IBO

INTERNATIONAL BACCALAUREATE ORGANISATION

MIDDLE YEARS PROGRAMME

AREAS OF INTERACTION

Middle Years Programme Areas of Interaction
August 2002

Foreword

This Middle Years Programme guide to the areas of interaction, published in August 2002, replaces *IBMYP Areas of Interaction Edition 1.1* published in August 1994. This new guide provides practical guidance about, and examples of, the ways in which the areas of interaction affect the teaching and learning process in schools authorized to offer the Middle Years Programme. It should be read in conjunction with the *Implementation and Development of the Programme* guide.

Although the basic philosophy of the Middle Years Programme remains unchanged, this new edition of the guide contains important changes and additions. It should be made available to all teachers of the Middle Years Programme.

Authorized MYP schools should start using this guide from September 2002 or January 2003, depending on the start of their school year.

Acknowledgments

This guide was written by practising teachers from authorized Middle Years Programme schools in many regions and by the Middle Years Programme curriculum team at IBCA. Thanks are due to all who contributed to its completion.

Contents

The Middle Years Programme

Introduction to the
Middle Years Programme

The Middle Years Programme (MYP) of the International Baccalaureate Organization (IBO) is a course of study designed to meet the educational requirements of students aged between 11 and 16 years. The curriculum may be taught as an entity in itself, but it is flexible enough to allow the demands of national, regional or local legislation to be met.

Early and present curriculum developers of the Middle Years Programme have shared a common concern to prepare young people for the changing demands of life in the twenty-first century.

MYP students are at an age when they are making the transition from early puberty to mid-adolescence: this is a crucial period of personal, social, physical and intellectual development, of uncertainty and of questioning. The MYP has been devised to guide students in their search for a sense of belonging in the world around them. It also aims to help students to develop the knowledge, attitudes and skills they need to participate actively and responsibly in a changing and increasingly interrelated world. This means teaching them to become independent learners who can recognize relationships between school subjects and the world outside, and learn to combine relevant knowledge, experience and critical thinking to solve authentic problems.

The eight **subject groups** provide a broad, traditional foundation of knowledge, while the pedagogical devices used to transmit this knowledge aim to increase the students' awareness of the relationships between subjects. Students are encouraged to question and evaluate information critically, to seek out and explore the links between subjects, and to develop an awareness of their own place in the world.

The MYP aims to develop in students:

- the disposition and capacity to be lifelong learners
- the capacity to adapt to a rapidly changing reality
- problem-solving and practical skills and intellectual rigour
- the capacity and self-confidence to act individually and collaboratively
- an awareness of global issues and the willingness to act responsibly
- the ability to engage in effective communication across frontiers
- respect for others and an appreciation of similarities and differences.

Fundamental Concepts

Adolescents are confronted with a vast and often bewildering array of choices. The MYP is designed to provide students with the values and opportunities that will enable them to develop sound judgment. Learning how to learn and how to evaluate information critically is as important as the content of the disciplines themselves.

From its beginning, the MYP has been guided by three fundamental concepts that underpin its development, both internationally and in individual schools:

- holistic learning
- intercultural awareness
- communication.

These concepts form the basis for the MYP's curriculum framework, which is shared by different types of schools in all parts of the world. The fundamental concepts of the MYP should be the guiding principles in designing the curriculum and school activities.

Holistic Learning

Holistic learning emphasizes the links between the disciplines, providing a global view of situations and issues. Students should become more aware of the relevance of their learning, and come to see knowledge as an interrelated whole. Students should see the cohesion and the complementarity of various fields of study, but this must not be done to the detriment of learning within each of the disciplines, which retain their own objectives and methodology.

Intercultural Awareness

Intercultural awareness is concerned with developing students' attitudes, knowledge and skills as they learn about their own and others' social and national cultures. By encouraging students to consider multiple perspectives, intercultural awareness not only fosters tolerance and respect, but may also lead to empathy.

Communication

Communication is fundamental to learning, as it supports inquiry and understanding, and allows student reflection and expression. The MYP places particular emphasis on language acquisition and allows students to explore multiple forms of expression.

Areas of Interaction

Students are required to experience and explore each of the five areas of interaction in every year of the programme:

- **approaches to learning (ATL)**, in which students take increasing responsibility for their learning

- **community and service**, through which students become aware of their roles and their responsibilities as members of communities

- *homo faber*, **environment**, **health and social education**, broad areas of student inquiry where personal as well as societal and global issues are investigated and debated.

The areas of interaction give the MYP its distinctive core. These areas are common to all disciplines and are incorporated into the MYP so that students will become increasingly aware of the connections between subject content and the real world, rather than considering subjects as isolated areas unrelated to each other and to the world. The MYP

presents knowledge as an integrated whole, emphasizing the acquisition of skills and self-awareness, and the development of personal values. As a result, students are expected to develop an awareness of broader and more complex global issues.

The areas of interaction are explored through the subjects, thereby fulfilling their integrative function. Some aspects, however, may also be approached as separate modules and interdisciplinary projects throughout the MYP. Student participation in the areas of interaction culminates in the personal project.

> Further information on the personal project is available in the *Personal Project* guide, first published 1998.

Curricular Framework

The MYP offers a curricular framework that allows school-specific requirements to be met while maintaining the mission and philosophy of the IBO. To ensure this, the IBO prescribes the aims and objectives of all subject groups and the personal project.

Aims and Objectives

The objectives of each subject group are skills-based and broad enough to allow a variety of teaching and learning approaches. The precise choice and organization of content is left to schools in order to preserve flexibility. In some subjects the content is not specified while in others a framework of concepts or topics is prescribed for all students to address over the five years. Such prescription is kept to a minimum and schools are asked to expand their scope of topics and depth of treatment according to their individual needs and preferences.

The aims and objectives of the subject groups address all aspects of learning including knowledge, understanding, skills and attitudes.

- **Knowledge**   The facts that the student should be able to recall to ensure competence in the subject.

- **Understanding**   How the student will be able to interpret, apply or predict aspects of the subject.

- **Skills**   How the student will be able to apply what has been learned in new situations.

- **Attitudes**   How the student is changed by the learning experience.

Objectives provided by the IBO for subjects in the MYP are defined as final objectives. While teachers will find it necessary to develop their own interim objectives and assessment practices in years 1–5, the final objectives form the basis for the assessment criteria which are intended for use in the final assessment of students' work at the end of year 5. Whether or not schools request IBO-validated grades for their students, they are all required to organize learning and assessment in a way that is consistent with the prescribed objectives.

Schemes of Work

It is each school's responsibility to produce schemes of work that enable students to reach the objectives of each subject. Sample schemes of work or sample activities for all subject groups have been written by practising teachers as a suggested means of achieving this. Teachers may choose to adopt the samples offered, amend them to suit their own requirements, or write an alternative scheme of work.

Whichever schemes of work schools adopt, the final MYP objectives are prescribed. The areas of interaction should remain an integral part of the subject teaching and learning process, and must be at the core of the personal project.

Assessment

Teachers must use the assessment criteria to assess students' work internally. All schools must use these criteria for final assessment.

Schools that request **IBO-validated grades** and **MYP certification** for students must submit internally assessed work to IBCA for external moderation.

Programme Evaluation

Programme evaluation is mandatory for all schools. It is a means of ensuring quality of programmes in participating schools, while assisting schools in their self-evaluation and curriculum development procedures. Evaluation occurs at regular, predetermined intervals.

Curriculum Model
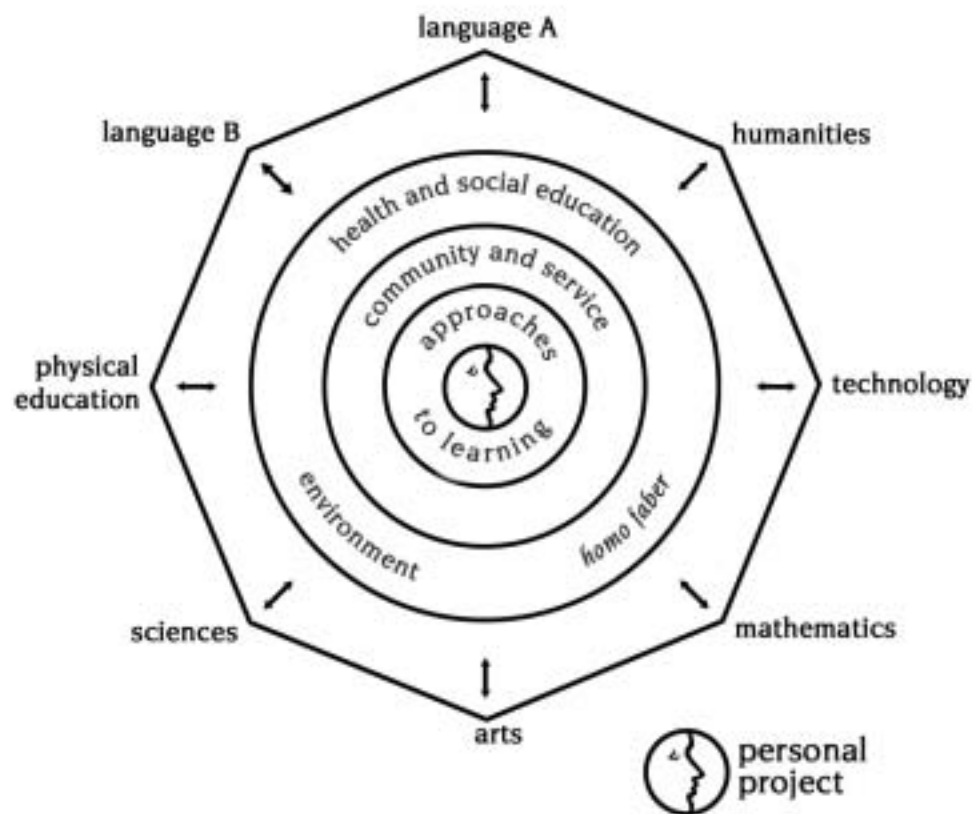
This diagram represents the curriculum model of the MYP. The five areas of interaction connect the development of the individual (at the centre) with the educational experience in all subject groups (at the outer points of the octagon). These interactive areas are common to all disciplines with each subject developing general and specific aspects of the areas. In this way, the subject groups are also linked by the areas of interaction, demonstrating the interdisciplinary potential of the MYP. The five areas of interaction have no clear boundaries, but merge to form a context for learning that contributes to the student's experience of the curriculum.

General Principles

Nature of the Areas of Interaction

Five Organizing Elements

The curriculum model of the MYP places the student and the way the student learns at its centre, as the child's development is the basis of the whole educational process. The areas of interaction surrounding the student in the model are the core elements of the MYP. They provide a framework for learning within and across the subject groups. They allow connections among the subjects themselves, and between the subjects and real-life issues.

Approaches to Learning

How do I learn best?
How do I know?
How do I communicate my understanding?

Approaches to learning (ATL) is central to the programme, as it is concerned with developing the intellectual discipline, attitudes, strategies and skills which will result in critical, coherent and independent thought and the capacity for problem solving and decision making. It goes far beyond study skills, having to do with "learning how to learn" and with developing an awareness of thought processes and their strategic use. This area of interaction recognizes that true learning is more than the acquisition of knowledge: it involves its thoughtful application, as well as critical thinking and problem solving, both individually and collaboratively.

Community and Service

How do we live in relation to each other?
How can I contribute to the community?
How can I help others?

Community and service starts in the classroom and extends beyond it, requiring students to participate in the communities in which they live. The emphasis is on developing community awareness and concern, a sense of responsibility, and the skills and attitudes needed to make an effective contribution to society. Students are expected to become actively involved in service activities.

Homo faber

Why and how do we create?
What are the consequences?

Homo faber allows students to focus on the evolution, processes and products of human creativity. It considers their impact on society and on the mind. Students learn to appreciate and to put into practice the human capacity to influence, transform, enjoy and improve the quality of life. This area of interaction encourages students to explore the relationships between science, aesthetics, technology and ethics. It is at the core of student-centred learning, where the students themselves are placed in the position of *homo faber*: solving problems and showing creativity and resourcefulness in a variety of contexts throughout the curriculum and school life.

Environment

Where do we live?
What resources do we have or need?
What are my responsibilities?

Environment aims to make students aware of their interdependence with the environment so that they accept their responsibility for maintaining an environment fit for the future. Students are confronted with global environmental issues which require balanced understanding in the context of sustainable development. Students also face environmental situations at home and at school which require decision making. This area of interaction places the students in a position where they take positive, responsible action for the future.

Health and social education

How do I think and act?
How am I changing?
How can I look after myself and others?

Health and social education prepares students for a physically and mentally healthy life, aware of potential hazards and able to make informed choices. It develops in students a sense of responsibility for their own well-being and for the physical and social environment. This area encourages students to explore their own selves as they develop healthy relationships with others.

While the main defining features of each area of interaction can be outlined, they should in no way be viewed as narrow categories. These broad-based areas of interaction overlap each other.

