

**LSPA Primary Academy - DT Progression Map**

	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	<p>Develop ideas with support.</p> <p>Talk about what they want to create.</p> <p>Begin to use appropriate shapes to draw what they want to create.</p>	<p>Have their own ideas.</p> <p>Have a clear purpose in mind.</p> <p>Talk about what they want to create.</p> <p>Share their ideas with others.</p> <p>Use representational drawings to draw what they want to create.</p>	<p>Say what they are making and what its purpose is.</p> <p>Draw a planned construction.</p> <p>Make a prototype slider to test the efficiency of their moving parts.</p>	<p>Say what they are making and who the intended user is.</p> <p>Annotate design sketches to show different parts.</p> <p>Use a design criteria to develop their ideas.</p> <p>Use templates to plan their ideas.</p>	<p>Explain how their design will appeal to intended users.</p> <p>Create a design criteria and use this to inform ideas.</p> <p>Annotate sketches referring to materials and reasons for their choices.</p>	<p>Gather information about the needs and wants of particular users.</p> <p>Make decisions that take into account the availability of resources (limited).</p> <p>Communicate ideas using annotated sketches.</p> <p>Make a prototype using various stitch spacings to test their efficiency.</p>	<p>Gather information about the needs, wants, preferences and values of particular users.</p> <p>Create and follow a design specification which they refer to throughout construction.</p> <p>Communicate ideas using annotated sketches, cross sectional and exploded diagrams.</p> <p>Make a prototype cam to test the efficiency of their moving parts</p>	<p>Conduct research using surveys, interviews, questionnaires and web-based resources.</p> <p>Develop a simple design specification to guide their thinking (product research).</p> <p>Use Google software to design and adapt their product. Adapting and testing out different ideas.</p>
Make measuring	<p>Explore materials, textures, tools and techniques.</p> <p>With support, select from a range of materials to construct with.</p>	<p>Explore, use and refine a variety of tools and techniques to express their ideas.</p>	<p>Measure by eye to cut pieces to fit.</p>	<p>Develop accuracy when measuring by eye to cut pieces to fit.</p>	<p>Use a ruler to mark components to size</p>	<p>Develop accuracy when making measurements.</p>	<p>Develop accuracy when making measurements.</p>	<p>Measure with a ruler and protractor, mark out and cut materials with increasing accuracy</p>
Make Cutting and shaping	<p>Use appropriate one handed tools with care. (eg. scissors, hole punch)</p> <p>Use different techniques to join materials (eg. glue, masking tape)</p>	<p>Independently select from a range of materials to construct with.</p> <p>Use age appropriate tools with care and precision (eg. scissors and safety knives)</p>	<p>Know how to safely cut a slit in a piece of card pushing scissor blade into blu tac.</p>	<p>Develop cutting skills using thicker materials such as strong card.</p>	<p>Develop cutting skills using a wider range of materials such as felt.</p>	<p>Use a craft knife safely to cut out holes into card</p>		<p>Safely use a saw to cut plywood. Use a drill to create a small channel in a piece of wood.</p>
Make Assemble and joining		<p>Use different techniques for joining materials (eg. adhesive tape, different types of glue)</p> <p>Create collaboratively, sharing ideas, resources and skills.</p>	<p>Use glue and split pins to join components.</p>	<p>Explore joining a range of components using tape, string and plasticine.</p>	<p>Consider joining techniques that are most appropriate for increasing stability and strength.</p>	<p>Use a running stitch to join two pieces of fabric.</p>	<p>Safely use a hot glue gun to join components.</p>	<p>Use a range of different stitches to join fabric.</p>
Make Aesthetic			<p>Create a moving picture incorporating a slider and lever which shows skill in colour mixing and mark making/spreading with paint.</p>	<p>Using paint and considering their initial design, complete a product which is appealing to the intended user</p>	<p>Considering their initial design, decide how to complete a product which is appealing to the intended user</p>	<p>Use a range of finishing techniques: fabric pens, stitching, etc, considering the intended user</p>	<p>Considering their initial design, independently complete a detailed product which is appealing to the intended user</p>	<p>Affix embellishments using a range of stitches.</p>

