Firs Primary School

Design and Technology Policy

Reviewed February 2020

The Purpose of the Design and Technology Policy

This policy outlines the teaching and learning of design and technology. All children will have the opportunity to undertake design and technology throughout their time at Firs Primary School. The teaching of design and technology is planned to ensure a progression of knowledge and skills across the foundation and primary phases.

Aims (Intent)

At Firs Primary School we ensure thorough coverage of the National Curriculum objectives for design and technology, providing opportunities for children to develop their knowledge and skills in the areas of design, making, evaluating, technical knowledge and cooking and nutrition. Our aims are that:

- Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iiterative process of designing and making. They work in a range of relevant contexts. Children develop skills in designing, evaluating, making and technical knowledge.
- Children will also learn a crucial life skill through learning about nutrition and food. Pupils will 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.

In addition, we aim to provide further opportunities for personal, spiritual, moral, social and cultural development through the teaching of design and technology by:

- Ensuring that children develop a greater awareness of current environmental issues through the study of the impact of modern methods of food production on the environment
- A specific emphasis on the development of vocabulary and oracy relevant to design and technology and in wider contexts, through the incorporation of discussion and vocabulary-based tasks in D&T lessons.
- Building cultural capital for our pupils by developing cross curricular links with other subjects, for instance Art and Design and History, exposing them to the best that has been said and done in the field of design and technology e.g. the opportunity to study the work of great architects and engineers including Isambard Kingdom Brunel and Cornelius Drebbel.
- Providing extra-curricular opportunities to enable children to further build upon their interests and talents in the area of design and technology e.g. children have the opportunity to take part in a STEAM club ‘Destination Imagination’ in which children have the opportunity to work scientifically, building on the skills learned in DT, outside of the classroom, working with other children and in different settings.

Implementation

Progression Guidance from the school’s academy (DDAT) has been used in conjunction with the school’s own EYFS progression guidance document to ensure that skills and knowledge in design and technology are built systematically on what children have learned in the previous key stage. Learning is revisited throughout each phase ensuring a secure foundation of skills and knowledge is in place, to prepare children for the transition to Key Stage 3.

A design and technology knowledge and skills map has been created (see appendix), which identifies the key learning and vocabulary to be taught within each topic across the school. This enables teachers to identify prior learning required for each topic and supports their planning for children working below or towards age related expectations. For each topic, staff are provided with a topic book outlining the key skills, knowledge and vocabulary – this supports teachers to recognise and build upon cross curricular links.

Design and Technology is taught for at least six half terms in every two-year topic cycle. It is taught this way in order to ensure that children benefit from meaningful cross-curricular links, which provide a context and purpose for their learning. Within the designated half termly topics, design and technology is taught as frequently as is necessary to deliver the objectives of the National Curriculum in each phase.

Lessons are adapted to meet the needs of pupils with special educational needs and/or disabilities (SEND) or those with English as an additional language (EAL) through a variety of methods, for example the use of visual communication software (Communication in Print), word banks, differentiated equipment and materials, pre-teaching, additional adult support or focused small group work.

Children who require interventions to support their learning in other areas of the curriculum will have these at different times each week to ensure that they never frequently miss the same subject lesson. They are never withdrawn from class during teaching inputs.

Assessment and Recording of Work

Teachers use formative assessment throughout lessons (e.g. observations and assessment) and adapt teaching accordingly to address any misconceptions that may arise. Also, at the end of the topic, teachers complete a summative assessment based on whether children have demonstrated through their work that they have met the national curriculum objectives and progression guidance for their phase. This helps the subject leader to monitor progress and attainment in design and technology across the school.

Children in the Early Years Foundation Stage (Reception and Nursery) are assessed using the Early Years Development Matters guidance and at the end of the reception years against the Early Learning Goals. EYFS objectives within the areas of communication and language development, physical development, personal, social, and emotional development, mathematics, understanding the world and expressive arts and design all contribute to laying the foundations for effective learning in design and technology throughout the primary phase.

A variety of methods are used to record work in design and technology, including pictures, structured worksheets, sketches, diagrams, flow charts, model making, written explanations, photographs, school displays and the occasional video recording. Work may be recorded in individual topic books, or in whole class topic books. Design and technology is a largely practical subject and there is no expectation that work is recorded for every lesson. Evidence shows that instant verbal feedback is the most effective form of feedback and this is prioritised in design and technology lessons, although work carried out in books should be marked in acknowledgement.