> The "Areas of Interaction" section in this guide provides a detailed description of the aims and characteristics of each of these areas.

All subject groups are touched by all areas of interaction in different and complementary ways. All teachers therefore share the responsibility of integrating skills, ideas, themes and issues related to these areas within the subjects themselves or in special projects. The areas of interaction aim to encourage new links between teachers. A new dynamic is created as teachers work together as a more cohesive team and learn to consider the curriculum from the point of view of the learner.

Defining Statements

The areas of interaction are:	The areas of interaction are not:
• interactive organizing themes which facilitate long-term learning	• extra topics artificially added to the curriculum or extra material to be "covered" by the teacher
• perspectives through which teachers and students consider teaching and learning, approach the different disciplines and establish effective connections	• extra subjects added to those on each outer point of the curriculum model
• a guide for inquiry and reflection for the students	• paper exercises naming only superficial links, with no real impact on the nature of teaching and learning in and out of the classroom
• a point of reference for team planning on the part of all teachers	• only linked to special interdisciplinary projects or topic weeks
• a common language used by educators and students across the curriculum	• artificial or contrived links between disparate subjects
• an anchor for learning	• static entities
• the starting point for the personal project.	• removed from the student's personal experience.

The following three examples illustrate how teachers have successfully integrated areas of interaction into their subject areas.

Example 1

A group of year 3 history students are learning about the early Middle Ages in western Europe as part of their school's curriculum. The class is using a set of guiding questions derived from appropriate areas of interaction to guide their inquiry.

Approaches to learning:

- *Which secondary sources will provide appropriate evidence?*
- *How will I present my findings visually and in my oral presentation?*
- *How will I structure my argument?*

Health and social education, homo faber:

- *To what extent does this period deserve the name "Dark Ages"?*

The teacher has clearly indicated to the students the **approaches to learning** skills focused on in this module, which are specified in the assessment rubric developed by the teacher as a part of this unit of work. It is also clear to other teachers of that age group that these skills have been taught explicitly within history. They can therefore be reinforced in other subjects to facilitate transfer of knowledge.

The explicit focus on the areas of interaction **health and social education** and *homo faber* provides common threads to guide the students' questioning. As they study the period and conduct individual and group research on specific topics within the module, students will have to go beyond the historical facts, to question values within society, to compare with their own and other contemporary social environments.

In dealing with the complex question above, which can be considered from a number of perspectives, students extend their learning beyond knowledge of facts and develop a broader understanding of issues linked to the subject and to real life. The focus on the areas of interaction drives learning and assessment in this unit.

Example 2

A group of students in year 1 of the programme are learning about pure substances and mixtures in sciences (chemistry). As part of their laboratory activities, students attempt to apply simple techniques to separate different types of mixtures, including techniques for separating impurities from water.

The skills to be developed include:

- using simple equipment
- making straightforward observations and measurements
- drawing scientific diagrams.

The teacher can then lead the student to explore issues linked to **environment** and *homo faber* by posing questions such as:

- *How pure is pure?*
- *Can the energy costs involved in the production of pure substances be justified?*
- *Why is only a fraction of the world's water directly drinkable?*
- *How can we produce enough drinkable water to meet our needs?*

The teacher can use these questions as a focus for discussion, for written responses, or to provide a lead into a further topic. They provide an authentic means of looking critically at an increasingly relevant resource problem with ethical dimensions.

Example 3

While studying the history of drama from the ancient Greek tragedies onwards within their performing arts course, year 4 students became interested in the role of the physical environment in staging the plays. The teacher decided to focus on **homo faber** and had the students investigate setting, location and construction of the theatres for which these plays were originally written. Students compared and contrasted their cultural, social and environmental impact. The mysterious ability of the Greeks to design acoustically superior amphitheatres led to an exploration into the concepts of physics to attempt to understand how this was achieved.

This study of the impact of the physical environment on the staging of plays led music students in the same year to consider advances in sound technology and the development of auditoriums which optimize sound quality for the audience. The students became curious about the criteria used to make judgments of quality and researched whether the most famous venues of the past were actually the ones which had the best acoustics. Students used their critical skills in the discussion of criteria used in different times and places in such judgments. Students then considered the implications of design on orchestral performance.

This unit of work involved common planning on the part of the arts and sciences teachers and engaged students in inquiry focused on different ways to construct a favourable environment for the enjoyment of the arts.

A Focus on Learning

As teams of teachers consider how they can use the areas of interaction to facilitate these connections in students' minds, they should consider the different ways in which these areas will impact on teaching and learning.

- The areas of interaction are organizing elements which strengthen and extend understanding through meaningful exploration of real-life issues. They help students to develop positive attitudes and a sense of personal and social responsibility.

- They should form part of the framework for student inquiry and take investigative learning further than subject boundaries.

- Exploration of the areas of interaction engages students in individual and collaborative work, and encourages the development of different types of intelligences and creativity.

- The areas of interaction become a vehicle for refining conceptual development through the different perspectives they offer. They create a deeper level of understanding.

- They engage students in reflection and metacognition, and lead them from academic knowledge to thoughtful action.

Areas of Interaction and the Fundamental Concepts

The areas of interaction place learning in the context of the fundamental concepts: the student develops the skills of inquiry and understands the similarities and differences between different approaches to human knowledge.

The different perspectives provided through the areas of interaction engage the student in:

- actively seeking understanding with insights gained from a variety of disciplines, with the areas of interaction as the main organizing elements

- using multiple forms of communication

- developing intercultural awareness through the investigation of a variety of cultural manifestations of human achievement in issues linked to health, the environment and social organization.

Flexibility in Approaches

The Middle Years Programme encourages the use of a variety of teaching and learning methodologies to produce a climate where students discover how they learn best in different contexts. Schools are free to explore a range of possibilities for implementing the areas of interaction. While these broad themes at the core of the programme are interactive among themselves and integrated throughout the curriculum, schools may wish to highlight certain areas at certain times. For example, some subjects may contribute to some areas more naturally than others, or certain areas can be made prominent for a period in the school year through special projects or thematic weeks.

Whatever the approach, all teachers are responsible for the planning and effective integration of the areas of interaction. Using the areas of interaction as a common set of organizing themes and contexts, teachers plan collaboratively to put the learner at the centre:

- through common reflection and discussion about a coherent approaches to learning framework in the school

- through coherent articulation within and across subject groups, involving discrete subject curricular planning, interdisciplinary curricular planning, and school-wide horizontal and vertical planning of the exploration of these interactive areas

- by allowing sufficient flexibility to take advantage of students' interests and individual strengths as well as important current events and issues.

This may involve a change in the way teachers consider teaching and learning, and presupposes an approach to teaching that gives the learners responsibility for their own learning. It also requires an approach that does not equate academic rigour with content coverage. It is based on the premise that enhanced learning leads to the more effective transfer and long-term retention of knowledge.

At a time when the amount of information at our disposal is expanding very rapidly, the application of systematic and creative approaches to applying knowledge and solving problems becomes crucial. Similarly, for teachers, finding ways of enhancing meaning and understanding using well-chosen content and appropriate methodology is essential.

> Further guidance and examples on integrating the areas of interaction can be found in the "Delivering the Areas of Interaction" section of this guide, in the MYP subject guides and in the *Implementation and Development of the Programme* guide.

The Areas of Interaction

Approaches to Learning

Defining Features of the Area of Interaction

How do I learn best?
How do I know?
How do I communicate my understanding?

Helping students to learn is the ultimate goal of all schools. Through approaches to learning (ATL), schools provide students with the tools to enable them to take responsibility for their own learning. This involves articulating, organizing and teaching the skills, attitudes and practices that students require to become successful learners. It is the shared responsibility of the school and teachers to ensure that ATL is at the core of all curriculum development and delivery. A fully implemented and effective ATL approach in a school will strengthen student achievement against the subject objectives.

Approaches to learning goes beyond study skills. It also includes the skills listed below.

- **Organizational skills, study practices and attitudes towards work**

  Expectations need to be agreed, made explicit and developed through the school's pastoral care system (advisory/homeroom period) with reinforcement in the academic disciplines. The development of these skills and attitudes will be supported by the systematic use of tools such as a homework diary, and by student, parent and teacher involvement in acquiring common attitudes towards learning. This includes individual support and counselling for students struggling to meet the school's expectations.

- **Collaborative skills**

  Learning is often a group activity: students must learn how to work effectively together. Carefully designed collaborative learning uses the dynamics of groups to encourage students to take advantage of each others' strengths to consider different points of view.

- **Communication**

  The development of language is central to ATL as it is a medium for the generation of ideas as well as for their expression. Students need to acquire the skills of essay writing, analytical writing and creative writing. They also need to explore different, appropriate forms of expression to suit various contexts.

- **Information literacy**

  Learning how to access information and use it wisely is increasingly important. Students need to learn how to use the library and other media as well as to understand the research process (from finding and selecting information to judging it critically). This should be incorporated into inquiry and project work.

- **Reflection**

  Developing the ability to appraise work and evaluate performance realistically, and using this evaluation to adapt behaviour and learning strategies, is central to becoming an independent learner. A number of instruments and practices can help, including student self-evaluation used in assessing work and reporting, portfolio assessment where students have to explain their work to others, and student involvement in writing assessment rubrics.

- **Problem solving and thinking skills**

  Building a higher thought process using convergent and divergent thinking, making a point of view coherent, creatively generating new ideas and considering issues from multiple viewpoints, are all examples of transferable thinking skills. Teaching practices that require students to explain how their thought processes help develop these skills which, when used systematically, can become habits of mind.

- **Subject-specific and interdisciplinary conceptual understanding**

  Students can start to appreciate and compare the nature and methodology of different academic disciplines, exploring and reflecting on different ways of knowing. (At the highest level this leads on naturally to Theory of Knowledge in the Diploma Programme.)

Approaches to learning helps students acquire transferable skills: it fosters positive values and attitudes, leading to the development of purposeful and effective habits of mind.

Example 1: What ATL means in Practice

On the following page, the chart, provided by a school authorized to offer the MYP, illustrates the scope of ATL as it is organized there.

**Example 1
What ATL means in Practice**

APPROACHES TO LEARNING:

Knowledge and Learning
- Intellectual discipline
- Knowledge of subject
- Open-minded attitude
  - Sharing learning
    - through task completion
    - with peers
    - in reflection
- Practice critically assessing information and range of information sources
- Classifying information using concepts, maps and graphic organisers

Using Information
- IT skills
- Skills needed to locate information
- Skills needed to access texts
- Skills needed to complete set tasks

Developing Thinking Skills
- Problem-solving activities
- Deduction and induction
- Creativity and reflection
- Range of thinking strategies
- Decision-making
- Coherent thought: mapping thinking

Independence and responsibility
- Seeking help
- Setting goals: including own assessment criteria for ATL
- Group skills
- Meeting deadlines
- Individual and collective learning experiences

Skills of Communication
- Presentation skills
- Vocabulary
- Teamwork
- Questioning
- Speaking / listening
- Ability to write using a range of levels

Opportunities for Optimum Learning
- Utilizing resources
- Making connections: interdisciplinary
- Recognising different learning styles
- Planning
- Receiving explicit instructions:

Implementation

Approaches to learning represents the obligation of all teachers to teach students how to learn. It is most easily developed in schools where teachers are encouraged to reflect on their teaching as well as students on their learning. Teachers need opportunities to question, challenge and share their knowledge, views and opinions. This helps to promote reflective practice in the classroom, as demonstrated in the following example.

Example 2

One school introduces aspects of ATL to its teachers by asking them to reflect collectively on the following three questions.

- *How do we decide what is most important for our students to learn?*
- *How can we give them ownership of their learning?*
- *How can different disciplines contribute in the most effective way to "learning how to learn"?*

The same school then helps its year 1 and year 2 students to organize their reflection process at the end of each term around four generic questions.

- *What sort of learner am I?*
  Students might consider: investigating learning styles; considering the characteristics of a good learner in the different subjects; thinking of, and using, effective learning strategies.

- *How can I research effectively?*
  Students might consider: accessing information from different sources; finding and selecting relevant information; evaluating and presenting the results of research.

- *How can I organize my time and my materials well?*
  Students might consider: using an agenda effectively, establishing and respecting timelines; achieving a balanced workload, organizing notes and documents.

- *What have I learned and done well this term?*
  Students might consider: analysing successes and difficulties, setting new goals, reflecting on the approaches to learning that have worked best.

Students respond to a short questionnaire and self-assess their work in major projects or units accomplished during the term.

All teachers in a school have an obligation to teach students how to learn. They have a responsibility to ensure that students acquire the skills and the confidence to take ownership of their own learning. Teachers cannot assume that students have the necessary skills to be successful learners and must explicitly teach ATL skills and strategies. This needs to be done in an agreed way that takes into account the context of the school and the specific needs of the learners.

In requiring students to complete research projects, for example, it is the responsibility of teachers to know what research skills have already been taught and practised, and to ensure that any new skills required to carry out the research effectively are explicit taught. The process of research becomes as important as the content of the project. Similarly, in setting an assessment task, the teacher should analyse the process of completing the task from the student's point of view and make sure that the strategies and skills needed to do well have been taught and are understood.

