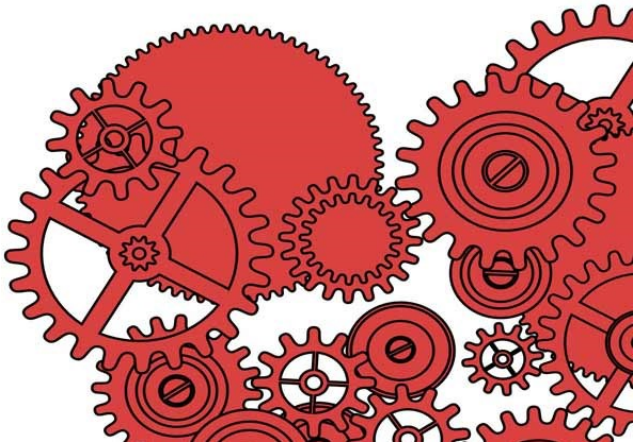
Sacred Heart RC Nursery & Primary School



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Progression in Design and Technology
Including Early Years Foundation Stage

EYFS

The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. This document demonstrates which early years outcomes are prerequisite skills for DT within the national curriculum.

	Birth to 3	3 and 4 Year Olds	Children in Reception	Early Learning Goal
Physical Development	• Sit without support. • Reach out for objects as co-ordination develops. • Try a wider range of foods with different tastes and textures. • Reach out for objects as co-ordination develops. • Pass things from one hand to the other. Let go of things and hands them to another person or drops them. • Build independently with a range of appropriate resources. • Develop manipulation and control. • Explore different materials and tools. • Use large and small motor skills to do things independently, for example manage buttons and zips, and pour drinks.	• Use large-muscle movements to wave flags and streamers, paint and make marks. • Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a small hole they dug with a trowel. • Use one-handed tools and equipment, for example, making snips in paper with scissors. • Use a comfortable grip with good control when holding pens and pencils.	• Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons. • Confidently and safely use a range of large and small apparatus indoors and outside, alone and in a group.	• Hold a pencil effectively in preparation for fluent writing – using the tripod grip in almost all cases. • Use a range of small tools, including scissors, paintbrushes and cutlery. • Begin to show accuracy and care when drawing

	Birth to 3	3 and 4 Year Olds	Children in Reception	Early Learning Goal
Expressive Arts and Design	• Explore different materials, using all their senses to investigate them. Manipulate and play with different materials. • Use their imagination as they consider what they can do with different materials. • Make simple models which express their ideas.	Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. • Develop their own ideas and then decide which materials to use to express them. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Join different materials and explore different textures.	• Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively sharing ideas, resources and skills.	• 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. • Make use of props and materials when role playing characters in narratives and stories.
		Bake, Card, Construction kit, Cook, Cut, Decoration, Fold, Healthy, Model, Mould, Paper, Pattern, Pencils, Pens, Recipe, Ruler, Scissors, Sellotape, Shape, Wheel, Whisk, Wood Wool, Plastic, string, glue, staples, paper fasteners, cardboard		

Designing		
Understanding contexts, users and purposes	**Across KS1 pupils should:** • Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment • State what products they are designing and making • Say whether their products are for themselves or other users • Describe what their products are for • Say how their products will work • Say how they will make their products suitable for their intended users • Use simple design criteria to help develop their ideas	**Across KS2 pupils should:** Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment -Describe the purpose of their products -Indicate the design features of their products that will appeal to intended users -Explain how particular parts of their products work **In lower KS2 pupils should also**: -Gather information about the needs and wants of particular individuals and groups -Develop their own design criteria and use these to inform their ideas **In upper KS2 pupils should also:** -Carry out research, using surveys, interviews, questionnaires and web-based resources -Identify the needs, wants, preferences and values of particular individuals and groups *Develop a simple design specification to guide their thinking*
Generating, developing, modelling and communicating ideas	**Across KS1 pupils should:** • Generate ideas by drawing on their own experiences • Use knowledge of existing products to help come up with ideas • Develop and communicate ideas by talking and drawing • Model ideas by exploring materials, components and construction kits and by making templates and mock ups • Use information and communication technology, where appropriate, to develop and communicate their ideas.	**Across KS2 pupils should:** • Share and clarify ideas through discussion • Model their ideas using prototypes and pattern pieces • Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas • Use computer-aided design to develop and communicate their ideas **In lower KS2 pupils should also:** • Generate realistic ideas, focusing on the needs of the user • *Make design decisions that take account of the availability of resources* **In upper KS2 pupils should also:** • Generate innovative ideas, drawing on research • *Make design decisions, taking account of constraints such as time, resources and cost*

