Stage 5 Design and Technology

Course plan (200 hours)

Rationale

Studying this course allows students who have demonstrated strength in the completion of quality units of work in Stage 4 of the Design and Technology course an opportunity to extend themselves in a personal area of interest. This course will assist students in appreciating the range of careers available in the design and technological innovation areas to meet the demands of a knowledge-based economy and lifestyle.

The school is a medium sized secondary, catering for boys mostly from a language background other than English. The low socio-economic background and its associated effects present a real challenge in keeping these boys focused in producing high quality learning outcomes.

The units of the course are written as individual design projects. Each unit addresses a range of outcomes through a variety of teaching and learning strategies. It is possible that elements of more than one unit could run concurrently to suit resource allocation within the faculty, such as, workshops, tooling or computer access.

Units

1	Easter egg package	(10 weeks)
2	Cutlery organiser	(14 weeks)
3	Fold it up	(16 weeks)
4	Pot plant stand	(10 weeks)
5	CD storage	(30 weeks)

200 hour course plan					
	Unit 1	**Unit 2**	**Unit 3**	**Unit 4**	**Major project**
Unit title **Design project**	**Easter egg package** Design and make the prototype of an Easter egg package using suitable materials	**Cutlery organiser** Design and make the prototype of a cutlery rack for a set of 6.	**Fold it up** Design an item that features a folding mechanism.	**Pot plant stand** Design a suitable free-standing stand for a pot plant	**CD storage** Design and make using suitable materials a CD rack to store 50 CDs.
Time	25 hours	35 hours	40 hours	25 hours	75 hours
Focus area of design	Packaging	Furniture	Engineering	Structural	Furniture
Syllabus objectives	1, 2, 5	1, 2, 3, 4, 5, 6	3, 4, 5, 6	5, 6	1, 3, 4, 5, 6
Essential content (Outcomes)	5.1.1, 5.1.2, 5.4.1, 5.5.1	5.1.1, 5.2.1, 5.3.1, 5.4.1, 5.5.1, 5.6.3	5.3.1, 5.3.2, 5.4.1, 5.5.1, 5.6.1, 5.6.2, 5.6.3	5.5.1, 5.6.1	5.1.1, 5.3.2, 5.4.1, 5.5.1, 5.6.1, 5.6.2, 5.6.3
Core content	• The concepts of design. • Creative and innovative idea-generation. • Research and exploration. • Communication and presentation techniques. • Innovation. • The work of past and current designers across a range of settings.	• Identification of needs and opportunities. • Factors affecting a holistic approach to design and production. • Impacts of technologies on societies. • The work of current and past designers across a range of settings. • Innovation. • Communication and presentation techniques. • Realisation of design ideas using technologies.	• Design purpose and setting factors. • Human technical and environmental factors. • Innovation. • Communication techniques. • Evaluating. • Realisation of design ideas using technologies. • Management. • Ethical and responsible design.	• Identification of needs and opportunities. • Creative and innovative idea generation. • Research and exploration. • Management. • Communication. • Trends in technology and design.	• Human, technical and environmental factors. • Creative ideas generation. • Research and exploration. • Experimentation. • Management. • Communication and presentation techniques. • Realisation of design ideas using technologies. • Evaluating. • Experimentation. • Innovation. • Impact of technologies.

Evidence of work	☑ Sketching first ideas ☑ Development drawings ☑ Research work ☑ Prototype ☑ Assignment	☑ Research and analysis ☑ Concept ideas ☑ Development of ideas ☑ Final drawings ☑ Making the design ☑ Testing and evaluation ☑ Prototype ☑ Assignment	☑ Research and analysis ☑ Assignment ☑ Concept ideas ☑ Development of ideas into a final design ☑ Testing and evaluation of final design ☑ Presentation techniques and modelling	☑ Materials study ☑ Fabrication techniques ☑ Sketching and drawing design ideas ☑ Presentation of final design ideas ☑ Production notes ☑ Prototype ☑ Assignment	☑ Research and analysis ☑ Concept idea generation ☑ Development of concept ideas into possible designs ☑ Constructing prototype and testing ☑ Evaluating and preparing production notes ☑ Assignment
Assessment methods	Self evaluation Teacher assessment	Peer evaluation Teacher evaluation	Group and analysis Analysing feedback Teacher assessment	Self-evaluation Teacher assessment	Group presentation Self-evaluation Teacher assessment