To facilitate this, schools need to ensure that teachers have:

- time to meet, share ideas and plan together
- opportunities for professional development which furthers their own understanding of ATL
- leadership that guides and supports them
- defined tools to sequence and map the skills and approaches used in teaching.

Through careful planning, teachers are responsible for teaching, reinforcing, documenting and monitoring specific ATL skills. These skills need to be mapped across the disciplines for each year level, as well as from year to year, and need to be made explicit in the school's assessment and reporting practice.

The process of the mapping of skills needs to be developed to meet the requirements of individual schools and school systems. It is also important that individual teachers, and the school's system, allow for differences between students and provide the necessary support. Each teacher will have strengths and weaknesses in ATL which must be recognized and addressed.

Within Subjects

Teachers need to identify the role of ATL in their disciplines and need to discuss with colleagues how they will teach and/or reinforce ATL skills. They should identify key skills for success in their specific subject group, and make it an explicit part of their assessment scheme.

Teachers need to identify and accommodate the different learning styles represented in every classroom. They should provide opportunities for students to acquire and demonstrate knowledge and learning in different ways.

Notes

The table on the following page is cumulative: many of the skills and attitudes listed are suitable for introduction in year 1; others, which are more cognitively demanding, may be introduced later. By the end of the programme, students are expected to have reasonable mastery of all. The development of many ATL skills occurs in a spiral. Skills which are introduced in year 1 need to be developed and reinforced throughout the programme.

The first five domains are interdisciplinary in nature: they could apply to most or all subjects. The last two are subject-specific and need to be adapted for other disciplines.

It would make sense for a school to adopt an agreed policy for domains which apply to all disciplines. This would also provide evidence of a holistic approach to learning.

Example 3

This example illustrates how the history teachers in one MYP school have developed a framework to contribute to ATL in their school. The following skills form part of the teaching and assessment in their subject.

Domains	Expectations
Organizational skills and attitudes towards work	• Be punctual • Keep an organized work file • Hand completed homework in on time • Show care for work well done • Be organized for class, equipped and ready to work
Collaborative skills	• Respect others' points of view • Understand that different points of view can be valid • Listen to other opinions
Communication	• Listen carefully to others • Present ideas clearly and coherently, in writing and through public speaking • Use language accurately to express ideas • Use writing, drafting and note taking as a means for generating ideas
Information literacy	• Know how to use the media centre in the school • Know how to use the electronic media and the internet • Select and reject information according to goal • Identify and summarize the main points of a piece of non-fiction writing • Evaluate the value of information in different media
Reflection	• Monitor and evaluate own performance accurately, recognizing strengths and weaknesses • Revise work and adapt behaviour based on reflection
Subject-specific thinking skills	• Comprehend, interpret, evaluate and use a range of historical sources

Understanding of fundamental historical concepts	• Demonstrate an understanding of:
	  • continuity and changes
	  • cause and consequences
	  • similarity and difference
	  • the beliefs and motives of people in the past

Across Subject Groups

The skills may also be mapped from year to year across the disciplines. An example follows.

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Example 4: Mapping an individual ATL skill (note-taking) across years 1–5

To become successful note-takers, students should be introduced to the skills across the subjects in a progressive manner, depending on their age and ability.

Progression of skill	Stages of skill acquisition	Sample teaching strategies
Basic	• Identify key words/main idea in a paragraph • Rewrite key words/ideas into simple sentences/paragraphs • Include bibliography according to a model	• Modelling by teacher • Provide frameworks for recording notes • Complete and discuss task in groups • Listen for key words in a text read aloud • Provide examples of bibliographies • Provide good and poor examples of note-taking and resulting rewritten texts
Intermediate	• Identify key words/main ideas in a text • Classify notes into main and supporting ideas • Rewrite key words/ideas into a series of linked paragraphs	
Advanced	• Rewrite key words/ideas from a range of sources into well-structured paragraphs • Reference documentation and sources of notes	

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Alternatively, teachers within a year group may wish to identify core skills to be taught to students across the disciplines, and make these skills part of the assessment and reporting scheme for that year. This can be seen in the following example.

Example 5: Horizontal planning: integrating the ATL skill of note-taking into subject areas across a year level

Step 1: In a planning meeting, teachers of the same year level identify ATL skills, break down the skills, and discuss teaching strategies and student outcomes (see note-taking chart above).

Step 2: Teachers indicate when the skill will be addressed in their subject group.

The sample chart below indicates how year 3 teachers in one school have decided to integrate note-taking across the subjects.

Language A	**Topic: Racism** Using an Amnesty International article, identify main and supporting ideas covering examples of racism, causes of racism, and government solutions to racism.
Mathematics	**Topic: Reliability of statistics** Locate/provide two newspaper articles which use supporting graphs. Identify key ideas in text and relate to key information in graphs to assess reliability of statistics.
Sciences	**Topic: Boiling point of liquids** Develop chart for noting of key observations during and following experiments.
Humanities	**Topic: Acid rain** Working in groups, combine notes on the issue of acid rain from three different secondary sources (for example, video, newspaper, textbooks) using a noting framework.
Technology	**Topic: Comparing food hygiene practices in the home with restaurant regulations** Brainstorm home food storage and preparation practices, note down official food regulation legislation, and compare practices in a series of linked paragraphs.
Arts	**Topic: Critical appreciation of a painting style (for example, Cubism)** Teacher models the notetaking process for one painting. Students are presented with three paintings of the style. Students must note their observations of each painting under separate categories (for example, content, medium, message). Each aspect is written up into a paragraph comparing and contrasting the three paintings.
Physical Education	**Topic: Listening to a description of the rules of a sport** Students take notes as the teacher reads the rules of the sport. Using their notes, students will write the rules of the sport in order to teach another group (for example, a younger year level).

As these examples show, when teachers focus on ATL, they analyse the learning which must take place for all students. They structure the processes to ensure maximum chances of success, adapting tools to the needs of the learner and involving the student actively in the process. The obligation of the school is to ensure that no student misses out, that the skills and processes are reinforced through all subjects.

Community and Service

Defining Features of the Area of Interaction

How do we live in relation to each other?
How can I contribute to the community?
How can I help others?

The mission statement of the IBO stresses that its concern extends beyond intellectual achievement: students should develop a personal value system through which to guide their own lives as thoughtful members of local communities and the larger world. The curriculum model places the student as a learner at its centre; the next circle represents the place and role of the student in communities, from the immediate family and school environment to the world at large.

Giving importance to the sense of community throughout the MYP encourages responsible citizenship as it seeks to deepen students' knowledge and understanding of the world around them. Students should be encouraged to make connections between their intellectual and social development and the benefits that they can contribute to the community by asking themselves, "How can I make a difference?" This area is about action and reflection inside as well as outside the classroom. Students discover the social reality of self, others and community. In so doing, this area of interaction fosters the affective, creative, ethical and cognitive development of the adolescent.

The area of community and service in the MYP aims to develop:

*   sensitivity to the needs of the community and society in general
*   awareness of the role of the individual within a community
*   a willingness and the skills to respond to the needs of others
*   an altruistic attitude which enriches the life of the student through enhanced insight into different social patterns and ways of life.

This area of interaction also supports the fundamental concept of intercultural awareness, which aims to encourage tolerance and respect, leading to empathy and understanding. Students engage in interactive situations that will enrich them emotionally, socially, morally and culturally by engaging them in positive action and contact with other social and cultural environments.

The idea of community should be developed as an integral part of the programme, present in the curriculum as well as in whole-school and extra-curricular activities. Students should become aware of specific issues, recognize their responsibility and become empowered to act in response to needs identified in class within the curriculum.

Community and service in the MYP involves three central elements:

*   awareness
*   involvement and service
*   reflection.

Learning activities will emphasize these elements to varying degrees.

Community Awareness

Before any useful involvement in the community can take place students must develop an **awareness** of what a community is, in all its complex forms. Students will develop increasingly sophisticated personal answers to fundamental questions such as:

- What does "community" mean?

- What makes a community?

- How are communities similar?

- How are they different?

- What is my role in the community?

- How can I make a difference?

Through the curriculum and school activities outside the classroom, students must be given opportunities to develop awareness of different communities and their needs. They should also develop an awareness of their own strengths and interests, and of ways in which they can help respond to these needs in a practical way. By stimulating this awareness, and by helping students develop their ATL skills, teachers are all responsible for the integration of community and service. This is shown in the following example.

Example 1

Within their technology class, groups of year 2 students are engaged in designing and creating board games for primary age students. The games are intended for a local orphanage. Within the research stage of the design cycle in technology, the students have considered the needs of the recipients, and appropriate strategies to make the games attractive and fun to play. It is planned that the young children will actually come as guests to the school, and learn to play the games with the class. The children will then receive the games as gifts.

Community Involvement and Service

It is hoped that increased awareness of community needs and of personal strengths and interests can translate into a willingness to respond to these needs in a responsible, altruistic way. Social awareness should therefore develop into social involvement, where the student displays increasing levels of responsibility and initiative. Encouraging students to use outside the school the talents and skills developed at school can help them develop a sense of satisfaction and self-esteem.

The MYP requires students to become actively engaged in service activities, individually and in groups. There are many ways in which this can take place within and outside the classroom. The IBO allows schools to develop this area of interaction in ways that are appropriate for their students and that reflect local realities. The idea of community and service can be interpreted in different ways by different cultural groups.

Several basic principles should be applied by all schools.

- The MYP encourages schools to structure the area of community and service in a way which leads students through the stages of growth of awareness to responsible, autonomous action. While teachers can go a long way to raise awareness and encourage the development of positive attitudes and values, service activities are a requirement of the MYP for all students.

- Community involvement for all students should be sustained in each year of the MYP, aiming to develop in young people a positive response to community needs.

- The activities chosen by students and accepted by the school as community involvement should reflect the maturity level of the students and should respect individual preferences.

- Schools should establish appropriate ways of giving importance to community involvement in the minds of the students without awarding grades for community and service.

Example 2

The following is a list of examples of community involvement and service that has been used in schools. These activities will necessitate varying levels of supervision depending on local circumstances and ages of students.

- Helping to host or clean up after school activities (for example, parents' evenings, technical support for performances)
- Assisting other students (special needs, newly arrived or second language students) through tutoring
- Managing school sports teams
- Contributing to student committees and organizations (for example, newspaper, radio, welcome committee for new students)
- Supporting and developing links between the school and international organizations such as Amnesty International
- Volunteer work in a nursery or an elementary school
- Organizing weekend activities for younger students in the elementary school
- Making regular visits and providing services to senior citizens living alone
- Supporting and developing links with local groups such as orphanages and senior citizens' centres
- Participating in volunteer work in a developing country.

Reflection

In all cases, reflection is an essential part of community and service. It should be part of the students' experience, as it encourages better awareness of needs as well as the quality of response. It helps the students to develop positive attitudes and to become aware of strengths and difficulties. It also allows the teachers and the school to monitor the quality of community and service at the individual and at the school levels.

Many schools have developed tools that guide the reflection process, and allow for formative and summative assessment of the service activities. These could include journals, summary documents to describe the activities and reflect on their impact, group discussions, presentations of some projects and student-led conferences.

The following is a community and service journal entry written by a 12-year-old student following participation in a "Special Olympics" activity organized by the school. Such journals are also very useful in helping students reflect on their own service initiatives.

Example 3

JOURNAL ENTRY

Date: 15 February   **Title of activity:** Special Olympics

Reason for choosing this activity:

I love sports, and we did an event to help kids with special needs experience sports.

Rate your performance   1 = Poor   4 = excellent

	1	2	3	4
I was punctual	☐	☐	☑	☐
I completed my work/task on time	☐	☐	☑	☐
I was reliable	☐	☐	☐	☑
I assumed responsibilities	☐	☐	☑	☑
I used my time effectively	☐	☐	☑	☐
I listened to and encourage others	☐	☐	☑	☐
I had fun	☐	☐	☐	☑

Reflection: use these questions to guide your writing

- What did this activity involve? What aspects of this activity suited me?
- What did I do well? What could I have done better?
- What did I learn from this about myself? About others?

This activity made me see and learn about kids who either had a mental weakness, or a learning disability.

I had an amazing day. Of course, it wasn't an intense Olympic when I'm determined to score or win. This was my first time I actually encountered these kids. When I'd see them in the supermarket, I'd try not to look and stare. But finally, I realized they are just normal kids like me. They love to have fun and they are all great people. In fact, when I was playing sports, I couldn't tell the difference between us. That is, well, there really is no difference.

I learned so much from this event. The tiniest gestures, comments, reaction are important. It can make somebody feel good, or hurt them.

Schools also involve adults in the supervision and reflection process that accompanies community involvement. Input from responsible adults within and outside the school also helps students themselves. In some cases older students can help with the organization, supervision, reflection and evaluation of community and service for younger students.

Implementation

School Structures

The development of community awareness and involvement on the part of students depends on favourable conditions and supportive school structures.

