The Leys Primary School Subject Overview for Design Technology 2025-26

Becoming the next great inventor

	Autumn	Spring	Summer
EYFS	All areas to be taught across whole year	All areas to be taught across whole year	All areas to be taught across whole year
Key Skills	**Structures** **All skills throughout the year** Fixing and joining methods Junk modelling	**Textiles**- **All skills throughout the year** threading beads and paper weaving Clay making structures	**Food technology** **All skills throughout the year** Playdough making cakes, foods Summer 2 Simple DT project Reception ELG- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Share their creations, explaining the process they have used;
Key subject links	**Being imaginative and expressive** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Uses various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces.	**Being imaginative and expressive** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Use a range of small tools, including scissors, paint brushes and cutlery;	**Being imaginative and expressive** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function; Understand some important processes and changes in the natural world around them, including the seasons and changing states of matter. Relate to fruits and vegetables coming into season. Where do plants grow?

	Use a range of small tools, including scissors, paint brushes and cutlery;		Use a range of small tools, including scissors, paint brushes and cutlery;
Key Vocabulary	Joining techniques Parts Joined	Threading Weaving Hole	Seasons Sensory vocabulary-soft, juicy, crunchy, sweet, sticky, smooth, sharp Mix
SMSC and British Values	Individual liberty Mutual respect for and tolerance		
Global Goals and School values	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
The Leys Pathways	EYFS- Explore EYFS- Communicate EYFS- Solve EYFS - Care	EYFS- Explore EYFS- Communicate EYFS- Solve EYFS - Care	EYFS- Explore EYFS- Communicate EYFS- Solve EYFS - Care
Year 1	Mechanisms- sliders and levers Project- Moving Christmas cards	Food technology Project- Fruit salad	Structures- freestanding structures Project- Freestanding chair
Key Skills	**Designing** • Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their	**Designing** Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables. Communicate these ideas through talk and	**Designing** Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their

	ideas through drawings and mock-ups with card and paper. **Making** • Plan by suggesting what to do next. • Select and use tools, explaining their choices, to cut, shape and join paper and card. • Use simple finishing techniques suitable for the product they are creating. **Evaluating** • Explore a range of existing books and everyday products that use simple sliders and levers. • Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. **Technical knowledge and understanding** • Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project.	drawings. **Making** Use simple utensils and equipment to cut,and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste **Evaluating** Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended user and purpose. **Technical knowledge and understanding** Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.	ideas through talking, mock-ups and drawings. **Making** • Plan by suggesting what to do next. • Select and use tools, skills and techniques, explaining their choices. • Select new and reclaimed materials and construction kits to build their structures. • Use simple finishing techniques suitable for the structure they are creating. **Evaluating** • Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. • Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria. **Technical knowledge and understanding** • Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary relevant to the project.

Key subject links	**<u>Spoken language</u>** – children listen and respond appropriately to adults. Ask relevant questions to extend their knowledge and understanding. Build technical and directional vocabulary. **<u>Mathematics</u>** – describe position, direction and movement. Use appropriate standard and non-standard measures.	**<u>Maths</u>**- data handling - favourite fruits and vegetables Measure- kg, g, ml, l	**<u>Mathematics</u>** – use appropriate standard and non-standard measures. Recognise and name common 2-D and 3-D shapes. **<u>Science</u>** – think about the properties of materials that make them suitable or unsuitable for particular purposes.
Key Vocabulary	Mechanism Slider Lever Fulcrum Pivot Slot Design Make Evaluate	Healthy choices Balanced diet Reared Caught Grown	Design Make Evaluate Joining techniques- glue sellotape Strengthen skills- rolling folding
SMSC and British Values	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance
Global Goals and School values	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration
The Leys Pathways	KS1- Explore KS1-Communicate	KS1- Explore KS1-Communicate	KS1- Explore KS1-Communicate

