



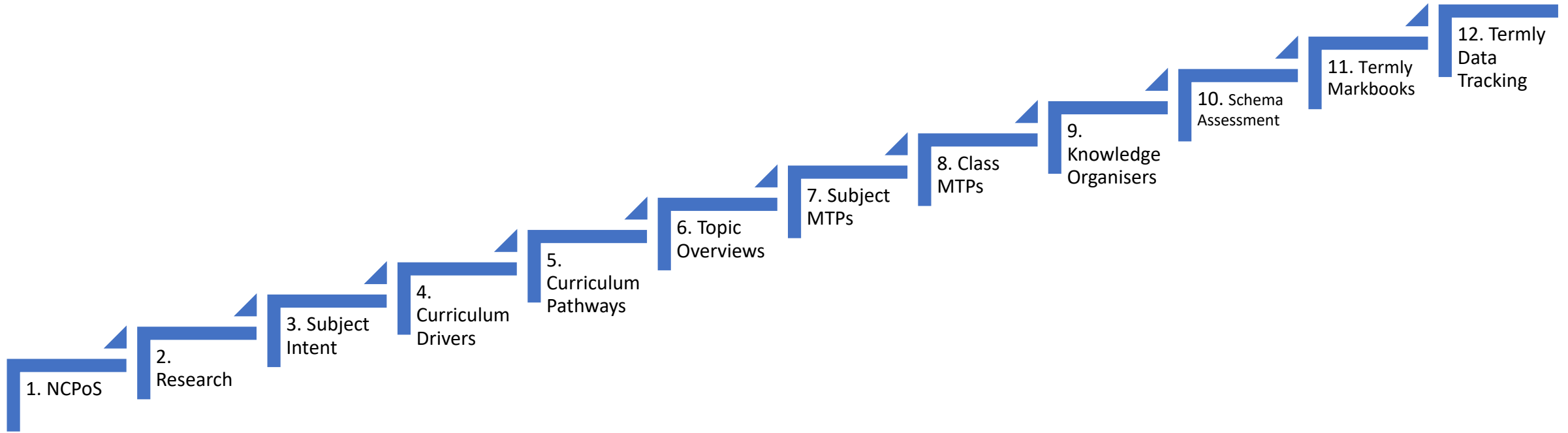
DT at Peters Hill



Our Process

The Process at Peters Hill

Our 12 step approach





INTENT

At Peters Hill, our DT curriculum strives towards the following aims:

- To give a range of DT opportunities to support children's belief that they can be designers and engineers.
- To develop guided research skills and knowledge about specific materials, features and design of the product to be made.
- To practice research to produce a prototype of a product to be created.
- To develop skills of evaluation before producing final design/product.
- To create final products using evaluations to inform production.
- To use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.

We believe that in DT, all children should:

- Understand the role of design and designers.
- To build and apply a repertoire of knowledge, understanding and skills to design and make prototypes and products.
- To develop creative, technical and practical expertise to participate successfully in the technological world.
- To understand and apply the principles of nutrition and learn how to cook.
- To develop subject specific technical vocabulary and opportunities to evaluate and reflect upon design.
- To think critically and present their views and ideas.

Children become proficient designers through building knowledge and skills across the specific pathways of;

- Pathway 1- Developing, planning and communicating ideas.
- Pathway 2- Working with tools, equipment, materials and components to make quality products.
- Pathway 3- Technical knowledge.
- Pathway 4- Evaluating processes and products.
- Pathway 5- Food.
- Pathway 6 – Mechanisms.
- Pathway 7 – Textiles.
- Pathway 8 – Structures.
- Pathway 9 – Electrical Systems.

Curriculum Drivers - How do our whole school values link to the subject?

- **AMBITION (Success)** – Where appropriate, examples to be shown of the product to be created to allow a firm grasp of the aim and outcomes of the task set. Apply discussion about previous learning to establish prior knowledge in order for this to then be applied to the current task. Identify the skills needed to engage in the creative process with an effective and logical approach. This should ensure the final product created is of a high standard, follows the design brief and is fit for purpose.
- **BELIEF (Confidence)**– All children will have regular opportunities to evaluate their learning and the product they are creating to enable them to assess their learning/ skills over time. By using constant evaluation of the process build into this the belief that we can feel positive and proud about what we create, this should instil self-confidence that we can then carry through to all areas of the curriculum.
- **COMPASSION (Motivation)** – Children will be encouraged to relate where appropriate to the world around them and to draw inspiration from what they see, this will in turn support the use of each child's observational skills. Consideration should be given to how objects we see daily work and are constructed fostering awe and wonder in each individual child. The notion that the world and its contents should not be taken for granted; Everything starts with a thought. Children will be motivated by their creations and the hands-on approach Design Technology offers to learning.
- **PRIDE (Knowledge)** – Opportunities must be given to allow children to assess and evaluate each other's work at regular stages in Design Technology lessons. Encourage positive comments but also fair and sensitively honest ones about how a product can be improved. Constructive criticism must be used and accepted in order to make what we do better, on the quest to strive for perfection. This will support the sense of pride that is felt when we have worked to the best of our ability.
- **RESPECT (Responsibility)** – Children need to develop an awareness of all aspects of the world around them from the natural to the man made. Understand the concept that for something to be created it begins with a thought and then becomes part of a creative process to bring into being. It is this process we can all become part of by creating our own designs and products.

Key Competencies

- The following documents set out the key competencies developed across the range of topics in each year group.
- These key competencies are set out as pathways to demonstrate how they link and progress throughout the school.
- These competencies are then planned into each topic through the half termly medium term planning process.
- These competencies combine to make the total schema that teaching staff use to assess the children at the end of the topic. This generates assessment judgements as set out on the following slide and happens three times a year.
- These total judgements average throughout the term. This total will fall between 1 to 5 depending on the outcome of each topic.

Novice	Simple idea	Relational idea	Multiple Links	Expert understanding
1	2	3	4	5
The task is not attacked appropriately; the pupil hasn't really understood the point and uses too simple a way of going about it.	The pupil's response only focuses on one relevant aspect.	The pupil's response focuses on several relevant aspects but they are treated independently and additively. Assessment of this level is primarily quantitative.	The different aspects have become integrated into a coherent whole. This level is what is normally meant by an adequate understanding of some topic.	The previous integrated whole may be conceptualised at a higher level of abstraction and generalised to a new topic or area.
Well below - Has significant difficulties in successfully accessing the competencies	Below - Can access key competencies of the schema but need significant support to do so.	Emerging - Started to unlock key competencies of the schema but not yet secure. Support can be required.	Secure - Securely unlocked the key competencies of the schema. No support is required.	Mastered - Can apply the competencies of the schema with fluency in different contexts.

Key Competency Expectations

Well Below

Working well below the standard. Has significant difficulties in accessing the key competencies.

Below

Working below the standard. Can access key competencies of the schema but needs support to do so.

Emerging

Emerging towards the standard. Started to unlock key competencies of the schema but not yet secure. Support can be required.

Secure

Meeting the standard. Securely unlocked the key competencies of the schema. No support is required.

Mastered

High attaining within the standard. Can apply the competencies of the schema with fluency in different contexts.

Key
Competencies

Pathways	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	<p>I can generate my own ideas to make something</p> <p>I can explain to someone else how I want to make my product.</p> <p>I can make a simple plan before making. I can describe how something works.</p>	<p>I can identify at least one feature my product needs to have, to be successful.</p> <p>I can create a labelled picture of my idea.</p>	<p>I can discuss existing products.</p> <p>I can identify some of the features my product needs to be successful.</p> <p>I am beginning to understand that my product might be useful to a certain group or individual.</p> <p>I can make a clear, labelled sketch of my design.</p> <p>I can practise/test my skills, e.g. stitching, mechanisms.</p>	<p>I can investigate existing products.</p> <p>I can explain and follow a given design criteria.</p> <p>I can identify who my product is for. I can make a clear, labelled sketch of each part of my design.</p> <p>I can practise/test my skills, e.g. stitching, mechanisms.</p>	<p>I can research a range of existing products.</p> <p>I can suggest ideas for my own design criteria.</p> <p>I understand that my product might be suitable for specific individual or group.</p> <p>I can create a product that has clear purpose.</p> <p>I can communicate my ideas through multiple annotated sketches.</p> <p>I can experiment with computer-aided design.</p> <p>I can make mock-ups to test my design.</p>	<p>I can independently research a range of existing products.</p> <p>I can develop my own design criteria.</p> <p>I can create something that is aimed at a specific individual or group.</p> <p>I can create a product that is functional and fit for purpose.</p> <p>I can communicate my ideas through annotated sketches, cross-sectional and exploded diagrams.</p> <p>I can use computer-aided design.</p> <p>I can create a prototype.</p>

Working with tools, equipment, materials and components to make quality products	<p>I can use resources and tools correctly, e.g. scissors.</p> <p>I can cut, shape and join materials.</p>	<p>I can investigate materials and choose suitable ones to make my product.</p> <p>I can join materials/components in different ways.</p> <p>I am beginning to use finishing techniques to make my products more appealing.</p>	<p>I can use tools/equipment safely and correctly.</p> <p>I can suggest one reason why some materials/components might be suitable to create my products.</p> <p>I am beginning to use finishing techniques more consistently to make my products more appealing.</p>	<p>I can use tools/equipment safely and correctly.</p> <p>I am beginning to suggest reasons why some materials/components might be suitable to create my products.</p> <p>I can use finishing techniques consistently to make my products more appealing.</p>	<p>I can name and explain the purpose of the tools/equipment I use to make my products.</p> <p>I can use tools/equipment safely and with reasonable accuracy.</p> <p>I can suggest why materials/components might be suitable to create my products.</p> <p>I can use finishing techniques effectively.</p>	<p>I can select the correct tools/equipment to cut, shape, join and finish my products.</p> <p>I can use tools/equipment safely and accurately.</p> <p>I can select appropriate materials/components to create my products.</p> <p>I can justify my choice of material/components based on, e.g. their properties, aesthetic qualities.</p>

Key Competencies

Technical knowledge

I can experiment with making my products stronger, stiffer and more stable.

I can make a slider.

I can find one way to make my structures stronger, stiffer and more stable.

I can use mechanisms, e.g. levers, sliders, wheels and axles, in my products.

Most of my product is strong and stable.

I can use mechanical systems in my products, e.g. gears, pulleys, cams, levers and linkages.

I can make a product that is strong and stable.

I can use mechanical systems in my products, e.g. gears, pulleys, cams, levers and linkages.

I can use a variety of techniques to strengthen my products.

I can use a mechanical system in my products, e.g. gears, pulleys, cams, levers and linkages.

I can strengthen, stiffen and reinforce my products.

I understand and can use mechanical systems in my products, e.g. gears, pulleys, cams, levers and linkages.

I understand and can use electrical systems in my products, e.g. series circuits incorporating switches, bulbs, buzzers and motors.

Key Competencies

Evaluating processes and products	I can say what I like/dislike about existing/my products.	<p>I can say what I like/dislike about existing products.</p> <p>I can say what went well with my product.</p> <p>I can say one thing I would change to improve my product.</p>	<p>I can identify one positive feature of an existing product.</p> <p>I can identify one positive feature of my own product or the product of another.</p> <p>I can make one improvement to my work.</p>	<p>I can say whether I think an existing product works well or not.</p> <p>I can say whether my products/the products of others work as intended.</p> <p>I can make more than one improvement to my work.</p>	<p>I can identify the positive/negative features of existing products.</p> <p>I can judge whether my products/the products of others match the design criteria.</p> <p>I can make some improvements to my work based on my own and the evaluations of others.</p> <p>I can identify how a key events/individual in design and technology has helped shape the world.</p>	<p>I can appraise a range of existing products, identifying the positive/negative features and suggesting improvements.</p> <p>I can evaluate my products against my own design criteria.</p> <p>I can constructively evaluate the work of others against their design criteria.</p> <p>I can make improvements to my work based on my own and the evaluations of others.</p> <p>I understand how key events and individuals in design and technology have helped shape the world.</p>
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Key Competencies

Food						
	I can develop my knowledge of basic healthy eating messages.	I can develop my knowledge of basic healthy eating messages.	I can develop my knowledge of healthy eating messages.	I can develop my knowledge of healthy eating messages.	I can develop my knowledge of healthy eating messages.	I understand the principles of a healthy and varied diet.
	I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).	I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).	I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).	I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).	I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).	I can demonstrate the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).
	I can Shape food with accuracy for a desired effect.	I can whisk using a fork.	I can cut food safely.	I can cut food safely.	I can cut food safely using a bridge hold.	I can cut food safely using a bridge hold.
	I can Shape using a rolling pin.	I can rub in fat to flour.	I can peel with a swivel peeler with supervision.	I can peel with a swivel peeler with supervision.	I can peel with a swivel peel to create food ribbons to be used in a dish.	I can peel with a swivel peel to create food ribbons to be used in a dish.
	I can spoon ingredients between containers.	I can knead dough.	I can shape and mould to create visually appealing products.	I can shape and mould to create visually appealing products.	I can spoon ingredients between containers equally dividing mixture.	I can spoon ingredients between containers equally dividing mixture.
	I can measure using a spoon or count ingredients.	I can spoon ingredients between containers.	I can spoon ingredients between containers equally dividing mixture.	I can spoon ingredients between containers equally dividing mixture.	I can mix/fold ingredients together carefully.	I can mix/fold ingredients together carefully.
	I can sift flour into a bowl.	I can measure referring to ingredients in simple fractions.	I can measure using a jug with support	I can mix/stir to combine.	I can measure using a jug independently.	I can measure using a jug independently.
	I can follow simple instructions given one at a time by an adult.	I can cut using a table knife to cut into equal portions.	I can cut out placing the cutter in positions to make best use of the material and avoid waste.	I can measure using a jug with support	I can measure Using digital scales independently.	I can measure Using digital scales independently.
		I can grate soft foods e.g. cheese, cucumber.		I can measure Using digital scales with support to begin with.		

Key Competencies

Key Competencies

I can follow a simple recipe supported by an adult	I can grate soft foods e.g. cheese, cucumber.	I can cut out placing the cutter in positions to make best use of the material and avoid waste.	I can grate firmer foods e.g. apple, carrot.	I can grate using the zesting part of the grater.
I can explain how to work with food hygienically.	I can follow a simple recipe with guidance from an adult.	I can grate firmer foods e.g. apple, carrot.	I can explain and demonstrate how to work with food hygienically.	I can follow a simple recipe independently.
I can identify different food groups.	I can explain how to work with food hygienically.	I can follow a simple recipe with guidance from an adult.	I know the approximate portion size you should eat from each food group as part of a healthy diet.	I can explain and demonstrate how to work with food hygienically.
	I can identify different food groups.	I can explain how to work with food hygienically.	I can prepare and cook a variety of dishes using a range of cooking techniques.	I can prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
	I can name some of the food groups that are part of a healthy diet.	I can identify different food groups.	I can understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	
	I can prepare a variety of dishes.	I can name all the food groups that are part of a healthy diet.		
		I can prepare a variety of dishes using a range of techniques.		

