MYP Computer and Design

Key Concepts

Key concepts promote the development of a broad curriculum. They represent big ideas that are both relevant within and across disciplines and subjects. For Deisgn these are **communication, communities, development** and **systems**.

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

Related Concepts

Related concepts Related concepts promote deep learning. They are grounded in specific disciplines and are useful for exploring key concepts in greater detail. Inquiry into related concepts helps students develop more complex and sophisticated conceptual understanding. There are 12 related concepts for each visual and performing arts.

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

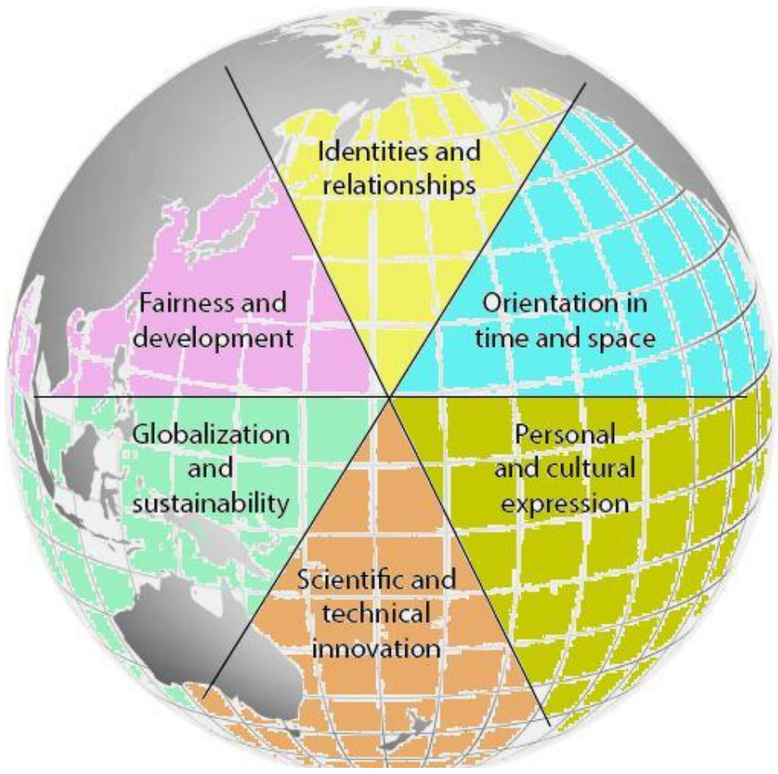
Global Concepts

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. When teachers select a global context for learning, they are answering the following questions.

- Why are we engaged in this inquiry?
- Why are these concepts important?
- Why is it important for me to understand?
- Why do people care about this topic?

MYP sciences can develop meaningful explorations of:

• identities and relationships • orientation in space and time • personal and cultural expression • scientific and technical innovation • globalization and sustainability • fairness and development



Statement of Enquiry Criteria

Statement of inquiry Teachers construct the statement of inquiry for a unit by combining a **key concept**, one or more **related concepts**, and a **global context** for the unit into a **meaningful statement** that students can understand. This statement expresses the relationship between concepts and context; it represents a transferable idea supported by factual content. Statements of inquiry facilitate synergistic thinking, synthesizing factual and conceptual levels of mental processing and creating a greater impact on cognitive development than either level of thinking by itself (Erickson 2007; Marzano 2009).
The statement of inquiry:

- represents a contextualized, conceptual understanding
- describes a complex relationship that is worthy of inquiry
- explains clearly what students should understand and why that understanding is meaningful
- can be qualified (using phrases such as “often”, “may” and “can”) if it is not true in all situations, but is still an important idea
- can be formulated at different levels of specificity.

Overview of Assessment

In the MYP, subject group objectives correspond to assessment criteria. Each criterion has eight possible achievement levels (1–8), divided into four bands that generally represent limited (1–2); adequate (3–4); substantial (5–6); and excellent (7–8) performance. Each band has its own unique descriptor that teachers use to make "best-fit" judgments about students' progress and achievement. This guide provides the required assessment criteria for years 1, 3 and 5 of MYP sciences. In response to national or local requirements, schools may add criteria and use additional models of assessment. Schools must use the appropriate assessment criteria as published in this guide to report students' final achievement in the programme. Teachers clarify the expectations for each summative assessment task with direct reference to these assessment criteria. Task-specific clarifications should clearly explain what students are expected to know and do. They could be in the form of: • a task-specific version of the required assessment criteria • a face-to-face or virtual classroom discussion • a detailed task sheet or assignment.