	KS1- Solve	KS1- Solve	KS1- Solve
Year 2	Healthy eating and preparing fruits and vegetables- healthy skewers. Project- Fruit and vegetables skewers	Mechanisms- wheels and axles Project- Simple vehicles	Textiles- templates and joining techniques. Project- Puppet making
Key Skills	**Designing** Design appealing products for a particular user based on simple design criteria, taking into account the preferences of the user. Generate initial ideas and design criteria through investigating a variety of fruit and vegetables rating and commenting on the textures and tastes. Communicate these ideas through talk, drawings and star ratings **Making** Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely. Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product. **Evaluating** Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences. Evaluate ideas and finished products against design criteria, including intended	**Designing** • Generate initial ideas and simple design criteria through talking and using their own experiences. • Develop and communicate ideas through drawings and mock-ups. **Making** • Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. • Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics. **Evaluating** • Explore and evaluate a range of products with wheels and axles. • Evaluate their ideas throughout and their products against the original criteria. **Technical knowledge and understanding** • Explore and use wheels, axles and axle holders. • Distinguish between fixed and freely moving axles.	**Designing** • Design a functional and appealing product for a chosen user and purpose based on simple design criteria. • Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology. **Making** • Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. • Select from and use textiles according to their characteristics. **Evaluating** • Explore and evaluate a range of existing textile products relevant to the project being undertaken. • Evaluate their ideas throughout and their final products against original design criteria. **Technical knowledge and understanding** • Understand how simple 3-D textile

	user and purpose. **Technical knowledge and understanding** Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell Guide. Know and use technical and sensory vocabulary relevant to the project.	• Know and use technical vocabulary relevant to the project.	products are made, using a template to create two identical shapes. • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. • Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. • Know and use technical vocabulary relevant to the project.
Key subject links	**Spoken language** – ask questions to check understanding; use the correct terminology for equipment and food processes. • **Writing** – instructions on how to use one of the utensils; how to prepare e.g. a fruit for eating. • **Science** – talk about a balanced diet, different types of food and hygiene.	**Mathematics** – measuring length using non-standard and standard units. • **Science** – working scientifically: ask simple questions and observe closely. Explore use of everyday materials.	**Science** – use knowledge of properties of everyday materials to select appropriate ones for their products. • **Spoken language** – ask questions throughout the process to check understanding, develop vocabulary and build knowledge. Explain and articulate their ideas orally. • **Art and design** – use and develop drawing skills. • **Mathematics** – measurement using non-standard and standard units.
Key Vocabulary	Eatwell guide Food groups Fruit	Vehicle Wheel Axle	Template Cutting Sewing - running stitch

	Vegetables Peel Slice cut	Axle holder Chassis	Finishing techniques- glue
SMSC and British Values	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance
Global Goals and School values	Determination, Aspiration	Determination, Aspiration	Determination, Aspiration
The Leys Pathways	KS1- Explore KS1-Communicate KS1- Solve	KS1- Explore KS1-Communicate KS1- Solve	KS1- Explore KS1-Communicate KS1- Solve
Year 3	**Food - healthy and varied diet** **Project- Healthy dip**	**Mechanisms- levers and linkages** **Project- moving posters**	**Textiles - 2D shape to 3D product** **Project- pillow**
Key Skills	**Designing** • Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. **Making** • Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select and use appropriate utensils and	**Designing** • Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas. **Making** • Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.	**Designing** • Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas. **Making** • Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.

	equipment to prepare and combine ingredients. - Using the bridge and claw cut. • Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. **Evaluating** • Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. **Technical knowledge and understanding** • Know how to use appropriate equipment and utensils to prepare and combine food from a given variety of given equipment. • Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.	• Select from and use finishing techniques suitable for the product they are creating. **Evaluating** • Investigate and analyse books and, where available, other products with lever and linkage and mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make. **Technical knowledge and understanding** • Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project.	• Select from and use finishing techniques suitable for the product they are creating. **Evaluating** • Investigate and analyse books and, where available, other products with lever and linkage and mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make. **Technical knowledge and understanding** • Understand and use lever and linkage mechanisms. • Distinguish between fixed and loose pivots. • Know and use technical vocabulary relevant to the project.
Key People	Ainsley Harriott		Vivenne Westwood
Key subject links	**Mathematics** – mass kg/g. **Art and Design** – using and developing drawing skills. **Writing** – new vocabulary. Use non-fiction	**Mathematics** – use the vocabulary of position,direction and movement. Use a ruler to measure to the nearest cm, half cm or mm.	**Computing** – opportunity to create pattern pieces using a computer program. **Mathematics** – nets of shapes and accurate measurement mm/cm.

