



DT

St Edmund Campion

Autumn

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Box Modelling	Mechanisms (Levers & Sliders) Christmas Cards	Mechanisms (Wheels & Axels) Moon Buggy Toy	Structures Shell structures (including computer aided design) Christmas Gift Box for enterprise	Textiles (2-D shape to 3-D product) Purse/Bag/Apron for Enterprise	Structures (Frame structures) Small scale bird hide	Textiles Combining different fabric shapes (including computer aided design) Stitched Christmas decoration

Spring

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Food	Textiles (Templates & Joining Techniques) Animal Puppets	Structures (Free standing) Bridges Science Link - Rivers	Mechanical Systems (Pneumatics) Moving Monsters Science Link - Forces	Electrical Systems Simple circuits and switches (including programming and control) Nightlight Science Link - Electricity	Mechanical systems (Pulleys and Gears) Toy vehicle gears and pulleys	Electrical Systems Using more complex switches and circuits (include programming, control and monitoring) Lighting up a Theatrical stage

Summer

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Make a Musical Instrument	Food & Nutrition - (Preparing Fruit & Vegetables) Fruit Kebabs	Food & Nutrition - (Preparing Fruit & Vegetables) Smoothie	Mechanical Systems (Levers & linkages) Moving Picture Story	Food & Nutrition (Healthy and varied diet) Pizza Making	Mechanical systems (CAMS) Make a wooden toy with oscillating/rotating movement	Food & Nutrition (Food celebrating culture and seasonality) Savoury snacks for Yr 6 Picnic

Design

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<ul style="list-style-type: none"> * select my own resources * explore different materials and decide which materials to use to express own ideas * talk about what I want to make and can suggest different ways I can do it, with support * use my own ideas to confidently create my own pieces of work which I can talk about and evaluate * use language of designing and making (join, build, shape, longer, shorter, heavier etc. 	<ul style="list-style-type: none"> * have own ideas to design something * explain to someone what I want to do * describe and explain what my product is for, and how it will work * use pictures and words to make a simple plan through teacher modelling * design a product for myself following design criteria * research similar existing products 	<ul style="list-style-type: none"> * think of own ideas and plan what to do next * explain what I want to do and describe how I may do it * understand and explain purpose of product, how it will work and how suitable it is for the user * draw simple designs and label parts of products using words * design products for myself and others following a design criteria * use knowledge of existing products to produce ideas 	<ul style="list-style-type: none"> * consider the purpose for a product and begin to research the users' needs * show design meets a range of requirements or specification * describe the purpose of a product and explain how it will work * have at least one idea about how to create product and follow a design criteria * create a plan which shows order, equipment and tools * draw annotated designs and describe by using an accurately labelled sketch and words to detail design decisions, material choices and suitability * make a prototype 	<ul style="list-style-type: none"> * use research for design ideas to create a mood board of existing products * show design meets a range of requirements and is fit for purpose including how it will work * begin to create own design criteria and adapt work when original ideas don't work. * have at least one idea about how to create product and suggest improvements for design. * produce a plan and explain the use of materials, equipment and processes. * communicate ideas using an annotated sketch 	<ul style="list-style-type: none"> * design with a range of ideas using the internet, questionnaires and existing products for design ideas accounting for users viewpoint and appeal to user * begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose * create own design criteria * produce a logical, detailed and realistic step by step plan and explain how it will appeal to the audience and meet the design criteria * use cross-sectional planning (3D) and annotated sketches using appropriate paper e.g. squared * clearly explain how parts of product will work and its purpose * where appropriate use computer-aided designs 	<ul style="list-style-type: none"> * draw on market research to inform design by exploring user's individual needs, wants and requirements for design * identify features of design that will appeal to the intended user and justify planning in a convincing way * create own design criteria and specification and follow/refine a logical plan * use annotated sketches, cross-sectional planning and where appropriate exploded diagrams for finer details * clearly explain how parts of design will work, and how they are fit for purpose * independently model and refine design ideas by making prototypes and using pattern pieces * where appropriate use computer-aided designs

