

Design (MYP 1)

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP1 Design 2020/21 UNIT 1 "The design cycle from theory to practice: a series of case studies "	Systems	Evaluation, Perspective	<p>Scientific and technical innovation</p> <p>Methods, Processes and solutions</p>	Gaining perspective of different methods creates an understanding of processes and solution which may be applied to a set of systems.	<p>A: Inquiring and analysing</p> <p>i. explain and justify the need for a solution to a problem</p> <p>ii. state and prioritize the main points of research needed to develop a solution to the problem</p> <p>iii. describe the main features of an existing product that inspires a solution to the problem</p> <p>iv. present the main findings of relevant research</p> <p>B: Developing ideas</p> <p>i. develop a list of success criteria for the solution</p> <p>ii. present feasible design ideas, which can be correctly interpreted by others</p> <p>iii. present the chosen design</p> <p>iv. create a planning drawing/diagram, which outlines the main details for making the chosen solution</p> <p>C: Creating the solution</p> <p>i. outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution</p> <p>ii. demonstrate excellent</p>	<p>Description</p> <p>Learning Experiences:</p> <p>Thinking:</p> <p>As the students are approaching a whole new subject they will be encourage to think critically in order to reason about products and procedures. As a key skill for design, there will be many occasions for group work and class discussion to encourage the students to question the world around the, raise doubts and draw conclusion</p> <p>Communication</p> <ul style="list-style-type: none"> I. Communication skills Exchanging thoughts, messages and information effectively through interaction Give and receive meaningful feedback 	<p>the design cycle not only gives a clear structure when designing but it is also a very useful process for problem solving. The students will become familiar with it and find different ways to apply it in various contexts. The students will follow that approach when designing their own product as well as being able to recognise all the steps from looking at a product. They will also be able to transfer the design cycle philosophy to daily use, they will acquire tools and strategies (eg: swot analysis, gantt chart, flow chart, mind maps...) that facilitate their critical as well as lateral thinking and time management. Students will also refine their technical skills as well as fine motor skills.</p>

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MYP1 Design 2020/ 21 UNIT S1 "Fundamentals of SPHERO"	Development	Collaboration, Invention	<p>Scientific and technical innovation</p> <p>Virtual environments and the Information Age, Principles and discoveries</p>	Through inventions and collaboration it is possible to develop principles of technological innovation to adapt to the information age.	<p>technical skills when making the solution</p> <p>iii. follow the plan to create the solution, which functions as intended</p> <p>iv. list the changes made to the chosen design and plan when making the solution</p> <p>D: Evaluating</p> <p>i. outline simple, relevant testing methods, which generate data, to measure the success of the solution</p> <p>ii. outline the success of the solution against the design specification</p> <p>iii. outline how the solution could be improved</p> <p>iv. outline the impact of the solution on the client/target audience</p> <p>A: Inquiring and analysing</p> <p>ii. state and prioritize the main points of research needed to develop a solution to the problem</p> <p>iv. present the main findings of relevant research</p> <p>B: Developing ideas</p> <p>ii. present feasible design ideas, which can be correctly interpreted by others</p> <p>iv. create a planning drawing/diagram, which</p>	<p>Description</p> <p>Self-management</p> <ul style="list-style-type: none"> • III. Organization skills • Managing time and tasks effectively • Bring necessary equipment and supplies to class 	coding: drawing and blocks, it literacy, technical language, lateral thinking, problem solving

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP1 Design 2020/ 21 UNIT 2 "World Wide Xmas Design"	Communication	Markets and trends	Personal and cultural expression Artistry, Products	Market and trends are bound to cultural expressions, through artistry and products one can communicate a personal expression.	<p>outlines the main details for making the chosen solution</p> <p>C: Creating the solution</p> <p>ii. demonstrate excellent technical skills when making the solution</p> <p>iii. follow the plan to create the solution, which functions as intended</p> <p>iv. list the changes made to the chosen design and plan when making the solution</p> <p>D: Evaluating</p> <p>ii. outline the success of the solution against the design specification</p> <p>iii. outline how the solution could be improved</p> <p>iv. outline the impact of the solution on the client/target audience</p>		Students will work on a short Christmas design project. After researching some traditional Global Christmas design they will represent their idea in a postcard.
Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP1 Design 2020/ 21 UNIT 3 : Elements and Principles of design	Communication	Adaptation, Form Other: aesthetic	Identities and relationships Personal efficacy and	Communicating in various forms may boost one's personal efficiency thus create a	<p>A: Inquiring and analysing</p> <p>i. explain and justify the need for a solution to a problem</p>	<p>Description</p> <p>Self-management</p> <ul style="list-style-type: none"> • III. Organization skills • Managing time and 	In this units the students will discover the elements and principles of design.

agency, Motivation

motivating agency adaptable to different situations.