Mechanisms	<u>Wheels and Axels</u>	<u>Sliders and Levers</u>	<u>Levers and Linkages</u>	<u>Pneumatics</u>	<u>Cams</u>	<u>Pulleys or Gears</u>
	<p>Generate ideas and simple design criteria.</p> <p>Develop and communicate ideas through drawings and mock-ups.</p> <p>Select a range of tools and equipment and materials to perform practical tasks.</p> <p>Explore wheels and axles and evaluate their ideas and products against original criteria.</p>	<p>Generating, modelling and communicating ideas.</p> <p>Planning making, selecting tools and using finishing techniques.</p> <p>Exploring books and products; evaluating own product against original criteria.</p> <p>Exploring sliders and levers; understanding types of movement; technical vocabulary.</p>	<p>Generate realistic ideas and use annotated sketches and prototypes to develop, model and communicate ideas.</p> <p>Select and use tools with some accuracy to cut, shape and join paper and card.</p> <p>Investigate and analyse their own and others' products with lever and linkage mechanisms.</p> <p>Understand and use lever and linkages, and fixed and loose pivots.</p>	<p>Generate their own realistic ideas and use annotated sketches and prototypes to develop, model and communicate ideas.</p> <p>Select and use tools with some accuracy, cut and join materials and components such as tubing, syringes and balloons.</p> <p>Investigate and find information on and products with pneumatic mechanisms and evaluate their own products and ideas against criteria and user needs.</p> <p>Understand and use pneumatic mechanisms.</p>	<p>Generate a design from research; develop a specification, model and communicate ideas.</p> <p>Produce lists of tools and materials and plans to make accurately assembled and well finished products within constraints.</p> <p>Compare final product to the original specification; test products with the intended user and critically evaluate the product, considering the views of others.</p> <p>Investigate famous manufacturing and engineering companies relevant to the project.</p>	<p>Generate ideas through research and develop and communicate a simple design specification.</p> <p>Select use a range of tools and equipment to make products that that are accurately assembled and well finished within the constraints of time, resources and cost.</p> <p>Compare the final product to the original design specification and test the quality of the design, manufacture and functionality with the user.</p> <p>Investigate famous manufacturing and engineering companies relevant to the project.</p>

Key
Competencies

Textiles	<u>Templates and Joining Techniques</u>	<u>Templates and Joining Techniques</u>	<u>2D Shape to 3D product</u>	<u>2D Shape to 3D product</u>	<u>Combining different fabric shapes</u>	<u>Using computer aided design in textiles</u>
	Design a functional, appealing product for a chosen user and purpose.	Design a functional, appealing product for a chosen user and purpose.	Generate design criteria for an appealing, functional product for specific users.	Generate design criteria for an appealing, functional product for specific users.	Generate and communicate innovative ideas through research.	Generate innovative ideas through research and develop these using mock-ups and prototypes including using computer-aided design.
	Generate, develop, and communicate ideas.	Generate, develop, and communicate ideas.	Produce annotated sketches, prototypes, final product sketches and pattern pieces.	Produce annotated sketches, prototypes, final product sketches and pattern pieces.	Produce detailed lists of equipment and fabrics and formulate step-by-step plans for making.	
	Use a range of textiles, tools and equipment to perform practical tasks.	Use a range of textiles, tools and equipment to perform practical tasks.	Select fabrics and fastenings according to their functional characteristics.	Select fabrics and fastenings according to their functional characteristics.	Investigate and analyse textile products linked to their final product and compare the final product to the original design specification.	Design functional, appealing products for the intended user that are fit for purpose based on a simple design specification.
	Explore and evaluate existing textile products and their own ideas and products.	Explore and evaluate existing textile products and their own ideas and products.	Investigate a range of 3-D textile products.	Investigate a range of 3-D textile products.		Select and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished.
	Understand how 3-D textile products are made, using joining, templates and finishing to create two identical shapes.	Understand how 3-D textile products are made, using joining, templates and finishing to create two identical shapes.	Test their product against the original criteria and with the intended user.	Test their product against the original criteria and with the intended user.	Know that a 3-D textile product can be made from a combination of pattern pieces, fabric shapes and different fabrics and that fabrics can be strengthened, stiffened and reinforced.	Work within the constraints of time, resources and cost.

Key Competencies

Structures	Freestanding Structures	Freestanding Structures	Shell Structures	Shell Structures	Frame Structures	Shell structures using computer aided design
	<p>Generating design ideas; developing modelling and explaining using talk, mock-ups and drawings.</p> <p>Planning making, selecting tools and new and recycled materials; using finishing techniques.</p> <p>Exploring existing freestanding structures; evaluating their own products against original criteria.</p> <p>Know about strengthening structures; knowledge of vocabulary.</p>	<p>Generating design ideas; developing modelling and explaining using talk, mock-ups and drawings.</p> <p>Planning making, selecting tools and new and recycled materials; using finishing techniques.</p> <p>Exploring existing freestanding structures; evaluating their own products against original criteria.</p> <p>Know about strengthening structures; knowledge of vocabulary.</p>	<p>Generate and develop realistic ideas and design criteria collaboratively and through analysis of existing products.</p> <p>Order the stages of making; selecting tools and using with some accuracy.</p> <p>Investigate and evaluate shell structures, and construct strong, stiff shell structures.</p> <p>Test and evaluate own products against design criteria and intended user and purpose.</p>	<p>Generate and develop realistic ideas and design criteria collaboratively and through analysis of existing products.</p> <p>Order the stages of making; selecting tools and using with some accuracy.</p> <p>Investigate and evaluate shell structures, and construct strong, stiff shell structures.</p> <p>Test and evaluate own products against design criteria and intended user and purpose.</p>	<p>Research user needs and existing products and develop and model innovative ideas into a design specification.</p> <p>Formulate a plan with a step-by-step list of tasks and resources.</p> <p>Use tools to accurately measure, mark out, cut, shape and join materials to make frameworks.</p> <p>Use finishing techniques suitable for the product and critically evaluate their products against a range of criteria.</p> <p>Research key events and individuals relevant to frame structures.</p>	<p>Generate ideas and designs, developing them through analysis of shell structures and use CAD to model and communicate ideas.</p> <p>Plan the making and use appropriate tools and software, explaining their choices. Use computer-generated finishing techniques.</p> <p>Evaluate shell structures and their own products.</p> <p>Develop knowledge of nets of cubes and cuboids and more complex 3D shapes and how to construct strong, stiff shell structures.</p>

Key Competencies

Electrical Systems

Simple Circuits and switches

Use annotated sketches, cross sectional and exploded diagrams to develop and communicate ideas.

Select and use tools with some accuracy to cut, shape, join and finish.

Use construction materials and electrical components according to their functional properties and aesthetic qualities.

Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.

Simple programming and control

Gather information and develop and communicate realistic design ideas using annotated sketches and prototypes.

Connect simple electrical components in a series circuit and program an interface to enhance the way the product works.

Investigate and analyse a range of powered products, including programmed, and evaluate their own products and design criteria.

Understand and use computing to program and control products with electrical systems.

Monitoring and Control

Develop a design specification for a product that responds automatically to environmental changes in the environment.

Generate and communicate ideas through annotated sketches and representations of electrical circuits or circuit diagrams.

Using a step-by-step plan, select and accurately assemble materials, electrical components, to produce a functional product.

Create and modify a computer control program to enable their electrical product to respond to changes in the environment.

More complex switches and circuits

Develop a design specification for a functional product that responds automatically to changes in the environment.

Formulate a step-by-step plan to making, listing tools, equipment, materials and components.

Use a computer control program to enable an electrical product to work automatically in response to changes in the environment.

Test and evaluate the system to demonstrate its effectiveness for the intended user and purpose.

Know and use technical vocabulary relevant to the project.

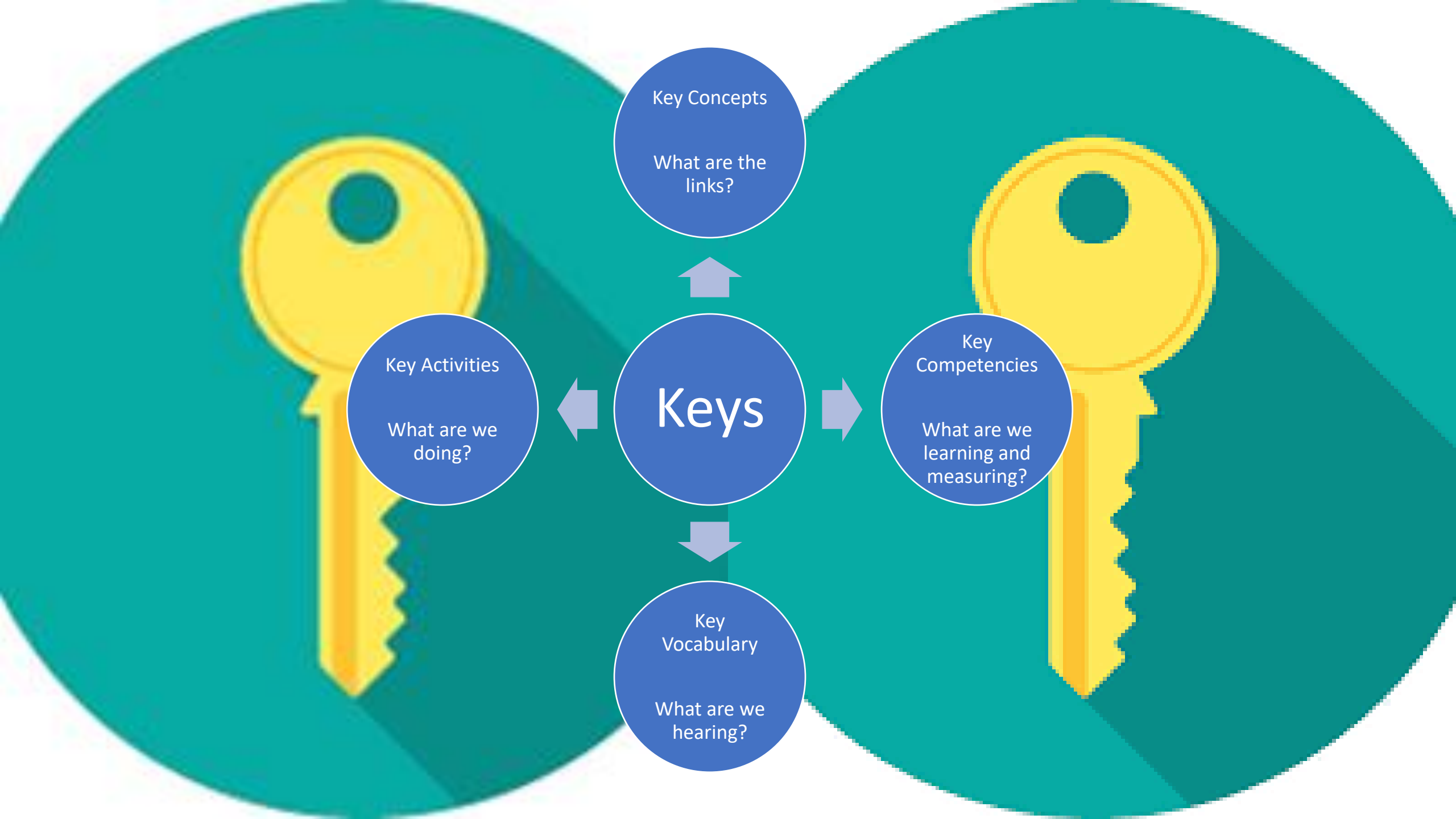
Key Competencies



IMPLEMENTATION

TOPIC OVERVIEW

Year Group	Autumn	Spring	Summer
1	<u>Textiles</u> Making a Christmas ornament	<u>Mechanisms</u> Making a moving picture	<u>Structures</u> Making a miniature playground
2	<u>Structures</u> Design and create a house from 1666	<u>Textiles</u> Make a finger puppet.	<u>Mechanisms</u> Plan and design a moving vehicle including wheels and axels.
3	<u>Mechanisms</u> Moving christmas cards	<u>Textiles</u> Coin purse/wallet	<u>Structures</u> Food packaging
4	<u>Textiles</u> Plan and create their own hanging felt Christmas decoration.	<u>Mechanisms</u> Create their own moving monster toy using a pneumatic system to open the mouth	<u>Structures</u> Plan and design a chocolate packaging as part of the Aztec topic <u>Electrical Systems</u> Taught within Science Topic
5	<u>Mechanisms and electrical systems</u> Toys made from recycled materials	<u>Structures</u> CAD design, frame structures Eiffel Tower Models- link to history topic.	<u>Textiles</u> Textiles, combining different fabric shapes - Upcycling old clothing link to 'Where do our clothes come from?' topic in Geography.
6	<u>CAD and textiles</u> <u>Shell structures using computer aided design</u> To make a bag for an adventure in the Amazon	<u>Structures</u> To create a bridge to hold a certain weight.	<u>Textiles</u> Keyrings



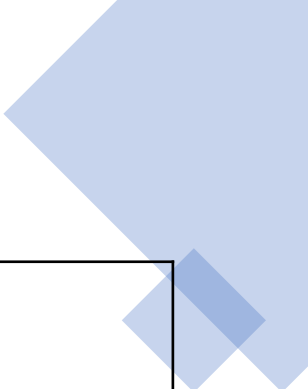


Reception


DT in the EYFS

- The EYFS framework is structured very differently to the national curriculum as it is organised across seven areas of learning rather than subject areas. The aim of this document is to help subject leaders to understand how the skills taught across EYFS feed into national curriculum subjects.
- This document demonstrates which statements from the 2020 Development Matters are prerequisite skills for DT within the national curriculum. The table below outlines the most relevant statements taken from the Early Learning Goals in the EYFS statutory framework and the Development Matters age ranges for Three and Four-Year-Olds and Reception to match the programme of study for DT.
- The most relevant statements for DT are taken from the following areas of learning:
 - Physical Development
 - Expressive Arts and Design

DT		
Three and Four-Year-Olds	Personal, Social and Emotional Development	<ul style="list-style-type: none"> Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.
	Physical Development	<ul style="list-style-type: none"> Use large-muscle movements to wave flags and streamers, paint and make marks. Choose the right resources to carry out their own plan. Use one-handed tools and equipment, for example, making snips in paper with scissors.
	Understanding the World	<ul style="list-style-type: none"> Explore how things work.
	Expressive Arts and Design	<ul style="list-style-type: none"> Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
Reception	Physical Development	<ul style="list-style-type: none"> Progress towards a more fluent style of moving, with developing control and grace. Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
	Expressive Arts and Design	<ul style="list-style-type: none"> Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.



ELG	Physical Development	Fine Motor Skills	Use a range of small tools, including scissors, paintbrushes and cutlery.
	Expressive Arts and Design	Creating with Materials	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.





