

# Michael Faraday DT Curriculum Map

D&T	Key Skills	Autumn	Spring	Summer
<b>Year 1</b>	<p><b>Generating Ideas - Designing</b></p> <ul style="list-style-type: none"> <li>- Think of own ideas for design</li> <li>- Develop and communicate these ideas through talk, drawings and words (planning)</li> <li>- Design a product</li> <li>- Work in a range of contexts</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>- Explain what is being made and why</li> <li>- Select and use appropriate tools, equipment and simple utensils to perform a job</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>- Evaluate own and pre-existing products, saying what is good or bad about them</li> <li>- Say whether their product does what it is meant to and how it could be improved</li> </ul> <p><b>Food and Nutrition</b></p> <ul style="list-style-type: none"> <li>- Know how to peel, cut, grate, mix and mould foods (with close supervision)</li> <li>- Understand where a range of fruit and vegetables come from</li> <li>- Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell Plate</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Use sheet materials and construction tools with appropriate supervision</li> <li>- Know how to make freestanding structures stronger, stiffer and more stable</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>- Understand how simple 3D textile products are made, using a template to create two identical shapes</li> <li>- Understand how to cut and then join fabrics using different techniques - Decorate using a range of items</li> </ul> <p><b>Mechanisms</b></p> <ul style="list-style-type: none"> <li>- Know about movement of simple mechanisms such as levers, sliders, wheels and axels</li> <li>- Explore and use sliders and levers</li> <li>- Understand that different mechanisms produce different types of movement</li> </ul>	Construction: Make a model of my school	Cooking and Nutrition: 'Eat more fruit and vegetables' <i>Link with science</i> (plants)	Pictures/toys': Design and make a toy
<b>Year 2</b>	<p><b>Generating Ideas – Designing</b></p> <ul style="list-style-type: none"> <li>- Think of ideas and plan by suggesting what to do next</li> <li>- Describe designs through talking and using drawings, diagrams, models, mock-ups, and ICT</li> <li>- Design a product for myself and others, following simple design criteria.</li> <li>- Work confidently in a range of contexts</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>- Explain what is being made and why the audience will like it</li> <li>- Select and use tools, equipment, skills and techniques to perform practical tasks, explaining their choices</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>- Describe how their own and pre-existing products work (what went well and what could be done differently)</li> <li>- Suggest how well their product works in relation to the purpose, the user and whether it meets the original design criteria</li> </ul> <p><b>Food and Nutrition</b></p> <ul style="list-style-type: none"> <li>- Know how to peel, cut, grate, mix and mould foods (with supervision)</li> <li>- Understand where a range of fruit and vegetables come from</li> <li>- Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The Eatwell Plate</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Use sheet materials and construction tools with appropriate supervision</li> <li>- Know how to make freestanding structures stronger, stiffer and more stable</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>- Understand how simple 3D textile products are made, using a template to create two identical shapes</li> <li>- Understand how to cut and then join fabrics using different techniques</li> <li>- Decorate using a range of items</li> </ul> <p><b>Mechanisms</b></p> <ul style="list-style-type: none"> <li>- Explore and use mechanisms</li> <li>- Explore and use sliders and levers</li> </ul>	Fabric – making bunting: Joining fabrics together. Stitching	Cooking and Nutrition: Healthy eating link to Science	Mechanisms: Make a pop-up book using slides and levers
<b>Year 3</b>	<p><b>Generating Ideas – Designing</b></p> <ul style="list-style-type: none"> <li>- Create a design that meets a range of requirements</li> <li>- Consider the equipment and tools needed when planning</li> <li>- Describe and communicate ideas or a design using talk, accurately labelled diagrams, and prototypes</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>- Plan the main stages of making</li> <li>- Select from and use a range of appropriate utensils, tools and equipment</li> <li>- Measure, mark out, assemble and join materials and components with some accuracy</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>- Evaluate own and pre-existing products</li> <li>- Suggest what could be changed to improve a design, beginning to link this to the design brief and the views of others</li> </ul> <p><b>Food and Nutrition</b></p> <ul style="list-style-type: none"> <li>- Know how to peel, cut, grate, mix, mould and begin to cook foods (using toasters and microwaves)</li> <li>- Know how to use appropriate equipment and utensils</li> <li>- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Use sheet materials and construction tools with appropriate supervision</li> <li>- Develop and use knowledge of how to construct strong, stiff shell structures</li> <li>- Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>- Know how to strengthen, stiffen and reinforce existing fabrics</li> <li>- Understand how to securely join two pieces of fabric together</li> <li>- Understand the need for patterns and seam allowances</li> </ul> <p><b>Mechanisms</b></p> <ul style="list-style-type: none"> <li>- Understand the movement of simple mechanisms and use them e.g. levers and linkages</li> <li>- Distinguish between fixed and loose pivots</li> </ul>	Construction: London Landmark	Cooking and Nutrition: 'Packaging' 'Sandwich Snacks'	Construction: (Ancient Egypt) D&T project to <i>link with history</i> (i.e. pyramids, stone coffins, sarcophagus)

