MYP Design Networking Session
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Name Card Design

Please create a name card that adheres to the following specifications (Objective B strand i):

Your name must be clearly legible from 20 feet away;

The card must be free-standing on a flat surface, such as the desk;

You must incorporate some design, drawing, graphic, etc. that is significant to you.

Agenda: Session 1 - Overview of Design

- *Explore the challenges of implementing authentic, contextualized, student-centered learning in a whole school environment*

- *Participants will develop an understanding of the aims, objectives, and requirements of the subject group, including interdisciplinary planning.*

- *Participants will develop an understanding of the concept-based approach in the MYP to include the structure of knowledge.*

What is design?

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"Design, and the resultant development of new technologies, has given rise to profound changes in society: transforming how we access and process information; how we adapt our environment; how we communicate with others; how we are able to solve problems; how we work and live."

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What is design?

"Design is the link between innovation and creativity, taking thoughts and exploring the possibilities and constraints associated with products or systems, allowing them to redefine and manage the generation of further thought through prototyping, experimentation and adaptation. It is human-centred and focused on the needs, wants and limitations of the end user."

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Litre of Light

And this solar bottle bulb never heats up.
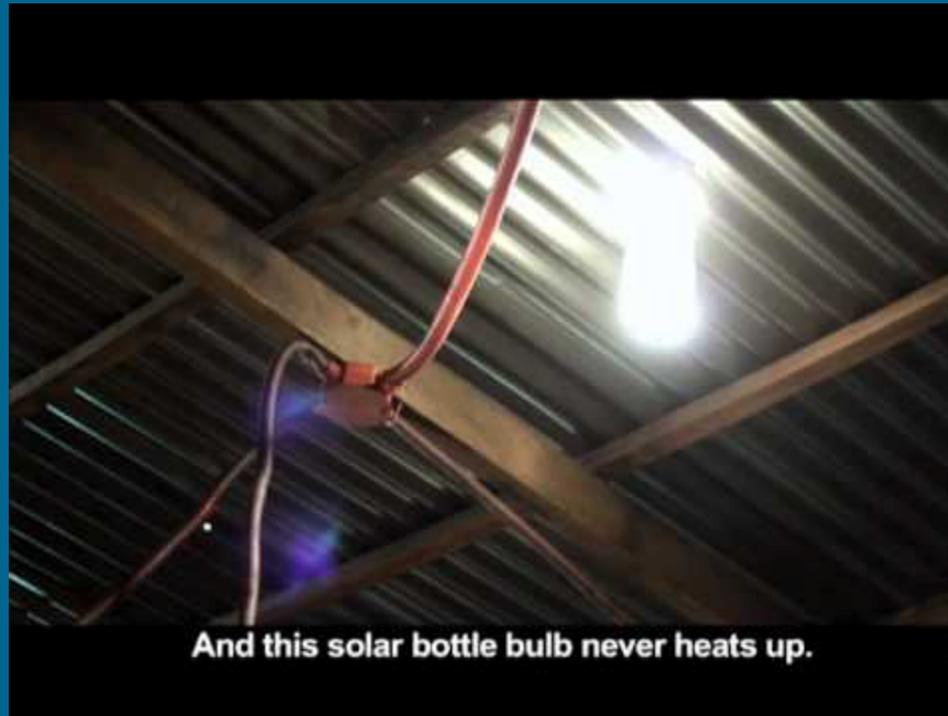
What is design?

Digital Design	Product Design	Design
Computer Science	Fashion design	Architectural design
Digital communication design	Food product design	Computer-aided design
Digital game design	Industrial design	Graphic design
Digital interface design	Mechanical engineering design	Robotics
Interactive media design	Materials design	Systems engineering design
Web design	Structural engineering design	

Aims of Design - Encourage and enable students to:

- Enjoy the design process, develop an appreciation of its elegance and power

- 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

Aims of Design - Encourage and enable students to:

- 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

Aims of Design - Encourage and enable students to:

- Act with integrity and honesty, and take responsibility for one's own actions developing effective working practices

The progression from Years 1 through 5

Development of objectives:

MYP year 1	MYP year 3	MYP year 5
Emphasis placed on individual strands of the objectives.	Emphasis placed on addressing individual objectives.	The objectives are fully addressed.
Students explore contrived, teacher-led design challenges set in familiar contexts.	Students explore identified, real-life problems set in familiar and unfamiliar contexts.	Students independently explore complex real-life problems set in unfamiliar contexts.
Students design for themselves.	Students design products for familiar groups of people.	Students design products for a client or an identified target audience.