Year I

DT – Summer 2- Freestanding Structures- A Miniature Playground

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
Design <ul style="list-style-type: none"> •design purposeful, functional, appealing products for themselves and other users based on design criteria •generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • Make <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 	<p>Guided research about specific materials, features and design of the product to be made.</p> <p>Research to be fed into planning to produce a prototype of product to be created.</p> <p>Prototype to be evaluated before producing final design/product.</p> <p>Create final product using evaluations to inform production.</p> <p>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</p>	<p>Freestanding Structures</p> <p>Generating design ideas; developing modelling and explaining using talk, mock-ups and drawings.</p> <p>Planning making, selecting tools and new and recycled materials; using finishing techniques.</p> <p>Exploring existing freestanding structures; evaluating their own products against original criteria.</p> <p>Know about strengthening structures; knowledge of vocabulary.</p>	<p>Freestanding structure – something that is able to stand upright on its own.</p> <p>Design - decide upon the look and functioning of an object by making a detailed drawing of it.</p> <p>Make – to form something by joining parts together</p> <p>Product – something that is a result of a process.</p> <p>Communicate - share or exchange information or ideas.</p> <p>Join – to link or connect something.</p> <p>Tools – a device used to carry out a particular function.</p> <p>Resources – a source or supply of things you need.</p> <p>Criteria - a principle or standard by which something may be judged or decided</p> <p>Product - a thing that is the result of an action or process</p>	<p>1. What is a freestanding structure? Chn to gain an understanding of what is meant by the term 'structures' by looking for them in their environment. Identify structures within the playground and shapes they can see.</p> <p>2. What shapes can I see and make out of materials? Chn to identify shapes within a playground structure and recreate those shapes with a range of materials. Explore which shapes are easy and difficult to make with given resources.</p> <p>3. What tools and resources will I need? Chn to list the criteria needed to create a free standing structure. Chn design their dream playground. Identify what materials and equipment is needed.</p> <p>4&5. How can I cut and join materials? Chn to choose a structure within their dream playground to create using a range of materials. Explore cutting and joining techniques.</p> <p>6. How can I improve my structure? Chn to showcase their dream playgrounds and evaluate them. Identify how it could be made more stable or stiffer. Chn to have the opportunity to change their products.</p>

Subject – DT (Cooking)

NC PoS	Key Concepts Link	Key Knowledge and Pathway	Vocabulary	Activity
Evaluate § explore and evaluate a range of existing products § evaluate their ideas and products against design criteria	Developing, planning and communicating my ideas I can generate my own ideas to make something I can explain to someone else how I want to make my product. I can make a simple plan before making. I can describe how something works. Working with tools I can use resources and tools correctly, e.g. scissors. I can cut, shape and join materials. Evaluating I can say what I like/dislike about existing/my products.	Food I can develop my knowledge of basic healthy eating messages. I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). I can cut food safely.	Healthy - in a good physical or mental condition. Unhealthy - harmful to health. Moderation – the avoidance of having too much (excess) Equipment - the necessary items for a particular purpose. Safely - in a way that is not likely to cause or lead to harm or injury. Ingredients - any of the foods or substances that are combined to make a particular dish.	1. How can I use cooking equipment safely? Children to learn about healthy and unhealthy food in moderation. Children design their Christmas cookie based on the ingredients provided. Children to learn how to use equipment safely when creating their cookies e.g. cookie cutters, spoons and knives.

DT – Spring 2- Moving Picture Books

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> - Design purposeful, functional, appealing products for themselves and other users based on design criteria - Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <p>Make</p> <ul style="list-style-type: none"> - Select from and use a range of tools and equipment to perform practical tasks. 	<p>Guided research about specific materials, features and design of the product to be made.</p> <p>Research to be fed into planning to produce a prototype of product to be created.</p> <p>Prototype to be evaluated before producing final design/product.</p> <p>Create final product using evaluations to inform production.</p> <p>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</p>	<p>Mechanisms</p> <p>Generate ideas and simple design criteria.</p> <p>Develop and communicate ideas through drawings and mock-ups.</p> <p>Select a range of tools and equipment and materials to perform practical tasks.</p> <p>Explore sliders, levers and wheels and evaluate their ideas and products against original criteria.</p>	<p>Mechanism - components acting together to make an action take place</p> <p>Slider - An object moved in a particular direction through the mechanism of pull.</p> <p>Lever - a bar which turns around a point/pivot</p> <p>Pivot - a point about which a lever turns.</p> <p>Push - A force that makes an object move away.</p> <p>Pull - A force that makes the object move closer.</p> <p>Direction - The path along which something moves.</p> <p>Criteria - Steps that make a design/product successful.</p> <p>Template - a piece of material used for the processes of designing.</p>	<p>1. Sliders</p> <p>Children to explore a range of moving picture books. Children to recognise how the pictures move and focus on creating a mechanism. Children use templates to create a simple slider.</p> <p>2. Levers</p> <p>Children to explore a range of objects with simple mechanisms. Children to create a simple lever. Explore what happens when the paper fastener is too tight and how to use the paper fastener safely. Children to use templates to add pictures to their lever.</p> <p>3. Moving Pictures</p> <p>Children to design their own moving picture using their previous knowledge of sliders and levers. Children to find the purpose of their moving picture and appropriately design their background and pictures for this purpose.</p>

Spring 2- Moving Picture Books

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Evaluate</p> <ul style="list-style-type: none"> - Explore and evaluate a range of existing products - Evaluate their ideas and products against design criteria and consider the views of others to improve their work <p>Technical knowledge</p> <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 	<p>Guided research about specific materials, features and design of the product to be made.</p> <p>Research to be fed into planning to produce a prototype of product to be created.</p> <p>Prototype to be evaluated before producing final design/product.</p> <p>Create final product using evaluations to inform production.</p> <p>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</p>	<p>Mechanisms</p> <p>Generate ideas and simple design criteria.</p> <p>Develop and communicate ideas through drawings and mock-ups.</p> <p>Select a range of tools and equipment and materials to perform practical tasks.</p> <p>Explore sliders, levers and wheels and evaluate their ideas and products against original criteria.</p>	<p>Mechanism - components acting together to make an action take place</p> <p>Slider - An object moved in a particular direction through the mechanism of pull.</p> <p>Lever - a bar which turns around a point/pivot</p> <p>Pivot - a point about which a lever turns.</p> <p>Push - A force that makes an object move away.</p> <p>Pull - A force that makes the object move closer.</p> <p>Direction - The path along which something moves.</p> <p>Criteria - Steps that make a design/product successful.</p> <p>Template - a piece of material used for the processes of designing.</p>	<p>4. Moving Pictures</p> <p>Children to create their own moving picture using their design ideas. Can they improve their chosen mechanism from the first time they made one? What could they do differently?</p> <p>5. Evaluate - Class showcase Children to evaluate each other's moving pictures. Children to evaluate their own work and make any changes to needed to improve it.</p>

DT - Summer- Textiles- Felt mini-beasts

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Design *design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <p>Make *select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] *select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p>	<p>Developing, planning and communicating my ideas I can generate my own ideas to make something I can explain to someone else how I want to make my product. I can make a simple plan before making. I can describe how something works.</p> <p>Working with tools I can use resources and tools correctly, e.g. scissors. I can cut, shape and join materials.</p> <p>Evaluating I can say what I like/dislike about existing/my products.</p>	<p>Textiles <u>Templates and Joining</u> Design a functional, appealing product for a chosen user and purpose.</p> <p>Generate, develop, and communicate ideas. Use a range of textiles, tools and equipment to perform practical tasks.</p> <p>Explore and evaluate existing textile products and their own ideas and products.</p> <p>Understand how 3-D textile products are made, using joining, templates and finishing to create two identical shapes.</p>	<p>Design - decide upon the look and functioning of an object by making a detailed drawing of it.</p> <p>Make – to form something by joining parts together</p> <p>Product – something that is a result of a process.</p> <p>Communicate - share or exchange information or ideas.</p> <p>Join – to link or connect something.</p> <p>Tools – a device used to carry out a particular function.</p> <p>Resources – a source or supply of things you need.</p>	<p>1. How can we remember those who fought in the war? Recall discussions in History about Remembrance Day – identify significant images that the Children can use to create a class poppy wreath to hang on the door.</p> <p>2. What is my product going to look like? Children to be shown examples of felt ornaments. Children to plan the design for their own felt ornament, thinking about shape and decoration.</p> <p>3. What tools and resources do I need? Children to think about how they are going to create their product they have designed, identifying and selecting the correct tools and resources.</p> <p>4. How can I join these materials together? Children to practice using needles safely using an embroidery mat. Once children have practiced needlework, they can work with the teacher to apply this knowledge and join their two shapes together.</p> <p>5. How could I improve my work? Children to showcase their hanging ornaments. Children to analyse their product and talk about what they like and dislike.</p>

DT (Cooking) - Spring 2 – Fruit Kebabs

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
Evaluate § explore and evaluate a range of existing products § evaluate their ideas and products against design criteria	Developing, planning and communicating my ideas I can generate my own ideas to make something I can explain to someone else how I want to make my product. I can make a simple plan before making. I can describe how something works. Working with tools I can use resources and tools correctly, e.g. scissors. I can cut, shape and join materials. Evaluating I can say what I like/dislike about existing/my products.	Food I can spoon ingredients between containers. I can measure using a spoon or count ingredients. I can follow simple instructions given one at a time by an adult.	Healthy - in a good physical or mental condition. Unhealthy - harmful to health. Moderation – the avoidance of having too much (excess) Equipment - the necessary items for a particular purpose. Safely - in a way that is not likely to cause or lead to harm or injury. Ingredients - any of the foods or substances that are combined to make a particular dish.	6. How can I use cooking equipment safely? Children to learn about healthy and unhealthy food in moderation. Children design their fruit kebab based on the ingredients provided. Children to learn how to use equipment safely when creating their kebab e.g. knife, spoons and whisk



Year 2

Subject – DT – Tudor Houses

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p><u>Design</u> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups.</p> <p><u>Make</u> Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining, finishing)</p> <p><u>Evaluate</u> Evaluate their ideas and products against design criteria.</p> <p><u>Technical Knowledge</u> Build structures, exploring how they can be made stronger, stiffer and more stable</p>	<p><u>Subject Intent</u></p> <p>Guided research about specific materials, features and design of the product to be made.</p> <p>Research fed into planning to produce a prototype of product to be created.</p> <p>Create final product using evaluations to inform production.</p> <p>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process</p>	<p><u>Design – Lesson 1</u> I can explain to someone else how I want to make my product. (Year 1 skill) I can create a labelled picture of my idea. (Year 2 skill) I can identify at least one feature my product needs to have, to be successful. (Year 2)</p> <p><u>Make -Lesson 2/3</u> I can investigate materials and choose suitable ones to make my product. (Year 2) I can use resources and tools correctly, e.g. scissors. (Y1) I can cut, shape and join materials. (Y1) I can join materials/components in different ways. (Y2) I am beginning to use finishing techniques to make my products more appealing. (Y2)</p> <p><u>Evaluating Process: Lesson 4</u> I can say what I like/dislike about existing products. (Y1 and 2) I can say what went well with my product. (Y2) I can say one thing I would change to improve my product. (Y2)</p> <p><u>Technical knowledge: 2/3</u> I can find one way to make my structures stronger, stiffer and more stable. (Y2)</p>	<p><u>Lesson 1</u> Tudor house Jetty Wattle and daub Timber frame Gabled roof Wooden shutter Stone chimney</p> <p>Materials Tools Design Ruler Measure Labels Masking tape Glue gun</p>	<p><u>Lesson 1</u></p> <ul style="list-style-type: none"> Working with a shoulder partner give the class a selection of laminated Tudor house photos. Discuss the features of the structures. What are the similarities between them? Look at the way the second level over hangs the lower level.(jetty) Identify the wooden frames on each one. Look at the shape of the windows and doors. Give each pair a set of material picture labels. ie timber frame, wattle and daub roof, wooden shutters, stone chimney. Ask them to blue tac the labels onto their picture. Discuss where they have placed them and how houses were made. Show children photos of Tudor houses already made out of junk boxes. Ask them to select a picture they would like to create. In pairs ask them to make a list of the resources they think they might need to make a model like these. ie two boxes, one large and one small, flat card for the roof, lollypop sticks for the timber frame, scissors, tape, white paint, black paint etc... Model to children how to design a tudor house based on their chosen picture on the white board. Show them how to draw the smaller box on the bottom (jetty), larger box on the top, the roof, the shutters, the window. Model how to use rulers to create the correct shapes and sizes. Scaffold less able children by providing them with pre cut shapes to draw around, or tracing design if required. Once children have drawn their design, discuss the materials that will be available for them to use and show them examples. Model to children how to label their designs with the materials from the picture list. Allow children time to present their designs to an audience. Can they describe what they are making and the materials they intend to use? Children should be able to identify the features specifically related to a tudor house. <p><u>Lesson 2/3</u></p> <ul style="list-style-type: none"> In order for children to receive adult support with joining and cutting skills this would be delivered ideally in small groups, with children creating a model in pairs. You may require 2-3 lessons to create the finished product. You may want to follow this link: https://www.youtube.com/watch?v=vx3l8ebV0eY

Subject – DT – Tudor Houses

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p><u>Design</u> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups.</p> <p><u>Make</u> Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining, finishing)</p> <p><u>Evaluate</u> Evaluate their ideas and products against design criteria.</p> <p><u>Technical Knowledge</u> Build structures, exploring how they can be made stronger, stiffer and more stable</p>	<p><u>Subject Intent</u></p> <p>Guided research about specific materials, features and design of the product to be made.</p> <p>Research fed into planning to produce a prototype of product to be created.</p> <p>Create final product using evaluations to inform production.</p> <p>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process</p>	<p><u>Design – Lesson 1</u> I can explain to someone else how I want to make my product. (Year 1 skill) I can create a labelled picture of my idea. (Year 2 skill) I can identify at least one feature my product needs to have, to be successful. (Year 2)</p> <p><u>Make – Lesson 2/3</u> I can investigate materials and choose suitable ones to make my product. (Year 2) I can use resources and tools correctly, e.g. scissors. (Y1) I can cut, shape and join materials. (Y1) I can join materials/components in different ways. (Y2) I am beginning to use finishing techniques to make my products more appealing. (Y2)</p> <p><u>Evaluating Process: Lesson 4</u> I can say what I like/dislike about existing products. (Y1 and 2) I can say what went well with my product. (Y2) I can say one thing I would change to improve my product. (Y2)</p> <p><u>Technical knowledge: Lesson 2/3</u> I can find one way to make my structures stronger, stiffer and more stable. (Y2)</p>	<p><u>Lesson 2/3</u> Measure Score Mark out Ruler Length Join/assemble Stable/strong instructions</p> <p><u>Lesson 4</u> Evaluate Improve Advice Recommendations</p>	<p><u>Lesson 2/3 continued:</u></p> <ul style="list-style-type: none"> Model to children how to create the basic structure. Model how to join two boxes together to create the jetty and how to measure and cut out the roof shape. Discuss with children how to make the structure strong so it does not fall apart once painted. You may decide to use either glue or tape. Children will then need to paint their model white and leave to dry. Children will then need to cut out and create the windows, doors and timber framework from the resources available. Support will be required with using the tools safely, using a ruler accurately and joining the materials securely. It is important to develop children's independence and not do it for them. The cardboard materials used should not be too thick as children who have not yet developed adequate hand strength (fine motor skills) will struggle with the task. <p><u>Lesson 4</u></p> <ul style="list-style-type: none"> In pairs children could create their own video clip where they present their finished model. Ask children to think about the following key questions. How did you make your house? What did you enjoy about making the house? Which part of the house was the easiest to make? What did you find difficult? Did you learn any new skills? If you were going to do this again, what would you do differently? What would your advice be to someone else making this model? <p>The teacher could assemble the evaluation clips and create a class film for classes to use next year.</p>

