



| Intent | Children across Talavera Junior School will use creativity and imagination to design and make products that solve real and relevant problems within a variety of contexts. Through the evaluation of past and present design technology, they will develop a critical understanding of its impact of daily life and the wider world. Our curriculum covers: design, construction, cooking and nutrition, use of tools, exploring mechanisms, electrical systems and computing.  |          |   |          |   |          |
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|        | Autumn 1  | Autumn 2 | Spring 1  | Spring 2 | Summer 1  | Summer 2 |
| Year 3 | <p style="text-align: center;"><u>Healthy living-cous cous salad</u></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Use research and develop collaboratively a design criteria for an appealing product which is fit for purpose</li> <li>Generate and develop ideas through discussions, prototypes, pattern pieces and annotated sketches.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select and choose appropriate tools for practical tasks of cutting, joining, shaping and finishing.</li> <li>Select from and use a wider range of materials and components including construction materials, textiles and ingredients for functional properties and aesthetic purposes.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate existing products.</li> <li>Evaluate current products and own ideas against design criteria.</li> </ul> <p><b>Cooking and nutrition</b></p> <ul style="list-style-type: none"> <li>Understand and begin apply the principles of a balanced and varied diet.</li> <li>Understand seasonality and where a variety of ingredients are grown.</li> </ul> <p>I can begin to evaluate an existing product based on looks and function.<br/>           I can begin to understand the purpose of a design criteria.<br/>           I can share and develop my own ideas in different ways.<br/>           I can choose an appropriate tool for cutting ingredients.<br/>           I can select different ingredients based on my own taste.<br/>           I can choose ingredients that make a healthy balanced diet.<br/>           I can begin to evaluate my design against the collaborative design criteria.</p> |          | <p style="text-align: center;"><u>Sewing- Egyptian headdress</u></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Use research and develop collaboratively a design criteria for an appealing product which is fit for purpose</li> <li>Generate and develop ideas through discussions, prototypes, pattern pieces and annotated sketches.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select and choose appropriate tools for practical tasks of cutting, joining, shaping and finishing.</li> <li>Select from and use a wider range of materials and components including construction materials, textiles and ingredients for functional properties and aesthetic purposes.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate existing products.</li> <li>Evaluate current products and own ideas against design criteria.</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Apply knowledge of running and basting stitch to strengthen a product.</li> </ul> <p>I can begin to evaluate an existing product based on looks and function.<br/>           I can begin to understand the purpose of a design criteria.<br/>           I can share and develop my own ideas in different ways.<br/>           I can choose appropriate fabric to make a headdress.<br/>           I can stitch two pieces of fabric together.</p> |          | <p style="text-align: center;"><u>Design and make-levers and linkages moving pollinators</u></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Use research and develop collaboratively a design criteria for an appealing product which is fit for purpose</li> <li>Generate and develop ideas through discussions, prototypes, pattern pieces and annotated sketches.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select and choose appropriate tools for practical tasks of cutting, joining, shaping and finishing.</li> <li>Select from and use a wider range of materials and components including construction materials, textiles and ingredients for functional properties and aesthetic purposes.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate existing products.</li> <li>Evaluate current products and own ideas against design criteria.</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Understand and use a lever and linkage mechanism.</li> </ul> <p>I can begin to evaluate an existing product based on looks and function.<br/>           I can begin to understand the purpose of a design criteria.<br/>           I can share and develop my own ideas in different ways.<br/>           I can begin to evaluate my design against the collaborative design criteria.<br/>           I can choose a simple lever and linkage mechanism to make a pollinator move.</p> |          |



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|               |   | <p>I can choose a stitch to begin to strengthen a product.<br/>I can begin to evaluate my design against the collaborative design criteria.</p>   | <p>I understand what a fixed pivot is.<br/>I can select an appropriate material which is strong enough for a linkage and lever.</p>  |
