



Year 3 D&T Medium Term Overview

Topic	Aut 2 Home and Away	Spring 1 A Peachy Adventure	Summer 1 What Lies Beneath
Unit and Outcome	Shell Structures Children will design and create their own Christmas gift box using a net.	Cooking Children will design and make a platter of snacks that contain a balance of the main food groups.	Linkages and Levers Children will design and make a working part of the Krindlekrax that uses levers and linkages.
Topic Specific Vocabulary	packaging	slice (noun and verb)	lever
Subject specific Vocabulary	net	grate	mechanism
General Vocabulary	structure	health	movement
Prior Learning	<p>In KS1 pupils were taught:</p> <p>Designing</p> <ul style="list-style-type: none"> • Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their ideas through talking, mock-ups and drawings. <p>Make</p> <ul style="list-style-type: none"> • Plan by suggesting what to do next. • Select and use tools, skills and techniques suitable for the task, explaining their choices. • Select new and reclaimed materials and construction kits to build their structures. • Use simple finishing techniques suitable for the structure they are creating <p>Evaluate</p> <ul style="list-style-type: none"> • Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. • Evaluate their product by discussing how well it works in relation to the purpose, the user and whether it meets the original design criteria. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> • Know how to make freestanding structures stronger, stiffer and more stable. • Know and use technical vocabulary relevant to the project. 	<p>In KS1 pupils were taught:</p> <p>Design</p> <ul style="list-style-type: none"> - To design purposeful, functional, appealing products for themselves and other users based on design criteria - To 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"> - To use the basic principles of a healthy and varied diet to prepare dishes. - To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> - To evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> - To understand where food comes from. 	<p>In KS1 pupils were taught:</p> <p>Design</p> <ul style="list-style-type: none"> - To design purposeful, functional, appealing products for themselves and other users based on design criteria - To 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"> - To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> - To explore and evaluate a range of existing products - To evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> - To build structures, exploring how they can be made stronger, stiffer and more stable - To explore and use mechanisms [for example, levers, sliders, wheels and axles] in their product
Later Learning	<p>In Upper KS2 pupils will be taught:</p> <ul style="list-style-type: none"> - What a frame structure is - How to join materials - How to strengthen structures 	<p>In Year 4 pupils will be taught:</p> <ul style="list-style-type: none"> - That food can be reared or caught. - How to make healthy eating choices. - That food is needed to provide energy for the body. - How to join and combine a range of ingredients. - How to measure and weigh ingredients appropriately. - How to use techniques like chopping and slicing. 	<p>In Year 4 pupils will be taught:</p> <ul style="list-style-type: none"> - How to design and create a lamp which incorporates a circuit created in Science. - How to adapt their designs - How to choose the most appropriate materials for their lamp

