









# Subject Overview: Design & Technology

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year R	<b>ELG: Creating with Materials</b> Children at the expected level of development will: <ul style="list-style-type: none"><li>- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;</li><li>- Share their creations, explaining the process they have used;</li><li>- Make use of props and materials when role playing characters in narratives and stories.</li></ul>					
	<b>Structures: Large-Scale</b>   Pupils will access a range of large-scale construction sets (both indoors and outdoors).  They will need to consider how materials are stacked to create stability.	<b>Textiles: Weaving</b>   Pupils will access a variety of materials for weaving (ribbon, string, threads, strips of fabric, etc.) alongside additional materials (beads, hoops, buttons, etc.) to weave through a variety of frames.	<b>Structures: Small-Scale</b>   Pupils will access a range of small-scale construction kits.  They will need to consider different materials, tools and pieces.	<b>Food: Exploration</b>   Pupils will access a range of cooking utensils and ingredients, and contribute to creating a food product using chopping/grating/mixing.	<b>Joining Techniques</b>   Pupils will access a range of materials (textiles, paper, card, etc.) and explore joining them in different ways (gluing, stapling, sewing, weaving).  They will need to consider effective ways to join materials together.	<b>Mechanisms: Vehicles</b>   Pupils will access a range of existing toy vehicles and explore how they work. They will access a range of resources (cardboard boxes, wheels, split pins) that they may be able to use to construct their own vehicle.
	<b>Structures: Homes</b> <i>junk modelling and large-scale small-scale lollipop houses</i>	<b>Food: Diwali Food</b> <i>coconut ice / rangoli biscuits</i>  <b>Mechanisms: Fire Engines</b> <i>using wheels</i>	<b>Food: Gingerbread</b>  <b>Structures: Design and Construct a Home for the Three Bears</b>	<b>Structures: Bug Hotels Using Natural Materials</b>  <b>Food: Cooking Using Heat</b> <i>chocolate Easter nests</i>	<b>Textiles: Weaving Materials</b> <i>materials and frames</i>	<b>Joining Techniques</b> <i>gluing, stapling, sewing, weaving</i>
	<p>Pupils will have design and technology experiences embedded throughout continuous provision. Provision will be made for different aspects/strands of design and technology, with pupils becoming increasingly adept at selecting and using tools, encountering an array of materials/ingredients, and working on both individual and collaborative projects. These projects may be led by the child's interests, by particular events through the year, or in response to a story or other stimulus encountered in class (e.g. creating a wall strong enough for Humpty Dumpty)..</p> <p>Pupils will be guided throughout to consider the end user and purpose of creating something (e.g. making something for a parent may mean it is different to if they are making it for themselves), and to discuss and consider the rationale for selecting particular tools, materials and equipment from a selection provided. They will be encouraged to talk about what they have created and the creation process. Opportunities will be used to teach pupils to be safe using tools and resources.</p>					

Mechanisms: Sliders and Levers

Design, make and evaluate a **moving greetings card** (product) for **another child** (user) for **giving to them** (purpose).



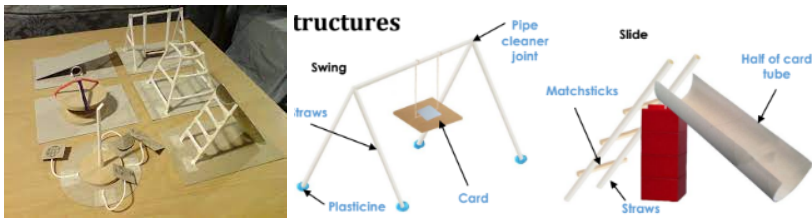
- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use talking and mock-ups to show our design? *Design*
- 3-5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	<div>Design a functional and appealing product for a chosen user and purpose based on simple design criteria - <i>user / functionality / aesthetics / materials / scale (shape, size, weight).</i></div> <div>Generate, develop, model and communicate their ideas as appropriate through <b>talking</b>, drawing, templates and <b>mock-ups</b>.</div>
<div>Make</div> <div></div>	<div>Select materials for the product and give simple reasons why they have chosen them.</div> <div>Select from and use a range of tools, materials and equipment to perform practical tasks.</div> <div>Use simple finishing techniques suitable for the product they are creating.</div> <div>Use sliders and levers for a purpose.</div>
<div>Evaluate</div> <div></div>	<div>Explore a range of existing products. <i>What product is it? Who is it for? What is it for? How does it work? Where might it be used? What materials is it made from? Why have these been used? What do you like and dislike about it?</i></div> <div>Evaluate their product by discussing how well it works in relation to the purpose and whether it meets design criteria.</div>