Making		
Planning	**Across KS1 pupils should:** • Plan by suggesting what to do next • Select from a range of tools and equipment, explaining their choices. • Select from a range of materials and components according to their characteristics	**Across KS2 pupils should:** • Select tools and equipment suitable for the task • Explain their choice of materials and components according to functional properties and aesthetic qualities • Select materials and components suitable for the task **In lower KS2 pupils should also**: • *Order the main stages of making* **In upper KS2 pupils should also:** • *Produce appropriate lists of tools, equipment and materials that they need* • *Formulate step-by-step plans as a guide to making*
Practical skills and techniques	**Across KS1 pupils should:** • Follow procedures for safety and hygiene • Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components • Measure, mark out, cut and shape materials and components • Assemble, join and combine materials and components • Use finishing techniques, including those from art and design	**Across KS2 pupils should:** • Follow procedures for safety and hygiene • Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components **In lower KS2 pupils should also**: • Measure, mark out, cut and shape materials and components with some accuracy • Assemble, join and combine materials and components with some accuracy • Apply a range of finishing techniques, including those from art and design, with some accuracy **In upper KS2 pupils should also:** • Accurately measure, mark out, cut and shape materials and components • Accurately assemble, join and combine materials and components • Accurately apply a range of finishing techniques, including those from art and design *Use techniques that involve a number of steps* Demonstrate resourcefulness when tackling practical problems

Evaluating		
Own ideas and products	**Across KS1 pupils should:** • Talk about their design ideas and what they are making •Make simple judgements about their products and ideas against design criteria • *Suggest how their products could be improved*	**Across KS2 pupils should:** • **I**dentify the strengths and areas for development in their ideas and products • Consider the views of others, including intended users, to improve their work **In early KS2 pupils should also:** • Refer to their design criteria as they design and make • Use their design criteria to evaluate their completed products **In late KS2 pupils should also:** • Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • *Evaluate their ideas and products against their original design specification*
Existing products	**Across KS1 pupils should explore**: • What products are • Who products are for • What products are for • How products work • How products are used • Where products might be used • What materials products are made from • What they like and dislike about products	**Across KS2 pupils should investigate and analyse:** • How well products have been designed • How well products have been made • Why materials have been chosen • What methods of construction have been used • How well products work • How well products achieve their purposes • How well products meet user needs and wants **In lower KS2 pupils should also investigate and analyse:** • Who designed and made the products • Where products were designed and made • When products were designed and made • Whether products can be recycled or reused **In upper KS2 pupils should also investigate and analyse**: • How much products cost to make • How innovative products are • How sustainable the materials in products are • What impact products have beyond their intended purpose
Key events & individuals	**Not a requirement in KS1**	About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.

Technical Knowledge		
		Across KS2 pupils should know: • How to use learning from science to help design and make products that work • How to use learning from mathematics to help design and make products that work • That materials have both functional properties and aesthetic qualities • *That materials can be combined and mixed to create more useful characteristics* • That mechanical and electrical systems have an input, process and output • *The correct technical vocabulary for the projects they are undertaking* • How mechanical systems such as levers and linkages or pneumatic systems create movement • How simple electrical circuits and components can be used to create functional products •How to program a computer to control their products • How to make strong, stiff shell structures • How mechanical systems such as cams or pulleys or gears create movement • How more complex electrical circuits and components can be used to create functional products • How to program a computer to monitor changes in the environment and control their products • How to reinforce and strengthen a 3D framework

