

# SJA Progression of Skills – (Design & Technology)



	Y1/2	Y3	Y4	Y5	Y6	Questions to support the development of a DT product.
<p><b>Background Research</b> Researching the history of DT and exploring existing products.</p>	<ul style="list-style-type: none"> <li>*Understand how key events and individuals in design &amp; technology have helped to shape the world.</li> <li>*Investigate and evaluate a range of existing products through teacher led activities.</li> <li>*Research what a product is used for.</li> <li>*Research how a product works.</li> <li>*Identify where a product might be found e.g within a workplace.</li> <li>*Express your opinion on what you like and don't like about the products appearance.</li> </ul>	<ul style="list-style-type: none"> <li>*Understand how key events and individuals in design technology have helped to shape the world.</li> <li>*Investigate and evaluate a range of existing products through teacher led activities and questioning.</li> <li>*Research when a product was invented and what it's purpose is.</li> <li>*Identify what materials a product has been made from.</li> <li>*Identify where this product might be found and who might use this product.</li> <li>*Evaluate and express your opinion on the products appearance and design.</li> </ul>	<ul style="list-style-type: none"> <li>*Understand how key events and individuals in design technology have helped to shape the world.</li> <li>*Investigate and evaluate a range of existing products using teacher led activities as well as independent research.</li> <li>*Identify when the product was invented and what it's purpose is.</li> <li>*Identify what a product has been made from and how it has been made.</li> <li>*Identify where this product might be found and who might use this product.</li> <li>*Evaluate and express your opinion on the products design and purpose.</li> </ul>	<ul style="list-style-type: none"> <li>*Understand how key events and individuals in design technology have helped to shape the world.</li> <li>*Do thorough independent evaluations of existing products considering:                             <ul style="list-style-type: none"> <li>- Who invented the product?</li> <li>- When it was made.</li> <li>- Is it fit for purpose?</li> <li>- How well it's been made.</li> </ul> </li> <li>*Identify what a product has been made from and how environmentally friendly the materials are.</li> <li>*Evaluate the product on design, appearance and use.</li> <li>*Identify how much the product would cost to make and how innovative it is.</li> </ul>	<ul style="list-style-type: none"> <li>*Understand how key events and individuals in design technology have helped to shape the world.</li> <li>*Do thorough independent evaluations of existing products considering:                             <ul style="list-style-type: none"> <li>- Who invented the product?</li> <li>- When it was made.</li> <li>- Is it fit for purpose?</li> <li>- How well it's been made.</li> </ul> </li> <li>*Identify what a product has been made from and how environmentally friendly the materials are.</li> <li>*Evaluate the product on design, appearance and use.</li> <li>*Identify how much the product would cost to make and how innovative it is.</li> </ul>	<ul style="list-style-type: none"> <li><i>*What would you change about your design?</i></li> <li><i>*What do you like about someone else's design?</i></li> <li><i>*What would happen if you changed...?</i></li> <li><i>*What would improve your design?</i></li> <li><i>*What made creating your design difficult?</i></li> <li><i>*Explain what you would change and how this would improve your design?</i></li> <li><i>*How would you change your design for a 'real world' purpose?</i></li> </ul>
<p><b>Design</b> Expressing ideas through discussions, brainstorm, drawings.</p>	<ul style="list-style-type: none"> <li>*Start to generate ideas from background research and own experiences.</li> <li>*Develop and share ideas through talking and simple drawings. Teacher templates and questioning to support this.</li> <li>*Draw a picture of an existing product, changing some of its appearance qualities.</li> </ul>	<ul style="list-style-type: none"> <li>*Start to brainstorm ideas for a product, considering it's purpose and intended user.</li> <li>*Share and discuss design ideas through whole class discussions.</li> <li>*Draw a product design using labels.</li> </ul>	<ul style="list-style-type: none"> <li>*Brainstorm ideas considering the purpose identify the intended user.</li> <li>*Share and discuss design ideas within a team, showing listening skills to other people's ideas.</li> <li>*Sketch a design using labels to show specific features of a product.</li> </ul>	<ul style="list-style-type: none"> <li>*Brainstorm ideas and share and discuss them within a team, showing confidence about your own ideas and opinions, as well as listening to others.