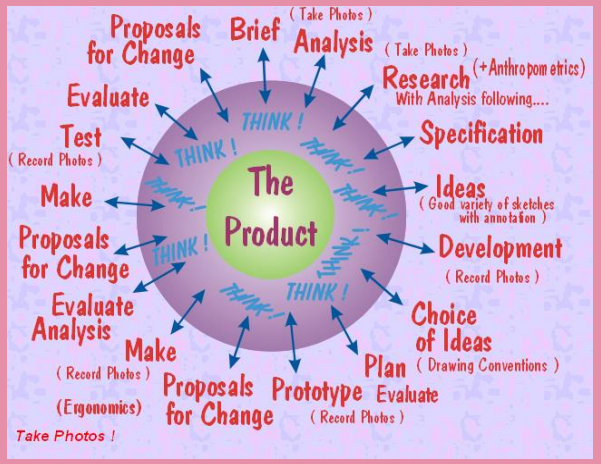
Curriculum Skills and Progression Map
Design & Technology: 2023 to 2024



Nebula
where stars are born

The Design and Technology Curriculum and Christian Distinctiveness

at Horsford CofE VA Primary School

"The Lord has made everything for its own purpose," Proverbs 16:4

Courage – While exploring Design & Technology, we hope that children will feel courageous to explore new and challenging concepts to design, create and evaluate products that may be far from their usual interests or 'comfort zone'.

Compassion – An essential part of Design & Technology is the ability to objectively evaluate how successful our endeavours were. We recognise that not all of our attempts will turn out the way we wanted, and that this is an important part of the Design & Technology process. We encourage the children to show compassion to themselves and others as they go through this process.

Responsibility – At Horsford C.E. V.A. Primary school, we give the children all the support they need with tackling new Design & Technology challenges, and we instil that it is their responsibility to always try the best they can – whatever their initial ability might be, and to take care of the Design & Technology resources they use with increasing care and attention.

Our story of 'The Good Samaritan' teaches the children to work together and to support each other in their Design & Technology learning, even if they would not usually choose to be friends.

'Spirituality is the bitter-sweet yearning for beauty, truth, love and wonder beyond ourselves. It is a longing we pursue together and a treasure we glimpse in ourselves and one another and seek beyond us into eternity. It is life in all its fullness.'

The Design and Technology Curriculum and Provision for Pupils with SEND

At Horsford C of E VA Primary school, we believe all pupils should have the opportunity to learn to the best of their capabilities through a broad and balanced, inclusive curriculum. For our pupils with a Special Educational Need, we scaffold their learning to provide them with the strongest opportunities for success in our school. We believe firmly in the SEND Code of Practice's statement that 'every teacher is a teacher of SEN' and that our pupils with SEN should be provided with the same opportunities as their peers in our school. This means that, with their learning being personalised to meet their areas of need, they feel included in the classroom and make progress year on year. Reasonable adjustments are made in all lessons to enable this.

The Design and Technology curriculum can be adapted to meet the needs of children with SEND in the following ways.

Coloured Paper or recycled paper to minimise visual stress	Having a study buddy
Breaking down lessons into short, manageable chunks	Checking seating position – sight problems – near the back for sensory needs
Mixed ability groups – using peers as support and role models	Writing slopes
Adult assistance nearby	Whiteboards for practising writing or note taking (flowing)
Recording ideas on whiteboards as an aide memoire	A safe/quiet space in or near the classroom
Recording devices to record their answers/sentences – talking tins, iPad	Special interest projects linked to and alongside class learning
My Turn/Your Turn	Proud/success book
Breaks	Social stories
Targets made clear for lessons and learning – linked to IEP	Extra time for the trickier tasks
Now/Next	Visual and picture aids
Visual Timetables – class and individual	Pencil grippers – variety of pens and pencils
Coloured Paper for visual stress	Variety of pens/writing implements
Cushions for seats – wobble and wedge cushions	Success book
Headphones/ear defenders	Ask the child what they need
Gloves/Plastic Paper (So don't have to touch paper)	Tall tables where children can stand and work
Word lists of key vocabulary for pre-learning and as prompts	Trying a 1:1 adult/adult nearby
Relevant word banks of common language for different subjects	

When planning for Design and Technology class teachers should adapt their lessons where necessary using ideas taken from this list, however it is important to remember this list is not exhaustive and other adaptations may be needed for children with specific needs.

