

Product design

WHAT IS THE COURSE ABOUT?

MYP design encourages creative thinking skills and raises students' awareness of their responsibilities when making design decisions and taking action. It requires the use of the design cycle as a tool, which provides the methodology close to one that designers use to develop products. The process is divided into four stages: inquiring and analysing; developing ideas; creating the solution and evaluating. This process leads to the creation of solutions that solve a problem.

Programme also enables students to develop not only practical skills but also strategies for creative and critical thinking.

The aims of MYP design are to encourage and enable students to:

- enjoy the design process,
- develop knowledge, understanding and skills from different disciplines to design and create solutions to problems using the design cycle
- use and apply technology effectively as a means to access, process and communicate information, model and create solutions, and to solve problems
- develop an appreciation of the impact of design innovations for life, global society and environments
- appreciate past, present and emerging design within cultural, political, social, historical and environmental contexts
- develop respect for others' viewpoints and appreciate alternative solutions to problems
- act with integrity and honesty, and take responsibility for their own actions developing effective working practices.

Objectives

Objectives are: *inquiry and analysis*, *developing ideas*, *creating the solution* and *evaluating*.

A: In *inquiry and analysis* students are presented with a design situation, from which they identify a problem that needs to be solved. They analyse the need for a solution and conduct an inquiry into the nature of the problem.

B: In *developing ideas* students write a detailed specification, which drives the development of a solution.

C: In *creating the solution* students plan the creation of the chosen solution and follow the plan to create a prototype sufficient for testing and evaluation.

D: In *evaluating* students design tests to evaluate the solution, carry out those tests and objectively evaluate its success. They do identify areas where the solution could be improved and explain how their solution will impact on the client or target audience.

Requirements

School offers 2 periods of Product design classes per week where students use the design cycle to solve problems and create 3D objects or 2D graphic design.

Topics

UNIT 1 Lamp

UNIT 2 Notebook making

UNIT 3 Graphic design

Assessment

Assessment includes the whole cycle represented through all strands of each criterion that students must fill during writing of report.

Criteria	Strands	Points (max)
A Inquiring and analysing	explain and justify the need for a solution to a problem for a specified client/target audience	8
	identify and prioritize primary and secondary research needed to develop a solution to the problem	
	analyse a range of existing products that inspire a solution to the problem	
	develop a detailed design brief, which summarizes the analysis of relevant research.	
B Developing ideas	develop design specifications, which clearly states the success criteria for the design of a solution	8
	develop a range of feasible design ideas, which can be correctly interpreted by others	
	present the chosen design and justify its selection	
	develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution	
D Creating the solution	construct a logical plan, which describes the efficient use of time and resources, sufficient for peers to be able to follow to create the solution	8
	demonstrate excellent technical skills when making the solution	
	follow the plan to create the solution, which functions as intended	
	fully justify changes made to the chosen design and plan when making the solution	
	present the solution as a whole	
D Evaluating	design detailed and relevant testing methods, which generate data, to measure the success of the solution	8
	critically evaluate the success of the solution against the design specification	
	explain how the solution could be improved	
	explain the impact of the solution on the client/target audience	

Grade boundaries:

Grade	Boundaries
1	0-5
2	6-9
3	10-14
4	15-18
5	19-23
6	24-27
7	28-32