



Year 8 Design and Technology

**Subject overview:**

The year 8 curriculum focuses on students investigating and selecting and applying a range of technologies, materials, systems, tools and equipment. They consider the ways that properties and characteristics of resources can be combined to create and produce sustainable designed solutions to problems for individuals and the community. Students identify the sequences and steps involved in design tasks. There is a strong focus on engineering principles, materials and appropriate technologies. They develop plans with criteria for success to manage design tasks, including safe and responsible use of materials and tools, and apply management plans to successfully complete design tasks. They create and adapt design ideas, make considered decisions and communicate to different audiences using appropriate technical terms and a range of technologies and graphical representation techniques.

Students research, analyse and explain factors that influence the design of products, services and environments to meet present and future needs. They explain the contribution of design and technology innovations and enterprise to society. Students explain how the feature of technologies impact on designed solutions and influence design decisions for each of the prescribed technologies contexts.

Contextual literacy and numeracy capabilities are supported and further developed throughout the course.

Assessment Type	%	Topic	Potential Tasks
Research Analysis Evaluation <i>In most cases required presentations will be written although other forms of presentation may be negotiated</i>	30%	<b>Research analysis and evaluation</b> associated with practical tasks	Examine and prioritise competing factors including social, ethical and sustainability considerations in the development of technologies and designed solutions to meet community needs for preferred futures.  Investigate the ways in which products, services and environments evolve locally, regionally and globally through the creativity, innovation and enterprise of individuals and groups  Analyse how motion, force and energy are used to manipulate and control electromechanical systems when designing simple, engineered solutions.  Analyse ways to produce designed solutions through selecting and combining characteristics and properties of materials, systems, components, tools and equipment.  Evaluate designed solution in reference to how well the product matches the intended outcome.
Assessment Type	%	Topic	Potential Tasks
Designing Producing	70%	Various practical tasks involving <b>design production</b>	Create and adapt design ideas, develop plans and communicate to different audiences using appropriate technical terms and a range of technologies including graphical representation techniques.  Effectively and safely use a broad range of materials, components, hand tools, machinery, equipment and techniques to make designed solutions with the emphasis on working safely and independently.  Use project management processes when working individually and collaboratively to coordinate production of designed solutions.