<u>Gainford CE Primary and Preschool</u> <u>Design Technology</u>

How design technology links to the ethos and values of Gainford CE Primary School

At Gainford CE Primary we see the ultimate purpose of education as the promotion of developing young people who can flourish in all areas of their lives-'Together we love learn and flourish' Through our DT curriculum we aim to help children develop their creativity, understand their culture and contribute towards the well-being of the nation (DFE, 2014).

A character education for design technology (CAUGHT)

Through design technology the children can learn to take risks and be **courageous**, imaginative, innovative, enterprising and accomplished people. Through the **honest** evaluation of past and present design and technology, they can develop a critical understanding of its impact on daily life and the wider world (DFE, 2014). We aim to teach the children to be **supportive** and **caring** towards each other by giving them opportunities to work together on projects or by **honestly** evaluating their peers' creations, thinking of ways they could be improved. The children will develop their understanding of the needs of others in order to design **inclusive** products and also develop their knowledge of the sustainability of products and where they come from, reinforcing their **respect** for and **thankfulness** for the environment.

Our vision for Design Technology

At Gainford we intend to provide lots of opportunities for children to learn, apply and strengthen essential skills they need to design, make, and evaluate a product for a specified purpose. We hope that the children can be **courageous** to try new ways of working and to draw on a broad range of skills and subject knowledge from other subjects such as maths, science, computing and art in order to design and create products that will solve real and relevant problems in a variety of contexts; becoming **inclusive** by considering not just their own needs and values, but those of others too.

How do we teach design technology at Gainford CE Primary and Preschool? (TAUGHT)

At Gainford Primary DT will be taught as a discrete subject and through other subjects such as science, history, geography, ICT. In Foundation Stage, the children develop essential basic skills in design and technology which prepares them for the transition into Year 1. This is by

the teacher creating many opportunities for the children to carry out DT related activities across all areas of learning.

There are 5 categories that the skills in the curriculum are split into: Structures, Mechanisms, Textiles, Cooking and Nutrition and Electrical Systems¹. These in turn will be taught in a rolling programme² across Key Stage 1, Lower Key Stage 2 and Upper Key Stage 2 to ensure the children gain the skills they need and can be adapted to work within topics and mixed year groups.

From Year 1 upwards, the children will engage in 3 DT units a year which will involve the children:

Designing

The children will:

- Explore products linked to their project.
- Carry our research regarding the product they are going to make to they can use this to support the design of their product.
- Draw/sketch their design and annotate this with information about it such as what features they have included and what materials, tools and skills they will need to practise before making the product.

Making

The children will then make their product.

Evaluating

The children will be given the opportunity to not only evaluate the effectiveness of their product but also the skills they have used to make it.

> Technical Knowledge/Skills

The children will engage in a practical activity of practising the technical knowledge or skill they will need to use when making their product. This could be a new skill or one previously learnt but may still require more practise.

Cooking and Nutrition

The children will be given the opportunity to not only explore a variety of different foods and where they come from, but also learn about the principles off a healthy and varied diet. They will also engage in the practical element of designing and producing a variety of dishes using a range of cooking techniques.

Design technology skills and knowledge taught for each year group

By the end of Key Stage One, it is expected that the children will be able to:

Explain their ideas through talking, drawing, ICT and templates.

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¹ KS2 category only

² See exemplar Long Term Plan

- Select the tools, materials and techniques they need according to their characteristics.
- Evaluate their ideas and products against a specified design criterion.
- Explain how structures can be made stronger and use mechanisms such as wheels and levers in their products.
- Understand where their food comes from and how to plan for a healthy and varied diet.

By the end of Key Stage Two, it is expected that the children will be able to:

- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- Select from a wider range of tools, materials and techniques they need according to their functional properties and aesthetic properties.
- Evaluate their ideas and products against their own design criteria, take on board the views of others to improve their work.
- Use their knowledge of how structures can be made stronger, mechanisms (such as pulleys, gears etc) and electrical systems to build more complex structures.
- Use their knowledge to prepare and cook a variety of dishes using a range of techniques.
- Understand when, where and how a variety of ingredients are grown, nurtured, caught, manufactured etc

See progression tables attached for breakdown of skills for each year group.