- ii. state and prioritize the main points of research needed to develop a solution to the problem
- iii. describe the main features of an existing product that inspires a solution to the problem
- iv. present the main findings of relevant research

B: Developing ideas

- i. develop a list of success criteria for the solution
- ii. present feasible design ideas, which can be correctly interpreted by others
- iii. present the chosen design
- iv. create a planning drawing/diagram, which outlines the main details for making the chosen solution

C: Creating the solution

- i. outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution
- ii. demonstrate excellent technical skills when making the solution
- iii. follow the plan to create the solution, which functions as intended
- iv. list the changes made to the chosen design and plan when

- tasks effectively
- Bring necessary equipment and supplies to class

They will learn how to create a compelling poster, understanding the use of the layout according to the amount of info they want to transmit.

Subject Group Overview

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP1 Design 2020/21 UNIT 4 "An Ester Design Challenge"	Communities	Resources, Collaboration	<p>Personal and cultural expression</p> <p>Metacognition and abstract thinking, Practice and competency</p>	Through practice and collaboration one can build up competency withing a community, utilising a range or resources and applying abstract thinking.	<p>making the solution</p> <p>D: Evaluating</p> <p>i. outline simple, relevant testing methods, which generate data, to measure the success of the solution</p> <p>ii. outline the success of the solution against the design specification</p> <p>iii. outline how the solution could be improved</p> <p>iv. outline the impact of the solution on the client/target audience</p> <p>C: Creating the solution</p> <p>ii. demonstrate excellent technical skills when making the solution</p>	<p>Description</p> <p>Communication</p> <ul style="list-style-type: none"> I. Communication skills Exchanging thoughts, messages and information effectively through interaction Use intercultural understanding to interpret communication 	Students will evaluate digital forms of expressing feelings and ideas. They will create a set of images to use as emoji related to Easter around the World.
MYP1 Design 2020/21 UNIT 5 "Let your SPHERO draw"	Systems	Resources, Invention	<p>Scientific and technical innovation</p> <p>Products, Ingenuity and progress</p>	Ingenuity and existing resources build innovative products to increment existing systems	<p>A: Inquiring and analysing</p> <p>i. explain and justify the need for a solution to a problem</p> <p>ii. state and prioritize the main points of research needed to develop a solution to</p>	<p>Description</p> <p>in this unit we focus on combining knowledge, understanding and skills to create products or solutions with practical</p>	By the time we start this unit the students have familiarized themselves with the Sphero robot, they will know how to maneuver it through the joystick mode and will have practised using

the problem

iii. describe the main features of an existing product that inspires a solution to the problem
iv. present the main findings of relevant research

B: Developing ideas

i. develop a list of success criteria for the solution
ii. present feasible design ideas, which can be correctly interpreted by others
iii. present the chosen design
iv. create a planning drawing/diagram, which outlines the main details for making the chosen solution

C: Creating the solution

i. outline a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution
ii. demonstrate excellent technical skills when making the solution
iii. follow the plan to create the solution, which functions as intended
iv. list the changes made to the chosen design and plan when making the solution

D: Evaluating

i. outline simple, relevant testing

activities and the construction of prototypes

Thinking

- X. Transfer skills
- Utilizing skills and knowledge in multiple contexts
- Combine knowledge, understanding and skills to create products or solutions

the canvas mode. We will look at available resources and discuss properties and potential. In creating their product, the students will also practice their technical and fine motor skills.

methods, which generate data, to measure the success of the solution

ii. outline the success of the solution against the design specification

iii. outline how the solution could be improved

iv. outline the impact of the solution on the client/target audience

Design (MYP 2)

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP2 DESIGN 2020/21 UNIT 1S “Working with Sphero and the Blocks”	Development	Collaboration, Innovation	Scientific and technical innovation Systems, Principles and discoveries	Discovering innovative systems requires principled collaboration	<p>A: Inquiring and analysing</p> <p>i. explain and justify the need for a solution to a problem</p> <p>ii. construct a research plan, which states and prioritizes the primary and secondary research needed to develop a solution to the problem</p> <p>B: Developing ideas</p> <p>iv. develop accurate planning drawings/ diagrams and outline requirements for the creation of the chosen solution</p> <p>C: Creating the solution</p> <p>iii. follow the plan to create the solution, which functions as intended</p> <p>iv. explain changes made to the chosen design and plan when making the solution</p>	<p>Description</p> <p>Self-management</p> <ul style="list-style-type: none"> • IV. Affective skills • Managing state of mind • Mindfulness • Practise focus and concentration 	Students will learn some advanced functions of sphero, applicable to various tasks. These functions may seem overcomplicated at first but they will enable students to apply their overall knowledge to specific situations.

