



# SVC Design and Technology Learning Pathway - Year 9



LP	Research and Designing	Making	Evaluating	Technical Knowledge
8-9	<p><b>Understanding contexts, users and purposes:</b></p> <p>Students will independently change a basic brief</p> <p>Students will produce research that is varied and include product analysis of primary sources and interviews that include a range of question types and produce a thorough and justified Specification for a marketable product</p> <p>Students will show a strong understanding of users' needs shown in the specification</p> <p><b>Generating, developing, modelling and communicating ideas:</b></p> <p>Students will produce Ideas that clearly link back to the Specification/research</p> <p>Students Ideas will be creative and annotation will explain strengths and areas for development</p> <p>Students selection and rejection will be clear in order that a final design solution reflects all users' needs</p> <p>Students modelling will be expressive and detailed.</p> <p>Students final solution can be clearly seen to have evolved with all users' needs addressed.</p>	<p><b>Planning:</b></p> <p>Students will create their own making plan and be aware of timescales to inform their own deadlines</p> <p>Students will confidently and independently correctly identify and select tools</p> <p>Students will share their knowledge and be trusted to lead</p> <p>Students will experiment and include new materials/ingredients that include Smart materials and/or systems and control and/or packaging</p> <p>Students will compile detailed and meaningful notes during lessons and demonstrations</p> <p><b>Practical skill and techniques:</b></p> <p>Students' accuracy will dominate their processes and their use and range of tools, materials, ingredients and processes will be expanding.</p> <p>Students will demonstrate confidence and the need to be experimental will be clear</p> <p>Students will show a desire to continually modify and their need to reform will be strong.</p>	<p><b>Own ideas and products:</b></p> <p>Students will evaluate the commercial use and performance of their product throughout the making process</p> <p>Students will discuss their product in relation to their specification and brief and evaluate strengths and weaknesses</p> <p>Students will suggest ways to improve their product should they move it forward and seek the opinion of their original users.</p> <p><b>Existing products and key events and individuals:</b></p> <p>Students will analyse products that include new technologies and ingredients to support their own design ideas</p> <p>Students will likely have a far greater understanding of how these can link to their brief and own design ideas</p> <p>Students understanding of a products evolution is strong</p> <p>Students will discuss with confidence and select key designers/movements/trends and features and modify and apply them to their own design ideas.</p>	<p><b>Making products work:</b></p> <p>Students will naturally use cross curricular links to inform the making process, specifically Science and Maths.</p> <p>Students will fully understand the importance of accuracy and how to achieve this together with its impact on the quality of outcome</p> <p>Students will make informed choices regarding the selection of materials based on their properties and characteristics</p> <p>Students will likely use CAD to form part of the development of ideas and their final product.</p>
6-7	<p><b>Understanding contexts, users and purposes:</b></p> <p>Students will develop a basic brief to include some changes</p> <p>Students will produce research that will include surveys/questionnaires</p> <p>Students will develop interview questions that may include closed questions and some analysis may be fact based rather than own views.</p> <p>Students will develop a specification that includes all ACCESSFM statements, however at the lower end some statements may not show clear links to the research</p> <p><b>Generating, developing, modelling and communicating ideas:</b></p> <p>Students development of ideas may not move too much from the initial ideas at the lower end, however, the designs will show instances of creativity and technical skill and variety</p> <p>Students production of ideas will have links to the Specification and take into account the users' needs</p> <p>Students modelling will be creative with a good use of modelling materials and some risk taking.</p>	<p><b>Planning:</b></p> <p>Students will produce making plans of their work and show a good understanding of processes and their links to deadlines</p> <p>Students will correctly identify tools and their uses and levels of confidence will be high</p> <p>Students will not require intervention but there may be hesitation when experimenting.</p> <p><b>Practical skill and techniques:</b></p> <p>Students will produce products that are largely accurate with a strong link to Maths</p> <p>Students will be able to select basic tools and materials with some experimental process/es</p> <p>Students will be moving towards creative changes but this may be more at the end of the project</p> <p>Students will use a variety of finishes to enhance their product</p> <p>Students will be able to discuss modifications with confidence at satisfies most of the needs of the user.