



Design and Technology Policy

Love bears all things, believes all things, hopes all things,
endures all things.'

1 Corinthians 13:7

Approved: November 2023

Review date: November 2024

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Introduction

This policy outlines the purpose, nature and management of the design and technology in our school.

The policy reflects the consensus of opinion of the whole teaching staff and has the full agreement of the governing body.

The implementation of this policy is the responsibility of all the teaching staff.

Intent

Our love of investigation and problem solving begins in the EYFS, where children show curiosity about objects and develop the ability to question why things happen. They are engaged in open-ended activities to allow them to find ways to solve problems, find new ways to do things and test their ideas. In addition to this, they are taught how to choose the resources they need and handle equipment and tools safely and effectively. All children have the opportunity to begin representing their own ideas, thoughts and feelings through design and technology from the very start of their journey at All Saints.

This work is then built upon in KS1 and KS2 through the national curriculum for design and technology which aims to ensure that all pupils fulfil their potential and aims to:

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

Implementation

Activities are planned to encourage full and active participation by all pupils in accordance with the relevant and agreed policies.

The children are taught a range of designing and making skills progressively throughout each key stage. Key enquiry skills are taught throughout the units and are represented with symbols to make it explicitly clear to the children which skills they are focusing on in a particular lesson. This begins in EYFS and continues through KS1 and into KS2. This allows the children to be clearer about their own learning and make links between concepts and ideas.

All projects are planned using an investigative approach so that Design Technology activities are relevant and purposeful.

'DT' planning in the Early Years is based on the Foundation Stage framework: knowledge and understanding of the world and expressive arts and design areas of study. Planning in Key Stages 1 and 2 is based on the National Curriculum. Projects are agreed in all year groups to ensure robust curriculum coverage and is developed through planned themes.

Design technology is identified on an annual subject overview for each year group, which describes the balance of subjects taught throughout the year. This information is monitored to ensure that the Design Technology curriculum is covered in all key stages.

Knowledge organisers are created by the teacher and shared with the subject leader and include prior learning to ensure all children have the opportunity to build upon their existing knowledge and skills. The plans are used to identify activities and assessments so that it can be taught in line with the scheme and policy. Plans are evaluated at the end of the project so that they can be modified and improved before they are delivered again.

Skills progression grids are used as a basis for planning so that pupils can gain age appropriate skills to meet the aims of the policy. By the end of KS2 children will be knowledgeable and skilled in:

- Mechanical systems
- Structures
- Textiles
- Electrical systems
- Programming, monitoring and control
- Cooking and Nutrition

At the end of a project, plans are evaluated so that provision is adjusted for the following year. Outcomes and evaluations are shared with the Design Technology leader.

EYFS

In the EYFS, through 'knowledge and understanding of the world' and 'Expressive arts and design' children explore and select materials and equipment and use skills such as cutting, joining, folding and building for a variety of purposes. Children experience different construction kits which allow control, movement, methods of linking and joining pieces together and taking them apart. Children develop these ideas by simple drawings, making models and it arouses their curiosity by discussing how things work with simple technological vocabulary and adapting.

Opportunity is provided for each child to develop his/her design and technology capability through:

- Assignments in which they design and make products.
- Focused practical tasks in which they develop and practise particular skills and knowledge.
- Activities in which they investigate, disassemble and evaluate simple products.

Each child is given the opportunity to work with a range of materials and components, to work independently and in teams and to apply skills, knowledge and understanding from other curriculum subjects, where appropriate.

The work undertaken should be practical, enjoyable and relevant for all children.

Children will be taught in their normal class group.

Impact

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

Through the evaluation of past and present design and technology, pupils develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Health and Safety

Children will be taught appropriate methods of handling and using tools, equipment and materials safely, considering the hazards and risks in their activities and following simple instructions to control risk to themselves.

Resources

Resources are available in a central resource area in the hall store cupboard to be accessed by the teacher and on request from children during projects. All staff are responsible for returning equipment, storing it safely and tidily and informing the Design and Technology leader when resources run low or become lost or damaged. List of desirable resources are included in the appendix

Assessment, recording and reporting

The purpose of assessment, recording and reporting in DT is to track progress and identify the next steps in learning for each child.

Assessments are made over a period of time and are based on the evidence of more than one activity.

Formative assessment

Class teachers assess Design Technology skills, knowledge and understanding based on outcomes from learning intentions. Marking will be in line with the school's marking policy.