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Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP2 Design 2020/ 21 UNIT 1 "Revising the Cycle"	Communication	Adaptation, Collaboration, Invention	Personal and cultural expression Products, Fields and disciplines Other	What is the design cycle	<p>D: Evaluating ii. explain the success of the solution against the design specification</p> <p>A: Inquiring and analysing i. explain and justify the need for a solution to a problem B: Developing ideas i. develop a design specification, which outlines the success criteria for the design of a solution based on the data collected iii. present the chosen design and outline the reasons for its selection C: Creating the solution i. construct a logical plan, which outlines the efficient use of time and resources, sufficient for peers to be able to follow to create the solution ii. demonstrate excellent technical skills when making the solution D: Evaluating ii. explain the success of the solution against the design specification iii. describe how the solution could be improved</p>	<p>Description</p> <p>Communication</p> <ul style="list-style-type: none"> • I. Communication skills • Reading, writing and using language to gather and communicate information • Organize and depict information logically 	the students are already familiar with the key concept of the design cycle, by applying the prior knowledge the students will be able to reinforce it. They will link the theoretical knowledge with their personal experience (summer work) and the hands on project.
MYP2 Design 2020/ 21 UNIT 2 "Create"	Development	Invention, Markets and	Identities and	Personal identity	A: Inquiring and analysing	Description	Students will learn

Subject Group Overview

your brand"	trends	relationships Lifestyle choices, Identity formation	formation in design is influenced by lifestyle choices, through the development of inventions it is possible to understand market and trends.	iii. analyse a group of similar products that inspire a solution to the problem iv. develop a design brief, which presents the analysis of relevant research B: Developing ideas iii. present the chosen design and outline the reasons for its selection C: Creating the solution ii. demonstrate excellent technical skills when making the solution D: Evaluating ii. explain the success of the solution against the design specification iv. describe the impact of the solution on the client/target audience	Communication • I. Communication skills • Exchanging thoughts, messages and information effectively through interaction • Interpret and use effectively modes of non-verbal communication	about branding and the value of visual identity. They will look into markets and trends and brand positioning. They will create their own unique brand, selecting a topic out of three. They will create design proposals and present them to the class.
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MYP2 Design 2020/ 21 UNIT 3 "From Nature to Design"	Communication	Ergonomics, Form	Orientation in space and time Natural and human landscapes and resources, Evolution	Nature communicates ideas through form and ergonomics, therefore the natural landscape is connected to human evolution also in the design process.	A: Inquiring and analysing iii. analyse a group of similar products that inspire a solution to the problem C: Creating the solution ii. demonstrate excellent technical skills when making the solution	Description Learning Experiences: Self-management: the students will organize their work according to clear deadlines. Knowing what is expected from them they will be able to plan time and resources. they will identify strategies to maximize academic achievement as well as personal growth. Due to	The students will attentively observe nature and their surroundings. They will identify and analyze patterns, make unusual connections in order to create original ideas or use existing work in new ways. Their personal experience will support the conceptual research that helps them identify patterns and modules in a variety of contexts. In doing so the students will be able to create original work

the focus on technical drawing and linocut the students will be responsible for specific material for each lessons. Taking notes and creating plans will help them structure their final work . Students will independently use technology to research and analyze the concept of the units as well as in class through the use of videos to show techniques and content.

in a creative and structure manner. Technical drawing will be applied to this unit as one of the tools to achieve the stated goal, since it is a requirement of the national curriculum. The students will practice on freehand drawing too and will end the unit producing a personalized tote bag using the lino cut technique.

Through technical drawings the students will appreciate the importance of focus and concentration. they will learn new skills and techniques which will promote perseverance in order to achieve good results.

They will look at the work of others to then produce their own.

Research:

the students will research on pattern, collect a variety of options and verify that their findings meet the requirements specified. the will be able to identify the concept in different context also

by using a plethora of sources.

Thinking:

By observing the work of others the students will be encouraged to identify problems and possible ways to overcome them. Thanks to the depth of the concept, the students will be stimulated to investigate it from different perspectives. they will use brainstorming, mind maps and visual thinking to explore the topic in depth and come up with original ideas with the support of their prior knowledge as well as new connections. In so doing the students will be able to create new and personal links between subjects groups, contexts and their own interest and experience.