| <p>Year 4</p> | <p><b><u>Scuttle bugs - Electrical mechanism</u></b></p> <p><b><u>Design</u></b></p> <ul style="list-style-type: none"> <li>Use research and develop collaboratively a design criteria for an appealing product which is fit for a purpose and users needs are focused upon.</li> <li>Generate, develop and communicate ideas through discussions, annotated sketches, exploded diagrams, computer aided technology and prototypes.</li> </ul> <p><b><u>Make</u></b></p> <ul style="list-style-type: none"> <li>Select and use a wider range of tools for practical tasks of cutting, joining, shaping and finishing.</li> <li>Select from and use a wider range of materials and components including construction materials, textiles and ingredients for functional properties and aesthetic purposes.</li> </ul> <p><b><u>Evaluate</u></b></p> <ul style="list-style-type: none"> <li>Investigate and begin to analyse existing products</li> <li>Evaluate their own products and ideas against criteria and user needs as they design and make identifying strengths and improvements.</li> </ul> <p><b><u>Technical knowledge</u></b></p> <ul style="list-style-type: none"> <li>Understand and begin to use electrical systems in their products, such as series circuits incorporating switches and buzzers.</li> </ul> | <p><b><u>Healthy living-survival granola bars</u></b></p> <p><b><u>Design</u></b></p> <ul style="list-style-type: none"> <li>Use research and develop collaboratively a design criteria for an appealing product which is fit for a purpose and users needs are focused upon.</li> <li>Generate, develop and communicate ideas through discussions, annotated sketches, exploded diagrams, computer aided technology and prototypes.</li> </ul> <p><b><u>Make</u></b></p> <ul style="list-style-type: none"> <li>Select and use a wider range of tools for practical tasks of cutting, joining, shaping and finishing.</li> <li>Select from and use a wider range of materials and components including construction materials, textiles and ingredients for functional properties and aesthetic purposes.</li> </ul> <p><b><u>Evaluate</u></b></p> <ul style="list-style-type: none"> <li>Investigate and begin to analyse existing products</li> <li>Evaluate their own products and ideas against criteria and user needs, as they design and make identifying strengths and improvements.</li> </ul> <p><b><u>Cooking and nutrition</u></b></p> <ul style="list-style-type: none"> <li>Apply the principles of a healthy and varied diet to a savoury product.</li> </ul> | <p><b><u>Design and make-structures-bird hides</u></b></p> <p><b><u>Design</u></b></p> <ul style="list-style-type: none"> <li>Use research and develop collaboratively a design criteria for an appealing product which is fit for a purpose and users needs are focused upon.</li> <li>Generate, develop and communicate ideas through discussions, annotated sketches, exploded diagrams, computer aided technology and prototypes.</li> </ul> <p><b><u>Make</u></b></p> <ul style="list-style-type: none"> <li>Select and use a wider range of tools for practical tasks of cutting, joining, shaping and finishing.</li> <li>Select from and use a wider range of materials and components including construction materials, textiles and ingredients for functional properties and aesthetic purposes.</li> </ul> <p><b><u>Evaluate</u></b></p> <ul style="list-style-type: none"> <li>Investigate and begin to analyse existing products</li> <li>Evaluate their own products and ideas against criteria and user needs, as they design and make identifying strengths and improvements.</li> </ul> <p><b><u>Technical knowledge</u></b></p> <ul style="list-style-type: none"> <li>Research key events and individuals relevant to frame structures and develop and use knowledge of how to construct strong, stiff shell structures (structures).</li> </ul> <p>I can begin to use research to make a collaborate design criteria.</p> |



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|               | <p>I can begin to use research to make a collaborate design criteria.<br/>         I understand the importance of making an appealing product for an intended user.<br/>         I can begin to develop my own ideas in a range of ways including through more detailed sketches.<br/>         I can select a wider range of tools to complete a particular task.<br/>         I can select from a wider range of materials based on their looks and their function.<br/>         I can begin to analyse an existing product based on looks and function.<br/>         I can begin to use the correct components of an electrical system.<br/>         I can incorporate a switch and buzzer in my electrical system.</p>                           | <ul style="list-style-type: none"> <li>Apply knowledge of fresh and processed ingredients which would be appropriate for the product</li> </ul> <p>I can begin to use research to make a collaborate design criteria.<br/>         I understand the importance of making an appealing product for an intended user.<br/>         I can begin to develop my own ideas in a range of ways including through more detailed sketches.<br/>         I can select a wider range of tools to complete a particular task.<br/>         I can select from a wider range of materials based on their looks and their function.<br/>         I can begin to analyse an existing product based on looks and function.<br/>         I can select healthy ingredients for a savoury product.<br/>         I understand the difference between fresh and processed ingredients.</p> | <p>I understand the importance of making an appealing product for an intended user.<br/>         I can begin to develop my own ideas in a range of ways including through more detailed sketches.<br/>         I can select a wider range of tools to complete a particular task.<br/>         I can select from a wider range of materials based on their looks and their function.<br/>         I can begin to analyse an existing product based on looks and function.<br/>         I can experiment with different structures and strengthen them based on research.</p>   |