<p>Year 3 National Curriculum Objectives</p>	<p>Design</p> <ul style="list-style-type: none"> • Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. • Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. <p>Make</p> <ul style="list-style-type: none"> • Order the main stages of making. • Use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. • Explain their choice of materials according to functional properties and aesthetic qualities. • Use finishing techniques suitable for the product they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> • Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. • Test and evaluate their own products against design criteria and the intended user and purpose. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> • Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. • Know and use technical vocabulary relevant to the project. 	<p>Design</p> <ul style="list-style-type: none"> • To generate and communicate ideas through design diagrams. • To understand and apply the principles of a healthy and varied diet. • To know where and how ingredients are grown or processed. <p>Make</p> <ul style="list-style-type: none"> • To select and use tools and equipment to perform practical tasks. • To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques like spreading, peeling and grating <p>Evaluate</p> <ul style="list-style-type: none"> • To evaluate their ideas and products against their own design diagrams. <p>Technical Knowledge</p> <ul style="list-style-type: none"> • To know how to use appropriate equipment and utensils to prepare and combine food.. 	<p>Design</p> <ul style="list-style-type: none"> • 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. • To generate, develop, model and communicate their ideas through discussion, annotated sketches <p>Make</p> <ul style="list-style-type: none"> • To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. • To accurately select from and use a wider range of materials and components, including construction materials according to their functional properties and aesthetic qualities <p>Evaluate</p> <ul style="list-style-type: none"> • To investigate and analyse a range of existing products • To 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>Technical knowledge</p> <ul style="list-style-type: none"> • To apply their understanding of how to strengthen, stiffen and reinforce more complex structures •
<p>More detailed knowledge required</p>	<ul style="list-style-type: none"> - A shell structure is a hollow structure made from a thin outer layer which offers shelter and protection. - Examples of a shell structure include O2, The Eden Project Biodomes, The Shard. - Everyday objects that are shell structures - a mug, a plant pot and packaging. - A net is a flat two dimensional shape, which contains score lines and when folded and glued together, forms a three dimensional shape. - Nets are often used for packaging items such as orange cartons, point of sale display units, tissue boxes and so on. 	<ul style="list-style-type: none"> - All foods contain nutrients which your body needs to stay active throughout the day. Some foods have more nutrients than others. - Breads are high in carbohydrates so therefore the filling should be high in protein and have vegetables as well. - Everyone should have their '5 a day' – this means five portions of fruit and vegetables, to get the right amount of nutrients. - It's important not to eat too much sugar and salt: sugary foods are bad for your teeth and can be fattening, and salty foods can lead to heart disease. - A meal should be made up of 1/3 fruit and veg, 1/3 carbohydrates and 1/3 of either protein or dairy and a little bit of fat. 	<ul style="list-style-type: none"> - A mechanical linkage is an assembly of bodies connected to manage forces and movement. - A lever is a rigid body capable of rotating on a point on itself. - A loose pivot is a fastener that joins things together. - A fixed pivot is a fastener that joins things to a fixed point. - Lever and linkage mechanisms usually produce oscillating or reciprocating movement.
<p>Year 3 Skills</p>	<p>Design</p> <ul style="list-style-type: none"> • To draw a design labelling parts and think about the order of their work. <p>Make</p> <ul style="list-style-type: none"> • To mark out and cut and shape materials • To assemble and join materials <p>Evaluate</p> <ul style="list-style-type: none"> • To refer to design diagrams when designing and making. • To identify what they liked about their product and one thing to change. <p>Technical Knowledge</p> <ul style="list-style-type: none"> • Develop and use knowledge of how to construct strong, stiff shell structures. • Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. 	<p>Design</p> <ul style="list-style-type: none"> • To generate and clarify ideas through discussion with peers and adults to develop design diagrams with reference to sensory characteristics (taste, texture, aroma) • To identify and check that each different food group has been included in appropriate quantities. <p>Make</p> <ul style="list-style-type: none"> • To plan the main stages of a recipe, listing ingredients, utensils and equipment. • To select and use appropriate utensils and equipment to prepare and combine ingredients. • To select from a range of ingredients to make appropriate food products, thinking about sensory characteristics (taste, texture, aroma) <p>Evaluate</p>	<p>Design</p> <ul style="list-style-type: none"> • To draw a design labelling parts and think about the order of their work. <p>Make</p> <ul style="list-style-type: none"> • To mark out and cut and shape materials • To assemble and join materials <p>Evaluate</p> <ul style="list-style-type: none"> • To refer to design diagrams when designing and making. • To identify what they liked about their product and one thing to change. <p>Technical Knowledge</p> <ul style="list-style-type: none"> • To know how mechanical systems such as levers and linkages create movement.

