Crowan Primary School
Design Technology Curriculum

Intent	Implementation	Impact
At Crowan Primary School we aim to provide children with a DT education that is relevant in our rapidly changing world. We want to encourage our children to become problem solvers who can work creatively on individual and shared projects. We believe that high-quality DT lessons will inspire children to think independently, innovatively and develop creative, procedural and technical understanding. Our DT curriculum provides children with opportunities to research, represent their ideas, explore and investigate, develop their ideas, make a product and evaluate their work. Children will be exposed to a wide range of mediums including textiles, food and woodwork; through this, children will develop their skills, vocabulary and resilience, as well as a wide range of skills and techniques ranging from structures and strengthening to sewing and programming.	We have a clear rolling programme of skills progression and coverage of Design Technology topic areas in line with the National Curriculum. Children have access to key knowledge, language and meanings to understand Design Technology and to use these skills across the curriculum. In Design Technology, children are asked to solve problems and develop their learning independently. This allows the children to have more ownership over their curriculum and lead their own learning in Design Technology. The reflective process of Investigate/Gather, Design, Build and Evaluate are used through all Design projects to enhance learning by using learning from previous projects and progressing the skills that they have been taught. Cross curricular links with English, Maths and ICT skills are also taught in Design Technology so children can apply and embed the skills they have learnt in a purposeful context.	From a well designed and implemented curriculum the children will: ➢ have clear enjoyment and confidence in design and technology that they will then apply to other areas of the curriculum. ➢ ultimately know more, remember more and understand more about Design Technology, demonstrating this knowledge when using tools or skills in other areas of the curriculum and in opportunities out of school. ➢ will achieve age related expectations in Design Technology. ➢ develop skills as designers and attributes they can use beyond school and into adulthood.

Progression of skills in Design Technology

Foundation and Key Stage 1 – Progression of Skills

		Key Stage One Milestones	
Skills in Design Technology	Reception	Year 1	Year 2
Developing, planning and communicating ideas.	From the EYFS Curriculum: • Manipulate materials to achieve a planned effect • Construct 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 using. **Early Learning Goal:** Children sing songs, make music and dance, and experiment with ways of changing them. ***They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.***	• to draw on their own experience to help generate ideas • to suggest ideas and explain what they are going to do • to identify a target group for what they intend to design and make • to model their ideas in card and paper • to develop their design ideas applying findings from their earlier research	• generate ideas by drawing on their own and other people's experiences • to develop their design ideas through discussion, observation , drawing and modelling • to identify a purpose for what they intend to design and make • to identify simple design criteria • to make simple drawings and label parts
Working with tools, equipment, materials and components to make quality products		• to make their design using appropriate techniques • With help measure, mark out, cut and shape a range of materials • how to use tools *eg scissors and a hole punch* safely • to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape • to select and use appropriate fruit and vegetables, processes and tools • basic food handling, hygienic practices and personal hygiene • use simple finishing techniques to improve the appearance of their product	• begin to select tools and materials; use vocab' to name and describe them • to measure, cut and score with some accuracy • to use hand tools safely and appropriately • to assemble, join and combine materials in order to make a product • to cut, shape and join fabric to make a simple garment. Use basic sewing techniques • follow safe procedures for food safety and hygiene • to choose and use appropriate finishing techniques
Evaluating processes and products		• to evaluate their product by discussing how well it works in relation to the purpose • to evaluate their products as they are developed, identifying strengths and possible changes they might make	• to evaluate against their design criteria • to evaluate their products as they are developed, identifying strengths and possible changes they might make

		• to 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

Design Technology is an integral part of the Foundation Stage learning. It is interwoven into everyday learning. The children have many opportunities throughout each day and week to develop their skills within this subject. An area within the classroom, as well as in the outdoor area, is available for children to access through both teacher lead and self-initiated learning where the children can learn and develop all aspects of the progression skills. The Rolling Programmes is only a general idea and may change regularly to suit the children interest.

Foundation	Key skills	The Big Question	Suggestions
Autumn	Constructing with a purpose	What tools and ingredients do I need?	Baking and icing a Christmas Cake
Spring	Explore and use different fabrics	Which fabrics are easy to cut? Which are waterproof?	Make a blanket for a teddy, or make a parachute for a small toy
Summer	Collecting, assembling and combining materials	What are the best materials to use? What do I need to join them together?	Make a money box/or Jam jar butterfly/mini-beast scene

YEAR A

All 'The Big Question' and 'Suggestions' are changeable, they are only possible suggestions.