Resources

Some resources for the teaching of design and technology are held in a central store, these include equipment used for teaching food technology, mechanical and electrical products and computer programming.

Phase teams also have their own annual budget which allows them to purchase any additional materials and equipment they may need to deliver the national curriculum objectives.

Safety in Design and Technology

The safety of the children is the responsibility of the class teacher. The children are made aware of the safe use and correct procedure involved when using tools and equipment in a learning environment and how to follow proper procedures for food safety and hygiene. The children are made aware of the need to be careful and to understand that their actions can affect others. The children build up a range of skills when using equipment to reduce unnecessary risk.

- Rotary cutters are to be used with a safety ruler
- Craft knives are used only by 5/6 under direct supervision of an adult
- Glue guns are used (low temperature) under supervision.

All staff, including helpers, are made aware of food safety procedures when working with food to minimise any risks. The children wear protective clothing if necessary.

Monitoring and Review

The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology subject leader. The work of the subject leader also involves supporting colleagues in the teaching of design and technology, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The design and technology subject writes an annual report in which she/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The design and technology subject leader has specially-allocated, regular management time in order to review evidence of the children's work and undertake lesson observations of design and technology teaching across the school.

The application of this DT policy will be monitored by the curriculum leaders and reviewed and agreed by Governors Spring 2021.

Appendix: Design and Technology Knowledge and Skills Map

	EYFS	Year 1/2	Year 3/4	Year 5/6
National Curriculum/EYFS Curriculum and Development Matters	**Physical Development** ***(40-60 months)*** Uses simple tools to effect changes in materials Handles tools, objects, construction and malleable materials with safety and increasing control Eats a healthy range of foodstuffs and understands the need for variety in food Shows some understanding that good practices with regard to exercise, eating, sleeping and hygiene can contribute to good health Shows understanding of how to transport and store equipment safely ***(ELG)*** Children handle tools and equipment effectively Children know the importance for good health of physical exercise and a healthy diet and talk about ways to keep healthy and safe **Understanding the World** ***(40-60 months)*** Completes a simple program on a computer Uses ICT software to interact with age-appropriate computer software ***(ELG)*** Children recognise that a range of technology is used in places such as homes and schools. They select and use technology for particular purposes **Expressive Arts and Design** ***(40-60 months)*** Understands that different materials can be combined to create new effects Manipulates materials to achieve a planned effect Constructs with a purpose in mind, using a variety of resources Uses simple tools and techniques competently and appropriately Selects appropriate resources and adapts work where necessary Selects tools and techniques needed to shape, assemble and join materials they are joining ***(ELG)*** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function	Pupils should be taught to: ▪ 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 ▪ select from and use a range of tools and equipment to perform practical tasks [e.g. 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 ▪ explore and evaluate a range of existing products ▪ evaluate their ideas and products against design criteria ▪ build structures, exploring how they can be made stronger, stiffer and more stable ▪ explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products ▪ use the basic principles of a healthy and varied diet to prepare dishes ▪ understand where food comes from	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 ▪ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design ▪ select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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 ▪ 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 ▪ 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 [e.g. series circuits incorporating switches, bulbs, buzzers and motors] ▪ apply their understanding of computing to program, monitor and control their products ▪ 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	

Key Learning By Topic				
		Enchanted Woodland Children will make a moving picture linked to an aspect of their topic or key text, which incorporates either a lever or slider. • explore and use mechanisms [levers and/or sliders], in their products • select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing] **Moon Zoom** Children will learn how to make a moving vehicle incorporating wheels and axels. • explore and use mechanisms [wheels and axles], in their products • select from and use a range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing] • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics **Muck, Mess and Mixtures** Children will explore foods from around the world, identifying their countries of origin. They will learn how to sort the foods into food types, and identify which foods are healthy/unhealthy. They will learn to prepare a number of simple healthy dishes from different cultures. • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from • select from and use a wide range of ingredients, according to their characteristics **Street Detective** Children will explore existing road and street signs, identifying their purpose and evaluating their effectiveness. They will then design their own street signs to encourage people to look after the local environment (incorporating the use of ICT). • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria	**I am Warrior (double DT unit)** Children will research, design and make Roman or Celtic shields, evaluating their finished product against the design criteria. They will also follow a simple Roman recipe to make bread, soup or porridge • investigate and analyse a range of existing products • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design • select from and use a wider range of tools and equipment to perform practical tasks [e.g. cutting, shaping, joining and finishing], accurately • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • *prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques* **Playlist** Making instruments: research, develop, design, make and evaluate. • 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 • select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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 • 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 **Tremors** Children will design and build either a model volcano that lights up, or a building that vibrates/shakes as if in an earthquake. • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design • select from and use a wider range of materials and components, including construction materials,	**Frozen Kingdom** Children will work in groups to build large scale shelters (using the outdoor environment if possible) • generate, develop, model and communicate their ideas through discussion, • select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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 • apply their understanding of how to strengthen, stiffen and reinforce more complex structures **Bloodheart** Children will investigate and analyse a range of existing food and drinks packaging, considering materials, sustainability, attractiveness and information provided on the label. They will develop design criteria and then design their own packaging for an imaginary food product, using computer aided design techniques. They will evaluate their final design against the design criteria given. • 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 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 **Darwin's Delights** Children will design, build and evaluate mechanical animal models based on the Nuffield DT project. • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design • select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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