		<ul style="list-style-type: none"> To evaluate the ongoing work and the final product with reference to their design diagram. <p>Technical knowledge</p> <ul style="list-style-type: none"> To know how to use appropriate equipment and utensils to prepare and combine food To use a range of cooking techniques like cutting, peeling and grating. 	
Linked artists/historians/musicians etc.	Nicolas Grimshaw - designed The Eden Project Theodor Tobler of the Tobler company - created the chocolate bar and the packaging.	<ul style="list-style-type: none"> Gordon Ramsey Heston Blumenthal 	<ul style="list-style-type: none"> Archimedes - invented the lever
Linked Texts Purple – Fiction Blue – Non-Fiction	Packaging (D&T Workshop) Lynn Huggins-Cooper https://www.bbc.co.uk/teach/class-clips-video/design-challenge-making-packaging-soft-fruit-2d-3d-software/zr28qp3	Recipe books for children Kids Lunch Boxes – Naomi Potter Cooking Step By Step: More than 50 Delicious Recipes for Young Cooks (Dk Activities) Complete Children's Cookbook: Delicious step-by-step recipes for young chefs	How Things Work by Conrad Mason and Colin King Levers by Chris Oxlade



Year 4 D&T Medium Term Overview

Topic	Autumn 1 Varjak Paw	Spring 2 Tragic Titanic	Summer 2 S.O.S Save Our Species
Unit and Outcome	Textiles Children will make a hand puppet character from the story - Varjak Paw.	Lighting up the Titanic Children will create a lamp that incorporates a circuit created in Science.	Cooking Children will make healthy flapjacks that will be eaten at Mr Fox's dinner party.
Topic Specific Vocabulary	Stitch	Lantern	Dice (to chop) (L3)
Subject Specific Vocabulary	Fabric	Conductor	Recipe (L2)
General Vocabulary	Template	Circuit	Varied (L1)
Prior Learning	<p>In KS1 pupils were taught:</p> <p>Design</p> <ul style="list-style-type: none"> - To design a functional and appealing product for a chosen user and purpose based on simple design criteria. - To generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology. <p>Make</p> <ul style="list-style-type: none"> - To select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. - To select from and use textiles according to their characteristics. <p>Evaluate</p> <ul style="list-style-type: none"> - To explore and evaluate a range of existing textile products relevant to the project being undertaken. - To evaluate their ideas throughout and their final products against original design criteria. <p>Technical knowledge</p> <ul style="list-style-type: none"> - To understand how simple 3-D textile products are made, using a template to create two identical shapes. - To understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. - To explore different finishing techniques e.g. using painting, we fabric crayons, stitching, sequins, buttons and ribbons. - To know and use technical vocabulary relevant to the project. 	<p>In Year 3 pupils were taught:</p> <ul style="list-style-type: none"> - To design and create a pop up illustration for the topic using levers and linkages. 	<p>In Year 3 pupils were taught:</p> <ul style="list-style-type: none"> - To know that food is grown. - How to work hygienically and safely. - To understand that a healthy diet is made up from a variety and balance of different foods and drinks. - To analyse the taste, texture, smell and appearance of a range of foods. - To use techniques like cutting, peeling and grating.
Later Learning	<p>In Year 6 pupils will be taught:</p> <ul style="list-style-type: none"> - To design and create a textile Keepsake bag with an identity emblem. 	<p>In Year 5 pupils will be taught:</p> <ul style="list-style-type: none"> - To design and create fairground rides with moving parts. 	<p>In Year 5 pupils will be taught:</p> <ul style="list-style-type: none"> - To know the effect of seasons on food. - How to prepare food products taking into account the properties of ingredients. - To adapt recipes to change the appearance, taste, texture and aroma. - To measure and weigh ingredients using scales. - To use techniques like mixing and spreading.

