

Design Technology - Nursery	
DT vocabulary	
New vocabulary – How are we developing articulate pupils?	
bricks, balance, tall, wide, stack, tower, build, join, stick, cut.	
Intent: Informed, articulate, empowered	Implementation
Key objectives – Informed pupils	
Design	<ul style="list-style-type: none"> For children to be able to construct with a purpose and safely To know how to create recognisable representations of objects. To know that different construction toys can be used to make new things that can be used in pretend play
Make	<ul style="list-style-type: none"> Uses various construction materials. Joins construction pieces together to build and balance. Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. Realises tools can be used for a purpose. Uses available resources to create props to support role-play
Evaluate	<ul style="list-style-type: none"> Tell someone about their creation Respond to what they have heard, expressing their thoughts and feelings
Technical knowledge	Join different materials and explore different textures
<p>Suggested activities</p> <ul style="list-style-type: none"> Provide a place where work in progress can be kept safely. Talk with children about where they can see models and plans in the environment – looking at buildings in the local area, buildings that are under construction (the new development across the road) Demonstrate and teach skills and techniques associated with the things children are doing, for example, show them how to balance bricks so that they will not fall down. <ul style="list-style-type: none"> Making birthday cards Den building <p>Focus: To know that different construction toys can be used to make new things that can be used in pretend play</p> <p>Making musical instruments using junk modelling resources</p> <p>Focus: Scissor skills</p> <ul style="list-style-type: none"> scissors skills and progression <p>Focus: Cooking and Nutrition</p> <p>Autumn 1</p> <p>Fruit taste testing – trying new fruits</p> <p>Autumn 2</p> <p>Tasting foods from around the world</p> <p>Spring 1</p> <p>Nursery Rhymes – making hard boiled eggs. Using forks to mash the eggs and make sandwiches</p> <p>Summer 1</p> <p>Cutting fruits</p>	
<p>Suggested resources</p> <ul style="list-style-type: none"> Drama-based workshops Construction/Creation work areas Offer a variety of junk modelling materials Cooking equipment <ul style="list-style-type: none"> Bowls, spoons, measuring jug, knives, forks, cups, sieve, whisk Woodwork bench Junk modelling – reminders to parents and staff to collect recycling Pegs Fabric Blocks 	
<p>Skills and Attributes – empowering our pupils to succeed</p> <ul style="list-style-type: none"> Be curious and ask questions about how things work Enjoy finding things out <p>Feel satisfaction at having created or learned something</p> <ul style="list-style-type: none"> To keep going after making a mistake <ul style="list-style-type: none"> Being willing to have a go Making links to previous learning and home life Exploring and playing with what they know 	

Design Technology - Reception

DT vocabulary

Revisited vocabulary		New vocabulary – How are we developing articulate pupils?	
bricks, balance, tall, wide, stack, tower, build, join, stick, cut		bricks, balance, tall, wide, stack, tower, enclosure, build, join, stick, cut, design, change, use, joins, edges, hammer, safely, tools, make, size shape	
Intent: Informed, articulate, empowered		Implementation	
		Prior Knowledge: experience of using basic tools, experience of joining materials, experience of cutting fruit	
Key objectives – Informed pupils		Suggested activities	Suggested resources
Design	<ul style="list-style-type: none"> Make use of props and materials when they are role playing (Reception) Create collaboratively, sharing ideas, resources and skills 	Den building Scissors skills Focus: Scissor skills <ul style="list-style-type: none"> Developing scissors skills and progression Focus: Making props to use in the Role play area <ul style="list-style-type: none"> Designing and making their own props to use to retell stories and recreate role play scenarios Focus: Identify and select resources and tools to achieve a particular outcome Den building Focus: Cooking and Nutrition Autumn 1 Making porridge Autumn 2 Tasting foods from around the world Spring 1 Making bread – trip to pizza express (making pizza) Spring 2 Designing a gingerbread man – decorating a gingerbread man Summer 1 Hungry caterpillar taste test Summer 2 Writing a shopping list for a picnic and making sandwiches for a picnic Computing Links How to be a safe pedestrian – creating cityscapes for the beebots Programming beebots To control the beebots by giving one instruction at a	<ul style="list-style-type: none"> Drama-based workshops Construction/Creation work areas Cooking trolley Woodwork bench Junk modelling – reminders to parents and staff to collect recycling Pegs Fabric blocks
Make	<ul style="list-style-type: none"> To identify and select resources and tools to achieve a particular outcome Explore, use and refine a variety of artistic effects to express their ideas and feelings. 		Skills and Attributes – empowering our pupils to succeed <ul style="list-style-type: none"> Be curious and ask questions about why things happen & how things work <ul style="list-style-type: none"> Enjoy finding things out and beginning to seek out information from books and resources Feel satisfaction at having created or learned something To keep going after making a mistake <ul style="list-style-type: none"> Being willing to have a go Making links to previous learning and home life Exploring and playing with what they know
Evaluate	<ul style="list-style-type: none"> To experiment with creating different things and to be able to talk about their uses Share their creations, explaining the processes they have used 		
Technical knowledge	<ul style="list-style-type: none"> To learn the names of different tools and techniques that can be used to make and create 		