Measuring Impact (SOUGHT)

Evidence of children's knowledge and skills will be found through:

- Children's work in books
- End product
- Displays
- Language they use verbally

Progression Table:

Topic	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Structure		I can have my own ideas and plan	I can begin to research others'		I can begin to consider needs/wants	
		what to do next.	needs		of individuals/groups when	
		I can explain what I want to do and	I can show design meets a range of		designing and ensure product is fit	
		describe how I may do it.	requirements		for purpose	
		I can describe design using pictures,	I can describe purpose of product		I can create own design criteria	
		words, models, diagrams, begin to	I can follow a given design criteria		I can have a range of ideas	
		use ICT.	I have at least one idea about how		I can produce a logical, realistic plan	
		I can explain what I am making and	to create product		and explain it to others.	
		why it fits the purpose.	I can describe design using an		I can use cross-sectional planning	
		I can make suggestions as to what I	accurately labelled sketch and		and annotated sketches	
		need to do next.	words		I can make design decisions	
		I can choose best tools and	I can make design decisions		considering time and resources.	
		materials, and explain choices.	begin to use computers to show		I can clearly explain how parts of	
		I can describe what went well,	design		product will work.	
		thinking about design criteria	I can select suitable		I can model and refine design ideas	
		I can talk about existing products	tools/equipment, explain choices;		by making prototypes and using	
		considering: use, materials, how	begin to use them accurately		pattern pieces.	
		they work, audience, where they	I can select appropriate materials,		I can use computer-aided designs	
		might be used; express personal	fit for purpose.		I can use selected tools/equipment	
		opinion	I can work through plan in order		with good level of precision	
		I can evaluate how good existing	I can consider how good product		I can produce suitable lists of tools,	
		products are	will be		equipment / materials needed	
		I can talk about what I would do	I can begin to measure, mark out,		I can select appropriate materials, fit	
		differently if I were to do it again	cut and shape		for purpose; explain choices,	
		and why	materials/components with some		considering functionality	
		I can measure materials.	accuracy		I can create and follow detailed	
		I can describe some different	I can begin to assemble, join and		step-by-step plan	
		characteristics of materials.	combine materials and components		I can explain how product will	
		I can join materials in different	with some accuracy		appeal to an audience	
		ways.	I can begin to apply a range of		I can mainly accurately measure,	
		I can use joining, rolling or folding to	finishing techniques with some		mark out, cut and shape	
		make it stronger.	accuracy		materials/components	
		I can use own ideas to try to make	I can look at design criteria while		I can mainly accurately assemble,	
		product stronger.	designing and making		join and combine	
			I can use design criteria to evaluate		materials/components	
		This unit provides ample	finished product		I can mainly accurately apply a range	
		opportunities to reflect and	I can say what I would change to		of finishing techniques	
		consider:	make design better		I can use techniques that involve a	
		How we can be inspired by things	I can begin to evaluate existing		small number of steps	
		that have been created and how	products, considering: how well		I can begin to be resourceful with	
		we can inspire others with our	they have been made, materials,		practical problems	
		own ideas.	whether they work, how they have		I can evaluate ideas and finished	
		Being honest in our evaluations	been made, fit for purpose		product against specification,	
		and with ourselves if something	I can begin to understand by whom,		considering purpose and	
		hasn't gone quite to plan.	when and where products were		appearance.	
		Being caring towards others by	designed		I can evaluate and discuss existing	
		sharing tools/equipment	I can learn about some		products, considering: how well	
			inventors/designers/		they've been made, materials,	
			engineers/chefs/ manufacturers of		whether they work, how they have	
			ground-breaking products		been made, fit for purpose I can research how sustainable	
			I can use appropriate materials			
			I can work accurately to make cuts		materials are	
			and holes		I can talk about some key inventors	
			I can join materials		/ designers / engineers / chefs /	

