and suggest improvements for design</p> <p>Evaluate products for both their purpose and appearance</p> <p>Explain how the original design has been improved</p> <p>Present a product in an interesting way</p>	<p>Links scientific knowledge by using lights, switches or buzzers</p> <p>Use electrical systems to enhance the quality of the product</p> <p>Use IT, where appropriate, to add to the quality of the product</p>	<p>Know how to be both hygienic and safe when using food</p> <p>Bring a creative element to the food product being designed</p>

Autumn Term	Spring Term	Summer Term
<p>Electrical Systems <i>(Linked to simple circuits and switches - Including programming and control)</i></p> <p>Night lights</p>	<p>Food <i>(Linked to Healthy and varied diet)</i></p> <p>Design and Make a curry</p>	<p>Mechanical Systems <i>(Linked to Levers and Linkages and Ancient Egypt)</i></p> <p>Ancient Egypt – Design and make a Shadoof</p>



Year 5

Designing	Making	Evaluating	Technical Knowledge	Food Technology
<p>Come up with a range of ideas after collecting information from different sources</p> <p>Produce a detailed, step-by-step plan</p> <p>Explain how a product will appeal to a specific audience</p> <p>Design a product that requires pulleys or gears</p>	<p>Use a range of tools and equipment competently</p> <p>Make a prototype before making a final version</p> <p>Make a product that relies on pulleys or gears</p>	<p>Suggest alternative plans; outlining the positive features and draw backs</p> <p>Evaluate appearance and function against original criteria</p>	<p>Links scientific knowledge to design by using pulleys or gears</p> <p>Uses more complex IT program to help enhance the quality of the product produced</p>	<p>Be both hygienic and safe in the kitchen</p> <p>Know how to prepare a meal by collecting the ingredients in the first place</p> <p>Know which season various foods are available for harvesting</p>

Autumn Term	Spring Term (1)	Spring Term (2)
<p>Textiles <i>(Linked to Victorians)</i></p> <p>Making a pin cushion</p>	<p>Food <i>(Linked to Ancient Greece - celebrating cultures and seasonality)</i></p> <p>Ancient Greek Cuisine – humus</p>	<p>Mechanical Systems (STEM) <i>(Linked to Science - Pulleys or gears)</i></p> <p>Pulleys - Transporting tomatoes in Nepal</p>



Year 6

Designing	Making	Evaluating	Technical Knowledge	Food Technology
Use market research to inform plans and ideas	Know which tool to use for a specific practical task	Know how to test and evaluate designed products	Use electrical systems correctly and accurately to enhance a given product	Explain how food ingredients should be stored and give reasons
Follow and refine original plans	Know how to use any tool correctly and safely	Explain how products should be stored and give reasons	Know which IT product would further enhance a specific product	Work within a budget to create a meal
Justify planning in a convincing way	Know what each tool is used for	Evaluate product against clear criteria	Use knowledge to improve a made product by strengthening, stiffening or reinforcing	Understand the difference between a savoury and sweet dish
Show that culture and society is considered in plans and designs	Explain why a specific tool is best for a specific action			

Autumn Term	Spring Term	Summer Term
<p>Food <i>(Linked to WW2 - working with budgets/rationing)</i></p> <p>Cooking with seasonal produce</p>	<p>Structures <i>(Linked to Climate Change)</i></p> <p>Making wind turbines that carry out a function</p>	<p>Electrical Systems <i>(Linked to more complex switches and circuits)</i></p> <p>Electrical systems that serve a purpose – Fair Ground rides</p>



Subject Specific Vocabulary

The table below outlines vocabulary that we would like children to be confident in using by the end of KS2 through the exposure to high-quality DT teaching and learning.

Designing	Making	Evaluating	Technical Knowledge	Food Technology
User	Prototype	MDF	Brittle	Recipe
Purpose	Equipment	Polystyrene	Malleable	Taste test
Sketch	Landscape	Propeller	Opaque	Texture
Original	Portrait	PVA	Rigid	Fat
Investigate	Mark out	Sandpaper	Stable	Kilojoule
Research	Mock up	Screw	Synthetic	Ingredient
Function	Model	Sellotape	Texture	Apron
Pattern piece	Template	Shaft	Three-dimensional	Baking sheet
Design criteria	Fold	Spacer	Two-dimensional	Basin
Annotated diagram	Axle	Textile	Translucent	Can opener
Appearance	Balsa wood	Washer	Transparent	Chopping board
Components list	Beam	Wheel	Abrasive	Dish cloth
Design proposal	Binca	Winch	Acrylic	Bake
Dismantle	Bolt	Bench hook	Adhesive	Baste
Engineering	Cam	Bench vice	Mouldable	Beat
Enlarged view	Chassis	Bradawl	Reclaimed materials	Boil
Final design	Cog	Coping saw	Rust	Dice
Orthographic	Corriflute	Drill	Applique	Glaze
Product analysis	Dowel	G clamp	Bodkin	Grill
Sequential diagram	Drive belt	Glue gun	Cladding	Knead
Specification	Gear	Goggles	Crank	Roast
	Hard wood	Hammer		Rub in
	Soft wood	Hole punch		
	Hinge	Jinks corner		
	Mesh	Junior hacksaw		
	Nail	Needles		
	Nut	Pins		
	Plastic	Pliers		
	Plywood	stapler		
				Set
				Simmer
				Grater
				Healthy eating
				Hygenic
				Knives
				Ladle
				Measuring jug
				Measuring spoons
				Mixing bowl
				Palette knife
				Pan
				Cutters
				Pincers
				Scales
				Sieve
				Spatula
				Tongs
				Whisk
				Wooden spoon
				Zester