		time then combining more than one instruction To predict, estimate, try, refine, debug and extend their programming sequences.	
Impact - Assessment guidance ELG			
	Early Learning Goal		
	<p>EAD</p> <p>Creating with Materials ELG</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> - 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. <p>Being Imaginative and Expressive ELG</p> <p>Children at the expected level of development will:</p> <ul style="list-style-type: none"> - Perform songs, rhymes, poems and stories with others, and – when appropriate try to move in time with music. <p>PSED</p> <p>Managing Self</p> <ul style="list-style-type: none"> - Understanding the importance of healthy food choices <p>Physical Development</p> <ul style="list-style-type: none"> - Using a range of small tools, including scissors, paintbrushes and cutlery 		

Design Technology - Year 1			
DT vocabulary			
Revisited vocabulary		New vocabulary – How are we developing articulate pupils?	
bricks, balance, tall, wide, stack, tower, enclosure, build, join, stick, cut, design, change, use, joins, edges, hammer, safely, tools, make, size, shape		Slider, lever, slot, masking tape, paper fastener, join, pull, push, straight, curve, forwards, backwards, structure, weak, base, edge, surface, corner, metal, wood, plastic, shape words Design, evaluate, purpose, product, function, purpose	
Intent: Informed, articulate, empowered		Implementation	
		Prior Knowledge: experience of using basic tools, experience of joining materials, experience of cutting fruit.	
Key objectives – Informed pupils		Suggested activities	Suggested resources
Design	<ul style="list-style-type: none"> • Design purposeful, functional, appealing products for themselves and other users based on design criteria • Generate, develop, and communicate their ideas through talking, drawing, and, where appropriate, information and communication technology 	<p>Focus: Structures</p> <p>Make a simple moving toy e.g. Jumping Jack Evaluate a range of old and new toys</p> <p>Focus Mechanisms – sliders and levers</p> <p>Make a moving book or picture</p>	<p>Project on a Page: Mechanisms – sliders and levers Structures – Freestanding structures Food – preparing fruit and vegetables</p> <p>Books with moving elements Card, masking tape, split pins, glue. Scissors, cutting</p>

Make	<ul style="list-style-type: none"> 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 according to their characteristics 	<p>Focus : Cooking and Nutrition Use the basic principles of a healthy and varied diet to create soup.</p> <p>Computing Links Programming beebots To control the beebots by giving one instruction at a time then combining more than one instruction To predict, estimate, try, refine, debug and extend their programming sequences.</p>	<p>mats. Boxes, pipe cleaners, cotton reels, tubes, string Cookery trolley and ingredients</p>
Evaluate	<ul style="list-style-type: none"> Evaluate their ideas and products against design criteria Explore and evaluate a range of existing products 	<p>Programming on screen To start to understand the term 'algorithm'. To understand the term 'block coding' and practise simple programs To practise simple debugging</p>	<p>Skills and Attributes – empowering our pupils to succeed •Be curious and ask and answer questions about why things happen & how things work •Enjoy finding things out and know where to find information •Explore and experiment, engaging in open ended tasks to test their ideas •Be willing to go with their own ideas and take a risk •Apply prior learning and 'mistakes' to a problem •Generate imaginative ideas in response to a stimulus or problem •Identify what they want to achieve •To act on feedback to make improvements</p>
Technical knowledge	<ul style="list-style-type: none"> Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms in their products 	<p>Digital Literacy To create an ebook using the ipad about toys To be able to combine photos and text</p>	<p>Motivation •Feel satisfaction at having created or learned something •To keep going after making a mistake</p>