DESIGN & TECHNOLOGY: AGE RELATED STATUTORY COVERAGE

EYFS

Expressive Arts and Design

EYFS Statutory Educational Programme: 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.

DESIGN

- Talk about what they want to make

MAKE

- Use a variety of tools and materials to make models.

Creating with materials ELG

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;

Physical development: Fine Motor Skills ELG

- Use a range of small tools, including scissors, paint brushes and cutlery; competently, safely and confidently.

EVALUATE

- Be excited about what they have made
- Share their creations, explaining the process they have used;
- Make use of props and materials when role playing characters in narratives and stories.

KEY STAGE ONE LEARNING

DESIGN

- Design purposeful, functional, appealing products based on design criteria
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and ICT 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, ingredients according to their characteristics

EVALUATE

- Explore and evaluate a range of existing products
- Evaluate 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

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

KEY STAGE TWO LEARNING

DESIGN

- Use research and develop 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 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 ideas and products against their own design criteria and consider the views of others to improve their work
- Understand how key events and individuals have helped shape the world

TECHNICAL

- 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 products.

COOKING AND NUTRITION

- 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.

Skills Map – Design & Technology

Early Years

Reception Statements

	Design	Make	Evaluate
Objectives	• Talk about what they want to make, individually and collaboratively.	• **Safely** use and explore a variety of **materials**, **tools** and techniques, experimenting with colour, design, texture, form and function; • Use a range of small tools, including scissors, paint brushes and cutlery; competently, **safely** and confidently. • Use a variety of tools and **materials** to make models.	• Share their **creations**, explaining the process they have used
Skills	• Think of their own **ideas**. • Consider which **materials** to use. • **Plan** how best to approach a task.	• Select appropriate resources & **tools**. • Work **safely** and **hygienically** with support. • **Join materials**, using tape or glue.	• **Describe** the making process and say if their product works as they wanted it to and if they like it or not.

Design Inquiry

Design and Technology is covered throughout the year through weekly themes taken from the interests of the children. A weekly hook sheet is published and Design Technology work can be identified on it. Weekly enhanced provision is planned to ensure the children have the opportunity to explore designing and making skills independently throughout the week.

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

Skills Map – Design & Technology

Year 1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle 1	DT: Wolf Trap				DT: Make a hinged treasure chest	DT: Where food comes from
Cycle 2	DT: Tea Party	DT: Rocket Crawler		DT: Make a boat		

	Technical Knowledge	Design	Make	Evaluate
Objectives	• 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 & Nutrition:** Use the basic principles of a **healthy and varied diet** to prepare dishes • **Cooking & Nutrition: Understand** where food comes from.	• Design **purposeful**, **functional**, **appealing** products based on design criteria. • Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.	• 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, ingredients, according to their **characteristics**	• Explore and evaluate a range of existing **products** • Evaluate their ideas and products against **design criteria**
Skills		• Explain what they want to do, what the **product** is for and how it will work. • Use pictures and words to **design** a product for myself following **design criteria**. • Use knowledge of existing products to produce ideas.	• Independently work safely & hygienically. • Sort materials, **components** or ingredients according to their **characteristics**, with support. • Select appropriate tools, techniques or equipment. with support to make **structures** & **mechanisms**. • Measure, **mark out**, cut and shape, with support	• Begin to talk about what 'is good' and 'isn't good' about a range of existing **products**. • Begin to talk about ideas and products against **design criteria**.

