Tema International School

TEMA INTERNATIONAL SCHOOL

MYP
Parents Guide

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Tema International School Mission Statement

To provide an excellent eduaction to all students who are admitted into the school, irrespective of Nationality, Ethnicity, Creed or Gender.

To draw on the cultural diversity of the school community as a foundation for building universal human values and for preparing its students to be responsible citizens who exhibit honesty and integrity in a complex and rapidly changing global environment.

To develop the spirit of inquiry in our students as a fundamental tool for creative thinking, critical reasoniong and stimulating intellectual development.

It is our hope that the young adults who graduate from TIS will be equipped with knowledge and skills which re applicable in a variety of situations and which will enable them tocontribute meaningfully to their communities whereever they may find themselves.

Vision

Tema International School is an Interantional School of choice which produces world class citizens who are aware of and respond to the needs of their community and society at large. The Tema International School Community is dedicated and commited to this shared vision.

IB Mission Statement

The International Baccalaureate aims to develop inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect.

To this end the organization works with schools, governments and international organizations to develop challenging programmes of international education and rigorous assessment.

These programmes encourage students across the world to become active, compassionate and lifelong learners who understand other people, with their differences, can also be right.

The IB Programmes

The IBO offers four programmes of which TIS offers two at this point, the MYP and the DP, creating a continuum of international education. This continuum also assures a common educational framework with aims and values, and the concept of how to develop international-mindedness. The Learner Profile is the core of this framework and is an embodiment of what the IB means by "international-mindedness"

The Middle Years Programme (MYP) aims at students aged 11 to 16 and provides a framework of academic challenge and life skills through embracing and transcending traditional school subjects.

International – mindedness

The attempts to define international-mindedness in increasingly clear terms and to move closer to that ideal in practice are central to the mission of IB World Schools. Given the variety and complexity of schools, and the elusive nature of the concept of international-mindedness itself, it would be naive to propose any simple definition and expect it to stand up to rigorous examination. Rather, the IB suggests that the definition reflects a range of interrelated factors.

However, in examining these factors during the years since the inception of the MYP, a profile has emerged of the kind of student who represents the essence of the programme, the kind of student who, in establishing a personal set of values, will be laying the foundation upon which international-mindedness will develop and flourish. The attributes of such a learner are listed in the IB learner profile. IB World Schools should be proud to send out into the world students who exemplify the attributes expressed in this profile.

The IB Learner Profile

The learner profile is the IB mission in action. These attributes of internationally minded people represent a broad range of human capacities and responsibilities that go beyond a concern for intellectual development and academic account. They imply a commitment to implement standards and practices that help all members of the school community learn to respect themselves, others and the world around them.

The IB Learner Profile	
The aim of all IB programmes is to develop internationally minded people who, recognising our common humanity and shared guardianship of the planet, help to create a better and more peaceful world. IB learners strive to be:	
Inquirers	We nurture our curiosity, developing skills for inquiry and research. We know how we learn independently and with others . We learn with enthusiasm and sustain our love of learning throughout life.
Knowledgeable	We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.
Thinkers	We use critical and creative thinking skills to analyze and take responsible action in complex problems. We exercise initiative in making reasoned, ethical decisions.
Communicators	We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

Principled	We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.
Open-minded	We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.
Caring	We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.
Risk-takers	We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.
Balanced	We understand the importance of balancing different aspects of our lives - intellectual, physical, and emotional - to achieve well - being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.
Reflective	We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

Introduction

"Tema International School is an authorised IB World School and a candidate school for the Middle Years Programme. These are schools that share a common philosophy—a commitment to high quality, challenging, international education that Tema International School believes is important for our students and reflect the attributes of the Learner Profile."

Tema International School follows the IB Diploma Programme and started implementing the Middle Years Programme in September 2016. Both International Baccalaureate programmes are based on the premise that for students to become fully-informed and contributing citizens of an increasingly globalized world, schools must teach them to be excellent communicators, to be aware of multiple cultures, including their own, and to make connections between their learning and their lives.

Why do we choose the MYP for our students?

The Middle Years Programme was developed by international educators in the 1980s who wanted to develop a curriculum for the middle schools of schooling. It was to share the same philosophy as the DP, which was developed in the late 1960s, and would prepare the students to be successful in the DP. The programme, of which the first draft came out in 1987, aimed to be used in international schools. The philosophy of the MYP, with the Learner Profile at its core reflects the experience of teachers and educationalists working in the field of international education. The Next Chapter of the MYP, which started in September 2014 brought changes that allow for more smoother transitions between the programmes as well as to meet national requirements

From fundamental concepts to the IB learner profile

From its beginning, the MYP was guided by three principles that have had a special currency for learners aged 11-16, inspired by the IB mission: holistic learning, intercultural awareness and communication. These fundamental concepts of the programme provided a strong foundation for teaching and learning in the MYP. They represent an early attempt to establish a philosophy of international education that the IB now recognises more fully with the

adoption of the IB learner profile across the IB continuum.

Holistic learning, intercultural awareness and communication are implied in or are part of the IB learner profile, especially in the attributes "balanced, open-minded, and "communicators"

MYP is student-centred.

As part of their experience of the MYP students develop an awareness of their own learning process and the necessary skills to continue learning throughout life. The curriculum seeks to shift the emphasis from teacher instruction to student learning wherever possible and from transmission of knowledge to inquiry. The MYP thus aims to combine academic rigor with the fostering of learning attitudes appropriate to young people in a global society. MYP students are making the transition from early puberty to mid-adolescence, which is an important period of personal, social and intellectual development, of uncertainty and questioning.TIS teachers aim to help in this process through their choice of teaching practice: they encourage students to develop critical thinking, to solve 'real-life' problems, to communicate their ideas and to express their creativity in different ways. Teachers try to link the different subjects where possible using interdisciplinary units and students are encouraged to look for similarities between the subjects as well to come an understanding of the holistic approach.

MYP Programme Model
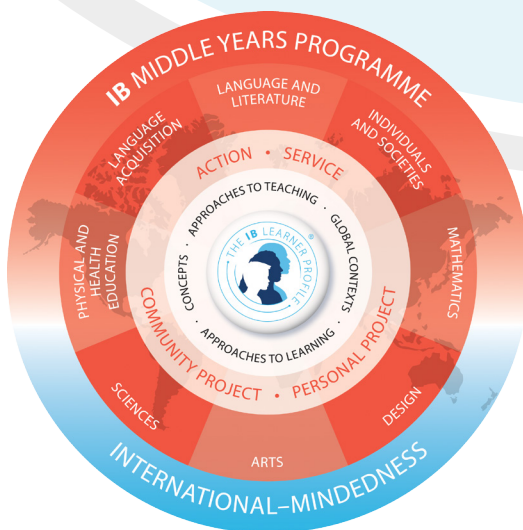
In the programme model for the MYP, the first ring around the student at the centre describes the features of the programme that helps students develop disciplinary (and interdisciplinary) understanding.

- Approaches to Learning (ATL) - demonstrating a commitment to approaches to learning as a key component of the MYP for developing skills for learning.

- Approaches to teaching - emphasising MYP pedagogy, including collaborative learning through inquiry.

- Concepts - highlighting a concept driven curriculum.

- Global contexts - showing how learning best takes place in context.

The second ring describes some important outcomes of the programme.

- Inquiry based learning may result in student-initiated action, which may involve service within the community.

- The MYP culminates in the Personal Project (for students in MYP year 5)

The third ring describes the MYP's broad and balanced curriculum.

- The MYP organises teaching and learning through eight subject groups: language and literature, language acquisition, individual and societies, sciences, mathematics, arts, physical and health education, and design.