Impact - Assessment guidance Y1

	Pupils can	
Design	<p>Use simple design criteria to help develop ideas Describe what they are designing and who the product is for Describe how their product will work Generate ideas based on own experiences Use knowledge of existing products to develop own ideas Develop ideas through talk and drawing Model by making templates and mock ups Use computer technology</p>	
Make	<p>Plan by suggesting what to do next Select a range of tools and materials explaining their choices Follow instructions for safety and hygiene Measure mark out, cut and shape with increasing accuracy Assemble, join and combine materials Use finishing techniques such as decoration</p>	

Evaluate	<p>Talk about their products</p> <p>Make simple judgements against design criteria</p> <p>Suggest how their product could be improved</p> <p>Explore what products are, how they are used, how they work, materials used and what they like/dislike about the product</p>
Technical knowledge	<p>Know the simple characteristics of materials and components</p> <p>About the movement of simple mechanisms including levers, sliders, wheels and axles</p> <p>That a 3D product can be made from 2D materials</p> <p>How to safely use basic tools</p>

Christopher Hatton School Scheme of Work for Design Technology - Year 2

DT vocabulary

Revisited vocabulary		New vocabulary	
Masking tape, join, curve, forwards, backwards, structure, weak, base, edge, surface, corner, metal, wood, plastic. Design, evaluate, purpose, product, function		Axle, vehicle, axle holder, chassis, body, cab, assembling, functional Template, pattern, mark out, suitable, design criteria, fabric names	
Intent		Implementation	
		Prior Knowledge: experience of using basic tools, experience of joining materials, experience of preparing fruit and vegetables	
Key objectives		Suggested activities	Suggested resources
Design	<ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, and communicate their ideas through talking, drawing, and, where appropriate, information and communication technology 	<p>Focus: Textiles templates and joining techniques Make an upcycled item of clothing or puppet for fairy tale topic</p> <p>Focus Mechanisms – Wheels and axles Make a moving fire engine</p> <p>Focus : Food</p>	<p>Project on a Page: Mechanisms –Wheels and axles Textiles Templates and joining Food – preparing fruit and vegetables Selection of toy vehicles, dowel, wheels, straws, card discs. Paper drill, hole punch, double sided tape, hacksaw, vice Cookery trolley</p>

Make	<ul style="list-style-type: none"> 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 according to their characteristics 	<p>Make simple family recipe or bake a gift for your family</p> <p>Focus Structures Make a model Tudor house</p> <p>Computing Links Programming Lego robots To introduce building and coding Lego Wedo. To use programing blocks such as light, motor and movement sensors. To understand how this technology is used outside of school</p>	
Evaluate	<ul style="list-style-type: none"> Evaluate their ideas and products against design criteria Explore and evaluate a range of existing products 	<p>Digital Literacy and creativity To create an animation of the Great Fire of London. To combine text and pictures to create a fact file about the Great fire of London To save and retrieve their work Main focus:</p>	<p>Skills and Attributes: empowering our pupils to succeed</p> <ul style="list-style-type: none"> •Be curious and ask and answer questions about why things happen & how things work •Enjoy finding things out and know where to find information •Explore and experiment, engaging in open ended tasks to test their ideas •Be willing to go with their own ideas and take a risk •Apply prior learning and ‘mistakes’ to a problem •Generate imaginative ideas in response to a stimulus or problem •Predict events/outcomes understanding the concept of cause and effect •Identify what they want to achieve •To act on feedback to make improvements
Technical knowledge	<p>Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms in their products</p>	<p>Creativity Game design To understand what makes good game To plan their game including settling, baddies, collectables, points system To create a 3D game based on recycling topic To save and retrieve their work</p>	<p>Motivation</p> <ul style="list-style-type: none"> •Feel satisfaction at having created or learned something •To keep going after making a mistake