<p><b>Year 4</b></p>	<p><b>Generating Ideas – Designing</b></p> <ul style="list-style-type: none"> <li>- Generate more than one idea for how to create a product</li> <li>- Gather information to help design a successful product</li> <li>- Produce a detailed plan with labelled diagrams, a written explanation and step-by-step guide</li> <li>- Suggest improvements to develop and refine a planned idea</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>- Order the main stages of making</li> <li>- Select and use a range of appropriate tools with accuracy - to measure, mark out, cut, join, and assemble materials and components with accuracy</li> <li>- Explain their choice of materials</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>- Evaluate the appearance and usability of own and pre-existing products</li> <li>- Explain the strengths of the original design and what could be improved. Consider the appearance and usability, linking this to the design brief</li> </ul> <p><b>Food and Nutrition</b></p> <ul style="list-style-type: none"> <li>- Know how to peel, cut, grate, mix, mould and begin to cook foods (using toasters and microwaves)</li> <li>- Know how to use appropriate equipment and utensils to prepare and combine food</li> <li>- Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Use sheet materials and construction tools with appropriate supervision</li> <li>- Develop and use knowledge of how to construct strong, stiff shell structures</li> <li>- Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>- Know how to strengthen, stiffen and reinforce existing fabrics</li> <li>- Understand how to cut and securely join two pieces of fabric together using a running stitch, over sewing, back stitch or fastenings</li> <li>- Understand seam allowances, create simple patterns and decoration techniques</li> </ul> <p><b>Mechanisms</b></p> <ul style="list-style-type: none"> <li>- Understand the movement of simple mechanisms and use them e.g. levers and linkages</li> <li>- Distinguish between fixed and loose pivots</li> </ul>	<p>Design and Make it: (Romans) D&amp;T project to <i>link with history</i> (i.e. sandals, shields)</p> <p>Cooking and Nutrition: Italian Food</p>	<p>Mechanisms: 'Buggies and electrical circuits'</p>	<p>Textiles: Sewing and stitching project</p>
<p><b>Year 5</b></p>	<p><b>Generating Ideas – Designing</b></p> <ul style="list-style-type: none"> <li>- Generate a range of innovative ideas after collating relevant information to develop a design brief and criteria</li> <li>- Produce a detailed plan, with step-by-step instructions, and a list of resources required</li> <li>- Suggest alternative plans, considering the positive aspects and drawbacks of each</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>- Select from and use, a range of appropriate utensils, tools and equipment accurately and expertly to measure and combine ingredients, materials and resources</li> <li>- Consider the aesthetic qualities and functionality of their work</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>- Evaluate the appearance and function of a product against the original criteria, saying whether it is fit for purpose</li> <li>- Evaluate the strengths and suggest improvements that could be made</li> <li>- Consider the views of others to improve their work</li> </ul> <p><b>Food and Nutrition</b></p> <ul style="list-style-type: none"> <li>- Cut, mix, mould and begin to use utensils and equipment including heat sources to prepare and cook food e.g. hobs</li> <li>- Understand about seasonality in relation to food products and the source of different food products</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Use sheet and construction materials appropriately</li> <li>- Understand how to strengthen, stiffen and reinforce 3D frameworks</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>- Produce a 3D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics</li> <li>- Understand how fabrics can be strengthened, stiffened and reinforced where appropriate</li> </ul> <p><b>Mechanisms</b></p> <ul style="list-style-type: none"> <li>- Understand that mechanical and electrical systems have an input, process and an output</li> <li>- Understand how gears, cams and pulleys can be used to speed up, slow down or change the direction of movement</li> </ul>	<p>Cooking and Nutrition: Greek food</p>	<p>3D Textiles: Create a 3D textile product from a combination of pattern pieces</p>	<p>Design and Make a Vehicle: Building vehicles using a cam mechanism and gears (<i>Link to science</i>)</p>
<p><b>Year 6</b></p>	<p><b>Generating Ideas – Designing</b></p> <ul style="list-style-type: none"> <li>- Use a range of information to inform a design</li> <li>- Produce a detailed plan, with cross-sectional diagrams and computer generated designs</li> <li>- Work within constraints, refining and justifying plans as necessary</li> </ul> <p><b>Making</b></p> <ul style="list-style-type: none"> <li>- Select from and use, a range of appropriate utensils, tools and equipment accurately and expertly to measure and combine ingredients, materials and resources</li> <li>- Consider the aesthetic qualities and functionality of their product as they make it, refining details as necessary</li> </ul> <p><b>Evaluation</b></p> <ul style="list-style-type: none"> <li>- Evaluate the appearance and test the function of a product against the original criteria, saying whether it is fit for purpose</li> <li>- Identify strengths and suggest improvements that could be made, considering materials, methods, sustainability and cost</li> </ul> <p><b>Food and Nutrition</b></p> <ul style="list-style-type: none"> <li>- Cut, mix, mould and use utensils and equipment including heat sources to prepare and cook food e.g. hobs (developing independence)</li> <li>- Understand about seasonality in relation to food products and the source of different food products</li> </ul> <p><b>Construction</b></p> <ul style="list-style-type: none"> <li>- Use sheet and construction materials appropriately</li> <li>- Understand how to strengthen, stiffen and reinforce 3D frameworks</li> </ul> <p><b>Textiles</b></p> <ul style="list-style-type: none"> <li>- Pin and tack fabrics, use patterns and seam allowances and join fabrics to make quality products</li> <li>- Produce a 3D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics</li> </ul> <p><b>Mechanisms</b></p> <ul style="list-style-type: none"> <li>- Understand that mechanical and electrical systems have an input, process and an output</li> <li>- Understand how gears, cams and pulleys can be used to speed up, slow down or change the direction of movement</li> </ul>	<p>Mechanical systems: Create a 3D Houses of Parliament. Light up the Houses of Parliament using an electric circuit.</p>	<p>Construction: (Bridges) <i>Link to geography</i> (mountains)</p>	<p>Enterprise Project linked to Cooking and Nutrition: Develop a healthy treat (testing, packaging and pitching ideas)</p>