



**Curriculum  
Map  
Design  
Technology  
2024-2025**

**Intent:**

**‘Our aim at West Heath Primary School is for all pupils to become innovative and creative thinkers.’**

At West Heath Primary School, we aim to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideas, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, testing and to be reflective learners who evaluate their work and the work of others. Through our curriculum, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

The curriculum has been designed as a spiral curriculum with the following key principles in mind:

**Cyclical:** Pupils return to the key areas again and again during their time in primary school. Children are given the time to practise.

**Increasing depth:** Each time a key area is revisited it is covered with greater complexity.

**Prior knowledge:** Upon returning to each key area, prior knowledge is utilised so pupils can build upon previous foundations, rather than starting again.

- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- To 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.
- To critique, evaluate and test their ideas and products and the work of others.
- To understand and apply the principles of nutrition and learn how to cook.
- To celebrate achievements in D&T, with a gallery of their products.
- Extra-curricular visits and experiences.

*‘Studying design and technology includes the use of a broad range of knowledge, skills and understanding, and prompts engagement in a wide variety of activities. Pupils design and make products that solve real and relevant problems within a variety of contexts’ (Design & Technology Association, 2024).*

The Design and technology scheme of work aims to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. Through the scheme of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements. The Design and technology scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. EYFS (Reception) units provide opportunities for pupils to work towards the Development matters statements and the Early Learning Goals. Kapow Primary is an Artsmark partner and supports our school on our Artsmark journey, inspiring children and young people to create, experience, and participate in great arts and culture.

**Implementation:**

The Design and technology National curriculum outlines the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition\* has a separate section, with a

focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality. The National curriculum organises the Design and technology attainment targets under four subheadings: Design, Make, Evaluate, and technical knowledge. We have taken these subheadings to be our Kapow Primary strands:

- **Design**
- **Make**
- **Evaluate**
- **Technical Knowledge**

Cooking and nutrition are given a particular focus in the National curriculum and this is one of our six key areas that pupils revisit throughout their time in primary school:

- **Cooking & Nutrition**
- **Mechanisms/Mechanical Systems**
- **Structures**
- **Textiles**
- **Electrical Systems (KS2 Only)**
- **Digital World (KS2 Only)**

Kapow Primary's Design and technology scheme has a clear progression of skills and knowledge within these strands and key areas across each year group.

### Design

All pupils at West Heath Primary school will have the opportunity to develop their **design skills** by:

#### **KS1**

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Generate, develop, model, and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
- Use basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

#### **KS2**

- 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.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- Understand and apply principles of a healthy and varied diet.

- Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.
- Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

### **Make**

All pupils at West Heath Primary school will have the opportunity to develop their **making skills** by:

#### **KS1**

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining, and finishing].
- Select from and use a wide range of materials and components, including construction materials, textiles, and ingredients, according to their characteristics.
- Use basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

#### **KS2**

- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

### **Evaluate**

All pupils at West Heath Primary school will have the opportunity to develop their **evaluating skills** by:

#### **KS1**

- Explore and evaluate a range of existing products.
- Evaluate their ideas and products against design criteria.
- Use basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

#### **KS2**

- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.

## **Technical Knowledge**

All pupils at West Heath Primary school will have the opportunity to develop their **technical knowledge** by:

### **KS1**

- Build structures, exploring how they can be made stronger, stiffer and more stable.
- Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

### **KS2**

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].
- Apply their understanding of computing to program, monitor and control their products.

## **Wider Opportunities**

Pupils at West Heath Primary school will have the opportunity to **explore the wider design technology curriculum** by:

- Participating in after school design technology clubs.
- Experiencing, listening, and appreciating professionals within the industry.
- Learning about art culture and repertoire from external providers.
- Visiting external art establishments/displays.
- Displaying and celebrating their Art in school and at the arts festival.

Through Kapow Primary's Design and technology scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six key areas. Each of the key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Kapow Primary scheme is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning.

