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### TECHNOLOGY: CORE LEARNING OUTCOMES for Years 1 to 10

| **STRAND** | **Organisers** | **LEVEL 1** | **LEVEL 2** | **LEVEL 3** | **LEVEL 4** | **LEVEL 5** | **LEVEL 6** |
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| Technology Practice | **Investigation** | **TP1.1** Students gather knowledge, ideas and data from familiar environments and show how these are used to meet design challenges. | **TP2.1** Students organise knowledge, ideas and data about how needs and wants might be met and use this information when meeting design challenges. | **TP3.1** Students examine knowledge, ideas and data from a range of sources and establish the relevance of this information when meeting design challenges. | **TP4.1** Students use consultative methods to gather knowledge, ideas and data when researching alternatives within design challenges. | **TP5.1** Students analyse links between knowledge, ideas and data gathered to meet design challenges and the design and development of new and improved products. | **TP6.1** Students formulate detailed plans for gathering knowledge, ideas and data and validate choices of information, sources and methods. |
| **Ideation** | **TP1.2** Students generate design ideas and communicate them through experimentation, play and pictures. | **TP2.2** Students generate design ideas, acknowledge the design ideas of others and communicate their design ideas using annotated drawings that identify basic design features. | **TP3.2** Students collaboratively generate design ideas and communicate these using presentations, models and technical terms. | **TP4.2** Students generate ideas through consultation and communicate these in detailed design proposals. | **TP5.2** Students generate ideas and communicate these in design proposals that indicate an understanding of factors influencing production of the option(s) they have selected. | **TP6.2** Students generate design ideas and communicate these in design proposals that indicate various options and incorporate management strategies for managing resources. |
| **Production** | **TP1.3** Students make products that are meaningful to them, and describe their production procedures. | **TP2.3** Students identify, sequence and follow production procedures needed to make products of their own design. | **TP3.3** Students cooperatively develop and follow production procedures to make products that reflect their design ideas. | **TP4.3** Students identify and make use of the practical expertise of others when following production procedures to make products for specific users. | **TP5.3** Students meet predetermined standards as they follow production procedures to make quality products. | **TP6.3** Students negotiate and refine production procedures in making quality products that meet detailed specifications. |
| **Evaluation** | **TP1.4** Students express thoughts and opinions to evaluate their own and others’ design ideas or products. | **TP2.4** Students compare initial design ideas with final products and give reasons for similarities and differences. | **TP3.4** Students test and judge how effectively their own or others’ processes and products meet the design challenge. | **TP4.4** Students gather feedback to gauge how effectively their design ideas and processes meet design challenges and how effectively products meet the needs of specific users. | **TP5.4** Students use predetermined criteria to judge how well processes and products meet the needs of specific users, and recommend modifications or improvements. | **TP6.4** Students identify methods for evaluating commercial or industrial products and processes and use these to judge the appropriateness of their own processes and products. |
| **Information** | **Nature** | **INF1.1** Students identify and describe different forms of information. | **INF2.1** Students explain the purposes of different forms of information and describe how these are used in everyday life. | **INF3.1** Students describe advantages and disadvantages of different sources and forms of information. | **INF4.1** Students analyse sources and forms of information and match these to the requirements of design challenges. | **INF5.1** Students explain how changes to sources, forms and management of information affect design and production decisions. | **INF6.1** Students analyse issues related to ownership and control of information in societies. |
| **Techniques** | **INF1.2** Students use simple techniques for presenting information for their own purposes. | **INF2.2** Students use simple techniques for accessing and presenting information for themselves and others. | **INF3.2** Students select and use techniques for generating, modifying and presenting information for different purposes. | **INF4.2** Students apply techniques for transforming and transmitting information for different audiences. | **INF5.2** Students compare and select techniques for processing, managing and presenting information for specific users. | **INF6.2** Students use specialised techniques for managing and organising the presentation of information to meet detailed specifications. |
| **Materials** | **Nature** | **MAT1.1** Students identify characteristics of materials and explain how materials are used in everyday products. | **MAT 2.1** Students match the characteristics of materials to design requirements. | **MAT 3.1** Students choose materials according to various characteristics that best suit the product and user. | **MAT 4.1** Students explain how characteristics of materials affect ways they can be manipulated. | **MAT 5.1** Students compare and contrast materials according to their characteristics to determine how effectively the materials meet predetermined standards. | **MAT 6.1** Students incorporate in their design proposals ideas about the impacts of particular materials used in products. |
| **Techniques** | **MAT 1.2**Students explore equipment and techniques when joining and combining materials for meaningful purposes. | **MAT 2.2** Students select and use suitable equipment and techniques for manipulating and processing materials. | **MAT 3.2** Students select and use suitable equipment and techniques to combine accurately in order to meet design requirements. | **MAT 4.2** Students employ their own and others’ practical knowledge about equipment and techniques for manipulating and processing materials in order to enhance their products. | **MAT 5.2** Students operate equipment and apply techniques for manipulating and processing materials to meet predetermined standards. | **MAT 6.2** Students use specialised equipment and refined techniques to make quality products to detailed specifications. |
| **Systems** | **Nature** | **SYS1.1** Students identify familiar systems and describe how these are used in everyday life. | **SYS2.1** Students identify and describe the order of components in familiar systems. | **SYS3.1** Students identify and describe relationships between inputs, processes and outputs in systems. | **SYS4.1** Students identify and explain the logic of systems and subsystems. | **SYS5.1** Students explain the structures, controls and management of systems and subsystems. | **SYS6.1** Students explain principles underlying complex systems in terms of structures, control and management. |
| **Techniques** | **SYS1.2** Students sequence steps to develop simple systems to carry out familiar tasks. | **SYS2.2** Students combine components to assemble systems in order to meet their needs and the needs of others. | **SYS3.2** Students assemble and trial systems they design by considering inputs, processes and outputs. | **SYS4.2** Students incorporate feedback to refine and modify systems and/or subsystems. | **SYS5.2** Students incorporate control and management mechanisms in systems that include subsystems. | **SYS6.2** Students devise ways to manage and monitor the operation of complex systems. |