**General Resources:** books containing levers and linkages  
**Consumables:** card, pre-cut levers, paper fasteners

Structures: Freestanding Structures

Design, make and evaluate a **playground structure** (product) for a **toy figure / character** (user) for **playing with** (purpose).



- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use talking and drawing to show our design? *Design*
- 3-5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	<div>Design a functional and appealing product for a chosen user and purpose based on simple design criteria - <i>user / functionality / aesthetics / materials / scale (shape, size, weight).</i></div> <div>Generate, develop, model and communicate their ideas as appropriate through <b>talking</b>, <b>drawing</b>, templates and mock-ups.</div>
<div>Make</div> <div></div>	<div>Select materials for the product and give simple reasons why they have chosen them.</div> <div>Select from and use a range of tools, materials and equipment to perform practical tasks.</div> <div>Use simple finishing techniques suitable for the product they are creating.</div> <div>Know how to make freestanding structures stronger, stiffer and more stable.</div>
<div>Evaluate</div> <div></div>	<div>Explore a range of existing products. <i>What product is it? Who is it for? What is it for? How does it work? Where might it be used? What materials is it made from? Why have these been used? What do you like and dislike about it?</i></div> <div>Evaluate their product by discussing how well it works in relation to the purpose and whether it meets design criteria.</div>

**General Resources:** masking tape  
**Consumables:** card, Artstraws

Food: Preparing Fruit and Vegetables

Design, make and evaluate a **fruit / vegetable snack** (product) for **themselves** (user) for a **picnic** (purpose).



- 1: What products already exist? (Food Origin; Healthy and Varied Diet) *Evaluate*
- 2: Where does our food come from? (Principles of a Healthy & Varied Diet; Food Sources) *Design*
- 3: How can our product be purposeful, functional and appealing? How can we use talking and drawing to show our design? *Design*
- 4: How can I use materials, tools and technical skills to make a product? *Make*
- 5: How effectively does my product meet its purpose? *Evaluate*

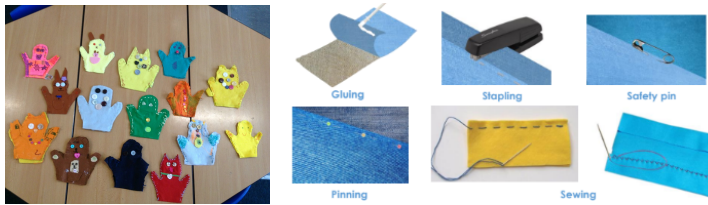
<div>Design</div> <div></div>	<div>Design a functional and appealing product for a chosen user and purpose based on simple design criteria - <i>user / functionality / aesthetics / materials / scale (shape, size, weight).</i></div> <div>Generate, develop, model and communicate their ideas as appropriate through <b>talking</b>, <b>drawing</b>, templates and mock-ups.</div>
<div>Make</div> <div></div>	<div>Select materials for the product and give simple reasons why they have chosen them.</div> <div>Select from and use a range of tools, materials and equipment to perform practical tasks.</div> <div>Understand and apply the principles of a healthy and varied diet to prepare dishes, including how ingredients are part of the eatwell plate.</div> <div>Prepare (e.g. measuring, chopping, peeling, grating) and assemble ingredients safely and hygienically.</div> <div>Know that all food comes from plants and animals and that it must be farmed, grown elsewhere (e.g. home) or caught.</div>
<div>Evaluate</div> <div></div>	<div>Explore a range of existing products. <i>What product is it? Who is it for? What is it for? How does it work? Where might it be used? What materials is it made from? Why have these been used? What do you like and dislike about it?</i></div> <div>Evaluate their product by discussing how well it works in relation to the purpose and whether it meets design criteria.</div>