I can begin to make strong	manufacturers of ground-breaking
structures	products
	I can measure carefully to avoid
This unit provides ample	mistakes
opportunities to reflect and	I can attempt to make product
consider:	strong
How we can be inclusive by	I can continue working on product
thinking of others' needs.	even if original didn't work
How we can be inspired by the	I can make a strong, stiff structure
work of others.	Tour make a strong stri structure
Being honest in our evaluations and	This unit provides ample
with ourselves if something hasn't	opportunities to reflect and
gone quite to plan.	consider:
gone quite to plan.	How we can be inclusive by
	thinking of others' needs.
	How we can be inspired by the
	work of others.
	Being honest in our evaluations
	and with ourselves if something
	hasn't gone quite to plan.
	Caring for the environment and
	being honest about our use of
	materials/recycling.
	Nurturing an understanding of our
	impact on the planet.
Mechanism I have my own ideas I can have my own ideas and I can begin to research others'	I can use internet and
	questionnaires for research and
	design ideas
and how it will work	I can take a user's view into account
Lean use nictures and words to plan	when designing
begin to use models I can explain purpose of product, I can describe design using an	I can create own design criteria
I how it will work and how it will	
he cuitable for the user	I can have a range of ideas
	I can produce a logical, realistic plan
Tear research similar existing	and explain it to others.
	I can make design decisions
I can explain what I'm making and diagrams, begin to use ICT I can make a prototype	considering time and resources.
why I can design products for myself I can begin to use computers to	I can clearly explain how parts of
I can consider what I need to do and others following design show design	product will work.
next Criteria I can select suitable	I can model and refine design ideas
I can select tools/equipment to cut, I can choose best tools and tools/equipment, explain choices;	by making prototypes and using
shape, join, finish and explain materials, and explain choices. begin to use them accurately	pattern pieces.
choices I can use knowledge of existing I can select appropriate materials,	I can use computer-aided designs
it can choose suitable materials and	I can use selected tools/equipment
explain choices	with good level of precision
Tour dry to do informing techniques	I can produce suitable lists of tools,
	equipment / materials needed
I can talk about my work, linking it I can make suggestions as to I can begin to assemble, join and	I can create and follow detailed
to what I was asked to do what I need to do next. combine materials and components	step-by-step plan
I can talk about existing products I can join materials / with some accuracy	I can explain how product will
considering: use, materials, how components together in I can begin to apply a range of	appeal to an audience
they work, audience, where they different ways.	I can mainly accurately measure,
might be used I can describe which tools I'm accuracy	mark out, cut and shape
I can talk about existing products,	materials/components
and say what is and isn't good designing and making	I can mainly accurately assemble,
I can talk about things that other I can use design criteria to evaluate	join and combine
people have made finished product	materials/components