Evaluate	<p>Talk about what they have made.</p> <p>Talk about what they like and dislike about their product.</p> <p>Make simple changes to products they have made.</p> <p>With support, solve problems.</p>	<p>Can comment on what they like and dislike about their product.</p> <p>Talk about how well their product works.</p> <p>Talk about and explain how they have created their product.</p> <p>Explore ways of solving new problems.</p> <p>Find new ways to accomplish their goal.</p> <p>Adapt and make changes to products they have created.</p>	Talk about their finished pro	Talk about their finished product and what they like about it, how they solved any problems and how it could be improved.	Referring to their criteria, assess the strengths and areas for development regarding their finished product.	Referring to their criteria, assess the strengths, areas for development and views of others regarding their finished product.	Critically evaluate their product throughout the making process against the design specifications and whether it is fit for purpose.	Critically evaluate their product throughout the making process against the design specifications and it's fitness for purpose including the requirements of the intended user.
Cooking and Nutrition	<p>Identify &amp; name a range of food items.</p> <p>Identify where food comes from (eg. plants and animals)</p> <p>Make healthy choices about food and drink.</p>	<p>Recognise food is organised into groups (ie. fruit, vegetables, grain)</p> <p>Identify and understand specific sources of common foods (ie. fruits from trees; milk from cows)</p> <p>Recognise the importance of a varied diet for overall health.</p> <p>Identify healthy &amp; unhealthy foods</p> <p>Discuss and recognise factors contributing to overall health</p> <p>Independently manage personal hygiene routines.</p>	<p>Know that all food comes from either plants or animals.</p> <p>Understand that healthy eating includes eating five portions of fruit/vegetables a day.</p> <p>Understand the safe use of a knife.</p> <p>Know to wash their hands before preparing food.</p> <p>Understand the correct technique for cutting cheese / ham / cucumbers - sandwiches for teddy bear's picnic</p>	<p>Know that food is farmed, grown or caught.</p> <p>Can name and sort food into the five groups in the eatwell plate.</p> <p>Develop safe knife use through dicing skills.</p> <p>Understand the technique of dicing fruits (ice cream alternative).</p> <p>Design, make and evaluate</p>	<p>Know that seasons affect the availability of food.</p> <p>Know that the body needs food for energy.</p> <p>Understand the safe use of a heat source when baking.</p> <p>Understand the techniques of: chopping, slicing, grating and spreading (healthy pizza).</p> <p>Technical skills task - one session</p>	<p>Develop understanding of how food is processed.</p> <p>Know that a healthy diet consists of balanced food groups.</p> <p>Understand the safe use of a heat source when baking, a grater and peeler.</p> <p>Understand the techniques of: grating, peeling and mixing</p> <p>Design, make and evaluate - whole unit.</p>	<p>Develop their understanding of where food is grown, reared and caught.</p> <p>Know that recipes can be adapted to appeal to our senses (happiness in healthy eating).</p> <p>Understand the safe use of a heat source when baking.</p> <p>Understand the techniques of: kneading, proving and baking</p> <p>Design and make bread</p> <p>Design, make and evaluate</p>	<p>Develop their understanding of regional dishes.</p> <p>Select healthy dishes to create a class menu.</p> <p>Independently and safely use a heat source when frying, boiling and baking.</p> <p>Independently use a range of techniques when following a recipe.</p> <p>Design, make and evaluate</p>