**General Resources:** cutlery knives, chopping boards  
**Consumables:** food tasters (bought at time), other food products (brought by children), kebab sticks (bought at time)



Textiles: Templates and Joining Techniques

Design, make and evaluate a **puppet** (product) for **a friend** (user) for **putting on a puppet show** (purpose).



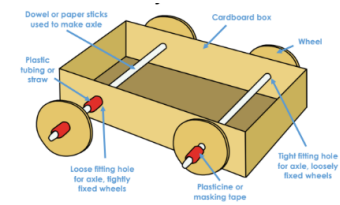
- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use talking and templates to show our design? *Design*
- 3: What technical skills will I need to make the product? (Sewing Skills - Practice Using Binca) *Make*
- 4-5: How can I use materials, tools and technical skills to make a product? (Make Using Felt Squares Cut to Shape) *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	<p>Design a functional and appealing product for a chosen user and purpose based on simple design criteria - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i>.</p> <p>Generate, develop, model and communicate their ideas as appropriate through <b>talking</b>, drawing, <b>templates</b> and mock-ups.</p>
<div>Make</div> <div></div>	<p>Select materials for the product and give simple reasons why they have chosen them.</p> <p>Select from and use a range of tools, materials and equipment to perform practical tasks.</p> <p>Use simple finishing techniques suitable for the product they are creating.</p> <p>Understand how simple 3D textile products are made, using a template to create two identical shapes.</p> <p>Understand how to join fabrics using different techniques (e.g. running stitch, glue, over stitch, stapling).</p> <p>Explore different finishing techniques (e.g. painting, fabric crayons, stitching, sequins, buttons, ribbons).</p>
<div>Evaluate</div> <div></div>	<p>Explore a range of existing products. <i>What product is it? Who is it for? What is it for? How does it work? Where might it be used? What materials is it made from? Why have these been used? What do you like and dislike about it?</i></p> <p>Evaluate their product by discussing how well it works in relation to the purpose and whether it meets design criteria.</p>

**General Resources:** needles, thread, stapler, glue, fabric crayons  
**Consumables:** felt square each for product

Mechanisms: Wheels and Axles

Design, make and evaluate a **transportation vehicle** (product) for **an explorer** (user) for **moving around in** (purpose).



- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use talking and drawing to show our design? *Design*
- 3-5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	<p>Design a functional and appealing product for a chosen user and purpose based on simple design criteria - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i>.</p> <p>Generate, develop, model and communicate their ideas as appropriate through <b>talking</b>, <b>drawing</b>, templates and mock-ups.</p>
<div>Make</div> <div></div>	<p>Select materials for the product and give simple reasons why they have chosen them.</p> <p>Select from and use a range of tools, materials and equipment to perform practical tasks.</p> <p>Use simple finishing techniques suitable for the product they are creating.</p> <p>Explore and use wheels, axles and axle holders.</p> <p>Distinguish between fixed and freely moving axles.</p>
<div>Evaluate</div> <div></div>	<p>Explore a range of existing products. <i>What product is it? Who is it for? What is it for? How does it work? Where might it be used? What materials is it made from? Why have these been used? What do you like and dislike about it?</i></p> <p>Evaluate their product by discussing how well it works in relation to the purpose and whether it meets design criteria.</p>

**General Resources:** glue, masking tape  
**Consumables:** cardboard box; wooden dowel; wooden wheels; card triangles/axle supports



Food: Preparing Fruit and Vegetables

Design, make and evaluate a **fruit salad** (product) for **their family** (user) for **enjoying eating healthily** (purpose).