<p>Year 4 National Curriculum Objectives</p>	<p>Design</p> <ul style="list-style-type: none"> To generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. To produce annotated sketches, prototypes, final product sketches and pattern pieces. <p>Make</p> <ul style="list-style-type: none"> To plan the main stages of making. To select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. To select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern. <p>Evaluate</p> <ul style="list-style-type: none"> To investigate a range of 3-D textile products relevant to the project. To test their product against the original design criteria and with the intended user. To take into account others' views. To understand how a key event/individual has influenced the development of the chosen product and/or fabric. <p>Technical knowledge</p> <ul style="list-style-type: none"> To understand how to securely join two pieces of fabric together. To understand the need for patterns and seam allowances. 	<p>Design</p> <ul style="list-style-type: none"> To use research to inform the design of functional products that are aimed at individuals and groups. To generate, develop and communicate their ideas through discussion and annotated sketches <p>Make</p> <ul style="list-style-type: none"> To select from and use a range of tools and equipment to perform practical tasks To select from and use a range of materials and components according to their functional properties. <p>Evaluate</p> <ul style="list-style-type: none"> To investigate and analyse a range of existing products To evaluate their ideas and products against their labelled diagrams To understand how key individuals in design and technology have helped shape the world (inventors) <p>Technical Knowledge</p> <ul style="list-style-type: none"> To apply their understanding of how to strengthen, stiffen and reinforce more complex structures To understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 	<p>Design</p> <ul style="list-style-type: none"> Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose. Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas. <p>Make</p> <ul style="list-style-type: none"> Plan the main stages of a recipe, listing ingredients, utensils and equipment. Select and use appropriate utensils and equipment to prepare and combine ingredients. Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics. <p>Evaluate</p> <ul style="list-style-type: none"> Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs. Evaluate the ongoing work and the final product with reference to the design criteria and the views of others. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> Know how to use appropriate equipment and utensils to prepare and combine food. Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Know and use relevant technical and sensory vocabulary appropriately.
<p>More detailed knowledge required</p>	<ul style="list-style-type: none"> Hand puppets are a type of puppet that is controlled by the hand or hands inside the puppet. Fabric can be joined together with a variety of different stitches e.g. running stitch and over stitch. Templates are a shaped piece of paper/card/plastic used as an outline for cutting out. Applique is a technique in which pieces of fabric are sewn onto another piece of fabric to create designs. 	<ul style="list-style-type: none"> Components of a light switch e.g. handles, switches. A circuit is a path through which electricity passes. The components in an electrical circuit e.g. battery, wires, switch, light bulb. Push-to-make switches allow the electricity to flow through the circuit when it is pressed but when it is released the circuit is broken and the switch is off. What is needed to make a circuit work - power source, closed switch, conductors touching the wires. A conductor is a material which allows an electrical current to pass through it. 	<ul style="list-style-type: none"> Ingredients can be reared or caught. Food is needed to provide energy for the body. Ingredients can be fresh, pre-cooked and processed. A healthy and varied diet is important. Fresh foods are healthier than processed foods. Chopping means to cut into either big or small pieces. Slicing means to cut into thin strips.
<p>Year 4 Skills</p>	<p>Design: Draw annotated sketches of design Refer to design criteria when making</p> <p>Make: Joining two pieces of fabric together</p> <p>Evaluate: Refer to design criteria when making</p> <p>Technical Knowledge: Know how to thread a needle Know how to strengthen, stiffen and reinforce existing fabrics. Know and use technical vocabulary relevant to the project.</p>	<p>Design: Draw a design and annotate Plan a sequence of actions to make a product, explaining their choice of tools and materials</p> <p>Make: Measure, mark out and cut and shape materials with some accuracy Assemble, join and combine materials with some accuracy Apply a range of finishing techniques.</p> <p>Evaluate: Refer to design criteria when designing and making Identify the strengths and areas for development in their product.</p> <p>Technical Knowledge Know how to include a working circuit into their design.</p>	<p>Design Draw labelled diagrams</p> <p>Make Make design decisions that take account of the availability of resources. Refer to design criteria when designing and making. Join and combine a range of ingredients. Measure and weigh ingredients appropriately.</p> <p>Evaluate To evaluate the flapjacks against set of criteria (taste/ smell/ appearance)</p> <p>Technical Knowledge To use techniques like chopping and slicing.</p>