DT (Cooking) – Autumn 2- Shortbread Biscuits

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.</p> <p>To use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>To understand where food comes from.</p>	<p>Subject Intent Guided research about specific materials, features and design of the product to be made.</p> <p>Research fed into planning to produce a prototype of product to be created. Create final product using evaluations to inform production. Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process</p>	<p>Lesson 1: I can design a biscuit.</p> <p>Lesson 2: I can explain how to work with food hygienically. I can follow a simple recipe supported by an adult. I can measure, with support, the correct amount of flour, sugar, and butter in grams. I can rub in fat to flour. I can knead dough. I can spoon ingredients between containers. I can roll dough into four equal portions using my hands. I can develop the skills to safely use a range of basic cooking equipment including a teaspoon, tablespoon, a cup, a bowl, digital scales and an oven.</p> <p>Year 1 skill- I can Shape food with accuracy for a desired effect.</p> <p>Lesson 3: I can evaluate my product.</p>	<p>Cooking Knife Spoon Fork Bowl Whisk Rub Knead recipe</p>	<p>Week 4: Cooking Design a shortbread biscuit shape. Link to history topic- Discuss who Thomas Farriner was and what he was doing when the Great Fire of London started. Discuss how Thomas Farriner baked biscuits for King Charles 2nd's Navy. They were sent off to sea in barrels aboard the giant naval ships. Explain that we will be making our own shortbread biscuits. Children to look at a range of shortbread designs. In groups, children can discuss what they like and dislike about each design. Then the children can create their own shortbread biscuit shape which they will use when they cook their shortbread.</p> <p>Week 5: Making shortbread biscuits Children will make their own shortbread biscuit using_ butter, sugar, plain flour and chocolate chips. (See recipe) Model how to follow the recipe and model using each piece of equipment e.g spoon, fork, bowl, scales. The children will follow the recipe with adult support to create their shortbread and they will shape their biscuit using their designs from the previous lesson.</p> <p>Week 6: Evaluate- Children to evaluate their shortbread biscuit. Ask children to think about the following key questions: How did you make your biscuit? What did you enjoy about making the biscuit? Did you learn any new skills? Do you like the way it looks? Yes/No? Why/Why not? Do you like the way it tastes? Why/Why not? How could it be improved? Did you face any problems? How did you overcome them?</p>

DT (Cooking) – Spring 1- Healthy Wraps

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.</p> <p>To use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>To understand where food comes from.</p>	<p>To guide research about specific materials, features and design of the product to be made.</p> <p>Create final product using evaluations to inform production. Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</p>	<p><u>Lesson 1:</u></p> <ul style="list-style-type: none"> I can classify different food groups. I can describe basic healthy eating messages. <p><u>Lesson 2: Plan/ Design</u></p> <ul style="list-style-type: none"> I can create a labelled picture of my idea. 	<p><u>Eat well plate</u> - The eat well plate is designed to make healthy eating easier. Eat foods from each group on the eat well plate in the correct amounts each day. Carbohydrates, fats and sugars, protein, fruits and vegetables and dairy.</p> <p><u>grater</u> – A device having a surface covered with holes edged by slightly raised cutting edges, used for grating cheese and other foods.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> - Allergies are abnormal immune system reactions</p>	<p><u>Lesson 1: Healthy eating messages</u></p> <p>Recap from science in spring 1: Children to sort the food into the correct food groups explaining their choices.</p> <p>Explore the question 'How do we know if our food is healthy?' Discuss which parts of the eatwell plate we should try to limit in our diet such as sugar and fat. Explain that many drinks and foods that we would not expect to contain sugar, do in fact have sugar added to them (e.g bread, ketchup, spaghetti sauce, soup, yoghurt, baked beans). Explain that when sugar is turned into fine white (processed) granules, it is easy to add to different foods and drinks. Ask children to guess how many teaspoons of sugar they think is in a standard can of cola. Reveal the answer is 10!</p> <p>Show children four drinks in or alongside the packaging. Select a variety of drinks and include fruit juice (thought to be a healthy option) and a sugar-free counterpart of another drink.</p> <p>Using class consensus, ask pupils to rank the drinks in order of the most to the least sugary. Ask the children to look at the drinks containers and find the information about the contents of the drink. The information will be presented as 'g of sugar' per can/carton/bottle and also per 100ml portion. The children should record the information from the packages into their worksheet. Did the sugar-free drinks always contain less sugar? Were you surprised at how much sugar is in some drinks? Is it ok to drink these drinks? Ensure the children are aware that sugar is ok in small amounts.</p> <p><u>Lesson 2: Plan/design</u></p> <p>After looking at hidden sugars and discussing the eatwell guide in the previous lesson, ask the children 'Is it a good idea to eat just fruit and vegetables in our diet?' Discuss how each food group is important for staying healthy (Recap from science spring 1)</p> <p>Explain to the children that their task is to design a healthy wrap. Create a success criteria as a class e.g:</p> <ul style="list-style-type: none"> The wrap must be healthy The wrap should include a protein, vegetable and dairy product The children should like the wrap The wrap should be tasty but not expensive

DT (Cooking) – Spring 1- Healthy Wraps

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.</p> <p>To use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>To understand where food comes from.</p>	<p>To guide research about specific materials, features and design of the product to be made.</p> <p>Create final product using evaluations to inform production. Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</p>	<p><u>Lesson 3: Make</u></p> <ul style="list-style-type: none"> I can explain how to work with food hygienically. I can identify and use the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). I can grate soft foods e.g. cheese, cucumber. I can follow and complete a simple recipe supported by an adult. <p><u>Lesson 4: Evaluate</u></p> <ul style="list-style-type: none"> I can evaluate what I have made. 	<p><u>grater</u> – A device having a surface covered with holes edged by slightly raised cutting edges, used for grating cheese and other foods.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> - Allergies are abnormal immune system reactions</p>	<p>Lesson 3: Make- The children can make their own healthy wrap using their design from the previous lesson. The children will follow the recipe using their choice of ingredients with adult support. Teachers to model how to chop the salad using the bridge technique and model how to grate the cheese.</p> <p><u>Lesson 4: Evaluate</u> Children to evaluate their wrap from the previous lesson answering the following questions; What did you like about your wrap? Do you like the way it looks why/why not? Is your wrap healthy? Explain your answer. How could it be improved? What variation would you like to try?</p>

DT –Spring 2- Textiles- A finger puppet.

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p><u>Design</u> Deign purposeful, functional, appealing products for themselves and others based on design criteria</p> <p><u>Make</u> Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining, finishing) Select materials from a wide range of materials</p> <p><u>Evaluate</u> Evaluate their ideas and products against design criteria</p>	<p>To guide research about specific materials, features and design of the product to be made.</p> <p>Create final product using evaluations to inform production. Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</p>	<p><u>Textiles: Templates and joining techniques</u></p> <p><u>Lesson 1: Design</u> To know how to design a functional, appealing product for a chosen user and purpose.</p> <p>To generate, develop and communicate ideas.</p> <p><u>Lesson 2 – Prototype</u></p> <p>To use a range of textiles, tools and equipment to perform practical tasks.</p> <p><u>Lesson 3 and 4: Make</u></p> <p>To understand how 3 textile products are made, using joining, templates and finishing to create two identical shapes.</p> <p><u>Lesson 5: Evaluate</u></p> <p>To explore and evaluate existing products and their own ideas and products.</p>	<p>Materials Fix Secure Attach Join Template Technique Idea Product Join Shapes Tools Link</p>	<p><u>Lesson 1: Can you design a finger puppet of a character from Grandad's Island?</u></p> <p>Children to explore a range of existing finger puppets. What do you like about them? What could be improved? The children can then design their own puppet (linked to our English text- Grandad's Island) which they will make in the next lesson. What materials will you need for your product? What tools will you need to make your product? How will you join the materials? EXTEND – Which materials do you think will be effective for making your finger puppet and why?</p> <p><u>Lesson 2: Prototype</u> Working in small groups with an adult, the children will learn how to thread the thread into the needle and create a simple running stich on their practise material before learning how to join the material using thread. What works well? What will you need to do to improve it for your final product? ENRICH – How could you improve your stitching and how will you change this when you make your product?</p> <p><u>Lesson 3 and 4: Make</u> Working in small groups with an adult, model how to create a template on card and cut it out. Repeat this for the identical shape. Use the template to cut out the felt material to the desired shape. The children can then use the running stitch they practised in their prototypes to join the two identical shapes together using the needle and thread. The children can then use a range of materials such as fabric, felt, foam paper, ribbon, buttons and fabric pens to decorate their product. * Remember to take a picture of the finished products to put in the green topic books. EXTEND – Why have you chosen that material to make your finger puppet? Which materials work well and what would you like to try next time?</p> <p><u>Lesson 4: Evaluate</u> Evaluate their products. Ask children to think about the following key questions. •How did you make your puppet? •What did you enjoy about making it? •Which part of the puppet was the easiest to make? •What did you find difficult? •Did you learn any new skills? •If you were going to do this again, what would you do differently? CHALLENGE- What would your advice be to someone else making a finger puppet?</p>

DT (Cooking) – Summer 1- Bread

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating.</p> <p>To use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>To understand where food comes from.</p>	<p>Guided research about specific materials, features and design of the product to be made. Research fed into planning to produce a prototype of product to be created. Create final product using evaluations to inform production. Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process</p>	<p>I can explain how to work with food hygienically.</p> <p>I can follow and complete a simple recipe supported by an adult</p> <p>I can whisk using a fork.</p> <p>I can measure referring to ingredients in simple fractions.</p> <p>I can cut using a table knife to cut into equal portions.</p> <p>I can knead dough.</p> <p>I can evaluate what I have made</p>	<p>Whisk with a fork - until mixture is combined. Creating a lighter mixture by adding air.</p> <p>Measure using simple fractions – cut the dough in half</p> <p>Knead -to work and press into a mass. Fold, push, turn and press the dough. It alters the texture of the bread.</p>	<p><u>Design:</u> The children will create a simple design for their bread shape, based on the current topic of journeys.</p> <p><u>Make</u> Before the cooking session, discuss the food hygiene rules. The children will make their bread roll using; white bread flour, fast-action dried yeast, sugar, teaspoon salt, olive oil, milk. Share the method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> • Kneading • Mixing • Measuring • Cutting into equal portions <p>Teachers will model each stage of the recipe step by step for the children to follow.</p> <p><u>Evaluate</u> Evaluate- Children to taste and evaluate their bread. Ask the children to think about the following key questions: How did you make your bread? What did you enjoy about making the bread? Did you learn any new skills? Do you like the way it looks? Yes/No? Why/Why not? Do you like the way it tastes? Why/Why not? How could it be improved? Did you face any problems? How did you overcome them?</p>

DT– Summer 2- Wheels and Axels- A Moving Vehicle

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p><u>Design:</u> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p><u>Make:</u> select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p><u>Evaluate:</u> evaluate their ideas and products against design criteria</p> <p><u>Technical Knowledge:</u> Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p><u>Subject Intent</u> Guided research about specific materials, features and design of the product to be made.</p> <p>Research fed into planning to produce a prototype of product to be created.</p> <p>Create final products using evaluations to inform production.</p> <p>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process</p>	<p><u>Wheels and axels:</u> I can explore wheels and axels, understanding the types of movement and using technical vocabulary.</p> <p>I can identify and explain at least one feature my product needs to have, to be successful. I can produce a labelled picture of my idea.</p> <p>Technical knowledge: I can use mechanisms, e.g. levers, sliders, wheels and axels, in my products. I am beginning to use finishing techniques to make my products more appealing.</p> <p>Evaluation: I can explain what I like/dislike about existing products. I can explain what went well with my product. I can explain one thing I would change to improve my product.</p>	<p>Axle – a rod on which one or more wheels can rotate, either freely or be fixed to and turn with the axle.</p> <p>Axle holder – the component through which an axle fits and rotates.</p> <p>Chassis – the frame or base on which a vehicle is built.</p> <p>Friction – resistance which is encountered when two things rub together.</p> <p>Dowel – wooden rods used for making axles to hold wheels</p>	<p>1. <u>Design:</u> Children to be given the opportunity to explore a range of existing products that include wheels and axels e.g toys including cars, bikes, skateboards, tractors etc. Are there any other products that we use in our everyday life that include wheels and axels? E.g wheel barrows, hamster wheels etc Explain that we are going to be making a moving vehicle using the wheels and axels mechanism. Children to generate a success criteria and identify and explain at least one feature their product will need in order to be successful. The children will then create a labelled design of their product using the technical vocabulary.</p> <p>2. <u>Make</u> The children will use their designs and their success criteria to create their own vehicle using the wheels and axels kits which include cardboard, wheels and axels. Can you use any finishing techniques to make your product more appealing? The children can choose from a range of materials to make their product more appealing including; paint, tin foil, sequins, pens, pencils, fabric etc.</p> <p>3. <u>Evaluate:</u> The children will evaluate their product against their design criteria. How did you make your vehicle? What did you enjoy about making it? Did you learn any new skills? Do you like the way it looks? Yes/No? Why/Why not? Is your product successful? Why/why not? How could it be improved? Did you face any problems? How did you overcome them? Is your product successful?</p>



