DT Curriculum Progression

Year Group	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Nursery 2's	Cardboard tube owls Make a rocket Make a packed lunch to take to the moon	Making crowns Christmas trees using lollypop sticks	Make a house for the three little pigs using junk modelling resources Paper bag bears puppets	Make a dinosaur using junk modelling resources Bunny hats	Animal masks	Make a sea creature Junk modelling Making fruit kebabs
Nursery 3's	Explore different construction materials Develop own ideas - Build your house using different blocks/shapes	Begin to make complex small worlds using construction materials Develop own ideas – use different materials in creative area for a purpose	Develop own ideas – use different materials in construction area for a purpose Develop and make based on own ideas Model making – creating closed shapes to represent objects	Model making – creating closed shapes to represent objects	Develop their own ideas and decide how they will express these ideas.	Develop their own ideas and decide how they will express these ideas.
Reception	Free junk modelling and the idea of joining pieces together to make a pre-planned model. Practise joining techniques. Range of construction, materials and tools Making models on our own and as a group. Discuss problems and how they might be solved as they arise Decide what you want to make before you make it (plan)	Range of construction, materials and tools Making models on our own and as a group Discuss problems and how they might be solved as they arise Decide what you want to make before you make it (plan) Notice and express features of the natural world around them. Express colours shapes and textures. Range of materials and tools. Christmas and winter crafts	Express ideas and feelings through: Junk modelling Encourage children to work on joint projects	Express ideas and feelings through: Junk modelling Encourage children to work on joint projects	Express ideas and feelings through: Junk modelling Refine skills Encourage children to work on joint projects	Express ideas and feelings through: Junk modelling Refine skills Encourage children to work on joint projects
Year 1	**Cooking and Nutrition** Sandwiches Context - Local community (making sandwiches for the homeless/those in need).		**Construction (structures)** Materials Victorian furniture Context – school (making furniture to furnish a dolls house).		**Construction (mechanism and mechanical systems)** Moving Pictures mechanisms such as levers, sliders, wheels and axles Pioneer - Lothar Meggendorfer and/or Robert Subuda Context – school (making a moving picture for reception children). Enrichment – John O'Leary - https://johnolearyillustration.co.uk/workshops/	

DT Curriculum Progression

Year 2		**Construction (structures)** Bridges Context – industry	**Textiles** Animal puppets Pioneer – Jim Henson (The Muppets) Context – playground (deliver a puppet show for the other class/reception/year 2).			**Cooking and Nutrition** Fruit salad Context – home (healthy, nutritional snack to encourage parents to buy/try new fruits) Wider environment – Urban Outreach Enrichment – Kenyon Hall Farm
Year 3		**Construction (mechanism and mechanical systems)** Pneumatics – Stone Age Hunt – spear Cave painting – hand Fire Context – leisure/industry		**Construction (Structures)** Photo Frames Context – home/enterprise	**Cooking and Nutrition** Foods from other cultures Tomato based sauce Potato (patatas bravas), pasta, Veg (ratatouille) pioneer - Jacques Pépin, Joël Robuchon Thomas Keller Context - culture	
Year 4	**Textiles** Pencil cases Context – home/school/enterprise		**Construction (electrical systems)** Wire Loop Games Pioneer - Robert (Bob) Scrimshaw (inventor of Wire Loop Game) Context – enterprise (use as a game at the summer fair)/leisure.			**Cooking and Nutrition** Macaroni cheese Context – home/culture
Year 5		**Computing control (programming and electronics)** Enrichment - Bolton SICT microbut and construction kits Context - industry		**Cooking and Nutrition** Brazilian Bobó de camarão curry Pioneer – Helen Rizzo **Context - culture**		**Textiles** Rainforest cushions Context – enterprise/home
Year 6		**Construction (mechanism and mechanical systems)** Fair ground rides (mechanical systems such as cams or pulleys or gears create movement) Pioneer – Archimedes Context - leisure		**Cooking and Nutrition** Pizzas Context – home (healthy, nutritional savoury meal/alternative to takeaway). Enrichment – chef coming into school	**Construction (Structures)** Bird boxes Context – wider environment/school/enterprise	

EYFS

EYFS Statutory Educational Programme

Expressive Arts and Design The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe

End Points

Expressive Arts and Design

ELG: Creating with Materials Children at the expected level of development will: - 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.

ELG: Being Imaginative and Expressive Children at the expected level of development will: - Invent, adapt and recount narratives and stories with peers and their teacher; - Sing a range of well-known nursery rhymes and songs; Perform songs, rhymes, poems and stories with others, and – when appropriate – try to move in time with music.