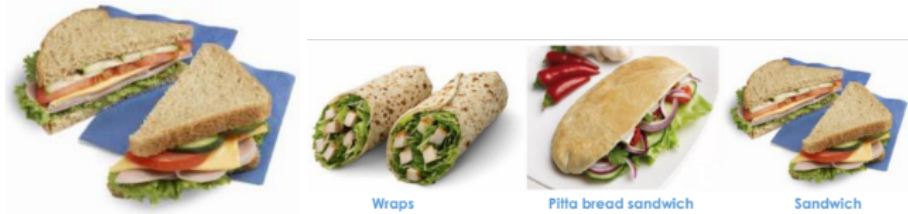
- 1: What products already exist? *Evaluate*
- 2: Where does our food come from? (Principles of a Healthy & Varied Diet; Food Sources) *Design*
- 3: How can our product be purposeful, functional and appealing? How can we use talking to show our design? *Design*
- 4: How can I use materials, tools and technical skills to make a product? *Make*
- 5: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	<p>Design a functional and appealing product for a chosen user and purpose based on simple design criteria - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i>.</p> <p>Generate, develop, model and communicate their ideas as appropriate through <b>talking</b>, drawing, templates and mock-ups.</p>
<div>Make</div> <div></div>	<p>Select materials for the product and give simple reasons why they have chosen them.</p> <p>Select from and use a range of tools, materials and equipment to perform practical tasks.</p> <p>Understand and apply the principles of a healthy and varied diet to prepare dishes, including how ingredients are part of the eatwell plate.</p> <p>Prepare (e.g. measuring, chopping, peeling, grating) and assemble ingredients safely and hygienically.</p> <p>Know that all food comes from plants and animals and that it must be farmed, grown elsewhere (e.g. home) or caught.</p>
<div>Evaluate</div> <div></div>	<p>Explore a range of existing products. <i>What product is it? Who is it for? What is it for? How does it work? Where might it be used? What materials is it made from? Why have these been used? What do you like and dislike about it?</i></p> <p>Evaluate their product by discussing how well it works in relation to the purpose and whether it meets design criteria.</p>




**General Resources:** cutlery knives, chopping boards  
**Consumables:** food tasters (bought at time), other food products (brought by children)

Food: Healthy and Varied Diet

Design, make and evaluate a **type of sandwich** (product) for **themselves** (user) for **eating on a picnic** (purpose).



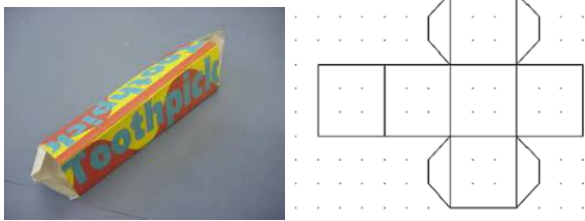
- 1: What products already exist? (Sources of Ingredients) *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use cross-sectional drawings to show our design? (Principles of Healthy Diet) *Design*
- 3: How can I use materials, tools and technical skills to make a product? *Make*
- 4: How effectively does my product meet its purpose? *Evaluate*

<i>Design</i> 	Generate realistic ideas and design criteria collaboratively, focusing on the needs of the user and purpose of the product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i> .  Use annotated sketches, prototypes, <b>cross-sectional drawings</b> and computer-aided design to develop and communicate ideas.
<i>Make</i> 	Plan and order the main stages of making.  Select appropriate materials for the product according to their functional properties and aesthetic qualities.  Select from and use appropriate tools with some accuracy.  Understand and apply the principles of a healthy and varied diet to prepare dishes, including how ingredients are part of the eatwell plate.  Prepare (e.g. measuring, chopping, peeling, grating) and assemble ingredients safely and hygienically, following a recipe.  Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.
<i>Evaluate</i> 	Investigate and evaluate a range of existing products, including analysing the materials, components and techniques that have been used.  Test and evaluate their product against design criteria and the intended user and purpose.




**General Resources:** cutting knives, cutlery knives, chopping boards  
**Consumables:** food tasters (bought at time), other food products (brought by children)

Structures: Shell Structures

Design, make and evaluate a **cardboard packaging box** (product) for **a shop** (user) for **containing and selling a product** (purpose).



