Inquiry: Establishing the purpose of the unit

The "Inquiry" section of the MYP unit planner identifies the purpose of the unit to ensure its alignment with MYP philosophy and requirements. The components of this section of the MYP unit planner are: concepts, global contexts, statement of inquiry, inquiry questions, subject-group objectives, summative assessment and ATL.

Concepts

Key concepts

The MYP identifies 16 key concepts to be explored across the curriculum. These key concepts, shown in Table 2, represent understandings that reach beyond the eight MYP subject groups from which they are drawn.

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

Table 2
MYP key concepts

Teachers use key concepts from their own subject group(s)—as well as key concepts from other subject groups—to plan disciplinary and interdisciplinary units of work. Teachers identify one key concept that drives the unit's development.

The following broad descriptions apply across subject groups, and MYP subject-group guides suggest further subject-specific understandings. These concepts are not only "key" in the sense of being important; they also provide a key—a way into a body of knowledge through structured and sustained inquiry. They place no limits on breadth of knowledge or on depth of understanding, and therefore provide access to every student, regardless of individual aptitudes and abilities.

Inquiry into MYP key concepts will further develop (and lead to debate on) the meaning of these significant ideas.

- **Aesthetics** deals with the characteristics, creation, meaning and perception of beauty and taste. The study of aesthetics develops skills for the critical appreciation and analysis of art, culture and nature.

- **Change** is a conversion, transformation or movement from one form, state or value to another. Inquiry into the concept of change involves understanding and evaluating causes, processes and consequences.

- **Communication** is the exchange or transfer of signals, facts, ideas and symbols. It requires a sender, a message and an intended receiver. Communication involves the activity of conveying information or meaning. Effective communication requires a common "language" (which may be written, spoken or non-verbal).

- **Communities** are groups that exist in proximity defined by space, time or relationship. Communities include, for example, groups of people sharing particular characteristics, beliefs or values as well as groups of interdependent organisms living together in a specific habitat.

- **Connections** are links, bonds and relationships among people, objects, organisms or ideas.

- **Creativity** is the process of generating novel ideas and considering existing ideas from new perspectives. Creativity includes the ability to recognize the value of ideas when developing innovative responses to problems; it may be evident in process as well as outcomes, products or solutions.

- **Culture** encompasses a range of learned and shared beliefs, values, interests, attitudes, products, ways of knowing and patterns of behaviour created by human communities. The concept of culture is dynamic and organic.

- **Development** is the act or process of growth, progress or evolution, sometimes through iterative improvements.

- **Form** is the shape and underlying structure of an entity or piece of work, including its organization, essential nature and external appearance.

- **Global interactions**, as a concept, focuses on the connections among individuals and communities, as well as their relationships with built and natural environments, from the perspective of the world as a whole.

- **Identity** is the state or fact of being the same. It refers to the particular features that define individuals, groups, things, eras, places, symbols and styles. Identity can be observed, or it can be constructed, asserted and shaped by external and internal influences.

- **Logic** is a method of reasoning and a system of principles used to build arguments and reach conclusions.

- **Perspective** is the position from which we observe situations, objects, facts, ideas and opinions. Perspective may be associated with individuals, groups, cultures or disciplines. Different perspectives often lead to multiple representations and interpretations.

- **Relationships** are the connections and associations between properties, objects, people and ideas—including the human community's connections with the world in which we live. Any change in relationship brings consequences—some of which may occur on a small scale, while others may be far-reaching, affecting large networks and systems such as human societies and the planetary ecosystem.

- **Systems** are sets of interacting or interdependent components. Systems provide structure and order in human, natural and built environments. Systems can be static or dynamic, simple or complex.

- The intrinsically linked concept of **time, place and space** refers to the absolute or relative position of people, objects and ideas. Time, place and space focuses on how we construct and use our understanding of location ("where" and "when").

Related concepts

Related concepts and their definitions are found in each MYP subject-group guide, along with examples of how they are used to develop MYP units. Teachers can develop additional related concepts to meet the needs of students and local or national curriculum requirements. For each unit, teachers identify one or more related concept(s) that extend(s) learning, lead(s) to deeper understanding, or offer(s) another perspective from which to understand the identified key concept(s).

Using key and related concepts

Since key and related concepts describe the most important ideas for teaching in the subject, teachers can use them as a framework for vertically articulating the curriculum. For example, teachers can begin by identifying the key and related concepts that will be addressed in each year of the programme, and then map the development of those concepts with respect to MYP subject-group objectives. Alternatively, teachers can begin by developing their understanding of subject-group objectives over the years of the programme, then identify key and related concepts for specific units.