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

Skills Map – Design & Technology

Year 2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle 1	DT: Wolf Trap				DT: Make a hinged treasure chest	DT: Where food comes from
Cycle 2	DT: Tea Party	DT: Rocket Crawler		DT: Make a boat		

	Technical Knowledge	Design	Make	Evaluate
Objectives	• 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 & Nutrition:** Use the basic principles of a **healthy and varied diet** to prepare dishes • **Cooking & Nutrition: Understand** where food comes from.	• Design purposeful, functional, appealing products based on design criteria. • Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and ICT and, where appropriate, information and communication technology.	• 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, ingredients, according to their characteristics	• Explore and evaluate a range of existing products • Evaluate their ideas and products against design criteria
Skills		• Describe design using pictures, words, models & **diagrams**. • Design products for myself & others following design criteria. • **Research** similar existing products. • Make lists of materials or ingredients they will need.	• Explain how to work safely or hygienically, with support. • Independently sort materials, components or ingredients according to their characteristics. • Make suggestions as to what I need to do next. • Begin to use **finishing techniques** to make products look good.	• Describe what went well, thinking about design criteria • Talk about existing products considering use, materials, how they work, **audience**, where they might be used; express personal **opinion** • Talk about what I would do differently if I were to do it again & why.

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

Skills Map – Design & Technology

Year 3

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle 1		DT: Pop-up books -		European Structures	Vegetable Soup	
Cycle 2	DT: Puppets – Light & Sound			DT: Bread making – Romans	DT: Making a kite	

	Technical Knowledge	Design	Make	Evaluate
Objectives	• 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] • Cooking & Nutrition: 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**.	• Use research and develop 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	• 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.	• Investigate and analyse a range of existing products. • **Evaluate** 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 Technology have helped shape the world.
Skills		• Begin to research others' needs. • Show design meets a range of **requirements**. • Describe design using an accurately labelled sketch and words. • Make detailed lists of materials or ingredients needed.	• Independently demonstrate how to work safely or hygienically. • Begin to measure, mark out, cut and shape materials/components with some **accuracy**. • Begin to **assemble**, join and combine materials and components with some accuracy. • Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Begin to understand and use **mechanical systems** in their products. • Begin to understand and apply the principles of a healthy & varied diet. • Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	• Use design criteria to **evaluate** finished product. • Identify what you would change to make design better. • Begin to **evaluate** existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose • Learn about some inventors/designers/ engineers/chefs/ manufacturers of **ground-breaking** products

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

Skills Map – Design & Technology

Year 4

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle 1		DT: Rock Cakes – Extreme Earth		DT: Pop-up books - Easter		DT: Norman Castles
Cycle 2	DT: Puppets – Light & Sound			DT: Bread making – Romans	DT: Making a kite	

	Technical Knowledge	Design	Make	Evaluate
Objectives	• 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] • Cooking & Nutrition: 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**.	• Use research and develop 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	• 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.	• Investigate and analyse a range of existing products. • Evaluate 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 Technology have helped shape the world.
Skills		• Begin to create own design criteria. • Suggest improvements for design. • Make and explain **design decisions** considering availability of resources.	• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Understand and use mechanical systems in their products. • Understand and apply the principles of a healthy & varied diet. • Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	• Use criteria to evaluate product. • Begin to explain how I could improve original design. • Discuss by whom, when and where products were designed • Research whether products can be **recycled** or **reused**. • Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

Skills Map – Design & Technology

Year 5

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle 1			DT: Towers, domes & bridges	DT: Towers, domes & bridges	DT: Healthy Lunches (Jamie Oliver case study)	
Cycle 2		DT: WW1 Trench Model		DT: Kingdom – Bread and cakes		DT: Cams Toy

	Technical Knowledge	Design	Make	Evaluate
Objectives	• 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 & Nutrition: 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**.	• Use research and develop 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and **computer-aided design**	• 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.	• Investigate and analyse a range of existing products. • Evaluate 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 Technology have helped shape the world.
Skills		• Use internet & **questionnaires** for research & design ideas. • Create own design criteria. • Produce a logical, realistic plan & explain it to others. • Make design decisions considering time & resources. • Use **computer-aided designs**.	• Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Confidently understand and use mechanical systems in their products. • Begin to understand and use **electrical systems** in their products. • Begin to apply their understanding of computing to **program**, **monitor** and **control** their products. • Confidently 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.	• Evaluate ideas & finished product against specification, considering purpose and appearance. • Test and evaluate final product. • Research how **sustainable** materials are. • Talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

Skills Map – Design & Technology

Year 6

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cycle 1			DT: Towers, domes & bridges	DT: Towers, domes & bridges	DT: Healthy Lunches (Jamie Oliver case study)	
Cycle 2		DT: WW1 Trench Model		DT: Kingdom – Bread and cakes		DT: Cams Toy

