

YEAR 10 PRODUCT, DESIGN AND TECHNOLOGY (WOOD, METAL, PLASTIC)

The Year 10 course aims to introduce students to the different structural properties of a range of materials such as solid timber and veneered plywood and composite boards, metals and plastics. Students investigate the properties of these materials and refer to Australian Standards when investigating their use. Students will be given the opportunity to select appropriate materials to meet specified product design requirements. The course aims to develop student knowledge of the product design process and build skills and understanding in the use of simple and complex equipment to construct a range of products using different materials, according to specific criteria outlined in design briefs.

Students will learn about:

- critiquing the design of an existing product to identify environmental consequences of material selection.
- justifying decisions when selecting from a broad range of technologies – materials, systems, component, tools and equipment. For example, selecting low-emission paints and locally sourced materials.
- analysing and explaining the ways in which the properties and characteristics of materials have been considered in the design of products with specific requirements such as minimising size and weight for distribution.
- investigating emerging materials and their impact on design decisions.
- Investigating - Critique needs or opportunities to develop design briefs and investigate and select an increasingly sophisticated range of materials, systems, components, tools and equipment to develop design ideas.
- Generating - Apply design thinking, creativity, innovation and enterprise skills to develop, modify and communicate design ideas of increasing sophistication.
- Producing - Work flexibly to safely test, select, justify and use appropriate technologies and processes to make designed solutions.
- Evaluating - Evaluate design ideas, processes and solutions against comprehensive criteria for success recognising the need for sustainability.
- Planning and managing - Develop project plans to plan and manage projects individually and collaboratively taking into consideration time, cost, risk and production processes.

Subject to a materials charge. Please refer to the *Materials Charges* document for indicative costs.