Impact - Assessment guidance Y2

	Pupils can:	
Design	<p>Use simple design criteria to help develop ideas Describe what they are designing and who the product is for Describe how their product will work Generate ideas based on own experiences Use knowledge of existing products to develop own ideas Develop ideas through talk and drawing Model by making templates and mock ups Use computer technology</p>	

Make	Plan by suggesting what to do next Select a range of tools and materials explaining their choices Follow instructions for safety and hygiene Measure mark out, cut and shape with increasing accuracy Assemble, join and combine materials Use finishing techniques such as decoration	
Evaluate	Talk about their products Make simple judgements against design criteria Suggest how their product could be improved Explore what products are, how they are used, how they work, materials used and what they like/dislike about the product	
Technical knowledge	Know the simple characteristics of materials and components About the movement of simple mechanisms including levers, sliders, wheels and axles That a 3D product can be made from 2D materials How to safely use basic tools	

Christopher Hatton School Scheme of Work for Design Technology - Year 3

DT vocabulary

Revisited vocabulary	New vocabulary	
base, edge, surface, corner, metal, wood, plastic assembling, functional Template, pattern, mark out, e, design criteria, fabric names Design, evaluate, purpose, product, function	Fastening, compartment, structure, stitch. Seam Shell structure, 3D. scoring, tabs, innovative, prototype Texture, savoury, hygienic, hot, spicy, sour, processed, seasonal, harvested.	
Prior Knowledge: experience of using basic tools, experience of joining materials, experience of preparing food		
Intent	Implementation	
Key objectives	<u>Suggested Activities</u>	Suggested resources

Design	<ul style="list-style-type: none"> • 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 	<p>Focus Food: healthy diet Plan a meal for an athlete. Make an energy bar</p> <p>Textiles: 2D shape to 3D product Make costume based on Egyptian design</p> <p>Structures: Shell structures Make recyclable packaging</p> <p>Computing Links Digital Literacy Using LGFL app maker create an app linked to stone age topic. Combining text and graphics to create a multimedia app</p> <p>Programming Lego robots Introduction to chrome books To create a prototype machine for cleaning the oceans out of Lego. To program the prototype using motors and sensors.</p> <p>Creativity: Game design To understand what makes a good game. To design their game including settling, baddies, collectables, points system To create a 3D game based on plastic pollution in the oceans To save and retrieve their work</p>	<p>Project on a Page: Food – Healthy and varied diet Textiles 2D shape to 3D product Structures: Shell structures</p> <p>Range of packaging Card, tape, decorating materials</p> <p>Recipe books Cookery trolley and ingredients</p> <p>Fabric, sewing equipment, binca</p>
Make	<ul style="list-style-type: none"> • select from and use a wider range of tools and equipment to perform practical tasks 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	<ul style="list-style-type: none"> • 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 DT have helped shape the world. 		
Technical knowledge	<ul style="list-style-type: none"> • 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 and nutrition	<ul style="list-style-type: none"> • understand and apply the principles of a healthy and varied diet • Prepare and cook a variety of predominantly savoury dishes from different cultures using a range of cooking techniques • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed • 		

Impact - Assessment guidance Y3

	Pupils can	Transferable skills and attributes
Design	Describe the purpose of their product Indicate the design features that will appeal to intended users Explain how particular parts of their products work Gather information about the needs or wants of particular groups Develop their own design criteria	<p>Critical Curiosity</p> <ul style="list-style-type: none"> •To ask why, what and how questions •Understand what information is most relevant and locate this within sources •Use more than 1 criteria to sort and classify •Use research skills such as scanning, skimming, search