Year 3

DT – Autumn 2- Mechanisms- Moving Christmas Cards

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>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</p> <p>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>select from and use a wider range of tools and equipment to perform practical tasks accurately</p> <p>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> <p>investigate and analyse a range of existing products</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>understand how key events and individuals in design and technology have helped shape the world</p> <p>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>understand and use mechanical systems in their products</p>	<p>Guided research</p> <p>Prototype production</p> <p>Evaluation</p> <p>Final product informed by prototype</p> <p>Discussion</p> <p>Technical vocabulary</p>	<p>Developing, planning and communicating ideas I can discuss existing products. I can identify some of the features my product needs to be successful. I am beginning to understand that my product might be useful to a certain group or individual. I can make a clear, labelled sketch of my design. I can practise/test my skills, e.g. stitching, mechanisms.</p> <p>Working with tools, equipment, materials and components to make quality products I can use tools/equipment safely and correctly. I can suggest one reason why some materials/components might be suitable to create my products. I am beginning to use finishing techniques more consistently to make my products more appealing.</p> <p>Technical Knowledge Most of my product is strong and stable. I can use mechanical systems in my products, e.g. gears, pulleys, cams, levers and linkages.</p> <p>Evaluating processes and products I can identify one positive feature of an existing product. I can identify one positive feature of my own product or the product of another. I can make one improvement to my work.</p> <p>Levers and Linkages Generate realistic ideas and use annotated sketches and prototypes to develop, model and communicate ideas. Select and use tools with some accuracy to cut, shape and join paper and card. Investigate and analyse their own and others’ products with lever and linkage mechanisms. Understand and use lever and linkages, and fixed and loose pivots.</p>	<p>User Purpose Function Prototype Design Brief Design Criteria</p> <p>Input Output</p> <p>Mechanism Lever Linkage Loose pivot Fixed Pivot Slot Guide/Bridge</p>	<p>Children to investigate, analyse and evaluate products which have a range of lever and linkages mechanisms. Use questions to develop children’s understanding e.g. Who might it be for? What is its purpose? What do you think will move? How will you make it move? What part moved and how did it move? How do you think the mechanism works? What materials have been used? How effective do you think it is and why? What else could move?</p> <p>Teacher demonstrates a range of lever and linkage mechanisms to the children using prepared teaching aids. Use questions to develop children’s understanding e.g. Which card strip is the lever? Which card strip is acting as the linkage? Which part of the system is the input and which part the output? What does the type of movement remind you of? Which are the fixed pivots and which are the loose pivots?</p> <p>Teacher demonstrates the correct and accurate use of measuring, marking out, cutting, joining and finishing skills and techniques. Pupils work in small groups to produce a range of different lever and linkage mechanisms using existing templates.</p> <p>As a whole class develop the design brief with the children: to design a Christmas card for parents or grandparents. Discuss with pupils the purpose of the product they will be designing and making and who the product will be for. Ask the pupils to agree the key themes of the card. To generate a range of ideas, encouraging creative responses. Agree on design criteria that can be used to guide the development and evaluation of the children’s products.</p> <p>Pupils should develop their knowledge and skills by undertaking a mini design and make activity using one of their lever/linkage templates to create a prototype card. This could replicate one or more of the teaching aids. Pupils evaluate their prototypes and using annotated sketches continue to develop, model and communicate their ideas.</p> <p>Pupils work in teams to create ideas of what could move on the card. Pupils plan their own moveable Christmas card. Pupils are asked to consider the main stages in making before assembling high quality products, drawing on the knowledge, understanding and skills learnt through previous activities.</p> <p>Pupils demonstrate their Christmas Cards – a short video could be made to illustrate the movement. Pupils evaluate the final products against the intended purpose and with the intended user, drawing on the design criteria previously agreed.</p>

Subject – DT/Cooking – Fruit Muffins

NC PoS	Key Concepts Link	Key Competencies	Key Vocabulary	Key Activities
<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 using a range of cooking techniques 	<p>production</p> <p>Evaluation</p>	<ul style="list-style-type: none"> I can prepare a variety of dishes. I can use tools/equipment safely and correctly. (grater, peeler, knife). I can follow a simple recipe with guidance from an adult. I can explain how to work with food hygienically. 	<p>Rise - To increase in height, size, volume</p> <p>Mix – Combine or put together to form one</p> <p>Equipment – A list of things needed.</p> <p>Personal hygiene – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p>Cross contamination – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p>Allergies - Allergies are abnormal immune system reactions.</p>	<p>Discuss hygiene rules</p> <p>Follow the recipe with guidance.</p> <p>Children to make two different muffins.</p> <p>Deciding on preference and why.</p> <p>Evaluating taste and textures.</p> <p>Discuss key vocabulary.</p>

DT/Cooking – Bread Rolls – Sandwiches – Spring 1

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<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 using a range of cooking techniques 	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 5- Food</p>	<ul style="list-style-type: none"> • I can prepare a variety of dishes. • I can use tools/equipment safely and correctly. (grater, peeler, knife). • I can follow a simple recipe with guidance from an adult. • I can explain how to work with food hygienically. 	<p>Rise - To increase in height, size, volume</p> <p>Mix – Combine or put together to form one</p> <p>Equipment – A list of things needed.</p> <p>Personal hygiene – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p>Cross contamination – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p>Allergies - Allergies are abnormal immune system reactions.</p>	<ul style="list-style-type: none"> • Discuss hygiene rules • Recap and discuss why. • Children to make two different muffins. <p>Discuss vocab and new key skills. Watch videos.</p> <ul style="list-style-type: none"> • Follow the recipe with guidance. <p>Show recipe step by step and children follow and complete their own.</p> <p>Second sessions – tasting</p> <ul style="list-style-type: none"> • Deciding on preference and why. • Evaluating taste and textures. <ul style="list-style-type: none"> • Discuss key vocabulary – recap and record on recipe write up.

DT/Cooking – Bread Rolls – Sandwiches – Spring 1

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<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 using a range of cooking techniques 	<p>Production</p> <p>Evaluation</p>	<ul style="list-style-type: none"> • I can name some of the food group that are part of a healthy diet. • I can prepare a variety of dishes. • I can use tools/equipment safely and correctly. (grater, peeler, knife) • I can follow a simple recipe with guidance from an adult. • I can explain how to work with food hygienically. 	<p><u>Method</u> – A certain way of doing something.</p> <p><u>Knead</u> – To mix by pressing, folding, and pulling.</p> <p><u>Rise</u> – To increase in height, size, volume</p> <p><u>Mix</u> – Combine or put together to form one</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> – Allergies are abnormal immune system reactions.</p> <p><u>grater</u> – A device having a surface covered with holes edged by slightly raised cutting edges, used for grating cheese and other foods.</p> <p><u>Swivel peeler</u> – A peeler is a special tool used for removing the skin from fruit. A swivel peeler has a special blade.</p>	<p>First session will be a tasting session. We will look at a variety of possible sandwich fillings. Children taste and evaluate foods and foods that these are paired with.</p> <p>Discuss and identify food groups and discussed the importance of a balanced diet.</p> <p>Children will design their sandwich.</p> <p>Second session</p> <p>Discuss hygiene rules.</p> <p>Share method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> • Knead • Mix <p>Discuss vocab</p> <ul style="list-style-type: none"> • Rise • Personal hygiene • Cross contamination • Allergies <p>Show recipe step by step and children follow and complete their own.</p> <p>Third session – same day</p> <p>Children note changes in buns.</p> <p>Introduce new equipment</p> <ul style="list-style-type: none"> • Grater • Swivel Peeler <p>Children follow their design to create their sandwich. Children then taste their sandwich and evaluate what they have made.</p>

DT – Textiles - Spring 2- Coin Purse/Wallet

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>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</p> <p>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>select from and use a wider range of tools and equipment to perform practical tasks accurately</p> <p>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> <p>investigate and analyse a range of existing products</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>understand how key events and individuals in design and technology have helped shape the world</p> <p>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>understand and use mechanical systems in their products</p>	<p>Guided research</p> <p>Prototype production</p> <p>Evaluation</p> <p>Final product informed by prototype</p> <p>Discussion</p> <p>Technical vocabulary</p>	<p>Developing, planning and communicating ideas</p> <p>I can discuss existing products.</p> <p>I can identify some of the features my product needs to be successful.</p> <p>I am beginning to understand that my product might be useful to a certain group or individual.</p> <p>I can make a clear, labelled sketch of my design.</p> <p>I can practise/test my skills, e.g. stitching, mechanisms.</p> <p>Working with tools, equipment, materials and components to make quality products</p> <p>I can use tools/equipment safely and correctly.</p> <p>I can suggest one reason why some materials/components might be suitable to create my products.</p> <p>I am beginning to use finishing techniques more consistently to make my products more appealing.</p> <p>Evaluating processes and products</p> <p>I can identify one positive feature of an existing product.</p> <p>I can identify one positive feature of my own product or the product of another.</p> <p>I can make one improvement to my work.</p> <p>Textiles</p> <p>2D Shape to 3D product</p> <p>Generate design criteria for an appealing, functional product for specific users.</p> <p>Produce annotated sketches, prototypes, final product sketches and pattern pieces.</p> <p>Select fabrics and fastenings according to their functional characteristics.</p> <p>Investigate a range of 3-D textile products.</p> <p>Test their product against the original criteria and with the intended user.</p>	<p>Designing user, purpose, model, mock-up, evaluating, labelled drawings, stiffening, reinforcing Making</p> <p>pattern/templates , strength, weaknesses, accurate, finishing</p> <p>Knowledge and Understanding</p> <p>fabric, stitch, seam, seam allowance embroidery, applique</p> <p>Properties</p> <p>strength, hard-wearing, stretch, fray, flexible, stiff</p>	<p>DT Association – Bendy Bags Project</p> <p>Pupils examine carefully a collection of simple textile containers e.g. purses, wallets, spectacle cases, draw-string bags. Focus on seams, size, fitness for purpose. What could you keep in this bag? How would you describe this fabric? Pupils make labelled drawings from different views showing specific features. Pupils identify a general criteria for a successful textile bag.</p> <p>Pupils are introduced to stitching techniques. Teacher demonstrates and allows pupils to practise textile techniques e.g. running stitch, starting/finishing. Point out to children that the seam takes up some of their fabric and that they need to allow for this in their measurements. Show children how to add a seam allowance and discuss when it is needed. Pupils sew two small pieces of fabric together and test which joining method makes the strongest seam e.g. glue, sewing, tape.</p> <p>Whole class, discuss with the children the purpose and the user of the coin purse/wallet. Design, make and evaluate a coin purse (product) for myself (user) for keeping change safe (purpose). Pupils then draw up a simple design specification. Pupils will put the list of points in order with the most important ones coming first. Pupils use paper template to mock up their designs and choose suitable fabric. Pupils think about finishing techniques e.g. applique, embroidery.</p> <p>Pupils construct their coin purse, measuring, taping, cutting and joining fabric with some accuracy. Pupils review their progress in making their purse: How well is this working? Is it what the user wants? What could we do to make it better? How could we improve the way it looks? Feels? Opens? Closes? What do you need to change? What effect will this have?</p> <p>Pupils evaluate the finished purses by testing in use, discussing strengths and areas for development of both appearance and function and suggest improvements. Does the container meet the criteria? How have you tested the container? Would it do the job better if it were better made? How could it be better made? Pupils evaluate their product identifying strengths and areas for development against the original specification.</p>

DT – Textiles - Finish Creating Purse/Wallet – Summer 1

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>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</p> <p>generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>select from and use a wider range of tools and equipment to perform practical tasks accurately</p> <p>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> <p>investigate and analyse a range of existing products</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>understand how key events and individuals in design and technology have helped shape the world</p> <p>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>understand and use mechanical systems in their products</p>	<p>Guided research</p> <p>Prototype production</p> <p>Evaluation</p> <p>Final product informed by prototype</p> <p>Discussion</p> <p>Technical vocabulary</p>	<p>Developing, planning and communicating ideas</p> <p>I can discuss existing products.</p> <p>I can identify some of the features my product needs to be successful.</p> <p>I am beginning to understand that my product might be useful to a certain group or individual.</p> <p>I can make a clear, labelled sketch of my design.</p> <p>I can practise/test my skills, e.g. stitching, mechanisms.</p> <p>Working with tools, equipment, materials and components to make quality products</p> <p>I can use tools/equipment safely and correctly.</p> <p>I can suggest one reason why some materials/components might be suitable to create my products.</p> <p>I am beginning to use finishing techniques more consistently to make my products more appealing.</p> <p>Evaluating processes and products</p> <p>I can identify one positive feature of an existing product.</p> <p>I can identify one positive feature of my own product or the product of another.</p> <p>I can make one improvement to my work.</p> <p>Textiles</p> <p>2D Shape to 3D product</p> <p>Generate design criteria for an appealing, functional product for specific users.</p> <p>Produce annotated sketches, prototypes, final product sketches and pattern pieces.</p> <p>Select fabrics and fastenings according to their functional characteristics.</p> <p>Investigate a range of 3-D textile products.</p> <p>Test their product against the original criteria and with the intended user.</p>	<p>Designing</p> <p>user, purpose, model, mock-up, evaluating, labelled drawings, stiffening, reinforcing</p> <p>Making</p> <p>pattern/templates, strength, weaknesses, accurate, finishing</p> <p>Knowledge and Understanding</p> <p>fabric, stitch, seam, seam allowance</p> <p>embroidery, applique</p> <p>Properties</p> <p>strength, hard-wearing, stretch, fray, flexible, stiff</p>	<p>DT Association – Bendy Bags Project</p> <p>Pupils examine carefully a collection of simple textile containers e.g. purses, wallets, spectacle cases, draw-string bags. Focus on seams, size, fitness for purpose. What could you keep in this bag? How would you describe this fabric? Pupils make labelled drawings from different views showing specific features. Pupils identify a general criteria for a successful textile bag.</p> <p>Pupils are introduced to stitching techniques. Teacher demonstrates and allows pupils to practise textile techniques e.g. running stitch, starting/finishing. Point out to pupils that the seam takes up some of their fabric and that they need to allow for this in their measurements. Show pupils how to add a seam allowance and discuss when it is needed. Pupils sew two small pieces of fabric together and test which joining method makes the strongest seam e.g. glue, sewing, tape.</p> <p>Whole class, discuss with the pupils the purpose and the user of the coin purse/wallet. Design, make and evaluate a coin purse (product) for myself (user) for keeping change safe (purpose). Pupils then draw up a simple design specification. Pupils will put the list of points in order with the most important ones coming first. Pupils use paper template to mock up their designs and choose suitable fabric. Pupils think about finishing techniques e.g. applique, embroidery.</p> <p>Pupils construct their coin purse, measuring, taping, cutting and joining fabric with some accuracy. Pupils review their progress in making their purse: How well is this working? Is it what the user wants? What could we do to make it better? How could we improve the way it looks? Feels? Opens? Closes? What do you need to change? What effect will this have?</p> <p>Pupils evaluate the finished purses by testing in use, discussing strengths and areas for development of both appearance and function and suggest improvements. Does the container meet the criteria? How have you tested the container? Would it do the job better if it were better made? How could it be better made? Pupils evaluate their product identifying strengths and areas for development against the original specification.</p>