Thinking

- VIII. Critical thinking skills
- Analysing and evaluating issues and ideas
- Practise observing carefully in order to recognise problems

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Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP2 Design 2020/ 21 UNIT 4 "Technical Drawing an introduction"	Systems	Function	Scientific and technical innovation Methods, Processes and solutions	In order to create solid systems it is important to create a method which may be adaptable to a variety of processes and solutions.	<p>A: Inquiring and analysing</p> <p>ii. construct a research plan, which states and prioritizes the primary and secondary research needed to develop a solution to the problem</p> <p>iii. analyse a group of similar products that inspire a solution to the problem</p> <p>B: Developing ideas</p> <p>i. develop a design specification, which outlines the success criteria for the design of a solution based on the data collected</p> <p>iv. develop accurate planning drawings/ diagrams and outline requirements for the creation of the chosen solution</p> <p>C: Creating the solution</p> <p>ii. demonstrate excellent technical skills when making the solution</p> <p>iii. follow the plan to create the solution, which functions as intended</p> <p>D: Evaluating</p> <p>iv. describe the impact of the solution on the client/target audience</p>	<p>Description</p> <p>Self-management</p> <ul style="list-style-type: none"> • IV. Affective skills • Managing state of mind • Self-motivation • Practise positive thinking • Resilience • Practise dealing with disappointment and unmet expectations 	the students will need to be able to draw geometrical shapes according to the requirements of technical drawing as well as being able to shoot a video-tutorial. They will need to have an understanding of the key features of a video-tutorial and effective communication.

Design (MYP 3)

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP3 Design Unit 1 2020/21: Methods of drawing representation	Communication	Perspective, Form	Personal and cultural expression Craft, Creation	The different methods of drawing representation are important forms of communication achieved through craft handed creations : the different visual perspectives allow us to express our personal expression in an universal drawing code.	A: Inquiring and analysing iv. develop a design brief, which presents the analysis of relevant research B: Developing ideas ii. present a range of feasible design ideas, which can be correctly interpreted by others iii. present the chosen design and outline the reasons for its selection C: Creating the solution ii. demonstrate excellent technical skills when making the solution iii. follow the plan to create the solution, which functions as intended D: Evaluating iii. describe how the solution could be improved	Description Communication: <i>Interpret and use effectively modes of non verbal communication:</i> The mastery that the students reach in the drawing field allows them to develop this ATL skill: the goal is to be able to express effectively the use of technical drawing that is a non verbal form of communication with its rules, guidelines and language. Self Management: <i>Plan strategies and take action to achieve personal and academic goals:</i> Creating a technical drawing requires a strong motivation and dedication and in order to do it in the proper way students need to plan strategies to reach that goal, taking then action with the correct approach. <i>Bring necessary equipment and supplies to class:</i>	Students will learn to use in the proper way 2 core methods of representation: - Orthogonal projections - Axonometric projections Becoming expert in these 2 methods of representation allows them to be able to represent in a powerful way with the drawing methods the World around them. They learn how to use these 2 methods using 2 different approaches: the one of technical drawing and the one of sketch technique, even though these approaches are very different in the execution, they are using the same concept approach. Through the sketch technique skills students learn this important drawing method that allows them to represent in an immediate way the concepts they have in their mind only using a sketchbook and a

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MYP3 Design Unit 2 Systems 2020/21: Renewable and non-renewable sources of energy		Evaluation, Resources, Sustainability	<p>Globalization and sustainability</p> <p>Human impact on the environment</p>	The evaluation of the complex systems allowing us to generate energy and the consequent human impact on the environment in the process of generation clearly dictates the need to prefer more	<p>D: Evaluating</p> <p>ii. explain the success of the solution against the design specification</p> <p>iii. describe how the solution could be improved</p> <p>iv. describe the impact of the solution on the client/target audience</p>	<p>In order to create a technical drawing properly, students need to bring all the necessary equipment to school, otherwise the final result will be strongly compromised.</p> <p>Communication</p> <ul style="list-style-type: none"> I. Communication skills Exchanging thoughts, messages and information effectively through interaction Interpret and use effectively modes of non-verbal communication <p>Self-management</p> <ul style="list-style-type: none"> III. Organization skills Managing time and tasks effectively Plan strategies and take action to achieve personal and academic goals Bring necessary equipment and supplies to class <p>Approaches to Learning</p> <p>Description</p> <p>Critical thinking skills:</p> <p>"Consider ideas from multiple perspectives"</p> <p>When evaluating</p>	<p>pencil; through the technical drawing skills students learn how to draw with rigorous and precise approach using the proper tools in an effective way.</p> <p>The different topics that will be covered can be divided in no renewable sources of energy and renewable ones. After a first introduction to what is energy and how we're using it, the topics that will be covered in relation to no renewable</p>

sustainable systems of energy generation having less impact on the natural **resources**.

different methods to produce energy students need to be able to consider ideas from different perspectives: becoming aware of not only the strengths but also about the weaknesses, the opportunities for improvements and the threats of each kind of source of energy is the correct approach to not fall in easy and common generalizations.