Linked artists/historians/musicians etc.	<p>Famous people behind the puppets - including the Muppets/Sesame Street. https://promotionalpropsandcostumes.co.uk/people-behind-the-puppets-famous-puppeteers/</p>	<p>Know how to make strong shell structures</p> <ul style="list-style-type: none"> • Conrad Hubert (Founder of Eveready in 1888) • David Misell (inventor of flashlight). 	<ul style="list-style-type: none"> • Jamie Oliver • Mary Berry
Linked Texts Purple – Fiction Blue – Non-Fiction	<p>Sewing for Kids: 30 fun projects to hand or machine sew - Alexa Ward Sewing School: 21 sewing projects kids will love to make - Amie Plumley and Andria Lisle The Best of Sewing Machine Fun for Kids: Projects & 37 activities. - Lynda Milligan and Nancy Smith</p>	<p>Invention of the Flashlight: https://www.thoughtco.com/invention-of-the-flashlight-1991794</p> <p>Inventor Lab: Awesome build for Smart Makers by Dr Lucy Rogers</p> <p>The Little Inventors Handbook: A guide to becoming an ingenious inventor by Dominic Wilcox and Katherine Mengardon</p> <p>Electrical Wizard: How Nikola Tesla lit up the world By Elizabeth Rusch</p>	<p>Mary Berry's Baking Bible</p> <p>The Cake Book - Jamie Oliver</p> <p>Children's book of Baking: 60 Delicious Recipes for Children to Make: Over 60 Delicious Recipes for Children to Make</p>



Year 5 D&T Medium Term Overview

Topic	Autumn 1 A Land Faraway	Summer 2 Fun at the Fair
Unit and Outcome	<p align="center">Cooking</p> <p align="center">Children will cook a savoury dish of spring rolls.</p>	<p align="center">Structures and Pulleys</p> <p align="center">Children will design and make a fairground ride with moving parts.</p>
Topic Specific Vocabulary	Seasonal	Pulleys
Subject specific Vocabulary	Savoury	Rigid
General Vocabulary	Method	Assemble
Prior Learning	<p>In Year 4 pupils were taught:</p> <p>To know that food can be reared or caught. To make healthy eating choices. That food is needed to provide energy for the body. How to join and combine a range of ingredients. How to measure and weigh ingredients appropriately. To use techniques like chopping and slicing.</p>	<p>In Year 4 pupils were taught:</p> <p>To design and create a lamp which incorporates a circuit created in Science.</p>
Later Learning	<p>In Year 6 pupils will be taught:</p> <p>To know how food is processed into ingredients that can be eaten To know that different foods contain different substances (water, fibre) that are needed for health. To know the importance of a healthy diet from an understanding of a balanced diet. To use techniques like kneading and baking.</p>	<p>In Year 6 pupils will be taught:</p> <p>To generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes and pattern pieces. To select from and use a wider range of tools and equipment to perform practical tasks accurately. To understand how key events and individuals in design and technology have helped shape the world. To understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p>
Year 5 National Curriculum Objectives	<p>Design</p> <ul style="list-style-type: none"> To investigate and analyse a range of existing products <p>Make</p> <ul style="list-style-type: none"> To prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques <p>Evaluate</p> <ul style="list-style-type: none"> To evaluate their ideas and products against their own design criteria <p>Technical Knowledge</p> <ul style="list-style-type: none"> To understand seasonality 	<p>Design</p> <ul style="list-style-type: none"> 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 To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design <p>Make</p> <ul style="list-style-type: none"> To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately To 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>Evaluate</p> <ul style="list-style-type: none"> To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p>Technical knowledge</p> <ul style="list-style-type: none"> To apply their understanding of how to strengthen, stiffen and reinforce more complex structures. To investigate and analyse range of existing products To understand how key individuals in design and technology have shaped the world. To apply their understanding of computing to program, monitor and control their products.

