Design and Technology Curriculum Map and Progression document

St Peter's is an active Catholic Community, inspired by the life of Jesus. It is a place where children learn and grow in a happy, secure and nurturing environment with Christ at its centre.

At St Peter's our aims are that:

- Everyone is encouraged to strive to achieve individual excellence in all learning experiences.
- As part of the Catholic Church in Winchester we support all members of the School community in their journey of faith, by acknowledging and celebrating the presence and active love of God.
- As a Christian community we reach out to parents, the community and the wider world.

The Vision and Mission statements underpin the school curriculum. From these a culture and ethos is generated that supports the spiritual development of all involved in the community. The school is committed to ensuring that the curriculum is broad and balanced in order that the needs of all children are provided for and the uniqueness of each individual is valued. We develop the whole child through striving for excellent academic achievement along with valuing the spiritual, social, moral, cultural, physical and creative development of each individual.

We believe that intelligence is multi-faceted, and children learn in different ways; the curriculum must support this.

In all subjects, **recalling pre-knowledge and skills** is fundamental to our rationale for all curriculum areas. This means that essential linked knowledge/ skills are **revised** and links made with children's current learning in all subjects. Key concepts/ end points for each topic are highlighted and **over-learning** of these areas occurs through **repetition, modelling and scaffolding of learning**. Through our subject-specific Schemes of Work, we make sure that learning for all is progressive and sequential. In addition, reading and vocabulary are emphasised in all subjects. Thus, key concepts become embedded in the **long-term memory.**

Aims

 The national curriculum for design and technology aims to ensure that all pupils:
☐ **develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world**
☐ **build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users**
☐ **critique, evaluate and test their ideas and products and the work of others**
☐ **understand and apply the principles of nutrition and learn how to cook.**

2022-23
Curriculum from Design and Technology Association
DT Curriculum Map: Units relate to the Year Group unless otherwise stated.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	Continuous provision resources available- children must be taught how to use these. Construction kits- Lego, Duplo, Magnetix, Hammer and nails. Water runs, marble runs, conker runs. Small scale junk modelling- yogurt pots, cereal boxes, bottles, rolls, boxes. Large scale- guttering, tyres logs, wild lands objects, milk crates. Lolly sticks, straws, card wheels, paper, matchsticks. Use of fixings- sellotape, masking tape, string, wool, ribbon, blue tack, staples, split pins, paper clips, pipe cleaners, treasury tags, glue sticks, PVA. Tools- scissors, hammers, role play building sets, rolling pins, extruders (garlic press and play dough pressers). Tape measures, staplers, hole punch, cutters, tape dispensers. Use of resources on continuous basis- for; msking play dough, biscuits, bread, salt dough, decorations, junk modelling, role play activities. ICT- Bee bots, computers, IWB, role play phones, IPAds, digital cameras, talk tins.					
Year 1		**Preparing fruits and vegetables – linked Science**		**Templates and joining Puppets – link to Science**		**Freestanding structures Castles – link to History**
Year 2		**Mechanisms - wheels and axles Fire Engines – link to History**		**Slides and levers Easter Cards**		**Templates and joining Bags for life**
Year 3		**Levers and linkages Shadow puppets - linked to science and English (villains)**	**Healthy diet Sandwiches, rolls, wraps and pittas link to Science**			**Roman chariots– mechanisms – wheels and axles combined with shell structures - linked to History**
Year 4		**2D-3D structures Sewing Anglo-Saxon purses link to History**		**Shell structures/combining programming – pizza boxes** **Healthy and varied diet Pizza making link to Geography**		**Simple programming/electrics Light up toys linked to English**
Year 5		**Seasons and culture Making seasonal scones/biscuits**		**Combining different fabric shapes Design and sew Mexican applique for wall hanging link to Geography**		**Moving mechanisms – levers, linkages, axles and pulleys Greek catapults linked to History and Science**
Year 6		**Cams and moving mechanisms Mechanical cam toys linked to Victorians**		**Seasons and culture Bread**		**Computer aided design Designing tablet covers**