DT Curriculum Progression

<table>
<tr><th></th><th colspan="4">KS1</th></tr>
<tr><td>National curriculum</td><td colspan="4">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

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:
• Use the basic principles of a healthy and varied diet to prepare dishes
• understand where food comes from</td></tr>
<tr><td></td><td colspan="2">Year 1</td><td colspan="2">Year 2</td></tr>
<tr><td></td><td>Knowledge</td><td>Skills</td><td>Knowledge</td><td>Skills</td></tr>
<tr><td>Design</td><td><u>Understanding contexts, users and purposes</u>

Pupils should:
DK1a) Work within a range of contexts, such as imaginary, story-based, home and school. (All)
DK1b) With support, state what products they are designing and making. (All)
DK1c) Describe what their products are for. (Structures) (Mechanisms)
DK1d) Say how their products will work. (Mechanisms)</td><td></td><td><u>Understanding contexts, users and purposes</u>

Pupils should:
DK2a) Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment. (All)
DK2b) State what products they are designing and making. (All)
DK2c) Say whether their products are for themselves or other users.(Puppets)</td><td></td></tr>
</table>

	DK1e) Use simple design criteria to help develop their ideas. **(All)** **<u>Generating, developing, modelling and communicating ideas</u>** **Pupils should:** DK1f) Generate ideas by drawing on their own experiences. **(All)** DK1g) Use knowledge of existing products to help come up with ideas. **(All)** DK1h) Develop and communicate ideas by talking and drawing. **(All)** DK1i) Model ideas by exploring materials, components and by making templates and mock-ups. **(Mechanisms)**		DK2d) Describe the purpose of their product.**(Bridges) (Puppets)** DK2e) Describe how their products will work**.(Bridges) (Puppets)** DK2f) Say how they will make their products suitable for their intended users. **.(Bridges) (Puppets)** DK2g) Use a design criteria to help develop their ideas. **(Bridges) (Puppets)** **<u>Generating, developing, modelling and communicating ideas</u>** **Pupils should:** DK2h) Generate a wide range of ideas by drawing on their own experiences. **(Puppets/food)** DK2i) Use their growing knowledge of existing products to help come up with ideas. **(Puppets/Bridges)** DK2j) Develop and communicate ideas by talking, drawing and simple annotations. **(Puppets)** DK2k) Model ideas by exploring materials, components and by making templates and mock-ups. **(Bridges)** DK2l) Use information and communication technology, where appropriate, to effectively develop and communicate their ideas. **(Puppets)**	
Make	**<u>Planning</u>** **Pupils should:** MK1a) Select from a range of tools and equipment MK1b)Select from a range of materials and components. **(All)** **<u>Practical skills and techniques</u>** **Pupils should:** DK1b) Follow procedures for safety and hygiene. **(All)**	**<u>Practical skills and techniques</u>** **Pupils should:** MS1a) Use a range of materials and components, including food ingredients and mechanical components. **(All)** MS1b) Measure, mark out, cut and shape materials and components. **(Structures) (Mechanisms)** MS1c) Assemble, join and combine materials and components. **(Structures) (Mechanisms)**	**<u>Planning</u>** **Pupils should:** *MK2a) Plan by suggesting what to do next.* **(All)** MK2b) Select from a range of tools and equipment, *explaining their choices.* **(Bridges)** MK2c) Select from a range of materials and components according to their characteristics. **(Puppets)** **<u>Practical skills and techniques</u>**	**<u>Practical skills and techniques</u>** **Pupils should:** MS2a) Use a range of materials and components, including construction materials and kits, textiles and food ingredients. **(all)** MS2b) With increasing accuracy, measure, mark out, cut and shape materials and components. **(Puppets)** MS2c) With increasing accuracy assemble, join and combine materials and components. **(Puppets/ Bridges)**