- Community and service should be seen as an integral part of the programme. Students should therefore consider it in a positive way. The quality and motive of an act of community and service are more important than the act itself, or the number of hours devoted to it.

- The organization of such student activities as student council, student newspapers, first aid courses, conflict resolution and leadership skills training, peer support groups provide students opportunities to develop the necessary skills and attitudes to play an active role in serving their community.

- Parents should be fully informed of the aims and expectations of community and service, and should be invited to support it wherever possible.

- Community and service activities should be organized and monitored in ways which ensure safety for students at all times.

- Schools should establish appropriate ways of giving community involvement importance in the minds of the students without awarding grades for community and service.

- In many cases, individuals within the school should be given sufficient time to coordinate the integration of this area of interaction across the subject groups, to plan and monitor community and service activities which take place outside class time, and to keep teachers informed of such activities.

Role of Teachers

As in all areas of interaction, teachers play a key role in helping students make community and service a significant part of their experience of the programme. This can be achieved in a number of ways.

- All teachers are role models, and as such they should also show an interest in the community. Where possible, they should respond to opportunities to become involved themselves.

- Sharing personal experiences with students, facilitating discussion and reflection, bringing related issues to the fore within their teaching are all excellent ways of helping students become more aware of community and service.

- Curriculum planning should allow teachers to realize that their subject offers many opportunities to develop a sense of community in students. The following is an example of how subject teaching within a school focuses on community issues.

	Example 4: Horizontal planning, community and service, year 2 of the MYP	
	Topics for Study	**Related Community and Service Issues**
Language A	As part of the normal curriculum, students are required to compose a short story in order to develop writing skills. Although there are no restrictions on subject matter, students are required to write from personal experience.	This type of work allows for an exploration of certain issues relating to community and service. For example, a student may choose to develop a character based on a personal relationship that has grown as a result of a community and service project.
Language B	As part of the normal curriculum, students are studying forms of greeting, and writing greeting cards for New Year's Day. They discuss the custom of sending cards in some cultures and different ways of expressing good wishes on special occasions.	Students read brochures about Amnesty International, and listen to a presentation about prisoners of conscience identified by the organization. They write greeting cards for some prisoners. This allows further exploration and discussion of basic rights and freedom.
Humanities	As part of the history curriculum, students take a field trip to New York City. As preparation for the trip students are divided into groups to research a particular aspect of life in New York (architecture, pollution, crime, leisure, history, etc).	After the research and the trip have been completed, each group researches and reports back on similar aspects from their local community.
Mathematics	As part of the mathematics curriculum, students are required to study statistics and their use in society. They learn how to gather information and then turn it into clear and understandable formats (eg pie charts, flow diagrams, averages and percentages).	Using their newly acquired knowledge and understanding, mathematics students then attend a school sports tournament and produce a series of statistics relating to personal and team achievement. These statistics provide a service to the team involved: these statistics can highlight strengths and weaknesses and thus improve the team's overall performance.
Arts	As part of the normal curriculum, students are required to design and produce a card to celebrate a particular occasion. Thought must be given to colour, size, shape and texture of materials. Students thus develop their skills, knowledge and understanding.	Through discussion in class the art teacher poses several questions that relate to community and service issues such as: "How might others react upon receipt of a card containing a special message?" Students reflect on how community and a sense of belonging can be enhanced through communications of this kind.
Sciences	As a normal part of the science curriculum, students are required to study about viruses. This study includes specific work on their transmission, and their impact on health and society.	As part of related follow up work, students design an information pamphlet on the subject of HIV which is then distributed to students in the whole school as part of their participation in International Aids Day. Discussions on the impact of AIDS and other viruses on a variety of different communities might then follow.
Physical Education	Students focus on the skills and tactics required to be able to participate in a game of "wheelchair basketball". Individual students will also be selected to spend a whole day in a wheelchair and analyse the physical demands that this entails.	As part of this project, students will be encouraged to reflect on various aspects of disability. "What did it feel like to be in a wheelchair?" "What problems did you encounter?" "Does your school have adequate disabled access and facilities?" FOLLOW UP: This presents opportunities for individual students to become involved with organizations for the disabled as part of their community and service involvement.
Technology	As part of the normal design technology curriculum, students study the processes involved in designing, building, testing and then manufacturing household objects.	With community and service in mind, several students decide to design and build accessories for the newly renovated bathrooms of a Bulgarian orphanage that they are sponsoring. Discussions follow on issues relating to family, geopolitical influences and community responsibility.

Homo Faber

Defining Features of the Area of Interaction

Why and how do we create?
What are the consequences?

To gain some insight into the concept of *homo faber*, it is necessary to go back to the origin of the word *faber*, which is derived from the Latin word *facere*. *Facere* encompasses the sense of making, creating and doing. *Homo faber* is therefore a person who can be an artisan, a maker of objects, an artist, an inventor or a thinker. As an area of interaction, *homo faber* goes beyond looking solely at individuals, and looks at human contributions both in context and as part of an ongoing process. These contributions result from the human instinct to create, innovate, develop, or transform our lives and our world. *Homo faber* therefore is at the heart of inquiry and active learning, and it puts the student in a situation of responsible action in a variety of contexts encountered through the curriculum. This area of interaction culminates in the personal project, where the student chooses an area of inquiry and creation.

Over the five years of the programme, students will:

- identify why we create, develop or change products, examine contributions, developments and changes through time and predict possible future developments and changes

- be involved as innovators, creators and developers

- celebrate human endeavour and achievement, and also evaluate and criticize the impact of the creation on individuals, society and/or the world.

Many areas of human activity can be explored through *homo faber*, including:

- **systems**, such as laws, methods of government, transport, education, healthcare

- **communication**, which may include statistics, language, mathematical formulae, codes

- **technology**, for example, buildings, machinery, tools

- **thought**, including principles, concepts, ideas, opinions, attitudes

- **art**, such as painting, sculpture, embroidery, theatre, music

- **culture**, for example, fashion, rituals, food.

Homo faber is much more than the presentation of a product as an example of human achievement. For students and teachers it involves questioning, explaining, discovering and doing. Students need to investigate the creative process, to engage with the product and reflect on its role and context in the continuum of human achievement. This may result both in the celebration of this achievement, and possibly a recognition of any negative impact or consequence. This area of interaction involves all subject groups in different ways as it encourages students to see the relationships between science, aesthetics, technology and ethics. An example of this follows.

Example 1

Year 1 students undertake an interdisciplinary project that includes mathematics and visual arts. In mathematics, they study transformation geometry including the concepts of symmetry, isometries (rotation, translations, reflection), enlargement and limits. In visual arts classes, students use this knowledge and understanding to investigate the work of Escher. In particular, students learn about Escher's self-posed mathematical problems and how he resolved them through the medium of print-making. The series of lessons culminates in students making their own "Escher print" and identifying the transformation geometries used.

These lessons use *homo faber* as a focus and can lead to an appreciation of transformation geometry in the art of a variety of cultures.

Homo faber goes beyond the act of creation alone. It leads students to examine, experience and reflect on the creative process, from the following perspectives:

- **Origin**   The individual desire to create, develop or change.

- **Process**   The processes involved in creation, development or change.

- **Product**   That which has been created.

- **Context**   Placing the product in context.

- **Impact**   The impact of this creation on individuals, society and the world.

- **Development**   Subsequent developments and changes.

Example 2: Integration of *homo faber* into three subjects in a school term in year 4

Humanities	**Topic: Advances in weaponry during World War One**
	Students research the impetus to develop more efficient fighting machines that could work over long distances led to the development of machine guns, poison gas and tanks.
	The impact of these weapons can be explored in letters between soldiers at the front and home. Students consider other related developments (for example, women's emancipation, developments in medicine, and the long-range missiles of today).
Arts	**Topic: Lighting in theatre**
	Students use electric torches to experiment with shadow. They make a list of what kind of atmosphere each of their lights creates.
	Origins: students research theatre practices in the past, in other countries and the locations of performance (indoor/outdoor).
	Process: students discuss why lighting is used in theatre and how it may enhance a drama. They discuss how a place and time of day and atmosphere are communicated to an audience (lighting, words).
	Product: students are given a piece of text. They present it in different ways—one in bright light and the other using candles, electric torches, coloured gels, etc. They write about it in their development workbooks.
	Impact: how did light change theatre practice? Developments: to learn how to use the control board and to chart a lighting plot for a play.
Sciences	**Topic: Discoveries**
	History of optics: the discovery and application of simple lenses up to the present day and how their limitations led to the use of other innovations.
	The accidental discovery and development of X-rays leading to field applications in medicine within 20 years.
	The invention and development of the rocket engine.
	The development of enzyme-based low temperature washing powder.

Research, reflection and analysis are required to make this process a relevant learning experience. The students need to become conscious of the processes in which they are engaged or that they have experienced. They also need to consider other people's processes in similar tasks and how they may contribute to the student's own work. This is an important step towards recognizing the evolution of thought and creation. Finally, students need to recognize the impact of their creation either on themselves or on the future. These perspectives are illustrated in the following example.

Example 3: Masks

The following is a sample unit plan in performing arts (drama) and design technology, with a focus on *homo faber*.

Origin	The students are introduced to classical Greek theatre, believed by many to be the origin of western theatre practice. The class examines and discusses the use of masks to show different characters. Students also look at chorus work and masks through a series of practical exercises and activities.
Process	The students research classical Greek masks, looking at a variety of sources (pictures, vases, sculptures), and they design their own masks. They then make a mask in the style of Greek chorus masks, choosing their own materials. They record every stage of the process of creation. They then decorate their masks. The students research classical Greek masks, looking at a variety of sources. They create a worksheet, "Mask-making Made Simple", for younger students, as a step-by-step guide to making a mask.
Product	The students use their masks to devise their own chorus improvisations on a given theme (for example, war and peace) and they discuss the implications of using a mask, paying attention to how the body, sound and text are used.
Context	The class examines rituals and how classical Greek theatre grew out of the religious traditions of that culture. The students are given a chorus text from a classical Greek play, which they rehearse in small groups and present in a ritualistic way, using their masks. The students discuss the function of the chorus in the play and elements that make up a ritual. They discuss what rituals tell us about a society.
Development	Discussion: what sorts of rituals do we use today? How do they differ from culture to culture? What do they have in common? Students use masks to create their own ritual piece of theatre on a given theme. This can lead into a study of the development of mask and ritual in any of the following areas: Noh theatre, Beijing opera and painted faces, Indian Kathikali, African dance. Students can also examine these performing styles related to masks: Commedia del'Arte, mime, circus and clown work, make-up for the theatre.

Implementation

The subject groups of the MYP contribute in different ways to the students' understanding of *homo faber*. The definition of a product goes beyond arts or technology. It refers to mathematical formulae, language, systems, ideas and objects. *Homo faber* should prompt the creative and innovative involvement of the whole school community in presenting a holistic view of human activity, both in the past and in the present.

In all subjects, the students should encounter examples of the constructive activities of human beings. This does not necessitate additional subject content, but it does require a process of thorough reflection.

Homo faber is open-ended and provides opportunities for discussion and further inquiry beyond individual subject borders. It may raise ethical issues such as progress, how development in one culture may be inappropriate to another, and the responsibility we need to take for our progress. This is demonstrated in the following examples.

Example 4

This example shows the way in which an MYP school has chosen to focus the teachers' and students' inquiry and reflection on *homo faber*, concentrating on roles humans play in different endeavours. Depending on the situations these roles provide the perspectives guiding the students in processes of inquiry, reflection and active creation.

Domain of inquiry	Role(s)
Human ability to create change and to respond to the consequences of changes	User and producer
Scientific and mathematical thought through time	Inventor
Ethical development of people through time	Philosopher
Changing perspectives of aesthetic judgments	Writer/artist

Example 5

This example shows how one MYP school in Africa has chosen to focus some interdisciplinary teaching on *homo faber* every year of the programme. The main concepts and topics explored in different ways through various subject groups are listed below.

Year 1	**_Homo faber_ comes into being—from the earliest humans to _Homo sapiens_** • Creation stories and evolution • Toolmaking from Stone Age to Iron Age • Prehistoric art to classical Greek and Roman art • Society and civilization, archeology as inquiry

Year 2	**_Homo faber_, a western focus—humanism and the formation of a modern mindset through "transition and change"**
	
	 • Inquiry as a way of thinking and changing: simple machines of the Middle Ages and the Scientific Revolution
	 • European origins—Renaissance, Enlightenment
	 • Scientific methods
	 • European transitions
	     • Renaissance (transition in thought)
	     • Reformation (transition in belief)
	     • Explorations (transition in knowledge)
	     • Industrial Revolution (transition in production and lifestyles)
	 • Democratic revolutions

Year 3	**_Homo faber_, meaning and existence** • Art and human faith and beliefs (world focus on religions and systems as they are expressed in art and symbol) • Technology and ethics
Year 4	**_Homo faber_, living together** • Revolutionary change and the making of modern systems • Comparative political and economic systems • International organizations • Revolutionary technologies of the modern era (for example, communications, transport, warfare, in context)
Year 5	**_Homo faber_, the challenge at hand** • African and international focus on population: natural resources, sustainable development, hunger, AIDS, ethnic conflicts • Development and technology: international organizations and control, environmental protection initiatives

The *Implementation and Development of the Programme* guide provides more examples of the integration of *homo faber* on pages 73 and 74.