Progression of skills

Developing, planning and communicating ideas

Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Draw on own experiences to help generate ideas	• Draw on their own experiences to help generate ideas	• Generate ideas from drawing on their own and other people's experience.	• Generate ideas for an item, considering its purpose and the users.	• Generate ideas considering the purpose for which they are designing	• Generate ideas through brainstorming and identify a purpose for their product	• Communicate their ideas through detailed labelled drawings
• Suggest ideas and explain what they will do	• Suggest ideas and explain what they are going to do	• Develop their design ideas through discussion, observation, drawing and modelling	• Identify a purpose and establish criteria for a successful product	• Make labelled drawings from different views showing specific features	• Draw up a specification for their design	• Develop a design specification
• Model ideas using variety of objects	• Model ideas on card and paper	• Identify a purpose for what they intend to design and make	• Plan the order of their work before starting. Explore, communicate design proposals by modelling ideas	• Develop a clear idea of what has to be done planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail.	• Develop a clear idea of what has to be done, planning how to use materials equipment and processes, and suggesting alternative methods of making if the first attempts fail.	• Explore develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways
• Use a variety of objects to show ideas	• Develop design ideas from earlier research	• Make simple drawings and label parts.	• Make drawings with labels when designing	• Evaluate products and identify criteria that can be used for their own designs	• Use results of investigations, information sources, including ICT when developing design ideas	• Plan the order of their work, choosing appropriate materials, tools and techniques

Working with tools, materials and components to make quality products (including food)

Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Use tools for play and making purposes	• Make their design using appropriate techniques	• Begin to select tools and materials: use vocab to name and describe them	• Select tools and techniques for making their product	• Select appropriate tools and techniques for making their product	• Select appropriate materials tools and techniques	• Select appropriate tools ,materials, components and techniques • Assemble components and make working models
• Cut and stick using a variety of materials	• With help measure mark out and cut a range of materials	• Measure cut and score with some accuracy	• Measure , mark, score , cut out and assemble components with more accuracy	• Measure, mark, cut out and shape a range of materials using a range of appropriate tools equipment and techniques	• Measure and mark out accurately • Use tools and equipment safely and accurately	• Use tools safely and accurately
• Investigate using a variety of tools	• Use tools e.g. scissors and a hole punch safely	• Use hand tools safely and appropriately	• Work safely and accurately with a range of simple tools	• Join and combine component and materials accurately in temporary and permanent ways	• Weigh and measure accurately, (time, dry ingredients, liquids)	• Construct products using appropriate joining techniques
• Assemble and join different materials • Select and use tools for basic food handling with directed ingredients	• Assemble join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape • Select and use appropriate fruit and vegetables, use appropriate tools • Use basic food handling, hygienic practices and personal hygiene	• Assemble join and combine materials in order to make a product • Cut, shape and join fabric to make a simple item. Use basic sewing techniques • Follow safe procedures for food safety and hygiene • Choose and use appropriate finishing techniques	• Think about their ideas as the making progresses. Be willing to change things if this helps them to improve their work • Measure, tape, pin, tuck and join fabric with some accuracy • Demonstrate hygienic food preparation and storage • Use finishing techniques to strengthen and improve the appearance of their product, using a range of equipment including ICT	• Sew using a range of different stitches, weave, knit • Measure, join, pin, cut and join fabric with some accuracy • Use simple graphical communication techniques • Demonstrate hygienic food preparation and storage and adapt or modify ideas	• Apply the rules for basic food hygiene and other safe practices, e.g. –hazards relating to the use of ovens • Cut and join with accuracy to ensure good quality finish of the product	• Make modifications as they go along • Pin, sew and stitch materials together to make a product • Achieve a high quality product

Evaluating processes and products

Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
• Explain what their object is and how it works in relation to the purpose	• Evaluate their product by discussing how well it works in relation to the purpose	• Evaluate against their design criteria	• Evaluate their product against the original design criteria e.g. how well it meets its intended purpose	• Evaluate their work both during and at the end of the assignment	• Evaluate a product against the original design	• Evaluate their product identifying strengths and areas for development, and carrying out appropriate tests • Record their evaluations using drawings with labels
• Make changes based on evaluation	• Evaluate their products as they are developed, identifying strengths and possible changes they might make	• Evaluate products as they are developed identifying strengths and possible changes they might make	• Dissemble and evaluate familiar products	• Evaluate their products carrying out appropriate tests	• Evaluate it personally and seek evaluation from others	• Evaluate against their original criteria and suggest ways that their product can be improved
	• Evaluate their product by asking questions about what they have made and how they have gone about it	• Talk about their ideas saying what they like and dislike about them	• Talk about their ideas saying what they like and dislike about them			