## **Pedagogy & Assessment**

- Teachers routinely model work effectively, provide clear explanations and point out connections between content, supporting pupils, including pupils who need the most support, to learn the curriculum in the long term.
- Teachers are clear about what they want pupils to learn. They make sure that pupils practise the building blocks of subject knowledge along the way. Pupils have sufficient repeated encounters with concepts, they have sufficient practice 'in the moment' when learning practical knowledge.

- Teacher’s design and plan activities; they are clear about the knowledge they want pupils to learn. Teachers use the teaching methods that will best enable pupils to know and remember this content in the long term.
- Teachers plan classroom activities to teach knowledge and are clear about which concrete examples they require pupils to use.
- Teachers make subject-specific adaptations to activities for pupils with SEND, where appropriate, without lowering expectations.
- Formative Assessment – Occurs throughout the learning process, through dialogue and conversation. The curriculum is built around the several assessment areas: generating ideas, using design, making skills, evaluating and analysing.
- Self and Peer Review - Pupils know objectives and success criteria to enable them to review successfully.
- Summative Assessment – Assessment materials and quizzes are used for each unit of work.

**Impact:**




The impact of Kapow Primary’s scheme can be constantly monitored through both formative and summative assessment opportunities. Each lesson includes guidance to support teachers in assessing pupils against the learning objectives. Furthermore, each unit has a unit quiz and knowledge catcher which can be used at the start and/ or end of the unit. After the implementation of Kapow Primary Design and technology, pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society. The expected impact of following the Kapow Primary Design and technology scheme of work is that children will:

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National curriculum for Design and technology.
- Meet the end of key stage expectations outlined in the National curriculum for Computing.

# DESIGN TECHNOLOGY

## CURRICULUM MAP

### Year 1




Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	TOYS	REMEMBRANCE	THE LOCAL AREA	SEASONS	INTREPID EXPLORERS	SEASIDE
Outcome	<p><b>Design Technology</b></p> <p>Structures: Constructing a Windmill</p> <p><b>Toy Windmills</b></p> 	<p><b>Art &amp; Design</b></p>	<p><b>Art &amp; Design</b></p>	<p><b>Art &amp; Design</b></p>	<p><b>Design Technology</b></p> <p>Cooking and Nutrition: Smoothies</p> <p><b>Smoothies</b></p> 	<p><b>Design Technology</b></p> <p>Textiles: Puppets</p> <p><b>Punch &amp; Judy Puppets</b></p> 
HEAD (Knowledge)	<p>Learning Objective:</p> <p>To know what a design criterion is and to follow the design criteria to meet the needs of a user.</p> <p>To make a stable structure.</p> <p>To make functioning sails/blades that attach to the supporting structure.</p> <p>To improve their windmill.</p>				<p>Learning Objective:</p> <p>To describe fruits and vegetables and explain how to identify fruits.</p> <p>To name a range of places that fruits and vegetables grow.</p> <p>To describe basic characteristics of fruit and vegetables.</p> <p>To prepare fruits and vegetables to make a smoothie.</p>	<p>Learning Objective:</p> <p>To join fabrics together using pins, staples or glue.</p> <p>To design a puppet and use a template.</p> <p>To join their two puppets' faces together as one.</p> <p>To decorate a puppet to match their design.</p>