Key Stage 1	**Key skills**	**The Big Question**	**Suggestions**
Autumn	Textiles - joining	Should I use glue to join or is there another way?	Sewing – Christmas decoration
Spring	Structures – stronger, stiffer, more stable	Why doesn't the play equipment fall down when we play on it?	Playground equipment mini models
Summer	Mechanisms – levers, sliders	How can I make this story come to life?	Moving picture books

Key Stage 1 YEAR B	**Key skills**	**The Big Question**	**Suggestions**

Autumn	Textiles - joining	My socks have holes in them shall I throw them away?	Sock puppets
Spring	Mechanisms – wheels, axels	How do the wheels stay on the car?	Make your own moving vehicles
Summer	Garden focus – cutting, shaping, joining, finishing.	Where do all the bugs go at night?	Make your own bug hotel

Key Stage 2 – Progression of Skills

	Lower Key Stage 2 Milestones		Upper Key Stage 2 Milestones	
Skills in Design Technology	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas.	• to generate ideas for an item, considering its purpose and the user/s • to identify a purpose and establish criteria for a successful product. • to plan the order of their work before starting • to explore, develop and communicate design proposals by modelling ideas • to make drawings with labels when designing	• how to generate ideas, considering the purposes for which they are designing • to make labelled drawings from different views showing specific features • to 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 • to evaluate products and identify criteria that can be used for their own designs	• to generate ideas through brainstorming and identify a purpose for their product • to draw up a specification for their design • to 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 • to use results of investigations, information sources, including ICT when developing design ideas	• to communicate their ideas through detailed labelled drawings • to develop a design specification • to explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways • to plan the order of their work, choosing appropriate materials, tools and techniques
Working with tools, equipment, materials and	• to select tools and techniques for making their product • measure, mark out, cut, score and assemble	• to select appropriate tools and techniques for making their product • to measure, mark out, cut and shape a range of materials, using	• to select appropriate materials, tools and techniques • to measure and mark out accurately	• to select appropriate tools, materials, components and techniques • to assemble components to make working models

components to make quality products	components with more accuracy • to work safely and accurately with a range of simple tools • to think about their ideas as they make progress and be willing to change things if this helps them to improve their work • to measure, tape or pin, cut and join fabric with some accuracy • demonstrate hygienic food preparation and storage • to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT	appropriate tools, equipment and techniques • to join and combine materials and components accurately in temporary and permanent ways • to sew using a range of different stitches, to weave and knit • to measure, tape or pin, cut and join fabric with some accuracy	• to use skills in using different tools and equipment safely and accurately • to weigh and measure accurately (time, dry ingredients, liquids) • to apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • to cut and join with accuracy to ensure a good-quality finish to the product	• to use tools safely and accurately • to construct products using permanent joining techniques • to make modifications as they go along • to pin, sew and stitch materials together to create a product • to achieve a quality product
Evaluating processes and products	• to evaluate their product against original design criteria e.g. how well it meets its intended purpose • to disassemble and evaluate familiar products	• to evaluate their work both during and at the end of the assignment • to evaluate their products carrying out appropriate tests	• to evaluate a product against the original design specification • to evaluate it personally and seek evaluation from others	• to evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests • to record their evaluations using drawings with labels • to evaluate against their original criteria and suggest ways that their product could be improved

Rolling Programme of Coverage

All 'The Big Question' and 'Suggestions' are changeable, they are only possible suggestions.

Year A

Lower Key Stage 2	Key skills	The Big Question	Suggestions
Autumn	Structures, packaging – strengthen, stiffen, reinforce	Where does Santa keep his lunch?	Lunch boxes.
Spring	Mechanisms – levers, pulleys	What would make my monsters even more scary?	Moving Monsters
Summer	Textiles – cutting, shaping, joining, finishing	How do I keep my money safe?	Purses, Wallets

Year B

Lower Key Stage 2	Key skills	The Big Question	Suggestions
Autumn	Structures – strengthening, stiffening, reinforcing.	How can I secure all my important things?	Treasure Box
Spring	Textiles – cutting, shaping, joining, finishing	How can I recycle old clothes?	Design a T-shirt / Pieces of clothing
Summer	Mechanisms – levers, pulleys	How do I make this come to life?	Moving books

YEAR A

Upper Key Stage 2	Key skills	The Big Question	Suggestions
Autumn	Structures – strengthening, stiffening, reinforcing	How do I make music with cardboard?	Musical instruments
Spring	Mechanisms – Cams, linkages, gears	How can I make my toy move?	Moving toys
Summer	Textile - cutting, shaping, joining and finishing	What shall I wear to the festival?	Make your own festival hat?

YEAR B

Upper Key Stage 2	Key skills	The Big Question	Suggestions

Autumn	Structures – strengthening, stiffening, reinforcing	How would I help desert plants alive in this country?	Shelters / Biomes
Spring	Mechanisms – Cams, linkages, gears	What is the best way to make this move?	Automaton Projecy
Summer	Computing to programme to control their products.	How do I make something move?	Lego Education WeDo project.