

PROGRESSION IN DESIGN TECHNOLOGY

Expressive arts and design educational programme (taken from the EYFS Framework 2020)

Physical development educational programme (taken from the EYFS Framework 2020)

The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials.

The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

EYFS	
Design: Developing planning and communicating ideas.	<ul style="list-style-type: none"> • Are encouraged to talk about what they would like to make, how they will do it and what they think about it when it is finished. • Make use of props and materials when role playing characters in narratives and stories. • Have daily opportunities to make their own creations using a wide range of different materials, fixings and tools which are freely available in continuous provision.
Working with tools, equipment, materials and components to make quality products FOOD	<ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
Working with tools, equipment, materials and components to make quality products CONSTRUCTION	<ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
Working with tools, equipment, materials and components to make quality products TEXTILES	<ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
Working with tools, equipment, materials and components to make quality products SHEET MATERIALS	<ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. • Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
Evaluating processes and products	<ul style="list-style-type: none"> • Are encouraged to evaluate what they have made and make changes as appropriate. • Share their creations, explaining the process they have used.

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YEAR 1

<p>Design: Developing planning and communicating ideas.</p>	<ul style="list-style-type: none"> • Explain what they are making and which materials they are using • Select materials from a limited range that will meet the design criteria • Select and name the tools needed to work the materials • Produce a mock up with kits or reclaimed materials • Use drawings to record ideas as they are developed and talk about them • Design a product for a given purpose • Select pictures to help develop ideas • Use drawings to record ideas as they are developed • Discuss their work as it progresses
<p>Working with tools, equipment, materials and components to make quality products FOOD</p>	<ul style="list-style-type: none"> • Develop a food vocabulary using taste ,smell, texture and feel • Group familiar food products e.g. fruit and vegetables • Work safely and hygienically • Understand the need for a variety of foods in a diet • Understand where food comes from • Work with an adult to make food following a simple recipe.
<p>Working with tools, equipment, materials and components to make quality products CONSTRUCTION</p>	<ul style="list-style-type: none"> • Use a range of materials to create models. • See glue gun used by an adult • Talk about how structures can be made stronger
<p>Working with tools, equipment, materials and components to make quality products TEXTILES</p>	<ul style="list-style-type: none"> • Colour fabrics using a range of techniques e.g. fabric paints, printing, painting • Cut out shapes which have been created by drawing round a template onto the fabric
<p>Working with tools, equipment, materials and components to make quality products SHEET MATERIALS</p>	<ul style="list-style-type: none"> • Fold, tear and cut paper and card • Roll paper to create tubes • Cut along lines, straight and curved • Curl paper Use hole punch
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Say what they like and do not like about items they have made and attempt to say why • Talk about their designs as they develop and identify good and bad points • Talk about changes made during the making process • Explore and evaluate a range of existing products

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YEAR 2

<p>Design: Developing planning and communicating ideas.</p>	<ul style="list-style-type: none"> • Use pictures and words to convey what they want to design and make • Select appropriate technique explaining First.....Next.....Last.... • Explore ideas by rearranging materials • Describe their models and drawings of ideas and intentions • Produce a mock up with kits/reclaimed materials or ICT • Add notes to drawings to help explanations • Design a product from a detailed design criteria
<p>Working with tools, equipment, materials and components to make quality products FOOD</p>	<ul style="list-style-type: none"> • Cut, peel, grate, chop a range of ingredients • Work safely and hygienically • Understand the need for a variety of foods in a diet • Measure and weigh food items, non-statutory measures e.g. spoons, cups • Follow a recipe to make food with increasing independence.
<p>Working with tools, equipment, materials and components to make quality products CONSTRUCTION</p>	<ul style="list-style-type: none"> • Attach wheels to a chassis using an axle • Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels • Join appropriately for different materials and situations e.g. glue, tape, • Mark out materials to be cut using a template • Cut strip wood/dowel using hacksaw and bench hook • Investigate how structures can be made stronger, stiffer and more stable
<p>Working with tools, equipment, materials and components to make quality products TEXTILES</p>	<ul style="list-style-type: none"> • Join fabrics by using running stitch, glue, staples ,over sewing, tape • Decorate fabrics with buttons, beads, sequins, braids, ribbons
<p>Working with tools, equipment, materials and components to make quality products SHEET MATERIALS</p>	<ul style="list-style-type: none"> • Insert paper fasteners for card linkages • Create hinges • Use simple pop ups • Investigate strengthening sheet materials Investigate joinings temporary, fixed and moving
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Talk about their designs as they develop and identify good and bad points • Talk about changes made during the making process • Discuss how closely their finished products meet their design criteria • Explore and evaluate a range of existing products