<p><b>HANDS</b> <b>(Skills)</b></p>	<p>Success Criteria:</p> <ul style="list-style-type: none"> <li>To puncture a hole.</li> <li>To add weight to a structure.</li> <li>To hold scissors correctly.</li> <li>To begin to estimate equal distances.</li> <li>To cut carefully.</li> <li>To fold to make the shape of the structure.</li> <li>To widen a hole.</li> <li>To join parts together.</li> <li>To attach a supporting structure.</li> <li>To test a structure.</li> <li>To test my windmill.</li> <li>To make my design better.</li> <li>To decorate their windmill for the user.</li> </ul>				<p>Success Criteria:</p> <ul style="list-style-type: none"> <li>To name fruits and vegetables.</li> <li>To identify seeds.</li> <li>To sort fruits and non-fruits.</li> <li>To name places where fruits and vegetables grow.</li> <li>To decide whether a fruit or vegetable will grow aboveground or underground.</li> <li>To make predictions about where edible parts of plants will grow.</li> <li>To use a fork to hold foods they are cutting.</li> <li>To use a table knife to cut soft foods.</li> <li>To use a juicer to get juice from fruits.</li> <li>To work safely and follow instructions.</li> <li>To choose fruits and vegetables to taste.</li> <li>To suggest fruits to put together based on taste.</li> </ul>	
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					<p>To describe a food's taste.</p> <p>To decide on three ingredients to create a recipe.</p> <p>To gather the ingredients for a simple recipe.</p> <p>To cut and juice fruits as part of a recipe.</p> <p>To use my senses to compare my smoothie with my partner's.</p> <p>To colour a template to create a carton design.</p> <p>To choose my favourite recipe.</p> <p>To talk to the class about my design brief.</p>		
<b>HEART (Values)</b>	<b>Respect</b>	<b>Honesty</b>	<b>Empathy</b>	<b>Collaboration</b>	<b>Resilience</b>	<b>Determination</b>	<b>Excellence</b>

<b>DESIGN TECHNOLOGY</b>
<b>CURRICULUM MAP</b>

Year 2						
Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	THE GREAT FIRE OF LONDON	THE GUNPOWDER PLOT	THE UK	AFRICA	TITANIC	HOT & COLD PLACES
Outcome	Art & Design	<b>Design Technology</b> Mechanisms: Fairground Wheel <i>Fairground Wheel</i> 	Art & Design	<b>Design Technology</b> Mechanisms: Making a Moving Monster <i>Adapt to make an African Animal</i> 	Art & Design	<b>Design Technology</b> Structures: Baby Bear's Chair <i>Chairs/Buildings</i> 
<b>HEAD (Knowledge)</b>		Learning Objective: To explore wheel mechanisms and design a Ferris wheel. To select appropriate materials. To build and test a moving wheel. To make and evaluate a structure with a rotating wheel.		Learning Objective: To look at objects and understand how they move. To look at objects and understand how they move. To explore different design options. To make a moving monster.		Learning Objective: To explore the concept and features of structures and the stability of different shapes. To understand that the shape of the structure affects its strength. To make a structure according to design criteria. To produce a finished structure and evaluate its strength, stiffness and stability.