			,			
	I can begin to talk about what could	I can choose suitable materials	I can say what I would change to		I can mainly accurately apply a range	
	make product better	and explain choices depending	make design better		of finishing techniques	
	I am beginning to use levers or	on characteristics.	I can begin to evaluate existing		I can use techniques that involve a	
	slides	I can describe what went well,	products, considering: how well		small number of steps	
			they have been made, materials,		I can evaluate ideas and finished	
	This unit provides ample	thinking about design criteria	whether they work, how they have		product against specification,	
	opportunities to reflect and	I can talk about existing products	been made, fit for purpose		considering purpose and	
	consider:	considering: use, materials, how	I can begin to understand by whom,		appearance.	
		they work, audience, where they	when and where products were		I can evaluate and discuss existing	
	How we can be inspired by things that have been greated and how	might be used; express personal	designed		products, considering: how well	
	that have been created and how	opinion	I can learn about some		they've been made, materials,	
	we can inspire others with our	I can evaluate how good existing	inventors/designers/		whether they work, how they have	
	own ideas.		engineers/chefs/ manufacturers of		been made, fit for purpose	
	Being caring towards others by	products are	ground-breaking products		I can test and evaluate final product	
	sharing tools/equipment	I can talk about what I would do	I can select appropriate tools /		I can begin to evaluate how much	
	Being honest in our evaluations	differently if I were to do it again			products cost to make and how	
	and with ourselves if something	and why	techniques I can alter product after checking, to		•	
	hasn't gone quite to plan.	I can use levers or sliders	make it better		innovative they are I can research how sustainable	
	Being nurturing towards others by	I am beginning to understand how			I	
	listening to their ideas and making	to use wheels and axles.	I can begin to try new/different		materials are	
	suggestions.		ideas		I can talk about some key inventors	
		This unit provides ample	I can use simple lever and linkages		/ designers / engineers / chefs /	
		opportunities to reflect and	to create movement		manufacturers of ground-breaking	
		consider:			products	
		How we can be inspired by things	This unit provides ample		I can select most appropriate tools /	
		that have been created and how	opportunities to reflect and		techniques	
		we can inspire others with our	consider:		I can explain alterations to product	
		own ideas.	How we can be inclusive by		after checking it	
			thinking of others' needs.		I can grow in confidence about	
		Being honest in our evaluations and with ourselves if semathing	How we can be inspired by the		trying new / different ideas.	
		and with ourselves if something	work of others.		I can use levers and linkages to	
		hasn't gone quite to plan.	Being honest in our evaluations and		create movement	
		Being caring towards others by	with ourselves if something hasn't		I can use pneumatics to create	
		sharing tools/equipment	gone quite to plan.		movement	
					• honest in our	
					plans/decisions/evaluations and	
					with ourselves if something hasn't	
					gone quite to plan.	
					Being nurturing towards others by	
					listening to their ideas and making	
					suggestions.	
					suggestions. • How we can be inclusive by	
					How we can be inclusive by	
					 How we can be inclusive by thinking of others' needs. 	
					 How we can be inclusive by thinking of others' needs. How we can be inspired by the 	
					 How we can be inclusive by thinking of others' needs. How we can be inspired by the 	
					 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. 	
					 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and 	
Textiles	I have my own ideas			I can use research for design ideas	 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and being honest about our use of 	I can draw on market research
Textiles	I have my own ideas I can use pictures and words to			I can use research for design ideas I can show design meets a range of	 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and being honest about our use of 	
Textiles	I can use pictures and words to			I can show design meets a range of	 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and being honest about our use of 	inform design
Textiles	I can use pictures and words to plan, begin to use models			I can show design meets a range of requirements and is fit for purpose	 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and being honest about our use of 	inform design I can use research of user's
Textiles	I can use pictures and words to plan, begin to use models I can design a product for myself			I can show design meets a range of requirements and is fit for purpose I can have at least one idea about	 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and being honest about our use of 	inform design I can use research of user's individual needs, wants,
Textiles	I can use pictures and words to plan, begin to use models			I can show design meets a range of requirements and is fit for purpose	 How we can be inclusive by thinking of others' needs. How we can be inspired by the work of others. Caring for the environment and being honest about our use of 	I can use research of user's

I can select tools/equipment to cut, shape, join, finish and explain choices I can measure, mark out, cut and

shape, with support
I can choose suitable materials and

I can choose suitable materials and explain choices

I can try to use finishing techniques to make product look good
I can talk about my work, linking it to what I was asked to do
I can talk about existing products considering: use, materials, how they work, audience, where they might be used

I can begin to talk about what could make product better

I can measure, cut and join textiles to make a product, with some support

I can choose suitable textiles

This unit provides ample opportunities to reflect and consider:

- How we can be inspired by things that have been created and how we can inspire others with our own ideas.
- Being honest in our evaluations and with ourselves if something hasn't gone quite to plan.
- Being caring towards others by sharing tools/equipment