</li> <li>*Using background research and own experiences to create a design criteria to inform your design of an innovative, functional and appealing product that is fit for purpose.</li> <li>*Represent ideas using diagrams, annotated sketches and computed</li> </ul>	<ul style="list-style-type: none"> <li>*Brainstorm ideas and share and discuss them within a team, showing confidence about your own ideas and opinions, as well as listening to others.</li> <li>*Using background research and own experiences to create a design criteria to inform your design of an innovative, functional and appealing product that is fit for purpose.</li> <li>*Represent ideas using diagrams, annotated sketches and computed</li> </ul>	<ul style="list-style-type: none"> <li><i>*How effective at... is your design?</i></li> <li><i>*How would you adapt your product for more mass production?</i></li> <li><i>*What developments would need to be made for your design to...?</i></li> <li><i>*What tests do you need to undertake to test your design?</i></li> </ul>

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				based programmes (where appropriate).	based programmes (where appropriate).	<i>*What do you predict would happen if...?</i>
<b>Planning</b> Identifying equipment and a step by step plan.	*Identify what tools you need to create a product from a list given. *Read an example of how this product is made from a simple step by step guide. *Identify materials that are needed to make a product. *Choose suitable materials and explain choices depending on characteristics.	*Identify which equipment and materials are needed to create a specific product. *Read an example of how this product is made from a simple step by step guide and identify the key points. *Choose suitable materials for a product based on background research.	*Identify and create a plan which shows equipment, tools and materials that are needed to create a specific product. *Create a step by step guide on how you would create a product. *Choose suitable tools and materials independently for a product, explaining why they have been chosen considering function and aesthetic.	*Produce a detailed list for tools, equipment and materials that are needed for a specific product (including lengths, sizes etc.) *Write down a step by step plan/guide for making a specific product. *Choose suitable tools, materials and techniques for a specific product based on background research and identifying the cost of materials needed to create a product.	*Produce a detailed list for tools, equipment and materials that are needed for a specific product (including lengths, sizes etc.) *Write down a step by step plan/guide for making a specific product. *Confidently choose suitable tools, materials, components and techniques for a specific product based on background research and identifying the cost of materials needed to create a product.	
<b>Evaluating own product</b> Evaluate, critique, improve. Is it fit for purpose? (Evaluating should be used at each stage of designing and making throughout KS2)	*Look at a prototype of a product and discuss what you like and dislike about it, using DT questioning. *Start to evaluate their product by discussing how well it works in relation to the purpose. *Identify what they would change about their product if they made it again.	*Create and peer/self-critique at least one prototype of your product before creating a final design. *Using PC & MD, consider the views of others to improve their design and product; throughout the designing and making process. *Evaluate their products carrying out appropriate tests to consider improvements. *Reflect and evaluate their final product, considering strengths and weaknesses.	*Create and peer/self-critique at least one prototype of your product before creating a final design. *Using PC & MD, consider the views of others to improve their design and product; throughout the designing and making process. *Evaluate their products carrying out appropriate tests to consider improvements. *Reflect and evaluate their final product, considering strengths and weaknesses.	*Create and peer/self-critique at least one prototype of your product before creating a final design. *Using PC & MD, consider the views of others to improve their design and product; throughout the designing and making process. *Evaluate their products carrying out appropriate tests to consider improvements. *Reflect and evaluate their final product, considering strengths and weaknesses.	*Create and peer/self-critique at least one prototype of your product before creating a final design. *Using PC & MD, consider the views of others to improve their design and product; throughout the designing and making process. *Evaluate their products carrying out appropriate tests to consider improvements. *Reflect and evaluate their final product, considering strengths and weaknesses.	