<p><b>HANDS</b> <b>(Skills)</b></p>		<p>Success Criteria:</p> <p>To describe how axles help wheels to move a vehicle.</p> <p>To evaluate different designs.</p> <p>To design and label a working wheel.</p> <p>To understand the properties of different materials.</p> <p>To communicate ideas to someone else.</p> <p>To select appropriate materials for the wheel.</p> <p>To build a stable structure.</p> <p>To test elements of the design.</p> <p>To adapt the design as necessary.</p> <p>To make the wheel rotate.</p> <p>To evaluate a wheel mechanism and adapt it as necessary.</p> <p>To ensure that the pods stay upright when rotating around a fixed point.</p>		<p>Success Criteria:</p> <p>To understand that mechanisms are a collection of moving parts that work together in a machine.</p> <p>To understand that there is always an input and output in a mechanism.</p> <p>To identify mechanisms in everyday objects.</p> <p>To understand that a lever is something that turns on a pivot.</p> <p>To understand that a linkage is a system of levers that are connected by pivots.</p> <p>To help devise whole-class design criteria for what our moving monster should do.</p> <p>To understand that mechanisms are a collection of moving parts that work together in a machine.</p> <p>To understand that there is always an input and output in a mechanism.</p> <p>To understand that a lever is something that turns on a pivot.</p>		<p>Success Criteria:</p> <p>To identify natural and man-made structures.</p> <p>To understand what is meant by stability and identify when a structure is more or less stable than another.</p> <p>To explain that shapes and structures with wide, flat bases or legs are the most stable.</p> <p>To understand the meaning of the word's strength, stiffness and stability.</p> <p>To understand there are different ways to fold paper to improve its strength and stiffness.</p> <p>To build a strong and stiff structure by folding paper.</p> <p>To test the strength of my structure.</p> <p>To remember that chairs are structures that need to be strong, stiff and stable.</p> <p>To create joints and structures from paper, card and tape.</p>
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				<p>To understand that a linkage is a system of levers that are connected by pivots.</p> <p>To understand that linkages use levers and pivots to create motion.</p> <p>To think of two points to add to the class design criteria.</p> <p>To draw two moving monster designs that meet all points of the design criteria.</p> <p>To design the linkage, to make a monster move.</p> <p>To make linkages by connecting levers and pivots.</p> <p>To understand that materials can be selected according to their characteristics.</p> <p>To design and make the features of a monster.</p> <p>To evaluate how functional my monster is and whether it meets the Design Criteria.</p>		<p>To identify that the chair I design needs to be strong, stiff, stable and support Teddy.</p> <p>To create joints and structures.</p> <p>To evaluate my structure according to the design criteria.</p>
<p><b>HEART</b> <b>(Values)</b></p>	<p><b>Respect    Honesty    Empathy    Collaboration    Resilience    Determination    Excellence</b></p>					

# DESIGN TECHNOLOGY

## CURRICULUM MAP

### Year 3

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Topic</b>	STONE AGE	BRONZE AGE	BIOMES- SAVANNAH	HOW DOES YOUR GARDEN GROW?	THE EGYPTIANS	BIRMINGHAM
<b>Outcome</b>	<b>Art &amp; Design</b>	<p><b><i>Design Technology</i></b></p> <p>Structures: Constructing a Castle</p> <p><b><i>Bronze Age Castles</i></b></p> 	<b>Art &amp; Design</b>	<p><b><i>Design Technology</i></b></p> <p>Cooking &amp; Nutrition: Eating Seasonally</p> <p><b><i>Seasonal Tarts</i></b></p> 	<b>Art &amp; Design</b>	<p><b><i>Design Technology</i></b></p> <p>Digital World: Wearable Technology</p> <p><b><i>Wearable Technology</i></b></p> 
<b>HEAD (Knowledge)</b>		<p>Learning Objective:</p> <p>To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure.</p> <p>To design a castle.</p> <p>To construct 3D nets.</p> <p>To construct and evaluate my final product.</p>		<p>Learning Objective:</p> <p>To explain why food comes from different places around the world.</p> <p>To explain the benefits of seasonal foods.</p> <p>To develop cutting and peeling skills.</p> <p>To evaluate seasonal ingredients.</p>		<p>Learning Objective:</p> <p>To research and evaluate existing products.</p> <p>To develop design criteria.</p> <p>To use code to program and control a product.</p> <p>To develop and communicate ideas.</p> <p>To develop ideas through computer-aided design.</p>

