

DESIGN AND TECHNOLOGY PROGRESSION MAP

Overview:

Our curriculum encourages children to understand that by exploring their own choices when designing and making they will be able to bring their ideas to life, making a product fulfil a specification. They will learn to evaluate process & technique to develop their own knowledge and understanding in order to empower the choices they make.

EYFS Development Matters Reference

- Explore, use and refine a variety of artistic effects to express their ideas and feelings
- Return to and build on their previous learning, refining ideas and developing their ability to represent them
- Create collaboratively, sharing ideas, resources and skills

EYFS ELGs

- Safely use and explore a variety of materials, tools and techniques experimenting with colour, design, texture, form and function
- Share their creations, explaining the process they have used
- Make use of props and materials when role-playing characters in narratives and stories

National Curriculum Reference for Key Stage 1

- 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 (for example 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 [for example, 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

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In the scheme below objectives relating to ‘**design**’ and ‘**evaluate**’ should be applied where possible across all Design and Technolgy contexts.
Objectives specific to mechanisms/ product design are identified in **red**, those specific to textiles are identified in **blue**, and those specific to food are identified in **green**.

In each year, pupils will be learning to:

	Nursery	Reception	1	2	3
Design	Explore different materials through play Develop their own ideas and start to think about which materials to use	Select appropriate resources and say what they are going to make Draw a simple pictorial plan Use a template to draw around Begin to use the language of designing and making (join, build, shape, mix, longer, shorter, heavier) Children know the importance of a healthy diet and can talk about ways to keep healthy Use senses to describe food	State what they are making and who it is for Use own experiences to design a product based on set design criteria Communicate their ideas and designs through talking, pictures and simple plans Make choices about materials from a given list and create a list of materials needed. With support think about sensory characteristics when combining food ingredients	State what they are making, who it is for and identify a purpose for their product Use own experiences and knowledge of existing products to help come up with ideas Use simple design criteria to design functional and appealing products Communicate ideas and designs through talk, pictures, labelled drawings and templates Justify their choices of materials using scientific knowledge of properties and suitability (can be verbal) Use given templates and mock ups to design and make their products	Establish success criteria for what will make a successful product Research different design ideas Annotate drawings with materials chosen and why they have made these choices Select appropriate materials and tools ensuring they are fit for purpose Choose ingredients from a small selection and consider nutrition, taste, smell and appearance when developing a recipe Consider best way of fixing materials
Make	Use one-handed tools and equipment, for example, make snips in paper with scissors Explore ways of joining different materials explore different textures	Construct with a purpose in mind selecting and using a variety of materials Select appropriate tools and techniques needed to shape, assemble and join materials	Choose appropriate materials from a given selection according to their properties and characteristics Select a range of appropriate tools and equipment and use them safely (with support) Use scissors to cut and shape paper and fabric	Use a variety of tools effectively and safely Mark out and cut materials including textiles Accurately draw and cut around templates and shapes Begin to measure out materials with support	Work through plan in order Measure materials/ textiles accurately Mark out and cut materials/ textiles with accuracy

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		Explore joining materials using glue, cellotape, making tape, split pins, staples, paper clips Use scissors to cut paper Handle equipment and tools safely and effectively Begin to cut, spread and mix Understand need to wash hands before cooking	Use a template to draw and cut around with support Use a variety of methods to join materials (for example glue, masking tape, split pins) Begin to use simple finishing techniques to improve the appearance of their product Make simple sliding mechanisms Use glue to join fabric Practise stirring, mixing, pouring, grating, peeling Follow instructions/ steps of a recipe with support Follow hygiene rules Spread using a knife Cut with a knife (with support)	Choose effective ways to join, assemble and combine materials Use simple finishing techniques to improve the appearance of their product Create a simple winding mechanism Use joining, rolling or folding to make structures stronger Use basic sewing techniques to join two pieces of fabric Use techniques such as mixing, grating, kneading, cutting, spreading Follow the steps of a recipe Follow hygiene rules Cut with a knife	Thread a smaller needle and knot thread Use ways of embellishing fabric eg sewing on a button for decoration, sewing on sequins/adding chain stitch Accurately and safely : peel, chop, slice, grate harder foods
Evaluate	talk about differences in materials and say what they like/dislike	Take part in a verbal evaluation of the product and be able to answer questions Identify what they like about it and one thing to improve	Start to evaluate existing products and identify what they like/dislike about them Say what was good and what was weaker in their product Evaluate their outcomes against the success criteria – verbally with support	Evaluate existing products, against the design criteria Describe what went well, thinking about design criteria Compare their final product with their original design and explain whether it was successful Suggest improvements for their products and explain ideas	Evaluate existing products, against the design criteria and consider how they could be improved Use design criteria to evaluate finished product Identify strengths and weaknesses Evaluate finished product for overall functionality and appearance