	texts such as description, explanation and instructions e.g. recipes. Organise their work using e.g. headings, subheadings. **<u>Spoken language</u>** – consider and evaluate different viewpoints. Use discussion to develop understanding through exploring ideas.	**<u>Spoken language</u>** – ask relevant questions to extend knowledge and understanding. Build their technical vocabulary. **<u>Art and design</u>** – use colour, pattern, line, shape.	**<u>Science</u>** - identify and compare the suitability of a variety of fabrics for particular uses. **<u>Art and design</u>** – investigating visual and tactile qualities of fabrics and using colour and pattern appropriately. **<u>Spoken language</u>** – develop technical vocabulary. Give well-structured descriptions of e.g. finishing techniques.
Key Vocabulary	Fresh food Processed food Bridge technique Claw technique Mash	Levers Linkages Pivot point- fixed Pivot point -movable Input Output	Template Cutting Measuring Filling sewing - running stitch Sewing- back stitch Cross stitch
SMSC and British Values	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance
Global Goals and School values	 Determination, Aspiration	 Determination, Aspiration	 Determination, Aspiration
The Leys Pathways	LKS2- Explore LKS2- communicate LKS2- Solve	LKS2- Explore LKS2- communicate LKS2- Solve	LKS2- Explore LKS2- communicate LKS2- Solve

Year 4	Structures- shell structures Project - gift box - possibly for enterprise day.	Food technology Project- Bread	Electrical systems- simple programming and controlling Project- torch
Key Skills	**Designing** • Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. • Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. **Making** • Order the main stages of making. • Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. • Explain their choice of materials according to functional properties and aesthetic qualities. • Use finishing techniques suitable for the product they are creating. **Evaluating** • Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. • Test and evaluate their own products against design criteria and the intended	**Designing** • Generate and clarify ideas through discussion with peers and adults to develop design criteria including an introduction to herbs and spices. • Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. **Making** • Plan the main stages of a recipe, listing ingredients, utensils and equipment. • Select and use appropriate utensils and equipment to prepare and combine ingredients. • Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. **Evaluating** • Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. • Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.	**Designing** • Gather information about users' needs and wants, and develop design criteria to inform the design of products that are fit for purpose. • Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. **Making** • Order the main stages of making. • Select from and use tools and equipment to cut,shape, join and finish with some accuracy. • Connect simple electrical components and a battery in a series circuit to achieve a functional outcome. • Program a standalone control box, microcontroller or interface box to enhance the way the product works. **Evaluating** • Investigate and analyse a range of existing battery-powered products, including pre-programmed and programmable products.

	user and purpose. **Technical knowledge and understanding** • Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary relevant to the project.	**Technical knowledge and understanding** • Know how to use appropriate equipment and utensils to prepare and combine food. • Begin to learn about seasonality - experimenting with different herbs and spices. • Know and use relevant technical and sensory vocabulary appropriately.	• Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. **Technical knowledge and understanding** • Understand and use computing to program and control products containing electrical systems, such as series circuits incorporating switches, bulbs and buzzers. • Know and use technical vocabulary relevant to the project.
Key People		Nadiya Hussain	James Dyson- engineer- Dyson vacuums
Key subject links	**Mathematics** – use a ruler to measure to the nearest cm, half cm or mm. Draw 2-D shapes and make 3-D shapes using modelling materials. • compare and sort common 2-D and 3-D shapes in everyday objects. Recognise 3-D shapes in different orientations and describe them. **Science** – discuss the properties and suitability of materials for particular purposes. **Computing** – design and create digital content on screen, creating nets for their	**Science** – Healthy living, **Spoken language** – ask relevant questions to extend knowledge and understanding. • **Mathematics** – measure, compare weight kg, g	**Science** – know how to construct simple series circuits and have a basic understanding of conductors, insulators and open and closed switches. **Computing** – design, write and debug programs that accomplish specific goals, including controlling physical systems. **Spoken language** – asking questions to check understanding, develop technical vocabulary and build knowledge.