		MS1d) Use finishing techniques, including those from art and design. **(Structures) (Mechanisms)**	**Pupils should:** MK2d) Follow procedures for safety and hygiene. **(hygiene – food, safety – Bridges /puppets)**	MS2d) Use finishing techniques, including those from art and design. **(Puppets)**
Evaluate	**<u>Own ideas and products</u>** **Pupils should:** EK1a) Talk about their design ideas and what they are making. **(All)** EK1b) Make simple judgements about their products and ideas against design criteria. **(All)** *EK1c) Suggest how their products could be improved.* **(All)** **<u>Existing products</u>** **Pupils should explore:** • EK1d) what products are**(All)** • EK1e) who products are for**(All)** • EK1f) what products are for**(All)** • EK1g) how products work**(All)** • EK1h) how products are used**(All)** • EK1i) where products might be used**(All)** • EK1j) what materials products are made from**(All)** • EK1k) what they like and dislike about products**(All)**		**<u>Own ideas and products</u>** **Pupils should:** EK2a) Talk confidently about their design ideas and what they are making. **(All)** EK2b) Make judgements about their products and ideas against design criteria. **(Bridges)** *EK2c) Explain how their products could be improved.* **(Bridges)** **<u>Existing products</u>** **Pupils should explore in greater detail:** • EK2d) what products are • EK2e) who products are for • EK2f) what products are for • EK2g) how products work • EK2h) how products are used • EK2i) where products might be used • EK2j) what materials products are made from • EK2k) what they like and dislike about products **(Puppets) (Bridges)**	
Technical Knowledge	**<u>Making products work</u>** **Pupils should know:** TK1a) How freestanding structures can be made stronger, stiffer and more stable. (**Structures)** *TK1b) That food ingredients should be combined according to their sensory characteristics***.(Sandwiches)** *TL1c) The correct technical vocabulary for the projects they are undertaking.* **(All)**		**<u>Making products work</u>** **Pupils should know:** TK2a) About the simple working characteristics of materials and components. **(Puppets)** TK2c) How freestanding structures can be made stronger, stiffer and more stable. **(Bridges)** *TK2d) That a 3-D textiles product can be assembled from two identical fabric shapes.* **(Puppets)**	

	TK2b) About the movement of simple mechanisms such as levers, sliders, wheels and axles **(Mechanisms)**		*TK2e) That food ingredients should be combined according to their sensory characteristics.* **(Food)** *TK2f) The correct technical vocabulary for the projects they are undertaking.* **(All)**	
Cooking and Nutrition	**<u>Where food comes from</u>** **Pupils should know:** CK1a) That all food comes from plants or animals. **<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CK1b) That everyone should eat at least five portions of fruit and vegetables every day.	**<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CS1a) How to use techniques such as **cutting, peeling** and **grating**. CS1b) With support, prepare simple dishes safely and hygienically, without using a heat source.	**<u>Where food comes from</u>** **Pupils should know:** CK2b) That food has to be farmed, grown elsewhere (e.g. home) or caught. **<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CK2c) How to name and sort foods into the five groups in The eatwell plate.	**<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CS2a) How to use techniques such as **cutting, peeling** and grating whilst considering the aesthetics of their dish. CS2b) How to prepare simple dishes safely and hygienically, without using a heat source.
Vocabulary	**Healthy Sandwich – healthy, balanced diet, filling, appearance, flavour, portion.** **Victorian furniture – stable, freestanding, purpose, product, join, attractive.** **Moving mechanisms – lever, pivot, moving, mechanism, audience, slider.**		**Fruit salad – ingredients, equipment, slicing, dicing, safety.** **Puppets – running stitch, needle, eye, template, puppet.** **Bridges – freestanding, strong, stable, join, structure.**	
End points	**By the end of Y1 through the coverage of Cooking and Nutrition, Construction (structures) and Construction (mechanism and mechanical systems) children will be able to:** • Know where food comes from and how to safely and hygienically prepare a healthy sandwich using a range of techniques. • State what they are designing and making, describe what it is for and say how their product will work. • Use simple design criteria, talking and drawing to help develop their ideas. • Use knowledge of existing products and their own experiences to help develop their ideas. • Model ideas by exploring materials, components and by making templates and/or mock-ups. • Select appropriate tools, equipment, materials and components to safely make their product using a range of practical skills and measuring, joining and finishing techniques. • Evaluate existing products by exploring their use and purpose. • Evaluate their own design ideas and products against a simple criteria and suggest ways these can be improved.		**By the end of Y2 through the coverage of Cooking and Nutrition, Construction (structures) and Textiles children will be able to:** • Understand how food is produced whilst being able to categorise items into the five groups. • With more independence, children safely and hygienically prepare a fruit salad which is aesthetically pleasing, using a range of techniques. • State what they are designing and making, describe what it is for, say how their product will work and how it is suitable for its intended user. • Follow a design criteria to develop their own ideas. • Use knowledge of existing products and their own experiences to help develop a wide range of ideas which includes annotations and the use of ICT. • Model ideas by exploring materials, components and by making templates and/or mock-ups. • Select appropriate tools, equipment, materials and components according to their characteristics and explain their choices. • Use increasing accuracy of practical skills and measuring, joining and finishing techniques whilst understanding next steps when making their product safely. • Evaluate existing products by exploring their use and purpose, including giving their opinion.	