- In many cases, discrete or integrated disciplines may be taught and assessed within the subject group: for example, history or geography within the individuals and societies subject group: biology , chemistry or physics within the sciences subject group.

- The distinction between subject groups blurs to indicate the interdisciplinary nature of the MYP. The subject groups are connected through global contexts and key concepts

Approaches to Learning

Approaches to Learning (ATL)

The core aim of the ATL programme at TIS is the formation of students as **independent learners and critical thinkers**. In other words, students should understand how to analyse and contrast information, how to communicate effectively and how to reflect upon their own learning.

Through the ATL teachers help students to develop skills that have relevance across the curriculum that help them "learn how to learn" and provide a solid

foundation for learning independently and with others. At TIS students are encouraged to view the class teacher as a 'facilitator' who promotes reflection on and articulate on the process of learning.

ATL is divided into five skill categories, expanded into developmentally-appropriate skill clusters.

IB ATL skill categories	MYP ATL skill clusters
Communication	I Communication
Social	II Collaboration
Self management	III Organisation
	IV Affective
	V Reflection
Research	VI Information literacy
	VII Media literacy
Thinking	VII Critical thinking
	IX Creative thinking
	X Transfer

Some of the key questions to be answered by students with respect to ATL skills include:

• What are my present skills in this area and what evidence do I have of my development?

• What skills can I improve?

• What new skills can I learn?

A concept driven curriculum that uses ATL skills effectively enables students to become stronger, more self-regulated learners.

Service and action in IB programmes

Action (learning by doing and experiencing) is a key component in the kind of teaching and learning common to all IB programmes. Service, as a subset to action, has always been a shared value of the IB community (previous in MYP, Community and Service) IB learners strive to be caring members of the community who demonstrate a personal commitment to service, and act to make a positive difference to the lives of others as an important way to engage in principled action across a range of overlapping local and global

communities. Through responsible action, tightly connected with sustained inquiry and critical reflection, young people and adults can develop the kind of attributes described by the learner profile that are essential for success in future academic pursuits and for adult life.

The MYP aims to help students develop their personal understanding, their emerging sense of self and their developmentally appropriate responsibility in their community.

As students become more aware and acquire a better understanding of the context and of their responsibilities, they become empowered to make choices about how to take thoughtful and positive action. This action will be different from student to student and from context to context. The action may involve students in:

- feeling empathy towards others
- making small -scale changes to their behavior
- undertaking larger and more significant projects
- acting on their own
- acting collaboratively
- taking physical action
- suggesting modifications to an existing system to the benefit of all involved
- lobbying people in more influential positions to act

Service requires that students are able to build authentic connections between what they learn in the classroom and what they encounter in the community, and grow in confidence and responsibility as they become "actors" in the "real world" beyond school.

How the curriculum works at TIS

Learning

Before any formal secondary school teaching takes place, children have already acquired considerable knowledge from both their elementary school experience and every day interactions. Subject teaching is directed at encouraging students to be aware of alternative views of the world. This aspect of teaching provides children with learning experiences which broaden their understanding of the natural, artistic, literary and technological world, encourages them to clarify existent views, challenges the limitations of their own views, enables them to appreciate the differences between their views and those of others and leads them to develop a personal perspective that is broader and more consistent than before.

The learning environment

At TIS, we see the school facilities as not only the context but also an extension of the learning that takes place here. The students are encouraged to express their viewpoints in a variety of forms (orally, wall displays, drawings, role-playing, written form, modeling, artefact production, etc.) and these viewpoints are valued as important contributions to the learning experience. The environment creates an atmosphere of respect and trust where ideas are brought into the open, discussed, experimented with and challenged.

TIS teachers are aware that learning is a gradual, non-linear and affective process and that students' progress at different rates. Classes are adapted to maximize support for individual needs through differentiation. The Science labs are equipped to support laboratory practical inquiry, there is a fully equipped computer lab, well facilitated Art/Drama/Music rooms. Besides these subject specific classroom adaptations, teachers organise their classroom in a way that it becomes a specialist learning resource for the students.

Learning to be a critical thinker
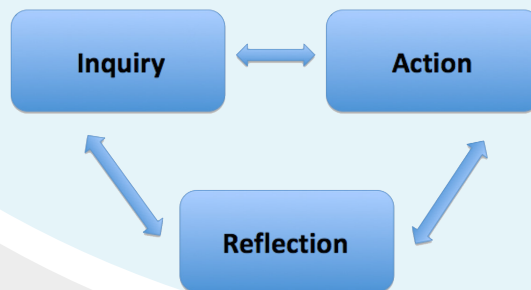
In some educational systems learning is associated solely with the recollection of facts. However, in MYP the focus is on inquiry. Critical thinking and problem solving are two fundamental approaches within MYP and are strongly encouraged in every subject area at TIS. Understanding as a result of independent inquiry is considered more profound than the simple acquisition of knowledge. When working on a MYP unit of work students can use the inquiry cycle as seen below.

This will allow them to:

- Make connections between previous learning and current learning
- Experiment and play with various possibilities
- Make predictions and take action to see what happens
- Collect data and report findings
- Clarify existing ideas and reappraise perceptions of events
- Deepen their understanding through the application of a concept
- Make and test theories
- Research and seek information
- Take and defend a position
- Solve problems in a variety of ways

Reflective Practices

In contemporary education the demands have shifted from a passive accumulation of facts to a state of mind, which is capable of selecting the relevant 'pieces' of information. This cognitive attitude calls for an independent approach to learning. At TIS teachers at all levels encourage self-evaluations as one of the means to reflect on one's own level of understanding, and to self-assess the need to pursue learning further.

In conjunction with this learning practice, the subject teacher encourages a gradual increase in the degree of independence in students' choices of method of inquiry and content of study.

For instance, in Individuals and Societies the inquiry process involves students in collecting and analysing information about people, groups, communities and societies. Inquiry is focused through the use of questions and hypotheses. Students explore and communicate social values and are challenged to think about the nature of social justice, the welfare of others, the acceptance of cultural diversity and respect for the environment.

Communication

Although we recognise and admire the ability to memorise as a valuable cognitive asset, real learning consists of the ability to apply knowledge in different contexts.

Students at TIS are encouraged to address different audiences as a means of re-thinking their new ideas. For example; they produce posters for display in public areas, present group views to the whole class, discuss in small groups, make individual and group presentations.

Assessing Development

At TIS we recognise that students learn in different ways and in keeping with this holistic view of education we think it is important to provide a variety of different ways for students to demonstrate what they have learnt. This is the guiding principle of MYP assessment. The programme provides teachers with a structure for assessment centred around fixed objectives based on adapted criteria to meet the needs of their students.

Assessment at TIS is:

Varied in approach

Tema International School sees learning as a lifelong experience of which assessment is a major component. Assessment is used on a daily basis to ensure direct feedback to inform students and teachers about their learning and teaching as well as informing the parents about the achievements of their children. Students might be assessed on project work, presentations to class, role-play and debate, essays, or tests etc.

Assessment aims to support and encourage a positive attitude of student learning as well as driving the ongoing development of the middle school curricula.