DT – Structures – Summer 2- Scone Packaging

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Design use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make 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> <p>Evaluate investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world</p> <p>Technical Knowledge apply their understanding of how to strengthen, stiffen and reinforce more complex structures understand and use mechanical systems in their products understand and use electrical systems in their products apply their understanding of computing to programme, monitor and control their products.</p>	<p>Guided Research</p> <p>Prototype</p> <p>Final Product</p> <p>Evaluations</p> <p>Technical Vocabulary</p>	<p>Pathway 1 -Developing, planning and communicating ideas I can discuss existing products. I can identify some of the features my product needs to be successful. I am beginning to understand that my product might be useful to a certain group or individual. I can make a clear, labelled sketch of my design.</p> <p>Pathway 2 -Working with tools, equipment, materials and components to make quality products I can use tools/equipment safely and correctly. I can suggest one reason why some materials/components might be suitable to create my products. I am beginning to use finishing techniques more consistently to make my products more appealing.</p> <p>Pathway 3 -Technical knowledge Most of my product is strong and stable.</p> <p>Pathway 4 -Evaluating processes and products I can identify one positive feature of an existing product. I can identify one positive feature of my own product or the product of another. I can make one improvement to my work.</p> <p>Pathway 5 – Food I can develop my knowledge of healthy eating messages. I can develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). I can cut food safely. I can grate soft foods e.g. cheese, cucumber. I can identify different food groups. I can name some of the food groups that are part of a healthy diet. I can prepare a variety of dishes.</p> <p>Pathway 8 –Structures Generate and develop realistic ideas and design criteria collaboratively and through analysis of existing products. Order the stages of making; selecting tools and using with some accuracy. Investigate and evaluate shell structures, and construct strong, stiff shell structures. Test and evaluate own products against design criteria and intended user and purpose.</p>	<p>Designing font, graphic, decision, evaluating, criteria, fit for purpose, holds Making scoring, tabs, interlocking, adhesives, join, assemble, accuracy Knowledge and understanding aperture, three- dimensional (3D) shape, face, edge, vertex, two- dimensional, side, corner, cube, cuboid, prism, net, packaging, shell structure, height, width, breadth, capacity, centimetre, millimetre, measure</p>	<p>Week 2 Food Tasting Scone Filling Lesson. Pupils taste test a range of ingredients for a savoury and a sweet scone. Pupils evaluate paired ingredients and decide on their choices.</p> <p>Week 3 BIG QUESTION Why do we need food packages? Pupils list the jobs of food packaging. Pupils investigate and analyse a range of packaging, identifying key features with a clear labelled sketch.</p> <p>Week 4 Maths lessons exploring nets. Pupils open food packaging and explore the nets of 3D shapes. Pupils create their own 3D shapes using 2D shapes.</p> <p>Week 5 Pupils plan their own scone packaging, thinking about purpose and audience. Pupils make packaging for scones using prior knowledge of nets. Pupils construct 3D shape and use finishing techniques to complete.</p> <p>Week 6 Pupils follow a recipe and make their sweet and savoury scone. Pupils evaluate the taste of scone. Pupils evaluate packaging for scones.</p>

DT – Structures – Summer 2- Scone Packaging

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<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 using a range of cooking techniques 	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 5- Food</p>	<ul style="list-style-type: none"> • I can describe and apply my knowledge of healthy eating messages. • I can apply my skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). • I can cut food safely. • I can spoon ingredients between containers equally dividing mixture. • I can measure using a jug with support • I can cut out placing the cutter in positions to make best use of the material and avoid waste. • I can grate soft foods e.g. cheese, cucumber. • I can follow and complete a simple recipe with guidance from an adult. • I can apply my knowledge of how to work with food hygienically. • I can create a variety of dishes. • I can evaluate what I have made and suggest improvements. 	<p><u>grater</u> – A device having a surface covered with holes edged by slightly raised cutting edges, used for grating cheese and other foods.</p> <p><u>Scale</u> – Scale is defined as a system or series of marks used for measuring.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Knead</u> – To mix by pressing, folding, and pulling.</p> <p><u>Rise</u> - To increase in height, size, volume</p> <p><u>Mix</u> – Combine or put together to form one</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> - Allergies are abnormal immune system reactions.</p>	<p>First session will be a tasting session. We will look at a variety of possible scone flavours. We will discuss pairings and what this means. The children will taste or smell flavours and decide and plan their two scone flavours. One sweet and one savoury.</p> <p>Second session Discuss hygiene rules. Share method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> • Knead • Mix • Cutting to avoid waste • Rubbing in <p>Discuss vocab</p> <ul style="list-style-type: none"> • Rise • Personal hygiene • Cross contamination • Allergies <p>Show recipe step by step and children follow and complete their own.</p> <p>Third session – same day Children taste and evaluate their creations.</p>

Subject – DT/Cooking – Scones

NC PoS	Key Concepts Link	Key Knowledge and Pathway	Vocabulary	Activity
<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 using a range of cooking techniques 	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 5- Food</p>	<ul style="list-style-type: none"> • I can describe and apply my knowledge of healthy eating messages. • I can apply my skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). • I can cut food safely. • I can spoon ingredients between containers equally dividing mixture. • I can measure using a jug with support • I can cut out placing the cutter in positions to make best use of the material and avoid waste. • I can grate soft foods e.g. cheese, cucumber. • I can follow and complete a simple recipe with guidance from an adult. • I can apply my knowledge of how to work with food hygienically. • I can create a variety of dishes. • I can evaluate what I have made and suggest improvements. 	<p><u>grater</u> – A device having a surface covered with holes edged by slightly raised cutting edges, used for grating cheese and other foods.</p> <p><u>Scale</u> – Scale is defined as a system or series of marks used for measuring.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Knead</u> – To mix by pressing, folding, and pulling.</p> <p><u>Rise</u> – To increase in height, size, volume</p> <p><u>Mix</u> – Combine or put together to form one</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> – Allergies are abnormal immune system reactions.</p>	<p>First session will be a tasting session. We will look at a variety of possible scone flavours. We will discuss pairings and what this means. The children will taste or smell flavours and decide and plan their two scone flavours. One sweet and one savoury.</p> <p>Second session Discuss hygiene rules. Share method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> • Knead • Mix • Cutting to avoid waste • Rubbing in <p>Discuss vocab</p> <ul style="list-style-type: none"> • Rise • Personal hygiene • Cross contamination • Allergies <p>Show recipe step by step and children follow and complete their own.</p> <p>Third session – same day Children taste and evaluate their creations.</p>



Year 4

DT- Textiles – Autumn 2- Christmas Decorations

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
When designing and making, pupils should be taught to: 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, select from and use a wider range of tools and equipment to perform practical tasks, select from and use a wider range of materials and components, including construction materials, textiles, evaluate their ideas and products against their own design criteria and consider the views of others to improve their work, apply their understanding of how to strengthen, stiffen and reinforce more complex structures	<p>Guided research about specific materials, features and design of the product to be made.</p> <p>Focused tasks in which children develop particular aspects of knowledge and skills Designing and making activities in which children design and make 'something' for 'somebody' for 'some purpose'</p> <p>Having the opportunity to evaluate each other's work, through the design stage and finished product: Being allowed time to constructively feedback on each other's work.</p>	<p><u>Pathway 7- Textiles</u></p> <p>1. LO: To identify who my product is for.</p> <p>2. LO: To construct a clear, labelled sketch of each part of my design</p> <p>3. LO: To apply my skills accurately.</p> <p>4 and 5. LO: To use tools and equipment safely and correctly.</p> <p>6. LO: To analyse my work and make any necessary improvements.</p>	<p>Product</p> <p>Brief</p> <p>Audience</p> <p>Materials</p> <p>Colours</p> <p>Decoration</p> <p>Design</p> <p>Label</p> <p>Sketch</p> <p>Stitch</p> <p>Running</p> <p>Cross</p> <p>Back</p> <p>Needle</p> <p>Fabric</p>	<p>1. Why do we design products with a specific audience in mind? Explain to children that at the end of the half term we will be hosting our own Victorian Street Fair and invite parents in to buy an item we make, money raised will go towards our charity 'Barnardos'. Explain that we will be designing Christmas decorations. Look at examples of decorations in Victorian times using iPads/Chromebooks and webpages. Who would have owned these? What purpose did they have? Introduce brief, and identify who product is going to be for (Rich Victorians at Christmas time, use of religious symbols)</p> <p>2. How does our design fit with our brief? Reflect on design brief from last lesson. Which materials would be effective / ineffective? Children sketch out and design three different decorations (and label) after using QR codes to research Victorian Christmas decorations designs. Carousel feedback – explore their peers' designs. Children to evaluate which design would be most effective and why and choose the one they are going to create.</p> <p>3. Can you accurately sew using the different stitches? Ensure correct health and safety measures are included, as needles can be sharp. Model how to create different stitches (running, back, cross), children to experiment using a piece of fabric during a rally coach. Afterwards, discuss completed products. Is the stitch strong and stable? Does it currently fit the brief so far? Which stitch do you prefer and why? What materials have we used? What other materials could we have used if we lived in Victorian times? Teach children then to stitch another piece of fabric on top, lace and a sequin or bead.</p> <p>4 and 5. Look back at last week's stitching techniques and recap our design brief. Children to use their planning sheets to begin making their decorations. Can you pick the most appropriate/stable stitch for each part of your product?</p> <p>6. Why is it important that we make changes to our designs? Now that the decorations have been created, children go back and look at their sketch designs. What changes need to be made? Discuss R.E. lessons and symbolism in Christianity. As we are looking at Victorian Christmas, can children add symbols to their designs?</p>

DT- Cooking – Autumn 2- Shortbread

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to: Select from and use a wider range of materials and components, including ingredients. prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p>	<p>Focused tasks in which children develop particular aspects of knowledge and skills.</p> <p>Designing and making activities in which children design and make 'something' for 'somebody' for 'some purpose'</p> <p>Reflect on personal achievement throughout the design and production stages.</p> <p>Children will be motivated by their creations and the hands-on approach Design Technology offers to learning</p>	<p><u>Pathway 5- Food</u></p> <p>1. LO: I can measure using digital scales with support.</p> <p>2. LO: I can shape and mould to create visually appealing products.</p> <p>2. LO: I can mix/stir to combine ingredients.</p> <p>2. LO: I can cut out placing the cutter in positions to make best use of the material and avoid waste</p> <p>2. LO: I can follow a simple recipe with guidance from an adult.</p> <p>3. LO: I can evaluate the success of my product.</p>	<p>Method</p> <p>Shortbread</p> <p>Cutter</p> <p>Precision</p> <p>Combine</p> <p>Rolling pin</p> <p>Unit of measure</p> <p>Rubbing</p> <p>Evaluation</p> <p>Temperatures</p> <p>Waste product</p> <p>Flaky</p> <p>Biscuit</p>	<p>1. What is the main ingredient in shortbread that creates the sweet taste? Share design brief to children, link to Queen Victoria's love of shortbread. Have chn tried this dish before? What variations have they seen? Chn to examine the method and look at the food groups that are involved in the making process. Chn to experiment with scales and weighing out ingredients, think about about the different technique needed when pouring flour and butter into a container</p> <p>2. What different techniques were needed for cooking this recipe? Recap hygienic rules of cooking to start. Children to assess their attire, do any changes need to be made? Eg tie long hair back. Recipe will be available for one between 2 for children to work through. Teacher to model set skills at the front of the class before the children copy.</p> <p>3. What was successful and what would you change for next time? After chn have tasted their product ask them to think about the texture and taste. Did they like what they created? Was it visually appealing as well as tasting nice? Chn to complete an evaluation form that allows them to think what they would change/ add next time</p>

DT – (Cooking) – Spring 2- Pizza

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Understand and apply the principles of a healthy and varied diet;</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques;</p> <p>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>Activities which involve investigating and evaluating existing product- Taste tests</p> <p>Apply discussion about previous learning to establish prior knowledge in order for this to then be applied to the current task.</p> <p>Children will have regular opportunities to evaluate their learning and the product they are creating to enable them to assess their learning/ skills over time</p>	<p>Pathway 5 - Food</p> <p>1. LO: I can identify the food groups that are part of a healthy diet.</p> <p>2. LO: I can use my knowledge of the food groups to plan my own healthy dish.</p> <p>3 and 4. LO: I can use tools and equipment safely and correctly when preparing food.</p> <p>4. LO: I can evaluate my meal and make necessary improvements.</p>	<p>Eat well plate Carbohydrates (bread) Vegetables Protein Fats</p> <p>Base Toppings Ingredients</p> <p>Equipment Grater Knife Hygiene</p>	<p>1. Discuss the eat well plate, why is this a popular topic in the news at the moment? Why is this incentive being pushed in schools? Research: where pizza comes from (geographical link with Naples), what pizza is made from, shapes and sizes of pizzas and toppings for pizzas. Market research – popular pizzas and toppings, interview family members.</p> <p>2. Design their pizza: purpose and 4 labelled ideas. Discuss a healthy diet (different breads that could be used for the base and different vegetables that could be used for toppings). Highlight importance of allergies and alternative foods/ingredients. Sample a variety of toppings and bases to help inform their own design.</p> <p>3. Planning: pick their favourite design and name their pizza. List ingredients and equipment needed.</p> <p>4. Discuss basic hygiene rules and using tools safely. Class teacher to model kneading the dough and rolling it into a shape. Discuss the role of yeast and types of flour. Make their pizzas using bridge technique for cutting.</p> <p>5. Discuss skills learnt and evaluate (both looks and taste). What would you change?</p>

DT – pneumatic systems – Spring 2- Moving Monster Toy

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>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. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand and use mechanical systems in their products.</p>	<p>Understand the concept that for something to be created it begins with a thought and then becomes part of a creative process to bring into being. It is this process we can all become part of by creating our own designs and products.</p> <p>Identify the skills needed to engage in the creative process with an effective and logical approach. This should ensure the final product created is of a high standard, follows the design brief and is fit for purpose.</p> <p>Consideration should be given to how objects we see daily work and are constructed fostering awe and wonder in each individual child</p>	<p>Pathway 1: planning and developing ideas Pathway 3: Technical knowledge Pathway 6: Mechanisms and Pneumatics</p> <p>1. LO: I can investigate existing pneumatic products.</p> <p>2. LO: I can evaluate a variety of existing products that use air to make them work.</p> <p>3. LO: I can plan and design my own moving monster toy that uses a pneumatic system to open the helmet.</p> <p>4. LO: I can make a toy with a moving pneumatic part.</p> <p>5. LO: I can evaluate my product using my design brief and suggest improvements.</p>	<p>Pneumatic systems</p> <p>Syringe</p> <p>Balloon</p> <p>Pressure</p> <p>Force</p> <p>Air</p> <p>Compression</p> <p>Evaluate</p> <p>Design brief</p> <p>Mechanism</p> <p>Aesthetic</p> <p>Appealing</p> <p>Purpose</p> <p>Labelled diagram</p> <p>Measurement</p>	<p>PSHE Link – colour monster story.</p> <p>Historical link – how did Romans entertain themselves in colosseums? What games did children play?</p> <p>1 and 2. Explore moving monster toys, balloon pumps, drills etc children to understand the process of a pneumatic system. Evaluate the positive and negatives of using a pneumatic system in a product. How effective are they? Experiment with resources to create compressed air. Why don't all toys use a pneumatic system?</p> <p>3. After evaluating pneumatic systems and moving monster toys, children to plan and design their own toy fit for a toy store. Discuss the design brief and the mechanism. Market research – interview other children in year 2 and 3 to find out what makes a successful pneumatic toy. Children to use this in their plans. Children to calculate measurements and materials for each part of their toy. How will we ensure the mouth opens smoothly? How can we design a product where the pneumatic system is hidden?</p> <p>4. Using junk modelling, balloon, syringe and plastic piping, children will follow their plan to create their toy, ensuring it is powerful enough to open the mouth. Before completing, children will need to evaluate the aesthetic features of their toy by ensuring the pneumatic system is hidden. Does it meet the brief? How is it suitable for a child?</p>