Thinking

- VIII. Critical thinking skills
- Analysing and evaluating issues and ideas
- Consider ideas from multiple perspectives

- sources of energy will be:
- Oil: its extraction and use, the system of refinement, limitations and risks associated to this source of energy
 - Nuclear energy: how it's obtained, strengths and risks associated to it
 - Hydroelectric energy: the positive aspect of the production of energy with such method that anyway presents risks and downsizes
 - Thermal energy: the great effectivity of this source of energy that anyway requires important investments
 - Solar energy: the different ways in which this source of energy can be used
 - Wind energy: the great potential for this source of energy that is affected anyway by evident limitations

Design (MYP 4)

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP4 Design Unit 1 Development 2020/21: DESIGN of an APP.		Markets and trends, Invention	Personal and cultural expression	The development of	A: Inquiring and analysing iii. analyse a range of	Description Learning	The idea of a design process that

Prototyping and testing, keys for innovation.

Other:
Testing of products through beta testing method.

Entrepreneurship, Practice and competency

the prototype of an app represents a perfect chance to come up with an **invention** that is the result of personal driven motivation, thus leading to catch the perception of **entrepreneur** approach based on personal inspiration and at the same time necessity to meet the needs of the users and the **trends** of the society in order to be successful in the **market**.

existing products that inspire a solution to the problem
iv. develop a detailed design brief, which summarizes the analysis of relevant research
i. explain and justify the need for a solution to a problem for a specified client/target audience
ii. identify and prioritize the primary and secondary research needed to develop a solution to the problem
B: Developing ideas
i. develop a design specification, which clearly states the success criteria for the design of a solution
ii. develop a range of feasible design ideas, which can be correctly interpreted by others
iv. develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution
C: Creating the solution
ii. demonstrate excellent technical skills when making the solution
iii. follow the plan to create the solution, which functions as intended
D: Evaluating
i. design detailed and relevant testing methods, which

Experiences:

Research:
Process data and report results. (Criterion A)

Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media [including digital social media and online networks].

ATL skill associated to the strand 2 of the CRITERION A: “ii. constructs a detailed research plan, which identifies and prioritizes the primary and secondary research needed to develop a solution to the problem independently”: for the second strand of the criterion A students have to conduct a research on the field in which they find information about the field in which they identified the problem they want to solve. Students are encouraged to use reliable sources for the investigation, to find varied sources that can give different points of view, to summarize the

continuously focuses on the needs of the user and is somehow strictly related to the way in which the IBO DESIGN CYCLE has been developed. In the world of technology and APPS the requirement to have a constant contact with the users has become of vital importance, much more than in the past. The way a product is developed is today strictly related to the feedbacks received during the design process, being able to fast prototype a product and testing has become a key for the success.

Prototyping and testing are 2 key elements of the design process. In this unit they are applied to a kind of product that in the last decade has been diffused and used from a huge numbers of users: SMARTPHONE APP.

Students need to demonstrate capability of managing the design cycle from the early stage to the final evaluation.

Knowledge explored in the unit:

generate data, to measure the success of the solution

iv. explain the impact of the solution on the client/target audience

ii. critically evaluate the success of the solution against the design specification

iii. explain how the solution could be improved

result of their research through graphs and in case they have the opportunity to engage with primary sources too in order to acquire qualitative and quantitative data.

ATL skill associated to the strand 3 of the CRITERION A: "iii. The student analyses a range of existing products that inspire a solution to the problem in detail": in order for students to analyze the market of the existing apps (analysis of the competition) students will have to practice these ATL skills: they are expected to analyze other apps that already exist in the market and to compare their features with the features that they would like to include in the app they design. Students are encouraged to use direct experience of testing of the competitive apps by downloading them: in such way they appreciate the value of a comparison method carried on in independent way by themselves evaluating objectively what the

Cr. A:

Understanding of the need of the users as starting point for the creation of each APP entering into the market. The comparison chart as a tool to present effectively the differences among different products (in this case APPS), analysing the competition in a detailed way with authentic test of the other APPS done by the students

The single page graph as a tool to summarize the distinctive features of a product

Cr. B:

The user chart as a method to visualize effectively the structure of the APP and the steps the user is going through to perform an action.