When planning a unit of work and determining the conceptual understandings for students to explore through the unit, it is important to note the following.

- Students need multiple opportunities to explore the concepts defined for each subject or discipline. Students should have meaningful inquiry into all of the key and related concepts for each relevant subject group at least once over the course of the MYP.

- Over the course of the programme, students need to develop an understanding of the key and related concepts at increasing levels of sophistication and abstraction.

- Summative assessments should offer students opportunities to reach the highest achievement levels with regard to their conceptual knowledge and understanding.

- Related concepts can have different levels of abstraction and disciplinary specificity (Erickson 2008). In some cases, key concepts can function like related concepts. For example, in a unit entitled "Balance in complex organisms requires the effective interaction of systems", the related concepts balance and interaction bring disciplinary depth to the key concept of systems—and also deepen understanding of the subject.

Global contexts

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 global contexts, illustrated in figure 9, provide common points of entry for inquiries into what it means to be internationally minded, framing a curriculum that promotes multilingualism, intercultural understanding and global engagement. These contexts build on the powerful themes of global significance that structure teaching and learning in the PYP, creating relevance for adolescent learners.
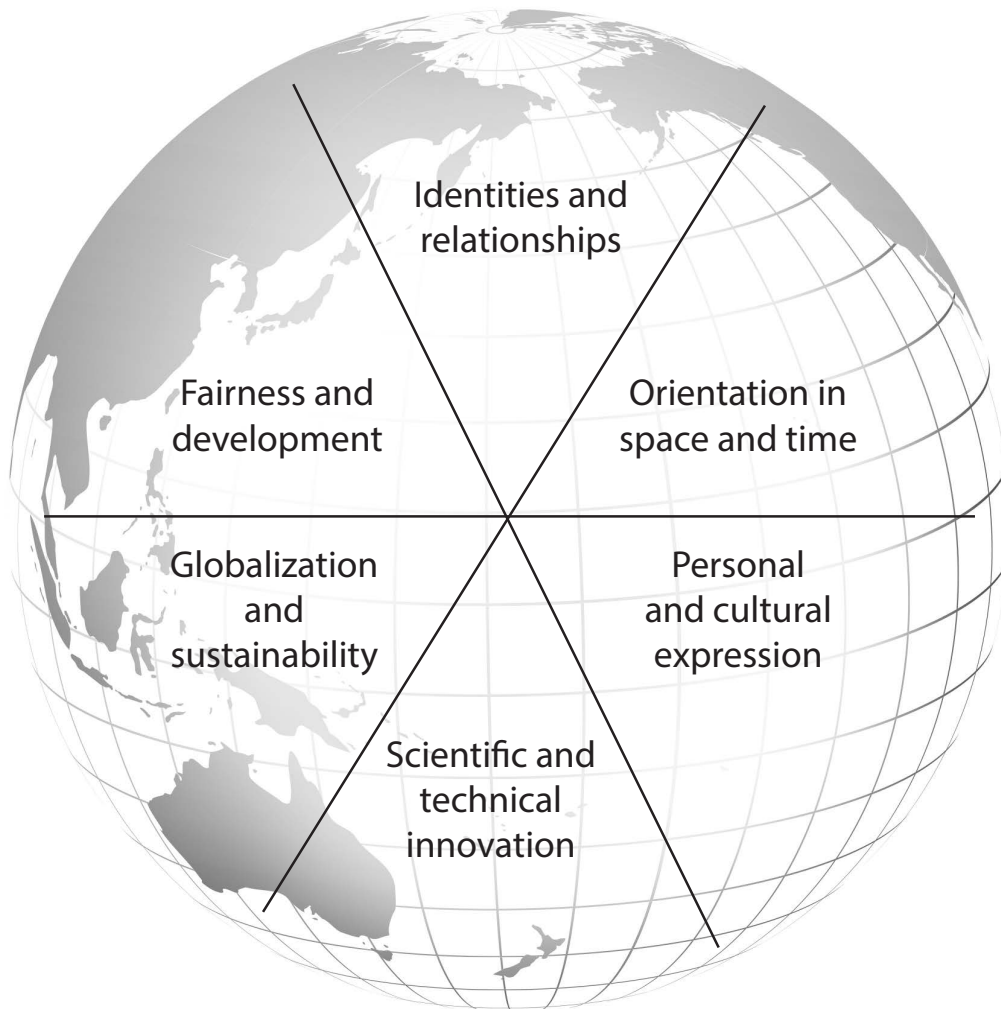
Figure 9
MYP global contexts

These and other contexts for teaching and learning inspire explorations of our common humanity and shared guardianship of the planet. They invite reflection on local, national and global communities, as well as the real-life issues and concerns of 11- to 16-year-old students. For each MYP unit, teachers should identify one global context that establishes a focus for meaningful teaching and learning in a programme of international education. Over the course of their study, students should encounter all six global contexts.

