

OLQP DT Progression of Skills grid

Co-ordinator – S. Astill

Link Governor – TBC

	Exploring and Developing Ideas	Evaluating and Developing Work
EYFS	<ul style="list-style-type: none"> Explains own knowledge and understanding, and asks appropriate questions of others. PSED 4D-6D Shows understanding of the need for safety when tackling new challenges, and considers and manages some risks ELG PD Shows understanding of how to transport and store equipment safely. ELG Practices some appropriate safety measures without direct supervision. ELG They represent their own ideas, thoughts and feelings through design and technology ELG EAD Children know about similarities and differences in relation to materials ELG U the W 	<ul style="list-style-type: none"> They are confident to speak in a familiar group, will talk about their ideas, and will choose the resources they need for their chosen activities. ELG PSED
KS1	<ul style="list-style-type: none"> 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. Select and use a wide range of materials and components.. 	<ul style="list-style-type: none"> Explore and evaluate a wide range on existing products. Evaluate their own ideas and products against design criteria. Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms.
KS2	<ul style="list-style-type: none"> Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Generate, develop, model and communicate ideas through discussion, annotated sketches, cross sectional and exploded diagrams, prototypes, pattern pieces and computer aided design. Select from a wider range of tools and equipment. Select from a wider range of materials and components. 	<ul style="list-style-type: none"> Investigate and analyse a range of existing products. Understand how key events and individuals in technology have helped shape the world. Apply understanding of how to make more complex structures more stable. Understand and use mechanical systems in their products. Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.

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	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	<ul style="list-style-type: none"> • They represent their own ideas, thoughts and feelings through design and technology ELG EAD • Explains own knowledge and understanding, and asks appropriate questions of others. 40-60 PSED 	<ul style="list-style-type: none"> • Follow verbal instructions. • Explain what they are making and which materials they are using. • Name the tools they are using. • Describe what they need to do next. • Select materials from a limited range that will meet the design criteria. • Model ideas with kits, reclaimed materials. • Select pictures to help develop ideas. • Discuss their work as it progresses. 	<ul style="list-style-type: none"> • Follow verbal instructions. • Select and name tools needed to work the materials. • Select appropriate techniques explaining: First... Next... Last... • Use pictures and words to convey what they want to design and make. • Describe models and drawings of ideas and intentions. • Use kits/reclaimed materials to develop an idea. • Use drawings to record ideas as they are developed. • Add notes to drawings to help explanations. • Discuss their work as it progresses. 	<ul style="list-style-type: none"> • Investigate similar products to the one to be made to give starting points for a design. • Draw/sketch products to help analyse how they are made. • Think ahead about the order of their work and decide upon tools and materials. • Plan a sequence of actions to make a product. • Record the plan by drawing (labelled sketches) or writing. 	<ul style="list-style-type: none"> • Investigate similar products to the one to be made to give starting points for a design. • Draw/sketch products to help understand how they are made. • Develop more than one design or adaptation of an initial design. • Propose realistic suggestions as to how they can achieve their designs and decide upon tools and materials. • Record the plan by drawing (labelled sketches) or writing. 	<ul style="list-style-type: none"> • Investigate products/images to collect ideas and give starting points. • Sketch and model alternative ideas e.g. technical drawings, exploded diagrams • Use a computer to model ideas. • Record ideas using annotated diagrams. • Propose realistic suggestions as to how they can achieve their designs and decide upon tools and materials. • Record the plan by drawing (labelled sketches) or writing. • Make prototypes. • Use found information to inform decisions. 	<ul style="list-style-type: none"> • Investigate products/images to collect ideas and give starting points. • Sketch and model alternative ideas e.g. technical drawings, exploded diagrams • Combine modelling and drawing to refine ideas. • Plan a sequence of work using a storyboard. • Draw plans which can be read/followed by someone else. • Give a report using correct technical vocabulary. • Make prototypes. • Use found information to inform decisions.