	• Explain how to make their product work or move using simple technical vocabulary.	• Evaluate their own design ideas and products against a simple criteria and suggest ways these can be improved. • Explain why the simple characteristics of chosen materials are suitable using appropriate technical vocabulary.

KS2	
National curriculum	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: • 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.

DT Curriculum Progression

	Year 3		Year 4	
	Knowledge	Skills	Knowledge	Skills
Design	**<u>Understanding contexts, users and purposes</u>** **Pupils should:** DK3a) Develop their own design criteria and use these to inform their ideas. **(All)** **<u>Generating, developing, modelling and communicating ideas</u>** **Pupils should:** DK3b) Share and clarify ideas through discussion.**(All)** DK3c) Use annotated sketches to develop and communicate their ideas.**(Pheumatics) (Photoframes)** DK3d) Generate realistic ideas, focusing on the needs of the user**.(All)**		**<u>Understanding contexts, users and purposes</u>** **Pupils should:** DK4a) Gather information about the needs and wants of particular individuals and groups. **(Wire loop games)(American foods)** DK4b) Develop their own design criteria and use these to inform their ideas**.(Textiles) Wire loop games)(American foods)** **<u>Generating, developing, modelling and communicating ideas</u>** **Pupils should:** DK4c) Share and clarify ideas through discussion**.(Textiles) Wire loop games)(American foods)** DK4d) Model their ideas using prototypes and pattern pieces**.(Textiles) Wire loop games)(American foods)** DK4e) Use annotated sketches to develop and communicate their ideas**.(Textiles) (Wire loop games)** DK4f) Generate realistic ideas, focusing on the needs of the user.**(Textiles) Wire loop games)(American foods)** *DK4g) Make design decisions that take account of the availability of resources.*(**Textiles) Wire loop games)(American foods)**	
Make	**<u>Planning</u>** **Pupils should:** MK3a) Select tools and equipment suitable for the task**.(All)** MK3b) Select materials and components suitable for the task**.(All)**	**<u>Practical skills and techniques</u>** **Pupils should:** MS3a) Assemble, join and combine materials and components with some	**<u>Planning</u>** **Pupils should:** MK4a) Give views on different tools and equipment and judge whether they are suitable for the task.	**<u>Practical skills and techniques</u>** **Pupils should:** MS4a) Use a wider range of materials and components than KS1, including construction materials

	Practical skills and techniques **Pupils should:** MK3c) Follow procedures for safety and hygiene. **(World food)**	accuracy. **(Pheumatics) (Photoframes)** MS3b) Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients **(World food),** mechanical components**.(Pneumatics)** MS3c) Apply a range of finishing techniques, including those from art and design, with some accuracy. .(**Pheumatics) (Photoframes)**	(**Textiles) Wire loop games)(American foods)** MK4b) Give views on different materials and components and judge whether they are suitable for the task. **(Textiles) Wire loop games)(American foods)** *MK4c) Order the main stages of making.* **(Textiles) Wire loop games)(American foods)** **Practical skills and techniques** **Pupils should:** MK4d) Follow procedures for safety and hygiene.] **(Textiles) Wire loop games)(American foods)**	and kits, textiles, food ingredients, mechanical components and electrical components. (**Textiles) Wire loop games)(American foods)** MS4b) Measure, mark out, cut and shape materials and components with some accuracy. (**Textiles) Wire loop games)(American foods)** MS4c) Assemble, join and combine materials and components with some accuracy. **(Textiles) Wire loop games)** MS4d) Apply a range of finishing techniques, including those from art and design, with some accuracy. **(Textiles) Wire loop games)(American foods**)
Evaluate	**Own ideas and products** **Pupils should:** EK3a) Begin to identify the strengths and areas for development in their ideas and products**.(All)** EK3b) Refer to their design criteria as they design and make.(**Pheumatics) (Photoframes)** EK3c) Use their design criteria to evaluate their completed products and consider the views of others to improve their work. (**Pheumatics) (Photoframes**) **Existing products** **Investigate and analyse:** EK3d) Who designed and made the products.(**Photoframes)** EK3e) Where products were designed and made.(**Photoframes)**		**Own ideas and products** **Pupils should:** EK4a) Identify the strengths and areas for development in their ideas and products. (**Textiles) Wire loop games)(American foods**) EK4b) Refer to their design criteria as they design and make. (**Textiles) Wire loop games)(American foods**) EK4c) Use their design criteria to evaluate their completed products and consider the views of others to improve their work. **(Textiles) Wire loop games)(American foods)** **Existing products** **Investigate and analyse:** EK4d) Whether products can be recycled or reused. (**Wire loop games)(American foods**)	