Table 3 contains explanations of the MYP global contexts and some of the many explorations that they can inspire.

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
Orientation in space and time	What is the meaning of "where" and "when"? Students will explore personal histories; homes and journeys; turning points in humankind; discoveries; explorations and migrations of humankind; the relationships between, and the interconnectedness of, individuals and civilizations, from personal, local and global perspectives.	Possible explorations to develop • Civilizations and social histories, heritage, pilgrimage, migration, displacement and exchange • Epochs, eras, turning points and "big history" • Scale, duration, frequency and variability • Peoples, boundaries, exchange and interaction • Natural and human landscapes and resources • Evolution, constraints and adaptation • Indigenous understanding

Global context	Focus question(s) and description	Example explorations
Personal and cultural expression	What is the nature and purpose of creative expression? Students will explore the ways in which we discover and express ideas, feelings, nature, culture, beliefs and values; the ways in which we reflect on, extend and enjoy our creativity; our appreciation of the aesthetic.	Possible explorations to develop • Artistry, craft, creation, beauty • Products, systems and institutions • Social constructions of reality; philosophies and ways of life; belief systems; ritual and play • Critical literacy, languages and linguistic systems; histories of ideas, fields and disciplines; analysis and argument • Metacognition and abstract thinking • Entrepreneurship, practice and competency
Scientific and technical innovation	How do we understand the world in which we live? Students will explore the natural world and its laws; the interaction between people and the natural world; how humans use their understanding of scientific principles; the impact of scientific and technological advances on communities and environments; the impact of environments on human activity; how humans adapt environments to their needs.	Possible explorations to develop • Systems, models, methods; products, processes and solutions • Adaptation, ingenuity and progress • Opportunity, risk, consequences and responsibility • Modernization, industrialization and engineering • Digital life, virtual environments and the Information Age • The biological revolution • Mathematical puzzles, principles and discoveries
Globalization and sustainability	How is everything connected? Students will explore the interconnectedness of human-made systems and communities; the relationship between local and global processes; how local experiences mediate the global; the opportunities and tensions provided by world-interconnectedness; the impact of decision-making on humankind and the environment.	Possible explorations to develop • Markets, commodities and commercialization • Human impact on the environment • Commonality, diversity and interconnection • Consumption, conservation, scarcity; natural resources and public goods • Population and demography • Urban planning, strategy and infrastructure • Data-driven decision-making

Global context	Focus question(s) and description	Example explorations
Fairness and development	What are the consequences of our common humanity? Students will explore rights and responsibilities; the relationship between communities; sharing finite resources with other people and with other living things; access to equal opportunities; peace and conflict resolution.	Possible explorations to develop • Democracy, politics, government and civil society • Inequality, difference and inclusion • Human capability and development; social entrepreneurs • Rights, law, civic responsibility and the public sphere • Justice, peace and conflict management • Ecology and disparate impact • Power and privilege • Authority, security and freedom • Imagining a hopeful future

Table 3
Global contexts and explorations

The selected global context will inform the questions that teachers and students ask throughout the unit. However, many explorations of global contexts are closely related and, in the course of the unit, questions that relate to other global contexts may also be encouraged, developed and considered.

Inquiring into subject content through a global context enables students to develop a deeper understanding of both the subject and its application in the real world. Repeated cycles of inquiry, action and reflection can lead students from academic knowledge towards practical understanding, developing positive attitudes towards learning as well as a sense of personal and social responsibility.

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.

Teachers can make very broad statements more specific, age-appropriate and focused by asking themselves "Why/how does this relationship or principle occur?" and "What are the implications of this understanding?" However, statements of inquiry should not be so specific that they cannot be transferable beyond the content of the unit.

Inquiry questions

Inquiry questions are drawn from, and inspired by, the statement of inquiry. Teachers and students develop these questions to explore the statement of inquiry in greater detail. Students can develop their own questions in ways that satisfy curiosity and deepen understanding. The strands of subject-specific objectives can also be helpful in formulating inquiry questions.

Inquiry questions give shape and scope to a unit of study, and they help to scaffold the objectives that students should strive to achieve. As the unit progresses, both teachers and students can develop additional questions to explore.

Table 4 lists some characteristics of factual, conceptual and debatable questions to consider when planning MYP units.