				<p>To design a mock-up using criteria.</p> <p>To evaluate a dish.</p>		<p>To improve a design based on feedback.</p> <p>Inventors: Seymour Rubenstein and Rob Barnaby</p>
<p><b>HANDS</b></p> <p><b>(Skills)</b></p>		<p>Success Criteria:</p> <p>To identify different features of castles.</p> <p>To design my own castle.</p> <p>To label the features of my castle.</p> <p>To explain why a castle needs to be strong and stable.</p> <p>To recall the features of a castle.</p> <p>To add two design points to the design specification to appeal to the person/purpose of my castle.</p> <p>To draw the design of my castle using 2D shapes and labelling:</p> <ul style="list-style-type: none"> <li>-the 3D shapes that will create the features;</li> <li>-the materials I need;</li> <li>-the colours I will use.</li> </ul>		<p>Success Criteria:</p> <p>To identify some fruits and vegetables that cannot be grown in the UK.</p> <p>To label countries where different fruits and vegetables grow.</p> <p>To know that importing food has an impact on the environment.</p> <p>To match fruits and vegetables with the season in which they grow in the UK.</p> <p>To find recipes containing seasonal foods.</p> <p>To identify equipment used for preparing food.</p> <p>To explain why food would or would not need to be prepared.</p> <p>To describe the safety rules for preparation techniques.</p>		<p>Success Criteria:</p> <p>To describe a significant moment in the history of digital products.</p> <p>To give reasons why a product is useful.</p> <p>To suggest some people who might find a product useful.</p> <p>To decide who will use my product.</p> <p>To identify what my product will do.</p> <p>To discuss how I want my product to function.</p> <p>To write code to control a function on a device.</p> <p>To check my code for errors by comparing it to the correct code.</p> <p>To think about the user when choosing the code for my product.</p> <p>To draw a diagram of how I would like my product to look.</p>




		<p>To know that a net is what a 3D shape would look like if it were opened out flat.</p> <p>To construct a range of 3D geometric shapes using a net by:</p> <ul style="list-style-type: none"> <li>-Cutting along the bold lines.</li> <li>-Folding along the dotted lines.</li> <li>-Keeping the tabs, the correct size.</li> <li>-Making crisply folded edges.</li> <li>-Constructing the net using glue to make a geometric shape.</li> </ul> <p>To construct my castle to meet the requirements of my brief by:</p> <ul style="list-style-type: none"> <li>-Making neat 3D shapes using nets.</li> <li>-Stacking shapes and recyclable materials to make the structures of my castle.</li> <li>-Creating a castle base to secure my structures to.</li> <li>-Adorning my castle with facades and other decorative features.</li> </ul> <p>To evaluate my work and the work of others.</p>		<p>To identify current seasonal foods.</p> <p>To taste various fruits and vegetables and describe their flavours.</p> <p>To contribute to a class taste wheel.</p> <p>To design a puff pastry tart using seasonal vegetables and fruits.</p> <p>To use colours to identify nutritional benefits.</p> <p>To describe my puff pastry tart and the benefits of its ingredients.</p> <p>To taste tarts and provide feedback.</p> <p>To consider taste, texture, appearance and use of seasonal ingredients.</p> <p>To receive feedback on my tart and identify strengths.</p>		<p>To annotate my diagram to explain some of its features.</p> <p>To make choices that help me meet the design criteria.</p> <p>To define the term point of sale display.</p> <p>To follow simple design requirements and use Sketchpad to complete a computer-aided design.</p> <p>To answer simple questions to help evaluate my work.</p> <p>To form an opinion about a product.</p> <p>To participate in a discussion about a product.</p> <p>To use the opinions of others to suggest improvements to my design.</p>
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<p><b>HEART</b> <b>(Values)</b></p>	<p><b>Respect   Honesty   Empathy   Collaboration   Resilience   Determination   Excellence</b></p>					
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# DESIGN TECHNOLOGY

## CURRICULUM MAP

### Year 4

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Topic	ROMANS	ANGLO-SAXONS	EGG TECHNOLOGY	WATER WORLD	POWER IT UP	EUROPE
Outcome	<p><b>Design Technology</b></p> <p>Structure: Pavilions</p> <p><i>Roman Pavilion/Colosseum</i></p> 	<p><b>Art &amp; Design</b></p>	<p><b>Design Technology</b></p> <p>Mechanical Systems: Making a Slingshot Car</p> 	<p><b>Art &amp; Design</b></p>	<p><b>Design Technology</b></p> <p>Electrical Systems: Torches</p> <p><i>Torches</i></p> 	<p><b>Art &amp; Design</b></p>
<b>HEAD (Knowledge)</b>	<p>Learning Objective:</p> <p>To create a range of different shaped frame structures.</p> <p>To design a structure.</p> <p>To build a frame structure.</p> <p>To add cladding to a frame structure.</p>		<p>Learning Objective:</p> <p>To build a car chassis.</p> <p>To design a shape that reduces air resistance.</p> <p>To make a model based on a chosen design.</p> <p>To assemble and test my completed product.</p>		<p>Learning Objective:</p> <p>To learn about electrical items and how they work.</p> <p>To analyse and evaluate electrical products.</p> <p>To design a product to fit a set of specific user needs.</p> <p>To make and evaluate a torch.</p>	