Cooking and Nutrition		
Where food comes from	**Across KS1 pupils should know:** • That all food comes from plants or animals • That food has to be farmed, grown elsewhere (e.g. home) or caught	**Across KS2 pupils should know:** • That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world • That seasons may affect the food available • How food is processed into ingredients that can be eaten or used in cooking
Food preparation, cooking and nutrition	**Across KS1 pupils should know:** • How to name and sort foods into the five groups in the Eat well plate • That everyone should eat at least five portions of fruit and vegetables every day • How to prepare simple dishes safely and hygienically, without using a heat source • How to use techniques such as cutting, peeling and grating	**Across KS2 pupils should know:** • How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking **In early KS2 pupils should also know**: • That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eat well plate • That to be active and healthy, food and drink are needed to provide energy for the body • That different food and drink contain different substances – nutrients, water and fibre – that are needed for health

Sacred Heart: Design and Technology Curriculum

Year 1	MECHANISMS Moving Pictures	TEXTILES Textile Tree	FOOD Fruit Salad
Designing	Work confidently within a range of contexts, such as imaginary, story based, homes, school, gardens, local community, industry and the wider environment. State what products they are designing and making. Say how their products will work	Say how their products will work. Say how they will make their products suitable for intended users. Generate ideas by drawing on their own experiences.	Use simple design criteria to develop their ideas. Discuss what they like and dislike about products.
Making	Develop and communicate ideas by drawing and talking State how their products will work	Plan by suggesting what to do next. Select from a range of materials and components according to their characteristics.	Follow procedures for safety and hygiene. Use a range of materials and components including food ingredients.
Evaluating	Make simple judgements about their products and ideas against design criteria	Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved.	Talk about their design and what they are making. Suggest how their products could be improved.
Technical Knowledge	About the movement of simple	*The correct technical vocabulary for the*	*That food ingredients should be*

	mechanisms such as levers, sliders, wheels and axles. *The correct technical vocabulary for the projects they are undertaking.*	*projects they are undertaking*	*combined according to their sensory characteristics.*
Cooking and Nutrition	NA	NA	That food has to be farmed, grown elsewhere or caught. How to prepare simple dishes safely and hygienically without using a heat source. How to use techniques such as cutting, peeling and grating.
Vocabulary	<u>Key Vocabulary</u> picture image, speech bubble mechanism, lever, pivot, wheel, disk, centre, paper fastener, curve, bigger, smaller	<u>Key Vocabulary</u> cotton, wool, foil, net, linen, waterproof, strong, fasten, teaching branch, twig, tree, cardboard, metal, sandpaper – textile, cloth, soft, rough, card, loop, glue, sort, evaluate ,fabric, material comfortable sample evaluation, flexible, warm, wrap, paperclip, design specification	<u>Key Vocabulary</u> fruit, fruit juice, fruit salad, frozen, words to describe taste: play dough, flatten, mash, skin, peel, pips, dried, canned, taste, texture, colour, sweet, sour, bitter, tangy, spread, scoop, slice, stones, core, estimate, apple, banana, cherry, grape, sharp; words to describe handle, blade, edge, specification ,grapefruit, kiwi, lemon, pineapple, texture: soft, smooth, firm, bowl (of spoon) prongs ingredients, measure, mango, melon, orange, pear, chewy, crunchy, crisp, smoothly, lumpy compare, evaluate, lime, plum, raspberry, strawberry hard improve
Key events & individuals	<u>Moving picture book from the library</u>	Monika Correa	Nadiya Hussain
Links to other curriculum areas		Linked to Science – Everyday Materials	

Year 2	MATERIALS Fridge Magnets	CONSTRUCTION Stable Structures	FOOD Healthy Snacks
Designing	To say whether their products are for themselves or other users Describe what their products are for. Say how their products will work. Use knowledge of existing products to come up with ideas.	Say whether their products are for themselves or other users Describe what their products are for Use knowledge of existing products to help come up with ideas	work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment use simple design criteria to help develop their ideas generate ideas by drawing on their own experiences use information and communication technology, where appropriate, to develop and communicate their ideas
Making	Measure, mark out and, cut and shape materials and components. Use finishing techniques including those from art and design.	Select from a range of tools and equipment, explaining their decisions	Follow procedures for safety and hygiene Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components
Evaluating	What products are (Existing products) What products are for (Existing products) Who products are for (Existing products) How products are used (Existing products)	Talk about their design ideas and what they are making. How products are used (Existing products) Where products are used (Existing products) What they like and dislike about	make simple judgements about their products and ideas against design criteria What products are (Existing products) What products are for (Existing products)