Environment

Defining Features of the Area of Interaction

Where do we live?
What resources do we have or need?
What are my responsibilities?

Students are often confronted with complex and controversial global issues. This area of interaction deals with the importance of the local and global environment, the concepts of sustainable development in a context of increasing environmental threats and related problems of a political and socio-economic nature. Students also have to cope with their immediate surroundings and various environments within it, that require attention and involve decision making.

This area aims to help students to see the links between economic, political, cultural and social issues, to develop positive and responsible attitudes, and to gain the motivation, skills and commitment to contribute to their environments. Through this area of interaction students should develop an understanding of, and appreciation for:

- the variety of environments, natural and man-made, their qualities and the nature of our interaction with the environment
- the gravity and scope of many environmental issues
- conservation and the nature and role of local and international organizations responsible for protecting our environment
- man-made environments, interrelationships between people, between people and their environments, and related social issues
- the concepts, principles and issues connected to sustainable development
- political, economic and cultural dimensions of environmental issues
- the ways in which environments are manipulated, transformed, controlled, preserved or destroyed by people.

The entire school community will over time develop awareness through investigation, discussion and debate and should use these activities to develop appropriate attitudes, responsibility, and action. Teachers can help students gain an understanding of these concepts and issues at the personal, local, and global levels by guiding their investigation through the following perspectives:

- awareness
- responsibility
- action
- reflection.

Awareness

Developing personal awareness to connect with environmental issues at local and global level will lead to an understanding of the fragile balance and interconnectedness of theirenvironments. Over the five years of the programme students form a broader, deeper and more holistic understanding of their place within the global environment.

- What environments am I a part of?
- How do I affect the environment?
- How am I affected by the environment?

Students can investigate our interdependence with the environment. There are many natural connections to community, and to health and social education for students to explore as they consider the consequences of their personal actions and how their environment affects them. An example follows.

Example 1

Cultural studies of semi-nomadic people and their sustainable lifestyles such as exist in North America and Australia (often already taught in humanities curriculums) can introduce a meaningful connection to this area of interaction. One group focused on the problems of waste disposal in Inuit communities in Greenland. Students then discussed issues linked to waste disposal.

Responsibility

Responsibility involves students building on an awareness of issues and developing the positive attitudes needed to care about the environments we inhabit. In recognizing and accepting roles as consumers and producers students can take the personal connection and develop an understanding that the use and abuse of resources has local and global impact that affects the balance of the whole. Issues such as conflicting interests, conservation, urbanization, ecosystems and sustainable development should be investigated so that students are able to turn awareness in to a commitment to finding solutions. Assuming responsibility through a critical examination of environmental problems and their causes is a key step in developing positive values which can lead to considered action. This is demonstrated in the following example.

Example 2

Maintaining grounds, equipment and school buildings gives students a stake in their own school environment. These practical projects can be organized and monitored by groups of students like the student council. Other examples include students deciding not to accept plastic bags when purchasing in shops to avoid waste; others investigating the effects of music on people's behaviour, discovering that certain types of music have calming effects, and deciding to use this in the school at the beginning of the day to enhance their learning environment. Some students even experimented with aromatherapy in various areas of the school.

Action

An increased awareness of environmental issues can contribute to a greater sense of student responsibility. Encouraging students to become more active in the promotion of healthy local environments will create a strong base on which to build their involvement where more global issues are concerned. Often this will emerge from a question as simple as, "What difference can I make?" Whereas some actions directly result in tangible physical changes, other actions may be more symbolic and represent a change in the attitudes or commitment of the student. An example of this follows.

Example 3

As part of a science unit on heat and energy, year 2 students conduct audits of energy use in their homes by studying usage and costs of electricity. Some students also survey users' manuals and brochures from department stores to compare the energy consumption of different brands of electrical appliances. As a result, they produce a pamphlet which is distributed to the school community. Related environmental issues are discussed in class.

Issues linked to the environment are also dealt with in geography, where students discuss water consumption and needs. As a project, they count water units used at school and in their homes to appreciate the vast consumption of water in developed countries.

Reflection

Students should be given the opportunity to reflect on environmental issues from a personal perspective, taking into account the experience they have gained through related research and activities. These reflections should be guided to allow students to appreciate the balance between the local and global perspectives, as well as between personal and social responsibilities. It is important to consider the fundamental concepts of the MYP when reflecting on the environment. Students should consider how culture forms our outlook towards the environment; how we can effectively communicate concern about environment; and the need to evaluate and make decisions concerning the environment on a holistic level, recognizing the interconnectedness of our world. An example follows.

Example 4

As part of a school's regular programme of trips and excursions, short visits to areas can be incorporated, where students can observe environmental phenomena. Examples might include stopping at acidified lakes, short stops to inspect forest damage, conservation parks or coral reefs. A zoo visit to observe "beauty in a cage" prior to a reflective exercise can be very productive.

This element clearly links with *homo faber* in helping students to question the effectiveness of their actions related to the environment and take responsibility for their own ability to effect positive change. This element also builds on the reflective practices and sense of service developed in the area of community, as demonstrated in the following example.

> ## Example 5
>
> Long-term projects can generate a sense of continuity and commitment to the environment. For example, a biology unit might involve monitoring a river over the five-year programme, using year 5 students to introduce the year 1 students to the project. Ongoing projects rooted in the existing curriculum, such as weather monitoring stations, greenhouses and school gardens, can provide opportunities for data collection and analysis as well as delegation of responsibilities. Science and community awareness can encourage some students' voluntary participation in environmental monitoring, assessing fish populations in local rivers and the reintroduction and monitoring of species.

Implementation

The environment includes a vast, complex and often controversial set of issues. A collaborative approach to the teaching of the programme is therefore essential: it allows teachers to communicate about content and pedagogy regularly. Vertical and horizontal mapping help ensure that students explore environmental issues from various perspectives across the curriculum.

Helping students become informed, to reflect and act on environmental issues, provides opportunities for critical thinking and evaluation of evidence. Teachers should not avoid the controversy of many familiar areas of discussion, but should create a positive atmosphere in which all opinions are voiced. Students should be encouraged to consider issues from a systems perspective that can often grow from an investigation of individual topics: students can often best grasp the importance of an issue when they see a direct connection to their own lives.

In planning collectively and preparing units with a focus on the environment, teachers may find it useful to reflect on guiding questions such as the ones below.

- How can the unit help students consider the issue from different perspectives?
- Which resources will allow students to gain an understanding of these issues, considering the related physical, social and political aspects?
- To what extent does the unit show that issues are interconnected?
- What short-term or long-term projects can the students be encouraged to undertake to develop their understanding of the topic?
- How is the environment connected to community service?

Many schools include environment-related topics in their curriculum, but this does not necessarily change attitudes or give students the skills they need to act positively.

Integration of this area of interaction must:

- be approached from various perspectives by the different disciplines
- involve ethics, values and critical thinking
- lead to responsible action, where possible linked to community groups and projects
- aim to develop the fundamental concepts of intercultural awareness, holistic education and communication
- deal with global and local issues
- be supported by the whole-school culture and policies.

The IBO does not suggest the development of separate environmental courses in schools or the addition of further content to existing courses. On the other hand, "covering" environment-related topics in a limited number of courses which naturally deal with these issues does not necessarily result in a coherent approach or sense of focus for this area of interaction. Like the other areas of interaction, therefore, the environment is dealt with across the subject groups. As a result, it should form part of common planning that reduces duplication, increases the level of coherence and continuity from years 1–5, facilitates communication and improves the delivery of the curriculum.

Many activities for this area of interaction should be problem-oriented and interdisciplinary in nature. Regular real-life experiences with the natural and cultural environment can help students develop a responsible attitude towards the environment as a resource for leisure.

The following illustrations provides further examples of meaningful activities, projects and subject-specific work which focus on the environment.

Example 6

A school in western Europe organized a 3-day class trip entitled "Energy: Yesterday, Today and Tomorrow". This cross-curricular experience involved visits to a nuclear power plant, to a hydro-electric plant and to a disused coal mine. Year 2 teachers supported this by a follow-up in humanities, sciences, mathematics and language A classes. In language B, a visit by a retired coal-miner gave valuable insight into the hardships of the industry as endured by its workers.

Example 7

Year 3 visual art students, in a brief study of the role of sculpture in public places, attempted to try to account for the manner in which art enters into a reciprocal relationship within its immediate environment. Their understanding was further enhanced by looking at acclaimed failures and controversial art, and by trying to account for the judgments made by critics.

Example 8

In drawing parallels between Hitler's and Napoleon's invasions of Russia, a humanities teacher was led to consider how the environment can often play a key role in framing conflict. By looking briefly at the climate of a Russian winter the students began to appreciate that engaging in conflict was often about more than engaging an enemy. Students also researched and discussed several examples of how the environment has been seriously affected by modern weapons technology (for example, the Gulf War, the two world wars) and the possible effects of new weapons technology.

Health and Social Education

Defining Features of the Area of Interaction

How do I think and act?
How am I changing?
How can I look after myself and others?

This area deals with physical, social and emotional health and intelligence, key aspects of development leading to complete and healthy lives. Through this area, students become better informed about health issues as they consider life options. The students' experience in this area should develop in them a sense of responsibility for their own well-being and for their physical and social environment.

Integrating health and social education throughout the curriculum and school life aims to prepare students for life by developing their ability to make choices from alternatives and to evaluate and make decisions about health hazards which they may face. Students also become aware of related social issues and their effects on communities.

The exploration of this area of interaction goes beyond the acquisition of content knowledge. Students are increasingly in a position where they make choices that require critical thinking. Teams of teachers will therefore have to structure learning in health and social education by considering the following:

- knowledge
- skills
- attitudes
- values
- action.

Throughout the five years of the MYP, students should be given the opportunity to examine, discuss and reflect on the medical, psychological, sociological, economic and legal aspects of health. As they move through adolescence, students should also have the opportunity of exploring and reflecting on the complex network of relationships that they form with others. This is demonstrated in the following example.

Example 1

Tobacco and smoking are common topics for discussion with students of this age. This example lists ways in which a unit on tobacco use can be extended to encourage reflection and action, using the perspectives listed previously.

Knowledge	Knowledge relevant to the issue (nature of tobacco, long term and immediate consequences of tobacco use, social norms and social influences regarding tobacco use, reasons people use tobacco)
Skills	Making amends, self-reflection, decision making, refusal skills, personal management, assertiveness, self-control, self-assessment, adapting to new situations, empathy, moral judgment
Attitudes	Self-esteem, personal identity, accepting personal responsibility, self-awarenes, tolerance
Values	Respect, religious and cultural perspective, environmental responsibility, individual freedom, dilemmas, role of friends, class ethos
Action	Access to community support services, personal support from friends, family, teachers, materials

The extent to which young people consider and act on health-related issues is influenced by political, social and economic decisions at the community and national level, as well as by the actions and support of schools, families and friends. Today's leading causes of disability and early death among adults worldwide are cardiovascular diseases, cancer and depression. Among young people, physical injuries, AIDS, depression and parasitic infections are the leading causes of disease, disability and death. These illnesses are affected by a limited number of factors of risk behaviours usually initiated in early adolescence and continued into adulthood:

- unhealthy dietary practices
- sedentary lifestyle
- unhygienic practices
- tobacco use
- drug and alcohol abuse
- risky sexual behaviour
- behaviour that results in intentional or unintentional injury.

It is the school's responsibility to implement policies and provide a supportive environment, effective health education and access to health services that can prevent such risks and create conditions conducive to physical and mental health. These behaviours provide important targets for local priority action and a context from which schools can build a framework for the knowledge, values, skills and attitudes needed to pursue a healthy, balanced lifestyle.

The following list of topics, grouped in general categories, illustrates the types of issues which could be included in this area of interaction.