	products and combining text with graphics.		
Key Vocabulary	Shell structure Net Laminating Corrugating Ribbing Tabs	Seasonality Herbs Spices Weight Season Kneed prove	Circuit Bulb Wires with crocodile clips Switch Battery Fault
SMSC and British Values	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance
Global Goals and School values	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration
The Leys Pathways	LKS2- Explore LKS2- communicate LKS2- Solve	LKS2- Explore LKS2- communicate LKS2- Solve	LKS2- Explore LKS2- communicate LKS2- Solve
Year 5	Food- celebrating cultures and seasonality Project- Pizza	Mechanical systems- Pulleys or gears Project- vehicles with gears	Electrical systems- monitoring and control Project- Light sensor- garden light
Key Skills	**Designing** Generate innovative ideas through research and discussion with peers and adults to develop a design brief and	**Designing** Generate innovative ideas by carrying out research using surveys, interviews, questionnaires	**Designing** • Develop a design specification for a functional product that responds automatically to changes in the

	criteria for a design specification. Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose. Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas. **Making** Write a step-by-step recipe, including a list of ingredients, equipment and utensils Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients. Make, decorate and present the food product appropriately for the intended user and purpose. **Evaluating** Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/charts such as star diagrams. Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements. **Technical knowledge and understanding** Know how to use utensils and equipment	and web-based resources. Develop a simple design specification to guide their thinking. Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. **Making** Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost. **Evaluating** Compare the final product to the original design specification. Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work. Investigate famous manufacturing and engineering companies relevant to the project. **Technical knowledge and understanding** Understand that mechanical and electrical	environment. • Generate, develop and communicate ideas through discussion, annotated sketches and pictorial representations of electrical circuits or circuit diagrams. **Making** • Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. • Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. • Create and modify a computer control program to enable their electrical product to respond to changes in the environment. **Evaluating** • Continually evaluate and modify the working features of the product to match the initial design specification. • Test the system to demonstrate its effectiveness for the intended user and purpose. **Technical knowledge and understanding** • Understand and use electrical systems in their products. • Understand the use of computer control systems in products. • Apply their understanding of computing to program, monitor and control their

	including heat sources to prepare and cook food. Understand about seasonality in relation to food products and the source of different food products. Understand how key chefs have influenced eating habits to promote varied and healthy diets.	systems have an input, process and an output. Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. Know and use technical vocabulary relevant to the project.	products. • Know and use technical vocabulary relevant to the project.
Key People	Jamie Oliver- Chef	Henry Ford	
Key subject links	**Mathematics** – measurement of mass kg/g; understand and use approximate equivalence of metric and imperial units. **Art and design** – using and developing drawing skills. **Spoken language** – articulate and justify answers and opinions. Listen and respond to adults and peers. **Writing** – purpose of writing e.g. for planning and evaluation. **Mathematics** – measurement of mass kg/g. • **Science** – recognise the impact of diet on the way their bodies function.	**Computing** – use search technologies for research purposes and be discerning when evaluating digital content. **Art and design** – use and apply drawing skills. Use techniques with colour, pattern, texture,line and shape. **Mathematics** – understand ratios. Apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm.	**Mathematics** – apply understanding and skill to carry out accurate measuring using standard units i.e. cm/mm. **Science** – apply knowledge and understanding of circuits, switches, conductors and insulators. **Computing** – design, write and debug programs that accomplish specific goals,including controlling physical systems. Use sequence, selection, and repetition in programs. Work with variables and various forms of input and output. **Spoken language** – maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments. Develop understanding through speculating, hypothesising, imagining and exploring ideas.