	EK3f) When products were designed and made.(**Photoframes)** EK3f) About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.(**Photoframes)**			
Technical Knowledge	TK3a) That food ingredients can be fresh, pre cooked and processed.(**World food)** TK3b) How to use learning from mathematics to help design and make products that work.(**World food).(Photoframes)** TK3c) That materials have both functional properties and aesthetic qualities.(**Photoframes)(Pheumatics)** *TK3d) The correct technical vocabulary for the projects they are undertaking.*(**All)** TK3e) How mechanical systems such as levers and linkages or pneumatic systems create movement. **(Pneumatics**) TK3f) How to make strong, stiff structures.(**Photoframes)**		TK4a) How to use learning from science to help design and make products that work.(**Wire loop games)** TK4b) How to use learning from mathematics to help design and make products that work.(**Textiles) Wire loop games)(American foods)** TK4c) That products have both functional properties and aesthetic qualities. **(Textiles) Wire loop games)** TK4d) That mechanical and electrical systems have an input, process and output. **(Wire loop games and Science Electricity unit)** *TK4e) The correct technical vocabulary for the projects they are undertaking.***(Textiles) Wire loop games)(American foods)** TK4f) How simple electrical circuits and components can be used to create functional products. **(Wire loop games)**	
Cooking and Nutrition	**<u>Where food comes from</u>** **Pupils should know:** CK3a) How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. **<u>Food preparation, cooking and nutrition</u>** **Pupils should know:**	**<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CS3a) How to use a range of techniques such as **peeling**, **chopping, slicing,** grating, **mixing,** spreading, kneading and **baking**.	**<u>Where food comes from</u>** **Pupils should know:** CK4a) 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. **<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CK4b) How to prepare and cook a variety of predominantly savoury dishes safely and	**<u>Food preparation, cooking and nutrition</u>** **Pupils should know:** CS4a) How to use a range of techniques such as peeling, **chopping, slicing, grating, mixing,** spreading, kneading and **baking**.

	CK3b) That to be active and healthy, food and drink are needed to provide energy for the body.		hygienically including, where appropriate, the use of a heat source.	
Vocabulary	**Pneumatics – pneumatic, structure, component, aesthetic, function.** **Photo frames – freestanding, stable, decorative, functional, strong.** **Food – hygiene, peeling, chopping, slicing, mixing.**		**Wire loop game (electronics) – circuit, buzzer, components, metal, conductor** **Pencil cases (sewing) – running stitch, back stitch, whip stitch, fastenings (popper,toggle), embelishments, applique.** **American food (cooking) – saute, roux, simmer, savoury, international, culture.**	
End points	**By the end of Y3 through the coverage of Cooking and Nutrition, Construction (structures) and Pneumatics (mechanism and mechanical systems) children will be able to:** • Prepare and cook a variety of predominantly savoury dishes safely and hygienically using a range of techniques including, where appropriate, the use of a heat source. • Generate realistic ideas for their design. • State what they have chosen to design and make, describe what it is for, say how their product will work and how it is suitable for its intended user. • Create and follow their own design criteria to develop their own ideas. • Use knowledge of existing products and their own experiences to help develop a wide range of ideas shown by annotated sketches. • Select appropriate tools, equipment, materials and components that are suitable for the task according to their characteristics and give multiple reasons for their choices. • Safely assemble, join and combine a wider range of materials with some accuracy including food ingredients, strong, stiff structures and mechanical components. • With some accuracy apply a range of finishing techniques. • Begin to Identify the strengths and areas for development in their ideas and products. • Refer to their design criteria as they design and make and use their design criteria to evaluate their completed products. • Investigate and analyse existing products e.g. who, where, when in relation to designing and making. • Explain that food ingredients can be fresh, precooked and processed. • Explain that products have both functional properties and asthetic qualities. • Explain how mechanical systems such as pneumatic systems create movement.		**By the end of Y4 through the coverage of Cooking and Nutrition, Textiles and Construction (electrical systems) children will be able to:** • Understand how food is produced in the UK, Europe and the wider world • Prepare and cook a variety of predominantly savoury dishes safely and hygienically using a range of techniques including, where appropriate, the use of a heat source. • Develop their own design criteria based on information gathered about the needs and wants of particular individuals and groups. • Generate realistic ideas for their design taking into account the availability of resources, which are modelled using prototypes and pattern pieces. • State what they have chosen to design and make, describe what it is for, say how their product will work and how it is suitable for its intended user. • Use knowledge of existing products and their own experiences to help develop a wide range of ideas shown by annotated sketches. • Give their views on the suitability of a range of appropriate tools, equipment, materials and components and make selections according to their characteristics and explain their choices. • Order and implement the main stages of the making process including measuring. Marking, cutting and shaping materials and components and apply a range of finishing techniques. • Safely assemble, join and combine a wider range of materials with some accuracy including textiles and electrical components. • Identify the strengths and areas for development in their ideas and products. • Refer to their design criteria to shape their product and use their design criteria to evaluate their completed work. • Investigate and analyse whether products can be recycled or reused. • Give examples of products that have both functional properties and asthetic qualities. • Identify how mechanical and electrical systems have an input, process and output. • Explain how simple electrical circuits and components can be used to create functional products.	

