L-Università ta' Malta

From:	Dario Pirotta Director, MATSEC Support Unit
To:	College Principals Heads of School
Subject:	SEC 33 Design and Technology: Iterative Project 2023
Date:	12th October 2021

Heads of school are kindly requested to bring this document to the attention of all Design and Technology teachers.

Reference is made to the SEC 2023 Design and Technology syllabus. Candidates are to prepare an iterative project in line with one of the situations by the MATSEC Examinations Board.

Thank you for your co-operation.

Theme: **Sustainable Leisure Time**

Document guidelines

- Read carefully the Project Theme which will provide the context to all the situations available.

- Select one of the given situations after briefly analysing the context.

- Use the given specification grids to determine any information that yet requires to be specified.

- State your selected situation on the Iterative Project Grading Criteria document and read carefully the criteria set for all the project.

- The Iterative Project should consist of the Initial Project Proposal and the Final Design Project, as specified in the syllabus document.

Using the specification grid

The specification grid gives a snapshot of the situation, stating the fixed information that needs to be adhered to when developing the project. The level of specification row indicates whether the necessary information has been given in full in a section or if the candidate has further information to look into.

	Context	**Environment**	**Need**	**User**
Level of given specification	●○○	●○○	●○○	●●●
Information	info	info	info	info

For example, if the 'User' has 3/3 specs, then this area is fully specified; however if the 'Need' section only provides 1/3 specs, the candidate is expected to provide, based on his/her own decisions, and within the given theme, this missing specification within the Initial Project Proposal.

Kindly follow the syllabus guidelines on the Initial Project Proposal and Final Project.

Theme: **Sustainable Leisure Time**		

Situation 1

Certain leisure activities which are held in the residential environment (homes/garages/yards) such as gardening, sewing, baking, computer gaming, etc. generate wasted resources which several times are not used. Such material, or energy, might be used to sustain the same or other activities within the nearby environment.

Hobbyists who are environmentally conscious could be interested in products which make continuous use of these resources.

Guidelines

Examine the resources generated during any **ONE** leisure activity held in the residential setting, and develop a prototype device which can help reintegrated these resources back in the same or other domestic activity.

Note: This device has to be able to reintegrate resources whenever the leisure activity is performed and thus cannot be a one-time transformation of material into a new product.

	Context	**Environment**	**Need**	**User**
Level of given specification	●●○	●●○	●○○	●○○
Information	circular economy during leisure activities in residences	residential environment	reclaim wasted resources	household member/ visitor

Theme: **Sustainable Leisure Time**

Situation 2

For various centuries, children used to play and create games using materials and parts which they found lying around. Those who were lucky enough to have a manufactured toy usually inherited it from one sibling to the other and played with it throughout their entire childhood, inventing new ways how to play with it as they grow older. They were being sustainable without knowing.

A toy company is trying to implement these concepts into new products it produces.

Guidelines

Explore the sustainable ways how children used to play in the past. Produce a prototype toy or game which reflects the concepts of reusing parts, repurposing and modularity.

Note: The toy/game must not be a replica of an existing product. The artefact must be functional and physically allow play through the use of mechanical and/or electronic systems.

	Context	**Environment**	**Need**	**User**
Level of given specification	●●○	●○○	●○○	●●○
Information	sustainable toys inspired by the past	free time and spaces	enjoying oneself with least harm to the environment	children

Situation 3

Adventurous travellers need to travel light and comfortably, but also carry basic necessities. This is especially true when the destination is a remote area, e.g. trekking or camping or when going on pilgrimages or to an open-air concert, etc.

Travel products which respect the surrounding environment limiting carbon footprint might be appealing for these travellers.

Guidelines:

Identify **ONE** particular limitation which might be encountered during adventurous travel, such as personal care needs, carrying essential items, resting, etc. Create a product to aid travellers have a better experience throughout their journey in a sustainable way.

	Context	Environment	Need	User
Level of given specification	●○○	●●○	●○○	●●○
Information	adventurous and sustainable travel	isolated areas with limited access to essentials	having basic requirements during travel	adventure travellers