</p>	<p><b>Own ideas and products:</b></p> <p>Students will evaluate their product throughout the planning and making process Students will show this as written evidence but also verbal</p> <p>Students will produce a final summary that outlines successes against the original specification/brief</p> <p>Students will produce further investigation moving their product forward</p> <p><b>Existing products and key events and individuals:</b></p> <p>Students will analyse and acknowledge new technologies</p> <p>Students will, at the top end will try to include this in the development of their ideas</p> <p>Students will demonstrate a sound understanding of a products life cycle</p> <p>Students will understand and apply with some success, key designers/movements/key features/trends to their own ideas/product.</p>	<p><b>Making products work:</b></p> <p>Students will be guided to use Maths and Science to support the level of success of the final outcome</p> <p>Students will demonstrate good levels of accuracy and a fully functioning final product</p> <p>Students will display a good understanding of various material properties and will be successful in selecting the correct material for a specific use</p> <p>Students will produce a final solution that will likely be developed with some CAD.</p>

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4-5	<p><b>Understanding contexts, users and purposes:</b></p> <p>Students will most likely stay close to the original brief</p> <p>Students research will be internet based although the top end may see the benefits of gathering different research through interviews/surveys</p> <p>Students will produce a specification that may include some justified statements but will largely be statements of intentions and include all ACCESSFM points</p> <p><b>Generating, developing, modelling and communicating ideas:</b></p> <p>Students will produce ideas that relate to the brief with clear links to their specification</p> <p>Students will develop their ideas however, they will not move much from the original ideas</p> <p>Students will show evidence of growing confidence in terms of the presentation of ideas.</p> <p>Students' annotation will include some justification with several references to the specification.</p> <p>Students will create more detailed modelling to support the development of a final solution.</p>	<p><b>Planning:</b></p> <p>Students will produce production notes but these may display some errors</p> <p>Students will show growing ability to predict what can be produced in a certain timeframe</p> <p>Students may actively or be directed to seek support from others within the classroom as processes may have to be repeatedly learnt</p> <p>Students may show growing evidence of experimentation/risk taking</p> <p><b>Practical skill and techniques:</b></p> <p>Students will join products and this will be largely accurate</p> <p>Students may show a hesitant use of tools and techniques</p> <p>Students will show the desire to modify and improve the final appearance of their product</p> <p>Students will investigate finishing processes to improve the final outcome</p> <p>Students will demonstrate modifications at the end of the making process rather than during.</p>	<p><b>Own ideas and products:</b></p> <p>Students will evaluate their product during the making process verbally or written</p> <p>Students may leave out some features identified in their specification</p> <p>Students will produce a product where some parts may not always function as intended</p> <p>Students may use a pro forma to test their product against the original specification/brief</p> <p><b>Existing products and key events and individuals:</b></p> <p><b>Students will</b> understand developing technologies and their impact on the wider world</p> <p><b>Students will</b> understand the make-up of a product and the reasons for their existence</p> <p><b>Students will</b> understand sustainability</p> <p><b>Students will</b> recognise key designers/movements/chefs features and discuss with some confidence.</p>	<p><b>Making products work:</b></p> <p>Students will display a growing confidence in the use of Maths and Science during the making process</p> <p>Students may display some hesitation and errors may have an impact on the function of the final product</p> <p>Students will need to be reminded of properties of materials may have to be repeated continually however students will, on the whole, choose materials successfully</p> <p>Students may show basic CAD designs in their products.</p>