	Technical Knowledge	Design	Make	Evaluate
Objectives	• 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 & Nutrition: 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**.	• Use research and develop 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 ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	• 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.	• Investigate and analyse a range of existing products. • Evaluate 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 Technology have helped shape the world.
Skills		• Draw on **market research** to inform design & identify features of design that will appeal to the intended user. • Follow & refine a logical plan. • Make design decisions, considering, resources & cost.	• Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Confidently understand and use mechanical systems in their products. • Understand and use electrical systems in their products. • Apply their understanding of computing to program, monitor and control their products. • Confidently 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.	• Write a detailed evaluation of own ideas and products against design criteria using **technical language**. • Begin to compare and **appraise** own products against those created by peers.

Greater Depth

Through regularly returning to the processes involved in Design & Technology, greater depth of knowledge and understanding in a range of contexts will be achieved.

DESIGN & TECHNOLOGY: VOCABULARY MAP				
	Technical Knowledge	**Design**	**Make**	**Evaluate**
EYFS	materials	ideas materials plan tools	safely hygienically join materials	Describe creations
Year 1	structures mechanisms cooking nutrition healthy & varied diet	product design design criteria purposeful functional appealing	components characteristics structures mechanisms mark out	products design criteria
Year 2		diagrams research	finishing techniques	audience opinion
Year 3	mechanical systems seasonality reared caught processed	requirements	accuracy assemble mechanical systems	evaluate ground-breaking
Year 4		design decisions		recycled reused
Year 5	electrical systems program monitor control	questionnaires computer-aided designs	electrical systems program monitor control	sustainable
Year 6		market research		technical language appraise

	Year 1	Year 2
Examples of Deeper Thinking Questions	• What would you change about your design? • How could you make your design faster/stronger etc? • What do you like about someone else's design? • What would happen if you changed….?	• What could you do to make your design better? • Find one thing that is better about someone else's design. • How would you help someone who wanted to make their own…? • What is the best/worst thing about your design?
Cross-Curricular Links	**Cycle 1:** • Au1: Wolf Trap – Science (materials), English (Three Little Pigs), Geography (fairy tale map drawing) • Sp1: Make a Cape – Science (superhero bodies), English (superhero stories), History (superhero story – Edith Cavell) • Su1: Make a Treasure Chest – English (pirate stories), History (shipwreck – Henry Blogg) • Su2: Cooking and nutrition – Maths (measurement) • Cycle 2: • Au1: Tea Party – English (Fairy Tales) • Sp2: Rocket Crawler –English (Stargazing), Science (rockets), History (moon landing) • Su1: Design and make a boat – Geography (where the boat could sail to)	
Suggested Writing Opportunities	All DT topics can include writing for planning, designing and evaluating. **Cycle 1:** • Au1: Wolf Trap – instructions for building a wolf trap, Designing & Evaluating. • Sp1: Make a cape – English (description of cape, stories with capes), Designing & Evaluating. • Su1: Make a Treasure Chest – English (pirate stories), Designing & Evaluating. • Su2: Cooking and nutrition –writing recipes, Designing & Evaluating. **Cycle 2:** • Au1: Tea Party – recipe writing, Designing & Evaluating. • Sp2: Rocket Crawler – space stories, Designing & Evaluating. • Su1: Design and make a boat – Designing & Evaluating, stories about boats.	