More detailed knowledge required	<ul style="list-style-type: none"> - Know that different fruit and vegetables are only available at certain types of the year. - Know that different vegetables have different textures and can change after cooking. - Know that some nutrients are lost when cooking - particularly over cooking. - Know how to prepare resources and surfaces in a hygienic manner - Know that following a recipe includes measuring accurately - Know that recipes can be adapted based on taste and purpose - Know cooking requires adaptations to recipes - Know that using prototypes and evaluating prototypes is part of an effective design process 	<ul style="list-style-type: none"> - Levers, gears and pulleys are all mechanisms that make jobs easier to do. - Levers are the simplest type of mechanism. They are really good at lifting objects and can be used to make objects easier to lift. - A pulley is used to lift (or lower) heavy objects. They are wheel shaped with a groove that allows a cord to sit inside the groove. - A single pulley changes the direction of force, making pulling down easier than lifting up (adjusting window blinds).
Year 5 Skills	<p>Design: Design spring roll recipe Adapt recipes to change the appearance, taste, texture and aroma.</p> <p>Make: Prepare food products taking into account the properties of ingredients. Measure and weigh ingredients using scales.</p> <p>Evaluate: To evaluate the ongoing work and the final product with reference to their design.</p> <p>Technical Knowledge: Know the effect of seasons on food. To use techniques like mixing and spreading.</p>	<p>Design: Create 3 different designs for one product and choose which one to make - label and annotate - explaining the order in which they need to do things and listing equipment and material needed.</p> <p>Make: Make prototypes. Accurately measure, mark out, cut and shape materials Accurately assemble, join and combine materials Accurately apply a range of finishing techniques.</p> <p>Evaluate: Evaluate the quality of the design, manufacture and fitness for purpose of their prototype. Evaluate the final product against their original design</p> <p>Technical Knowledge: Know how to program a computer to control their product. Know how to reinforce and strengthen a 3D framework.</p>
Linked artists/ historians/ musicians etc.	<ul style="list-style-type: none"> ● Bobby Chinn ● Christine Ha 	<ul style="list-style-type: none"> ● Archimedes ● Elisha Graves Otis - invented the elevator
Linked Texts Purple – Fiction Blue – Non-Fiction	<p>Easy Spring Roll Cookbook - Maggie Chow</p> <p>Vietnamese Home Cooking - Charles Phan</p> <p>‘Super Foods for Super Kids’ by Noelle Martin, published by Rockridge Press</p> <p>The Vegetarian Cookbook, best for veggie families</p>	<p>Fairground Rides (Awesome Engineering) by Sally Spray</p> <p>Fairground (maker models) by Anna Claybourne</p> <p>The Funfair of Fear by Ian Ogilvy</p> <p>The boy who Swam with Piranhas by David Almond</p>



Year 6 D&T Medium Term Overview

Topic	Spring 1 Dragonology	Spring 2 Lest We Forget	Summer 1 Lest We Forget
Unit and Outcome	Cooking Children will design and make dragon bread.	Sewing Children will design and make their own treasured keepsake bag.	Woodwork and Electrical Circuits Children will create a moving vehicle
Topic Specific Vocabulary	dough	applique	chassis
Subject Specific Vocabulary	kneading	motif	prototype
General Vocabulary	prove	textile	component
Prior Learning	In Year 5 pupils were taught: <ul style="list-style-type: none"> - To know the effect of seasons on food - To prepare food products taking into account the properties of ingredients. - To adapt recipes to change the appearance, taste, texture and aroma. - To measure and weigh ingredients using scales. - To use techniques like mixing and spreading. 	In KS1 pupils were taught: <p>Design</p> <ul style="list-style-type: none"> - To design purposeful, functional, appealing products for themselves and other users based on design criteria - To 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"> - To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] - To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p>Evaluate</p> <ul style="list-style-type: none"> - To explore and evaluate a range of existing products - To evaluate their ideas and products against design criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> - To build structures, exploring how they can be made stronger, stiffer and more stable - To explore and use mechanisms [for example, levers, sliders, wheels and axles] in their product 	In Year 5 pupils were taught <ul style="list-style-type: none"> - To design and make a fairground ride with moving parts.
Later Learning	In Year 7 and KS3 pupils will be taught: <p>Design</p> <ul style="list-style-type: none"> - To use research and exploration to identify and understand user needs <p>Make</p> <ul style="list-style-type: none"> - To correct equipment use - To use a cooker and different methods for food preparation - To cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet. - To become competent in a range of cooking techniques. <p>Evaluate</p> <ul style="list-style-type: none"> - To evaluate and refine their ideas and products taking into account the views of intended users <p>Technical knowledge</p>	In Year 7 and KS3 pupils will be taught: <p>Design</p> <ul style="list-style-type: none"> - To use research and exploration to identify and understand user needs - To identify and solve their own design problems - To use this to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations use a variety of approaches - To generate creative ideas - To communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools <p>Make</p> <ul style="list-style-type: none"> - To select from and use specialist tools, techniques, processes, equipment and machinery precisely <p>Evaluate</p>	In KS3 pupils will be taught: <p>Design</p> <ul style="list-style-type: none"> - To use research and exploration to identify and understand user needs - To identify and solve their own design problems - To use this to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations use a variety of approaches - To generate creative ideas - To communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools <p>Make</p> <ul style="list-style-type: none"> - To select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture select from and use a wider, more complex range