Formative as well as summative

Formative assessment means that students will be given assessed feedback on their work to help them improve it. They will also be involved in this assessment, through assessing their peers or themselves. *Summative assessment* is an activity at the end of a project or term, made by the teacher and often used for reporting purposes. *(more detailed information about Assessment can be found in the TIS Assessment Policy)*
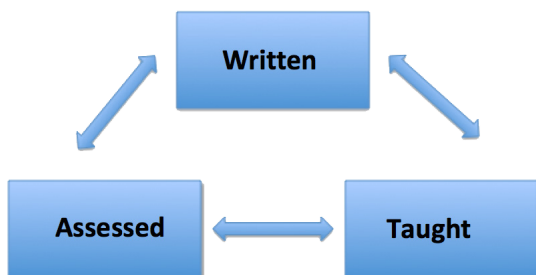
Criterion-related

Assessment will not be based simply on "How many questions can students answer?" or "What percentage have they achieved?" but rather "What skills have they learnt?" or "What level of understanding can they demonstrate?" Each subject has set MYP objectives that relate to their assessment criteria. The level of success of a student is determined through these criteria and their levels of achievement. The assessments are part of the curriculum cycle as shown below.

Reports

The school year knows two semesters in which there will be two full grade reports in December and June. These show:

- A summary of levels of achievement in each subject studied
- The descriptors for the levels achieved in each criterion for each of the subjects
- Indication of the Approaches to Learning
- A final subject grade
- A subject teacher's comment

TIS uses ManageBac to communicate the progress of their students and for reporting

What about grades?

The school uses MYP grades, from 1-7, to report on each subject at the end of each semester. To determine term grades, teachers first review a student's achievement on the subject-specific criteria. This is done by looking holistically at everything students have done over the term, taking into account factors such as the difficulty and importance of specific tasks, and the development

of skills over time. Once subject-specific criteria levels have been determined, a conversion chart with grade boundaries is used to determine the overall 1-7 grade for the term.

Students should be able to roughly estimate their grade at any point in the term by looking at the results of all the assessment tasks for a particular subject in ManageBac.

What should students do with the assessment information given to them by teachers?

- Students should make sure they understand the criteria, which will be used for each assessment task
- Students should self-assess while planning and preparing for an assessment task, and ask: How am I doing?
- Students should carefully review all comments made by teachers, and use that information to improve in future tasks
- Students should set goals, and should talk to their teachers about their progress. Teachers are very willing to provide assistance
- Students and parents should look at the ATL scores and the teacher comments, as well as the academic grades, to determine if a student is achieving all that they are capable of achieving

How does Tema International School ensure that its grades are fair and accurate?

- Teachers within each subject area work together to plan major assessment tasks. This is a guarantee that assessment tasks are fair and valid in determining the level of student achievement
- Teaching teams conduct team grading/standardisation, working together to assess student tasks. This ensures that a student's task earn the same mark from any TIS teacher

Interdisciplinary Activities – a holistic approach to teaching and learning

Besides the traditional subject specific courses taught by subject specialists, over-arching themes bridge the disciplines. Additionally, smaller interdisciplinary projects between two or more disciplines emerge throughout the year.

Why an interdisciplinary approach?

The notion that effective learning is associated with the ability to make connections across subjects, helping them to understand and act in, the world. Students learn by becoming aware of their own ability to recognise how new concepts are connected to their existing conceptual structure.

The main principles of interdisciplinary teaching are

- Teaching is the creation of opportunities to trigger student›s own thinking, rather than the delivery of "sacred truths"
- In interdisciplinary instructions, units of work give students the opportunity to deepen their understanding within one subject as well as helping to make fruitful connections between subjects in a purposeful way
- The global contexts serve as a vehicle and provide the context of real-life connections
- It helps students to communicate across subjects and to select and integrate forms of communication to achieve their goals and find answers to their inquiry
- Deepening the understanding of intercultural awareness through relevant experiences is supported by an interdisciplinary approach
- As in the MYP assessment is criteria related the assessment in interdisciplinary units take into account criteria of more than one subject and consider them in the larger context of the students integrated work yet stays grounded in their discipline.

Teaching Resources and Textbook Philosophy

The MYP focuses on meeting the needs of students and subject areas, and these needs vary between students, classes, schools, cultures and countries. In order to meet the specific needs of TIS students, and to best teach the knowledge and skills students need, each subject area gives careful consideration when choosing teaching resources and textbooks. In most cases, the best materials come from a variety of sources, which means that a single textbook might not be suitable.

Students should expect to use a variety of materials in their classes. Teachers will provide clear information to students as to which resources are needed for different lessons. Parents who would like information about resources should discuss questions first with their child or children, who should be able to explain which resources are being used in each class. Further questions should be discussed with the teacher.

MYP Assessment Criteria for All Subjects:

The **MYP** assessment model is also described as **criterion-related**, as it is based upon predetermined criteria that all students should have access to. The MYP identifies a set of objectives for each subject group, which are directly related to the assessment criteria of that particular subject group. The level of student success in reaching the objectives of each subject group is measured in terms of **levels of achievement** described in each assessment criterion. The criteria of the different subjects along with the maximum available level of achievement are shown below.

Subject	A	B	C	D
English (Language and Literature) *(A) Analysing* *(B) Organizing* *(C) Producing text* *(D) Using Language*	8	8	8	8
Individual and Societies *(A) Knowing and understanding* *(B) Investigating* *(C) Communicating* *(D) Thinking critically*	8	8	8	8

The Arts *(A) Knowing and Understanding* *(B) Developing Skills* *(C) Thinking Creatively* *(D) Responding*	8	8	8	8
French/Spanish (Language Acquisition) *(A) Comprehending Spoken and Visual Text* *(B) Comprehending Written and Visual Text* *(C) Communicating in Response to Spoken and/or Written and/or Visual Text* *(D) Use Language in Spoken and/or Written Form*	8	8	8	8
Mathematics *(A) Knowing and Understanding* *(B) Investigating patterns* *(C) Communication* *(D) Applying Mathematics in Real Life Contexts*	8	8	8	8
Sciences *(A) Knowing and Understanding* *(B) Inquiring and Designing* *(C) Processing and Evaluating* *(D) Reflecting on the Impacts of Science*	8	8	8	8
Physical Education *(A) Knowing and Understanding* *(B) Planning for Performance* *(C) Applying and Performing* *(D) Reflecting and Improving Performance*	8	8	8	8
Design *(A) Inquiring and Analyzing* *(B) Developing Ideas* *(C) Creating a Solution* *(D) Evaluating*	8	8	8	8

Grade Boundaries

All subjects	
Grade	*Boundaries*
1	0 – 3
2	4 – 7
3	8 – 12
4	13 – 17
5	18 – 22
6	23 – 27
7	28 - 32

Subject Area Overviews

(Adapted from the MYP Subject Guides)

Language and Literature English

Introduction

Language is fundamental to learning, thinking and communicating, therefore it permeates the whole curriculum. Indeed all teachers are language teachers, continually expanding the boundaries of what students are thinking about. Mastery of one or more languages enables each student to achieve their full linguistic potential.

Students need to develop an appreciation of the nature of language and literature, of the many influences on language and literature, and of its power. They will be encouraged to recognise that proficiency in language is a powerful tool for communication in all societies. Further more, language and literature incorporates creative processes and encourages the development of imagination and creativity through self expression.

All IB programmes value language as central to developing critical thinking, which is essential for the cultivation of intercultural understanding, as well as for becoming internationally minded and responsible members of local, national and global communities. Language is integral to exploring and sustaining personal development. The six skills areas in the MYP language and literature subject group- listening, speaking, reading, writing, viewing and presenting- develop as both independent and interdependent skills. They are centred within an inquiry-based learning environment. Inquiry is at the heart of MYP language learning, and aims to support students' understanding by providing them with opportunities to independently and collaborative investigate, take action and reflect.