<b>Making</b> Working with tools, equipment.	*Use simple tools with adult support; learning to use them safely and appropriately. *Start to assemble, join and	*Begin to use tools safely and accurately with adult or peer support. *Start to measure, mark out, cut, score and assemble	*Use tools safely and accurately. *Start to measure, mark out, cut, score and assemble components with more	*Use tools with a good level of precision and use to measure and combine appropriate ingredients, materials and	*Use tools precisely and safely to accurately measure, mark, cut and assemble materials, and securely connect electrical	

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<p>materials and components.</p>	<p>combine materials in order to make a product. *Follow a simple step by step plan throughout the making process.  *Try to use finishing techniques to make product look good.</p>	<p>components with some accuracy. *Begin to assemble, join and combine materials and components with some accuracy. *Follow a plan in the correct order. *Begin to apply a range of finishing techniques with some accuracy.</p>	<p>accuracy. *Begin to assemble, join and combine materials and components with some accuracy. *Follow detailed step by step plans throughout the making process. *Apply a range of finishing techniques with some accuracy.</p>	<p>resources. *Follow and adapt detailed step by step plans throughout the making process. *Mainly accurately apply a range of finishing techniques. *Be resourceful with practical problems.</p>	<p>components to produce reliable, functional products. *Follow and adapt detailed step by step plans throughout the making process. *Accurately apply a range of finishing techniques. *Be resourceful with practical problems.</p>	
<p><b>DT Skills</b> Y3-Y6 Topic Overview</p>		<p><b>Projects on a page to support each DT skill.</b></p> <p>*Structures - Use different techniques to build simple frame structures e.g. joining thin pieces of plastic tubes to support making a kite.</p> <p>*Textiles – Create pattern pieces to join together using different stitching techniques e.g a purse/wallet.</p>	<p><b>Projects on a page to support each DT skill.</b></p> <p>*Mechanical Systems – Create a simple lever/linkage mechanism e.g. a greetings card with moving parts.</p> <p>* Electrical Systems – make secure connections e.g. using a bulb holder, wires and a bulb to create a simple circuit/switch.</p>	<p><b>Projects on a page to support each DT skill.</b></p> <p>*Shell structures – Create a 3D net and assemble to create a product e.g. gift packaging.</p> <p>*Textiles – Combine different fabric shapes for the purpose of a product e.g. adding buttons or press studs to a bag.</p>	<p><b>Projects on a page to support each DT skill.</b></p> <p>*Structures – Use different techniques to build structures using materials such a wood to create a small-scale bird hide.</p> <p>*Electrical Systems – Use more complex switches and sensors; for example, a push to break switch, to make a product e.g. an alarm.</p> <p>*Mechanical Systems - Use construction kits to support with the learning/making of gears and pulleys to create a product e.g. a k-nex vehicle.</p>	
<p><b>Cooking &amp; Nutrition</b> Nutritional knowledge, Cooking skills</p>	<p>*Learn and start to understand that all food comes from plants or animals. *Demonstrate how to use techniques such as cutting, peeling and grating. *Understand how to name and sort foods into the five groups in ‘The Eat well plate’.</p>	<p>*Start to learn that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. *Sort foods into the 5 groups using The Eatwell Plate and identify that this makes up a</p>	<p>*Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. *Sort foods into the 5 groups using The Eatwell Plate and identify that this makes up a</p>	<p>*Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. *Begin to understand that seasons may affect the food available.</p>	<p>*Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world. *Understand that seasons may affect the food available.</p>	