2-3	<p><b>Understanding contexts, users and purposes:</b></p> <p>Students will not alter the original brief</p> <p>Students will use the internet to gather basic information to help to inform the future development of ideas those who use survey/interview evidence may not use them to support the development of their product</p> <p>Students will include a basic specification and include at least four key points and may use a pro forma</p> <p><b>Generating, developing, modelling and communicating ideas:</b></p> <p>Students will produce ideas that are simple and have a clear link to the original brief with an attempt at 3D</p> <p>Students will make some attempt at development such as a basic features however some ideas will be similar</p> <p>Students will produce basic modelling</p> <p>Students will have a final solution.</p>	<p><b>Planning:</b></p> <p>Students will be guided by a series of process sheets that will inform their own lesson planning</p> <p>Students will begin to identify and select tools with confidence as the project moves to the middle stages</p> <p>Students will likely need several picture prompts</p> <p>Students will show some experimentation</p> <p><b>Practical skill and techniques:</b></p> <p>Students will use obvious joining processes from traditional processes rather than new technologies such as CAD/CAM</p> <p>Students work may not show changes and modification however they may ask for peer or adult supervision to enhance the final appearance</p> <p>Students work may not show modifications.</p>	<p><b>Own ideas and products:</b></p> <p>Students will evaluate their product after the project has ended, some may evaluate throughout</p> <p>Students may only evaluate against some of the original specification points. This may be basic and brief</p> <p>Students will likely use a writing frame with some sentence starters and test against the specification/brief</p> <p><b>Existing products and key events and individuals:</b></p> <p>Students will understand the main functions of existing products and understand sustainability/recycling.</p> <p>Students may not make these links to their own products "life cycle"</p> <p>Students will apply colour and shape features of key designers/movements /shapes and trends with little changes.</p>	<p><b>Making products work:</b></p> <p>Students will use some basic Maths and encouraged to use Science during the making process</p> <p>Students will show some errors that may have a large impact on the final function/s of the end product</p> <p>Students will know some properties of materials but will a wide range</p> <p>Students will select materials with support</p> <p>Students will not always have CAD present in their final solution.</p>

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O-1	<p><b>Understanding contexts, users and purposes:</b></p> <p>Students will likely be led by an adult and be advised about what the brief means</p> <p>Students will develop their investigation skills by producing successful internet searches and produce research within the classroom environment</p> <p>Students will produce a specification using a pro forma with sentence starters and keywords</p> <p><b>Generating, developing, modelling and communicating ideas:</b></p> <p>Students will produce ideas that are basic and very similar.</p> <p>Students will develop ideas that may be heavily influenced by research rather than their own imaginative ideas</p> <p>Students may produce models to support their ideas</p> <p>Students will show a growing confidence and evidence of some independence</p> <p>Students may not have a final developed idea.</p>	<p><b>Planning:</b></p> <p>Students will be guided by an adult</p> <p>Students will use process sheets throughout the planning process</p> <p>Students will talk about their intentions with prompts from an adult</p> <p>Students will likely be led and learn through repetitive actions</p> <p>Students will show a growing confidence in for example the correct selection and use of tools</p> <p><b>Practical skill and techniques:</b></p> <p>Students will produce a basic product and may function as intended with support</p> <p>Students will make final choices when given a selection from an adult although</p> <p>Students may want to leave all decisions to an adult</p> <p>Students will use some finishing techniques but they may be influenced by peers work and may show inaccuracies.</p>	<p><b>Own ideas and products:</b></p> <p>Students will have talked about their product throughout the making process with the support of an adult</p> <p>Students will give a verbal evaluation of their product.</p> <p><b>Existing products and Key events and individuals:</b></p> <p>Students will be able to talk about a product and how it works</p> <p>Students will likely need spoken prompts from adults/peers</p> <p>Students may use this to support the making of their own product/s</p> <p>Students may apply designers/ movements/ chefs/ trends distinct features to their work but this may be direct copies.</p>	<p><b>Making products work:</b></p> <p>Students will be guided throughout the making process and links to Maths and Science will not necessarily be obvious.</p> <p>Students will use Maths but will be supervised at all times</p> <p>Students may show little understanding of properties of materials and students will be guided on their appropriate use.</p>