Make

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<ul style="list-style-type: none"> * join materials in different ways * use a range of materials to help me build * safely explore a variety of materials/tools to assemble * create a model out of junk and can talk about what they are * recognise different ways of joining materials * begin to build with a meaningful purpose, making a plan for what I want to build before starting it 	<ul style="list-style-type: none"> * explain what I'm making and think about what I need to do next * select and use tools/equipment safely to cut, shape, join and finish fabrics * mark out and cut fabric with support * try to use finishing techniques modelled by the teacher to make product look good * work in a safe and hygienic manner 	<ul style="list-style-type: none"> * explain what I am making, why it fits the purpose and begin to make suggestions as to what I need to do next * join material /components including simple sewing techniques * can identify and name which hand tools I'm using and why * use finishing techniques that have been modelled to make product look good * work safely and hygienically 	<ul style="list-style-type: none"> * follow step by step plan to select the most appropriate tools/equipment/materials and begin to use them accurately for a purpose * work accurately to measure, mark out, make cuts and holes to materials/components with some accuracy * assemble, join and combine materials and components with accuracy * begin to independently select and apply a range of finishing techniques with some accuracy 	<ul style="list-style-type: none"> * know which tools and equipment to use, explain choices in relation to required techniques and handle tools accurately * select appropriate materials, fit for purpose and explain choices based on properties * measure, mark out, cut, shape and assemble materials/components with accuracy * assemble, join and combine materials and components accuracy * independently select and apply a range of finishing techniques with accuracy * sew, weave or knit using a range of stitches 	<ul style="list-style-type: none"> * name and use a range of tools/equipment competently with a good level of precision * select appropriate materials, fit for purpose and explain choices considering functionality * mainly accurately measure, mark out, cut, shape, assemble and join materials/components * mainly accurately apply a range of finishing techniques to enhance appearance and function of the product * begin to be resourceful with practical problems * model and refine design ideas by making a prototype 	<ul style="list-style-type: none"> * know which tools and equipment to use for a task precisely and use any tool for its purpose correctly and safely * select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics * accurately measure, mark out, cut, shape, assemble and join materials/components * accurately apply a range of finishing techniques to enhance the appearance and function of a product * pin, sew and stitch (sing a range materials together to create a product

Evaluate

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<p>* evaluate and adapt my work with support</p> <p>* define my ideas and develop my ability to represent them</p> <p>Share my creations, explaining the process I have used</p> <p>* Practise some appropriate safety measures independently</p>	<p>* describe how things works</p> <p>* talk about existing products considering: use, materials, how they work, audience, where they might be used</p> <p>* talk about their product, and say what worked well and not so well</p> <p>* begin to talk about what could make product better</p>	<p>* explain what went well, thinking about design criteria</p> <p>* talk about existing products considering: use, materials, how they work, audience, where they might be used; express personal opinion</p> <p>* talk about what I would do differently if I were to do it again and why</p>	<p>* use design criteria to evaluate finished product knowing why a product has/hasn't been successful</p> <p>* explain how to change a model to make design better and improve it</p> <p>* begin to evaluate existing products orally, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose</p>	<p>* refer to design criteria while designing and making</p> <p>* use criteria to evaluate own product and others</p> <p>* evaluate and suggest how I could improve my original design</p> <p>* evaluate existing products for both purpose and appearance considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose</p>	<p>* evaluate quality of design while designing and making, suggesting alternative plans both positively and to account for any drawbacks found</p> <p>* evaluate ideas and finished product against specification, considering purpose and appearance.</p> <p>* evaluate and discuss existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose</p>	<p>* test and evaluate quality of design while designing and making; is it fit for purpose?</p> <p>* evaluate ideas and finished product against specification, stating if it's fit for purpose</p> <p>* test and evaluate final product; explain what would improve it and the effect different resources may have had</p> <p>* do full evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose</p>