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	<p>*Know that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>*Learn to understand and use food safety/hygiene measures when preparing and cooking ingredients.</p>	<p>healthy diet.</p> <p>*Identify that food and drink are needed to provide energy for a healthy and active lifestyle.</p> <p>*Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>*Understand and use food safety/hygiene measures when preparing and cooking ingredients.</p>	<p>healthy diet.</p> <p>*Identify that food and drink are needed to provide energy for a healthy and active lifestyle.</p> <p>*Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>*Understand and use food safety/hygiene measures when preparing and cooking ingredients.</p>	<p>*Sort foods into the 5 groups using The Eatwell Plate and identify that this makes up a healthy diet.</p> <p>*Identify that food and drink provide certain nutritional and health benefits which support a healthy lifestyle.</p> <p>*Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>*Understand and use food safety/hygiene measures when preparing and cooking ingredients.</p>	<p>*Sort foods into the 5 groups using The Eatwell Plate and identify that this makes up a healthy diet.</p> <p>*Identify that food and drink provide certain nutritional and health benefits which support a healthy lifestyle.</p> <p>*Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>*Understand and use food safety/hygiene measures when preparing and cooking ingredients.</p>	
<p><b>Vocabulary</b></p>	<p><b>Design:</b> Plan, Prepare, Design, Materials, Ideas, Use, Model, Improve, Research, Template</p> <p><b>Evaluate:</b> Change, Improve, Useful, Like, Dislike, Future, Progress, Adapt, Original, Evaluate</p> <p><b>Making:</b> Fast, Slow, Up, Down, Turn, Draw, Sketch, Tools, Fix, Glue, Attach, Brick, Wood, Stone, Cloth, Metal, Foam, Felt, Paper, Tissue, Newspaper, Cardboard, String, Wool, Clay, Scissors, Glue, Tape, Cut, Stick, Decorate, Finish</p> <p><b>Cooking &amp; Nutrition:</b> Healthy, Unhealthy, Source, Fruit, Vegetables, Clean, Safe, Unsafe, Amount, Ingredients, Recipe, Weight,</p>	<p><b>Design:</b> Plan, Organise, Prototype, Initial ideas, Brainstorm, Criteria, Diagrams, Labels, Sketches, Product, Customer, Target audience, Purpose, Application</p> <p><b>Evaluate:</b> Assess, Edit, Improve, Prefer, Change, Outcome, Develop, Test, Analyse, Effective, Fit for purpose, Design Criteria, Quality, Function, Unsuccessful, Modify, Alter</p> <p><b>Making:</b> Features, Materials, Mould, Liquid, Solid, Form, Shape, Hand-made, Packaging, Presentation, Machine made, Measure, Durable</p> <p><b>Cooking &amp; Nutrition:</b> Healthy, Unhealthy, Balanced, Vitamins, Nutrition, Healthy eating,</p>	<p><b>Design:</b> Plan, Organise, Prototype, Initial ideas, Brainstorm, Criteria, Diagrams, Labels, Sketches, Product, Customer, Target audience, Purpose, Application</p> <p><b>Evaluate:</b> Assess, Edit, Improve, Prefer, Change, Outcome, Develop, Test, Analyse, Effective, Fit for purpose, Design Criteria, Quality, Function, Unsuccessful, Modify, Alter</p> <p><b>Making:</b> Features, Materials, Mould, Liquid, Solid, Form, Shape, Hand-made, Packaging, Presentation, Machine made, Measure, Durable</p> <p><b>Cooking &amp; Nutrition:</b> Healthy, Unhealthy, Balanced, Vitamins, Nutrition, Healthy eating,</p>	<p><b>Design:</b> Plan, Organise, Prototype, Initial ideas, Brainstorm, Criteria, Diagrams, Labels, Sketches, Annotate, Brief, Product, Consumer, Customer, Target audience, Purpose, Application, Constraints, Client</p> <p><b>Evaluate:</b> Assess, Edit, Improve, Alter, Outcome, Develop, Test, Analyse, Effective, Fit for purpose, Design Criteria, Alternatives, Models, Quality, Function, Functionality</p> <p><b>Making:</b> Features, Materials, Mould, Liquid, Solid, Form, Shape, Adhesive, Lattice, Mass-produce, Hand-made, Packaging, Presentation, Machine made, Dimensions,</p>	<p><b>Design:</b> Plan, Organise, Prototype, Initial ideas, Brainstorm, Criteria, Diagrams, Labels, Sketches, Annotate, Brief, Product, Consumer, Customer, Target audience, Purpose, Application, Constraints, Client</p> <p><b>Evaluate:</b> Assess, Edit, Improve, Alter, Outcome, Develop, Test, Analyse, Effective, Fit for purpose, Design Criteria, Alternatives, Models, Quality, Function, Functionality</p> <p><b>Making:</b> Features, Materials, Mould, Liquid, Solid, Form, Shape, Adhesive, Lattice, Mass-produce, Hand-made, Packaging, Presentation, Machine made, Dimensions,</p>	

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	Nutrients, Vegetarian, Dietary, Requirements	Hygiene, Diet, Grams, Presentation, Taste, Texture, Flavour, Disinfect.	Hygiene, Diet, Grams, Presentation, Taste, Texture, Flavour, Disinfect.	Durable <b>Cooking &amp; Nutrition:</b> Healthy, Unhealthy, Balanced, Vitamins, Disease, Nutrition, Healthy eating, Hygiene, Diet, Cross Contamination, Grams, Storage, Presentation, Taste, Texture, Flavour, Disinfect, Bacteria.	Durable <b>Cooking &amp; Nutrition:</b> Healthy, Unhealthy, Balanced, Vitamins, Disease, Nutrition, Healthy eating, Hygiene, Diet, Cross Contamination, Grams, Storage, Presentation, Taste, Texture, Flavour, Disinfect, Bacteria.	
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