



SVC Design and Technology Learning Pathway - Year 7



LP	Research and Designing	Making	Evaluating	Technical Knowledge
8-9	<p>Understanding contexts, users and purposes:</p> <p>Students will respond creatively and imaginatively to the brief and explore the context of the brief.</p> <p>Students will collect research from several sources and is not restricted to ICT and includes more in-depth tasks such as interviews of the user group. There is a clear link to the brief</p> <p>Students specification has at least 7 points and is clear and justified with few errors</p> <p>Generating, developing, modelling and communicating ideas:</p> <p>Students will produce at least 4 detailed and highly original and imaginative ideas that include 3D</p> <p>Students annotation is detailed and clearly linked to their Specification and brief</p> <p>Students will discuss with confidence and modify their ideas in line with user opinions. CAD work will be developed with independence and include the complex use of etch and cut lines included</p>	<p>Planning:</p> <p>Students will produce a workable manufacturing plan linking all key processes</p> <p>Students will have a comprehensive knowledge of some manufacturing processes</p> <p>Students will discuss with their peers how to modify their plans should there be inaccuracies</p> <p>Practical skill and techniques:</p> <p>Students will use Maths effectively to ensure precision</p> <p>Students are able to choose the correct tools for each process without prompts and name specialist tools and machinery</p> <p>Students are highly independent and produce an accurate, precise and functioning product</p> <p>Students will confidently produce work that is highly individual and includes embellishments.</p>	<p>Own ideas and products:</p> <p>Students will evaluate their product throughout and are very aware of what needs modifying to improve their product as the task progresses. They act on this information.</p> <p>Students will test their product and produce a final evaluation. They discuss feedback from the user group and in detail write about at least two modifications.</p> <p>Existing products and Key events and individuals:</p> <p>Students will be able to relate key features of a product/s to a number of sophisticated concepts such as recycling/sustainability and mass and batch productions.</p> <p>Students will show a deeper understanding of existing products design and function and make connections between their ideas and the product to support and enhance their product.</p>	<p>Making products work:</p> <p>Students will bring prior knowledge to the discussion of materials/ingredients.</p> <p>Students will be able to identify other, appropriate materials that could be used in their product and understand why they made their choice</p> <p>Students will make links between Design, Science and Electronics and fully understand input and output</p> <p>Students will be able to understand and embellish a simple electronic circuit to include for example an LED</p>
6-7	<p>Understanding contexts, users and purposes:</p> <p>Student will respond creatively to the brief and explore the context</p> <p>Students will use research from a number of sources and includes examples of surveys/interviews and show a clear link to the brief</p> <p>Students can produce a specification is clear and includes 6 points with few errors and most will be justified</p> <p>Generating, developing, modelling and communicating ideas:</p> <p>Students will produce ideas that are original and detailed and include some 3D</p> <p>Students annotation is detailed describing how their ideas link to the specification</p> <p>Students may be included which is detailed and includes cut and etched shapes</p> <p>Students will discuss their ideas and modify them in response to feedback. CAD work is developed independently and include cut and etched shapes.</p>	<p>Planning:</p> <p>Students will plan their own, largely accurate manufacturing plan linking all key processes together</p> <p>Students will have an increasing knowledge of some manufacturing processes</p> <p>Practical skill and techniques:</p> <p>Students will use maths well to ensure precision</p> <p>Students can name specialist tools and machinery and select most tools appropriately</p> <p>Students will work largely independently and produce a good quality, functioning product</p> <p>Students will show practical work showing evidence of individuality with embellishments.</p>	<p>Own ideas and products:</p> <p>Students will show evidence of evaluating their product throughout and in some instances have changed their product as they progressed</p> <p>Students will test their product discuss modifications with their peers and write down two improvements in some detail</p> <p>Existing products and Key events and individuals:</p> <p>Students will identify key features of an existing product and link it to concepts such as recycling and mass and batch production</p> <p>Students will make connections between their designs and existing products and see common themes/elements that could enhance their own product.</p>	<p>Making products work:</p> <p>Students will be able to discuss materials and ingredients used in their product and understand their appropriate use</p> <p>Students will make simple links between design, science and electronics and use this knowledge to understand input and output</p> <p>Students will understand a simple circuit and how it works</p>