	Where products might be used (Existing products)	products.	Who products are for (Existing products) How products are used (Existing products) Where products might be used
Technical Knowledge	About the simple working characteristics of materials and components.	How freestanding structures can be made stronger, stiffer and more stable.	*that food ingredients should be combined according to their sensory characteristics*
Food and Nutrition	NA	NA	How to prepare simple dishes safely and hygienically. How to use techniques such as spreading.
Vocabulary	magnet, shape layer template, popular magnetic finish	Stable, structure, strong, weak, heavy, ramp, weight, route, cardboard, cotton reel, wool, materials	white bread, wholemeal bread, brown preferences, data, popular spinner, specification, bread, butter, toaster, timer, grills, survey evaluation, production heat, permanent change, browning system
Links to other curriculum areas		Science – Materials and their properties.	
Key events & individuals	Etsy for ideas and inspiration	Fazlur Rahman Khan – initiated structural systems for skyscrapers	Heston Blumenthal

<u>Objectives from DT to be covered in Science</u>

That all food comes from plants and animals.

That food has to be farmed, grown elsewhere or caught.

How to name and sort foods into the five groups in the Eatwell plate.

That everyone should eat at least five portions of fruit and vegetables every day.

Year 3	FOOD Seasonal Food - Pizza	TEXTILES Fabulous Flowers	CONSTRUCTION Making a Game
Designing	Gather information about the needs and wants of particular individuals and groups Develop their own design criteria and use these to inform their ideas *Make design decisions that take account of the availability of resources*	Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Model their ideas using prototypes and pattern pieces *Make design decisions that take account of the availability of resources*	Explain how particular parts of their products work Develop their own design criteria and use these to inform their ideas Share and clarify ideas through discussion Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas
Making	Select tools and equipment suitable for the task *Order the main stages of making* Follow procedures for safety and hygiene Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components	Select tools and equipment suitable for the task Explain their choice of materials and components according to functional properties and aesthetic qualities Select materials and components suitable for the task Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical	Select tools and equipment suitable for the task Explain their choice of materials and components according to functional properties and aesthetic qualities

		components and electrical components measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques, including those from art and design, with some accuracy	
Evaluating	Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products	Identify the strengths and areas for development in their ideas and products Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products	Identify the strengths and areas for development in their ideas and products Use their design criteria to evaluate their completed products
Technical Knowledge	How to use learning from science to help design and make products that work	How to use learning from mathematics to help design and make products that work *That materials can be combined and mixed to create more useful characteristics*	*That materials can be combined and mixed to create more useful characteristics*

Cooking and Nutrition	That food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking That seasons may affect the food available How food is processed into ingredients that can be eaten or used in cooking That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eat well plate That to be active and healthy, food and drink are needed to provide energy for the body That different food and drink contain different substances – nutrients, water and fibre – that are needed for health	NA	NA

Vocabulary	Seasonal, flour, milling, hygienically, commercially, climate, weather, harvested, vitamins, minerals, fibres, varied, fats, diet, vegetarian, sea fishing, fish stocks, nutrients, food calendar.	Leaves, petals ,stamen, carpel Pollen, stem ,corrugated ,straight curved ,spiral ,irregular, bent template, symmetrical	maracas, drum, xylophone, guitar, stretched string, stretched skin, rattle, composition, musical note, vibrates, rhythm, tune compose, amplify
Links to other curriculum area	Geography – food and trade	Science –Living things and their habitats/ Plants	Music
Key events & individuals	Jamie Oliver	William Morris	Leo Fender

