SVC Design and Technology Learning Pathway – Year 8

LP	Research and Designing	Making	Evaluating	Technical Knowledge
8-9	**Understanding contexts, users and purposes:** Students will independently consider problem solving during the planning process Students will go above and beyond what's expected in terms of research. Research will be thorough and varied Students written evidence including a specification will demonstrate a great deal of depth of knowledge and understanding **Generating, developing, modelling and communicating ideas:** Students will always produce ideas and a final product idea that have some feature/s different to other students; this is a regular occurrence Students will produce a range of original ideas and presentation techniques are exceptional Students annotation is always thorough and linked to the brief and specification.	**Planning**: Students will independently work through each process and thoroughly document their progress using a diary log Students will independently and successfully explain issues that may have arisen during the manufacturing of their product and offer alternatives Students will document and see modification as a positive and a valuable part of the learning process **Practical skill and techniques:** Students can select tools independently and identify making processes appropriate to the making task Students final aesthetics of their work reflects a high quality finish Students will produce a high quality product that fully functions Students will realise the needs of the target user group are important to the success of the product.	**Own ideas and products:** Students will try to problem solve during the making process without support Students will investigate and discuss HOW problems can be overcome with some guidance **Existing products and Key events and individuals:** Students will understand how existing products can influence how their product ideas are developed and evidence their influence in their designs/products Students will see how outside influences such as movements and designers, cultures and trends can begin to influence their choices during planning and making Students will understand globalisation and copyright and realise their importance to the design process.	**Making products work:** Students will fully understanding the properties and characteristics of a wide range of materials/ingredients Students competent and detailed use of CAD and CAM is becoming an important part of their design process Students will see a clear connection between this and batch and mass production Students will have a growing awareness of the importance of cross curricular links and can evidence the application of skills learnt in other subject areas to DT; in particular Maths and Science. Students see the accurate use of Maths and the quality of their product
6-7	**Understanding contexts, users and purposes:** Students will begin to solve problems during the planning process but may be hesitant and seek guidance Students will produce research that is varied and relevant to the brief Students will produce a detailed specification with justified statements **Generating, developing, modelling and communicating ideas:** **S**tudent's ideas and final product idea will be creative and imaginative and contain elements that have not been mentioned in the original brief. Ideas may show embellishments Students may take their lead from their peers rather than being highly original however their presentation techniques are of high quality Students will produce detailed annotation which will be mostly linked to the Brief and Specification	**Planning:** Students will document their processes in detail using a diary log Students will show a growing confidence with regard to the manufacturing of their product with little supervision Students will document modifications **Practical skill and techniques:** Students will correctly select tools and link them to the correct process specific to the task Students will use process sheets very occasionally and be confident when making Students will produce a final product that has a very good quality finish Students will produce a final product that functions as intended with very few flaws Students will produce a product that satisfies most of the needs of the user	**Own ideas and products**: Students will be able to problem solve during the making process with little support Students will seek assurance when problems arise but will, during the end of a rotation seek less support **Existing products and Key events and individuals:** Students will understand how existing products and designers/trends/key events may influence their work. There may be some evidence in their designs/product Students will have an awareness and understanding of globalisation Students will have a sound awareness of copyright and be aware of this in relation to their own work Students will understand copyright is an important part of the design process.	**Making products work:** Students will show a growing awareness that all materials/ingredients have particular characteristics and limitations Students can show evidence of the competent, partly detailed use of CAD and CAM Students will have a secure knowledge of the part CAD/CAM plays in making identical copies for batch and mass production Students will make successful cross curricular links with Maths to support their accuracy and the quality of their product. However Science is not always obvious to them.

