

Intent

Our Design and Technology curriculum is intended to provide opportunities for our pupils to design and make a product in response to a given purpose. At every stage they will be encouraged to ask and answer questions to enable them to evaluate their designs and begin to think logically to solve any problems. It will allow our children to be creative learners and promote imagination through a practical subject that will excite and engage all.

Skills	Pre School	Foundation	Year 1	Year 2	Year 3	Year 4
Design Understanding contexts, users and purposes. Generating, developing, modelling and communicating ideas	Personal, Social and Emotional Select and use activities and resources, with help when needed. Physical Development Choose the right resources to carry out their own plan. Understanding the World Explore how things work. Expressive Arts and Design Explore different materials freely, in order to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them.	Expressive Arts and Design – Creating with materials ELG Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.	Research similar existing products. Explain what their product is for and how it will work. Design products for themselves and others following design criteria. Generate own ideas. Model their ideas in card and paper. Use pictures and words to plan their design.	Use knowledge of existing products to produce ideas. Explain the purpose of the product, how it will work and how it will be suitable for the user. Design products for themselves and others following design criteria. Explain what they want to do and describe how they will do it. Generate own ideas and plan what to do next. Choose the best tools and materials and explain their choices. Describe their design using pictures, words, models and diagrams.	Begin to research others' needs. Describe the purpose of the product and explain how it will work. Show their design meets a range of requirements and make design decisions. Have at least one idea about how to create the product. Create a plan which shows order, equipment and tools. Make a prototype. Describe their design using accurately labelled sketches and words.	Use research for design ideas. Begin to create own design criteria. Show their design meets a range of requirements and is fit for purpose. Make and explain design decisions, considering availability of resources. Have at least one idea about how to create the product and suggest improvements for their design. Produce a plan, explain it to others and say how realistic it is. Make a prototype. Describe their design using labelled drawings from different views showing specific features.
Make Working with tools,	Physical Development	Physical Development	Explain what they are making and why.	Explain what they are making and why it fits the purpose.	Select suitable tools and equipment, explain their choices and begin to use them	Select suitable tools and equipment, explain their choices

equipment, materials and components to make quality products	Use one-handed tools and equipment, for example, making snips in paper with scissors. Expressive Arts and Design Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.	Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor ELG – Fine Motor Skills Use a range of small tools, including scissors, paintbrushes and cutlery Expressive Arts and Design Create collaboratively, sharing ideas, resources and skills.	Consider what they need to do next. Select the tools and equipment to cut, shape, join and finish and explain their choices. With support, measure, mark out, cut and shape a range of materials. Choose suitable materials and explain their choices. Try to use finishing techniques to make their product look good. Work in a safe and hygienic manner.	Make suggestions about what they need to do next. Join materials and components together in different ways. With support, measure, mark out, cut and shape a range of materials and components. Describe which tools they are using and why. Choose suitable materials and explain their choices depending on characteristics. Use finishing techniques to make their product look good. Work safely and hygienically.	accurately. Select appropriate materials that are fit for purpose. Work through their plan in order. Consider how good their product will be. Begin to measure, mark out, cut and shape materials and components with some accuracy. Begin to assemble, join and combine materials and components with some accuracy. Begin to apply a range of finishing techniques with some accuracy.	in relation to required techniques and use accurately. Select appropriate materials that are fit for purpose and explain their choices. Work through their plan in order. Realise if their product will be a good quality. 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 with some accuracy.
Evaluate Evaluating processes		Expressive Arts and Design	Talk about their work, linking it to what they were asked to do. Talk about existing products	Describe what went well, thinking about the design criteria.	Use the design criteria to	Use the design criteria to evaluate products and begin to