		Land Ahoy Children will investigate a range of materials, exploring their characteristics. They will select the most suitable materials with which to make a model boat; designing, building, testing and evaluating their boat. - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology - select from and use a range of tools and equipment to perform practical tasks [e.g. 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 **Bright Lights, Big City** Children will learn where bread fits within the healthy food wheel. They will learn about different types of bread and which are most/least healthy. They will learn to make bread using a simple recipe/ - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from **Superheroes** Children will learn about the healthy food wheel/pyramid. They will learn where meat comes from, matching meat products to the animals they come from. They will learn how to make healthy snacks using fresh, unprocessed ingredients. - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from - select from and use a wide range of ingredients, according to their characteristics **Scented Garden** Children will explore a range of commercially available bug hotels and use these to establish design criteria for their own bug hotel. They will collect a range of natural and recycled materials and use these to make their own - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria - select from and use a range of tools and equipment to perform practical tasks [e.g. 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 - build structures, exploring how they can be made stronger, stiffer and more stable	textiles and ingredients, according to their functional properties and aesthetic qualities - understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors] **Burps, Bottoms, Bile** Children will learn about healthy and unhealthy food groups. They will learn about where different meats, fruits and vegetables come from, examining the difference between intensively reared meats and sustainable, organic and/or free-range farming methods. They will learn that fresh food is healthier than processed foods and will examine the sugar content of a range of popular drinks and snacks. They will learn how to make healthy snacks, with no added sugar. - *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 - 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 - understand and apply the principles of a healthy and varied diet **Mighty Metals** Children will learn how to build and program a simple robot using a robotics kit. - 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 - apply their understanding of computing to program, monitor and control their products **Blue Abyss** Children will learn about Cornelius Drebbel and the invention of the Submarine, looking at the changes and improvements to Drebbel's initial design over time by other inventors/engineers, and the impact that his invention has had on the world in different contexts e.g. the use of submarines in war, science and conservation. - understand how key events and individuals in design and technology have helped shape the world	functional properties and aesthetic qualities - apply their understanding of how to strengthen, stiffen and reinforce more complex structures - evaluate their ideas and products against their own design criteria and consider the views of others to improve their work **Off With Her Head** Children will prepare and cook a Tudor stew using seasonal vegetables - 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 - 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 **Pharaohs** Understand and use electrical systems in products made: design and make a board game including lights, switches, buzzers or motors. - understand and use electrical systems in their products [e.g. series circuits incorporating switches, bulbs, buzzers and motors] - investigate and analyse a range of existing products - 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 - select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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 their ideas and products against their own design criteria and consider the views of others to improve their work

		Towers, Turrets and Tunnels Children will explore a variety of materials and construction techniques in order to design and build either a tower or bridge to solve a problem e.g. a bridge to reach between two tables for a model car to drive over, or a high tower to keep the treasure safe. ▪ build structures, exploring how they can be made stronger, stiffer and more stable ▪ evaluate their ideas and products against design criteria ▪ select from and use a range of tools and equipment to perform practical tasks [e.g. 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		**Time Traveller (cross-curricular unit with art and design)** Children will design a house based on a great architect's design style (e.g. arts and crafts, brutalist, art deco etc), specifying materials in the design and examining cost effectiveness. They will build a model of their design either practically or using computer aided design. They will learn about how architectural styles have developed in response to changes in society over time understand how key events and individuals in design and technology have helped shape the world ▪ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design ▪ select from and use a wider range of tools and equipment to perform practical tasks [e.g. 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 ▪ 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