MYP Language A is academically rigorous, and equips students with linguistic, analytical and communicative skills that can also be used in an interdisciplinary manner across all other subject groups. Students' interaction with chosen texts can generate insight into moral, social, economic, political, cultural and environmental factors and so contributes to the development of opinion forming, decision making and ethical reasoning skills, and further develops the attributes of an IB learner.

Aims

The aims of the teaching and study of MYP Language and Literature are to encourage and enable students to:

- use language as a vehicle for thought, creativity, reflection, learning, self-expression, analysis and social interaction

- develop the skills involved in listening, speaking, reading, writing, viewing and presenting in a variety of contexts

- develop critical, creative and personal approaches to studying and analysing literary and non-literary works

- engage with texts from different historical periods and a variety of cultures

- explore and analyse aspects of personal, host and other cultures through literary and non-literary works

- explore language through a variety of media and modes

- develop a lifelong interest in reading

- apply linguistic and literary concepts and skills in a variety of authentic contexts

Objectives

The objectives of MYP Language and Literature encompass the factual, conceptual, procedural and metacognitive dimensions of knowledge.

In order to meet these objectives, teachers will need to concentrate on each of the macro-skills of language: listening, speaking, reading, writing, viewing and presenting.

A Analysing

Through the study of language and literature students are enabled to deconstruct texts in order to identify their essential elements and their meaning. Analysing involves demonstrating an understanding of the creator's choices, the relationships between the various components of a text and between text, and making inferences about how an audience responds to a text, as well as the creator's purpose for producing text. Students should be able to use the text to support their personal responses and ideas. Literacy and critical literacy are essential lifelong learning skills; engaging with texts requires students to think critically and show awareness of, and an ability to reflect on, different perspectives through their interpretations of the text.

At the end of the course, students should be able to:

- analyse the content, context, language, structure, techniques and style of text(s) and the relationships amongst texts

- analyze the effects of the creator's choices on an audience

- justify opinions and ideas, using examples, explanations and terminology

- evaluate similarities and differences by connecting features across and within genres and texts

B Organising

Students should understand and be able to organise their ideas and opinions using a range of appropriate conventions for different forms and purposes of communication. Students should also recognise the importance of maintaining academic honesty by respecting intellectual property rights and referencing all sources accurately.

At the end of the course, students should be able to:

- employ organisational structures that serve the context and intention
- organise opinions and ideas in a sustained, coherent and logical manner
- use referencing and formatting tools to create a presentation style suitable to the context and intention

C Producing text

Students will produce written and spoken text, focussing on the creative process itself and on the understanding of the connection between creator and their audience. In exploring and appreciating new and changing perspectives and ideas, they will develop the ability to make choices aimed at producing texts that affect both he creator and the audience.

At the end of the course, students should be able to:

- produce texts that demonstrate insight, imagination and sensitivity while exploring and reflecting critically on new perspectives and ideas arising from personal engagement with the creative process
- make stylistic choices in terms of linguistic, literary and visual devices, demonstrating awareness of impact on an audience
- select relevant details and examples to develop ideas

D Using language

Students have opportunities to develop, organise and express themselves and communicate thoughts, ideas and information. They are required to use

accurate and varied language that is appropriate to the context and intention. This objective applies to, and must include, written, oral and visual text, as appropriate.

At the end of the course, students should be able to:

- use appropriate and varied vocabulary, sentence structures and forms of expression
- write and speak in a register and style that serve the context and intention
- use correct grammar, syntax and punctuation
- spell and pronounce with accuracy
- use appropriate non-verbal communication techniques

Language Acquisition French/ Spanish

Learning to speak another's language means taking one's place in the human community. It means reaching out to others across cultural and linguistic boundaries. Language is far more than a system to be explained. It is our most important link to the world around us. Language is culture in motion. It is people interacting with people.

Savignon (1983)

The ability to communicate in a variety of modes in more than one language is essential to the concept of an international education that promotes multilingualism and international understanding, both of which are central to the IB mission.

The study of additional languages in the MYP provides students with the opportunity to develop insights into the features, processes and craft of language and the concept of culture, and to realize that there are diverse ways of living, behaving and viewing the world.

The acquisition of the language of a community and the possibilities to reflect upon and explore cultural perspectives of our own and other communities:

- is valued as central to developing critical thinking, and is considered essential for the cultivation of intercultural awareness and the development of the internationally minded and responsible members of local, national and global communities
- is integral to exploring and sustaining personal development and cultural identity, and provides an intellectual framework to support conceptual development
- greatly contributes to the holistic development of students and to the strengthening of lifelong learning skills
- equips students with the necessary multi literacy skills and attitudes,

enabling them to communicate successfully in various global contexts and build intercultural understanding

Language acquisition in the MYP aims to develop a respect for, and an understanding of, other languages and cultures, and is equally designed to equip the student with a skills base to facilitate further language learning.

Language Acquisition Phases

The MYP structures additional language learning in phases so that the complexity and range of language profiles that students bring to their classroom is acknowledged and fostered. Students beginning their MYP studies may have exited from any five phases of PYP language or may have no prior knowledge or experience of the language to be studied in the MYP.

The pathways to further study are multiple. Phases 4, 5 and 6 allow for a smooth transition from MYP language B to DP group 2 courses—and, for a number of students, to group 1 courses. The MYP framework for language B reflects the concepts and skills of the presumed knowledge for these DP courses.

Students continuing on to the DP will have developed not only an inquiring and reflective approach to language learning but also multi literacy skills that they will be able to apply and extend in their DP language courses.

The table below shows the pathways from the MYP through to DP group 1 and group 2 courses.

MYP	DP
Phase 1	Ab initio
Phase 2	Ab intio (in rare cases) Language B SL
Phase 3	Language B SL
Phase 4	Language B SL/HL

Phase 5	Language A: literature SL Language A: language and literature SL Literature and performance SL
Phase 6	Language A: literature SL/HL Language A: language and literature SL/HL Literature and performance SL

Aims

The aims of all MYP subjects state what a teacher may expect to teach and what a student may expect to experience and learn. These aims suggest how the student may be changed by the learning experience.

An over-arching aim of teaching and learning languages is to enable the student to become a critical and competent communicator.

The aims of the teaching and learning of MYP language acquisition are to:

- gain proficiency in an additional language while supporting maintenance of their mother tongue and cultural heritage
- develop a respect for, an understanding of, diverse linguistic and cultural heritages
- develop the student's communication skills necessary for further language learning, and for study, work and leisure in a range of authentic contexts and for a variety of audiences and purposes
- enable the student to develop multi-literacy skills through the use of a range of learning tools, such as multimedia, in the various modes of communication
- enable the student to develop an appreciation of a variety of literary and non-literary texts and to develop critical and creative techniques for comprehension and constructing meaning
- enable the students to recognise and use language as a vehicle of thought, reflection, self-expression and learning in other subjects, and as a tool for enhancing literacy
- enable the student to understand the nature of language and the process of language learning, which comprises the integration of linguistic, cultural and social components
- offer insight into the cultural characteristics of the communities where the language is spoken
- encourage an awareness and understanding of people from own and other

cultures, leading to involvement and action in own and other communities

• foster curiosity, inquiry and a lifelong interest and enjoyment in language learning.

Objectives

The language acquisition objectives encompass the factual, conceptual, procedural and metacognitive dimensions of knowledge. The student's knowledge and understanding will be developed through:

• language learning
• learning through language
• learning about language (Haliday 1985)

This, in turn, helps students learn how to learn. The cognitive, linguistic and sociocultural aspects of communication are intertwined in each of the four objectives. The student is expected to develop the competencies to communicate appropriately, accurately and effectively in an increasing range of social, cultural and academic contexts, and for an increasing variety of purposes.