and products		Return to and build on their previous learning, refining ideas and developing their ability to represent them. Expressive Arts and Design – Creating with materials ELG Share their creations, explaining the process they have used.	considering use, materials, how they work, audience and where they might be used. Talk about existing products, and say what is and isn't good. Talk about things that other people have made. Begin to talk about what could make the product better.	Talk about existing products and express their own opinions, considering use, materials, how they work, audience and where they might be used. Evaluate how good existing products are. Talk about what they would do differently if they were to do it again and why.	evaluate their finished product and say what they would change to make the design better. Begin to evaluate existing products, considering how well they have been made, the materials, whether they work, how they have been made and their fitness for purpose. Begin to understand by whom, when and where products were designed. Learn about some inventors, designers, engineers, chefs or manufacturers of ground-breaking products.	explain how they could improve the original design. Evaluate existing products, considering how well they've been made, the materials, whether they work, how they have been made and their fitness for purpose. Discuss by whom, when and where products were designed. Research whether products can be recycled or reused. Know about some inventors, designers, engineers, chefs or manufacturers of ground-breaking products.
Technical Knowledge – Construction (including materials, structures, mechanisms and electrical systems)			Join appropriately for different materials and situations e.g. glue, tape. Use scissors to cut along straight and curved lines. Curl paper. Insert paper fasteners for card linkages. Mark our materials to be cut using a template. Create moving models which use levers and sliders.	Make vehicles with construction kits which contain free running wheels. Use a range of materials to create models with wheels and axles e.g. dowel, cotton reels. Join appropriately for different materials and situations e.g. glue, tape. Mark our materials to be cut using a template. Cut dowel using a hacksaw and bench hook. Use a hole punch. Create hinges. Observe an adult use a glue gun.	Create shell structures from appropriate materials. Create prototype shell structures. Use a glue gun with close supervision (one to one). Cut slots and internal shapes. Use a bradawl with close supervision to mark hole positions (one to one). Use a hand drill with close supervision to drill tight and loose fit holes (one to one). Create nets. Create a pulley mechanism.	Incorporate an electrical circuit with a bulb or buzzer and a switch into a model. Build frameworks using a range of materials e.g. wood, card. Strengthen frames and structures with diagonal struts. Create prototype frame structures. Measure and mark strips of wood to the nearest cm. Cut thin strips of wood using a hacksaw and bench hook. Use a glue gun with close supervision (one to one). Cut slots and internal shapes. Create nets.
Textiles			Cut out shapes which have been created by drawing round a template onto the fabric. Use pre-punched holes to learn how to sew using running stitch. Experiment with how to join decorative materials to fabrics.	Cut out shapes which have been created by drawing round a template onto the fabric. Begin to learn how to thread a needle and to a knot. Join fabrics by using a neat running stitch, over sewing and tape.	Use pins to temporarily hold fabrics. Thread a needle and tie a knot with greater independence. Join fabrics using running stitch, over sewing and back stitch.	N/A

				Decorate fabrics with buttons, beads and sequins.	Explore fastenings and recreate some e.g. drawstrings. Create a simple paper pattern. Use appropriate decoration techniques e.g. applique or simple stitches.	
Food and nutrition			Develop a food vocabulary using taste, smell, texture and feel. Group familiar food products e.g. fruits and vegetables. Cut and chop ingredients safely, with support. Measure and weigh food items using spoons and cups. Understand the need for a variety of foods in a diet.	Develop a food vocabulary using taste, smell, texture and feel. Group familiar food products e.g. fruits and vegetables. Understand the need for a variety of foods in a diet. Cut, peel, grate and chop a range of ingredients with increasing confidence. Measure and weigh food items using spoons and cups. Know where to find the nutritional information on packaging. Understand where food comes from. Use the basic principles of a healthy and varied diet to prepare dishes.	Develop sensory vocabulary and knowledge using taste, smell, texture and feel. Analyse the taste, texture, smell and appearance of a range of foods. Follow a basic recipe. Cut, peel, grate, chop and slice a range of ingredients. Measure and weigh ingredients appropriately. Begin to understand the nutritional information on packaging.	Develop sensory vocabulary and knowledge using taste, smell, texture and feel. Analyse the taste, texture, smell and appearance of a range of foods. Follow a basic recipe. Cut, peel, grate, chop and slice a range of ingredients. Join and combine a range of ingredients. Measure and weigh ingredients appropriately. Understand and apply the principles of a healthy and varied diet. To understand the nutritional information on packaging.
Vocabulary	DESIGN / MAKE / EVALUATE like, dislike, use FOOD fruit and vegetable, healthy, unhealthy, eat, balance, like, dislike, names of tools and equipment used CONSTRUCTION join, fix, glue, stick, names of	DESIGN / MAKE / EVALUATE like, dislike, use FOOD fruit and vegetable, healthy, unhealthy, eat, balance, like, dislike, names of tools and equipment used CONSTRUCTION	DESIGN / MAKE / EVALUATE planning, investigating design, evaluate, make, user, purpose, ideas, product, like, dislike FOOD fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, TEXTILES	DESIGN / MAKE / EVALUATE investigating, planning, design, make, evaluate, user, purpose, ideas, design criteria, product, function, improve, better FOOD fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, hot, spicy, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients TEXTILES	DESIGN / MAKE / EVALUATE user, purpose, design, model, evaluate, prototype, annotated sketch, functional, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing FOOD name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, seasonal, harvested healthy/varied diet TEXTILES	DESIGN / MAKE / EVALUATE evaluating, design brief / design criteria, innovative, prototype, user, purpose, function, prototype, appealing, planning, annotated sketch, sensory evaluations FOOD name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, seasonal, harvested healthy/varied diet ELECTRICAL SYSTEMS

	equipment, names of materials used	join, fix, glue, stick, names of equipment, names of materials used	joining, techniques, tools, fabrics, template, mark out, join, decorate, finish MECHANISMS slider, lever, pivot, slot, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish MECHANISMS vehicle, wheel, axle, axle holder, chassis, body, cutting, joining, shaping, finishing, fixed, free, moving, mechanism, names of tools, equipment and materials used	fabric, names of fabrics, fastening, compartment, zip, button, finishing technique, strength, weakness, templates, stitch, seam, seam allowance MECHANISMS mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating	series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device CONSTRUCTION names of tools, names of materials, measure, strengthen, net. slots. mark, structure, struts, prototype, framework
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