- 1: What products already exist? How did Robert Gair and Kelloggs develop cardboard packaging? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use annotated sketches to show our design? *Design*
- 3: How can we use computer-aided design to show our design? *Design*
- 4-5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<i>Design</i> 	Generate realistic ideas and design criteria collaboratively, focusing on the needs of the user and purpose of the product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i> .  Use <b>annotated sketches</b> , prototypes, cross-sectional drawings and <b>computer-aided design</b> to develop and communicate ideas.
<i>Make</i> 	Plan and order the main stages of making.  Select appropriate materials for the product according to their functional properties and aesthetic qualities.  Select from and use appropriate tools with some accuracy.  Use finishing techniques suitable for the product they are creating.  Develop and use knowledge of how to construct strong, stiff shell structures.  Develop and use knowledge of nets of cubes and cuboids.
<i>Evaluate</i> 	Investigate and evaluate a range of existing products, including analysing the materials, components and techniques that have been used.  Understand how a key event/individual has influenced the development of an existing product.  Test and evaluate their product against design criteria and the intended user and purpose.




**General Resources:** -  
**Consumables:** card (printable)

Textiles: 2D Shape to 3D Product

Design, make and evaluate a **pencil case** (product) for **themselves** (user) for **carrying things** (purpose).



- 1: What products already exist? How did the development of velcro/hook-and-loop fasteners transform products? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use prototypes to show our design? *Design*
- 3: What technical skills will I need to make the product? (Sewing Skills - Practice Using Binca) *Make*
- 4-5: How can I use materials, tools and technical skills to make a product? (Make Using Felt Squares Cut to Shape) *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

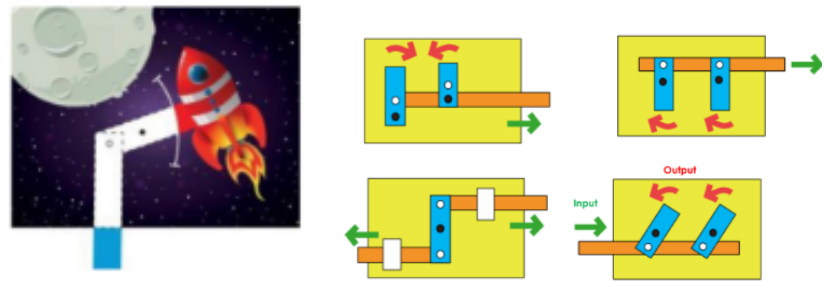
<i>Design</i> 	Generate realistic ideas and design criteria collaboratively, focusing on the needs of the user and purpose of the product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i> .  Use annotated sketches, <b>prototypes</b> , cross-sectional drawings and computer-aided design to develop and communicate ideas.
<i>Make</i> 	Plan and order the main stages of making.  Select appropriate materials for the product according to their functional properties and aesthetic qualities.  Select from and use appropriate tools with some accuracy.  Use finishing techniques suitable for the product they are creating.  Know how to strengthen, stiffen and reinforce existing fabrics.  Understand how to securely join two pieces of fabric together.  Understand the need for patterns and seam allowances.
<i>Evaluate</i> 	Investigate and evaluate a range of existing products, including analysing the materials, components and techniques that have been used.  Understand how a key event/individual has influenced the development of an existing product.  Test and evaluate their product against design criteria and the intended user and purpose.

**General Resources:** needles, thread  
**Consumables:** buttons, velcro, binca bookmark each for practice, felt square each for product



Mechanisms: Levers and Linkages

Design, make and evaluate a **book with moving parts** (product) for **younger children** (user) for **entertainment** (purpose).