Summative assessment

Assessment of progress is made at the end of each project based on evidence from independent activities. Teachers make their judgements against the learning objectives for that unit based upon the main areas: Planning, making, evaluating and technical knowledge. This information will be used to complete a child's individual report to parents and for the Design technology leader to determine the impact of the provision in the school.

Standards are assessed against EYFS and National Curriculum descriptors as appropriate. Assessment will be through:

- Observations
- Discussions with learners
- Learners' self-assessment
- Assessments against the skills progression grids at the end of topics.

Background Documentation

This policy was informed by reference to the statutory orders for Design and Technology.

Review

This policy will be reviewed in 2024 - 2025

Appendices

1. National Curriculum Overview KS1 and KS2
2. Curriculum coverage overview
3. Knowledge organise example
4. Progression grids
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6. Skills symbols overview

Appendix 1: National Curriculum Overview KS1 and KS2

Progression in Designing and Making Skills

Design Technology National Curriculum

Key stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- 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

Make

- 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

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- 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.

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- 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

Make

- 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 wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- 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

- 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

Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

Key stage 1

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

Key stage 2


- understand and apply the principles of a healthy and varied diet
- prepare and cook a 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.

Appendix 2: Curriculum coverage overview

Curriculum coverage overview

Class 1 (EYFS)	Junk modelling Construction Sets Wood and Plastic Food Textiles Design and make task of own choice
Class 2 (y1,2,3)	textiles : tie dying bags / puppets Structure: shelters from around the world / photograph frames Mechanisms: vehicles / moving cards / Toys Food: seasonal inspired cooking / chocolate spoons and truffles
Class 3 (y4,5,6)	Textiles: Fashion and textiles / Seasonal stockings Structures: Pavilions / Building bridges / Chinese inventions Mechanisms: catapults / Story books / Chinese inventions Electrical systems: story books / burglar alarms (in science curriculum) Programming and Control: (through ICT curriculum) Micro-bit / scratch / 3D CAD Food: West Asian cookery / Viking Feast

Appendix 3: Knowledge organiser example

<p>Class 2 – DT: chocolate (chocolate spoons y1/2, chocolate truffles y3)</p> <p>Cycle 2 : Autumn Term</p>	<p>Key driver: Creativity (hope/joy)</p>																																										
<p>Learning Sequence:</p> <ol style="list-style-type: none"> 1. Tasting and evaluating existing products 2. Evaluate existing packaging 3. Practise making different types and styles of packaging 4. Generate own ideas based upon your experiences and decide upon your final design including packaging 5. Make your food product 6. Evaluate the whole design and make process 	<p>Big Question: How did the discovery of the cocoa bean affect and change people in England? Was it for better or worse?</p> <p>Key Vocabulary: See below</p>																																										
<p>Key Knowledge:</p>  <table border="1" data-bbox="181 1013 448 1248"> <thead> <tr> <th>Taste</th> <th>Appearance</th> <th>Texture</th> </tr> </thead> <tbody> <tr> <td>fizzy</td> <td>red</td> <td>creamy</td> </tr> <tr> <td>sweet</td> <td>brown</td> <td>smooth</td> </tr> <tr> <td>delicious</td> <td>black</td> <td>rough</td> </tr> <tr> <td>yummy</td> <td>green</td> <td>bumpy</td> </tr> <tr> <td>cheesy</td> <td>blue</td> <td>lumpy</td> </tr> <tr> <td>tasty</td> <td>yellow</td> <td>dry</td> </tr> <tr> <td>spicy</td> <td>orange</td> <td>crispy</td> </tr> <tr> <td>salty</td> <td>golden</td> <td>chewy</td> </tr> <tr> <td>sour</td> <td>beautiful</td> <td>oily</td> </tr> <tr> <td>juicy</td> <td>dazzling</td> <td>greasy</td> </tr> <tr> <td>fresh</td> <td>dripping</td> <td>fatty</td> </tr> <tr> <td>rich</td> <td>flaky</td> <td></td> </tr> <tr> <td>disgusting</td> <td>appealing</td> <td></td> </tr> </tbody> </table>		Taste	Appearance	Texture	fizzy	red	creamy	sweet	brown	smooth	delicious	black	rough	yummy	green	bumpy	cheesy	blue	lumpy	tasty	yellow	dry	spicy	orange	crispy	salty	golden	chewy	sour	beautiful	oily	juicy	dazzling	greasy	fresh	dripping	fatty	rich	flaky		disgusting	appealing	
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SKILLS:

<p>Learning Objective</p> <p>To evaluate existing products To generate own ideas based on experiences To design an appealing product To select and use the appropriate techniques and tools To evaluate own design and adapt where necessary</p>	<p>Success Criteria:</p> <ul style="list-style-type: none"> I can evaluate existing products, giving my opinion I can generate my own ideas using pictures and words I can design a final product, describe it and show how I am going to make it I can talk about my product as I make it, improving it if needed I can evaluate my final product and suggest ways to improve it further
<p>PRIOR LEARNING:</p> <p>How to handle tools and equipment safely Exploring different textures and flavour of food Designing and making their own food product (y3 only)</p>	



DT progression of knowledge, skills and vocabulary

EYFS	Characteristics of effective learning	Early Learning Goals
	<p>Show curiosity about objects, events and people</p> <p>Questions why things happen</p> <p>Engage in open-ended activity</p> <p>Thinking of ideas</p> <p>Find ways to solve problems / find new ways to do things / test their ideas</p> <p>Use senses to explore the world around them</p> <p>Create simple representations of events, people and objects</p> <p>Planning, making decisions about how to approach a task, solve a problem and reach a goal</p> <p>Checking how well their activities are going</p> <p>Changing strategy as needed</p> <p>Reviewing how well the approach worked</p>	<p>Choose the resources they need for their chosen activities</p> <p>Handle equipment and tools effectively</p> <p>Children know the importance for good health of a healthy diet</p> <p>They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Children use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p> <p>They represent their own ideas, thoughts and feelings through design and technology</p>

Skills	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Generating ideas - designing	Design appealing products for a particular user based on simple design criteria. Generate initial ideas and design criteria through own experiences. Develop and communicate these ideas through talk and drawings and mock ups where relevant.	Generate ideas based on simple design criteria and their own experiences, explaining what they could make. Develop, model and communicate their ideas through talking, mock-ups and drawings.	Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. Use annotated sketches, prototypes, final product sketches and pattern pieces; communication technology, such as web-based recipes, to develop and communicate ideas.	Generate and clarify ideas through discussion with peers to develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.	Generate innovative ideas through research including surveys, interviews and questionnaires and discussion with peers to develop a design brief and criteria for a design specification. • Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. and, where appropriate, computer-aided design	Use research using surveys, interviews, questionnaires and web-based resources. to develop a design specification for a range of functional products. Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. Generate and develop innovative ideas and share and clarify these through discussion. Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.
Making	<ul style="list-style-type: none"> • Select and use simple utensils, tools and equipment to perform a job e.g. peel, cut, slice, squeeze, grate and chop safely; marking out, 	Plan by suggesting what to do next. Select and use tools, equipment, skills and techniques to perform	Plan the main stages of making. Select from and use a range of appropriate utensils, tools and equipment with some	Order the main stages of making. Select and use appropriate tools to measure, mark out, cut, score, shape and	<ul style="list-style-type: none"> • Produce detailed lists of equipment and fabrics relevant to their tasks 	<ul style="list-style-type: none"> • Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components.

	cutting, joining and finishing; cut, shape and join paper and card. <ul style="list-style-type: none"> • Select from a range of ingredients and materials according to their characteristics to create a chosen product. 	practical tasks, explaining their choices. Select new and materials, components, reclaimed materials and construction kits to build and create their products. Use simple finishing techniques suitable for the	accuracy related to their product. <ul style="list-style-type: none"> • Select from and use finishing techniques suitable for the product they are creating. 	combine with some accuracy related to their products. • Explain their choice of materials according to functional properties and aesthetic qualities. <ul style="list-style-type: none"> • Select from and use materials and components, 	.• Write a step-by-step plan, including a list of resources required. <ul style="list-style-type: none"> • Select from and use, a range of appropriate utensils, tools and equipment accurately to measure and combine appropriate ingredients, materials and resources. 	<ul style="list-style-type: none"> • Competently select from and use appropriate tools to accurately measure, mark, cut and assemble materials, and securely connect electrical components to produce reliable, functional products.
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		products they are creating.		including ingredients, construction and electrical components according to their function and properties.		<ul style="list-style-type: none"> Use finishing and decorative techniques suitable for the product they are designing and making.
Evaluating	Taste, explore and evaluate a range of products to determine the intended user's preferences for the product Evaluate their ideas throughout and finished products against design criteria, including intended user and purpose.	Explore a range of existing products related to their design criteria. Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria.	Investigate a range of 3-D textile products, ingredients and lever and linkage products relevant to their project. Test their product against the original design criteria and with the intended user. Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.	Investigate and evaluate a range of products including the ingredients, materials, components and techniques that are used. Test and evaluate their own products against design criteria and the intended user and purpose. Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.	Investigate and analyse products linked to their final product. Compare the final product to the original design specification and record the evaluations. Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. <ul style="list-style-type: none"> Consider the views of others to improve their work 	<ul style="list-style-type: none"> Continually evaluate and modify the working features of the product to match the initial design specification. Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. Test the system to demonstrate its effectiveness for the intended user and purpose.
Vocabulary	planning, investigating design, evaluate, make, user, purpose, ideas, product,	investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function	user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing	evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations	design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype	function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype
Knowledge	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food	<ul style="list-style-type: none"> Understand where a range of fruit and vegetables come from e.g. farmed or grown at home. 	Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.	<ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. 	<ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. 	<ul style="list-style-type: none"> Know how to use utensils and equipment including heat sources to prepare and cook food. 	<ul style="list-style-type: none"> Know how to use utensils and equipment including heat sources to prepare and cook food.