The language acquisition subject group objectives represent some of the essential processes of language and have been organised under the same four communicative processes for each of the six phases in order to assist teachers with planning, teaching and assessing. They are as follows.

• A   Comprehending spoken and visual text
• B   Comprehending written and visual text
• C   Communicating in response to spoken and/or written and/or visual text
• D   Using language in spoken and/or written form

A Comprehending spoken and visual text

Comprehending spoken and visual text encompasses aspects of listening and viewing, and involves the student in interpreting and constructing meaning from **spoken and visual text** to understand how images presented with oral text interplay to convey ideas, values and attitudes. Engaging with text requires the student to think creatively and critically about what is viewed, and to be aware of opinions, attitudes and cultural references presented in the visual text. The student might, for example, reflect on feelings, and actions, imagine himself or herself in another's situation, gain new perspectives and develop

empathy, based on what he or she has understood in the text.

As appropriate to the phase, the student is expected to be able to:

- listen for specific purposes and respond to show understanding
- interpret visual text that is presented with spoken text
- engage with the text by supporting opinion and personal response with evidence and examples from the text

B Comprehending written and visual text

Comprehending spoken and visual text encompasses aspects of listening and viewing, and involves the student in interpreting and constructing meaning from **written and visual text** to understand how images presented with oral text interplay to convey ideas, values and attitudes. Engaging with text requires the student to think creatively and critically about what is viewed, and to be aware of opinions, attitudes and cultural references presented in the visual text. The student might, for example, reflect on feelings, and actions, imagine himself or herself in another's situation, gain new perspectives and develop empathy, based on what he or she has understood in the text.

As appropriate to the phase, the student is expected to be able to:

- read for specific purposes and respond to show understanding
- interpret visual text that is presented with written text
- engage with the text by supporting opinion and personal response with evidence and examples from the text

C Communicating in response to spoken and/or written and/or visual text

In the language acquisition classroom, students will have opportunities to develop their communication skills by interacting on a range of topics of personal, local and global interest and significance, and in responding to spoken, written and visual text in the target language

As appropriate to the phase, the student is expected to be able to:

- interact and communicate in various situations
- express thoughts, feelings, ideas, opinions and information in spoken and written form
- speak and write for specific purposes

D Using language in spoken and/or written form

This objective relates to the correct and appropriate use of the spoken and written target language. It involves recognising and using language suitable to the audience and purpose, for example, the language used at home, the language of the classroom, formal and informal exchanges, social and academic language. When speaking and writing in the target language, students apply their understanding of linguistic and literary concepts to develop a variety of structures, strategies (spelling, grammar, plot, character, punctuation, voice) and techniques with increasing skill and effectiveness.

As appropriate to the phase, the student is expected to be able to:

- organise thoughts, feelings, ideas, opinions and information in spoken and written form
- develop accuracy when speaking and writing in the target language.

Sciences

The scientific mind does not so much provide the right answers as asks the right questions.

Claude Levi-Straus

With inquiry at the core, the MYP sciences framework aims to guide students to independently and collaboratively investigate issues through research, observation and experimentation. The MYP sciences curriculum must explore the connections between science and every day life. As they investigate real examples of science applications, students will discover the tensions and dependencies between science and morality, ethics, culture, economics, politics, and the environment.

Scientific inquiry also fosters critical and creative thinking about research and design, as well as the identification of assumptions and alternative explanations. Students should learn to appreciate and respect the ideas of others, gain good ethical reasoning skills and further develop their sense of responsibility as members of local and global communities.

Aims

The aims of all MYP subjects state what a teacher may expect to teach and what a student may expect to experience and learn. These aims suggest how the student may be changed by the learning experience.

The aims of MYP sciences are to encourage and enable students to:

- understand and appreciate science and its implications
- consider science as a human endeavor with benefits and limitations

- cultivate analytical, inquiring and flexible minds that pose questions, solve problems, construct explanations and judge arguments
- develop skills to design and perform investigations, evaluate evidence and reach conclusions
- build an awareness of the need to effectively collaborate and communicate
- apply language skills and knowledge in a variety of real life contexts
- develop sensitivity towards the living and non living environments
- reflect on learning experiences and make informed choices

Objectives

The objectives of MYP sciences encompass the factual, conceptual, procedural and metacognitive dimensions of knowledge.

The objectives reflect the holistic nature of science and the real world of scientists. They enable students to engage with all aspects of science, either through individual objectives or connected processes.

A Knowing and understanding

Students develop scientific knowledge (facts, ideas, concepts, processes, laws, models, and theories) and apply it to solve problems and express scientifically supported judgements

Assessment of this objective must be done using tests or exams. Assessment tasks could include questions dealing with "scientific claims" presented in media articles, or the results and conclusions from experiments carried out by others, or any question that challenges students to analyse and examine the information and allows them to outline arguments about its validity and/or quality using their knowledge and understanding of science.

In order to reach the aims of sciences, students should be able to:

- explain scientific knowledge
- apply scientific knowledge and understanding to solve problems set in familiar and unfamiliar situations
- analyse and evaluate information to make scientifically supported judgements

`B Inquiring and designing

Intellectual and practical skills are developed through designing, analysing and performing scientific investigations. Although the scientific method involves a wide variety of approaches, the MYP emphasizes experimental work and

scientific inquiry.

When students design a scientific investigation they should develop a method that will allow them to collect sufficient data so that the problem or question can be answered. To enable students to design scientific investigations independently, teachers must provide open ended problem to investigate. An open ended problem is one that has several independent variables appropriate for the investigation and has sufficient scope to identify both independent and controlled variables. In order to achieve the highest level for the strand in which students are asked to design a logical, complete and safe method, the student would include only relevant information, correctly sequenced.

In order to reach the aims of sciences, students should be able to:

- explain a problem or question to be tested by a scientific investigation
- formulate a testable hypothesis and explain it using scientific reasoning
- explain how to manipulate the variables, and explain how data will be collected
- design scientific investigations.

C Processing and evaluating

Students collect, process and interpret qualitative and/or quantitative data, and explain conclusions that have been appropriately reached. MYP sciences helps students to develop analytical thinking skills, which they can use to evaluate the method and discuss possible improvements or extensions.

In order to reach the aims of sciences, students should be able to:

- present collected and transformed data
- interpret data and explain results using scientific reasoning
- evaluate the validity of a hypothesis based on the outcome of the scientific investigation
- evaluate the validity of the method
- explain improvements or extensions to the method

D Reflecting on the impacts of science

Students gain global understanding of science by evaluating the implications of scientific developments and their applications to a specific problem or issue. A variety of communication modes will be applied in order to demonstrate understanding. Students are expected to become aware of the importance of documenting the work of others when communicating science.

Students must reflect on the implications of using science, interacting with one of the following factors: moral, ethical, social, economic, political, cultural or

environmental, as appropriate to the task. The student's chosen factor may be interrelated with other factors.

In order to reach the aims of sciences, students should be able to:

- explain the ways in which science is applied and used to address a specific problem or issue
- discuss and evaluate the various implications of the use of science and its application in solving a specific problem or issue
- apply communication modes effectively
- document the work of others and sources of information used

Individuals and Societies

MYP Individuals and Societies encourages learners to respect and understand the world around them and equips them with the necessary skills to inquire into historical, contemporary, geographical, political, social, economic, religious, technological and cultural contexts that have an impact on individuals, societies and environments. It encourages learners, both students and teachers, to consider local and global contexts.

MYP Individuals and Societies incorporates disciplines traditionally under the general term "the humanities" (such as history and philosophy) as well as disciplines in the social sciences (such as economics, business, management, geography, sociology and political science).