| <p>Year 5</p> | <p><u>DT -Design and make biome Buggies-Electric powered pully system.</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>Use research to develop a design criteria which focuses on aesthetics, purpose and functionality.</li> <li>Generate, develop, model and communicate ideas through discussions, annotated sketches, cross-sectional and exploded diagrams and pattern pieces.</li> </ul> <p><u>Make</u></p> <ul style="list-style-type: none"> <li>Competently select from and use appropriate tools to measure, mark out, cut, shape and join materials together.</li> <li>Competently use a wide range of materials according to their functional properties and aesthetic qualities.</li> </ul> <p><u>Evaluate</u></p> | <p><u>Sewing - Space toy rocket</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>Use research to develop a design criteria which focuses on aesthetics, purpose and functionality.</li> <li>Generate, develop, model and communicate ideas through discussions, annotated sketches, cross-sectional and exploded diagrams and pattern pieces.</li> </ul> <p><u>Make</u></p> <ul style="list-style-type: none"> <li>Competently select from and use appropriate tools to measure, mark out, cut, shape and join materials together.</li> <li>Competently use a wide range of materials according to their functional properties and aesthetic qualities</li> </ul> <p><u>Evaluate</u></p> <ul style="list-style-type: none"> <li>Investigate and evaluate a range of existing products</li> </ul>  | <p><u>Healthy living- bread</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> <li>Use research to develop a design criteria which focuses on aesthetics, purpose and functionality.</li> <li>Generate, develop, model and communicate ideas through discussions, annotated sketches, cross-sectional and exploded diagrams and pattern pieces.</li> </ul> <p><u>Make</u></p> <ul style="list-style-type: none"> <li>Competently select from and use appropriate tools to measure, mark out, cut, shape and join materials together.</li> <li>Competently use a wide range of materials according to their functional properties and aesthetic qualities</li> </ul> <p><u>Evaluate</u></p> <ul style="list-style-type: none"> <li>Investigate and evaluate a range of existing products</li> <li>Continually evaluate and modify the working features of the product to match the initial design specification</li> </ul> |

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|        | <ul style="list-style-type: none"> <li>Investigate and evaluate a range of existing products</li> <li>Continually evaluate and modify the working features of the product to match the initial design specification</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>To apply knowledge and use a range of electrical systems such as a motor and switch.</li> </ul> <p>I can research products to inform a design criteria that is appealing, purposeful and functions for the intended user.<br/> I can develop more in depth ideas in a range of different ways which could be verbal or written with annotations.<br/> I can competently select from a range of tools to make an intended product.<br/> I can competently use a range of materials for a particular purpose.<br/> I can apply knowledge of electrical systems to add in a motor.</p> | <ul style="list-style-type: none"> <li>Continually evaluate and modify the working features of the product to match the initial design specification</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Apply knowledge of different stitches to strengthen a product.</li> </ul> <p>I can research products to inform a design criteria that is appealing, purposeful and functions for the intended user.<br/> I can develop more in depth ideas in a range of different ways which could be verbal or written with annotations.<br/> I can competently select from a range of tools to make an intended product.<br/> I can competently use a range of materials for a particular purpose.<br/> I can use a range of different stitches within a product.<br/> I can strengthen a stitch when sewing pieces of fabric together.</p> | <p><b>Cooking and nutrition</b></p> <ul style="list-style-type: none"> <li>Prepare and cook a savoury food whilst applying the principles of a healthy and varied diet.</li> </ul> <p>I can research products to inform a design criteria that is appealing, purposeful and functions for the intended user.<br/> I can develop more in depth ideas in a range of different ways which could be verbal or written with annotations.<br/> I can competently select from a range of tools to make an intended product.<br/> I can competently use a range of materials for a particular purpose.<br/> I can use a range of ingredients to make a product healthy.<br/> I can prepare a work surface so it is safe for cooking.<br/> I can understand the importance of different food groups.</p> |