	<p>Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>. Know and use technical and sensory vocabulary relevant to the project.</p>	<p>Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of <i>The eatwell plate</i>. Know and use technical and sensory vocabulary relevant to the project.</p>	<p>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.</p>	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Understand about seasonality in relation to food products and the source of different food products. Know and use relevant technical and sensory vocabulary. 	<ul style="list-style-type: none"> Understand about seasonality in relation to food products and the source of different food products. Know and use relevant technical and sensory vocabulary.
Vocabulary	<p>fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients,</p>	<p>fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients</p>	<p>name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet</p>	<p>name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet</p>	<p>ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble</p>	<p>ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble</p>
Structures	<ul style="list-style-type: none"> Know how to make freestanding structures stronger, stiffer and more stable. Know and use technical vocabulary relevant to the project. 		<ul style="list-style-type: none"> 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. 		<ul style="list-style-type: none"> Understand how to strengthen, stiffen and reinforce 3-D frameworks. Know and use technical vocabulary relevant to the project. 	
Vocabulary	<p>cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder</p>		<p>shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision,</p>		<p>frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p>	

Textiles	<ul style="list-style-type: none"> Understand how simple 3-D textile 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 Know and use technical vocabulary relevant to the project. 		<ul style="list-style-type: none"> 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. Know and use technical vocabulary relevant to the project. 		<ul style="list-style-type: none"> Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. Understand how fabrics can be strengthened, stiffened and reinforced where appropriate. Know and use technical vocabulary relevant to the project. 	
Vocabulary	joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish		fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance		seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings,	
Mechanisms/mechanical systems	<ul style="list-style-type: none"> Explore and use sliders and levers. Understand that different mechanisms produce different types of movement. Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> Explore and use wheels, axles and axle holders. Distinguish between fixed and freely moving axles. Know and use technical vocabulary relevant to the project. 	<ul style="list-style-type: none"> Understand and use lever and linkage mechanisms. Distinguish between fixed and loose pivots. Know and use technical vocabulary relevant to the project. 		<ul style="list-style-type: none"> Understand that mechanical and electrical 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. 	

Vocabulary	slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used	mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating		pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output	
Electrical systems / programming and control				<ul style="list-style-type: none"> • Understand and use electrical systems in their products linked to science coverage. • Apply their understanding of computing to program and control their products. • Know and use technical vocabulary relevant to the project. 		<ul style="list-style-type: none"> • Understand and use electrical systems in their products linked to science coverage. • Apply their understanding of computing to program, monitor and control their products. • Know and use technical vocabulary relevant to the project.
Vocabulary				series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device		reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, series circuit, parallel circuit

**Appendix 5:
Assessment grid overview**

CLASS:	Planning	Making	Evaluating	Technical knowledge
CYCLE:				
Autumn Curriculum coverage:	WTS	WTS	WTS	WTS
	EXS	EXS	EXS	EXS
	GDS	GDS	GDS	GDS
Spring Curriculum coverage:	WTS	WTS	WTS	WTS
	EXS	EXS	EXS	EXS

	GDS	GDS	GDS	GDS
	Planning	Making	Evaluating	Technical knowledge
Summer Curriculum coverage: :	WTS	WTS	WTS	WTS
	EXS	EXS	EXS	EXS
	GDS	GDS	GDS	GDS
Overall end of year assessment	WTS	WTS	WTS	WTS
	EXS	EXS	EXS	EXS

	GDS	GDS	GDS	GDS

Appendix 6: skills symbols overview

Observing	Grouping	Questioning	Explaining	Linking	Researching