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Development of tasks:

MYP year 1	MYP year 3	MYP year 5
Students focus on skill development through focused tasks.	Students focus on advanced skill development through projects and short, focused tasks.	Students utilize a wide range of skills, developed through the previous years and apply them to a wide range of design situations.
Students are guided through units using structured templates.	Students can manage their own work organizing their time and folio appropriately.	Students independently manage their own work.
Teacher as leader and trainer.	Teacher as guide and advisor.	Teacher as facilitator.

The progression from Years 1 through 5

Year 1 In order to reach the aims of design, students should be able to:	Year 3 In order to reach the aims of design, students should be able to:	Year 5 In order to reach the aims of design, students should be able to:
Objective A: Inquiring and analysing		
i. explain and justify the need for a solution to a problem	i. explain and justify the need for a solution to a problem	i. explain and justify the need for a solution to a problem for a specified client/target audience
ii. state and prioritize the main points of research needed to develop a solution to the problem	ii. construct a research plan, which states and prioritizes the primary and secondary research needed to develop a solution to the problem	ii. identify and prioritize the primary and secondary 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	iii. analyse a group of similar products that inspire a solution to the problem	iii. analyse a range of existing products that inspire a solution to the problem
iv. present the main findings of relevant research.	iv. develop a design brief, which presents the analysis of relevant research.	iv. develop a detailed design brief, which summarizes the analysis of relevant research.
Objective B: Developing ideas		
i. develop a list of success criteria for the solution	i. develop a design specification, which outlines the success criteria for the design of a solution based on the data collected	i. develop a design specification, which clearly states the success criteria for the design of a solution
ii. present feasible design ideas, which can be correctly interpreted by others	ii. present a range of feasible design ideas, which can be correctly interpreted by others	ii. develop a range of feasible design ideas, which can be correctly interpreted by others
iii. present the chosen design	iii. present the chosen design and outline the reasons for its selection	iii. present the chosen design and justify its selection
iv. create a planning drawing/diagram, which outlines the main details for making the chosen solution.	iv. develop accurate planning drawings/diagrams and outline requirements for the creation of the chosen solution.	iv. develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution.

Year 1 In order to reach the aims of design, students should be able to:	Year 3 In order to reach the aims of design, students should be able to:	Year 5 In order to reach the aims of design, students should be able to:
Objective 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	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	i. 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
ii. demonstrate excellent technical skills when making the solution	ii. demonstrate excellent technical skills when making the solution	ii. demonstrate excellent technical skills when making the solution
iii. follow the plan to create the solution, which functions as intended	iii. follow the plan to create the solution, which functions as intended	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.	iv. explain changes made to the chosen design and plan when making the solution.	iv. fully justify changes made to the chosen design and plan when making the solution.
Objective D: Evaluating		
i. outline simple, relevant testing methods, which generate data, to measure the success of the solution	i. describe detailed and relevant testing methods, which generate accurate data, to measure the success of the solution	i. design detailed and relevant testing methods, which generate data, to measure the success of the solution
ii. outline the success of the solution against the design specification	ii. explain the success of the solution against the design specification	ii. critically evaluate the success of the solution against the design specification
iii. outline how the solution could be improved	iii. describe how the solution could be improved	iii. explain how the solution could be improved
iv. outline the impact of the solution on the client/target audience.	iv. describe the impact of the solution on the client/target audience.	iv. explain the impact of the solution on the client/target audience.

Design Command Terms

Command term	Definition
Analyse	Break down in order to bring out the essential elements or structure. (To identify parts and relationships, and to interpret information to reach conclusions.)
Construct	Display information in a diagrammatic or logical form.
Create	To evolve from one's own thought or imagination, as a work or an invention.
Define	Give the precise meaning of a word, phrase, concept or physical quantity.
Demonstrate	Make clear by reasoning or evidence, illustrating with examples or practical application.
Describe	Give a detailed account or picture of a situation, event, pattern or process.
Design	Produce a plan, simulation or model.
Develop	To improve incrementally, elaborate or expand in detail. Evolve to a more advanced or effective state.
Evaluate	Make an appraisal by weighing up the strengths and limitations.
Explain	Give a detailed account including reasons or causes. (See also "Justify".)