					Inventors: Thomas Edison, Joseph Swan and Lewis Latimer	
<b>HANDS (Skills)</b>	<p>Success Criteria:</p> <p>To make a variety of different frame structures.</p> <p>To know what the structure (pavilion) is used for.</p> <p>To understand that different materials can create different effects.</p> <p>To understand how to make a stable structure.</p> <p>To design a structure that is stable and aesthetically pleasing.</p> <p>To build a free-standing structure.</p> <p>To select appropriate materials to build a strong structure.</p> <p>To use my knowledge of how to reinforce corners to strengthen my structure.</p>		<p>Success Criteria:</p> <p>To understand that car designs have developed over many years.</p> <p>To know that a chassis is the frame of a car on which everything else is built.</p> <p>To know that all moving things have kinetic energy.</p> <p>To know that kinetic energy is the energy that something (an object or person) has by being in motion, e.g., the energy that a swing has to keep moving; any object in motion uses kinetic energy.</p> <p>To design a suitable car body to cover my chassis by:</p> <p>-Drawing a net to create a structure from.</p> <p>-Choosing shapes that increase or decrease the</p>		<p>Success Criteria:</p> <p>To identify electrical products.</p> <p>To know what electrical conductors and insulators are.</p> <p>To know that a battery contains stored electricity and can be used to power products.</p> <p>To identify the features of a torch.</p> <p>To understand how a torch works.</p> <p>To say what is good and bad about different torches.</p> <p>To understand what is important in torch design.</p> <p>To factor in who my product is for in my design criteria.</p> <p>To design a torch which satisfies both the design and success criteria.</p> <p>To make a working circuit with a switch.</p>	

	<p>To refer to my design sheet to create my pavilion.</p> <p>To select appropriate materials for my cladding.</p> <p>To add cladding which reflects my design.</p> <p>To create different textural effects with my chosen material.</p>		<p>speed of the car as a result of air resistance.</p> <p>-Adding graphics to personalise my design.</p> <p>To make the body of my car by:</p> <p>-Remembering that nets are flat shapes that can be turned into 3D structures.</p> <p>-Measuring, marking and cutting the panels (nets) against the dimensions of my chassis.</p> <p>-Including tabs on my net so I can secure them to the panels of my chassis</p> <p>-Decorating the panels.</p> <p>To assemble the panels of the body to the chassis correctly.</p> <p>To remember that smaller shapes create less air resistance and can move faster through the air.</p> <p>To evaluate the speed of my design based on the understanding that some</p>		<p>To use appropriate equipment to cut and attach materials.</p> <p>To assemble a torch according to my design criteria.</p> <p>To assemble a torch which satisfies the success criteria.</p> <p>To test my torch to evaluate its success.</p>	
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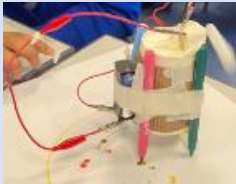

			cars are faster than others as a result of the following:  -Body shape. -Stored energy in the elastic band. -Accuracy of the angle in the chassis and axle.`			
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<b>HEART (Values)</b>	<b>Respect</b>	<b>Honesty</b>	<b>Empathy</b>	<b>Collaboration</b>	<b>Resilience</b>	<b>Determination</b>	<b>Excellence</b>
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**ART & DESIGN**