I can produce a plan and explain it to others

I can include an annotated sketch I can make and explain design decisions considering availability of resources

I can select appropriate materials, fit for purpose; explain choices I can realise if product is going to be good quality

I can measure, mark out, cut and shape materials/components with some accuracy

I can assemble, join and combine materials and components with some accuracy

I can apply a range of finishing techniques with some accuracy

I can refer to design criteria while designing and making

I can use criteria to evaluate product

I can begin to explain how I could improve original design
I can evaluate existing products, considering: how well they've been made, materials, whether they work, how they have been made, fit for purpose

I can discuss by whom, when and where products were designed I can research whether products can be recycled or reused I can know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products

I can think about user when choosing textiles
I can think about how to make

product strong

I can begin to devise a template I can explain how to join things in a different way

I can understand that a simple fabric shape can be used to make a 3D textiles project

This unit provides ample opportunities to reflect and consider:

- How we can be inclusive by thinking of others' needs.
- How we can be **inspired** by the work of others.

I can create own design criteria and specification

I can come up with innovative design ideas

I can follow and refine a logical plan. I can use annotated sketches, crosssectional planning and exploded diagrams

I can make design decisions, considering, resources and cost I can use computer-aided designs I can produce suitable lists of tools, equipment, materials needed, considering constraints I can select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics

I can create, follow, and adapt detailed step-by-step plans I can explain how product will appeal to audience; make changes to improve quality

I can accurately measure, mark out, cut and shape

materials/components

I can accurately assemble, join and combine materials / components

I can accurately apply a range of finishing techniques

I can use techniques that involve a number of steps

I can keep checking design is best it can be.

I can evaluate ideas and finished product against specification, stating if it's fit for purpose

I can do thorough evaluations of existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose
I can evaluate how much products cost to make and how innovative

I can research and discuss how sustainable materials are I can discuss some key inventors / designers / engineers / chefs / manufacturers of ground-breaking products