Command term	Definition
Identify	Provide an answer from a number of possibilities. Recognize and state briefly a distinguishing fact or feature.
Justify	Give valid reasons or evidence to support an answer or conclusion. (See also "Explain".)
List	Give a sequence of brief answers with no explanation.
Outline	Give a brief account or summary.
Present	Offer for display, observation, examination or consideration.
Prioritize	Give relative importance to, or put in an order of preference.
State	Give a specific name, value or other brief answer without explanation or calculation.
Summarize	Abstract a general theme or major point(s).

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Design Objectives / Assessment Criteria

A: Inquiring and analysing

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 inquiry into the nature of the problem.

B: Developing ideas

Students write a detailed specification, which drives the development of a solution. They present the solution.

Design Objectives / Assessment Criteria

C: 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: Evaluating

Students design tests to evaluate the solution, carry out those tests and objectively evaluate its success. Students identify areas where the solution could be improved and explain how their solution will impact on the client or target audience.

From objectives to design cycle

A - Inquiring and analysing

B - Developing ideas

C - Creating the solution

D - Evaluating the solution

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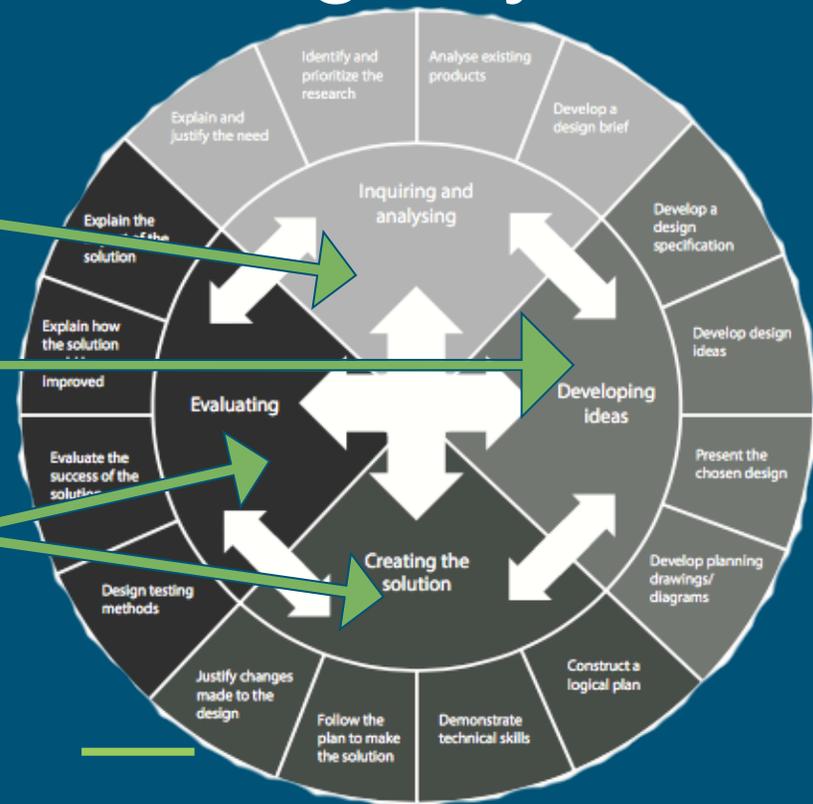
Panyee Football Club - Inquiring into design

As you watch consider how these young athletes follow the design cycle.

You may also find it useful to consider which learner profile attributes do they demonstrate as well as with approaches to learning they utilize.

Design Key Concepts

Aesthetics	Change	Communication	Communities
Connections	Creativity	Culture	Development
Form	Global interactions	Identity	Logic
Perspective	Relationships	Systems	Time, place and space

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Design Related Concepts

Related concepts in design		
Adaptation	Collaboration	Ergonomics
Evaluation	Form	Function
Innovation	Invention	Markets and trends
Perspective	Resources	Sustainability

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Design Conceptual Understanding

Select one key and two related concepts and develop a conceptual understanding from them.

