



# The T-RF- Design and Technology Progression



	F1 Nursery	F2 Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Designing</b>	<ul style="list-style-type: none"> <li>Explore how things work</li> <li>Develop their own ideas and then decide which materials to use to express them.</li> <li>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> </ul>	<ul style="list-style-type: none"> <li>Plan and think ahead about how they will explore or play with objects.</li> <li>Choose construction materials for a purpose</li> <li>Talk about what they want to make.</li> <li>Talk about what they might use.</li> </ul>	<ul style="list-style-type: none"> <li>Understand the purpose of what they intend to make.</li> <li>Be able to say who the target audience is for the item they are designing.</li> <li>Use pictures and words to convey what they want to design/ make</li> <li>Model their ideas using mock ups if relevant.</li> <li>Choose materials from a selection to plan the construction.</li> <li>Make a list of what they will need .</li> <li>Explain to someone else the process of what they will do using first, then to make a simple plan before making.</li> </ul>	<ul style="list-style-type: none"> <li>Have a clear purpose for what they intend to design and make</li> <li>Match the design criteria to a target audience.</li> <li>Use annotated diagrams to convey what they want to design/ make</li> <li>Model their ideas using mock ups if relevant.</li> <li>Think about the best materials needed to construct their ideas.</li> <li>Make a list of what they will need .</li> <li>Explain why they have chosen specific materials and the intended process they will follow.</li> </ul>	<ul style="list-style-type: none"> <li>I can prove that a design meets a set criteria.</li> <li>I can design a product and make sure that it is aesthetically pleasing.</li> <li>I can choose a material for both its suitability and its appearance.</li> </ul>	<ul style="list-style-type: none"> <li>I can use ideas from other people when designing.</li> <li>I can produce a plan and explain it.</li> <li>I can persevere and adapt work when original ideas don't work.</li> <li>I can communicate ideas through annotated sketches and drawings.</li> </ul>	<ul style="list-style-type: none"> <li>I can come up with a range of ideas after collecting information from different sources.</li> <li>I can produce a detailed step- by step plan.</li> <li>I can explain how a product will appeal to a specific audience.</li> <li>I can design a product containing pulleys and gears.</li> </ul>	<ul style="list-style-type: none"> <li>I can use market research to inform plans and ideas.</li> <li>I can follow and refine original plans.</li> <li>I can justify planning in a convincing way.</li> <li>I can show that culture and society is considered in plans and designs.</li> </ul>
<b>Making</b>	<ul style="list-style-type: none"> <li>Select and use activities and resources, with help when needed</li> <li>Make imaginative and complex 'small worlds' = stacking blocks vertically and horizontally, making enclosures and creating spaces.</li> <li>Join construction pieces together to build and balance</li> </ul>	<ul style="list-style-type: none"> <li>Select tools and use techniques needed to shape, assemble and join materials.</li> <li>Safely use and explore a variety of materials, tools and techniques experimenting with design and function.</li> <li>Use trial and error when making to refine their ideas.</li> <li>Do things Independently that have been previously taught</li> </ul>	<ul style="list-style-type: none"> <li>With support follow a plan or recipe.</li> <li>Measure , mark out, cut or use a template with a little guidance.</li> <li>Begin to assemble , join and combine components together using a variety of methods – glue/ masking tape/ staples.</li> <li>Explore using tools safely. ( including kitchen tools, scissors, stapler, hole punch)</li> <li>Begin to build structures exploring how they can be made stronger, stiffer and more stable.</li> <li>Use simple finishing techniques to improve the appearance of product.</li> </ul>	<ul style="list-style-type: none"> <li>Follow a plan or a basic recipe,</li> <li>Measure, cut and score, use a template with accuracy.</li> <li>Using previous and new knowledge select the best methods to assemble, join and combine materials together- Use basic sewing.</li> <li>Select and use tools safely and explain why they have chosen them.