Computer and Design

Computer science requires an understanding of the fundamental concepts of computational thinking, as well as knowledge of how computers and other digital devices operate.

Design technology aims to develop a high level of design literacy by enabling students to develop critical thinking and design skills, which they can apply in a practical context.

Assessment Criteria

Achievement Level	Level Descriptor			
	Criterion A: Inquiring and analysing	Criterion B: Developing ideas	CriterionC: Creating the solution	Criterion D: Evaluating
0	The student does not reach a standard described by any of the descriptors below	The student does not reach a standard described by any of the descriptors below.	The student does not reach a standard described by any of the descriptors below	The student does not reach a standard described by any of the descriptors below
1–2	The student: i. states the need for a solution to a problem ii. states the findings of research.	The student: i. states one basic success criterion for a solution ii. presents one design idea, which can be interpreted by others iii. creates an incomplete planning drawing/diagram.	The student: i. demonstrates minimal technical skills when making the solution ii. creates the solution, which functions poorly and is presented in an incomplete form.	The student: i. defines a testing method, which is used to measure the success of the solution ii. states the success of the solution.
3-4	The student: i. outlines the need for a solution to a problem ii. states some points of research needed to develop a solution, with some guidance iii. states the main features of an existing product that inspires a solution to the problem iv. outlines some of the main findings of research	The student: i. states a few success criteria for the solution ii. presents more than one design idea, using an appropriate medium(s) or labels key features, which can be interpreted by others iii. states the key features of the chosen design iv. creates a planning drawing/diagram or lists requirements for the creation of the chosen solution	The student: i. lists the main steps in a plan that contains some details, resulting in peers having difficulty following the plan to create the solution ii. demonstrates satisfactory technical skills when making the solution iii. creates the solution, which partially functions and is adequately presented iv. states one change made to the chosen design or plan when making the solution.	The student: i. defines a relevant testing method, which generates data, to measure the success of the solution ii. states the success of the solution against the design specification based on the results of one relevant test iii. states one way in which the solution could be improved iv. states one way in which the solution can impact the client/target audience.
5-6	The student: i. explains the need for a solution to a problem ii. states and prioritizes the main points of research needed to develop a solution to the problem, with some guidance iii. outlines the main features of an existing product that inspires a solution to the problem iv. outlines the main findings of relevant research..	The student: i. develops a list of success criteria for the solution ii. presents feasible design ideas, using an appropriate medium(s) and outlines the key features, which can be correctly interpreted by others iii. presents the chosen design describing the key features iv. creates a planning drawing/diagram, which outlines the main details for making the chosen solution.	The student: i. lists the steps in a plan, which considers time and resources, resulting in peers being able to follow the plan to create the solution ii. demonstrates competent technical skills when making the solution iii. creates the solution, which functions as intended and is presented appropriately iv. states one change made to the chosen design and plan when making the solution.	The student: i. defines relevant testing methods, which generate data, to measure the success of the solution ii. states the success of the solution against the design specification based on relevant product testing iii. outlines one way in which the solution could be improved iv. outlines the impact of the solution on the client/target audience, with guidance.
7-8	The student: i. explains and justifies the need for a solution to a problem ii. states and prioritizes the main points of research needed to develop a solution to the problem, with minimal guidance iii. describes the main features of an existing product that inspires a solution to the problem iv. presents the main findings of relevant research.	The student: i. develops a list of success criteria for the solution ii. presents feasible design ideas, using an appropriate medium(s) and outlines the key features, which can be correctly interpreted by others iii. presents the chosen design describing the key features iv. creates a planning drawing/diagram, which outlines the main details for making the chosen solution.	The student: i. outlines a plan, which considers the use of resources and time, sufficient for peers to be able to follow to create the solution ii. demonstrates excellent technical skills when making the solution iii. follows the plan to create the solution, which functions as intended and is presented appropriately iv. lists the changes made to the chosen design and plan when making the solution	The student: i. outlines simple, relevant testing methods, which generate data, to measure the success of the solution ii. outlines the success of the solution against the design specification based on authentic product testing iii. outlines how the solution could be improved iv. outlines the impact of the solution on the client/target audience.

MYP Unit Planner Check List

Unit title	Key concept	Related concept(s)	Global context	Statement of inquiry	Inquiry Questions	Approaches to Learning