



	Year 3	Year 4	Year 5	Year 6
Autumn 1	Textiles – pattern design.	Structures/Mechanical Systems – design, make and evaluate Roman invention for dragon's den pitch.	Structures/Mechanical Systems - Design, make and evaluate pop up books about Egyptians.	Food technology: War time ingredients, recipes & rationing
Autumn 2		Electricity – design, make and evaluate torches.		Electricity – design, make and evaluate light up Christmas cards.
Spring 1	Food Technology – design, make and evaluate pizza.	Food Technology – design, make and evaluate a loaf of bread.		
Spring 2	Food Technology– design, make and evaluate healthy smoothies	Food Technology – healthy eating.	Textiles – design, make and evaluate an invisibility cloak.	
Summer 1	Structures/Mechanical systems - related to rivers and mountains projects.			Construction- build a shelter that would help you survive a natural disaster.
Summer 2			Food Technology– related to the rainforest topic.	Computer Aided Design



Purpose of Study

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Subject Content

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products



- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.



Term	Year 3	Year 4	Year 5	Year 6
Autumn 1	<p>Identify products purpose and material and evaluate its design and use</p> <p>Discover intended users and design own product using tie dye</p> <p>Create pattern pieces and prototypes</p> <p>Make your own textiles product by choosing appropriate tools and combining materials with some accuracy.</p> <p>Use design criteria to evaluate product</p>	<p>Identify who made the product, when it was made and what its purpose is</p> <p>Evaluate the product on design and use</p> <p>Identify design features that will appeal to intended users</p> <p>Communicate ideas and create prototypes for product</p> <p>Assemble materials together to make finished product</p> <p>Use design criteria to evaluate product</p>	<p>Who used the pyramids? When were they made and why?</p> <p>Who are my intended users and what do they want from my product?</p> <p>create prototype for pyramids</p> <p>select the appropriate tools and materials to build own pyramid</p> <p>Refer to planning and initial ideas to evaluate pyramid</p>	<p>evaluate original product</p> <p>gather information about what a particular group of people would want from your product</p> <p>Create design description of product</p> <p>Record a step by step plan for making</p> <p>evaluate food product</p>
Autumn 2		<p>Who invented the lightbulb?</p> <p>Identify what the product has been made from</p> <p>Evaluate the product on design and use</p> <p>Gather information about what a particular group or people want from a product</p>		<p>What is the purpose of this product and how has it been made?</p> <p>evaluate product on design, appearance and use</p> <p>create a design description of product</p> <p>Use suitable materials to make own light up christmas</p>



		<p>Create prototype</p> <p>Complete torch</p> <p>Use design criteria to evaluate product</p>		<p>card</p> <p>Evaluate christmas card by considering the views of others</p>
Spring 1	<p>Sort foods into the 5 groups on the eat well plate</p> <p>Research facts about given topic</p> <p>Gather information on what people want from the product</p> <p>Choose ingredients based on findings and design pizza</p> <p>use cooking techniques to prepare pizza hygienically and safely</p>	<p>What is bread made from, what types are there and which one would be best for us to make?</p> <p>Generate ideas that will meet the needs of a customer</p> <p>Use cooking techniques to prepare a loaf of bread</p> <p>Consider the views of others, including intended user, whilst evaluating product</p>		
Spring 2	<p>Understand that food and drink are needed to provide energy for a healthy and active lifestyle</p> <p>Research facts about given sportsman</p> <p>Gather information on what people want from the product</p>	<p>What foods are reared, caught, or grown in the UK and across the globe</p> <p>Recipes can be changed by adding or taking away ingredients</p> <p>Understand that the seasons can affect food produce</p>	<p>explore context and existing products</p> <p>describing the purpose of the product and how it is appealing to others</p> <p>communicate ideas and create prototype for design using differing forms of diagrams</p>	



	<p>Choose ingredients based on findings and design a healthy smoothie</p> <p>Prepare smoothie hygienically and safely.</p>	<p>Food miles and sustainability</p>	<p>select appropriate materials and make invisibility cloak</p> <p>evaluate invisibility cloak</p>	
Summer 1	<p>Intended users and purpose of object</p> <p>Design river/mountain and represent ideas in different ways</p> <p>Measure, mark, cut and shape materials and components</p> <p>Join, assemble and combine materials and components</p> <p>Use design criteria to evaluate product</p>	<p>Evaluate product on its design and use</p> <p>decide on design features and how they will appeal to audience</p> <p>represent ideas in sketches</p> <p>Use construction materials to build design</p> <p>evaluate product focussing on strengths and weaknesses.</p>		<p>Explore existing products and its contexts</p> <p>discover design features that will appeal to audience</p> <p>Select the tools and apply the practical skills and techniques to making product</p> <p>Use design criteria to evaluate product</p>
Summer 2			<p>Recap healthy eating</p> <p>research facts about famous person linked to topic</p> <p>identify cost and benefit of making product</p> <p>develop own design criteria</p>	<p>Communicate their ideas through detailed labelled drawings</p> <p>Develop a design specification</p> <p>Explore, develop and communicate aspects of their design proposals by</p>

Curriculum Overview
DT 2021-22



**HENRY HINDE
JUNIOR SCHOOL**

			<p>Follow safety and food hygiene procedures to make dish related to topic</p> <p>Use design criteria to evaluate product</p>	<p>modelling their ideas in a variety of ways</p> <p>Plan the order of their work, choosing appropriate materials, tools and techniques</p>
--	--	--	---	---