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4-5	<p>Understanding contexts, users and purposes:</p> <p>Students will respond creatively to the brief</p> <p>Students will use research from two different resources e.g. survey/ICT</p> <p>Students can produce a basic specification including some justification</p> <p>Generating, developing, modelling and communicating ideas:</p> <p>Students will develop at least 3 ideas creative ideas with some evidence of 3D</p> <p>Students annotation is clear and linked to the specification</p> <p>Students will discuss their work and make some changes. CAD is individual and largely include etch tools and lettering.</p>	<p>Planning:</p> <p>Students will plan with some independence a step by step manufacturing plan using a pro form and keywords</p> <p>Students will have a good knowledge of some manufacturing processes</p> <p>Students will use their teams advice to influence their design planning</p> <p>Students will include some technical vocabulary</p> <p>Practical skill and techniques:</p> <p>Students will use math with some precision</p> <p>Students are able to name and use tools and processes with some level of accuracy</p> <p>Students will produce a functioning product with some evidence of independence</p> <p>Students will show a growing confidence in their abilities and individuality.</p>	<p>Own ideas and products:</p> <p>Students will evaluate their product throughout and made at least one change if necessary.</p> <p>Students are able to test their product and mention at least one way it could be modified in detail</p> <p>Existing products and Key events and individuals:</p> <p>Students will identify the key features of existing products and be able to link it to their product</p> <p>Students will understand, with some support, where key features of an existing product can be recycled or be mass or batch produced.</p>	<p>Making products work:</p> <p>Students will understand some characteristics and properties of some materials and ingredients</p> <p>Students will understand the connection between design, electronics and science. They will know where electronics have been used in a product</p> <p>Students will understand basic input and output.</p>
2-3	<p>Understanding contexts, users and purposes:</p> <p>Students are able to talk about the brief and respond with some creativity</p> <p>Students can use research from one source to help produce ideas</p> <p>Students can produce a specification using a writing frame and include 5 key points</p> <p>Generating, developing, modelling and communicating ideas:</p> <p>Students can produce three ideas with some creativity</p> <p>Students will label their work with some links to the specification.</p> <p>Students will talk about their work but not always change them. CAD is basic.</p>	<p>Planning:</p> <p>Students can complete a plan of making using a writing frame and key words</p> <p>Students will have a basic knowledge of some manufacturing processes</p> <p>Practical skill and techniques:</p> <p>Students will use basic maths</p> <p>Students can identify the tools and equipment by name</p> <p>Students making skills sometimes lacks accuracy</p> <p>Students will produce a product that does function as intended</p> <p>Students will produce work that displays evidence of some individuality</p> <p>Students can use their peers and adults advice to ensure their work is a success.</p>	<p>Own ideas and products:</p> <p>Students can change their <i>ideas</i> as they progress but do not always change their <i>product</i> as it progresses</p> <p>Students use a pro forma to help them test the product and use a pro forma to help them discuss changes to their product</p> <p>Existing products and Key events and individuals:</p> <p>Students will be able to describe an existing product, taking guidance from the specification headings</p> <p>Students will understand how key features of an existing product can be recycled and have a growing awareness of mass and batch production.</p>	<p>Making products work:</p> <p>Students are able to name materials and ingredients</p> <p>Students will sometimes understand WHY certain materials/ingredients have been used but not always</p> <p>Students will recognise similar terms in Design, Electronics and Science</p> <p>Students will understand input and output.</p>

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0-1	<p>Understanding contexts, users and purposes:</p> <p>Students will use pictures of final products to fully understand the brief</p> <p>Students will collect information from one research source</p> <p>Students will write a basic specification using a writing frame</p> <p>Generating, developing, modelling and communicating ideas:</p> <p>Students will create two basic design ideas that may include two copied shapes</p> <p>Students will produce basic labelling</p> <p>Students will talk about their work. CAD is a template with etch lines only.</p>	<p>Planning:</p> <p>Students will follow a step by step plan of making that has photographs to help them complete their final product</p> <p>Students will have an understanding of at least one Manufacturing process</p> <p>Practical skill and techniques:</p> <p>Students will use maths with support</p> <p>Students are able to recognise basic tools by sight but are not always able to name them</p> <p>Students will produce a product that will have a reasonable quality finish</p> <p>Students will have a product that functions</p> <p>Students will show a growing ability to work on their own.</p>	<p>Own ideas and products:</p> <p>Students will change work under supervision if necessary</p> <p>Students will be able to test their product with their friends and write down what they said with support</p> <p>Students may have to use question prompts to help them discuss possible changes to their product</p> <p>Existing products and Key events and individuals:</p> <p>Students will talk about products similar to the one they have made. Students may need the support of an adult to support to use this information to develop their own ideas.</p> <p>Students will be able to identify key features of an existing product and the concept of recycling.</p>	<p>Making products work:</p> <p>Students will be able to name and explain what materials/ingredients are with support</p> <p>Students will understand what Electronics are and input/output with support.</p>