Looking After Ourselves

- personal hygiene, dental care, diseases, vaccinations
- health and diet, food choices, exercise and rest
- leisure and fun, stress management
- smoking, tobacco-related illnesses
- addiction, drugs, alcohol
- contraception, sexually transmitted diseases, AIDS
- self-protection, risk taking, safety in the home
- traffic awareness, road safety
- coping with accidents, first aid
- tourist awareness of health risks, malaria, yellow fever etc
- mental illness, heart disease, cancer

Understanding Ourselves

- needs and wants
- personal identity, personal management, self-esteem
- self-reflection, decision making, refusal skills
- growing up, sexuality, emotional development, understanding of physical and emotional differences
- accepting responsibility, assertiveness, self-control
- self-assessment, adapting to new situations, career decisions
- spiritual awareness

Ourselves and Others

- communication, interpersonal relationships and skills
- friendships, peer pressure, sensitivity, making amends
- bullying, harassment, authority, class ethos
- family relationships, family needs and responsibilities
- emotional relationships, conception, pregnancy
- separation and divorce
- death and bereavement, suicide

Ourselves in the Wider Society

- freedom and responsibilities, delinquency and vandalism, crime and law, firearms regulations
- cultural, ethnic and socio-economic differences, racial prejudice, stereotyping
- morals and ethics, values, religious perspectives, moral judgment, tolerance, empathy and respect
- consumer attitudes and behaviours, advertising and media
- health and legal services, old age, handicaps and disabilities, community and environmental responsibilities, political influences, public health policies and dilemmas, environmental health
- world living standards, development issues, social justice

Implementation

As this area of interaction focuses on students' personal needs, students should be actively involved in its implementation. Close cooperation is also necessary with parents and the community beyond the school. Four areas of school life should be considered to implement this area of interaction. Schools can encourage positive outcomes by involving the whole community, particularly students, in the planning and development of each of these areas:

- policies linked to health, safety and school
- physical and psychosocial environment
- curriculum
- health and support services.

It is a school's responsibility to ensure that all teachers are comfortable dealing with these issues. Professional development, information, common planning time, opportunities for reflection and discussion on the part of teachers are all important in developing a school culture which supports health and social education. There should be a high level of awareness among all staff of a wide range of health-related issues that can be integrated into their curriculum. Even if major health issues are taught in separate health or biology classes, or dealt with specifically in whole-school thematic events with invited specialists, it is important that this area of interaction is supported by all subject teachers. A balanced approach should be adopted so that the subjects across the curriculum can offer reinforcement of the concepts from various perspectives. This is shown in the following example.

Example 2

This sequence of interdisciplinary lessons uses health and social education as the focus, and leads to an awareness of how incorrect body posture can lead to injury.

Year 2 students undertake an interdisciplinary project that includes physics, biology and physical education. In physics, students carry out some experiments on turning moments, and are introduced to the concept of levers. After an introduction to the different orders of levers, students study the human skeleton in biology classes and identify some examples of levers in the axial and appendicular skeletons. In physical education classes, students use this knowledge and understanding to investigate the most important levers used in a variety of sports. The lessons continue with a study of the correct and incorrect ways of carrying out a range of activities such as sitting, lifting, throwing, pushing and pulling. Students carry out a survey on the lifting tasks performed by various members of the school community. This leads to a study of injury statistics from different sources. Finally, students present their findings and their recommendations on body positioning to the school community.

Afterwards, students should be in a position to monitor their own body movements, and those of others, and appreciate more clearly the application of scientific principles.

Health and social education issues can then be addressed in a variety of ways, such as:

- the introduction into the curriculum of specific issues linked to health and social education
- interdisciplinary projects
- separate health classes
- thematic weeks, days or sessions when special activities highlight an issue (for example, guest speakers presenting health problems facing refugees; activities highlighting health-related issues for earthquake victims, prior to a fund-raising campaign within community service)
- special assemblies
- use of resources available in the wider community of the school
- non-academic contact periods (such as advisory, homeroom period, tutorials, counselling).

At all levels, basic factual knowledge should be supported by discussion to help students develop appropriate attitudes, values and skills.

Common planning is necessary to ensure the progression of learning across the subjects and from year to year. The choice of focus on health and social education topics will also be affected by events in the lives of students, class relationships, current issues for debate in local environments and the media.

Teachers can use guiding questions as a starting point to assess the extent to which students have acquired the knowledge, attitudes, values and skills relating to this area of interaction. The following list provides examples of such questions for discussion by teachers.

Looking After Ourselves

- Can students assess their own dietary habits in relation to their need for a balanced diet?
- Do students show commitment to physical exercise?
- Are the students aware of the importance of hygiene, both socially and to prevent disease?
- Can students define their own position on tobacco use?
- What is the students' attitude to substance abuse? How can they learn to say "no"?
- Are the students aware of the risks of Aids and sexually transmitted diseases and how to avoid them?

Understanding Ourselves

- To what extent have the students acquired confidence and self-esteem? How has this been achieved?
- How can students learn the skills of crisis resolution?
- Are the students able to make mature decisions when faced with choices of activity?
- Can students differentiate between needs and wants?
- Are students able to accept responsibility within group activities and tasks?

Ourselves and Others

- Can students resolve conflict without resorting to violence?
- Can students express their needs clearly within the context of respect towards others and towards the environment?
- Do the students enjoy family relationships? What problems have they experienced in this context?
- Can they act with tolerance towards students from other cultural backgrounds?
- Can they deal with peer pressure and retain their identity and prestige within the group?
- Can they identify widely held community values and evaluate them critically?

Ourselves in the Wider Society

- Are students aware of the different standards of living experienced by other people in their locality?
- Are the students aware of the potential health and environmental risks of certain large scale projects?
- Do students have strategies to deal with situations of bullying, harassment or prejudice?
- Can students discuss the relationship between lifestyle choices and the leading causes of death?

Example 3

This is an example of the way in which a team of year 2 teachers have decided to integrate the area of health and social education in a number of subjects during one school term.

Language A	Students reflect on and discuss the emotional impact of language. They discuss personal and group experiences of labelling and bullying. Using movie and television extracts, passages from literature and magazines, they discuss how language can hurt or heal.
Mathematics	During a fractions and graphing unit, students compile data on how they use their time during the week. This generates discussion on time management and balance of leisure and exercise with a healthy lifestyle, as well as reinforcing ATL.
Sciences	Science students are working on a unit on nutrition. They evaluate whether their own diet over the course of a week constitutes a balanced diet.
Humanities	Issues of social justice are dealt with in a "Teen Court", a mock trial derived from a play they have just studied.
Language B	In all language B classes students are working on foods and regional cuisines. Students design and prepare a menu.
Physical Education	Students are working on a unit on fitness. They assess their fitness level and relate energy intake (diet) to energy output. The link between diet, exercise and health is reinforced.

As a result of this discussion, teachers agree to strengthen the focus on nutrition in a more interdisciplinary way: the mathematics teachers decide to include data on nutrition in their fractions and graphing unit. The language B teachers add the evaluation of the menu in terms of meeting general nutritional requirements, as studied in the sciences.

Delivering the Areas of Interaction

Introduction

As schools develop the programme, they must consider two essential conditions for the successful implementation of the areas of interaction:

- curricular strategies
- school-wide planning.

This section deals with these two aspects and provides examples. However, these examples only show how schools can use a variety of means to organize and implement the areas of interaction. Each school is expected to develop the areas of interaction in ways appropriate to its size, its individual, local or national requirements and its own expectations. Schools should therefore allow their teachers to discuss and decide on their own strategies and models of development.

Curricular Strategies

Integrating the Areas of Interaction into the Curriculum

All teachers are responsible for making the areas of interaction an essential part of their curricular planning. Teachers should therefore be encouraged to discuss, understand and become involved in facilitating the exploration of these areas by students. As they design their curriculum within and across subject groups, teams of teachers will consider how they can:

- develop subject-specific and cross-curricular skills and habits of mind through approaches to learning

- help students understand the dimensions and the interconnected nature of the areas of interaction

- contribute to the students' growing awareness and understanding of issues linked to the areas of interaction

- establish opportunities for students to act as a result of their understanding of these issues.

The areas of interaction should therefore emerge through all dimensions of the curriculum.

- The **written curriculum,** or the identification of content for each age group within the curriculum framework, can be based on discrete disciplines and/or integrated within an interdisciplinary or project-based option.

- The **taught curriculum** refers to teaching approaches and the corresponding development of skills and thinking processes on the part of the students.

- The **learned curriculum** is the application of effective assessment of all dimensions of the students' learning. This assessment should be consistent with the learning and involve students' reflection and self-assessment.

Subject-specific Curricular Planning

As teachers plan the curriculum within their subject groups, and individual modules and lessons within it, they should consider the influence of the areas of interaction on the students' learning and use them as common vocabulary to enhance students' awareness.

For young students, this awareness will start with the level of **identification** of connections with broad issues and concepts. As students grow in their understanding, the integration of the areas of interaction should develop from explicit links to a real **focus** on specific aspects of the areas and an **exploration** by students of their dimensions as a context that enhances learning. The following examples illustrate these different levels of integration of the areas of interaction within subject-specific teaching.

Example 1

First year students are asked to present to their class short weekly reports about an event or news item that they consider significant. As they present their current event or issue, the teacher leads the class discussion further to focus on a related issue linked to the area(s) of interaction. In many cases, the teacher and students themselves will soon point out different perspectives linked to the issues and therefore extend the students' understanding beyond obvious or narrow interpretations of the area(s) of interaction concerned.

Following the discussion, the student is asked to place his/her newspaper clipping, photograph, or other visual representation of the event, on the appropriate section of a large bulletin board which is colour-coded for each area of interaction.

This simple activity allows students to start recognizing the different dimensions of these areas, and guides their choice of events. It starts at an elementary level of awareness, but it is very open-ended and can generate very meaningful inquiry for students, either individually or in groups.

Example 2

While third year students study a play in their language A class, they focus on the area of *homo faber* by considering the ingredients of good comedy. This focus will take the students from the study of the individual play studied as part of the curriculum to the characteristics, needs and expectations of the audience, as well as different ways in which playwrights have addressed those needs in different times and places. This focus also allows the students to consider cultural similarities and differences in theatrical conventions and in ideas of what constitutes humour.

Example 3

Students in year 4 are conducting independent investigations and group research into a variety of science (biology) issues relevant to **health and social education** and **environment**. They explore perspectives on issues such as sleep deprivation, genetically modified foods, or water treatment in developing countries. The activity culminates in a presentation by each group to the rest of the class who provide brief feedback based on a simple presentation rubric.

The activity meets the objectives and the assessment needs of sciences in the programme: the individual and/or collaborative study and presentation of work are assessed according to the sciences criteria, including "One World", which explicitly links the subject group and issues related to the areas of interaction. By giving students ample room to develop a topic of particular interest to them, the process is also an experience that can contribute to the personal project in year 5 of the programme.

Teachers should look for opportunities to develop the natural connections with, and a focus on, the areas of interaction within their curriculum. The subjects should all contribute, in different ways and to different degrees, to the students' awareness and understanding, to the development of skills and attitudes, to action and to reflection.

In planning this focus, teachers should follow some basic principles.

- It is counterproductive to try to integrate all areas of interaction into all activities. Teachers should remain true to the objectives of their subject and avoid contrived links which students would soon find artificial.

- Common discussion and planning of the integration of the areas of interaction in individual subjects allows teachers to become aware, and take advantage of, the ways in which they can reinforce cross-curricular concepts and skills.

- Students must be given time for reflection and for personal exploration of meaningful issues. Appropriate integration of the areas of interaction should enhance learning and encourage positive attitudes: the aim is to encourage students to be actively involved and engaged in learning and inquiry for its own sake.

- Within approaches to learning students are engaged in reflection and active inquiry throughout the curriculum. Students should become increasingly aware of how learning is organized and dealt with through the areas of interaction. Explicit references to the areas should not be superficial or contrived links, but rather directions given to students' inquiry and reflection on given topics. The students' growing capacity to analyse concepts and issues in terms of their place within the areas of interaction is assessed formally through the subjects, and culminates in the personal project.