| Year 6 | <p><b><u>Design and make- roller coasters</u></b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Use research and develop a design criteria of an innovative, functional and appealing product which is fit for purpose and aimed at particular individuals or groups.</li> <li>Generate, develop, model and analyse ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and computer aided designs.</li> </ul> <p><b>Make</b></p>   | <p><b><u>Healthy living-pizza</u></b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Use research and develop a design criteria of an innovative, functional and appealing product which is fit for purpose and aimed at particular individuals or groups.</li> <li>Generate, develop, model and analyse ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and computer aided designs.</li> </ul>  | <p><b><u>Design and make-microbits</u></b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>Use research and develop a design criteria of an innovative, functional and appealing product which is fit for purpose and aimed at particular individuals or groups.</li> <li>Generate, develop, model and analyse ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and computer aided designs.</li> </ul>   |



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| <ul style="list-style-type: none"> <li>Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join materials together.</li> <li>Select from and competently use a wider range of materials and components focusing on the functional properties, aesthetic qualities and the intended users.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate and evaluate a range of existing products</li> <li>Understand how key events and individuals in design and technology have helped shape the world</li> <li>Continually evaluate and modify the working features of the product to match the initial design specification and take into accounts others' views</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Understand and use an appropriate electrical system in a product.</li> </ul> <p><i>I can use wider research including on software devices to analyse products.</i></p> <p><i>I can develop a design criteria which focuses on creating an innovative product for a intended user.</i></p> <p><i>I can analyse and develop my own ideas whilst designing a product.</i></p> <p><i>I can choose and give reasons for picking a particular tool.</i></p> <p><i>I can select an appropriate material for a wide range of reasons based on its properties.</i></p> <p><i>I can measure, mark-out, cut and shape materials and components.</i></p> <p><i>I can listen to others feedback on a product and respond to modifications.</i></p> <p><i>I can make an appropriate electrical system and adapt for modifications.</i></p> | <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join materials together.</li> <li>Select from and competently use a wider range of materials and components focusing on the functional properties, aesthetic qualities and the intended users.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate and evaluate a range of existing products</li> <li>Understand how key events and individuals in design and technology have helped shape the world</li> <li>Continually evaluate and modify the working features of the product to match the initial design specification and take into accounts others' views</li> </ul> <p><b>Cooking and nutrition</b></p> <ul style="list-style-type: none"> <li>Prepare and cook a savoury dish whilst applying the principles of a healthy and varied diet.</li> </ul> <p><i>I can use wider research including on software devices to analyse products.</i></p> <p><i>I can develop a design criteria which focuses on creating an innovative product for a intended user.</i></p> <p><i>I can analyse and develop my own ideas whilst designing a product.</i></p> <p><i>I can choose and give reasons for picking a particular tool.</i></p> <p><i>I can select an appropriate material for a wide range of reasons based on its properties.</i></p> <p><i>I can listen to others feedback on a product and respond to modifications.</i></p> <p><i>I can safely prepare a work surface for cooking.</i></p> <p><i>I can explain the importance of food hygiene.</i></p> <p><i>I can cook a savoury dish on a budget.</i></p> | <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join materials together.</li> <li>Select from and competently use a wider range of materials and components focusing on the functional properties, aesthetic qualities and the intended users.</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Investigate and evaluate a range of existing products</li> <li>Understand how key events and individuals in design and technology have helped shape the world</li> <li>Continually evaluate and modify the working features of the product to match the initial design specification and take into accounts others' views</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Apply knowledge of computing to program, monitor and control their product.</li> <li>Apply knowledge of leavers and linkages to choose an appropriate mechanism for their product.</li> </ul> <p><i>I can use wider research including on software devices to analyse products.</i></p> <p><i>I can develop a design criteria which focuses on creating an innovative product for a intended user.</i></p> <p><i>I can analyse and develop my own ideas whilst designing a product.</i></p> <p><i>I can choose and give reasons for picking a particular tool.</i></p> <p><i>I can select an appropriate material for a wide range of reasons based on its properties.</i></p> <p><i>I can listen to others feedback on a product and respond to modifications.</i></p> <p><i>I can create a suitable lever and linkage system for a product.</i></p> <p><i>I can programme a microbit.</i></p> |
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## Design and Technology MTP

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|  |  | <p>I can cook a savoury dish which has components of a balanced diet.</p> | <p>I can use a motor to help control a lever and linkage system.</p> |
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