**CURRICULUM MAP**

**Year 5**

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Topic</b>	VICTORIANS	GROWING UP & GROWING OLD	GLOBAL TRADES	MOUNTAINS - ITALY	LET'S GET MOVING	COAST
<b>Outcome</b>	<b>Art &amp; Design</b>		<b>Design Technology</b>  Electrical Systems: Doodlers  <i>Motorised Doodler</i>  	<b>Design Technology</b>  Cooking & Nutrition: Developing a Recipe  <i>Spaghetti Bolognese</i>  	<b>Design Technology</b>  Mechanical Systems: Making a Pop-Up Book  <i>Pop-Up Book</i>	<b>Art &amp; Design</b>

						
<b>HEAD</b> <b>(Knowledge)</b>			<p>Learning Objective:</p> <p>To understand how motors are used in electrical products.</p> <p>To investigate an existing product to determine the factors that affect the product's form and function.</p> <p>To apply the findings from research to develop a unique product.</p> <p>To develop a DIY kit for another individual to assemble their product.</p>	<p>Learning Objective:</p> <p>To understand how ingredients are reared and processed.</p> <p>To make adaptations to design a recipe.</p> <p>To evaluate nutritional content.</p> <p>To practise food preparation skills.</p> <p>To design a product label.</p> <p>To follow and make an adapted recipe.</p>	<p>Learning Objective:</p> <p>To design a pop-up book.</p> <p>To follow my design brief to make my pop up book.</p> <p>To use layers and spacers to cover the working of mechanisms.</p> <p>To create a high-quality product suitable for a target user.</p>	
<b>HANDS</b> <b>(Skills)</b>			<p>Success Criteria:</p> <p>To identify simple circuit components (battery, bulb, motor and switch).</p>	<p>Success Criteria:</p> <p>To identify the ingredients in spaghetti bolognese.</p>	<p>Success Criteria:</p> <p>To remember that:</p> <ul style="list-style-type: none"> <li>-an input is the motion used to start a mechanism;</li> <li>-an output is the</li> </ul>	

			<p>To explain what a series circuit is.</p> <p>To give examples of motorised products and explain their primary function.</p> <p>To take apart a product and reassemble it.</p> <p>To determine which parts of the product, affect its function.</p> <p>To determine which parts of the product, affect its form.</p> <p>To alter the way a product functions by tinkering with its configuration.</p> <p>To identify design criteria based on findings from an investigation.</p> <p>To develop my design based on key points discovered in an investigation.</p>	<p>To create an informative poster.</p> <p>To explain the journey of beef from farm to table.</p> <p>To compare two bolognese sauces.</p> <p>To research unique ingredients in different bolognese recipes.</p> <p>To plan an adaptation of a basic bolognese recipe.</p> <p>To use a nutrition calculator.</p> <p>To compare nutritional values.</p> <p>To make ingredient choices based on nutritional values.</p> <p>To modify a recipe to contain different ingredient choices.</p> <p>To cut resistant foods like onions safely and accurately.</p>	<p>motion that happens as a result of starting the input.</p> <p>To know that structures use the movement of the pages to work.</p> <p>To know that mechanisms control movement.</p> <p>To design a book made up of a front cover and four pages and include a mixture of structures and mechanisms within it.</p> <p>To use paper, card and glue to make my book structure.</p> <p>To make mechanisms and/or structures as detailed in my design template by using sliders, pivots and folds to produce movement.</p> <p>To complete the mechanisms and structures as detailed</p>	
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			<p>To incorporate a motor into an electrical system.</p> <p>To identify and list the materials, equipment and circuit components required to build my product.</p> <p>To explain the steps required to assemble my product.</p> <p>To explain how to build and integrate an electrical system as part of my product.</p>	<p>To understand the safety aspects of working with hot food.</p> <p>To explain how to avoid cross-contamination.</p> <p>To measure and cut to fit specific dimensions.</p> <p>To design a label thinking about colours, ingredients and the contents of the jar.</p> <p>To evaluate a design against criteria.</p> <p>To use a recipe to gather the correct quantities of ingredients.</p> <p>To select the right equipment for each preparation technique.</p> <p>To make a video to explain a recipe.</p>	<p>in my design template.</p> <p>To make my book look neater and more attractive by using layers and spacers to hide relevant parts of my mechanisms.</p> <p>To complete the surface decoration of my pop-up book by adding the story through:</p> <ul style="list-style-type: none"> <li>-pictures;</li> <li>-captions.</li> </ul> <p>To know that I need to consider the preferences and needs of the user.</p> <p>To know that good quality making should be neat, accurate and securely assembled.</p>	
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<b>HEART (Values)</b>	<b>Respect   Honesty   Empathy   Collaboration   Resilience   Determination   Excellence</b>
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## ART & DESIGN