<p style="text-align: center;">Food</p>	<ul style="list-style-type: none"> Children know the importance for good health of physical exercise, and a healthy diet ELG PD They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. ELG EAD <p>Project/s: Making bread (The Little Red Hen)</p>	<ul style="list-style-type: none"> Develop a food vocabulary using taste, smell, texture and touch. Group familiar food products e.g. fruit and vegetables. Cut and peel a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in the diet. <p>Project/s: Design and make a fruit salad (**)</p>	<ul style="list-style-type: none"> Grate and chop a range of ingredients. Measure and weigh food items - non-statutory measures e.g. spoons, cups. Cut and peel a range of ingredients. Work safely and hygienically. Understand the need for a variety of foods in the diet. <p>Project/s: Baking Buns Thomas Farriner's bakery (Flashing Embers)</p> <p>Smoothies (Around the world in 80 dishes)</p>	<ul style="list-style-type: none"> Develop sensory vocabulary/knowledge using taste, smell, texture and touch. Follow simple recipes. Make healthy eating choices from an understanding of a balanced diet. Combine a range of ingredients. Work safely and hygienically Measure and weigh ingredients appropriately <p>Project/s: Ratatouille and bread (A Rumble in Rome)</p>	<ul style="list-style-type: none"> Analyse the taste, texture, smell and appearance of a range of food. Follow simple recipes. Make healthy eating choices from an understanding of a balanced diet. Combine a range of ingredients. Work safely and hygienically Measure and weigh ingredients appropriately <p>Project/s: Calzone/pizza/pasta (Venture around Vesuvius)</p>	<ul style="list-style-type: none"> Prepare food products taking into account the properties of ingredients and sensory characteristics. 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. Join and combine food ingredients appropriately. Decorate appropriately. Work safely and hygienically Show an awareness of a healthy diet from an understanding of a balanced diet <p>Year 5 Project/s: Mexican dips and dishes (Mesoamerican Mysteries)</p> <p>Year 6 Project/s: Healthy cereal bar (Mountains) Greek Salad preparation (Greeks)</p>
<p style="text-align: center;">Textiles</p>	<ul style="list-style-type: none"> Constructs with a purpose in mind, using a variety of resources. 40-60 months EAD They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. ELG EAD Children know about similarities and differences in relation to materials ELG U the W <p>Project/s: Mary peg dolls (Multicultural)</p>	<ul style="list-style-type: none"> Colour fabrics using a range of techniques e.g. fabric paints, printing and painting. Join fabrics with glue. Decorate fabrics with buttons, beads, sequins, braids and ribbons. <p>Project/s: Puppets (The Entertainers)</p>	<ul style="list-style-type: none"> Cut out shapes which have been created by drawing around a template onto the fabric. Join fabrics by using a running stitch, staples, over sewing and tape. Decorate fabrics with buttons, beads, sequins, braids and ribbons. <p>Project/s: Fossil Hunting bags (Daring detectives)</p>	<ul style="list-style-type: none"> Join fabrics using running stitch, over sewing and back stitch. Use appropriate decoration techniques (glue). Create a simple pattern to use on fabric. <p>Project/s: Tropical tree frogs (Tropical Tourists)</p>	<ul style="list-style-type: none"> Understand seam allowance. Understand the need for patterns. <p>Project/s: Eco functional products (Earth Entrepreneurs)</p>	<ul style="list-style-type: none"> Create 3D products using pattern pieces and seam allowance. Understand pattern layout. Join fabrics using over sewing, back stitch and blanket stitch. Make quality products. <p>Project/s: ***</p> <ul style="list-style-type: none"> Create 3D products using pattern pieces and seam allowance. Decorate textiles appropriately often before joining components (appliqué or simple stitches). Pin and tack fabric pieces together. Prototype a product using j cloths. Combine fabrics to create more useful properties. Explore fastenings and recreate some e.g. sew on buttons and make loops. <p>Project/s: Made do and mend teddy bears (WW2)</p>