</li> <li>Build structures exploring how they can be made stronger, stiffer and more stable.</li> <li>Choose and use appropriate finishing techniques based on own ideas.</li> </ul>	<ul style="list-style-type: none"> <li>I can follow a step- by- step plan choosing the right equipment and tools.</li> <li>I can select the most appropriate tools and materials.</li> <li>I can work accurately to measure, make cuts and make holes.</li> </ul>	<ul style="list-style-type: none"> <li>I know which tools to use for a particular task and show knowledge of handling the tool.</li> <li>I know which materials is likely to give the best outcome.</li> <li>I can measure accurately.</li> <li>I can make a product that uses electrical and mechanical components.</li> </ul>	<ul style="list-style-type: none"> <li>I can use a range of tools and equipment competently.</li> <li>I can use a variety of methods to create my design Eg discussion, annotated sketches, exploded diagrams and make a prototype before making the final version.</li> <li>I can make a product that relies on pulleys, gears and cams.</li> </ul>	<ul style="list-style-type: none"> <li>I know which tool to use for a specific practical task.</li> <li>I know how to use a range of tools correctly and safely.</li> <li>I know what each tool is used for.</li> <li>I can explain why a specific tool is best for a specific action.</li> </ul>

<b>Evaluation</b>	<ul style="list-style-type: none"> <li>Talk about what I like about my work.</li> </ul>	<ul style="list-style-type: none"> <li>Share creations explaining the processes used.</li> </ul>	<ul style="list-style-type: none"> <li>When looking at an existing product explain what they like and dislike and why.</li> <li>As they are making start to use trial and error evaluate what is going well and what they want to change.</li> <li>Using the end product talk about what went well and how it compares to their plan</li> </ul>	<ul style="list-style-type: none"> <li>When looking at an existing product explain what they like and dislike and why.</li> <li>Evaluate their products and the techniques they are using as they are developed identifying strengths and possible changes.</li> <li>Evaluate their work against the design criteria. Talk about how successful the end product is,</li> </ul>	<ul style="list-style-type: none"> <li>I can explain how to improve a finished model.</li> <li>I understand why a model has or has not been successful.</li> </ul>	<ul style="list-style-type: none"> <li>I can evaluate and suggest improvements for a design.</li> <li>I can evaluate products for their appearance and design.</li> <li>I can explain how the original design has been improved.</li> <li>I can present a product in an interesting way.</li> </ul>	<ul style="list-style-type: none"> <li>I can suggest alternative plans outlining the positive features and drawbacks.</li> <li>I can evaluate appearance and function against the original criteria.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to test and evaluate designed products.</li> <li>I can explain how products should be stored and justify my reasons.</li> <li>I can evaluate a product against a clear criteria.</li> </ul>
<b>Technical Knowledge</b>	<p>Join materials with glue and tape .</p> <p>Snip with scissors and cut in a straight line independently.</p> <p>Add decorations to work.</p> <p>Use a given template to make a model.</p>	<ul style="list-style-type: none"> <li>Understand that different materials can be combined to create new designs and effects.</li> </ul> <p>Join materials using glue and tape choosing the best to suit a purpose.</p> <p>Show growing control when using scissors.</p> <p>Stick on decorations</p> <p>Copy a model finished product to produce a similar version.</p>	<ul style="list-style-type: none"> <li>Join fabrics using staples / glue/ tape.</li> <li>Add decoration to fabrics using glue.</li> <li>Cut out shapes that have been created.</li> <li>Understand that different mechanisms produce different types of movement.</li> <li>Follow verbal instructions to learn a new technique- e.g. axle/ slider</li> <li>Explore and create moving mechanisms with increasing independence .</li> <li>Make a model and make it stronger and more stable.</li> <li>Explore how to make freestanding structures stronger, stiffer and more stable</li> </ul>	<ul style="list-style-type: none"> <li>Join fabrics using running stitch.</li> <li>Add decorations to fabric using sewing.</li> <li>Cut out shapes that have been created by drawing round a template.