

# King Ina Church of England Academy

## Design & Technology Curriculum Progression of Skills

Our curriculum approach to English reflects our vision statement:

Within our secure Christian environment, our vision is to develop healthy, happy, motivated learners who aspire to achieve their full potential and who look to the future with confidence.

	Structures	Mechanisms	Textiles	Electrical systems	Digital world	Cooking and nutrition
KS1	Build structures such as windmills and chairs, exploring how they can be made stronger, stiffer and more stable. Recognise areas of weakness through trial and error.	Introduce and explore simple mechanisms, such as sliders, wheels and axles in their designs. Recognise where mechanisms such as these exist in toys and other familiar products.	Explore different methods of joining fabrics and experiment to determine the pros and cons of each technique.	<b>KS2 only*</b> Create functional electrical products that use series circuits, incorporating different components such as bulbs, LEDs, switches, buzzers and motors.  Consider how the materials used in these products can:	<b>KS2 only*</b> Learn how to develop an electronic product with processing capabilities.  Apply Computing principles to program functions within a product including to control and monitor it.	Learn about the basic rules of a healthy and varied diet to create dishes.  Understand where food comes from, for example plants and animals.
KS2	Continue to develop KS1 exploration skills, through more complex builds such as pavilion and bridge designs. Understand material selection and learn methods to reinforce structures.	<b>Mechanical systems</b>  Extend pupils understanding of individual mechanisms, to form part of a functional system, for example: Automatas, that use a combination of cams, followers, axles/shaft, cranks and toppers.	Understand that fabric can be layered for effect, recognising the appearance and technique for different stitch and fastening types, including their: <ul style="list-style-type: none"> <li>• Strength.</li> <li>• Appropriate use.</li> <li>• Design.</li> </ul>	<ul style="list-style-type: none"> <li>• Protect the circuitry.</li> <li>• Reflect light.</li> <li>• Conduct electricity.</li> <li>• Insulate.</li> </ul>	Understand how the history and evolution of product design lead to the on-going Digital revolution and the impact it is having in the world today.	Understand and apply the principles of a healthy and varied diet to prepare and cook a variety of dishes using a range of cooking techniques and methods.  Understand what is meant by seasonal foods.  Know where and how ingredients are sourced.

### KAPOW units in King Ina Church of England's Curriculum Plan

Key Stage 1						
Discover		Explore		Create		
YEAR A	<u>TIME TRAVELLER</u>	<u>KNIGHTS &amp; DRAGONS</u>	<u>MADE IN BRITAIN</u>	<u>OUR WORLD</u>	<u>SUPER MOVERS</u>	<u>JURASSIC ADVENTURE</u>
	Textiles: Pouches	Mechanisms: Making a moving monster	Structures: Constructing a windmill	Mechanisms: Fairground wheel	Food: A balanced diet	
YEAR B	<u>V.I.P.s</u>	<u>GREAT &amp; GHASTLY EVENTS</u>	<u>WHAT'S ON THE MENU?</u>	<u>WEATHER EXPLORERS</u>	<u>ANIMAL MAGIC</u>	<u>SUN, SEA &amp; SAND</u>
	Mechanisms: Wheels and axles	Mechanisms: Making a moving story book	Food: Fruit and vegetables		Textiles: Puppets	
Key Stage 2						
Discover		Explore		Create		
YEAR A	<u>ANCIENT LEGACIES</u>		<u>POLES APART</u>		<u>WHAT A PERFORMANCE!</u>	
	Constructing a castle		Eating Seasonally Static electricity		Pavilions Waistcoats Fastenings	
YEAR B	<u>WHAT DID THE ROMANS DO FOR US?</u>		<u>LOCATION, LOCATION, LOCATION</u>		<u>GRAND DESIGNS</u>	
	Steady hand game		Bridges Electronic greetings cards		Playgrounds Automatic toys Digital world: electronic charm	
YEAR C	<u>INVADERS &amp; RAIDERS</u>		<u>WHAT MAKES BRITAIN GREAT?</u>		<u>SEASIDE SCENES</u>	
	Making a slingshot car		Come dine with me Adapting a recipe What could be healthier?		Mindful moments timer Cushions	
YEAR D	<u>A JOURNEY THROUGH TIME</u>		<u>ALL AROUND THE WORLD</u>		<u>STORYTELLERS</u>	
	Torches Monitoring devices		Navigating the world		Making a pop-up book Stuffed toys Mechanical systems: pneumatics toys	