

Year 7 Design and Technology

In Year 7, students come to Richmond School with a range of experiences, knowledge and skills relating to the world of Design and Technology. At primary school, some students are given experiences in Design and Technology and some students are fortunate enough to have access to tools and equipment at home. The focus for Design and Technology in Year 7 is to give students the basis for the following years and ensure that all students are taught the rules, routines and procedures for working in a practical environment. Students complete two small practical projects and are taught the stages of investigation, design, make and evaluate. Students are given the opportunity to use past experiences and in some cases, play to their strengths. Alongside these lessons are core principles. This a stand-alone lesson, one per fortnight, where students are given the extra knowledge they need to help with lessons in all Design and Technology strands. This can be drawing skills, presentation skills or information about the sources of materials and environmental considerations when designing and making.

| Methods of deepening and securing knowledge: | |
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| Spaced practice | Expectations with Health and Safety, in particular rules and routines, are broken up throughout the year and referred to throughout. Basic expectations are taught at first, which then develop into rules when using high-risk machinery for practical work. |
| Elaboration | Students are encouraged to elaborate on research and ideas throughout their project work. Students will research existing products or a material or process and need to elaborate on these, making sure they cover the impact these will have on their design and make process. |
| Interleaving | Using core principles, students can use this knowledge in their work in all strands. For example, lessons on creativity and developing ideas will come up in each project across the various strands. Students will practise these skills and knowledge throughout the year at different stages. |
| Concrete examples | Due to the types of work and projects students will complete, concrete examples are used by getting students to work with the actual materials, tools and machinery. |

| | Autumn term 1 | Autumn term 2 | Spring term 1 | Spring term 2 | Summer term 1 | Summer term 2 | |
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| Topic(s) | ID Tag - Introduction to plastics - Research on the client/user - Investigation of the use of plastics | ID Tag - Designing suitable for the client - Modelling/ prototyping - Developing designs and making a final outcome | ID Tag - Finishing processes - Evaluation - Reflecting and analysing work | Animal Silhouette - Introduction to project - Research of timbers - Reiteration of expectations - Initial designs | Animal Silhouette - Developing designs - Making templates/ prototyping - Making final product | Animal Silhouette - Finalising of making - Evaluating/ analysing progress | |

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| | | - Use of correct machinery and tools | | | - Finishing techniques and wood finishes | |
| Assessment | - Baseline assessment - Investigation design assessments | - Design assessment - On-going making assessments | - Making assessment - Evaluation assessment | - Investigation assessment | - Design assessment | - Making assessment - Evaluation assessment |
| CEIAG <i>(Careers that are linked to that topic)</i> | - The Plastics Industry - Use of Plastics in Manufacturing | - Product Design - Product Development/Making | - Manufacturing Industry | - The Timber Manufacturing Industry | - Product Design | |