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YEAR 3

<p>Design: Developing planning and communicating ideas.</p>	<ul style="list-style-type: none"> • Draw/sketch products to help analyse and understand how products are made • Think ahead about the order of their work and decide upon tools and materials • Record the plan by drawing (labelled sketches) or writing • Communicate their ideas through discussion and add notes to drawings to help explanations • Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups.
<p>Working with tools, equipment, materials and components to make quality products FOOD</p>	<ul style="list-style-type: none"> • Develop sensory vocabulary/knowledge using, smell, taste, texture and feel • Follow instructions • Make healthy eating choices from and understanding of a balanced diet • Join and combine a range of ingredients e.g. snack foods • Work safely and hygienically • Prepare and cook a range of predominantly savoury dishes using a range of cooking techniques. • Understand seasonality and know where and how ingredients are grown and captured
<p>Working with tools, equipment, materials and components to make quality products CONSTRUCTION</p>	<ul style="list-style-type: none"> • Make structures more stable by giving them a wide base • Prototype frame and shell structures • Use glue gun with close supervision (one to one) • Choose materials based on their functional properties and aesthetic qualities.
<p>Working with tools, equipment, materials and components to make quality products TEXTILES</p>	<ul style="list-style-type: none"> • Create a simple pattern • Understand the need for patterns
<p>Working with tools, equipment, materials and components to make quality products SHEET MATERIALS</p>	<ul style="list-style-type: none"> • Cut slots • Cut internal shapes • Use lolly sticks/card to make levers and linkages • Create nets
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Identify the strengths and weaknesses of their design ideas • Decide which design idea to develop • Consider and explain how the finished product could be improved • Explore and evaluate a range of existing products

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YEAR 4

<p>Design: Developing planning and communicating ideas.</p>	<ul style="list-style-type: none"> • Investigate similar products to the one to be made to produce own design criteria • Plan a sequence of actions to make a product • Develop more than one design or adaptation of an initial design • Propose realistic suggestions as to how they can achieve their design ideas • Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups. • Produce annotated sketches • Make Prototypes
<p>Working with tools, equipment, materials and components to make quality products FOOD</p>	<ul style="list-style-type: none"> • Analyse the taste, texture, smell and appearance of a range of foods • Measure and weigh ingredients appropriately • Prepare and cook a range of predominantly savoury dishes using a range of cooking techniques. • Make healthy eating choices from and understanding of a balanced diet • Understand seasonality and know where and how ingredients are grown and captured
<p>Working with tools, equipment, materials and components to make quality products CONSTRUCTION</p>	<ul style="list-style-type: none"> • Measure and mark square selection, strip and dowel accordingly to 1cm • Create shell or frame structures, strengthen frames with diagonal struts • Incorporate a circuit with a bulb or buzzer into a model • Choose materials based on their functional properties and aesthetic qualities.
<p>Working with tools, equipment, materials and components to make quality products TEXTILES</p>	<ul style="list-style-type: none"> • Prototype a product using J Cloths • Use appropriate decoration techniques e.g. appliqué(glued or simple stitches) • Understand seam allowance Join fabrics using running stitch, over sewing, back stitch • Explore fastenings and recreate some e.g. sew on buttons and make loops
<p>Working with tools, equipment, materials and components to make quality products SHEET MATERIALS</p>	<ul style="list-style-type: none"> • Use linkages to make movement larger or more varied. • Use and explore complex pop ups
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Discuss how well the finished product meets the design criteria and how well it meets the needs the needs of the user. • Explore and evaluate a range of existing products