LP	Research and Designing	Making	Evaluating	Technical Knowledge
4-5	**Understanding contexts, users and purposes:** Students will problem solve during the design process but may seek support and may continue on the "wrong path" and need adult intervention Students will produce research that is thorough and relevant to the brief Students will produce a specification and cover most Specification points. **Generating, developing, modelling and communicating ideas:** Students will produce a range of ideas and a final idea with some embellishments and some creativity Students will produce ideas that are well presented with emerging skills Students will produce informative annotation that include extended sentences.	**Planning:** Students will document their processes using a diary log Students will manufacture their product with some supervision from an adult Students will document and discuss some modifications **Practical skill and techniques:** Students will correctly select tools and machinery but may need recaps at the beginning of each lesson Students will rely on process sheets for part of the making processes although there should be evidence of students becoming more independent Students will produce a final product that will function very well Students will produce a product of good quality with a good quality finish Students will produce a product that will meet most of the needs of the user	**Own ideas and products:** Students will need some support when problem solving difficult issues Students will often overcome simple problems Students will be able to reflect upon their work but may not offer solutions to issues that have arisen **Existing products and Key events and individuals:** Students will be able to understand and show in some areas of their work where designers/trends/key events have influenced their work Students will understand globalisation but may need the concept simplifying Students may feel the need to "copy" existing products using Trademarks for example without fully understanding copyrights and the term "individual".	**Making products work:** Students will understand some limitations of commonly used materials/ingredients Students will be competent when using CAD and CAM, however their ideas may be basic Students sometimes realise the connection with batch and mass manufacturing, but this may be limited Students will use Maths with a good level of accuracy and their products may have inconsistencies because of this.
2-3	**Understanding contexts, users and purposes:** Students will seek guidance during problem solving at the start of the design process Students will likely need to see exemplar material to support their understanding Students will need to see final products and their construction explained before designing Students research will be basic and may lack detail Students will produce a specification that may not cover all points and be brief **Generating, developing, modelling and communicating ideas:** Students will need any possible problems highlighted BEFORE designing begins to make them aware of issues that could affect products Students designs will be plain with some detail. Presentation skills will be limited Written work will be labelling or short sentence.	**Planning:** Students can complete a plan of making using a writing frame and key words Students will have a basic knowledge of some manufacturing processes **Practical skill and techniques:** Students will use basic maths Students can identify the tools and equipment by name Students making skills sometimes lacks accuracy Students will produce a product that does function as intended Students will produce work that displays evidence of some individuality Students can use their peers and adults advice to ensure their work is a success.	**Own ideas and products:** Students can change their *ideas* as they progress but do not always change their *product* as it progresses Students use a pro forma to help them test the product and use a pro forma to help them discuss changes to their product **Existing products and Key events and individuals:** Students will be able to describe an existing product, taking guidance from the specification headings Students will understand how key features of an existing product can be recycled and have a growing awareness of mass and batch production.	**Making products work:** Students are able to name materials and ingredients Students will sometimes understand WHY certain materials/ingredients have been used but not always Students will recognise similar terms in Design, Electronics and Science Students will understand input and output.

LP	Research and Designing	Making	Evaluating	Technical Knowledge
0-1	**Understanding contexts, users and purposes:** Students will probably need constant support throughout the design process and problem solving Students will produce some research, this may be a simple collection of pictures and need adult support to guide them through the research stages Students will produce a specification using sentence starters and a writing frame **Generating, developing, modelling and communicating ideas:** Students will need support from their team and adults when producing ideas and a final idea however, there will be a move towards the student gaining confidence and working on their own Students will show very limited drawing and presentation skills. Ideas will most likely be line simple line drawings with recognisable shapes Students will produce labelling.	**Planning:** Students will produce a simple diary log using a pro forma Students will need adult support when changing manufacturing plan Students will be able to talk about any changes/modifications **Practical skill and techniques:** Students will, towards the end of the year show a growing awareness of the hand tools and will remember processes Students will use a process sheet with photographs Students will need adult support throughout the making process Students will likely be visual learners and need regular demonstrations of processes Students will produce an end product/s that may be incomplete and basic Students will show positive developments towards a better quality product.	**Own ideas and products:** Students will need support when facing problems Students will seek support throughout the making process Students will need support when evaluating their work as it progresses **Existing products and Key events and individuals:** Students will need constant access to examples of final products/existing products/key events/designers and trends to support their understanding Students will, with support be able to link their work to existing products Students will be reminded not to directly copy existing products and bring those ideas in to their own designs/products.	**Making products work:** Students will identify and sometimes name common materials and ingredients Students may use CAD/CAM as part of their product however, time may not allow this Students will rely on a template to work from Students will use Maths under supervision and may show some errors Students will likely need to be supervised whe using a ruler.