In this subject group, students can engage with exciting, stimulating and personally relevant topics and issues. Many sensitive and personally challenging topics require careful consideration in the context of a safe and responsible learning environment characterise by respect and open-mindedness. The study of individuals and societies helps students to appreciate critically the diversity of human culture, attitudes and beliefs. Courses in this subject group are important for helping students to recognise that content and methodology can be debatable and controversial, and for practicing the tolerance of uncertainty.

The IB approach to individual and societies includes a strong focus on inquiry and investigation. Students collect, describe and analyse data used in studies of societies; test hypothesis; and learn how to interpret increasingly complex information, including original source material. This focus on real world examples, research and analyses is an essential aspect of the subject group.

The study of individuals and societies helps students to develop their identities as individuals and as responsible members of local and global communities. These explorations of our common humanity are intrinsically interesting, and disciplines in this subject group are filled with potential for creating in students a lifelong fascination with the "human story: as it continuous to evolve in an era

of rapid change and increasing interconnectedness. Studies in individual and societies are essential for developing empathy and international mindedness, including the idea that "other people, with their differences, can also be right" (IB mission statement)

Aims

The aims of all MYP subjects state what a teacher may expect to teach and what a student may expect to experience and learn. These aims, therefore, suggest how the student may be changed by the learning experience.

The aims of the teaching and learning of MYP individuals and societies are to encourage and enable the student to:

- appreciate human and environmental commonalities and diversities
- understand the interactions and interdependence of individuals, societies and environments
- understand how both environmental and human systems operate and evolve
- identify and develop a concern for the well-being of human communities and the natural environment
- act as responsible citizens of local and global communities
- develop inquiry skills that lead towards conceptual understandings of the relationships between individuals, societies and the environments in which we live.

Objectives

The objectives of any MYP subject state the specific targets that are set for learning in the subject. They define what the student will be able to accomplish as a result of studying the subject.

The objectives of individuals and societies encompass the factual, conceptual, procedural and metacognitive dimensions of knowledge.

A Knowing and Understanding

Students develop factual and conceptual knowledge about individuals and societies.

In order to reach the aims of sciences, students should be able to:

- use terminology in context
- demonstrate knowledge and understanding of subject-specific content

and concepts through developed descriptions, explanations and examples.

B Investigating

Students develop systematic research skills and processes associated with disciplines in the humanities and social sciences. Students develop successful strategies for investigating independently and in collaboration with others.

In order to reach the aims of sciences, students should be able to:

- formulate a clear and focused research question and justify its relevance
- formulate and follow an action plan to investigate a research question
- use research methods to collect and record relevant information
- evaluate the process and results of the investigation.

C Communicating

Students develop skills to organise, document and communicate their learning using a variety of media and presentation formats.

In order to reach the aims of sciences, students should be able to:

- communicate information and ideas using an appropriate style for the audience and purpose
- structure information and ideas in a way that is appropriate to the specified format
- document sources of information using a recognised convention.

D Thinking critically

Students use critical thinking skills to develop and apply their understanding of individuals and societies and the process of investigation.

In order to reach the aims of sciences, students should be able to:

- discuss concepts, issues, models, visual representation and theories
- synthesise information in order to make valid arguments.
- analyse and evaluate a range of sources/data in terms of origin and purpose, examining values and limitations
- interpret different perspectives and their implications

Physical and Health Education

"Physical fitness is not only one of the most important keys to a healthy body, it is the basis of dynamic and creative intellectual activity."

John F Kennedy

MYP physical and health education aims to empower students to understand and appreciate the value of being physically active and develop the motivation for making healthy life choices. To this end, physical and health education courses foster the development of knowledge, skills and attitudes that will contribute to a student's balanced and healthy lifestyle. Through opportunities for active learning, courses in this subject group embody and promote the holistic nature of well being. Students engaged in physical and health education will explore a variety of concepts that helps foster an awareness of physical development and health perspective, empowering them to make informed decisions and promoting positive social interaction.

Physical and health education focuses on both learning about and learning through physical activity. Both dimensions help students to develop approaches to learning (ATL) skills across the curriculum. Physical and health education contributes a unique perspective to the development of the attributes of the IB learner profile, promoting the health of individuals and communities.

Through physical and health education, students can learn to appreciate and respect the ideas of others, and develop effective collaboration and communication skills. This subject area also offers many opportunities to build positive interpersonal relationships that can help students to develop a sense of social responsibility. At their best, physical and health education courses develop the enjoyment, engagement and confidence in physical activity that students need in order to achieve and maintain a balanced healthy life.

Physical activity and health are of central importance to human identity and global communities. They create meaningful connections among people, nations, cultures and the natural world, and they offer a range of opportunities to build intercultural understanding and greater appreciation for our common humanity.

Aims

The aims of MYP physical and health education are to encourage and enable students to:

- use inquiry to explore physical and health education concepts
- participate effectively in a variety of contexts
- understand the value of physical activity
- achieve and maintain a healthy lifestyle
- collaborate and communicate effectively
- build positive relationships and demonstrate social responsibility
- reflect on their learning experiences

Objectives

A Knowing and understanding:

Students develop knowledge and understanding about health and physical activity in order to identify and solve problems.

In order to reach the aims of physical and health education, students should be able to:

- explain physical health education factual, procedural
- apply physical and health education knowledge to analyse issues and solve problems set in familiar and unfamiliar situations
- apply physical and health terminology effectively to communicate understanding

B Planning for performance:

Students through inquiry design, analyse, evaluate and perform a plan n order to improve performance in physical and health education.

In order to reach the aims of physical and health education, students should be able to:

- design, explain and justify plans to improve physical performance and health
- analyse and evaluate the effectiveness of a plan based on the outcome

C Applying and performing:

Students develop and apply practical skills, techniques, strategies and movement concepts through their participation in a variety of physical activities

In order to reach the aims of physical and health education, students should be able to:

- demonstrate and apply a range of skills and techniques effectively
- demonstrate and apply a range of strategies and movement concepts
- analyse and apply information to perform effectively.

D Reflecting and improving performance:

Students enhance their personal and social development, set goals, take responsible action and reflect on their performance and the performance of others.

In order to reach the aims of physical and health education, students should be able to:

- explain and demonstrate strategies that enhance interpersonal skills
- develop goals and apply strategies to enhance performance
- analyse and evaluate performance

Visual Art and Drama

"The aim of art is to represent not the outward appearance of things, but their inward significance."

Aristotle

The arts are a universal form of human expression and a unique way of knowing that engage us in affective, imaginative and productive activity. Learning through the arts helps us to explore, shape and communicate our sense of identity and individuality. A focus on the individual enhances our self confidence, resilience and adaptability. It encourages our sense of belonging and community through the recognition of identities. During adolescence, the arts provide a unique opportunity for age appropriate and holistic development of the social, emotional, intellectual and personal intelligences of the student.

In MYP arts students have opportunities to function as artists, as well as learners of the arts. Artists have to be curious. By developing curiosity about themselves, others and the world, students become effective learners, inquires and creative problem solvers. Students develop through creating, performing and presenting arts in ways that engage and convey feelings, experiences and ideas. It is through this practice that students acquire new skills and master those skills developed in prior learning.

Development in the arts is a dynamic process, and not necessarily linear. The students moves freely through a creative process towards a deeper understanding of the arts. MYP values the process of creating artwork and the point of realization; the two elements combined tell us what students have experienced, learned and attempted to convey. In MYP arts, the four objectives have equal importance and value. Although the objectives can be addressed separately to scaffold learning, when used collectively they enrich teaching and learning of the arts.