Interdisciplinary Approach

The curriculum developed by teachers from the required framework in each subject group is interdisciplinary in the sense that all subject teachers are dealing with the same areas of interaction and fundamental concepts of the Middle Years Programme. Participation across the teaching staff stimulates discussion, cooperation, provides insights into each other's academic subject groups and gives teachers the positive feeling of working as a team.
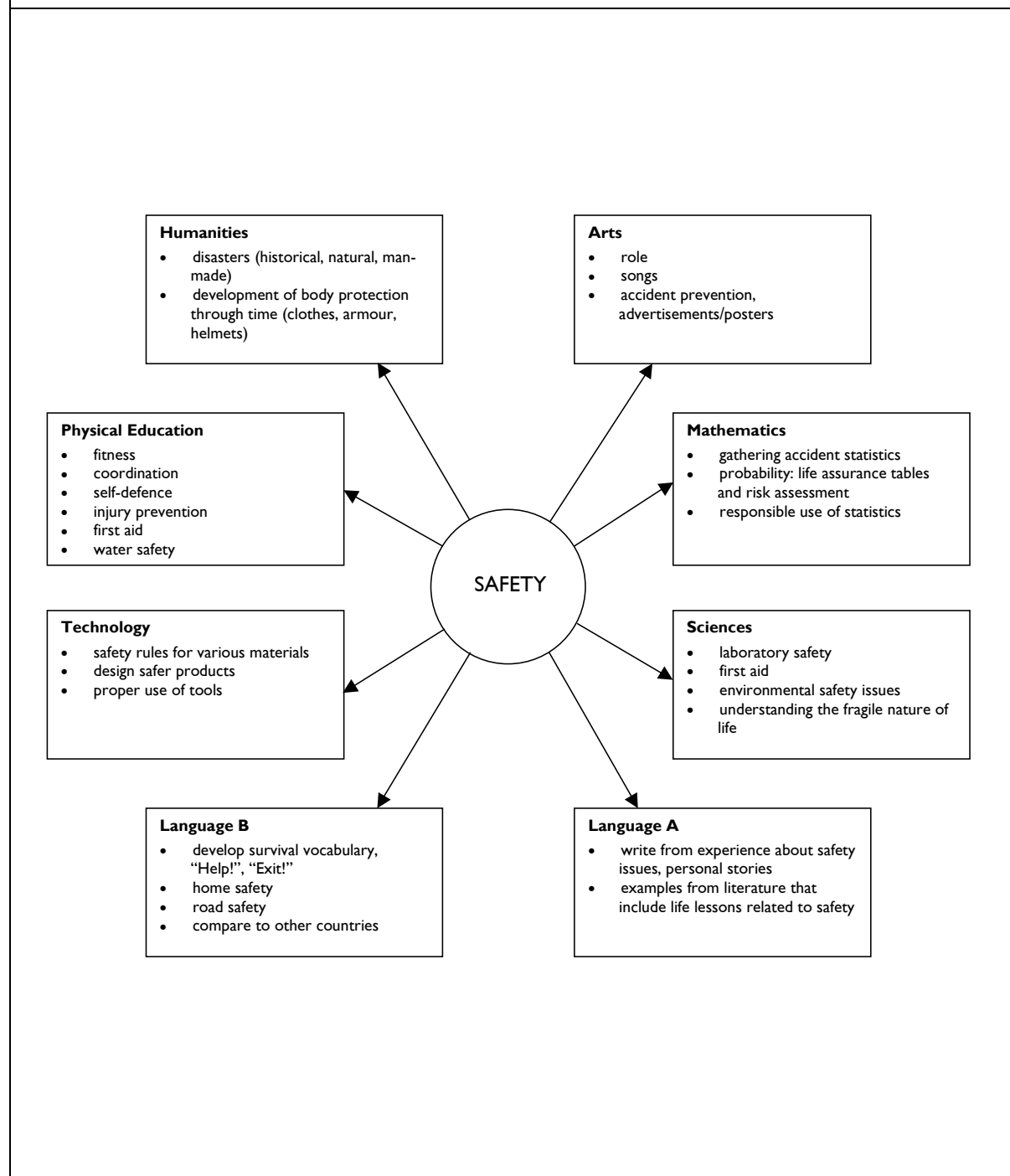
As human activity breaks down the barriers of academic disciplines, many occasions will occur when two or more subjects come together and reinforce each other, providing better insight for students as they focus on the areas of interaction through subject work. Some schools structure some disciplinary learning in thematic modules that combine two or more subjects to outline their natural links: examples include arts and communication (visual and performing arts, technology, language), science in sports, environmental science (sciences, mathematics, geography), literature and art.

Similarly, as projects or special events linked to the areas of interaction highlight their importance, they can encourage higher level thinking, problem-solving and decision-making skills. Through a careful choice of overall theme and guiding questions, students can use their experience of adolescent concerns (for example, rules and regulations, questioning authority) to come to an understanding of more global issues (such as laws and social customs) by exploring global themes (such as government and justice). Different disciplines can bring their own perspectives to such guiding questions as "What makes a law fair?" or "How can society treat its offenders fairly?"

Interdisciplinary project-based work can develop students' collaborative learning skills by allowing different types of groupings. Some schools occasionally break down the usual age-group barriers and encourage students of different ages to work together on interdisciplinary projects closely linked to the areas of interaction.

Example 4

The following diagram represents the result of a first brainstorming activity done by teachers of year 1 MYP students to prepare interdisciplinary work on the concept of safety. Teachers will then choose from this list to plan teaching. They will also consider ways in which resulting action and reflection can help students gain a deeper understanding of the concept and related issues.

Humanities
- disasters (historical, natural, man-made)
- development of body protection through time (clothes, armour, helmets)

Arts
- role
- songs
- accident prevention, advertisements/posters

Physical Education
- fitness
- coordination
- self-defence
- injury prevention
- first aid
- water safety

Mathematics
- gathering accident statistics
- probability: life assurance tables and risk assessment
- responsible use of statistics

SAFETY

Technology
- safety rules for various materials
- design safer products
- proper use of tools

Sciences
- laboratory safety
- first aid
- environmental safety issues
- understanding the fragile nature of life

Language B
- develop survival vocabulary, "Help!", "Exit!"
- home safety
- road safety
- compare to other countries

Language A
- write from experience about safety issues, personal stories
- examples from literature that include life lessons related to safety

These interdisciplinary projects and/or events should not be used only to motivate students nor as add-ons to the "real" curriculum. Too many activities or contrived links between subjects within a thematic project do not necessarily serve the students' understanding of the issues or extend learning. However, carefully prepared projects dealing with wide issues involving several disciplines can result in vigorous as well as academically rigorous learning.

> The "Delivering the Programme" section of the *Implementation and Development of the Programme* guide provides further advice on approaches to teaching within the MYP, and on the interdisciplinary potential of its curriculum.

Discrete Courses, Modules or Schemes

Schools are free to explore a range of possibilities for implementing the areas of interaction in an effective way. While the areas should be interactive among themselves and integrated throughout the school's curriculum, some schools may also wish to highlight certain areas at certain times. Examples include:

- running a separate course or module on health for a specified period of time during the school year in addition to the integration of health and social education issues into subject teaching

- teaching some specific approaches to learning skills as a discrete entity at various points of the programme, for example emphasizing research skills in preparation for the personal project

- planning and organizing a community and service scheme outside class time with the help of outside agencies

- setting time aside to plan and prepare for a special event linked to the areas of interaction, such as an exhibition, a science fair, or a week-long series of activities on a high-profile theme.

In many ways, emphasizing specific aspects of the areas of interaction in this way gives prominence to these areas and allows the students to pay special attention to chosen themes, issues and skills. However, the MYP recommends a balance of approaches in the choice of curricular strategies.

It should be remembered, however, that the areas of interaction are meant to be truly integrated into the curriculum, involving all subject groups. Discrete modules or schemes should not take precedence over the collective effort by all subject teachers to infuse learning with their focus.

Teaching Approaches

Integrating the areas of interaction should be done in a variety of ways. Teaching methods vary from one individual to another and depend to a large extent on the subjects themselves. Teachers, however, should reflect individually and collectively on the methods used within their classes and try to achieve a balance of approaches that suit a variety of learning styles.

Examples include:

- formal teacher instruction, using one or several areas of interaction as a focus

- presentations and inquiry-based projects led by students themselves

- open-ended problem-solving activities in or out of the classroom context, involving individual and/or collaborative work
- games, role-plays, field trips, extra-curricular activities.

Focus on the areas of interaction may be made explicit through the themes and concepts themselves, through the focus of the tasks, or through broad-based guiding questions developed by the teacher and/or the students. Such guiding questions frame the content and help the students to find the essential elements of the unit by leading them to explore the relationship between the content and the area of interaction. Guiding questions can prompt students to ask more questions, and ultimately to use the content as well as research skills and thinking skills to arrive at answers. In the process, connections to other areas of interaction can be made.

Example 5

Year 4 students are studying Shakespeare's *Macbeth* in their language A class. As they read the work and study characterization, plot development, poetic language and theme in the context of Shakespeare's theatre, they focus on the following guiding question linked to the area of health and social education: "How do interpersonal relationships affect an individual's ambitions, place in society and success in life?"

The question helps students empathize with the characters of the play, making it more relevant to them. Moreover, by studying how the characters in a timeless drama interact with this issue, students gain more than a knowledge of Shakespeare and *Macbeth*. They will be able to apply their knowledge to their own social education and to life in society.

The IBO encourages schools to use a balance of approaches. It does not prescribe any specific teaching methodology. Teachers should ensure that the range of teaching approaches chosen to integrate the areas of interaction:

- are embedded in the curriculum and build upon prior knowledge
- are placed in context and based on real, essential issues
- are age-appropriate, thought-provoking and engaging
- reflect the students' needs
- are open-ended and involve problem-solving skills
- extend learning through disciplined inquiry and research
- involve communication of ideas and personal reflection.

Organization and Planning

School-wide Planning

The areas of interaction are designed to provide meaning, relevance and cohesion within and across the disciplines taught to students in the MYP. They are therefore fundamental to curriculum planning.

- **Vertical planning** involves teachers in years 1–5 of the MYP in planning, either in their own subject groups or in interdisciplinary teams.

- **Horizontal planning** involves teachers of the same year group (within their own subject groups or in interdisciplinary teams) planning together.

Both types of collective reflection and planning are essential to the effective integration of the areas of interaction and the success of the MYP. Discussions involving heads of departments and subject teachers as well as area of interaction or grade level leaders may include the following issues:

- mapping of topics, concepts and skills for a balanced, coherent curriculum

- mapping the areas of interaction, including the progression of approaches to learning skills from years 1–5

- discussion of expectations and assessment for each year level, including student reflection and self-assessment

- meaningful integration of the areas of interaction in the subjects and/or through interdisciplinary teaching

- extra-curricular activities linked to the areas of interaction, such as community service projects

- recording and display of student work in relation to the areas of interaction

- reflection and evaluation of past activities and projects, and planning of new ones

- sharing of successes, difficulties and ideas for the future

- discussion of, and recommendations for, future needs (budgets, resources)

- training and professional development needs and activities.

Successful development of the areas of interaction depends on the provision of regular meeting time for planning and collective reflection. This process develops a shared understanding among staff of the dimensions of the areas of interaction, and it allows teachers to consider the whole curriculum from the point of view of the students.

> The "Delivering the Programme" section of the *Implementation and Development of the Programme* guide provides detailed comments about team planning within the MYP.

Mapping the Areas of Interaction

To give the students a balanced and age-appropriate experience of the areas of interaction, it is important for schools to develop tools which allow teachers to see "the big picture". Mapping the major focus on the areas of interaction at each grade (year) level promotes teachers' reflection, discussion and development of the MYP. It helps teachers to become aware of what is going on in their colleagues' classrooms, and therefore to understand their own students' experience better. In this way, they can consider the areas of overlap between subjects, avoid "overkill" in some areas and neglect of others. Teachers can sequence learning in their subject groups to reinforce related concepts and skills between different subjects, and often save time and effort for themselves and their students.

The areas of interaction can therefore be mapped **horizontally**, where a summary document shows the major focus for each area in a given year of the MYP. It is a tool to facilitate discussion among teachers about what really goes on in the class, and it is the basis for common planning.

The areas of interaction can also be mapped **vertically**. The summary chart showing the major focus for each area from year 1 to year 5 of the MYP can be compiled by area of interaction leaders or by the team of grade level leaders and shared with the staff. Each school should develop its own tool, which needs to be revisited regularly to reflect changes.

Example

A school has developed a general framework to direct the teachers' focus on the area of interaction **health and social education**. The explicit attention to specific aspects of the area allows teachers to plan appropriate activities individually and collectively. The following is a summary of the topics explored in years 3 and 4 of the MYP.

Year 3	**Being fair to yourselves and others**
	Relationships
	The nature of different kinds of relationships
	How do I react and interact with different people and why?
	Changing relationships with peers, friends, parents and others
	What can I do to make and build strong, healthy relationships?
	Health
	Reproduction, contraception and sexually transmitted diseases
Year 4	**The world in which we live**
	Where am I now, where do I want to go?
	Making informed choices about my future. Which skills and qualities do I possess and what relevance will they have to my future?
	Making compromises
	Alcohol, tobacco, medication and illegal substances; aspects of use and abuse
	How can I identify different types of conflict and learn to create a variety of options for resolving them?

Providing these two types of planning tools for teachers allows them to have a clearer idea of the students' experience of the areas of interaction, and to see how their subject can contribute to a real understanding of the related concepts, skills and knowledge. Teachers can then prepare single lessons/units or modules accordingly, focusing on aspects of the areas in ways which take the overall plan into account.

School Structures and Policies

The MYP Coordinator and the Educational Team

The school's MYP coordinator has a key role to play in the organization and successful integration of the areas of interaction into all aspects of the MYP. The specific responsibilities of the MYP coordinator will vary, depending on the number of students and teachers, the type of school and its management structure. However, this should be viewed as a **leadership position** with the support of the entire management and teaching team. The coordinator is responsible for monitoring the implementation of the areas of interaction through individual and team work.

Most schools find it useful to establish an MYP educational team to assist the MYP coordinator by involving a number of key individuals among the teaching staff, management, parents and students. The educational team will need to consider issues such as strategic planning, allocation of resources, timetabling and coordination. Such a team will be kept informed of the ways in which the school is implementing the areas of interaction and will provide direction to the MYP.

Area of Interaction or Grade Level Leaders

The IBO advises schools to give individual teachers responsibility for the coordination of the integration of the areas of interaction. This can be done in different ways. Schools may choose to appoint areas of interaction leaders for all grades and/or grade level (year) leaders to oversee the implementation of the respective areas for a particular age group.

