

MYP...Technology

Technology is "...the know-how and creative processes that may assist people to utilise tools, resources and systems to solve problems and enhance control over the natural and man-made environment in an endeavour to improve the human condition..." (UNESCO 1985)

Technology at IST currently encompasses the subjects ***Information Technology*** (IT) from grades 6-10 and ***Design Technology*** (DT) in grades 9-10.

Design Technology is a burgeoning program offered at IST which allows students to complement the skills they have learnt previously in IT. At IST we have a dedicated design workshop with excellent facilities, enabling students to tackle a variety of design projects working with various materials, equipment and techniques. These projects are open-ended and relate to the needs of the students in the MYP curriculum.

Information Technology is taught at IST in four newly and completely renovated labs with outstanding resources. Our facilities include a Mac Lab with 25 iMacs, 2 PC Labs with 50 HP PC's and a Multimedia room. All labs feature interactive whiteboards and projectors, have colour and laser A4 and A3 printers and use wireless networking. This facilitates a curriculum that is wide and varied and provides opportunities for students to learn new skills needed in a rapidly changing and developing, technologically global environment.

Towards the end of grade 10 students take student-centred learning to a new level as they write individual design briefs and complete their own projects in both DT and IT.

MYP Technology is more than acquiring skills and knowledge, for example in computer applications. It is also about learning to approach problems with the appropriate skills and techniques, identifying important aspects of a given situation and developing creative and innovative solutions. MYP Technology requires students to develop and continually apply the skills involved in planning, investigating, inventing, creating, testing, modifying and evaluating. Since technology has both local and global consequences, MYP Technology also requires students to understand the issues and consequences associated with technological developments.

The ***aims*** of MYP Technology include:

- ✓ To stimulate and maintain students' interest, curiosity and concern about technological aspects of their environment
- ✓ To enable students to develop skills that allow them to design and produce a range of quality products that address problems and needs in society

- ✓ To gain confidence and competence in using various resources, tools and materials (DT) or hardware and software (IT)
- ✓ To understand how design can be used as a method of communication
- ✓ To develop logical and lateral thinking skills as well as practical problem solving skills

Central to MYP Technology programme is the *Design Cycle*. This is a model for a process that enables students to use research, knowledge, skills and design principles in solving problems creatively. The cycle consists of five stages:

Investigate
Design
Plan
Create
Evaluate



The Design Cycle

Students are expected to use the design cycle process in all technology projects, which often involves critical analysis and moving back and forth between the

stages. For example, after a product / solution has been evaluated, there may be further investigating or planning before it is improved and re-evaluated.

To record their investigations, plan, and evaluate their product / solution, students keep a *process journal*. It is essential for students to understand the need for planning and how a plan might be changed or adapted as a project progresses and new experience or information comes to light. In MYP Technology, the *process* of developing a solution is as important as the *product*. It is also important for students to be able to reflect on their work, judge the effectiveness and quality of the product / solution compared to the original need and justify any modifications they may have made to the original plan.

Assessment in Technology incorporates both the student's approach to the process and the final product / solution. There are five *assessment criteria*, four of which correspond to the stages of the design cycle:

Investigate: This criterion assesses the student's ability to identify the problem, develop a design brief and formulate a design specification. Students are expected to acknowledge the sources of information and document these appropriately. (maximum 6)
Design: Students are expected to generate several possible designs that meet the design specification and to evaluate these against the design specification. They then select one design, justify their choice and evaluate this in detail against the design specification. (maximum 6)
Plan: This criterion assesses the student's ability to construct an effective plan with a series of logical steps for creating their chosen product/solution. Students evaluate the plan and justify any modifications to the design. (maximum 6)
Create: The student's ability to follow the plan and create the product / solution using skills, techniques, materials and resources is assessed using this criterion. Students are expected to document, (e.g. photographs, video) the process of making their product/solution, including when and how they use tools, materials and techniques.. They also evaluate the plan and to justify any changes made. (maximum 6)
Evaluate: Students evaluate the product/solution against the design specification in an objective manner based on testing, and to evaluate its impact on life, society and/or the environment. They also explain how the product/solution could be improved as a result of these evaluations. (maximum 6)
Attitudes in Technology This criterion focuses on the student's personal engagement (motivation, independence, general positive attitude) and attitudes towards safety, cooperation and respect for others. (maximum 6)

Further information about the MYP can be found on the IBO website, www.ibo.org