Key Vocabulary	Seasonality Growing cycle Cross contamination Hygiene Ratio Grate spread	Pulley Drive belt Gear Driver Follower	Circuit Sensors Daylight hours Stripping of wires Batteries
SMSC and British Values	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance
Global Goals and School values	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration	4 QUALITY EDUCATION 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION Determination, Aspiration
The Leys Pathways	UKS2- Explore UKS2- Communicate UKS2- Solve	UKS2- Explore UKS2- Communicate UKS2- Solve	UKS2- Explore UKS2- Communicate UKS2- Solve
Year 6	Textiles- combining different shapes Project- Purse/ phone case	Structures- frames structures Project combining with CAMS project- making a frame for the moving toy.	Mechanical systems- CAMS Project - moving toy
Key Skills	**Designing** Generate innovative ideas by carrying out research including surveys, interviews and questionnaires. Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate,	**Designing** Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources. Develop a simple design specification to guide the development of their ideas and	**Designing** Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. Develop a simple design specification to guide their thinking. Develop and communicate ideas through

	computer-aided design. Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. **Making** Produce detailed lists of equipment and fabrics relevant to their tasks. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. **Evaluating** Investigate and analyse textile products linked to their final product. Compare the final product to the original design specification. Test products with intended users and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work. **Technical knowledge and understanding** A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. Fabrics can be strengthened,	products, taking account of constraints including time, resources and cost. Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. **Making** Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. Use finishing and decorative techniques suitable for the product they are designing and making. **Evaluating** Investigate and evaluate a range of existing frame structures. Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. Research key events and individuals relevant to frame structures. **Technical knowledge and understanding** Understand how to strengthen, stiffen and reinforce 3-D frameworks. Know and use technical vocabulary relevant to the project.	discussion, annotated drawings, exploded drawings and drawings from different views. **Making** Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. **Evaluating** Compare the final product to the original design specification. Test products with the intended user, where safe and practical, and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work. Investigate famous manufacturing and engineering companies relevant to the project. **Technical knowledge and understanding** Understand that mechanical systems have an input, process and an output. Understand how cams can be used to produce different types of movement and change the direction of movement.

	stiffened and reinforced where appropriate.		Know and use technical vocabulary relevant to the project.
Key People	Tinker Hatfield	Zaha Hadid- architect	
Key subject links	Science – compare and group together everyday materials on the basis of their properties. • Mathematics – identify 3-D shapes, including cubes and other cuboids, from 2-D representations. • Spoken language – ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Use relevant strategies to build their vocabulary. • Computing – use technologies for research purposes and be discerning when evaluating digital content.	Spoken language – ask questions, formulate, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints. • Science – work scientifically investigating properties of fabrics. Children plan different types of scientific enquiries to answer questions. • History – significant person/people in their locality linked to textiles and products e.g. William Morris, Amanda Wakeley.	Spoken language – ask relevant questions, formulate and express opinions, give well-structured descriptions and explanations. Listen and respond appropriately, articulate and justify answers, arguments and opinions. Consider and evaluate different viewpoints. • Computing – use search technologies for research purposes and be discerning when evaluating digital content. • Science – forces and movement: explore the effects of simple machines on movement.
Key Vocabulary	Sewing chain stitch Fastening techniques Velcro Seam	Compression Strut Frame structures Triangulation - L join	Cams Rotary motion Oscillating motion Reciprocating motion Spacer
SMSC and British Values	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance	Individual liberty Mutual respect for and tolerance

Gloabl Goals and School values	 Determination, Aspiration	 Determination, Aspiration	 Determination, Aspiration
The Leys Pathways	UKS2- Explore UKS2- Communicate UKS2- Solve	UKS2- Explore UKS2- Communicate UKS2- Solve	UKS2- Explore UKS2- Communicate UKS2- Solve