	Years 3 & 4		Years 5 & 6	
Examples of Deeper Thinking Questions	**Year 3** • What could you change to improve your design? • What made creating your design difficult? • What questions would you ask if…?	**Year 4** • Explain what you could change and how it would improve your design? • How would you change your design for the 'real world'? • How effective at…. Is your…?	**Year 5** • How could you make your design more suited to mass production? • What developments would need to be made for your design to….? • What tests would you need to do to…?	**Year 6** • What would you need to change to be able to sell your design? • How could you adapt… to make…? • What do you predict would happen if…? • Judge whether…. would cause/change/affect….
Cross-Curricular Links	• Cycle 1: • Au1: Cooking a locally sourced meal – Geography (where does our food come from?), Science (Healthy Eating) • Sp2: Stone Age tool/jewellery – History (the Stone Age), Science (Rocks and fossils), English Y4 (Ug: Boy Genius of the Stone Age). • Su2: Cooking (Great bread Bake Off) – Geography (earning a living), Maths (measures) • Cycle 2: • Au2: Christmas crafts and pop-up books • Sp2: Cereal Bars with raisins – History (Anglo-Saxons) • Su2: Roman Catapults – History (Romans)		**Cycle 1:** • Sp1&2: Structures – Geography (North and South America) • Su1: Creating a healthy, locally sourced meal – Science (the human body), Geography (locally sourced food), Maths (measurement) • Cycle 2: • Au2: WW1 designing a trench – English (War Poets & War Horse), History (WW1), Art (WW1 artists). • Sp2: Cooking different types of bread –English (Historical stories, Anglo-Saxons & Vikings), Science (permanent changes of state), Maths (measurement) • Su1: 3D map of UK/mountain range – English (Foodland), Geography (UK geography)	
Suggested Writing Opportunities	• All DT topics can include writing for planning, designing and evaluating. • Cycle 1: • Au1: Cooking a locally sourced meal – Geography (explanation texts about where food for recipe came from/debate about food sources), Science (explaining and justifying menu choices), Recipe writing • Sp2: Stone Age tool/jewellery – History (the Stone Age), Science (Rocks and fossils), English Y4 (Ug: Boy Genius of the Stone Age). • Su2: Cooking (Great bread Bake Off) – Geography (discussion of how they ensured their product would make a profit), Recipe writing, advertising etc • Cycle 2: • Au2: Christmas crafts and pop-up books • Sp2: Cereal Bars with raisins – History (Explanation of Anglo-Saxon diets), Recipe writing • Su2: Roman Catapults – History (description/explanation of Roman weapons and battles)		• All DT topics can include writing for planning, designing and evaluating. • Cycle 1: • Sp1&2: Structures – English/Geography (description of super-structures) • Su1: Creating a healthy, locally sourced meal – Science (recipes, explaining how it's healthy), Geography (debate about locally sourced food) • Cycle 2: • Au2: WW1 designing a trench – English/history (descriptions of trenches and life in a trench), History (WW1), Art (WW1 artists). • Sp2: Cooking different types of bread – History (historically accurate recipes) • Su1: 3D map of UK/mountain range – English/Geography (description)	

Design & Technology Long Term Plan
Key Stage One
Years 1 and 2

Cycle One		Cycle Two	
Term/Theme enrichment	**Coverage – see skills map**	**Term/Theme enrichment**	**Coverage – see skills map**
A1: DT - Wolf Trap	Structures	**A1: DT - Tea Party**	Cooking and Nutrition
		A2: DT - Rocket crawler	Mechanisms
		Sp2: DT - Make a boat	Construction and Textiles
Su1: DT - Make a hinged treasure chest.	Mechanisms		
Su2: DT - Where food comes from.	Cooking and Nutrition		

Design & Technology Long Term Plan
Lower Key Stage Two
Years 3 and 4.

Cycle One		Cycle Two	
Term/Theme enrichment	**Coverage – see skills map**	**Term/Theme enrichment**	**Coverage – see skills map**
		A1: DT – Shadow Puppets	Mechanisms
A2: DT – Rock Cakes	Cooking & Nutrition		
Sp1: DT – Easter Pop-up Books	Mechanisms	**Sp2: DT – Breadmaking, Romans**	Cooking & Nutrition
		Su1: DT – Making a Kite	Structures
Su1: DT – Norman Castles	Structures		

Design & Technology Long Term Plan
Upper Key Stage Two
Years 5 and 6

Cycle One		Cycle two	
Term/Theme Enrichment	**Coverage – see skills map**	**Term/Theme Enrichment**	**Coverage – see skills map**
		A2: DT – WW1 Trench Model	Structures
Sp1: DT – Towers, domes & bridges	Structure		
Sp2: DT – Towers, domes & bridges	Electrical systems Computing	**Sp2: DT – Bread & Cakes**	Cooking & Nutrition
Su1 – Healthy Lunches (Jamie Oliver case study)	Cooking & Nutrition		
		Su2: Cam Toys	Mechanical Systems