<p>Construction</p>	<ul style="list-style-type: none"> EAD: Constructs with a purpose in mind, using a variety of resources. 40-60 months 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. 40-60 months EAD: They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. ELG <p>Project/s: Models of aliens and space crafts (To Infinity and beyond)</p>	<ul style="list-style-type: none"> Make vehicles with construction kits which contain free running wheels. <p>During 'toy' exploration in 'The Entertainers'</p>	<ul style="list-style-type: none"> Use a range of materials to create models with wheels and axels e.g. glue, tape, dowel and cotton reels. Attach wheels to a chassis using an axle. Join appropriately for different materials and situations e.g. glue and tape. Mark out materials to be cut using a template. Observe glue gun being used by an adult. <p>Project/s: Fire engines (Flashing Embers)</p>	<ul style="list-style-type: none"> Make structures more stable by giving them a wide base. Prototype frame and shell structures. Create a shell or frame structure; strengthen frames with diagonal struts. Measure and mark square selection, strip and dowel accordingly to 1cm. <p>Project/s: Caveman Cranes (Caveman Capers)</p>	<ul style="list-style-type: none"> Incorporate a circuit with a bulb/buzzer/motor or switch into a model. Control a model using an ICT control programme. Use a glue gun with close one to one supervision. <p>Project/s: Viking torch (Traders, raiders, invaders)</p>	<ul style="list-style-type: none"> Use bradawl to mark hole positions. Join materials using appropriate methods. Use a cam to make an up and down mechanism. Build frameworks using a range of materials to support mechanisms. E.g. wood, corrugated card and plastic. Use a glue gun with close supervision. <p>Project/s: CAM space toys (Battles and Beyond)</p> <p>Flood-proof homes (Voyage to the Valley of the Kings)</p>	<ul style="list-style-type: none"> Use a hand drill to drill tight and loose fit holes. Cut strip wood, dowel and square section wood accurately to 1cm. Join materials using appropriate methods. Use a glue gun with close supervision. <p>Project/s: ***(***)</p>
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<p style="text-align: center;">Sheet materials</p>	<ul style="list-style-type: none"> Constructs with a purpose in mind, using a variety of resources. 40-60 months EAD 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. 40-60 months They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. ELG EAD Children know about similarities and differences in relation to materials ELG U the W <p>Project/s: Split pin mini-beast ()</p> <p>Christmas cards</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. Use a hole punch. Insert paper fasteners for card linkages. Create hinges. Use simple pop ups. <p>Project/s: African Masks ()</p> <p>3D Castles (Dungeon and Dragons)</p>	<ul style="list-style-type: none"> Curl paper. Investigate strengthening sheet materials. Investigate joining temporary, fixed and moving materials. Fold, tear and cut paper and card. Roll paper to create tubes. Cut along lines, straight and curved. <p>Project/s: Making model houses (Flashing Embers)</p> <p>Fire engines (Flashing Embers)</p>	<ul style="list-style-type: none"> Cut slots. Cut internal shapes. <p>Through class lesson work</p> <ul style="list-style-type: none"> Use linkages to make movement larger or more varied. <p>Project/s: Caveman cranes (Caveman Capers)</p>	<ul style="list-style-type: none"> Create nets. <p>Throughout class lesson work.</p>	<ul style="list-style-type: none"> Cut slots. Cut accurately and safely to a marked line. Use a craft knife, cutting mat and safety ruler with one to one supervision if appropriate. Choose an appropriate sheet material for a purpose <p>Project/s: CAM space toys (Battles and beyond)</p> <p>Through art lessons in Mesoamerican Mysteries – Cut paper artwork.</p>	<ul style="list-style-type: none"> Choose an appropriate sheet material for a purpose Cut slots. Cut accurately and safely to a marked line. Use lolly sticks/card to make levers and linkages. Use and explore complex pop ups. Join and combine materials with temporary, fixed or moving joints <p>Project/s: *** (***)</p>
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<p style="text-align: center;"><i>Evaluating</i></p>	<ul style="list-style-type: none"> • Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. ELG EAD • Children know about similarities and differences in relation to materials ELG U the w • Explains own knowledge and understanding, and asks appropriate questions of others. 40-60 PSED • Children express themselves effectively EAD CL 	<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. 	<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. • Discuss how closely their finished products meet their design criteria. 	<ul style="list-style-type: none"> • Identify the strengths and weaknesses of their design ideas. • Consider and explain how the finished product could be improved. • Discuss how well the finished product meets the design criteria and how well it meets the needs of the user. 	<ul style="list-style-type: none"> • Identify the strengths and weaknesses of their design ideas. • Consider and explain how the finished product could be improved. • Discuss how well the finished product meets the design criteria and how well it meets the needs of the user. • Decide which design idea to develop. 	<ul style="list-style-type: none"> • Use design criteria to inform decisions about ways to proceed. • Justify decisions about materials and methods of construction. • Reflect on their work using design criteria stating how well the design fits the needs of the user. • Identify what does and does not work in a product. • Make suggestions as to how their design could be improved.
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