DT Curriculum Progression

	KS2			
	Year 5		Year 6	
	Knowledge	Skills	Knowledge	Skills
Design	**<u>Understanding contexts, users and purposes</u>** **Pupils should:** DK5a) Describe the purpose of their products. **(Sewing)** DK5b) Indicate the design features of their products that will appeal to intended users. **(All)** DK5c) Explain how particular parts of their products work. Carry out research, using surveys, interviews, questionnaires and web-based resources. **(Sewing)** *DK5d) Develop a simple design specification to guide their thinking* **(Sewing)** **<u>Generating, developing, modelling and communicating ideas</u>** **Pupils should:** DK5e) Share and clarify ideas through discussion.		**<u>Understanding contexts, users and purposes</u>** **Pupils should:** DK6a)Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment **(All)** DK6b) Describe the purpose of their products. **(Bird boxes)** DP6c) Indicate the design features of their products that will appeal to intended users**.(Fairground)** DK6d) Explain how particular parts of their products work..**(Fairground)** DK6e) Carry out research, using surveys, interviews, questionnaires and web-based resource **(Fairground)(Pizza)** DK6f) Identify the needs, wants, preferences and values of particular individuals and groups. **(Bird boxes)** *DK6g) Develop a design specification to guide their thinking.***(Bird boxes)** **<u>Generating, developing,</u>**	

	Model their ideas using prototypes and pattern pieces. **(Computer control)** DK5f) Use annotated sketches and cross-sectional drawings to develop and communicate their ideas. Generate innovative ideas, drawing on research. **(Sewing)** DK5g) Use computer-aided design to develop and communicate their ideas. **(Computer control)**		**<u>modelling and communicating ideas</u>** **Pupils should:** DK6h) Share and clarify ideas through discussion**.(Bird boxes)** DK6i) Model their ideas using prototypes**.(Fairground)** DK6j) Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas**..(Fairground)(Bird boxes)(Pizza)** DK6k) Generate innovative ideas, drawing on research**.(Fairground)** *DK6l) Make design decisions, taking account of constraints such as time, resources and cost.* **(Pizza)**	
Make	**<u>Planning</u>** **Pupils should:** MK5a) Select tools and equipment suitable for the task. **(All)** *MK5b) Begin to explain their choice of tools and equipment in relation to the skills and techniques they will be using.* **(Sewing)** MK5c) Select materials and components suitable for the task. **(Sewing)** MK5d) Begin to explain their choice of materials and components according to functional properties and aesthetic qualities. **(Sewing)** *MK5e) Produce appropriate lists of tools, equipment and materials that they need.* **(Greek Food) (Sewing)** *MK5f) Formulate step-by-step plans as a guide to making.* **(Greek Food) (Sewing)** **<u>Practical skills and techniques</u>**	**<u>Practical skills and techniques</u>** **Pupils should:** MS5a) Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components. **(All)** MS5b) Accurately measure, mark out, cut and shape materials and components. **(Greek Food) (Sewing)** MS5c) Accurately assemble, join and combine materials and components. . **(All)** MS5d) Accurately apply a range of finishing techniques, including those from art and design. **(Sewing)**	**<u>Planning</u>** **Pupils should:** MK6a) Select tools and equipment suitable for the task.**(Bird boxes)** *MK6b) Explain their choice of tools and equipment in relation to the skills and techniques they will be Using..***(Fairground)(Bird boxes)** MK6c) Select materials and components suitable for the task..**(Fairground)(Bird boxes)** MK6d) Explain their choice of materials and components according to functional properties and aesthetic qualities..**(Fairground)(Bird boxes)** *MK6e) Produce appropriate lists of tools, equipment and materials that they need.***(Bird boxes)** *MK6f) Formulate step-by-step plans as a guide to making.***(Pizza)** **<u>Practical skills and techniques</u>**	**<u>Practical skills and techniques</u>** **Pupils should:** MS6a) Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components **(Fairground)(Bird boxes)** MS6b) Accurately measure, mark out, cut and shape materials and components**.(Bird boxes) (Pizza)** MS6c) Accurately assemble, join and combine materials and components**.(Bird boxes)** MS6d) Accurately apply a range of finishing techniques, including those from art and design**.(Bird boxes)**