Technical Knowledge – Materials/Structures

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
		<ul style="list-style-type: none"> * join materials in different way * use joining, rolling/folding to make something stronger * make product stronger or more stable 	<ul style="list-style-type: none"> * join materials and make product stronger * know how to strengthen a product by stiffening or reinforcing a part of the structure. * make a strong, stiff structure 		<ul style="list-style-type: none"> * ensure product is strong and fit for purpose * use knowledge to improve a product by strengthening, stiffening or reinforcing it including a 3D frame 	

Technical Knowledge - Textiles

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
	<ul style="list-style-type: none"> * join textiles together to make a product, and explain how I did it * understand that a 3D textile structure can be made from two identical fabric shapes. 			<ul style="list-style-type: none"> * begin to devise a template * join different textiles in different ways * understand that a simple fabric shape can be used to make a 3D textiles project 		<ul style="list-style-type: none"> * think about user's wants/needs and aesthetics when choosing textiles * use a range of joining techniques with prototype * think about how to make product strong and look better think about how product might be sold * understand that a single 3D textiles project can be made from a combination of fabric shapes.

Technical Knowledge - Mechanisms

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
	<ul style="list-style-type: none"> * know how simple mechanism works such as sliders/levers * use sliders and levers to make a product with a moving part 	<ul style="list-style-type: none"> * use wheels and axles to make a product that moves 	<ul style="list-style-type: none"> * explain alterations to product after checking, to make it better * create a product with a simple mechanism using levers and linkages to create movement * use pneumatics to create movement 		<ul style="list-style-type: none"> * to link scientific knowledge to a design by using pulleys or gears to create movement * incorporate hydraulics/ pneumatics to products * use IT to enhance the quality of a product 	

Technical Knowledge – Electrical Systems, Computer Control & Monitoring

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
				<ul style="list-style-type: none"> * use number of components in circuit * where appropriate use IT to control a product or add to quality * link scientific knowledge by using light switches or buzzers 		<ul style="list-style-type: none"> *use different types of circuit & switch in product * think of ways in adding a circuit improves product * program a computer to monitor changes in environment and control product * use electrical systems correctly and accurately to enhance a product * know which IT product could enhance a product

Technical Knowledge – Food & Nutrition

EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
<ul style="list-style-type: none"> * Begin to understand some food preparation tools, techniques and processes * Practise stirring, mixing and pouring * Discuss how to make an activity safe and hygienic * Discuss use of senses * Understand need for variety in food * Begin to understand that eating well contributes to good health 	<ul style="list-style-type: none"> * know where some fruit and vegetables come from and why they are healthy * describe differences between some food groups (i.e. sweet, vegetable etc.) * describe the textures of fruit and vegetables * discuss how fruit and vegetables are healthy * cut fruit and vegetables safely, with support * use basic food handling hygiene practice and personal hygiene 	<ul style="list-style-type: none"> * follow safe procedures for food safety and hygiene * say where food comes from (plant or animal) * explain the food groups on the eat well plate and say which are healthy or not * describe “five a day” * cut, peel and grate safely with increasing confidence 		<ul style="list-style-type: none"> * demonstrate hygienic food preparation and recognise safe practices in the kitchen to prepare and cook dishes identifying hazards (e.g. oven) * carefully select ingredients and think about presenting product in interesting/ attractive ways * know which season certain foods are at their best and when food is ready for harvesting * begin to understand about food being grown, reared or caught in the UK or wider world * use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking * weigh ingredients and follow a recipe to create a dish 		<ul style="list-style-type: none"> * be hygienic/safe in the kitchen and follow own rules * weigh and measure accurately * work within a budget * know how to prepare a meal by collecting ingredients and by adding/substituting to change taste, texture, appearance or aroma * name some types of food that are grown, reared or caught in the UK or wider world * differentiate between a savoury or sweet meal * prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. * confidently use a range of techniques such as peeling, slicing, chopping, grating, mixing, spreading, kneading and baking.