Thinking creatively fits naturally in MYP arts, but can easily become a focus in other subject groups too. This objective is essential in modern education to address the need for students centred learning and life long learning, looking towards a modern context of flexible employment and higher demand for innovation and chance in workplace. As both an objective in the arts and an ATL skill across the programme, heightened awareness of thinking creatively encourages students to develop metacognitive skills and become self regulated learners.

Arts in the MYP stimulate young imaginations, challenge perceptions and develop creative and analytical skills. Involvement in the arts encourages students to understand the arts in context and the cultural histories of artworks, thus supporting the development of an inquiring empathetic world view. They challenge and enrich personal identity and build awareness of the aesthetic in a real world context.

Creativity is an MYP key concept, defined as the capacity to generate new ideas and consider existing ideas from new perspectives, as well as the ability to recognise the value of an idea in order to solve problems or innovate. It may

be evident in the process as well as outcome, solution or product.

Aims

The aims of the MYP arts are to encourage and enable students to:

- create and present art
- develop skills specific to the discipline
- engage in a process of creative exploration and (self) discovery
- make purposeful connections between investigation and practice

- understand the relationship between art and its contexts
- respond to and reflect on art
- deepen their understanding of the world

Objectives

A Knowing and understanding:

Through the study of theorists and practitioners of the arts, students discover the aesthetics of the art forms and are able to analyse and communicate in specialised language. Using explicit and tacit knowledge alongside an understanding of the role of the arts in a global context, students inform their work and artistic perspectives.

In order to reach the aims of arts, students should be able to:

- demonstrate knowledge and understanding of the art form studied, including concepts, processes and the use of subject specific terminology
- demonstrate an understanding of the role of the art form in original or displaced contexts
- use acquired knowledge to purposefully inform artistic decisions in the process of creating artwork.

B Developing skills:

The acquisition and development of skills provide the opportunity for active participation in the art form and in the process of creating art. Skill appreciation allows for students to develop their artistic ideas to a point of realisation. The point of realisation could take many forms. However , it is recogni§sed as the moment when the student makes a final commitment to his or her artwork by presenting it to an audience. Skills are evident in both process **and** product.

In order to reach the aims of arts, students should be able to:

- demonstrate the acquisition and development of the skills and techniques of the art form studied
- demonstrate the application of skills and techniques to create, perform and /or present art.

C Thinking creatively:

The arts motivate students to develop curiosity and purposefully explore and challenge boundaries. Thinking creatively encourages students to explore the unfamiliar and experiment in innovative ways to develop artistic intentions,

their processes and their work. Thinking creatively enables students to discover their personal signature and realise their artistic identity.

In order to reach the aims of arts, students should be able to:

- develop a feasible, clear, imaginative and coherent artistic intention
- demonstrate a range and depth of creative thinking behaviors
- demonstrate the exploration of ideas to shape artistic intention through to a point of realisation.

D Responding:

Students should have the opportunity to respond to their world, to their own art and to the art of others. A response can come in many forms; creating art as a response encourages students to make connections and transfer their learning to new settings. Through reflecting on their artistic intention and the impact of their work on an audience and on themselves, students become more aware of their own artistic development and the role that arts play in their lives and in the world. Students learn that the arts may initiate change as well as being a response to change.

In order to reach the aims of arts, students should be able to:

- construct a meaning and transfer learning to new settings
- create an artistic response which intends to reflect or impact on the world around them
- critique the artwork of self and others

Design

Design and the resultant of 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.

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 focuses on the needs, wants and limitations of end user.

Competent design is not only within the reach of a small set of uniquely skilled individuals, but can be achieved by all. The use of well-established design principles and processes increases the probability that a design will be successful. To do this, designers use a wide variety of principles, which taken together, make up what is known as the design cycle.

- designers adapt their approach to different design situations, but they have a common understanding of the process necessary to form valid and suitable solutions
- a designer has a role and responsibility to the community and the environment. Their decisions can have a huge impact and, therefor , their ethics and morals can and should be questioned regularly
- a designer should have the ability to maintain an unbiased view of a situation and evaluate a situation objectively, highlighting the strengths and weaknesses of a common product or system
- good communication is a key trait of any good designer through visual and oral presentation

Designing requires an individual to be imaginative and creative, while having a substantial knowledge base of important factors that will aid or constrain the process. Decisions made need to be supported by adequate and appropriate research and investigation. Designers must adopt an approach that allows them to think creatively, while conforming to the requirements of a design specification.

MYP design challenges all students to apply practical and creative thinking skills to solve design problems; encourages students to explore the role of design in both historical and contemporary contexts; raise students' awareness of their responsibilities when making design decisions and taking action.

The knowledge, skills and attitudes that students develop in design courses provide a meaningful foundation for further study and help to prepare students for:

- careers in fashion, food, graphic, industrial, instructional, multimedia, product, publications, video game and web design

- architecture
- education
- roles in engineering, manufacturing, advertising and media industries
- project management among others

Aims

The aims of MYP design are to 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 means to access, process and communicate information, model and create solutions, and to solve problems
- 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 and historical and environmental contexts
- develop respect for others' viewpoints and appreciate alternative solutions to problems
- act with integrity and honesty, and the responsibility for their own actions developing effective working practices

Objectives

The objectives of MYP design encompass the factual, conceptual. procedural and metacognitive dimensions of knowledge.

Together these objectives reflect the knowledge, skills and attitudes that students need in order to engage with and solve complex, real-life problems in both familiar and unfamiliar contexts; they represent essential aspects of design methodology.

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 an inquiry into the nature of the problem.

In order to reach the aims of design, students should be able to:

- explain and justify the need for a solution to a problem for a specific client/ target audience

- identify and prioritise the primary and secondary research needed to develop a solution to the problem
- analyse a range of existing products that inspire a solution to the problem
- develop a detailed design brief which summarises the analysis of relevant research

B Developing ideas:

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

In order to reach the aims of design, students should be able to:

- develop a design specification which clearly states the success criteria for the design of a solution
- develop a range of feasible design ideas which can be correctly interpreted by others
- present the final chosen design and justify its selection
- develop accurate and detailed planning drawings/diagrams and outline the requirements for the creation of the chosen solution

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.

In order to reach the aims of design, students should be able to:

- 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
- demonstrate excellent technical skills when making the solution
- follow the plan to create the solution, which functions as intended
- fully justify changes made to the chosen design and plan when making the solution
- present the solution as a whole, either:
  a.   in electronic form, or
  b.   through photographs of the solution from different angles, showing details

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.

In order to reach the aims of design, students should be able to:

- design detailed and relevant testing methods, which generate data, to measure the success of the solution
- critically evaluate the success of the solution against the design specification
- explain how the solution could be improved
- explain the impact of the solution on the client/target audience.

Mathematics

"Neglect of mathematics works injury to all knowledge, since he who is ignorant of it cannot know how the other sciences or the things of the world"

Roger Bacon(1214-1294)

The study of mathematics is a fundamental part of a balanced education. It promotes a powerful universal language, analytical reasoning and problem solving skills that contribute to the development of logical, abstract and critical thinking. Mathematics can help make sense of the world and allows phenomena to be described in precise terms. It also promotes careful analysis and the search for patterns and relationships, skills necessary for success both inside and outside the classroom. Mathematics, then, should be accessible to and studied by all students.

Studying mathematics, however, should be more than simple learning formulae or rules. Students should not have the impression that all of the answers to mathematics can be found in a book but , rather , that they can be active participants in the search for concepts and relationships. In that light, mathematics becomes a subject that is alive with the thrill of exploration and the rewards of discovery. At the same time, that new knowledge may then be applied to other situations, opening up even more doors fr students. MYP mathematics promotes both that inquiry and application, helping students to develop problem solving techniques that transcend the discipline and that are useful in the world outside school.