	Pupils should: MK5g) Follow procedures for safety and hygiene. **(Greek Food)**		**Pupils should:** MK6g) Follow procedures for safety and hygiene.**(Pizza)** *MK6h) Use techniques that involve a number of steps.***(Bird boxes)(Pizza)** MK6i) Demonstrate resourcefulness when tackling practical problems**.(Bird boxes)**	
Evaluate	**Own ideas and products** **Pupils should:** EK5a) Identify the strengths and areas for development in their ideas and products. **(All)** EK5b) Begin to consider the views of others, including intended users, to improve their work. **(Greek Food) (Sewing)** *EK5c) Evaluate their ideas and products against their original design specification* and consider the views of others to improve their work.. **(All)** **Existing Products** **Investigate and analyse:** EK5d) How well products have been designed. **(Computer control) (Sewing)** EK5e) How well products have been made. **(Sewing)** EK5f) Why materials have been chosen. **(Sewing) (Computer control)** EK5g) What methods of construction have been used. **(All)** EK5h) How well products work. **(Sewing) (Computer control)** EK5i) How well products achieve their purposes. **(Sewing) (Computer control)** EK5j) How well products meet user needs and wants. **(Sewing)**		**Own ideas and products** **Pupils should:** EK6a) Identify the strengths and areas for development in their ideas and products**..(Fairground)(Bird boxes)(Pizza)** EK6b) Consider the views of others, including intended users, to improve their work**..(Fairground)(Bird boxes)** EK6c) Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make**..(Fairground)(Bird boxes)** *EK6d) Evaluate their ideas and products against their original design specification* and consider the views of others to improve their work. **(Bird boxes)(Pizza)** **Existing Products** **Investigate and analyse:** EK6e) How well products have been designed.**(Bird boxes)** EK6f) How well products have been made**.(Bird boxes)(Pizza)** EK6g) Why materials have been chosen**.(Bird boxes)** EK6h) What methods of construction have been used**.(Bird boxes)** EK6i) How well products work.(**Bird boxes)** EK6j) How well products achieve their purposes. (**Bird boxes)**	

	EK5k) About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products. (**All**) Manufactor (**Computing Control)**		EK6k) How well products meet user needs and wants.(**Bird boxes)** EK6l) How much products cost to make**.(Pizza)** EK6m) How innovative products are.(**Bird boxes)** EK6n) How sustainable the materials in products are**.(Bird boxes)** EK6o) What impact products have beyond their intended purpose**.(Bird boxes)** EK6p) About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products **(Fairground)**	
Technical Knowledge	**<u>Making products work</u>** **Pupils should know:** TK5a) How to use learning from mathematics to help design and make products that work. **(Computer control) (Greek Food)** TK5b) That materials have both functional properties and aesthetic qualities. **(Sewing)** *TK5c) That materials can be combined and mixed to create more useful characteristics.* **(Greek Food) (Sewing)** *TK5d) The correct technical vocabulary for the projects they are undertaking*. **(All)** TK5e) How to program a computer to monitor changes in the environment and control their products. **(Computer control)** *TK5f) That a 3D textiles product can be made from a combination of fabric shapes.* **(Sewing)**		**<u>Making products work</u>** **Pupils should know:** TK6a) How to use learning from science to help design and make products that work**..(Fairground)** TK6b) How to use learning from mathematics to help design and make products that work**.(Bird boxes)** TK6c) That materials have both functional properties and aesthetic qualities.**(Bird boxes)** *TK6d) That materials can be combined and mixed to create more useful characteristics.* **(Pizza)** TK6e) That mechanical and electrical systems have an input, process and output.(**Fairground)** *TK6f) The correct technical vocabulary for the projects they are undertaking.***(Fairground) (Pizza)** TK6g) How mechanical systems such as cams or pulleys or gears create movement**.(Fairground)** TK6h) How more complex electrical circuits and components can be used to create functional products**..(Fairground)** TK6i) How to reinforce and strengthen a 3D framework**.(Bird boxes)**	