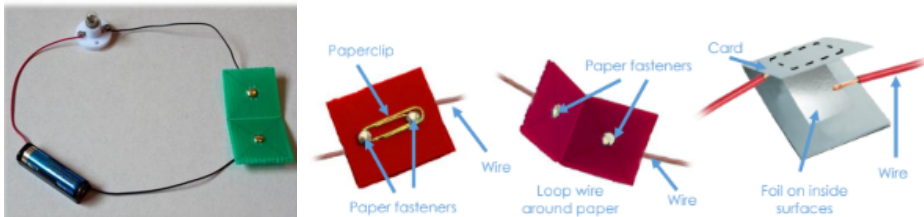
- 1: What products already exist? How did Mary Anderson’s development of the windscreen wiper change the use of levers and linkages? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? *Design*
- 3: How can we use prototypes to show our design? *Design*
- 4-6: How can I use materials, tools and technical skills to make a product? *Make*
- 7: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	Generate realistic ideas and design criteria collaboratively, focusing on the needs of the user and purpose of the product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i> .
	Use annotated sketches, <b>prototypes</b> , cross-sectional drawings and computer-aided design to develop and communicate ideas.
<div>Make</div> <div></div>	Plan and order the main stages of making.
	Select appropriate materials for the product according to their functional properties and aesthetic qualities.
<div>Evaluate</div> <div></div>	Investigate and evaluate a range of existing products, including analysing the materials, components and techniques that have been used.
	Understand how a key event/individual has influenced the development of an existing product.

**General Resources:** books containing levers and linkages  
**Consumables:** card, pre-cut levers, paper fasteners

Electrical Systems: Circuits and Switches

Design, make and evaluate a **buzzer** (product) for **themselves** (user) for **using in a quiz** (purpose).



- 1: What products already exist? How has the invention of electricity helped shape the world? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use annotated sketches to show our design? *Design*
- 3-4: How can I use materials, tools and technical skills to make a product? *Make*
- 5: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	Generate realistic ideas and design criteria collaboratively, focusing on the needs of the user and purpose of the product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i> .
	Use <b>annotated sketches</b> , prototypes, cross-sectional drawings and computer-aided design to develop and communicate ideas.
<div>Make</div> <div></div>	Plan and order the main stages of making.
	Select appropriate materials for the product according to their functional properties and aesthetic qualities.
<div>Evaluate</div> <div></div>	Investigate and evaluate a range of existing products, including analysing the materials, components and techniques that have been used.
	Understand how a key event/individual has influenced the development of an existing product.

**General Resources:** electrical resources (Science)  
**Consumables:** card, paper fasteners

Food: Healthy and Varied Diet

Design, make and evaluate a **salad** (product) for **their family** (user) for **eating healthily** (purpose).



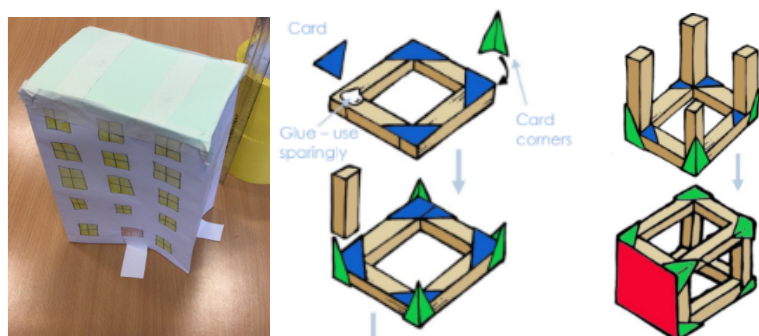
- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use annotated sketches to show our design? (Healthy and Varied Diet) *Design*
- 3: How can I use materials, tools and technical skills to make a product? *Make*
- 4: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	Generate realistic ideas and design criteria collaboratively, focusing on the needs of the user and purpose of the product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight)</i> .
	Use <b>annotated sketches</b> , prototypes, cross-sectional drawings and computer-aided design to develop and communicate ideas.
<div>Make</div> <div></div>	Plan and order the main stages of making.
	Select appropriate materials for the product according to their functional properties and aesthetic qualities.
<div>Evaluate</div> <div></div>	Investigate and evaluate a range of existing products, including analysing the materials, components and techniques that have been used.
	Understand how a key event/individual has influenced the development of an existing product.