Make	<p>Select tools and equipment suitable for the task Select materials and components suitable for the task</p> <p>Explain their choices according to functional and aesthetic properties Order the main stages of making</p>	<p>engines</p> <ul style="list-style-type: none"> •Record findings in given formats <p>Reasoning and Reflection</p> <p>Generate imaginative solutions to problems</p> <ul style="list-style-type: none"> •Plan a sequence of steps to tackle an investigation or enquiry •Explain what they have done and why using the language of sequence, cause and effect •State your own ideas and viewpoints and justify them •Use trial and improvement, to find the best solution •Discover and make connections within and across subjects, identifying some similarities and differences •Appreciate the views and ideas of others <p>Self-awareness</p> <ul style="list-style-type: none"> •Work & learn independently knowing when to seek help, •Anticipate how they will respond & feel in a situation by referring to past experience •Identify situations in which they learn best & feel most at ease •Use feedback to make improvements and identify next steps <p>Motivation</p> <ul style="list-style-type: none"> •Stay focussed on an activity and manage distractions •Recognise their progress and achievements & celebrate them •Understand making mistakes is an important part of learning •Recognising effort and practice are required to do well at something
Evaluate	<p>Identify strengths and areas for development Consider the views of other to improve their work Refer to their design criteria as they design and make Use design criteria to evaluate finished pieces Existing products: How well products have been designed and made Why materials have been chosen What methods of construction have been used How well products achieve their purposes Whether products can be reused/recycled About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</p>	
Technical knowledge	<p>How to use learning from science and maths to help design and make products That materials have both functional and aesthetic properties Use correct technical vocabulary for the project How to make strong stiff structures</p>	
Cooking	<p>That food is grown, reared and caught in the UK and world How to prepare a variety of dishes safely and hygienically including using a heat source Use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading, baking. What constitutes a healthy balanced diet Food and drink are needed to provide energy.</p>	

Christopher Hatton School Scheme of Work for Design Technology - Year 4

DT vocabulary

Revisited vocabulary

Design, evaluate, purpose, product, function
Fastening, compartment, structure, stitch. Seam
innovative, prototype, lever
2D 3D

New vocabulary

Mechanism, linkage, pivot, bridge, guide, system, input process, output
Linear, rotary, oscillating, reciprocating
Series circuit, connection, switch, insulator, conductor, crocodile clip

Prior Knowledge: experience of using basic tools, experience of joining materials, experience of preparing food

Intent		Implementation	
Key objectives		<p>Suggested Activities</p> <p>Mechanical systems: linkages and levers Make: Roman weapons</p> <p>Electrical systems: Simple circuits and switches Make a buzzer quiz game</p> <p>Textiles: Make a mitten suitable for an arctic explorer</p> <p>Computing Links programming Lego robots To improve in accuracy and speed of typing skills To make a drawbridge out of Lego. To program the bridge to sense a boat approaching and activate motors.</p> <p>Digital Literacy Using LGFL app maker create an app linked to polar explorer topic. Combining text and graphics to create a multimedia app</p> <p>Stop motion animation To design and create a stop motion animation based on climate change topic.</p>	Suggested resources
Design	<ul style="list-style-type: none"> 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 		<p>Project on a Page: Mechanical systems: linkages and levers Electrical systems: Simple circuits and switches Textiles: 2D shape to 3D product</p> <p>Range of card, joining materials Fabric, sewing equipment, range of winter clothing Electrical circuits box: bulbs, buzzers, wires, crocodile clips, battery holders, batteries.</p>
Make	<ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks 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	<ul style="list-style-type: none"> 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 DT have helped shape the world. 		
Technical knowledge	<ul style="list-style-type: none"> understand and use mechanical systems in their products [levers and linkages] Understand and use electrical systems in their products Apply their understanding of computing to program, monitor and control 		
Cooking and nutrition	<ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes from different cultures using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 		
Impact - Assessment guidance Y4			
Pupils can:		Transferable skills and attributes	