Structures		<p>Explore a range of materials, finding out whether they float or sink</p> <p>Design, make &amp; evaluate: boat for Mr Gumpy &amp; animals from Mr Gumpy's Outing</p> <p>Select reclaimed materials to form boat structure</p> <p>Consider material, shape, size</p> <p>Join materials to reflect design</p> <p>Design, make &amp; evaluate: rocket, linked to Whatever Next!</p>	<p>Playground equipment - stable structures</p> <p>Look at existing playground equipment (or examples of chosen project) and consider the structural design, in particular how they increase stability. Design, make and evaluate: playground equipment or chair for the three bears or bridge for the billy goats gruff</p> <p>Know how freestanding structures can be made stronger, stiffer and more stable</p> <p>Assemble, join and combine materials and components</p> <p>Use the correct technical vocabulary for the project</p>		<p>Desk tidy - shell structures</p> <p>Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used.</p> <p>Design, make and evaluate their own: Gift boxes, desk tidy, keep safe box, etc.</p> <p>How to make strong, stiff shell structures.</p> <p>Measure, mark out, cut, shape and assemble materials and components with some accuracy</p> <p>Use the correct technical vocabulary for the project</p>		<p>Marble run</p> <p>Apply their understanding of free standing structures to help build them.</p> <p>Use a wider range of tools and equipment to perform practical tasks accurately</p> <p>Use appropriate cutting and shaping techniques that include cuts within the perimeter of the material such as slots.</p> <p>Select appropriate joining techniques.</p> <p>Design and build a marble run which incorporates some varied bends.</p>	
Mechanisms	<p>Pivots</p> <p>Explore construction sets: tap - a - shape, small world cranes, diggers</p>	<p>Pivots</p> <p>Explore construction sets: tap - a - shape, plastic rods with split pins</p> <p>Use split pins to make flat objects with moving, pivoting parts (poppies, robots)</p>	<p>Levers and sliders</p> <p>Explore a range of existing books and products that use levers and sliders.</p> <p>Design, make and evaluate a moving picture.</p> <p>Know about the movement of simple mechanisms such as levers and sliders.</p> <p>Make a prototype of a lever and slider, using card.</p>	<p>Wheels and axles</p> <p>Investigate a range of wheeled toys, looking closely at the moving components. Make notes and labelled diagrams.</p> <p>Research the history of the wheel</p> <p>Learn about John Dunlop who invented the first rubber tyre</p> <p>Design, make and evaluate a moving vehicle.</p> <p>Know about the movement of simple mechanisms such as wheels and axles.</p>	<p>Pneumatics</p> <p>Understand how pneumatic systems create movement.</p> <p>Design, make and evaluate a moving monster, creature or mascot</p>		<p>Cam mechanisms</p> <p>Research a range of different cam mechanisms and their uses, making notes, including cross sectional and exploded drawings.</p> <p>Investigate Lego cams</p> <p>Understand the movement and function of simple mechanisms such as cams or gears.</p> <p>Design, make and evaluate a moving toy.</p>	

Electrical systems						Electrical game Learn about the history of electricity - research Benjamin Franklin, Thomas Edison  Devise a product which features a simple electrical circuit using one component (buzzer or bulb)		Electrical game Devise a product which features a more complex electrical circuit with multiple components such as switches, bulbs or buzzers.
Computing					Lego Develop understanding of Lego as a product. Knowing who designed Lego and why it is so successful: material, reusable, design, construction integrity.  Programme and control their product's movement (Lego race car)		Lego Create a product. Programme and control their product's movement. Monitor and adapt their product to improve its output (Lego race car).	
Textiles				finger puppets Using a template, cut and join two shapes using glue. Affix sequins, buttons and ribbon with glue.		Purse, wallet or phone holder  Cut and join two shapes using a running stitch using Binca.		Christmas decoration Cut and join two shapes and affix embellishments using a range of stitches.

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Cooking and Nutrition		Peelers - veg Mashed potato	Making sandwiches for Teddy bears picnic - spreading, cutting, chopping	Healthy alternative to ice-cream Cutting fruits	Skill session- chopping, slicing, grating and spreading (healthy pizza).	biscuits	bread-making	Meal

Structures		Boats Rockets	playground equipment - Making simple free-standing structures		Snack box - Shell structures		marble run	
Mechanisms		Moving parts with construction kits (pivots)	moving pictures (levers and sliders)	moving vehicles (wheels and axles)	Moving monsters (pneumatics)		moving toys (cams)	
Electrical systems						Electrical game simple circuit		Electrical game - wooden frame construction with more complex circuits
Computing					Lego race car		Lego race car and challenge to adapt and improve output	
Textiles				finger puppets Cutting templates, sticking and stitching embellishments			purse/wallet/phone holder - running stitch with binca	