

# Kingsham Primary School



## Design Technology Long Term Plan

## Purpose of study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

## Aims

The national curriculum for history aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

## Year 1 and 2

Year 1/2	Autumn	Spring	Summer
<b>A</b>	<p>LC / Context: Why do we remember? Textiles</p> <p>Outcome: Felt poppies Problem/Context: To make an item for Remembrance Day.</p> <p>Skills: Cut and shape materials, joining materials (Year 1 glue/Year 2 stitch).</p> <p>Talk about the properties of the materials. Yr. 2 – talk about why they chose the material.</p>	<p>LC / Context: How would 5a-day keep me healthy? Food</p> <p>Outcome: What fruits would be good in your salad?</p> <p>Visit the market to buy fruit in groups (with a budget). Problem/context: How can we make sure we're eating our 5 a day?</p> <p>Skills: cutting, chopping, peels. Assemble ingredients. Yr. 1 - Wash hands. Yr. 2 – know what hygienic means and how to be hygienic.</p>	<p>LC / Context: Once upon a Mixed-Up Time...? Mechanisms</p> <p>Outcome: movable page Problem/Context: jack and the mixed-up beanstalk.</p> <p>Skills: making levers (pivots) and slider mechanisms.</p>
<b>B</b>	<p>LC Where do rockets take us? Outcome – How can I learn my spellings – fridge magnet. Skills: joining materials, design, cut, evaluate.</p> <p>Outcome – What can Bob put his eggs on? How do you like your toast unit? Skills – hygiene, preferences, (science link).</p>	<p>LC / Context: What would life be like without...? Mechanisms</p> <p>Outcome: Moving roly-poly toy. What would life be like without toys? Skills: Make a product that moves, cutting, scissors, joining, design.</p>	<p>LQ – Through the door Textiles</p> <p>Outcome – textile tree for the class reading area. Skills – wrapping, design, joining, evaluating, 3D shapes.</p>

## Year 3 and 4

Year 3/4	Autumn	Spring	Summer
<b>A</b>	<p>LC / Context: Can you walk like an Egyptian?</p> <p>Outcome: Design and bake a loaf of bread for an Egyptian Pharaoh.</p> <p>Problem – Can you create a loaf of bread for an Ancient Egyptian banquet?</p> <ul style="list-style-type: none"> <li>• Prepare ingredients hygienically.</li> <li>• Do they take account of the ideas of others when designing?</li> <li>• Measure ingredients to the nearest gram accurately.</li> <li>• Assemble or cook ingredients.</li> </ul>	<p>LC / Context: Electricity</p> <p>Outcome: Create a map of Chichester with Light bulbs that indicate key features of the city.</p> <p>Problem – Can you create an electrical circuit to...</p> <ul style="list-style-type: none"> <li>• Create series and parallel circuits.</li> <li>• Can they use a simple circuit?</li> <li>• Can they use a number of components?</li> <li>• Can they add things to their circuit?</li> <li>• Are they confident trying new and different ideas?</li> <li>• How to use learning from science to design and make products that work</li> <li>• That mechanical and electrical systems have an input, process and output</li> <li>• The correct technical vocab for the projects they are undertaking</li> <li>• How simple electrical circuits and components can be used to make functional products.</li> </ul>	<p>LC / Context: Has Greece always been in the news?</p> <p>Outcome: Create a healthy Greek dish (salad/fruit salad) using traditional Greek ingredients.</p> <p>Problem –</p> <ul style="list-style-type: none"> <li>• Prepare ingredients hygienically.</li> <li>• Do they take account of the ideas of others when designing?</li> <li>• Measure ingredients to the nearest gram accurately.</li> <li>• Assemble ingredients.</li> <li>• Have they thought about what they can do to present their product in an interesting way?</li> <li>• Can they make their product look attractive?</li> <li>• Can they use equipment and tools accurately?</li> <li>• That food ingredients can be fresh, pre-cooked and processed.</li> </ul>

## Year 5 and 6

Year 5/6	Autumn	Spring	Summer
<b>A</b>	<p><b>LC / Context:</b> What is our place in the universe?</p> <p><b>Outcome:</b> Make a motorised moon Buggy (see buggy making unit)</p> <p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>. to develop their ideas through sketching and working with technical components, wooden strip, paper, card and found materials;</li> <li>• to develop their designs by thinking about the purpose of the toy and the needs of possible users;</li> <li>• to mark, measure, cut and join materials with increasing accuracy;</li> <li>• to use a variety of tools with precision and care;</li> <li>• to use simple mechanisms to provide a transmission system;</li> <li>• to use simple electrical circuits to operate motors, lights and buzzers</li> </ul>	<p><b>LC / Context:</b> What Makes the Earth Angry?</p> <p><b>Outcome:</b> Design Survival Soup (and bread) to drink outside</p> <p><b>Skills:</b></p> <p>Follow a recipe and make modifications so balanced pasta, pulses etc.), texture. Different food and drink contain different nutrients</p> <p>Analogue scales, graters, vegetable knives</p> <p>Hob</p> <p>Blender</p> <p>Bread - Combining methods – mixing, heating, folding and kneading.</p>	<p><b>LC / Context:</b> How does Britain have fun? (leisure and entertainment in 21<sup>st</sup> century Britain) (or Heroes and villains)</p> <p><b>Outcome:</b> Create a headband representative of 1920s, 1960s or 1990s for production (fashion show)</p> <p><b>Skills:</b> make a prototype</p> <p>Sew using a hem</p> <p>Finishing techniques</p> <p>Accurately measure, mark out materials</p> <p>Accurately assemble a range of materials</p>

<p><b>B</b></p>	<p><b>LC / Context:</b> Were the Saxons smashed by the Vikings?</p> <p><b>Outcome:</b> Make your own mythical Viking Creature (Refer to is your beast fierce or friendly unit)</p> <p><b>Skills:</b> to measure and mark out card accurately, to cut, bend and fold card, carefully</p> <ul style="list-style-type: none"> <li>• to produce decorative effects on card;</li> <li>• to scale up using a grid;</li> <li>• about these simple structure's concepts: <ul style="list-style-type: none"> <li>- strength and stiffness;</li> <li>- Balance and stability:</li> </ul> </li> <li>• Effective techniques for joining card</li> </ul>	<p><b>LC / Context:</b> Is Brazil wealthy?</p> <p><b>Outcome:</b> Make guacamole / salsa and adapt recipes. Ratio</p> <p><b>Skills:</b> Follow a recipe independently Make changes to a recipe To change ingredient in known recipes to improve taste/ To change texture</p>	<p><b>LC / Context:</b> Who de we think we are?</p> <p><b>Outcome:</b> Design and adapt a T-shirt which represents them for the production</p> <p><b>Skills:</b> Choosing textile for purpose How have they made their product attractive?</p> <p>Can they make up a prototype first? Can they use a range of joining techniques?</p>
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