Design	<p>Describe the purpose of their product</p> <p>Indicate the design features that will appeal to intended users</p> <p>Explain how particular parts of their products work</p> <p>Gather information about the needs or wants of particular groups</p> <p>Develop their own design criteria and use this to inform their ideas</p> <p>Share and clarify ideas</p> <p>Model ideas using prototypes and pattern pieces</p> <p>Use computer aided design</p> <p>Make design decisions taking account of the availability of resources</p>	<p>Critical Curiosity</p> <ul style="list-style-type: none"> •To ask why, what and how questions •Understand what information is most relevant and locate this within sources •Use more than 1 criteria to sort and classify •Use research skills such as scanning, skimming, search engines •Record findings in given formats <p>Reasoning and Reflection</p> <p>Generate imaginative solutions to problems</p> <ul style="list-style-type: none"> •Plan a sequence of steps to tackle an investigation or enquiry •Explain what they have done and why using the language of sequence, cause and effect •State your own ideas and viewpoints and justify them •Use trial and improvement, to find the best solution •Discover and make connections within and across subjects, identifying some similarities and differences •Appreciate the views and ideas of others <p>Self-awareness</p> <ul style="list-style-type: none"> •Work & learn independently knowing when to seek help, •Anticipate how they will respond & feel in a situation by referring to past experience •Identify situations in which they learn best & feel most at ease •Use feedback to make improvements and identify next steps <p>Motivation</p> <ul style="list-style-type: none"> •Stay focussed on an activity and manage distractions •Recognise their progress and achievements & celebrate them •Understand making mistakes is an important part of learning •Recognising effort and practice are required to do well at something
Make	<p>Select tools and equipment suitable for the task</p> <p>Select materials and components suitable for the task</p> <p>Explain their choices according to functional and aesthetic properties</p> <p>Order the main stages of making</p> <p>Follow procedures for safety</p> <p>Measure, mark out and shape materials with some accuracy</p> <p>Assemble, join and combine materials and components</p> <p>Apply a range of finishing techniques to improve their product</p>	
Evaluate	<p>Identify strengths and areas for development</p> <p>Consider the views of other to improve their work</p> <p>Refer to their design criteria as they design and make</p> <p>Use design criteria to evaluate finished pieces</p> <p>Existing products: say how well products have been designed and made</p> <p>Why materials have been chosen</p> <p>What methods of construction have been used</p> <p>How well products achieve their purposes</p> <p>Whether products can be reused/recycled</p> <p>Know about some inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</p>	
Technical knowledge	<p>How to use learning from science and maths to help design and make products</p> <p>That materials have both functional and aesthetic properties</p> <p>Use correct technical vocabulary for the project</p> <p>How mechanical systems create movement</p> <p>How simple electrical circuits can be used to make functioning products</p>	

DT vocabulary					
Revisited vocabulary	New vocabulary				
Template, pattern, mark out, design criteria, evaluate, purpose, product, function, stitch, seam processed, seasonal, harvested.	G clamp, pulley, gear, drive belt, rotation, spindle, driver, follower, ratio, annotated drawing, exploded diagram Functionality, design specification, design brief.				
Prior learning: Basic sewing skills and using patterns in Y4. Cookery skills developed each year. Model making using levers and simple mechanical systems					
Intent					
Implementation					
Key objectives					
<p>Design</p> <ul style="list-style-type: none"> 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 	<p>Suggested Activities</p> <p>Focus: Mechanical systems pulleys of gears Make an orbiting planet model</p> <p>Textiles: Combining different fabric shapes Make Viking linked products</p> <p>Computing Links</p> <p>Programming Lego robots To design and build a recycling truck using Lego Wedo. To programme the truck using motor, sensor blocks and sound</p> <p>website design To explore what makes a good website To create their own website, adding pages and navigational tools To research and write a quiz based on topic and imbed in website</p>				
		<p>Make</p> <ul style="list-style-type: none"> select from and use a wider range of tools and equipment to perform practical tasks 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 	<p>Suggested resources</p> <p>Project on a Page units Mechanical systems pulleys of gears Food: Seasonality Textiles: Combining different fabric shapes</p> <p>Books showing Viking ships and other source material Fabric, sewing kits, card, wood, doweling, string Range of fixatives Hacksaw, vice, G clamp, hand drill, sand paper</p> <p>Examples of toys etc with pulleys and gears (Could be e clip Construction kit pulleys or gears Gears, elastic bands</p>		
				<p>Evaluate</p> <ul style="list-style-type: none"> 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 DT have helped shape the world. 	<p>Cookery trolley and equipment Ingredients Range of recipe sources for reference</p>
				<p>Cooking and nutrition</p> <ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes from different cultures using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed 	<p>Food: Seasonality Make a palm oil free product or a Brazilian festive dish</p>
<p>Impact - Assessment guidance Y5</p>					