Aesthetics	Change	Communication	Communities
Connections	Creativity	Culture	Development
Form	Global interactions	Identity	Logic
Perspective	Relationships	Systems	Time, place and space

Related concepts in design		
Adaptation	Collaboration	Ergonomics
Evaluation	Form	Function
Innovation	Invention	Markets and trends
Perspective	Resources	Sustainability

Design Conceptual Understanding

Key Concept   Related Concepts

Evaluation of existing systems can lead to adaptations that improve them.

The sustainable development of resources requires foresight.

Inventions of communication technology have supported long-distance collaboration.

The representation of a diversity of perspectives within a community can enhance the functions of a product.

Inquiry

MYP unit planner

Teacher(s)		Subject group and discipline		
Unit title		MYP year		Unit duration (hrs)

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global contexts

Statement of inquiry

Inquiry questions
Factual— Conceptual— Debatable—

Intermission

Agenda: Session 2 - Design Units

Participants will develop an understanding of MYP global contexts to ensure meaningful, relevant, and engaging learning experiences.

Participants will develop an understanding of how concepts and context are synthesized into a statement of inquiry.

Discuss the design principles of summative assessment task(s) in relation to the subject group requirements and objectives.

Global contexts for relevancy

Teaching and learning in the MYP involves understanding concepts in context. Global contexts provide a common language for powerful contextual learning, identifying specific settings, events or circumstances that provide more concrete perspectives for teaching and learning.

- *MYP: From principles into practice* (2017) page 58

Global contexts for relevancy

- Identities and relationships

- Personal and cultural expression

- Scientific and technical innovation

- Fairness and development

- Globalization and sustainability

- Orientation in space and time

Selecting global context and exploration

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Global contexts and explorations

Global context	Focus question(s) and description	Example explorations
Identities and relationships	Who am I? Who are we? Students will explore identity; beliefs and values; personal, physical, mental, social and spiritual health; human relationships including families, friends, communities and cultures; what it means to be human.	Possible explorations to develop • Competition and cooperation; teams, affiliation and leadership • Identity formation; self-esteem; status; roles and role models • Personal efficacy and agency; attitudes, motivation, independence; happiness and the good life • Physical, psychological and social development; transitions; health and well-being; lifestyle choices • Human nature and human dignity; moral reasoning and ethical judgment; consciousness and mind

Redesigning the shopping cart - design projects

IDEO - Not experts at any one thing; good at the process of design.

Begin by evaluation, then inquire, develop ideas, and create.

Objectives, Summative - Conceptual

Objectives	Summative assessment	
	Outline of summative assessment task(s) including assessment criteria:	Relationship between summative assessment task(s) and statement of inquiry:

Agenda: Session 3 - Learning experiences alignment

- *Participants will examine the Agency, Information and Design (AID) framework*

- *develop an understanding of the 'Approaches to learning' categories and clusters.*

- *Explore how the inquiry cycle can frame meaningful, relevant, and engaging classroom learning.*

- *Discuss the nature and role of formative learning engagements.*

Teaching With Technology (*MYP:FPIP* Appendix 5)

"[T]oday's world is highly networked and interactive, and people use more technology tools than ever before to learn and do their work. Students need to develop technology literacy in order to thrive in an increasingly digital world."

"Technologies, however, are not necessarily digital. Technology is anything that aids or extends people and their abilities."

Teaching with technology (*MYP:FPIP* Appendix 5)

"Developing technology literacy does not require access to the newest or most expensive technological tools. Students develop technology literacy most effectively whenever they thoughtfully and critically use technology (including everything from simple tools to sophisticated devices) in environments that invite purposeful and playful experimentation."

Teaching with technology (*MYP:FPIP* Appendix 5)

What is Agency Information and Design?

Agency, Information and Design (AID) is a framework that can help students and teachers increase their technology literacy. The AID framework is a powerful lens through which to explore technology literacy in planning and in practice.