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YEAR 5

<p>Design: Developing planning and communicating ideas.</p>	<ul style="list-style-type: none"> • Investigate products/images to collect ideas and create own design criteria • Sketch and model alternative ideas • Develop one idea in depth • Combine modelling and drawing to refine ideas • Plan the sequence of work using a storyboard • Record ideas using annotated diagrams • Use models, kits and drawings to help formulate design ideas • Make prototypes • Use found information to inform decisions • Use a computer aided design to model ideas • Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups • When designing produce cross sectional and exploded diagrams.
<p>Working with tools, equipment, materials and components to make quality products FOOD</p>	<ul style="list-style-type: none"> • Select and prepare foods for a particular purpose • Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing. • Weigh and measure using scales • Cut and shape ingredients using appropriate tools and equipment e.g. grating • Join and combine food ingredients appropriately e.g. beating, rubbing in • Work safely and hygienically • Show awareness of a healthy diet from an understanding of a balanced diet • Understand how to feed themselves and others affordably now and in the future
<p>Working with tools, equipment, materials and components to make quality products CONSTRUCTION</p>	<ul style="list-style-type: none"> • Use hand drill to drill tight and loose fit holes • Cut strip wood, dowel, square section wood accurately to 1mm • Join materials using appropriate methods • Incorporate motor and a switch into a model • Control a model using an ICT control programme • Use a cam to make an up and down mechanism. • Use glue gun with close supervision • Choose materials based on their functional properties and aesthetic qualities.
<p>Working with tools, equipment, materials and components to make quality products TEXTILES</p>	<ul style="list-style-type: none"> • Understand pattern layout • Decorate textiles appropriately often before joining components • Combine fabrics to create more useful properties
<p>Working with tools, equipment, materials and components to make quality products SHEET MATERIALS</p>	<ul style="list-style-type: none"> • Cut slots • Cut accurately and safely to a marked line • Join and combing materials with temporary, fixed or moving joinings • Choose an appropriate sheet material for the purpose
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Use the design criteria to inform their decisions about ways to proceed • Justify their decisions about materials and methods of construction • Identify what does and does not work in the product. • Make suggestions as how their or others design could be improved • Explore and evaluate a range of existing products

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YEAR 6

<p>Design: Developing planning and communicating ideas.</p>	<ul style="list-style-type: none"> • Investigate products/images to collect ideas and create own design criteria • Sketch and model alternative ideas • Develop one idea in depth • Combine modelling and drawing to refine ideas • Plan the sequence of work using a storyboard • Record ideas using annotated diagrams • Use models, kits and drawings to help formulate design ideas • Make prototypes Use found information to inform decisions • Use a computer aided design to model ideas • Draw plans which can be read/followed by someone else • Give a report using correct technical vocabulary • Design innovative, functional, appealing produces that are fit for purpose that are aimed at particular individuals or groups. • When designing produce cross sectional and exploded diagrams.
<p>Working with tools, equipment, materials and components to make quality products FOOD</p>	<ul style="list-style-type: none"> • Prepare food products taking into account the properties of ingredients and sensory characteristics • Understand how to feed themselves and others affordably now and in the future
<p>Working with tools, equipment, materials and components to make quality products CONSTRUCTION</p>	<ul style="list-style-type: none"> • Use bradawl to mark hole positions • Build frameworks using a range of materials e.g. wood, card corrugated plastic to support mechanisms • Choose materials based on their functional properties and aesthetic qualities. • Apply their understanding of how to strengthen, stiffen more complex structures • Understand and use mechanical systems in their products eg gears, pulleys, cams, levers and linkages
<p>Working with tools, equipment, materials and components to make quality products TEXTILES</p>	<ul style="list-style-type: none"> • Create 3D products using pattern pieces and seam allowance • Pin and tack fabric pieces together • Join fabrics using over se wing, back stitch, blanket stitch or machine stitching • Make quality products
<p>Working with tools, equipment, materials and components to make quality products SHEET MATERIALS</p>	<ul style="list-style-type: none"> • Use craft knife, cutting mat and safety ruler under one to one supervision
<p>Evaluating processes and products</p>	<ul style="list-style-type: none"> • Reflect on their work using design criteria stating how well the design fits the needs of the user • Explore and evaluate a range of existing products