Design & Technology: Curriculum Skills and Progression Map

	Cumulative **Design & Technology** Skills Progression Ladder			
	Technical Knowledge	Design	Make	Evaluate
R	• 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.	• Think of their own **ideas**. • Consider which **materials** to use. • **Plan** how best to approach a task.	• Select appropriate resources & tools. • Work **safely** and **hygienically** with support. • **Join** materials, using tape or glue.	• **Describe** the making process and say if what they made works as they wanted it to and if they like it or not.
1	• 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** & **Nutrition**: Use the basic principles of a **healthy & varied diet** to prepare dishes • Cooking & Nutrition: Understand where food comes from.	• Explain what they want to do, what the **product** is for and how it will work. • Use pictures and words to **design** a product for myself following **design criteria**. • Use knowledge of existing products to produce ideas.	• Independently work safely & hygienically. • Sort materials, **components** or ingredients according to their **characteristics**, with support. • Select appropriate tools, techniques or equipment. with support to make **structures** & **mechanisms**. • Measure, **mark out**, cut and shape, with support	• Begin to talk about what 'is good' and 'isn't good' about a range of existing **products**. • Begin to talk about ideas and products against **design criteria**.
2		• Describe design using pictures, words, models & **diagrams**. • Design products for myself & others following design criteria. • **Research** similar existing products. • Make lists of materials or ingredients they will need.	• Explain how to work safely or hygienically, with support. • Independently sort materials, components or ingredients according to their characteristics. • Make suggestions as to what I need to do next. • Begin to use **finishing techniques** to make products look good.	• Describe what went well, thinking about design criteria • Talk about existing products considering use, materials, how they work, **audience**, where they might be used; express personal **opinion** • Talk about what I would do differently if I were to do it again & why.
3	• 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] (Y5 & 6) • Apply their understanding of computing to **program**, **monitor** and **control** their products. (Y5 & 6) • Cooking & Nutrition: 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**.	• Begin to research others' needs. • Show design meets a range of **requirements**. • Describe design using an accurately labelled sketch and words. • Make detailed lists of materials or ingredients needed.	• Independently demonstrate how to work safely or hygienically. • Begin to measure, mark out, cut and shape materials/components with some **accuracy**. • Begin to **assemble**, join and combine materials and components with some accuracy. • Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Begin to understand and use **mechanical systems** in their products. • Begin to understand and apply the principles of a healthy & varied diet. • Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	• Use design criteria to **evaluate** finished product. • Identify what you would change to make design better. • Begin to **evaluate** existing products, considering: how well they have been made, materials, whether they work, how they have been made, fit for purpose • Learn about some inventors/designers/ engineers/chefs/ manufacturers of **ground-breaking** products
4		• Begin to create own design criteria. • Suggest improvements for design. • Make and explain **design decisions** considering availability of resources.	• Apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Understand and use mechanical systems in their products. • Understand and apply the principles of a healthy & varied diet. • Begin to prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	• Use criteria to evaluate product. • Begin to explain how I could improve original design. • Discuss by whom, when and where products were designed • Research whether products can be **recycled** or **reused**. • Know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products
5		• Use internet & **questionnaires** for research & design ideas. • Create own design criteria. • Produce a logical, realistic plan & explain it to others. • Make design decisions considering time & resources. • Use **computer-aided designs**.	• Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Confidently understand and use mechanical systems in their products. • Begin to understand and use **electrical systems** in their products. • Begin to apply their understanding of computing to **program**, **monitor** and **control** their products. • Confidently 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.	• Evaluate ideas & finished product against specification, considering purpose and appearance. • Test and evaluate final product. • Research how **sustainable** materials are. • Talk about some key inventors/designers/ engineers/ chefs/manufacturers of ground-breaking products
6		• Draw on **market research** to inform design & identify features of design that will appeal to the intended user. • Follow & refine a logical plan. • Make design decisions, considering, resources & cost.	• Confidently apply their understanding of how to strengthen, stiffen and reinforce more complex structures**.** • Confidently understand and use mechanical systems in their products. • Understand and use electrical systems in their products. • Apply their understanding of computing to program, monitor and control their products. • Confidently 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.	• Write a detailed evaluation of own ideas and products against design criteria using **technical language**. • Begin to compare and **appraise** own products against those created by peers.