Cr. C:

The guidelines of an effective and well designed APP.

Cr. D:

The evaluation of a product accomplished

market offers.

Communication:
Give and receive meaningful feedback. (Criterion D)

In order for students to evaluate the level of appreciation of the app by the users, students will have to practice this ATL skill: **they are expected to acquire valuable feedback** that can help them define **how well the design of the app is answering to the initial goal** they set for themselves.

ATL skill associated to all the strands developed in the CRITERION D and mostly in the 2° one: “critically evaluate the success of the solution against the design specification based on authentic product testing”: in order for students to evaluate the level of appreciation of the app by the users, they will have to practice this ATL skill: they are expected to acquire valuable feedback that can help them define how well the design of the app is

through questions to the users using surveys and questionnaires showing the design of the app that represents in this case the “prototype” of the product.

Concepts explored in the unit:

- The brainstorming method to explore possible perspectives of development of ideas: use of insightful approach through instinctive connections
The use of personas to better objectively explore the profiles of possible users of the APP and understand their needs putting ourselves in their shoes

The definition of the criteria to set the specifications for the APP with a system that is resembling the way in which the assessment of the I.B.O. Is accomplished (with grade descriptors and levels of achievement)
The evaluation accomplished through external points of view that can give an objective perspective of feedbacks

answering to the initial goal they set for themselves.
The students are encouraged to use real communication to a group of users in order to obtain qualitative and quantitative data, thus allowing them to appreciate the value of collection of feedbacks with a user group, paramount action for the designers and also in accordance with an entrepreneur approach: if feedbacks of users are not considered, then their needs are not taken into account, leading to the creation of an invention whose features are not really appreciated by the market thus leading the invention to failure.

Communication

- I. Communication skills
- Exchanging thoughts, messages and information effectively through interaction
- Give and receive meaningful feedback

Research

- VI. Information literacy skills
- Finding, interpreting, judging and creating information
- Process data and

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP4 Design Unit 2 2020/21: Infographics	Communication	Function, Innovation	<p>Scientific and technical innovation</p> <p>Ingenuity and progress, Industrialization and engineering</p>	<p>The history of industrial design is characterized by ingenuity of designers of the past at the service of Industrialization: the function of an infographic is to communicate such design innovations with an engaging and effective layout.</p>	<p>A: Inquiring and analysing</p> <p>ii. identify and prioritize the primary and secondary research needed to develop a solution to the problem</p> <p>iii. analyse a range of existing products that inspire a solution to the problem</p> <p>iv. develop a detailed design brief, which summarizes the analysis of relevant research</p> <p>B: Developing ideas</p> <p>i. develop a design specification, which clearly states the success criteria for the design of a solution</p> <p>ii. develop a range of feasible design ideas, which can be correctly interpreted by others</p> <p>iii. present the chosen design and justify its</p>	<p>report results</p> <ul style="list-style-type: none"> VII. Media literacy skills Interacting with media to use and create ideas and information Locate, organize, analyse, evaluate, synthesise and ethically use information from a variety of sources and media (including digital social media and online networks) <p>Description</p> <p>Learning Experiences:</p> <p>Self-management:</p> <p>By planning in an organized way the strategy to acquire the variety of information connected to their research in the STEP A, students train on this important ATL skill that will be paramount in their academic future.</p> <p>Furthermore by developing feasible ideas to structure the information related to their topic, visualizing the most effective solution for their infographic, students use a strategy for</p>	<p>Students will be engaged in the analysis of different topics of the History of Design, every one of them will be assigned with a topic to base the research on.</p> <p>First the students will conduct a research on the topic using the Web and collecting appropriate images (STEP A of DESIGN CYCLE). They will have to use varied sources to investigate the topic from different perspectives, the collection and citation of the sources and the analysis of at least 2 of them will be mandatory.</p> <p>In the second</p>

selection

C: Creating the solution

ii. demonstrate excellent technical skills when making the solution
iii. follow the plan to create the solution, which functions as intended

D: Evaluating

ii. critically evaluate the success of the solution against the design specification
iii. explain how the solution could be improved

organizing and prioritizing content from varied sources and visual elements.