Progression in Skills				
	Design			
		• State the purpose of the design and the intended user • Explore materials, make templates and mock ups e.g. moving picture / lighthouse • Generate own ideas for design by drawing on own experiences or from reading	• Gather information about the needs and wants of particular individuals and groups • Develop their own design criteria and use these to inform their ideas • Research designs • Share and clarify ideas through discussion • Model their ideas using prototypes and pattern pieces • Use annotated sketches, cross-sectional drawings and diagrams • Use computer-aided design	• Carry out research, using surveys, interviews, questionnaires and web-based resources • Identify the needs, wants, preferences and values of particular individuals and groups • Develop a simple design specification to guide their thinking • Recognise when their products have to fulfil conflicting requirements • Generate innovative ideas, drawing on research Make design decisions, taking account of constraints such as time, resources and cost • Develop prototypes
	Make			
		• Select from a range of tools and equipment explaining their choices • Select from a range of materials and components according to their characteristics • Follow procedures for safety • Use and make own templates • Measure, mark out, cut out and shape materials and components • Assemble, join and combine materials and components Use simple fixing materials e.g. temporary – paper clips, tape and permanent – glue, staples • Use finishing techniques, including those from art and design	• Select tools and equipment suitable for the task • Explain their choice of tools and equipment in relation to the skills and techniques they will be using • Select materials and components suitable for the task • Explain their choice of materials and components according to functional properties and aesthetic qualities • Order the main stages of making • Produce detailed lists of tools, equipment and materials that they need • Follow procedures for safety • Use a wider range of materials and components, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components	
			• Measure, mark out, cut and shape materials and components with some accuracy • Assemble, join and combine materials and components with some accuracy apply a range of finishing techniques, include those from art and design, with some accuracy	• Accurately measure to nearest mm, mark out, cut and shape materials and components • Accurately assemble, join and combine materials/ components • Accurately apply a range of finishing techniques, including those from art and design • Use techniques that involve a number of steps Demonstrate resourcefulness, e.g. make refinements
	Evaluate			
		• Talk about their design ideas and what they are making • Make simple judgements about their products and ideas against design criteria • Suggest how their products could be improved Evaluating products and components used • Investigate - what products are, who they are for, how they are made and what materials are used	• Identify the strengths and weaknesses of their ideas and products • Consider the views of others, including intended users, to improve their work • Refer back to their design criteria as they design and make • Use their design criteria to evaluate their completed products • Investigate - how well products have been designed, how well products have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products achieve their purposes and how well products meet user needs and wants • Identify great designers and their work and use research of designers to influence work	
			• Identify the strengths and weaknesses of their ideas and products • Consider the views of others, including intended users, to improve their work • Investigate - who designed and made the products, where products were designed and made, when products were designed and made and whether products can be recycled or reused •	• Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make • Compare their ideas and products to their original design specification • Investigate - how much products cost to make, how innovative products are and how sustainable the materials in products are

<table>
<tr><th colspan="4">Technical Knowledge</th></tr>
<tr><td></td><td>• Understand about the simple working characteristics of materials and components
• Understand about the movement of simple mechanisms including levers, sliders (Year 1) wheels and axles (Year 2)
• Understand that food ingredients should be combined according to their sensory characteristics
• Know the correct technical vocabulary for the projects they are undertaking
• Understand how freestanding structures can be made stronger, stiffer and more stable</td><td colspan="2">▪ Understand how to use learning from science and maths to help design and make products that work
▪ Know that materials have both functional properties and aesthetic qualities
▪ Know that materials can be combined and mixed to create more useful characteristics
▪ Know that mechanical and electrical systems have an input, process and output
▪ Use the correct technical vocabulary for the projects they are undertaking</td></tr>
<tr><td></td><td></td><td>▪ Understand how levers and linkages or pneumatic systems create movement
▪ Understand how simple electrical circuits and components can be used to create functional products
▪ Understand how to program a computer to control their products
▪ Know how to make strong, stiff shell structures
▪ Know that a single fabric shape can be used to make a 3D textiles product
▪ Know that food ingredients can be fresh, pre-cooked and processed</td><td>▪ Understand how cams, pulleys and gears create movement
▪ Understand how more complex electrical circuits and components can be used to create functional products
▪ Understand how to program a computer to monitor changes in the environment / control their products
▪ Know how to reinforce/strengthen a 3D framework
▪ Know that a 3D textiles product can be made from a combination of fabric shapes
▪ Know that a recipe can be adapted a by adding or substituting one or more ingredients</td></tr>
<tr><th colspan="4">Cooking and Nutrition</th></tr>
<tr><td></td><td>• Know where food comes from
• Use appropriate equipment to weigh and measure ingredients
• Prepare simple dishes safely and hygienically, without using a heat source
• Use techniques such as cutting
• Name and sort foods into the five groups of the 'eat well' plate
• Know that everyone should eat at least five portions of fruit and vegetables every day</td><td colspan="2">▪ Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world
▪ Know that seasons may affect the food available
▪ Understand how food is processed into ingredients that can be eaten or used in cooking
▪ How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source
▪ How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</td></tr>
<tr><td></td><td></td><td>▪ Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate
▪ Know that to be active and healthy, food is needed to provide energy for the body
▪ Measure using grams
▪ Follow a recipe</td><td>▪ Know that recipes can be adapted to change the appearance, taste, texture and aroma
▪ Know that different foods contain different substances - nutrients, water and fibre - that are needed for health
▪ Understand the need for correct storage
▪ Measure accurately
▪ Work out ratios in recipes</td></tr>
</table>