	<ul style="list-style-type: none"> - To understand Vitamin C - The accurate use of bridge & claw method when cutting - To understand and apply the principles of nutrition and health. - To understand the source, seasonality and characteristics of a broad range of ingredients. 	<ul style="list-style-type: none"> - To analyse the work of past and present professionals - To evaluate and refine their ideas and products taking into account the views of intended users - To evaluate the impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists Design and technology <p>Technical knowledge</p> <ul style="list-style-type: none"> - To understand and use the properties of materials to achieve functioning solutions - 	<p>of materials, components and ingredients, taking into account their properties</p> <p>Evaluate</p> <ul style="list-style-type: none"> - To analyse the work of past and present professionals - To evaluate and refine their ideas and products taking into account the views of intended users and other interested groups - To understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists Design and technology <p>Technical knowledge</p> <ul style="list-style-type: none"> - To understand and use the properties of materials and the performance of structural elements to achieve functioning solutions - To understand how more advanced mechanical systems used in their products enable changes in movement and force understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs] - To apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].
<p>Year 6 National Curriculum Objectives</p>	<p>Design</p> <ul style="list-style-type: none"> • Understand and apply the principles of a healthy and varied diet • Understand how key events and individuals in design and technology have helped shape the world <p>Make</p> <ul style="list-style-type: none"> • Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. <p>Evaluate</p> <ul style="list-style-type: none"> • Investigate and analyse a range of existing products • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work <p>Technical Knowledge</p> <ul style="list-style-type: none"> • Know how to use techniques like kneading and baking. • Know how to use utensils and equipment including heat sources to prepare and cook food. • Know how food is processed into ingredients that can be eaten • Know that a recipe can be adapted by adding or substituting one or more ingredients. 	<p>Design</p> <ul style="list-style-type: none"> • To generate innovative ideas by carrying out research including surveys, interviews and questionnaires. • To develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design. • To design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. <p>Make</p> <ul style="list-style-type: none"> • To produce detailed lists of equipment and fabrics relevant to their tasks. • To formulate step-by-step plans and, if appropriate, allocate tasks within a team. • To select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost. <p>Evaluate</p> <ul style="list-style-type: none"> • To investigate and analyse textile products linked to their final product. • To compare the final product to the original design specification. • To test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. • To consider the views of others to improve their work. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> • To understand 3-D textile products can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • To understand fabrics can be strengthened, stiffened and reinforced where appropriate. 	<p>Design</p> <ul style="list-style-type: none"> • To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. <p>Make</p> <ul style="list-style-type: none"> • To select from and use a wider range of tools and equipment to perform practical tasks accurately. • To understand how key events and individuals in design and technology have helped shape the world. • To understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. <p>Evaluate</p> <ul style="list-style-type: none"> • To compare the final product to the original design specification. • To test products with the intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work. <p>Technical knowledge and understanding</p> <ul style="list-style-type: none"> • Understand that mechanical and electrical systems have an input, process and an output. • Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. • Know and use technical vocabulary relevant to the project.