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Technical knowledge required		That materials can be joined together in different ways Fruit and vegetables are healthy Too much sugar is not healthy Eating well contributes to good health That hands can carry germs and should be washed before handling food	That tools need to be handled safely Sliders help us move things A slider moves along a bar or strip Food comes from plants or animals Ingredients have properties e.g. sweet, sour, soft, hard, runny There are basic hygiene rules that need to be followed – hands washed, hair up, apron on Understand that fruit and vegetables are healthy	That tools need to be handled safely Freestanding structures can be made stronger by eg making thicker, propping up, glueing or using stronger material Food comes from UK and wider world. Identify carbohydrate, fruit/veg, protein (draw eat well plate) Five fruit or vegetables a day is healthy	Know how different mechanisms work and why/when they should be used e.g. levers, sliders, wheels Healthy food and drink are important for active healthy bodies. Healthy diet= variety/balance of food/drinks There are different types of stitches and they all have advantages and disadvantages
Useful Vocabulary		ideas, thoughts, materials, design, join, make, build, shape, tools, split pin, staple, paperclip, template, scissors, glue, masking tape, hole punch fruit vegetable mix, spread, cut healthy	ideas, thoughts, materials, design, join, make, build, shape, tools, split pin, staple, paperclip, template, scissors, glue, masking tape, hole punch planning, investigating, evaluate, choices, equipment, appearance, characteristics, properties, cut, fold, join, fix, evaluate, slider, assemble, explain, safety fruit, vegetable, plant, animal, food properties e.g. sweet, sour, hard, runny, soft healthy, recipe, hygiene stir, mix, pour, cut, spread, grate, peel	ideas, thoughts, materials, design, join, make, build, shape, tools, split pin, staple, paperclip, template, scissors, glue, masking tape, hole punch planning, investigating, evaluate, choices, make, equipment, appearance, characteristics, properties, cut, fold, join, fix, evaluate, axle, wheel, template, shape, assemble, explain, safety user, purpose, ideas, design criteria, product, function, roll, stronger, thicker, structure, framework, weak, strong, base, top mix, cut, knead, grate, spread, ingredients, dough healthy diet, recipe, carbohydrate, protein, hygiene Felt, running stitch, back stitch needles, thread	As previous years and in addition: model, annotated, width, breadth, capacity, marking out, assemble texture, taste, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic names of fabrics, chain stitch, seam, drawstring, loop Prototype

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Projects	child -led	child –led as well as taught elements in topics Magical Me: 3D model of house (joining techniques) Making cakes Designing a room Celebrations: making a 3D crown for the Wise men Making Christmas cards Land and Sea: Cooking biscuit 3D dinosaur model (joining techniques) People That Help Us: Making Easter cards 3D vehicles (joining techniques) Designing a new form of transport Fantasy: Fairy Tale castle (joining techniques) Our Country: Cooking scones Making a crown for the Queen	Pirates – design, make and evaluate pirate hat using felt/material Toys – exploring sliders to create a moving picture for a story Gingerbread man – designing, making and evaluating gingerbread men Superheroes – superhero Fruit salad skewers <i>Discreet lesson as part of English focus – following instructions to make a sandwich</i>	Knights and castles – design, make and evaluate a shield Great Fire of London – design, make and evaluate a model with winding mechanism Dinosaurs – making and evaluation a felt dinosaur (focus is on sewing process and techniques involved and not the designing element) Making bread <i>Discreet lesson as part of English focus – following instructions to make a sandwich – Lighthouse Keeper’s Lunch</i>	
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Note on progression within the 'Make' strand of Design and Technology

Children in Reception will have the opportunity to explore the following materials and tools both in their child-initiated and adult directed learning:

Materials	Tools
Paper Card Tissue paper Cardboard Fabric Felt Glue Masking tape Cellotape Treasury tags Split pins Paper clips Pipe cleaners String Ribbon Crispy Cakes (Cornflakes/Rice Crispies, chocolate) Cakes (eggs, butter, flour, sugar) Scones (eggs, milk, sugar, butter, flour)	Scissors Hole punches Staplers Wooden spoons Metal spoons Spreading knives Cutters Spatulas

Across Year 1 and Year 2 children will have the opportunity to explore the following materials and tools and build upon the skills they have learned in Reception:

Materials	Tools
Paper Card Tissue paper Cardboard Felt Glue Masking tape Sellotape Split pins Fruit Sandwiches (bread, butter, cheese, ham etc) Bread (flour, salt, yeast, sugar) Gingerbread Men (flour, salt, bicarbonate of soda, ginger, butter, sugar, golden syrup)	Scissors Pinking shears (Y1) Hole punches Staplers Wooden spoons Metal spoons Spreading knives Cutting knives Peelers Graters

Progression within this strand relates to the types of materials and tools used but also in the level of independence and accuracy with which they are used.