</li> <li>Choose the mechanism needed to create a specific type of movement.</li> <li>Follow verbal and written instructions learn a new technique.</li> <li>Apply knowledge of how to create moving mechanisms in own models.</li> <li>Know how to make freestanding structures stronger, stiffer and more stable.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to strengthen a product by stiffening or reinforcing a part.</li> <li>I can use a simple IT program within the design.</li> </ul>	<ul style="list-style-type: none"> <li>I can link scientific knowledge by using switches, lights or buzzers.</li> <li>I can use electrical systems to enhance the product.</li> <li>I can use IT to add to the quality of the finished product Eg nutritional information on labels.</li> </ul>	<ul style="list-style-type: none"> <li>I can like scientific knowledge to the design by using pulleys, gears and cams.</li> <li>I can use a more complex IT program to enhance the quality of the product produced.</li> </ul>	<ul style="list-style-type: none"> <li>I can use electrical systems correctly and accurately to enhance a given product.</li> <li>I know which IT product would further enhance a given product.</li> <li>I can use my knowledge to improve a finished product by reinforcing.</li> </ul>
<b>Food technology</b>	<ul style="list-style-type: none"> <li>Wash my hands before cooking.</li> <li>Use different tools when baking.</li> <li>Stir ingredients together</li> </ul>	<ul style="list-style-type: none"> <li>Use tools for baking correctly.</li> <li>Wash my hands before cooking.</li> <li>Stir and cut ingredients.</li> <li>Use a sieve.</li> </ul>	<ul style="list-style-type: none"> <li>Understand where a range of fruit and vegetables come from.</li> <li>Understand the basic principles of a healthy balanced diet.</li> <li>Follow basic hygiene rules</li> <li>Cut and prepare food safely.</li> <li>Measure and weigh items non statutory</li> </ul>	<ul style="list-style-type: none"> <li>Describe the ingredients use when making a dish or cake.</li> <li>Know what a balanced diet is and how to stay healthy.</li> <li>Be able to work in a hygienic way.</li> <li>Chop and prepare food safely.</li> <li>Weigh ingredients to use in a recipe.</li> </ul>	<ul style="list-style-type: none"> <li>I can describe how food ingredients come together.</li> <li>I can weigh out ingredients and follow a recipe.</li> <li>I can talk about which food is healthy and which is not.</li> <li>I know when food is ready to be harvested.</li> </ul>	<ul style="list-style-type: none"> <li>I know how to be both hygienic and safe when using food.</li> <li>I can bring a creative element to the food product being designed.</li> </ul>	<ul style="list-style-type: none"> <li>I can be both hygienic and safe in a kitchen.</li> <li>I know how to prepare a meal by collecting the correct ingredients.</li> <li>I understand that different foods are harvested at different times.</li> </ul>	<ul style="list-style-type: none"> <li>I can work within a budget to create a meal or menu Eg cross curricular Maths.</li> </ul>

Vocabulary	<u>Designing</u> Draw Ideas Make	<u>Designing</u>  Planning investigating design evaluate make user purpose ideas product	<u>Designing</u>  Investigate planning design make evaluate user purpose ideas design criteria product function	Construct, Template, Design, Evaluate, Ingredients, Components, Joining, Mechanism, Finishing, Materials, Axle, Levers, Instructions			
	<u>Making</u> Build Model Box Flat Sides Stick  <u>Evaluation</u> Like Don't like Better Worse  <u>Textiles</u> Bead Button Fabric <u>Mechanism Materials</u> Scissors , Materials, Cello tape, Glue stick,, PVA glue, spreader, Masking tape, Paper clip Plasticine, ruler, straw <u>Food</u> Apron Chop Cut Equipment Fork Knife Mix spoon	<u>Structure</u> Cut fold join fix Structure, wall , tower weak strong base top underneath side edge surface thinner, thicker corner point straight curved metal wood plastic circle square triangle rectangle cuboid cube cylinder <u>Mechanisms</u> Vehicle, wheel, axle, chassis, body, cab, assemble, join, shape, tools used, materials used, pivot, slider, lever ,rotate <u>Textiles</u> Fabric ,felt, template, pattern, running stitch, mark out, decorate, finish. <u>Food</u> Fruit and vegetable names Names of utensils and equipment Sensory vocabulary; soft, juicy, crisp, sour, crunchy, sweet, juicy, sticky, Healthy, diet, Slice, chop, combine, sprinkle, ingredients.					