Self-management

- III. Organization skills
- Managing time and tasks effectively
- Use appropriate strategies for organizing complex information

part students will be requested to sketch by hand (**STEP B of DESIGN CYCLE**) the structure of the Infographic with the purpose to find the perfect balance between conveying information and getting an interesting and aesthetically pleasing aspect of the Infographic that should be engaging and easy to read by the user. The students have to sketch by hand different, varied solutions and then decide among them which one would they consider to bring forward in the design process with justification.

In the following step the students work on the step **C, Creating the solution**. Having already gained knowledge and practice on the software Indesign, students will be able to design the Infographic with such software in an easier way: they are supposed to design a definitive final digital version of their idea of the infographic based on the choice they have made in the step B. The

solution should be connected to the sketch they have chosen in the step B but it can present some iterations based on reasoning in order to improve the final communication.

As final step of the unit (the step **D**), the students have to share their initials specifications and the final digital solution with one of their peers (chosen by the teacher). In such way every student will examine in an objective way the infographic designed by someone else. The goal is to analyse the specifications and to evaluate, based on the way they were structured, how well the final design meets those specifications. In the second part of the evaluation the students analyse the design of the infographic using a SWOT analysis: identifying strengths, weaknesses, opportunities and threats.

The unit is then finalized with the presentation by each student of the

INFOGRAPHIC that has been designed, outlining briefly in front of the peers the main features of the topic that was analysed.

Design (MYP 5)

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP5 Design Unit 1 2020/21: DESIGN FOR a CHAIR	Communities	Form, Adaptation, Ergonomics Other: Concept related to "Ergonomics": anthropometric measures of different percentiles of user population.	Identities and relationships Health and well-being	The consideration of the communities to be considered as target users and consequently the adaptation of the design to their anthropometric measures is paramount to give an adequate form to a chair design whose ergonomics needs to guarantee the well being of the users while sitting on it.	A: Inquiring and analysing i. explain and justify the need for a solution to a problem for a specified client/target audience ii. identify and prioritize the primary and secondary research needed to develop a solution to the problem iii. analyse a range of existing products that inspire a solution to the problem iv. develop a detailed design brief, which summarizes the analysis of relevant research B: Developing ideas i. develop a design specification, which clearly states the success criteria for the design of a solution ii. develop a range of feasible design ideas, which can be correctly interpreted by others iii. present the chosen design and justify its selection iv. develop accurate and detailed planning	Description Learning Experiences: Thinking: Create novel solutions to authentic problems: by exploring the possible solutions that could solve the problem they were starting from, students can explore a variety of novel solutions always keeping in mind the need of the user they considered. Combine knowledge, understanding and skills to create products or solutions: the solutions that the students are presenting should be the result of combining purposefully the knowledge they acquired about ergonomics, the considerations about shape and function leading to the sketches	Students will start analysing important concepts related to ergonomics, understanding the importance of these considerations in the design field. Then they will choose a specific field in which they find a problematic situation for the users while sitting down: starting from the needs of the users they will analyse different products that are trying to answer to these specific needs and they will do a SWOT analysis. At the same time they will clearly focus on the community of users target of the design development: it will be paramount to do take in consideration their anthropometric measures in order to design the chair with the proper dimensions.

drawings/diagrams and outline the requirements for the creation of the chosen solution

C: Creating the solution

ii. demonstrate excellent technical skills when making the solution
 iii. follow the plan to create the solution, which functions as intended
 iv. fully justify changes made to the chosen design and plan when making the solution

D: Evaluating

ii. critically evaluate the success of the solution against the design specification
 iii. explain how the solution could be improved
 iv. explain the impact of the solution on the client/target audience

presenting the different solutions using the sketching skill techniques.

Thinking

- IX. Creative thinking skills
- Generating novel ideas and considering new perspectives
- Create novel solutions to authentic problems
- X. Transfer skills
- Utilizing skills and knowledge in multiple contexts
- Combine knowledge, understanding and skills to create products or solutions

After this they will start stating the specifications for the design of the chair they want to create and they will use the conceptual modelling principles to start sketching ideas for the solution they want to create. Students will determine the dimensions of the chair representing it in scale 1:10 with orthogonal projections done by hand. The following step will be to represent the chair in orthogonal projections using a digital software, in this case Adobe Illustrator. The last step will be determined by the analysis of the final design of chair, considering the initial specifications, indicating the limitations it presents and the possible improvements that could have been made, concluding with an analysis of the impact that the solution could have on the audience.