Agency (ways of being)

The responsibility, ability and will to use technology wisely and to represent oneself well with technology

Information (ways of knowing)

The responsibility, ability and will to comprehend, use, and re-use many forms of information with technology

Design (ways of doing)

The responsibility, ability and will to plan, execute, and distribute ideas or content with technology

Figure 13
AID framework

Teaching with technology (*MYP:FPIP* Appendix 5)

|	Concept	Skill	Outcome
Agency	Intention (What do I want to accomplish? How do I choose to present myself?)	Using technology responsibly (How can I use the technology available to me in a principled way?)	I understand the possibilities and potential problems that technology presents. I am safe and I respect the rights and dignity of others when I use technology.

Teaching with technology (*MYP:FPIP* Appendix 5)

	Concept	Skill	Outcome
Information	Knowledge (What can I learn with technology?)	Using technology effectively (How can I find out what I need to know about using technology?)	I can demonstrate my knowledge and understanding using technology. I know how to find and use information using a range of technologies.
Design	Creativity (What can I imagine with technology?)	Using technology critically and creatively (How can I create and innovate with technology?)	I make and follow plans that use multiple technologies. I use or create new technologies flexibly to meet my short- and long-term goals.

Tilted unit planner - aligning components

Content	Learning experiences and teaching strategies	Formative assessment	Differentiation

Formatives demonstrate knowledge
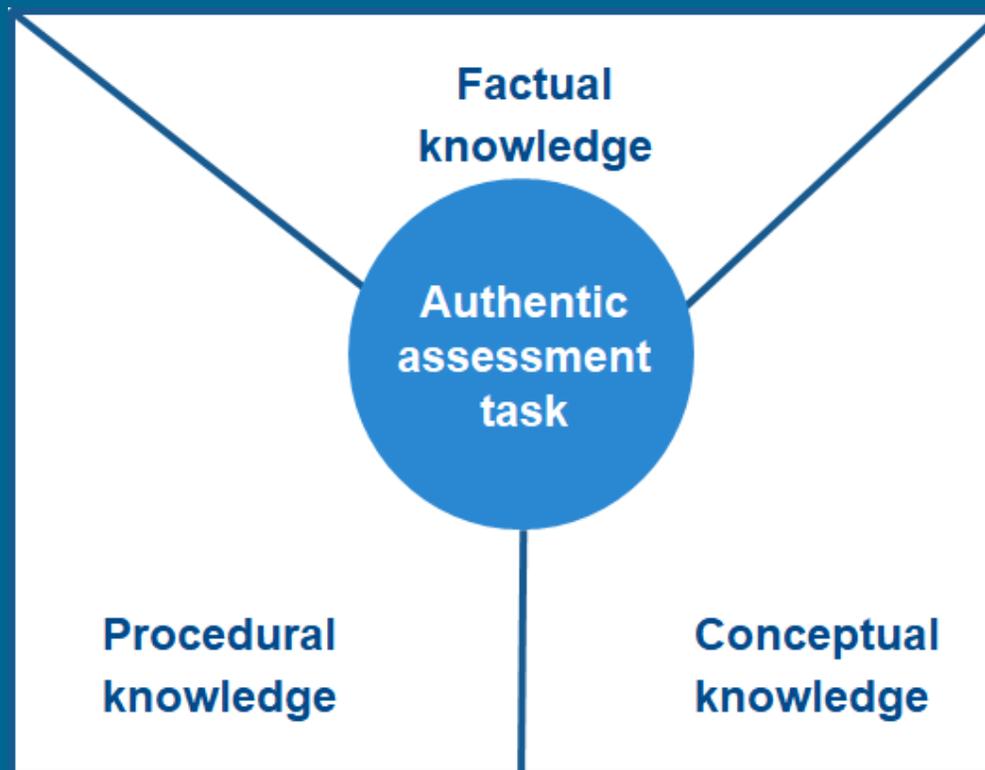
Reflection

Reflection: Considering the planning, process and impact of the inquiry

Prior to teaching the unit	During teaching	After teaching the unit
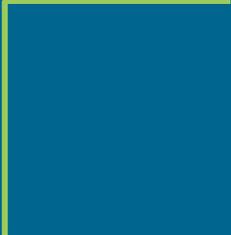
Thank you very much!

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