Factual questions	Conceptual questions	Debatable questions
• Knowledge/fact-based • Content-driven • Skills-related • Supported by evidence • Can be used to explore terminology in the statement of inquiry • Frequently topical • Encourage recall and comprehension	• Enable exploration of big ideas that connect facts and topics • Highlight opportunities to compare and contrast • Explore contradictions • Lead to deeper disciplinary and interdisciplinary understanding • Promote transfer to familiar or less familiar situations, issues, ideas and contexts • Encourage analysis and application	• Enable the use of facts and concepts to debate a position • Promote discussion • Explore significant ideas and issues from multiple perspectives • Can be contested • Have tension • May be deliberately provocative • Encourage synthesis and evaluation

Table 4
Characteristics of factual, conceptual and debatable inquiry questions

Subject-group objectives

Each MYP subject-group framework encompasses specific aims and objectives. The aims of all MYP subject groups state what teachers may expect to teach and what students may expect to experience and learn. The objectives of any MYP subject group state the specific targets that are set for learning in that subject group. They define what the student will be able to accomplish as a result of studying the subject. Each objective is elaborated by a number of **strands**; a strand is an aspect or indicator of the learning expectation.

The objectives of each subject group represent the use of knowledge, understanding and skills that must be taught. They encompass the factual, conceptual, procedural and metacognitive dimensions of knowledge. MYP objectives reflect and offer opportunities to develop the attributes of the IB learner profile.

The objectives for years 1, 3 and 5 of the programme are provided in MYP subject-group guides, and their use is mandatory.

Summative assessment

Summative assessment tasks should be directly linked to the statement of inquiry and provide varied opportunities for students to demonstrate their knowledge, understanding and skills. In planning these assessments of learning, teachers should ask the following questions.

• How does this assessment task relate to the statement of inquiry?

• Which MYP objectives are being addressed?

• How can we create meaningful performances of understanding?

• What evidence of learning will there be?

• How can we collect evidence of learning?

• How will the assessment task demonstrate conceptual understanding?

• How will results be recorded and analysed?

• How and when will students receive feedback?

Approaches to learning (ATL)

Every MYP unit identifies ATL skills that students will develop through their inquiry and demonstrate in the unit's formative (if applicable) and summative assessments. Many ATL skills directly support the attainment of subject-group objectives.

The most effective way to develop ATL is through ongoing, process-focused disciplinary and interdisciplinary teaching and learning. Teachers can use key and related concepts, along with global contexts, as vehicles for teaching effective learning strategies. Likewise, ATL skills can be powerful tools for exploring significant content. This dual focus on content and process promotes student engagement, deep understanding, transfer of skills and academic success.

In the MYP, ATL encompasses both general and discipline-specific skills. Many ATL skills are applicable to all MYP subject groups; these general "tools for learning" can be tailored to meet the specific needs of students and schools. To develop ATL skills that facilitate effective and efficient learning, students need models, clear expectations, developmental benchmarks (or targets) and multiple opportunities to practise. While ATL skills are not formally assessed in the MYP, they contribute to students' achievement in all subject groups. Teachers should provide students with regular, specific feedback on the development of ATL skills through learning engagements and formative assessment.

The structure of ATL skills in the MYP

The MYP extends ATL skill categories into 10 developmentally appropriate clusters. ATL skills are interconnected; individual skills and skill clusters that frequently overlap and may be relevant to more than one skill category. Appendix 1 describes some of the important ATL skills that students should develop in the MYP. Schools can use this list to build their own frameworks for developing students who are empowered as self-directed learners, and teachers in all subject groups can draw from these skills to identify approaches to learning that students will develop in MYP units.

Approaches to learning are most powerful when teachers plan and students engage with them in relation to significant and relevant content knowledge in order to develop transferable understanding.

In the MYP unit planner, teachers identify ATL skills—general as well as subject-specific—that students will need to develop, through their engagement with the unit's learning experiences (including formative assessments), to meet the unit's objectives. The skills that teachers identify in this section of the planner are used to develop horizontal and vertical planning of ATL to meet MYP requirements for the written curriculum. Students and teachers can also work to identify and develop additional important ATL skills.

ATL skills focus on the process of learning, helping students to become confident, independent, self-managed learners for life. Teachers should teach skills explicitly, and students should have structured opportunities to practise them. Appendix 1 contains a framework for the ATL skills that students may develop in the MYP.

Many ATL skills that have been learned and practised during a unit of work can be integrated in assessment through a variety of tasks and projects involving problem-solving, hands-on approaches (individually and in groups), as well as traditional testing. Assessments involving ATL often require students to use information from different sources critically and to make appropriate use of technology.