IGCSE DESIGN & TECHNOLOGY

Why should I choose D & T?

Within a rapidly changing technological society inspiration of design is located all around us. By manipulating mathematical shapes, natural forms, colour, texture and function of materials fresh products can certainly evolve. Design and Technology fosters individual flair, creativity and the ability to innovate by encouraging initiative, self-motivation and a spirit of enterprise. It enables students to confidently organise, identify, consider and solve problems independently through creative thinking, idea generation, planning and manufacturing.

Course content

Product Design, Resistant Materials and Graphics:
- Aesthetics (Form, Function, colour, shape, texture)
- Technical drawing – Isometric, Orthographic projection, Vanishing point
- Environmental considerations for sustainable design.
- Computer Aided Design (CAD) and theory of Computer Aided Manufacture (CAM).
- Planning for production (Accurate measurements, constructing prototypes – testing).
- Safe and effective application of tools within the workshop studio.
- Manufacturing techniques with a variety of materials (Perspex, Wood, Metal, and Paper).
- Joining and finishing processes.
- Performing conclusive evaluations in order to establish imaginative modifications.

The Design Process (the umbrella for conjuring fascinating design solutions):
1. Identify a Need= Identify a Need or Purpose in a given situation.
2. Design Brief= Produce a short Design Brief.
3. Tasks Schedule= List all major areas of work and allocate times and deadlines.
4. Analysis of Brief= Look at the Brief and produce a list of research questions.
5. Research= Identify and collate information only relevant to the Analysis of Brief.
6. Specification= Produce a list of requirements found from research relevant to the Brief.
7. Generate Ideas= A range of different possible solutions satisfying the Specification.
8. Choose Solution= Produce a solution using the Specification and your Generated Ideas.
9. Develop Solution= Generate details necessary to make the solution.
10. Make Solution= Produce the solution systematically.
11. Test Solution= Test your solution against the Brief and Specification.
12. Modify Solution= List modifications to improve the solution's effectiveness.
13. Evaluation= Evaluate the project against the Brief and Specification, provide recommendations.

How will I learn?

- You will creatively learn individually, in teams and as a whole class, via theory and by doing.
- (Class led and independent homework enquiries)
- You will be given project briefs which are stimulating and also challenging for you.
- Your needs in Design and Technology will be assessed regularly and you will focus on these needs until you are proficient in them.

How will I be assessed?

Paper 1: Design (1 hour 15 minutes) (25% of final mark)
This compulsory question paper tests Part 1 of the syllabus. Candidates answer one of three open-ended questions which assess their abilities of analysis and synthesis. The range of questions will reflect the breadth of optional content.

Paper 2: Graphic products (1 hour) (25% of final mark)

Paper 5: Coursework project (50% of final mark)

Realisation of a physical product – (25% of final mark)

Design Portfolio (25% of final mark)
Each candidate must complete an individual project which candidates usually work on over the final two terms of the course. The project is internally marked and externally moderated.

Candidates produce work in the form of an A3-size portfolio folder and the ‘made product’.

The folder must include sufficient photographic evidence of the made product, showing an overall view together with detailed views of evidence which support the award of marks for assessment criterion 6 ‘Product realisation’.

**Post IGCE Opportunities:**

A Level – IB, Design and Technology
University – Post Graduate study

**Some careers in which knowledge of Design and Technology would be useful:**

| Product Design | Interior Design | Fashion Design |
| Graphic Design | ICT: sales and technical support | Construction |
| Engineer | Architect | Marketing |
| Computer developer | Special effects work | Teacher |

**Contact for further information:**

[www.technologystudent.com](http://www.technologystudent.com)
[www.bbc.co.uk/gcsebitesize](http://www.bbc.co.uk/gcsebitesize)

Mr Tim (DT Coordinator)
[timothy_gandy@tenby.edu.my](mailto:timothy_gandy@tenby.edu.my)