Year 4	CONSTRUCTION	FOOD	MATERIALS
	Games	Seasonal foods - Smoothie	Party Hats

Designing	Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Describe the purpose of their products Indicate the design features of their products that will appeal to intended users *Make design decisions that take account of the availability of resources*	Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Describe the purpose of their products	Indicate the design features of their products that will appeal to intended users Model their ideas using prototypes and pattern pieces
Making	Select materials and components suitable for the task Measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy	Share and clarify ideas through discussion Generate realistic ideas, focusing on the needs of the user Select materials and components suitable for the task *Order the main stages of making* Follow procedures for safety and hygiene	Measure, mark out, cut and shape materials and components with some accuracy apply a range of finishing techniques, including those from art and design, with some accuracy
Evaluating	How well products work (existing products) How well products achieve their purposes (existing products) How well products meet user needs and wants (existing products)	Refer to their design criteria as they design and make How well products have been made (Existing products) How well products achieve their purposes (Existing products)	Identify the strengths and areas for development in their ideas and products Use their design criteria to evaluate their completed products

	who designed and made the products (existing products) where products were designed and made (existing products) when products were designed and made (existing products) whether products can be recycled or reused (existing products) Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products	How well products meet user needs and wants (Existing products)	
Technical Knowledge	How to make strong, stiff shell structures	How to use learning from science to help design and make products that work	How to use learning from mathematics to help design and make products that work That materials have both functional properties and aesthetic qualities
Cooking and Nutrition	NA	That to be active and healthy, food and drink are needed to provide energy for the body That a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eat well plate	NA

Vocabulary	.safe, convenient, toy, rules, template, square, preference practical, cost effective, hand/eye skill, right angle, sawing board, game, bored thinking skill, chance cutting mat, hacksaw, strip	consumer, market research, taste, texture, peeler, sieve, grater, whisk, questionnaire, interview, allergy, tasting panels, advertising, healthy water, fizzy water, milk, design specification, labelled, Ingredients, cost yoghurt, fruit, fruit juice drawing, evaluation	party, birthday, headpiece, stapler, shape, size, template printing, pattern, appliqué, celebration scissors, strip, join, specification, evaluation, best fit
Links to other curriculum areas	.	Science - Animals including humans.	
Key events & individuals	Lizzie Magie	Julius Freed and Bill Hamlin	Philip Treacy

Year 5	CONSTRUCTION Moving Animals	MECHANISMS Buggy	TEXTILES Carrier Bag
Designing	*Develop a simple design specification to guide their thinking* Generate innovative ideas, drawing on research *Make design decisions, taking account of constraints such as time, resources and cost*	Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Describe the purpose of their products Indicate the design features of their products that will appeal to intended users Explain how particular parts of their products work Model their ideas using prototypes and pattern pieces Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.	Carry out research, using surveys, interviews, questionnaires and web-based resources Identify the needs, wants, preferences and values of particular individuals and groups use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas generate innovative ideas, drawing on research
Making	Accurately measure, mark out, cut and shape materials and components Accurately assemble, join and combine materials and components *Use techniques that involve a number of steps*	Explain their choice of materials and components according to functional properties and aesthetic qualities Select materials and components suitable for the task *Formulate step-by-step plans as a guide to making* Accurately assemble, join and combine	Select tools and equipment suitable for the task Explain their choice of materials and components according to functional properties and aesthetic qualities Select materials and components suitable for the task Accurately measure, mark out, cut and

		materials and components *Use techniques that involve a number of steps* Demonstrate resourcefulness when tackling practical problems	shape materials and components Demonstrate resourcefulness when tackling practical problems
Evaluating	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make	Consider the views of others, including intended users, to improve their work *Evaluate their ideas and products against their original design specification* How well products have been designed (Existing products) How well products have been made (Existing products) Why materials have been chosen What methods of construction have been used (Existing products) How well products work (Existing products) How well products achieve their purposes (Existing products) How well products meet user needs and wants (Existing products) How sustainable the materials in products are (Existing products)