Vocabulary (Tier 2 and 3)		**Enchanted Woodland** mechanisms levers sliders tools cutting joining glue tape shaping finishing scissors movement evaluate **Moon Zoom** wheels axels measure saw scissors cut join glue tape faster slower design materials wood card plastic elastic band characteristics evaluate **Mush, Mess and Mixtures** healthy balanced varied diet location origin healthy unhealthy cultures traditions/traditional ingredients measure taste sweet salty sour sort	**I am Warrior (double DT unit)** research design make evaluate strengths weaknesses design criteria pattern colour material wood card metal plastic strong weight recipe savoury measure weigh hygiene peeling chopping slicing grating mixing spreading kneading ingredients baking **Playlist** design make evaluate research design criteria materials purpose sketch materials aesthetic functional improve strengths weaknesses users instrument noise sound **Tremors** design make construct	**Frozen Kingdom** design criteria communicate discuss tools equipment cutting joining materials functional strengthen stiffen reinforce structure weatherproof waterproof water resistant insulating shelter **Bloodheart** investigate analyse research packaging materials sustainability aesthetic appeal/appealing design criteria design evaluate computer aided design information labelling sustainable recyclable cost effective **Darwin's Delights** design construct evaluate design criteria diagram gears pulleys cams levers

		hygiene **Street Detective** road sign street sign warning information persuasion design environment purpose audience effectiveness design attractive bright template evaluate **Land Ahoy** materials plastic paper fabric card metal wood heavy light float sink waterproof water resistant dissolve evaluate characteristics **Bright Lights, Big City** bread healthy unhealthy grain flour recipe mix stir measure weigh ingredients	materials components electrical circuit wires batteries cells bulbs buzzer motor light shake vibrate **Burps, Bottoms, Bile** healthy unhealthy varied diet food wheel/pyramid sweet savoury sour seasonal grown reared caught processed fresh pre-prepared intensive farming factory farming sustainable farming/fishing organic free range ingredients weigh measure hygiene peeling chopping slicing grating mixing spreading kneading baking recipe grams tea spoon table spoon	linkage stiffen reinforce materials aesthetic function joining mechanical prototype **Off With Her Head** locally produced chicken/vegetable/beef stock ingredients weigh measure hygiene peeling chopping slicing grating mixing grams taste colour texture hygiene healthy varied diet savoury sweet sour **Pharaohs** electrical circuit wires switches buzzers motors bulbs batteries cells parallel circuit series circuit user purpose aesthetic design design criteria make evaluate strengths

		bake temperature oven safety hygiene whisk dough knead wholemeal white **Superheroes** meat fruit vegetables farming fresh chicken pork beef fish eggs sheep cows pigs healthy unhealthy balanced varied diet sugar grain ingredients characteristics recipe measure weigh mix **Seaside Garden** design evaluate natural recycled materials join build stick cut glue	**Mighty Metals** computing program monitor control functional robot components debug **Blue Abyss** submarine inventor/invention uses science war navy conservation prototype dive weights engineer submerge surface power	weaknesses components diagram prototype existing products research functional **Time Traveller (cross-curricular unit with art and design)** architect/architecture style movement research investigate analyse design build evaluate design criteria design floorplan strengthen stiffen reinforce Art-deco Brutalist Gothic Contemporary Tudor Victorian Classical Sustainable Materials