DT Curriculum Progression

			TK6j) That a 3D textiles product can be made from a combination of fabric shapes. **(Art unit)** *TK6k) That a recipe can be adapted by adding or substituting one or more ingredients*(**Pizza)**	
Cooking and Nutrition	**Where food comes from** **Pupils should know:** CK5a) 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. CK5b) That seasons may affect the food available. CK5c) How food is processed into ingredients that can be eaten or used in cooking. **Food preparation, cooking and nutrition** **Pupils should know:** CK5d) That different food and drink contain different substances – nutrients, water and fibre – that are needed for health.	**Food preparation, cooking and nutrition** **Pupils should know:** CS5a) How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. CS5b) How to use a range of techniques such as **peeling, chopping, slicing, grating, mixing,** spreading, kneading and baking.	**Where food comes from** **Pupils should know:** CK6a) 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. CK6b) That seasons may affect the food available. CK6c) How food is processed into ingredients that can be eaten or used in cooking. **Food preparation, cooking and nutrition** **Pupils should know:** *CK6d) That recipes can be adapted to change the appearance, taste, texture and aroma*	**Food preparation, cooking and nutrition** **Pupils should know:** CS6a) How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. CS6b) How to use a range of techniques such as **peeling, chopping, slicing, grating, mixing, spreading, kneading** and **baking**.
Vocabulary	**Computing control – electronics, computer control, microbit, projectile, variable.** **Rainforest Cushion – aesthetic, overstitch, embellishment, envelope fold, snap fastener, zip.** **Food – savoury, pre-cooked, processed, nutrition, reared.**		**Fairground rides – mechanical system, pulleys, input, process, output, electrical components, prototype.** **Bird boxes – reinforce, construct, functional properties, aesthetic, cross sectional diagram.** **Pizza – calzone, Stromboli, kneading, aroma, affordable**	
End points	**By the end of Y5 through the coverage of Cooking and Nutrition, Computing Control (programming and electronics) and Textiles children will be able to:** • Prepare and cook a variety of predominantly savoury dishes safely and hygienically using a range of more complex techniques including, where appropriate, the use of a heat source. • Explain that seasons may affect the food available and explain how food is processed into different ingredients. • Describe the purpose of their products whilst indicating the design features that will appeal to intended users. • From their design, explain how parts of their products should work.		**By the end of Y6 through the coverage of Cooking and Nutrition, Construction (mechanisms and mechanical systems) and Construction (structures) children will be able to:** • Prepare and cook a variety of predominantly savoury dishes safely and hygienically using a range of complex techniques including, where appropriate, the use of a heat source. • Explain how recipes can be adapted to change the appearance, taste, texture and aroma. • Describe the purpose of their products whilst indicating the design features that will appeal to intended users.	

	• Carry out research using surveys, interviews, questionnaires and web based resources. • Develop a simple design specification to guide their thinking. • Model, clarify and share their ideas using prototypes and pattern pieces. • Use annotated sketches and cross-sectional drawings to develop and communicate their ideas. • Use computer aided design to develop and communicate their ideas. • Give their views on the suitability of a range of appropriate tools, equipment, materials and components and make selections according to their functional properties and aesthetic qualities and explain their choices. • Formulate step-by-step plans as a guide to making. • Safely assemble, join and combine a wider range of materials with some accuracy including textiles and electrical components. • Accurately, mark, cut and shape materials and components and apply a range of finishing techniques. • Identify the strengths and areas for development in their ideas and products and consider adaptations that could be made. • Evaluate their ideas and products against their original design specification. • Evaluate how well products have been designed and made and explain how well products work.	• From their design, give detailed explanations of how parts of their products should work and next steps for success. • Carry out research using surveys, questionnaires and web based resources to identify the needs, wants, preferences and values of particular individuals and groups. • Develop a design specification to guide their thinking and make design decisions taking account of constraints. • Model, clarify and share their ideas using prototypes. • Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas. • Generate innovative ideas, drawing on research. • Give their views on the suitability of a range of appropriate tools, equipment, materials and components and make selections according to their functional properties and aesthetic qualities and explain their choices. • Safely assemble, join and combine a wider range of materials with some accuracy including both mechanical and electrical components and use techniques that involve a number of steps. • Accurately, mark, cut and shape materials and components and apply a range of finishing techniques. • Identify the strengths and areas for development in their ideas and products and consider adaptations that could be made based on the views of others. • Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make. • Evaluate how well products have been designed and made and explain how well products work, including why certain materials and methods have been chosen and how well their products meet user needs and wants. • Identify how mechanical systems including pulleys create movement and how complex electrical circuits can create functional products. • Reinforce and strengthen a 3D framework.