Technical Knowledge	How mechanical systems such as levers and linkages or pneumatic systems create movement How to use learning from mathematics to help design and make products that work How mechanical systems such as cams or pulleys or gears create movement How to reinforce and strengthen a 3D framework *The correct technical vocabulary for the projects they are undertaking*	That mechanical and electrical systems have an input, process and output *The correct technical vocabulary for the projects they are undertaking* How simple electrical circuits and components can be used to create functional products	How to make strong, stiff shell structures That materials have both functional properties and aesthetic qualities
Cooking and Nutrition	NA	NA	NA
Vocabulary	outline, expression, roar, net, length, mechanism, crank, crank and specification, shape, trace, chew, gawp, lick, width, height, slider, cam, shaft, cam and lever, design decision, detail peck proportion movement, rotation, oscillation, adjustments, reciprocation evaluation, review	vehicle, battery, abrasive, hexagon, mechanism, belt drive, simple, compound, gear, worm and wheel, motor, chassis, periphery push to make switch, push to break switch, on-off switch, pulley axle wheel, forwards, backwards, reverse, flashing LED (light emitting diode), series circuit, parallel circuit, bulb holder, buzzer, network	retail outlet, logos, integral, observation sensitive, predicting, plaiting, seam drawing, structure stiffen, fibre ,reinforce
Key events & individuals	Angie Bual – The Hatchling	James Dyson	1940s – LL Bean – Tote bag created

Year 6	MATERIALS Creatures	TEXTILES Fashion and Textiles	CONSTRUCTION Pioneering Programmers
Designing	*Develop a simple design specification to guide their thinking* Generate innovative ideas, drawing on research *Make design decisions, taking account of constraints such as time, resources and cost*	Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas Generate innovative ideas, drawing on research select materials and components suitable for the task	Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas Use computer-aided design to develop and communicate their ideas
Making	Explain their choice of materials and components according to functional properties and aesthetic qualities Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components accurately Apply a range of finishing techniques, including those from art and design	Accurately measure, mark out, cut and shape materials and components Accurately assemble, join and combine materials and components *Use techniques that involve a number of steps* Demonstrate resourcefulness when tackling practical problems	Explain their choices of components according to functional properties. *produce appropriate lists of tools, equipment and materials that they need* Accurately assemble, join and combine materials and components

Commented [ND1]: Stephen, I've realigned the pages and made the document more user friendly and athestically pleasing to the eye.
I've moved the suggested people from he title to its own row. I don't know whether Bridget started these, you or someone else? We need to look for suggested people showing a range of women, BAME, time etc.
Y3 and 4 have made some changes to thhe order so this will need changing in te document. Check with Jen.

Commented [GU2R1]: Bridget started the 'suggested people'. I have researched and added suggestions.

Evaluating	*Evaluate their ideas and products against their original design specification* *The correct technical vocabulary for the projects they are undertaking*	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make	*Evaluate their ideas and products against their original design specification* Who designed and made the products (Existing products) Where products were designed and made (Existing products) When products were designed and made (Existing products) How innovative products are (Existing products)

Technical Knowledge	How to make strong, stiff shell structures How to reinforce and strengthen a 3D framework	How to use learning from science to help design and make products that work That materials have both functional properties and aesthetic qualities *That materials can be combined and mixed to create more useful characteristics*	How to use learning from science to help design and make products that work That mechanical and electrical systems have an input, process and output How simple electrical circuits and components can be used to create functional products How to program a computer to control their products How more complex electrical circuits and components can be used to create functional products How to program a computer to monitor changes in the environment and control their products
Cooking and Nutrition	NA	NA	NA
Vocabulary	statue, gargoyle, totem pole, temple grid, vertical lines, strength, strong, stable, fastenings, dragon, welcome, deter, intruder, horizontal lines, stiffness, stiff ,welcomer, guardian expression (on face) scale, scaling up	Stitch, sew, needle, thread, hem, hemmed, properties, materials, pattern, join, textile, synthetic, fibres, straight stitch, whip stitch, back stitch. fashion. measurements, seam, drawstring.	Electrical systems, algorithms, programmed, micro controllers, Raspberry Pis, flowcharts, components, embedded, buttons, bulbs, Linux, LCD, Prototyped, CAD, code, defects.

Links to other curriculum areas			Computing Science – Electricity
Key events & individuals	Angie Bual – The Hatchling	Etsy – for ideas and inspiration	Bill Gates Alan Turing Ada Lovelace Dorothy Vaughan