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Approaches to Learning	Content
MYP5 UNIT 2: Redesign of a packaging	Systems	Innovation, Markets and trends, Sustainability Other: Another important	Scientific and technical innovation Products, Processes and solutions	The system through which designers innovate the products we use every day is with a process of	A: Inquiring and analysing i. explain and justify the need for a solution to a problem for a specified client/target audience	Description Self management: "Practice dealing	The process of exploring differentiated solutions is something the students already faced in other units and

concept the students learn throughout the unit is the one of "**iteration**": an evolution of the design that is improving an aspect in relation to the previous version.

alternatives and **iterations** to find the best **solution** that is not only differentiating itself from usual **trends** in the **markets** but it's also aimed to **sustainability** becoming in such way distinctive.

iii. analyse a range of existing products that inspire a solution to the problem

iv. develop a detailed design brief, which summarizes the analysis of relevant research

B: Developing ideas

i. develop a design specification, which clearly states the success criteria for the design of a solution

ii. develop a range of feasible design ideas, which can be correctly interpreted by others

C: Creating the solution

ii. demonstrate excellent technical skills when making the solution

iv. fully justify changes made to the chosen design and plan when making the solution

D: Evaluating

ii. critically evaluate the success of the solution against the design specification

iii. explain how the solution could be improved

with disappointment and unmet expectations":

designing a packaging requires a good control of tridimensional visualization and capability of exploring original solutions with persistence, this kind of approach is pretty complex and for this reason students could face disappointment and unmet expectations while exploring for new solutions and for this reason they need to practice this self management skill.

Thinking:

Make unexpected or unusual connections between objects

and/or ideas: it's important in the design process to use a lateral thinking approach in order to make unexpected connections and to come up with original solutions, in this case with the process of lateral thinking included in the process of development done by the teacher, students can understand how to apply that in a practical way.

this represents a unique skill that allows students to apply a method that they've already applied. Conceptually students come to know the concept of packaging and how it can be declined in different ways with the samples included in the unit presentation, this allows to shape a certain awareness of the features of distinctive design packaging.

Unit Title	Key Concepts	Related Concepts	Global Context & Explorations	Statement of Inquiry	Objectives	Self-management Thinking Approaches to Learning	Content
MYP5 Design Unit 2 2020/21: The power of DESIGN to improve the efficiency of FUNDRAISING ACTIVITIES	Change	Innovation, Perspective	Fairness and development Social entrepreneurs, Inequality	Students will explore in this unit how a CHANGE from the design point of view in the way that a fundraising activity is carried on can bring a remarkable innovation to the activity. Being able to analyze the fundraising activity from a novel perspective and to develop innovative ways to collect money can lead the students to become in their own social entrepreneurs in order to defeat in their own way the inequality.	<p>A: Inquiring and analysing</p> <p>i. explain and justify the need for a solution to a problem for a specified client/target audience</p> <p>ii. identify and prioritize the primary and secondary research needed to develop a solution to the problem</p> <p>iii. analyse a range of existing products that inspire a solution to the problem</p> <p>B: Developing ideas</p> <p>ii. develop a range of feasible design ideas, which can be correctly interpreted by others</p> <p>iii. present the chosen design and justify its selection</p> <p>C: Creating the solution</p> <p>ii. demonstrate excellent technical skills when making the solution</p> <p>iii. follow the plan to create the solution, which functions as intended</p> <p>D: Evaluating</p> <p>iii. explain how the solution could be improved</p> <p>iv. explain the impact of the solution on the client/target audience</p>	<p>Description</p> <p>Learning Experiences:</p> <p>Research:</p> <p>Make informed choices about personal viewing experiences: students have to review their personal experience in the fundraising activity and act to improve it.</p> <p>Thinking:</p> <p>Identify trends and forecast possibilities: by analyzing how some fundraising activities and the way they are carried on should give to the students inspiration to identify trends in this sector and to consequently forecast possible developments from their own perspective.</p> <p>Research</p> <ul style="list-style-type: none"> • VII. Media literacy skills • Interacting with media to use and create ideas and information • Make informed choices about personal viewing experiences <p>Thinking</p>	<p>The unit consists in redesigning the communication and also the basic approach of a fundraising activity that is done by the students every year as part of their CAS activities.</p> <p>Students at the end of the unit will know: how other innovative fundraising activities are carried on and how to get inspiration from them to change the one they do, the importance of the visual communication in front of the society to present ourselves in a reliable way, the concept of coordinated image when developing a series of products that belong to the same industry/association, the guidelines to design a LOGO in an effective way.</p>

- VIII. Critical thinking skills
- Analysing and evaluating issues and ideas
- Identify trends and forecast possibilities