Subject – DT- Structures- Design chocolate packaging as part of the Aztec topic.				
NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].	<p>Understand the concept that for something to be created it begins with a thought and then becomes part of a creative process to bring into being. It is this process we can all become part of by creating our own designs and products.</p> <p>Identify the skills needed to engage in the creative process with an effective and logical approach. This should ensure the final product created is of a high standard, follows the design brief and is fit for purpose.</p> <p>Consideration should be given to how objects we see daily work and are constructed fostering awe and wonder in each individual child</p>	<p>Pathway 1: planning and developing ideas Pathway 3: Technical knowledge Pathway 8: Shell Structures</p> <p>LO: I can investigate and evaluate existing shell structures.</p> <p>LO: I can test and evaluate my own product against a design criteria and suggest improvements. (prototype)</p> <p>LO: I can make a clear, labelled sketch of each part of my design (identifying who my product is for)</p> <p>LO: I can make a product that is strong and stable.</p> <p>LO: I can use finishing techniques consistently to make my products more appealing.</p>	<p>Net</p> <p>Package</p> <p>Sturdy</p> <p>Aesthetic</p> <p>Authentic</p> <p>Suitability</p> <p>Criteria</p> <p>Symmetry</p> <p>Colour</p> <p>Pattern</p> <p>Theme</p> <p>Logo</p>	<p>What makes a package appealing? Wrapper or packet? Explain what a shell structure is to children and share examples. Show children a range of packets and wrappers and 3D chocolate packaging. What makes us want to buy them? Rank them in order. Discuss how children ordered them and create a success criteria. Tell children about our brief – creating a 3D packaging to hold chocolate. Evaluate other 3D packaging in groups. Take part in market research, interview classmates, teachers and grown ups – what makes a package successful? How does the packet influence our buying decision?</p> <p>How successful is your own product against design criteria and intended user and purpose? After completing market research and initial evaluations, children to create prototype. Begin with experimenting with different nets and shapes. What works well? Which one do they like and why? Evaluate this in terms of aesthetics, sturdiness and suitability. What needs to change? What needs to stay?</p> <p>Plan and design packaging including measurements, additional details and the lid. Establish our audience (year 4 children after research) Consider how the user will access the chocolate. Is it resealable? Sturdy? Label with key details.</p> <p>Make final product. Decorate with finishing touches to make it more appealing for the target audience. How have you followed your plan? How will you ensure it is attractive?</p> <p>Evaluate final product. Carousel feedback: set up a mini exhibition for children to advertise their product. Children to make accompanying advert to support the ‘selling’ of their package to an audience.</p>

DT (Cooking)– Summer 2- Pretzels

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Understand and apply the principles of a healthy and varied diet;</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques;</p> <p>understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>Activities which involve investigating and evaluating existing product- Taste tests</p> <p>Apply discussion about previous learning to establish prior knowledge in order for this to then be applied to the current task.</p> <p>Children will have regular opportunities to evaluate their learning and the product they are creating to enable them to assess their learning/ skills over time</p>	<p>Pathway 5 - Food</p> <p>LO: I can name some of the food groups that are part of a healthy diet.</p> <p>LO: I can use my knowledge of the food groups to plan my own dish.</p> <p>LO: I can use tools and equipment safely and correctly when preparing food.</p> <p>LO: I can evaluate my meal and make necessary improvements.</p>	<p>Eat well plate Carbohydrates (bread) Vegetables Protein Fats</p> <p>Flavourings Sweet/savoury Ingredients</p> <p>Equipment Rolling pin Knife Hygiene</p>	<p>Research: where pretzels come from, what a pretzel is made from, shapes and sizes of pretzels and different fillings/flavours. Market research – popular pretzel tastes- interview family members.</p> <p>Design their pretzel: purpose and 4 labelled ideas. Discuss a healthy diet (different breads that could be used and different fillings depending on sweet or savoury taste. What shapes work well? Why? Highlight importance of allergies and alternative foods/ingredients.</p> <p>Planning: pick their favourite design and name their pretzel. List ingredients and equipment needed.</p> <p>Discuss basic hygiene rules and using tools safely. Make their pretzels Discuss skills learnt and evaluate (both looks and taste).</p>



Year 5

Cooking –Autumn 1- *Cheese Twists*

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Cooking</p> <p>DT –</p> <p>select from and use a wider range of tools and equipment to perform practical tasks accurately.</p> <p>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Cooking –</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p>	<p>I can cut food safely using a bridge hold.</p> <p>I can measure food using digital scales independently.</p> <p>I can follow a simple recipe independently.</p> <p>I can explain and demonstrate how to work with food hygienically.</p>	<p>LO: to analyse the skills required in a given recipe and to justify the purpose of the equipment I will use.</p> <p>LO: to apply the skills learnt to a recipe and use tools/equipment safely with reasonable accuracy.</p> <p>LO: to generate improvements to my final product based on my own evaluation.</p>	<p><i>Grater</i></p> <p><i>Digital</i></p> <p><i>Scale</i></p> <p><i>Method</i></p> <p><i>Mix</i></p> <p><i>Equipment</i></p> <p><i>Personal</i></p> <p><i>Hygiene</i></p> <p><i>Accuracy</i></p> <p><i>Evaluate</i></p>	<p>L1- Go through the recipe with the class. Analyse each of the skills that they will be using. Demonstrate these skills e.g. kneading, mixing and grating. Allow the children to justify what piece of equipment they should use for each stage. Go through the rules for cooking to ensure that the cooking is carried out safely and hygienically.</p> <p>L2 - Put all of the above into practise. Children will cook the cheese twists independently. Adults available for support if the children need it. Adult support when children are using a knife and the oven. Whilst some members of the class are cooking, others will be creating a poster of the skills learnt and the rules they need to remember.</p> <p>L3 – Children will take part in a taste test and discuss their findings with their table. Children will then complete a evaluation form which includes a spider diagram. Children will re write the recipe using their research to help them e.g. if their cheese twist was not very cheesy, add more cheese to the ingredients list.</p>

Autumn 2 - Solar system model (Mechanisms and electrical systems)

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
Developing, planning and communicating ideas.	I can research a range of existing products. I can suggest ideas for my own design criteria. I understand that my product might be suitable for specific individual or group. I can create a product that has clear purpose. I can communicate my ideas through multiple annotated sketches. I can experiment with computer-aided design. I can make mock-ups to test my design.	LO: to generate ideas for my own design. LO: to apply a mechanical and electrical system to my product. LO: to judge whether my product meets the design criteria.	Gears	1. Research skills (cams, gears, electrical systems) children to rotate around carousel to try these different skills. Children to then generate their own ideas for a project (solar system model with electrical system) Photograph children using cams/gears etc and in books, children to design their own model labelling and annotating the mechanisms and electrical systems. Children to make lists of tools and equipment and various design ideas to work on in the next lesson. Children to create their own design specification to assess against. 2. Children work on their project including a mechanical and electrical system building on skills from last lesson. Children to evaluate as they go, photographs of process in books for children to write about each stage as they go. 3. Children to analyse their final product and judge whether their product meets their original design criteria. Children to complete assessment against techniques and requirements in the real world.
Technical knowledge	I can use a variety of techniques to strengthen my products. I can use a mechanical system in my products, e.g. gears, pulleys, cams, levers and linkages.		Levers	
Evaluating processes and products	I can judge whether my products/the products of others match the design criteria.		Pulleys	
Mechanisms	Cams Generate a design from research; develop a specification, model and communicate ideas. Produce lists of tools and materials and plans to make accurately assembled and well finished products within constraints. Compare final product to the original specification; test products with the intended user and critically evaluate the product, considering the views of others. Investigate famous manufacturing and engineering companies relevant to the project.		Mechanical system	
Electrical	Generate and communicate ideas through annotated sketches and representations of electrical circuits or circuit diagrams. Using a step -by -step plan, select and accurately assemble materials, electrical components, to produce a functional product. Create and modify a computer control program to enable their electrical product to respond to changes in the environment.		Linkages	
		Market research		
		Survey		
		Target audience		
		Demographic		
		Product		
		Purpose		
		Evaluate		
		Suitability		

Cooking – Spring 1- Bread baguettes and hot chocolate (link to French)

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Cooking and Nutrition</p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p><i>Pupils should be taught to:</i></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 using a range of cooking techniques - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	<p><i>Guided research about specific materials, features and design of the product to be made.</i></p> <p><i>Research to be fed into planning to produce a prototype of product to be created.</i></p> <p><i>Prototype to be evaluated before producing final design/product.</i></p> <p><i>Create final product using evaluations to inform production.</i></p> <p><i>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</i></p> <p>Key learning from knowledge organiser –</p> <ul style="list-style-type: none"> • I know the approximate portion size you should eat from each food group as part of a healthy diet. • I can measure food using digital scales independently. • I can follow a simple recipe independently. • I can explain and demonstrate how to work with food hygienically. 	<p>Pathway 5 – Food</p> <p>LO: to analyse healthy eating messages and what constitutes a healthy diet.</p> <p>LO: to analyse a recipe, measure food accurately using digital scales and use subject specific vocabulary.</p> <p>LO: to independently follow a recipe safely and hygienically.</p> <p>Pathway 4 - Evaluating processes and products</p> <p>LO: to analyse and evaluate my finished product.</p>	<p><i>Balanced</i></p> <p><i>Nutritious</i></p> <p><i>Digital scale</i></p> <p><i>Method</i></p> <p><i>Knead</i></p> <p><i>Rise</i></p> <p><i>Mix</i></p> <p><i>Equipment</i></p> <p><i>Personal hygiene</i></p> <p><i>Cross contamination</i></p>	<p>1. Healthy eating and portion size Initial lesson covering healthy eating, a healthy diet and portion size. Introduce the eat well plate. Discuss the different types of nutrients, why they are important and how much of each nutrient we should eat. Analyse healthy eating messages (e.g. adverts). Children to evaluate the balance of nutrients in their final product. Children to create an advert to advertise healthy eating and provide information to others.</p> <p>2. Using the equipment and key vocabulary Children to analyse our recipe. Children to prepare the ingredients they will need using the appropriate equipment. Children to discuss the vocabulary specific for cooking and which pieces of equipment will be required for them to produce their product. Children to collect the equipment they will need using the correct vocabulary.</p> <p>3. Following the recipe hygienically and safely Children to follow the recipe independently using the ingredients they have prepared themselves and the equipment they have collected. Children will recap how to cook hygienically and how to keep safe when cooking before they begin.</p> <p>4. Evaluation Children to assess their final product based on various areas from physical appearance to taste and texture. Children to assess visually before completing a taste test. Children to determine using their evaluation what they will do next time to improve their product.</p>

DT – Spring 2 - Cams, gears, levers and pulleys - Viking long ships- link to history topic.

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Pathway 1 - Developing, planning and communicating ideas</p> <p>Pathway 2 - Working with tools, equipment, materials and components to make quality products</p> <p>Pathway 3 - Technical knowledge</p> <p>Pathway 4 - Evaluating processes and products</p> <p>Pathway 6 – Mechanism.</p>	<p><u>Developing, planning and communicating ideas</u> I can create a product that has clear purpose. I can communicate my ideas through multiple annotated sketches.</p> <p><u>Working with tools, equipment, materials and components to make quality products</u> I can name and explain the purpose of the tools/equipment I use to make my products. I can use tools/equipment safely and with reasonable accuracy.</p> <p><u>Technical knowledge</u> I can use a variety of techniques to strengthen my products. I can use a mechanical system in my products, e.g. gears, pulleys, cams, levers and linkages.</p> <p><u>Evaluating processes and products</u> I can judge whether my products/the products of others match the design criteria. I can make some improvements to my work based on my own and the evaluations of others.</p> <p><u>Mechanisms</u> Cams Generate a design from research; develop a specification, model and communicate ideas. Produce lists of tools and materials and plans to make accurately assembled and well finished products within constraints. Compare final product to the original specification; test products with the intended user and critically evaluate the product, considering the views of others. Investigate famous manufacturing and engineering companies relevant to the project.</p>	<p>LO: to formulate a design for a product with a clear purpose.</p> <p>LO: to utilise tools and equipment safely and accurately.</p> <p>LO: to use a mechanical system in my product (cams, gears, levers and/or pulleys)</p> <p>LO: to evaluate whether my design matches my criteria.</p>	<p>Cams</p> <p>Levers</p> <p>Linkages</p> <p>Pulleys</p> <p>Design</p> <p>Criteria</p> <p>Mechanical</p> <p>Accuracy</p> <p>Utilise</p> <p>Purpose</p> <p>Annotated</p> <p>Evaluation</p> <p>specification</p>	<p>Explain in Summer 1 we will be learning about Vikings.</p> <p>Design Viking longship with cams, gears, levers and or pulleys. Create detailed annotated sketches to show their longship designs.</p> <p>Children to use tools and techniques to make longship using cams, gears, levers or pulleys.</p> <p>Children to evaluate their final design and product against their original criteria.</p> <p>Children to share their longships and display in classroom ready for next half terms topic of Vikings.</p>

Cooking – Summer 1- Fruit Crumble				
NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Cooking and Nutrition</p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p><i>Pupils should be taught to:</i></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 using a range of cooking techniques - understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. 	<p><i>Guided research about specific materials, features and design of the product to be made.</i></p> <p><i>Research to be fed into planning to produce a prototype of product to be created.</i></p> <p><i>Prototype to be evaluated before producing final design/product.</i></p> <p><i>Create final product using evaluations to inform production.</i></p> <p><i>Use discussion to introduce technical vocabulary at appropriate stages throughout the design and production process.</i></p> <p>Key learning from knowledge organiser –</p> <ul style="list-style-type: none"> • I know the approximate portion size you should eat from each food group. • I can measure food using digital scales independently. • I can use basic food equipment safely. • I can follow a simple recipe independently. • I can explain and demonstrate how to work with food hygienically. 	<p>Pathway 5 – Food</p> <p>LO: to develop the skills to safely use a range of basic equipment and both cut and peel food safely.</p> <p>LO: to follow a recipe independently consistently demonstrating how to work with food safely and hygienically.</p> <p>Pathway 4 - Evaluating processes and products</p> <p>LO: to suggest improvements to my work based on my own and the evaluations of others.</p>	<p><i>Eat well plate</i></p> <p><i>Digital scale</i></p> <p><i>Method</i></p> <p><i>Bread crumbs</i></p> <p><i>Swivel peeler</i></p> <p><i>Bridge hold</i></p> <p><i>Mix</i></p> <p><i>Equipment</i></p> <p><i>Personal hygiene</i></p> <p><i>Cross contamination</i></p> <p><i>Allergies</i></p>	<p>Lesson 1 – Children to analyse their recipe, the skills they will be using, the equipment they will need and the ingredients they will need. Children to watch the following videos created by KL – <i>Bridge Hold, Claw Grip and Using a swivel peeler</i>. Children to use these videos to prepare their ingredients using cooking equipment safely whilst being monitored by adults. Children to also measure their ingredients independently using what has been learnt this year.</p> <p>Lesson 2 – Children to follow their recipe independently, safely and hygienically. Adult supervision at all times.</p> <p>Lesson 3 – Children to do a taste test and appearance test. Children to use a spider diagram to evaluate their product and use their results (and the advise from their peers) to make adjustments to their recipe to suit their preferences next time.</p>

DT – Summer 2- CAD and textiles- Upcycling old clothing

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Developing, planning and communicating ideas</p>	<p>I can experiment with computer-aided design. I can make mock-ups to test my design.</p>	<p>LO: to experiment with computer aided design and analyse its use in everyday life.</p>	<p>CAD</p>	<p>Task specification and purpose: to create a new item of clothing with a new design using old clothing (upcycling) linked to sustainability topic.</p>
<p>Textiles</p>	<p>Combining different fabric shapes Generate and communicate innovative ideas through research. Produce detailed lists of equipment and fabrics and formulate step-by-step plans for making. Investigate and analyse textile products linked to their final product and compare the final product to the original design specification. Know that a 3-D textile product can be made from a combination of pattern pieces, fabric shapes and different fabrics and that fabrics can be strengthened, stiffened and reinforced.</p>	<p>LO: to combine fabric shapes and create and test out innovative designs through investigation.</p> <p>LO: to investigate existing textile products linked to a specification.</p> <p>LO: to analyse step by step procedures to create a product.</p> <p>LO: to evaluate my final textile product and analyse improvements.</p>	<p>Computer aided design</p> <p>3D</p> <p>Dimensional</p> <p>2D</p> <p>Fabric</p> <p>Joining</p> <p>Textiles</p> <p>Market research</p> <p>Mood board</p>	<ol style="list-style-type: none"> Experiment with computer aided design (CAD) and analyse its use in everyday life e.g. jewellery, housing etc. Use chromebooks and CAD programme to create a CAD design for an item of clothing linked to our specification above. Test out different fabrics and designs creating a mood board in books for the item that they would like to create. Investigate different styles and techniques and share pieces of fabric from other people. Investigate using chromebooks what is on the market already (market research) are there any existing recycled clothing examples? Step by step- children to create a detailed sketch and plan for their final product and create step by step annotated picture instructions of how to create their final outcome. Evaluate- Children to look back at their mood board and final sketches to see whether they have achieved the original specification and reflect on their designs, CAD and final outcome.