	Pupils can:	Transferable skills and attributes
Design	<p>Describe the purpose of their product</p> <p>Indicate the design features that will appeal to intended users</p> <p>Explain how particular parts of their products work</p> <p>Carry out research using surveys, interviews, questionnaires and web based resources</p> <p>Identify the needs, wants, preferences and values of particular individuals and groups</p> <p>Develop a simple design specification to guide their thinking</p> <p>Share and clarify ideas</p> <p>Model ideas using prototypes and pattern pieces</p> <p>Use computer aided design</p> <p>generate innovative ideas based on research</p> <p>Make design decisions taking into account of constraints such as time, resources, costs</p>	<p>Critical curiosity</p> <ul style="list-style-type: none"> •To generate and follow a line of enquiry, planning effective steps and using efficient research strategies •Draw on a range of sources of evidence •Devise and use appropriate formats to organise and record •Recognise patterns, similarities, differences and sequences •Summarise and present information •To value the contribution of others <p>Reasoning and reflection</p> <p>Make connections and see relationships</p> <ul style="list-style-type: none"> •Evaluate the reliability of evidence •Support conclusions, using reasoned arguments and evidence •Explore issues, events and problems from different perspectives •Develop critical criteria to evaluate quality of outcomes and ideas <p>•Use a cycle of trial and improvement predicting possible effects of different solutions or modifications</p> <p>Self -awareness</p> <ul style="list-style-type: none"> •Reflect on their successes as a learner & identify how this might be improved •Identify any particular barriers to their learning and identify ways to overcome them •Accept and use constructive criticism •To self-evaluate <p>Motivation</p> <ul style="list-style-type: none"> •Persist with a task they find challenging overcoming difficulties •Recognise how different learning opportunities or contexts affect their motivation •To set personal goals recognising practice and perseverance are needed to achieve these
Make	<p>Select tools and equipment suitable for the task</p> <p>Select materials and components suitable for the task</p> <p>Explain their choices according to functional and aesthetic properties</p> <p>Products appropriate lists of tools and materials</p> <p>Formulate a step by step plan</p>	
Evaluate	<p>Identify strengths and areas for development</p> <p>Consider the views of other to improve their work</p> <p>Critically evaluate the quality of the design, manufacture and fitness for purpose and against their original design specification</p> <p>Existing products: How well products have been designed and made</p> <p>Why materials have been chosen</p> <p>What methods of construction have been used</p> <p>How well products achieve their purposes</p> <p>Evaluate cost, innovation, sustainability and impact</p> <p>About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</p>	
Technical knowledge	<p>How to use learning from science and maths to help design and make products</p> <p>That materials have both functional and aesthetic properties</p> <p>Use correct technical vocabulary for the project</p> <p>How mechanical systems create movement</p> <p>That a recipe can be adapted by substituting.</p>	
Cooking	<p>That food is grown, reared and caught in the UK and world</p> <p>How to prepare a variety of dishes safely and hygienically including using a heat source</p> <p>Use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading, baking.</p> <p>Different food and drink contain different nutrients that are needed for health</p> <p>That a recipe can be adapted to change the appearance, taste, texture.</p>	

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Evaluate	<p>Identify strengths and areas for development</p> <p>Consider the views of other to improve their work</p> <p>Critically evaluate the quality of the design, manufacture and fitness for purpose and against their original design specification</p> <p>Existing products: How well products have been designed and made</p> <p>Why materials have been chosen</p> <p>What methods of construction have been used</p> <p>How well products achieve their purposes</p> <p>Evaluate cost, innovation, sustainability and impact</p> <p>About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</p>	
Technical knowledge	<p>How to use learning from science and maths to help design and make products</p> <p>That materials have both functional and aesthetic properties</p> <p>Use correct technical vocabulary for the project</p> <p>How mechanical systems create movement</p>	
Cooking	<p>That food is grown, reared and caught in the UK and world</p> <p>How to prepare a variety of dishes safely and hygienically including using a heat source</p> <p>Use a range of techniques including peeling, chopping, slicing, grating, mixing, spreading, kneading, baking.</p> <p>Different food and drink contain different nutrients that are needed for health</p> <p>That a recipe can be adapted to change the appearance, taste, texture.</p>	

Aims:

In Design technology, we aim to ensure that pupils:

Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in a technological world

Build and apply a repertoire of knowledge, understanding and skills in order to design and make high quality prototypes and products for a wide range of users

Critique, evaluate and test their ideas and products and the work of others

Understand and apply the principles of nutrition and learn how to cook.