**General Resources:** cutting knives, chopping boards  
**Consumables:** food tasters (bought at time), other food products (brought by children)

Structures: Frame Structures

Design, make and evaluate a **model of a building** (product) for **the class** (user) for **building a model village** (purpose).



- 1: What products already exist? How have significant architects helped shape the world? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? *Design*
- 3: How can we use cross-sectional diagrams and prototypes to show our design? *Design*
- 4-5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	Generate innovative ideas based upon research into user needs and existing products using surveys, interviews and questionnaires.
	Develop a design specification for a functional product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight) / manufacturing resources (tools, time) / safety / environmental considerations / cost.</i>
<div>Make</div> <div></div>	Generate, develop, model and communicate ideas through discussion, annotated sketches, <b>cross-sectional</b> and exploded diagrams, <b>prototypes</b> , pattern pieces and computer-aided design.
	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.
	Competently select and accurately assemble materials.
<div>Evaluate</div> <div></div>	Use finishing and decorative techniques suitable for the product they are designing and making.
	Develop and use knowledge of how to strengthen, stiffen and reinforce 3D frameworks.
	Investigate and evaluate a range of existing products.

**General Resources:** bench hooks, G-clamps, safety goggles, right-angle guides, card for decoration  
**Consumables:** wooden batons (2 each), card triangles, card for decoration, glue

Electrical Systems: Monitoring and Control

Design, make and evaluate a **fairground ride** (product) for **an interactive display** (user) for **entertainment** (purpose).  
[link to Computing](#)



- 1: What products already exist? How has the invention and development of lights helped shape the world? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use annotated sketches to show our design? *Design*
- 3-5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	Generate innovative ideas based upon research into user needs and existing products using surveys, interviews and questionnaires.
	Develop a design specification for a functional product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight) / manufacturing resources (tools, time) / safety / environmental considerations / cost.</i>
<div>Make</div> <div></div>	Generate, develop, model and communicate ideas through discussion, <b>annotated sketches</b> , cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.
	Competently select and accurately assemble materials.
<div>Evaluate</div> <div></div>	Use finishing and decorative techniques suitable for the product they are designing and making.
	Understand that mechanical and electrical systems have an input, process and an output.
	Understand and use electrical systems in their products (e.g. series circuits incorporating switches, bulbs, buzzers and motors).

**General Resources:** Crumble sets (controller, lights, motor, wheels)  
**Consumables:** batteries, card, Artstraws

Food: Celebrating Culture and Seasonality

Design, make and evaluate a **pizza** (product) for **themselves** (user) for a **pizza buffet** (purpose).



- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use exploded diagrams to show our design? (Healthy and Varied Diet; Seasonality) *Design*
- 3: How can I use materials, tools and technical skills to make a product? Pizza Express Visit *Make*
- 4: How effectively does my product meet its purpose? *Evaluate*

<div>Design</div> <div></div>	Generate innovative ideas based upon research into user needs and existing products using surveys, interviews and questionnaires.
	Develop a design specification for a functional product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight) / manufacturing resources (tools, time) / safety / environmental considerations / cost.</i>
<div>Make</div> <div></div>	Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and <b>exploded diagrams</b> , prototypes, pattern pieces and computer-aided design.
	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.
	Competently select and accurately assemble materials.
<div>Evaluate</div> <div></div>	Understand and apply the principles of a healthy and varied diet to prepare dishes, including how ingredients are part of the eatwell plate.
	Know how to use utensils and equipment including heat sources to prepare and cook food, creating and refining recipes.
	Understand the importance of correct storage and handling of ingredients.

**General Resources:** -  
**Consumables:** food tasters (bought at time)



Textiles: Combining Different Fabric Shapes

Design, make and evaluate a **shopping bag** (product) for **themselves or a chosen adult** (user) for **carrying items** (purpose).