### CURRICULUM MAP

#### Year 6

Term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Topic</b>	WW2	BRITAIN SINCE 1945	THE RIVERS	SATs	TRANSITION	MAKE MONEY GROW
	<p><b>Design Technology</b> Textiles: Waistcoats <i>WW2 Design Waistcoats</i></p> 	<b>Art &amp; Design</b>	<b>Art &amp; Design</b>	SATs	<b>Art &amp; Design</b>	<p><b>Design Technology</b> Digital World: Navigating the World <i>Product Pitch</i></p> 

<p><b>HEAD</b> <b>(Knowledge)</b></p>	<p>Learning Objective:</p> <p>To design a waistcoat.</p> <p>To mark and cut fabric according to a design.</p> <p>To assemble a waistcoat.</p> <p>To decorate your waistcoat.</p>					<p>Learning Objective:</p> <p>To write a design brief and criteria based on a client request.</p> <p>To write a program to include multiple functions as part of a navigation device.</p> <p>To develop a sustainable product concept.</p> <p>To develop 3D CAD skills to produce a virtual model.</p> <p>To present a pitch to 'sell' the product to a specified client.</p>
<p><b>HANDS</b> <b>(Skills)</b></p>	<p>Success Criteria:</p> <p>To annotate my designs.</p> <p>To design clothing to a set of design criteria.</p> <p>To explain the differences between my design and the template.</p> <p>To accurately mark out the outline of the panels for my waistcoat.</p> <p>To cut neatly and accurately.</p>					<p>Success Criteria:</p> <p>To write a design brief from information submitted by a client.</p> <p>To develop design criteria to fulfil the client's request.</p> <p>To consider and suggest additional functions for my navigation tool.</p> <p>To program an n, e, s and w cardinal compass.</p> <p>To explain the key functions in my program, including any additions.</p>



	<p>To sew a strong running stitch.</p> <p>To ensure my stitches are small, neat and follow the edge.</p> <p>To tie strong knots to secure the thread in place.</p> <p>To secure a fastening.</p> <p>To attach objects for decoration using thread.</p> <p>To evaluate my work according to the design criteria.</p>					<p>To explain how my program fits the design criteria and how it would be useful as part of a navigation tool.</p> <p>To consider materials and their functional properties.</p> <p>To understand the need for sustainability in design.</p> <p>To develop a product idea through annotated sketches.</p> <p>To identify key industries that utilise 3D CAD modelling and explain why.</p> <p>To place and manoeuvre 3D objects using computer-aided design.</p> <p>To change the properties of or combine one or more 3D objects using computer-aided design to produce a 3D CAD model.</p> <p>To explain the key functions and features of my navigation tool.</p> <p>To explain my material choices and why they were chosen.</p> <p>To describe how my product fits the client's request and how it will benefit the customers.</p>
<p><b>HEART</b> <b>(Values)</b></p>	<p><b>Respect   Honesty   Empathy   Collaboration   Resilience   Determination   Excellence</b></p>					