Year 6

Subject – DT (Textiles using CAD) – Create a bag for an Amazon Explorer

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>DESIGN: use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>MAKE: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>EVALUATE & INVESTIGATE: investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work understand how key events and individuals in design and technology have helped shape the world</p>	<p>Pathway 1 - I can independently research a range of existing products. I can develop my own design criteria. I can create something that is aimed at a specific individual or group. I can create a product that is functional and fit for purpose. I can use computer aided design.</p> <p>Pathway 2 - I can select the correct tools/equipment to cut, shape, join and finish my products. I can use tools/equipment safely and accurately. I can select appropriate materials/component s to create my products. I can justify my choice of material/components based on, e.g. their properties, aesthetic qualities.</p> <p>Pathway 7 - Using computer aided design in textiles Generate innovative ideas through research and develop these using mock-ups and prototypes including using computer-aided design. Design functional, appealing products for the intended user that are fit for purpose based on a simple design specification. Select and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished.</p>	<p>L.O: I can analyse and generalise what the conditions are like in the Amazon rainforest to create criteria for a bag design.</p> <p>L.O: I can design a bag suitable for an explorer in the Amazon rainforest.</p> <p>L.O: I can operate CAD to create a plan including design <i>specifications</i> and steps of how to make my <i>product</i></p> <p>L.O: I can apply my plan to construct a bag that meets the <i>specification</i></p> <p>L.O: I can evaluate my product identifying strengths and areas for development against the original specifications.</p>	<p>computer aided design (CAD), computer aided manufacture (CAM) font, lettering, text, graphics, menu, scale, modify, repeat, copy, flip design brief, design criteria, design decisions, innovative, prototype seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces names of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings, iron transfer paper annotate, functionality, innovation, authentic, user, purpose, evaluate, mock-up, prototype</p>	<p>Lesson 1 Review conditions for explorers in the Amazon rainforest by using images and recounts. Create a mind map using words on drawings to show conditions identified. Expand mind map with specifications a bag would need to be suitable in these conditions (wet conditions = waterproof/sharp rocks = durable) Begin to sketch out ideas for bag design. Sketch book recording.</p> <p>Lesson 2 Children investigate and evaluate a range of existing textiles products and how they have been constructed using disassembly, and evaluate what the fabric shapes look like and how the parts have been joined. Use these findings to sketch a design (Or add to previous) and include captions for types of fabric/joining etc.</p> <p>Lesson 3 Develop computer-aided design (CAD) skills by using pattern making software (Wildthings) to generate, modify, scale, save and print pattern pieces. Recognise that designs can be easily modified and repeated on the computer without the need for a physical product. Print bag patterns on to paper. Evaluate as the children proceed with their work</p> <p>Lesson 4 Develop skills of threading needles and joining textiles using a range of stitches, building upon children's earlier experiences of stitches e.g. improving appearance and consistency of stitches and introducing new stitches Attach paper patterns to inside of fabric. Develop skills of sewing textiles by joining right side together and making seams. Children should investigate how to sew and shape curved edges by snipping seams, how to tack or attach wadding or stiffening and learn how to start and finish off a row of stitches. Evaluate as the children proceed with their work. Evaluate both as the children proceed with their work</p> <p>Lesson 5 Continue to stitch/construct bag, including any fasteners or straps.</p> <p>Lesson 6 Evaluate the final product in use, comparing the final product to the original design specification. Critically evaluate the quality of the design, the manufacture, functionality, innovation shown and fitness for intended user and purpose, considering others' opinions.</p>

Subject – DT/Cooking - Autumn 2 – Breakfast bars

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet prepare and cook a variety of dishes using a range of cooking techniques 	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 5- Food.</p>	<ul style="list-style-type: none"> I understand the principles of a healthy and varied diet and can explain the effects. I can demonstrate and apply the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). I can spoon ingredients between containers equally dividing mixture. I can mix/fold ingredients together carefully. I can measure using a jug independently. I can measure Using digital scales independently. I can follow and design a simple recipe independently. I can explain and apply my knowledge of how to work with food hygienically. I can evaluate what I have made and formulate an opinion. 	<p><u>Digital scale</u> – An instrument or machine for weighing.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Mix</u> – Combine or put together to form one</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> - Allergies are abnormal immune system reactions.</p>	<p>Initial lesson children research types of breakfast bars and different recipes and flavours.</p> <p>Children discuss similarities and differences. Discuss eat well plate and what would make a healthy breakfast bar. Look at some packaging from breakfast bars.</p> <p>Children use research to plan and design their recipe.</p> <p>Discuss hygiene rules.</p> <p>Share method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> Mixing Peeling if using fruit Grating if using zest <p>Discuss vocab</p> <ul style="list-style-type: none"> Personal hygiene Cross contamination Allergies <p>Show recipe step by step and children follow and complete their own.</p> <p>Second session – same day</p> <p>Children taste breakfast bars.</p> <p>Children taste cake and evaluate their product.</p>

DT– Spring 1- Bridges

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Developing, planning and communicating ideas</p> <p>Working with tools, equipment, materials and components to make quality products</p> <p>Technical knowledge</p> <p>Evaluation</p>	<p>Pathway 1- Developing, planning and communicating ideas.</p> <p>Pathway 2- Working with tools, equipment, materials and components to make quality products.</p> <p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 6 –Mechanisms.</p> <p>Pathway 8 – Structures.</p>	<p>L.O: I can analyse and evaluate designs of bridge types.</p> <p>L.O: I can compare and contrast different bridge designs considering why their purpose and location</p> <p>L.O: I can plan my bridge design, explaining why I have chosen to use my approach</p> <p>L.O: I can create my bridge using my design brief</p> <p>L.O: I can evaluate my bridge against my success criteria</p> <p>Developing, planning and communicating ideas</p> <p>I can independently research a range of existing products.</p> <p>I can create a product that is functional and fit for purpose.</p> <p>I can communicate my ideas through annotated sketches, cross-sectional and exploded diagrams.</p> <p>I can create a prototype.</p> <p><u>Working with tools, equipment, materials and components to make quality products</u></p> <p>I can use tools/equipment safely and accurately.</p> <p>I can select appropriate materials/component s to create my products.</p> <p>I can justify my choice of material/components based on, e.g. their properties, aesthetic qualities.</p> <p>Technical knowledge</p> <p>I can strengthen, stiffen and reinforce my products.</p> <p>I understand and can use mechanical systems in my products, e.g. gears, pulleys, cams, levers and linkages.</p> <p>Evaluation</p> <p>I can evaluate my products against my own design criteria.</p> <p>I can constructively evaluate the work of others against their design criteria.</p> <p>I can make improvements to my work based on my own and the evaluations of others</p> <p>Mechanisms</p> <p>Pulleys or Gears Generate ideas through research and develop and communicate a simple design specification.</p> <p>Select use a range of tools and equipment to make products that that are accurately assembled and well finished within the constraints of time, resources and cost.</p> <p>Compare the final product to the original design specification and test the quality of the design, manufacture and functionality with the user.</p>	<p>Bridge</p> <p>Mechanics</p> <p>Tools</p> <p>Equipment</p> <p>Pulleys</p> <p>Mechanisms</p> <p>Gears</p> <p>Structure</p> <p>Support</p> <p>Design</p> <p>Evaluate</p> <p>Generate</p>	<p>Activity 1 - children to analyse and evaluate designs of different bridge types. They annotate the physical features of the bridges and refer to the use/ location of each to reason why they may have been designed this way.</p> <p>Activity 2 - children to compare different types of bridges and their structure - why have they used certain designs? Discuss in their pairs the type of bridge and purpose. Sugar paper task – can they identify the physical parts of the bridge. What are the pros and cons of each bridge? Purpose – transport? Etc.</p> <p>Activity 3 - children to learn about different types of mechanisms to use when designing a bridge. Watch Video and make notes. Discuss why these are useful and whether this mechanisms are suited for different types of bridge locations.</p> <p>Activity 4 - Children to be provided with certain equipment to create own bridge. Children to then design own bridge to hold a certain amount of weight. Children to use ideas from bridges demonstrated e.g. suspension, arch, truss, cantilever, beam, cable stayed.</p> <p>Activity 5 - children to make own bridge using the skills they have learnt</p> <p>Activity 6 - children to evaluate their structure</p>

DT/Cooking –Spring 2- Marble Cake

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet prepare and cook a variety of dishes using a range of cooking techniques 	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 5- Food.</p>	<ul style="list-style-type: none"> I understand the principles of a healthy and varied diet and can explain the effects. I can demonstrate and apply the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl). I can spoon ingredients between containers equally dividing mixture. I can mix/fold ingredients together carefully. I can measure using a jug independently. I can measure Using digital scales independently. I can follow and design a simple recipe independently. I can explain and apply my knowledge of how to work with food hygienically. I can evaluate what I have made and formulate an opinion. 	<p><u>Digital scale</u> – An instrument or machine for weighing.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Knead</u> – To mix by pressing, folding, and pulling.</p> <p><u>Rise</u> - To increase in height, size, volume</p> <p><u>Mix</u> – Combine or put together to form one</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> - Allergies are abnormal immune system reactions.</p>	<p>Discuss hygiene rules.</p> <p>Share method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> Knead Mix <p>Discuss vocab</p> <ul style="list-style-type: none"> Rise Personal hygiene Cross contamination Allergies <p>Discuss and identify food groups and discussed the importance of a balanced diet.</p> <p>Show recipe step by step and children follow and complete their own.</p> <p>Second session – same day</p> <p>Children note changes in cake mix.</p> <p>Children taste cake and evaluate their product.</p> <p>Children suggest adaptation of recipe and rewrite recipe with their own plan.</p>

Subject – Summer 1 - DT/Cooking – Loaves

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<ul style="list-style-type: none"> understand and apply the principles of a healthy and varied diet prepare and cook a variety of dishes using a range of cooking techniques 	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 5- Food.</p>	<ul style="list-style-type: none"> I understand the principles of a healthy and varied diet. I can prepare and cook a variety of predominately savoury dishes using a range of cooking techniques. I can cut food safely using a bridge hold. I can measure food using a jug and digital scales independently. I can follow a simple recipe independently. I can explain and apply my knowledge of how to work with food hygienically. I can evaluate what I have made and formulate an opinion. 	<p><u>Digital scale</u> – An instrument or machine for weighing.</p> <p><u>Method</u> – A certain way of doing something.</p> <p><u>Knead</u> – To mix by pressing, folding, and pulling.</p> <p><u>Rise</u> – To increase in height, size, volume</p> <p><u>Mix</u> – Combine or put together to form one</p> <p><u>Equipment</u> – A list of things needed.</p> <p><u>Personal hygiene</u> – Personal hygiene is a collection of habits that people perform to keep themselves clean and their bodies healthy.</p> <p><u>Cross contamination</u> – Is how bacteria can spread. It occurs when juices from raw meats or germs from unclean objects touch cooked or ready-to-eat foods.</p> <p><u>Allergies</u> – Allergies are abnormal immune system reactions.</p>	<p>Children will investigate and research cost of bread. The cost of ingredients. They will use their recipe and cost out the price it will be to make their loaf.</p> <p>Share method with the children. Discuss skills they will be learning/using.</p> <ul style="list-style-type: none"> Knead Mix <p>Discuss vocab</p> <ul style="list-style-type: none"> Rise Personal hygiene Cross contamination Allergies <p>Discuss and identify food groups and discussed the importance of a balanced diet.</p> <p>Show recipe step by step and children follow and complete their own.</p> <p>Second session – same day Children note changes in cake mix. Children taste cake and evaluate their product. Children compare to shop brought bread including price.</p>

DT – Textiles – Summer 2- Keyrings

NC PoS	Key Concepts	Key Competencies	Key Vocabulary	Key Activities
<p>Using computer aided design in textiles Generate innovative ideas through research and develop these using mock-ups and prototypes including using computer-aided design.</p> <p>Design functional, appealing products for the intended user that are fit for purpose based on a simple design specification. Select and use a range of tools and equipment, including CAD, to make products that are accurately assembled and well finished</p>	<p>Pathway 4- Evaluating processes and products.</p> <p>Pathway 7 – Textiles</p>	<p>We will find out about Computer Aided Design - what it is, and how it is used. Then we will try out a Computer Aided Design software.</p> <p><u>L.O: I understand and can explain what computer aided design is</u></p> <p><u>L.O: I can apply my skills to design my own product</u></p> <p><u>L.O: I can evaluate my designs and suggest improvements</u></p>	<p>CAD – Computer aided design</p> <p>Evaluation</p> <p>Mock ups</p> <p>Prototypes</p> <p>Tinkercad</p>	<p>Getting started with Tinkercad</p> <p>Practising Tinkercad Basics video</p> <p>Familiarise yourself with the what is CAD? presentation and with the practising Tinkercad basics sheet ready for use in the lesson. The practising Tinkercad basics sheet can be downloaded and printed for pupils to use, if you prefer this to the digital version.</p> <p>Introduction Use the What is CAD? presentation to explain what Computer Aided Design is and how it is used.</p> <p>Learn the basics of how to use Tinkercad Show the children the practising Tinkercad basics video. Ensure children have Tinkercad open ready to start and ask them to work through the Tinkercad basics practise sheet. As children finish the practise exercise, ask them to experiment with Tinkercad to create an object from that by adding shapes, using shapes to cut away, resizing, etc.</p> <p>Draw a keyring in Tinkercad Show the keyring video tutorial. Ask the children to design their own keyring in Tinkercad</p> <p>Showcase The children show each other their keyring designs</p>