Aims

The aims of mathematics are to encourage and enable students to:

- enjoy mathematics, develop curiosity and begin to appreciate its elegance and power
- develop an understanding of the principles and nature of mathematics
- communicate clearly and confidently in a variety of contexts
- develop logical, critical and creative thinking
- develop confidence, perseverance, and independence in mathematical thinking and problem-solving
- develop powers of generalisation and abstraction
- apply and transfer skills to a wide range of situations, other areas of knowledge and future developments
- appreciate how developments in technology and mathematics have influenced each other
- appreciate the moral, social and ethical implications arising from the work of mathematicians and the applications of mathematics
- appreciate the international dimension in mathematics through an awareness of the universality of mathematics and its multicultural and historical perspectives
- appreciate the contribution of mathematics to other areas of knowledge
- develop the knowledge, skills and attitudes necessary to pursue further studies in mathematics
- develop the ability to reflect critically upon their own work and the work of others

Objectives

The objectives of MYP mathematics encompass the factual, conceptual, procedural and metacognitive dimensions of knowledge.

A Knowing and understanding:

Knowledge and understanding are fundamental to studying mathematics and form the base from which to explore concepts and develop skills. This objective assesses the extent to which students can select and apply mathematics to solve problems in both familiar and unfamiliar situations in a variety of contexts.

In order to reach the aims of mathematics, students should be able to:

- select appropriate mathematics when solving problems
- apply the selected mathematics successfully when solving problems
- solve problems correctly in both familiar and unfamiliar situations in a variety of contexts

B Investigating patterns:

Investigating patterns allows students to experience the excitement and satisfaction of mathematical discovery. Working through investigations encourages students to become risk-takers, inquirers and critical thinkers.

The ability to inquire is invaluable in the MYP and contributes to lifelong learning.

In order to reach the aims of mathematics, students should be able to:

- select and apply mathematical problem-solving techniques to discover complex patterns
- describe patterns as general rules consistent with findings
- prove, or verify and justify, general rules

C Communicating:

Mathematics provides a powerful and universal language. Students are expected to use mathematical language and different forms of representation when communicating mathematical ideas, reasoning and findings, both orally and in writing.

In order to reach the aims of mathematics, students should be able to:

- use appropriate mathematical language (notation, symbols and terminology) in both oral and written explanations
- use appropriate forms of mathematical representation to present information
- move between different forms of mathematical representation
- communicate   complete, coherent and concise mathematical lines of reasoning
- organize information using a logical structure

D Applying mathematics in real-life contexts:

MYP mathematics encourages students to see mathematics as a tool for solving problems in an authentic real-life context. Students are expected to transfer theoretical mathematical knowledge into real-world situations and

apply appropriate problem-solving strategies, draw valid conclusions and reflect upon their results.

In order to reach the aims of mathematics, students should be able to:

- identify relevant elements of authentic real-life situations
- select appropriate mathematical strategies when solving authentic real-life situations
- apply the selected mathematical strategies successfully to reach a solution
- justify the degree of accuracy of a solution
- justify whether a solution makes sense in the context of the authentic real-life situation.

Grade Descriptors for Term Grades

7 **Excellent**	A consistent and thorough understanding of the required knowledge and skills, and the ability to apply them **almost faultlessly** in a wide variety of situations. There is consistent evidence of analysis, synthesis and evaluation where appropriate. The student **consistently** demonstrates originality and insight, and **always** produces **work of high quality**.
6 **Very Good**	A consistent and thorough understanding of the required knowledge and skills, and the ability to apply them in a **wide variety** of situations. There is a consistent evidence of analysis, synthesis and evaluation where appropriate. The student **generally** demonstrates originality and insight.
5 **Good**	**A consistent and thorough understanding** of the required knowledge and skills, and the ability to apply them in a variety of situations. The student **generally** shows evidence of analysis, synthesis and evaluation where appropriate, and **occasionally** demonstrates originality and insight.
4 **Satisfactory**	**A good general understanding** of the required knowledge and skills, and the ability to apply them effectively in **normal** situations. There is **occasional** evidence of the skills of analysis, synthesis and evaluation.
3 **Mediocre**	**Limited** achievement against most of the objectives, or clear difficulties in some areas. The student demonstrates a **limited understanding** of the required knowledge and skills, and is **only able to apply** them fully in normal situations **with support**.
2 **Poor**	**Very limited** achievement against all the objectives. The student **has difficulty** understanding the required knowledge and skills, and is unable to apply them fully in normal situations, **even with support**.
1 **Very Poor**	**Minimal** achievement in terms of the objectives.

Assessment in the MYP at Tema International School

Assessing Development

At TIS we recognise that students learn in different ways and in keeping with this holistic view of education we think it is important to provide a variety of different ways for students to demonstrate what they have learnt. This is the guiding principle of MYP assessment. The programme provides teachers with a structure for assessment centred around fixed objectives based on adapted criteria to meet the needs of their students.

Assessment at TIS is:

Varied in approach

We see learning as a lifelong experience of which assessment is a major component. Assessment is used on a daily basis to ensure direct feedback to inform students and teachers about their learning and teaching as well as informing the parents about the achievements of their children. Students might be assessed on project work, presentations to class, role-play and debate, essays, or tests etc.

Assessment aims to support and encourage a positive attitude of student learning as well as driving the on-going development of the middle school curricula.

Formative as well as summative

Formative assessment means that students will be given assessed feedback on their work to help them improve it. They will also be involved in this assessment, through assessing their peers or themselves. Summative assessment is an activity at the end of a project or semester, made by the teacher and often used for reporting purposes.

Criterion-related

Assessment will not be based simply on "How many questions can students answer?" or "What percentage have they achieved?" but rather "What skills have they learnt?" or "What level of understanding can they demonstrate?" Each subject has set MYP objectives that relate to their assessment criteria. The level of success of a student is determined through these criteria and their levels of achievement.

MYP Assessment Criteria for All Subjects:

As the MYP assessment model is described as criterion-related, it is based upon predetermined criteria that all students should have access to. The MYP identifies a set of objectives for each subject group, which are directly related to the assessment criteria of that particular subject group. The level of student success in reaching the objectives of each subject group is measured in terms of levels of achievement described in each assessment criterion. Each subject has four criteria with levels of achievement between 0-8.

Reports

A full grade report will be issued in February and June.

These show:

- A summery of levels of achievement in each subject studied
- The descriptors for the levels achieved in each criterion for each of the subjects
- Indication of the Approaches to Learning (ATL)
- A final subject grade (at the end of each semester
- A subject teacher's comment

What about grades?

Grades 7 & 8 use IB grades, from 1-7, to report on each subject at the end of each semester.

To determine final grades, teachers first review a student's achievement on the subject-specific criteria. This is done by looking holistically at everything students have done over the semester, taking into account factors such as the difficulty and importance of specific tasks, and the development of skills over time. Once subject-specific criteria levels have been determined, a conversion chart with grade boundaries is used to determine the overall 1-7 grade for the semester or year.

IB MYP Grade Boundaries

All Subjects

Grade

1	1-5
2	6-9
3	10-14
4	15-18
5	19-23
6	24-2
7	28-32

References

International Baccalaureate Organization. *MYP: From Principles into Practice.* Cardiff,Wales: Peterson House, 2014

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Boix-Mansilla, Veronica. International Baccalaureate Organization. *MYP: guide to interdisciplinary teaching and learning.* Cardiff,Wales: Peterson House, 2014