- 1: What products already exist? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? *Design*
- 3: How can we use pattern pieces and computer-aided design to show the design? *Design*
- 4: What technical skills will I need to make the product? (Sewing Skills - Practice Using Binca; Different Stitches) *Make*
- 5-6: How can I use materials, tools and technical skills to make a product? *Make*
- 7: How effectively does the product meet its purpose? *Evaluate*

Design 	Generate innovative ideas based upon research into user needs and existing products using surveys, interviews and questionnaires.
	Develop a design specification for a functional product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight) / manufacturing resources (tools, time) / safety / environmental considerations / cost.</i>
Make 	Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, <b>pattern pieces</b> and <b>computer-aided design</b> .
	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.
	Competently select and accurately assemble materials.
Evaluate 	Use finishing and decorative techniques suitable for the product they are designing and making.
	Use a combination of accurately made pattern pieces, fabric shapes and different fabrics (strengthened, stiffened and reinforced where appropriate) within a product.

**Main Resources:** KS2 needles, threads, buttons, toggles, ties, textile selection  
**Consumables:** blank textile bag each, binca bookmark for practice each

Food: Celebrating Culture and Seasonality

Design, make and evaluate a **couscous dish** (product) for **their family** (user) for **eating to celebrate cultures from around the world** (purpose).



- 1: What products already exist? How have chefs from different cuisines developed the food we eat? *Evaluate*
- 2: How can our product be purposeful, functional and appealing? How can we use annotated sketches to show the design? (Principles of a Healthy Diet; Seasonality) *Design*
- 3: Where does our food come from? Supermarket Visit *Evaluate*
- 4: What materials and tools will I use to make the product and why? What technical skills will I use to make the product? (Food Hygiene and Safety) *Make*
- 5: How can I use materials, tools and technical skills to make a product? *Make*
- 6: How effectively does the product meet its purpose? *Evaluate*

Design 	Generate innovative ideas based upon research into user needs and existing products using surveys, interviews and questionnaires.
	Develop a design specification for a functional product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight) / manufacturing resources (tools, time) / safety / environmental considerations / cost.</i>
Make 	Generate, develop, model and communicate ideas through discussion, <b>annotated sketches</b> , cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.
	Competently select and accurately assemble materials.
Evaluate 	Understand and apply the principles of a healthy and varied diet to prepare dishes, including how ingredients are part of the eatwell plate.
	Know how to use utensils and equipment including heat sources to prepare and cook food, creating and refining recipes.
Evaluate 	Understand the importance of correct storage and handling of ingredients.
	Understand about seasonality in relation to food products and the source of different food products.

**Main Resources:** mixing bowls, cutting knives, chopping boards  
**Consumables:** food tasters, couscous (bought at time), other food products (brought by children)

Mechanisms: Cams

Design, make and evaluate a **moving toy** (product) for a **younger child** (user) for **playing with** (purpose).  
*link to Computing (3D modelling and printing)*



- 1: What products already exist? (Cams; Input, Process, Output) *Evaluate*
- 2: How can our product be purposeful, functional and appealing? *Design*
- 3: How can we use exploded diagrams and computer-aided design to show the design? *Design*
- 4-6: How can I use materials, tools and technical skills to make a product? *Make*
- 7: How effectively does the product meet its purpose? *Evaluate*

Design 	Generate innovative ideas based upon research into user needs and existing products using surveys, interviews and questionnaires.
	Develop a design specification for a functional product - <i>user / functionality / aesthetics / materials / scale (shape, size, weight) / manufacturing resources (tools, time) / safety / environmental considerations / cost.</i>
Make 	Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and <b>exploded diagrams</b> , prototypes, pattern pieces and <b>computer-aided design</b> .
	Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.
	Competently select and accurately assemble materials.
Evaluate 	Use finishing and decorative techniques suitable for the product they are designing and making.
	Understand that mechanical and electrical systems have an input, process and an output.

**General Resources:** bench hooks, G-clamps, safety goggles, right-angle guides, card for decoration  
**Consumables:** wooden batons (2 each), card triangles, cam selection, followers (MDF wheels), wooden dowel, wooden pegs (2 each), card for decoration, glue