they are

I can think about user's wants/needs and aesthetics when choosing textiles

			Being honest in our evaluations	I can make product attractive and
			and with ourselves if something	strong
			hasn't gone quite to plan.	I can make a prototype
				I can use a range of joining
			Caring for the environment and	techniques
			being honest about our use of	I can think about how product might
			materials/recycling.	be sold
				I can think carefully about what
				would improve product
				I can understand that a single 3D
				textiles project can be made from a
				combination of fabric shapes.
				This unit provides ample
				opportunities to reflect and
				consider:
				How we can be inclusive by
				· ·
				thinking of others' needs.
				How we can be inspired by the
				work of others and inspire others
				with our own ideas.
				Being honest in our evaluations
				and with ourselves if something
				hasn't gone quite to plan.
				Caring for the environment and
				being honest about our use of
				materials/recycling.
				Murturing an understanding of our
				Nurturing an understanding of our impact on the planet
Flectricity	N/A	N/A	I can begin to create own design	impact on the planet.
Electricity	N/A	N/A	I can begin to create own design	impact on the planet. I can use research of user's
Electricity	N/A	N/A	criteria	impact on the planet. I can use research of user's individual needs, wants,
Electricity	N/A	N/A	criteria I can have at least one idea about	impact on the planet. I can use research of user's individual needs, wants, requirements for design
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design.	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is.	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan.
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, crosssectional planning and exploded diagrams
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of resources	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded diagrams I can clearly explain how parts of
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of resources I can explain how product will work	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded diagrams I can clearly explain how parts of design will work, and how they are
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of resources I can explain how product will work I can make a prototype	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded diagrams I can clearly explain how parts of design will work, and how they are fit for purpose
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of resources I can explain how product will work I can make a prototype I can begin to use computers to	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded diagrams I can clearly explain how parts of design will work, and how they are fit for purpose I can independently model and
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of resources I can explain how product will work I can make a prototype I can begin to use computers to show design	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded diagrams I can clearly explain how parts of design will work, and how they are fit for purpose I can independently model and refine design ideas by making
Electricity	N/A	N/A	criteria I can have at least one idea about how to create product and suggest improvements for design. I can produce a plan and explain it to others I can say how realistic plan is. I can include an annotated sketch I can make and explain design decisions considering availability of resources I can explain how product will work I can make a prototype I can begin to use computers to show design I can select suitable tools and	impact on the planet. I can use research of user's individual needs, wants, requirements for design I can identify features of design that will appeal to the intended user I can come up with innovative design ideas I can follow and refine a logical plan. I can use annotated sketches, cross-sectional planning and exploded diagrams I can clearly explain how parts of design will work, and how they are fit for purpose I can independently model and refine design ideas by making prototypes and using pattern pieces
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	I can measure, mark out, cut and shape materials/components with some accuracy I can assemble, join and combine materials and components with some accuracy I can apply a range of finishing techniques with some accuracy I can refer to design criteria while designing and making I can use criteria to evaluate product I can begin to explain how I could improve original design I can discuss by whom, when and where products were designed I can know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products I can use number of components in circuit I can program a computer to control product	I can create, follow, and adapt detailed step-by-step plans I can explain how product will appeal to audience; make changes to improve quality I can accurately measure, mark out, cut and shape materials/components I can accurately assemble, join and combine materials / components I can accurately apply a range of finishing techniques I can use techniques that involve a number of steps I can be resourceful with practical problems I can evaluate quality of design while designing and making; is it fit for purpose? I can keep checking design is best it can be. I can evaluate ideas and finished product against specification, station
	I can know about some inventors/designers/ engineers/chefs/manufacturers of ground-breaking products I can use number of components in circuit I can program a computer to control	I can be resourceful with practical problems I can evaluate quality of design while designing and making; is it fit for purpose? I can keep checking design is best it can be.
	This unit provides ample opportunities to reflect and consider: • Being honest in our decisions/evaluations and with ourselves if something hasn't gone	product against specification, statin if it's fit for purpose I can test and evaluate final product explain what would improve it and the effect different resources may have had I can do thorough evaluations of
	quite to plan. How we can be inspired by the work of others	existing products considering: how well they've been made, materials, whether they work, how they've been made, fit for purpose I can evaluate how much products cost to make and how innovative they are
		I can research and discuss how sustainable materials are I can consider the impact of products beyond their intended purpose I can discuss some key inventors / designers / engineers / chefs /
		manufacturers of ground-breaking products I can use different types of circuit in product I can think of ways in which adding circuit would improve product
		I can program a computer to monitoring changes in environment and control product