<p>More detailed knowledge required</p>	<ul style="list-style-type: none"> - Know that different foods contain different substances (water, fibre) that are needed for health. - Know the importance of a healthy diet from understanding a balanced diet. - Understand that bread is a staple food product eaten all over the world. - Know how to prepare a hygienic worktop to keep yourself and others safe - know the techniques used to ensure bread rises - e.g. resting & kneading 	<ul style="list-style-type: none"> - Know that applique is the overlaying in which pieces of fabric are sewn or stuck on to a larger piece to form a picture or pattern. - Know that a seam is a line where two pieces of material are sewn together - Know the main stitches - blanket, hidden and running stitch. Know that those stitches remain the fundamental techniques of hand embroidery today. - Know that embroidery is a process of forming decorative designs with hand or machine needlework 	<ul style="list-style-type: none"> -Gears are toothed wheels that lock together and turn one another. The wheels are usually different sizes so that one gear speeds up to slow down the next gear. Gears are also used to change the direction of movement. - Gears are found in: Cars (in the gearbox and many other places) Bikes (usually attached to the chain) Children’s toys - A pulley is a wheel with a grooved rim in which a drive belt can run. - To know that a saw separates materials and is sharp (health and safety prep key) - To know how to strengthen structures - wooden structures need extra supports to stay attached other than glue
<p>Year 6 Skills</p>	<p>Design: Design bread loaf in the shape of a dragon and to adapt a recipe by adding more ingredients.</p> <p>Make: To use techniques like measuring, mixing, kneading and baking.</p> <p>Evaluate: To evaluate the dragon bread against set of criteria (taste/ smell/ appearance)</p> <p>Technical knowledge: To know how food is processed into ingredients that can be eaten. To know that a recipe can be adapted by adding or substituting one or more ingredients.</p>	<p>Design: Create 3 different designs for a product and create further designs/sketches for chosen design, from different perspectives. Label and annotate in detail.</p> <p>Make:Use techniques that involve a number of steps Demonstrate resourcefulness when tackling practical problems.</p> <p>Evaluate: Critically evaluate ideas and products against their original design specification.</p> <p>Technical knowledge: Know that a 3D textiles product can be made from a combination of fabric shapes.</p>	<p>Design:Create 3 different designs for a product and create further designs/sketches for chosen design, from different perspectives. Label and annotate in detail.</p> <p>Make:Use techniques that involve a number of steps Demonstrate resourcefulness when tackling practical problems.</p> <p>Evaluate:Critically evaluate ideas and products against their original design specification.</p> <p>Technical Knowledge: Know how mechanical systems such as cams and pulleys or gears create movement. Know how to join and reinforce the frame structure</p>
<p>Linked artists/ historians/ musicians etc.</p>	<ul style="list-style-type: none"> • Paul Hollywood • Nadiya Hussain 	<p>List of famous tailors: https://wunderlabel.com/blog/p/14-most-famous-tailors-of-all-time/</p> <p>History of seamstresses https://fashion-history.lovetoknow.com/fashion-clothing-industry/seamstresses</p>	<ul style="list-style-type: none"> • Martin Erbahard & Mark Tarpenning - both founders of Tesla • Christopher Edward Bangle is an American automobile designer. Bangle is known best for his work as Chief of Design for BMW Group, where he was responsible for the BMW, MINI and Rolls-Royce motor cars.
<p>Linked Texts</p> <p>Purple – Fiction</p> <p>Blue – Non-Fiction</p>	<p>Dough and Crust - Richard Bertinet</p> <p>Ken Forkish: Flour Water Salt Yeast</p> <p>Bread Bread Bread by Ann Morris</p> <p>Tony’s Bread by Tomie dePaola</p>	<p>My Big Book of Sewing: Over 60 fantastic projects to stitch and sew by CICO Books</p> <p>Simple Sewing Projects for Kids: Easy Sewing Ideas Will Amaze Your Kids: Sewing Patterns for Kids by Mr Kim Graves</p> <p>More Weekend Sewing: 25+ quick & easy projects - Annie’s Sewing Projects.</p>	<p>The Story of the Car - by Giles Chapman</p> <p>All Kinds of Cars by Carl Johanson</p>