		T	Ţ		T	This unit provides ample
						opportunities to reflect and
						consider:
						How we can be inclusive by
						thinking of others' needs.
						I -
						How we can be inspired by the
						work of others and inspire others
						with our own ideas.
						Being honest in our evaluations
						and with ourselves if something
						hasn't gone quite to plan.
						Being nurturing towards others by
						listening to their ideas and making
						suggestions.
						Caring for the environment and
						being honest about our use of
						materials/recycling.
						Nurturing an understanding of our
						impact on the planet.
Cooking &	I am beginning to understand that	I understand that all food comes	I am starting to know that food is	I understand that food is grown	I understand that food is grown (such	I know that food is grown (such as
Nutrition	all food comes from plants or	from plants or animals.	grown (such as tomatoes, wheat	(such as tomatoes, wheat and	as tomatoes, wheat and potatoes),	tomatoes, wheat and potatoes),
	animals.	I know that food has to be farmed,	and potatoes), reared (such as pigs,	potatoes), reared (such as pigs,	reared (such as pigs, chickens and	reared (such as pigs, chickens and
	I can explore the understanding	grown elsewhere (e.g. home) or	chickens and cattle) and caught	chickens and cattle) and caught	cattle) and caught (such as fish) in	cattle) and caught (such as fish) in
	that food has to be farmed, grown	caught.	(such as fish) in the UK, Europe and	(such as fish) in the UK, Europe and	the UK, Europe and the wider world.	the UK, Europe and the wider world.
	elsewhere (e.g. home) or caught.	I understand how to name and sort	the wider world.	the wider world.	I am beginning to understand that	I understand that seasons may affect
	I am starting to understand how to	foods into the five groups in 'The	I understand how to prepare and	I understand how to prepare and	seasons may affect the food	the food available.
	name and sort foods into the five	Eat well plate'	cook a variety of predominantly	cook a variety of predominantly	available.	I understand how food is processed
	groups in 'The Eat well plate'	I know that everyone should eat at	savoury dishes safely and	savoury dishes safely and	I understand how food is processed	into ingredients that can be eaten or
	I am beginning to understand that	least five portions of fruit and	hygienically including, where	hygienically including, where	into ingredients that can be eaten or	used in cooking.
	everyone should eat at least five	vegetables every day.	appropriate, the use of a heat	appropriate, the use of a heat	used in cooking.	I know how to prepare and cook a
	portions of fruit and vegetables	I can demonstrate how to prepare	source.	source.	I know how to prepare and cook a	variety of predominantly savoury
	every day.	simple dishes safely and	I am beginning to understand how	I know how to use a range of	variety of predominantly savoury	dishes safely and hygienically
	I know how to prepare simple	hygienically, without using a heat	to use a range of techniques such as	techniques such as peeling,	dishes safely and hygienically	including, where appropriate, the use
	dishes safely and hygienically,	source.	peeling, chopping, slicing, grating,	chopping, slicing, grating, mixing,	including, where appropriate, the use	of a heat source.
	without using a heat source.	I can demonstrate how to use	mixing, spreading, kneading and	spreading, kneading and baking.	of a heat source.	I understand how to use a range of
	I know how to use techniques such	techniques such as cutting, peeling	baking.	I know that a healthy diet is made	I am starting to understand how to	techniques such as peeling,
	as cutting, peeling and grating.	and grating.	I am starting to understand that a	up from a variety and balance of	use a range of techniques such as	chopping, slicing, grating, mixing,
			healthy diet is made up from a	different food and drink, as depicted	peeling, chopping, slicing, grating,	spreading, kneading and baking.
			variety and balance of different	in 'The Eat well plate'	mixing, spreading, kneading and	I know different food and drink
			food and drink, as depicted in 'The	I know that to be active and	baking.	contain different substances –
			Eat well plate'	healthy, food and drink are needed	I am beginning to understand that	nutrients, water and fibre – that are
			I am beginning to know that to be	to provide energy for the body.	different food and drink contain	needed for health.
			active and healthy, food and drink		different substances – nutrients,	
			are needed to provide energy for the body.		water and fibre – that are needed for health.	

Exemplar Topic Plan:

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	Year				
		Textiles	Mechanisms	Cooking & Nutrition	
Key Stage 1	1	Stitches – puppets (History link to toys)	Sliders and levers - Moving pictures	Healthy Lunchbox	
y St		Structures	Mechanisms	Cooking & Nutrition	
Ke	2	Freestanding structures (Science link to everyday materials topic)	Wheels and axles (History link)		
e.		Structures	Mechanisms	Cooking & Nutrition	
(ey Stage 2	3	Shell Structures	Levers and Linkages or Pneumatics (possible Science link to forces topic)	(Geography/history link to country studied	
er	4	Textiles	Electrical Systems	Cooking & Nutrition	
Lower Key 2		Link to history purses	Simple circuits (science link)		
7		Structures	Mechanisms	Cooking & Nutrition	
Upper Key Stage 2	5	Frame Structures	Pulleys & Gears or Cams	Celebrating Seasonality & Culture – Soup using seasonal ingredients from different cultures	
Jer		Textiles	Electrical Systems	Cooking & Nutrition	
Upp	6		Car Alarms	Bake a difference – summer FAIR	