These leaders will typically be members of the educational team. They will be responsible for:

- ensuring that the areas of interaction are well understood by teachers
- helping to decide how the areas of interaction can be addressed by subject-specific content and special activities in each year of the programme
- contributing to an overall plan for the integration of each area of interaction in a gradual way, according to the age group
- maintaining contact with teachers and departments, and helping to sustain momentum and enthusiasm
- monitoring the implementation of the areas of interaction.

Where the MYP is being offered jointly by a partnership of two or more schools, the articulation of learning through the subjects and the areas of interaction needs to be carefully considered, to ensure an integrated transition as students move between schools. The teams of leaders in the different sites must meet and plan together.

In all cases, attention to disciplines remains crucial to ensure the effective implementation of the MYP within the subject groups in years 1–5. Grade or year level meetings are also essential for the development of links between disciplines and the implementation of the areas of interaction.

> The *Implementation and Development of the Programme* guide provides detailed discussion and examples of various MYP school structures.

School Policies

The implementation of the areas of interaction can be supported and put into practice in everyday school life through the collective consideration and adoption of relevant school policies. Examples include:

- systematic student training in fire safety and first aid

- student council and government

- student involvement in peer help groups and other school community activities

- administrative policies and contractual arrangements allowing appropriate planning time

- active involvement of staff in decision-making

- general school regulations concerning the use of alcohol, drugs and smoking

- policies regulating the choice of food available at the school cafeteria and in vending machines

- environment and safety policies regulating the use of school facilities and equipment, recycling and the promotion of waste reduction.

Such policies can create an environment within the school community in keeping with the spirit of the areas of interaction and the fundamental concepts which drive the MYP.

Resources

Training and Resources for Teachers

Support and Professional Development Opportunities

The areas of interaction provide a common vocabulary and framework for teachers, not only in their own school, but around the world. However, teaching the MYP requires teachers to go beyond the vocabulary itself, to reflect and to act in ways which may be unfamiliar to them, or very different from the way they were taught themselves and contrary to some of the common practices in their former educational environment.

Arriving at a common understanding of the basic principles underlying the areas of interaction and developing an ownership of effective approaches takes time, practice and reflection. The regional offices of the IBO organize different types of training workshops and professional development activities for MYP coordinators and teachers. Practical examples of teaching through the areas of interaction are discussed and shared at these events.

Schools must ensure that accurate information, as well as collective and individual support, are provided for new teachers to grow in their understanding of these fundamental aspects of the MYP. Curriculum maps and lesson plans also help new teachers infuse their teaching with the principles of the areas of interaction.

Teachers are also encouraged to share ideas with colleagues in other participating schools. Personal, mail or electronic contacts with other practitioners of the MYP can lead to projects with common issues and themes in different schools, resulting in a richer exchange of ideas and an excellent intercultural experience for teachers and students.

Furthermore, teachers are encouraged to consult, and contribute to, the IBO's online curriculum centre as a means of sharing ideas and resources among MYP schools. All MYP curriculum materials are posted on the online curriculum centre, and schools are encouraged to add their own school projects and ideas for useful resources. Discussion forums provide a tool for the global exchange of ideas and debate among MYP teachers.

Using a Variety of Approaches and Resources

Focusing on the areas of interaction will undoubtedly affect the roles of teachers and students, and consequently the teaching methodologies and the resources used by them. Teachers have as crucial a role to play in curriculum development as in instruction itself. Students are encouraged and empowered to ask their own questions and seek solutions in response to real-life problems and issues. Therefore, traditional lecture-style instruction is inappropriate in many instances. On the other hand, the pre-determined sequence of learning dictated by textbooks may not take full advantage of the learning opportunities provided through collective attention to the areas of interaction.

The programme encourages teachers to use a balance of teaching methodologies across the subjects suitable for the different age groups in the MYP. This may include flexible use of textbooks and traditional classroom resources. However, as students conduct research and study community and world issues, teachers will have to plan the use of a variety of resources in the classroom, the school and/or local library, through the Internet and in the community. Access to educational documents and data produced by world organizations such as UNESCO and the World Health Organization (WHO) are also valuable sources of support for inquiry into many aspects of the areas of interaction.

Use of Resources by Students

Students should also learn to use appropriate and varied resources within their learning experience. Approaches to learning should encompass a range of techniques and approaches and allow students to discover and use appropriate resources to conduct independent inquiry and share the results of their research. Guided by their teachers, they will have to gather and interpret data from multiple sources, evaluate information critically, analyse and formulate opinions from a mass of information.

Working with a variety of resources on real-life issues develops the students' critical awareness and resourcefulness. The development of problem-solving and critical thinking skills involves the use of varied and up-to-date resources, including information technology.

Use of Outside Resources

Outside agencies and resources within the community are essential tools to support the students' experience of the areas of interaction. They can provide effective support in the form of documentation and data, as well as personal involvement in some aspects of the delivery of the MYP.

Example

Within the area of interaction **health and social education** students in year 3 are investigating and discussing different kinds of family structures in their humanities class. The language B teachers have offered to contribute to the topic by using resources in the form of pamphlets from a local social services agency written in the target language. This activity corresponds to the objectives of reading comprehension and oral expression within language B. Students discover through their language B classes that multilingual services are offered in their city to single mothers during pregnancy and after the birth of their child.

The activity is further enriched within the language B class by the visit of one of the officials of this local agency, who provides more details of the needs within the community, resources available, and the forms of volunteer work available through the agency.

As a result, a small group of students within the class take on a community service project related to this issue, in the form of a toy drive for the children, and the possibility of free babysitting services for the mothers. In so doing they help fill a real community need, and for some of them this activity contributes to improving their oral skills in their language B.

The involvement of outside agencies can enhance aspects of the MYP by linking the students' experience of the areas of interaction more closely with the community, and providing an opportunity for direct, active involvement.

Parents and other members of the local community can also provide invaluable help in the delivery of the MYP by providing a wealth of experience in many different fields and new perspectives on issues linked to the areas of interaction.

Assessing the Areas of Interaction

Assessment in Subjects

Coherence between Learning and Assessment

The areas of interaction form an integral part of the curriculum in schools offering the MYP, including the assessed curriculum, where teachers and students evaluate all dimensions of learning. At the time of authorization, and then regularly through MYP evaluation, schools are expected to identify how the areas of interaction are the focus of teaching and assessment.

The areas of interaction are not subjects in their own right, but rather they contribute to shaping, organizing and enhancing teaching within the disciplines. Teachers are not expected to allocate grades for the areas of interaction, but to make them an integral part of their assessment of student work, since they should be a central part of teaching.

The subject group guides give aims and objectives reflecting the influence of the areas of interaction and provide examples of their integration. The areas of interaction should therefore impact on formative and summative assessment conducted according to the subjects' assessment criteria.

Teachers should take account of the following points.

- The areas of interaction should play an important part in the choice of topics and tasks in assessment as in learning. Assessment should allow students to provide evidence of conceptual understanding and insight gained through the learning activities. Teachers should place assessment tasks in the context of the global issues and guiding questions related to the areas of interaction. Focus on the areas of interaction encourages and facilitates varied forms of authentic assessment.

- Approaches to learning (ATL) skills should 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. Assessment should also require students to use information from different sources critically and to make appropriate use of technology.

- The objectives and assessment criteria in some subjects focus specifically and explicitly on some aspects of the areas of interaction. For example, sciences in the MYP place learning in the context of "One World", requiring students to reflect on the ways in which science impacts on the environment and society. Humanities assessment criteria place special emphasis on the ATL skills. Other subjects link the objectives and assessment criteria to the areas of interaction more implicitly. In all cases, assessment should reflect learning and therefore involve students actively in presenting the results of their inquiry linked to the areas of interaction.

> The *Implementation and Development of the Programme* guide and subject group guides provide information on general principles of assessment within the MYP and specific guidance for each subject group.

Student Reflection and Self-assessment

Reflection is an essential element of effective learning. Through ATL, all teachers are responsible for involving students actively in all stages of the learning process.

The objectives of the MYP in all subject groups require students to develop higher thinking skills and conceptual understanding. Student reflection and metacognition are essential stages in that process. Several assessment tools can be helpful in that process:

- the development of specific rubrics detailing what good work looks like
- process journals (required in some subject groups, like the arts or technology, recommended in all)
- portfolio assessment, where appropriate
- self-assessment sheets related to specific approaches to learning skills
- open-ended questionnaires for formative assessment
- regular written personal statements by the students about key issues or important activities within the period (for example focus days or special projects)
- public events when students present the results of their inquiry to other students and/or parents, and reflect on their significance
- reflective journals which allow the student to detail their community and service activities and reflect on their impact.

The following example is a self-evaluation report written at the end of a term by a 14-year-old second language learner at an international school in Europe.

Example

Self Evaluation

This quarter went by very quickly. I thought it was the hardest quarter yet. We were overfilled with work and we received a project in most of the subjects. There were times when my work and my homework slid, but overall, this quarter was fun.

The piece of work I did which I got the most satisfaction out of was my *Call of the Wild* project. I did a painting of buck, who was the main character of this novel and a short history report of Alaska along with a poster. At first, I was just going to hand the painting, but later on, I thought that I should work on another aspect. As a result, I ended up doing a report. This was a great benefit to me because I learned more than just the history of Alaska, but I learned some important information on other fields such as the environment and politics.

The project that I would have liked to improved on was my science project. I was very happy with the amount of information we came up with. My partner and I had very team work as well. It was such a big disappointment that we couldn't hand in one of our work in time, we were in such a hurry to get it in by the due time. I also would have liked more time on our poster.

I accomplished some of the goals from the last quarter. For one thing, I did a quite a bit of service this quarter. The Student Council took a break from dances and organized some events to raise our school spirit.
I also started peer tutoring which made me understand the difficulty and the fun in teaching.

The other goal that I accomplished was joining the girl's soccer team. This was a big goal for me and I am very proud I achieved it because the competition was against high school girls.

Academically, my goal is left unaccomplished. I did not receive a seven for any of the subjects this quarter, which I have no arguments for. I wish I had been more organized and more alert. Due to some family issues, I missed out on some homework assignments from classes such as English and Science.

My next goal is doing my assignments on time. Not only that I would like to spend more time on it and take it more seriously. This goes especially for Science and English.

My other goal has to do with the Service project. I chose child labor. This might be my first step to achieving my dream career, which is joining the UNICEF and help kids all around the world. I am prepared to work my heart out on the project, and I would like the finished product to be as satisfying as my *Call of the Wild* project.

The *Implementation and Development of the Programme* guide provides examples of similar tools. Teachers are encouraged to consult the IBO's online curriculum centre, and to post their own examples of self-assessment tools that reflect the areas of interaction.

Recording and Reporting

Assessment procedures should be reflected in the way teachers record the results of student assessment, and report them to students and parents. Many schools opt for qualitative assessment of understanding, skills and attitudes linked to the areas of interaction in subject teaching, individual and group projects.

Assessment of the areas of interaction may be reported in a number of ways.

- Approaches to learning skills are often explicitly detailed on reports, in terms of cross-curricular and subject-specific skills.

- In many cases, community service results in regular communications with students and parents. Assessment involves the student as well as the school and beneficiaries or their representative as arranged by the school.

- Special projects completed within subject teaching can clearly place some assessment tasks in the context of the exploration of the areas of interaction.

- Portfolio assessment can be a useful tool to help students reflect on the focus on areas of interaction within a range of tasks.

- Teacher and/or student-led conferences with parents can highlight achievement in activities and projects linked to the areas of interaction.

- The *portfolio of achievement* delivered by the IBO to all graduating MYP students is a good way of profiling the student's involvement in activities and projects linked to the areas of interaction.

> The *Implementation and Development of the Programme* guide provides examples of formative and summative reports of student progress.

Personal Project

The personal project, completed by students in the final year of the MYP, is designed to provide evidence of the individual student's understanding of the areas of interaction. It is a requirement for all students in the MYP, whether or not the school requests IBO-validated grades and certification. The form and topic of the project is chosen by the student, and should be inspired by issues or experiences directly linked to the areas of interaction. The student should have gained sufficient experience of the areas to choose a theme or issue and explore it in a truly personal, creative way. An example follows.

Example 1

Myriam, an MYP student, explored the issues relating to refugees and asylum seekers in her country and region, as part of her humanities course in year 4. She decided in year 4 to become involved in community and service activities to help secure appropriate items of clothing and household appliances for newcomers to her community. In so doing, she has discovered that little is being done, except for language courses, to help young people of her age adapt to their new social environment.

As a follow-up to her community and service, Myriam decides that the goal of her personal project in year 5 of the MYP would be to organize a local community scheme whereby students in her school will pair up with young newcomers to the community, get to know them, help them become more familiar with the city and its facilities, and make new friends.

Her personal project research focuses on the backgrounds and cultural contexts of the new immigrants to her region. As part of her project, she organizes an "awareness week" in her school to foster an interest in the issue and a commitment on the part of other students; she also initiated a variety of social activities to create personal contact between students and newcomers.

She reflects on her project in her personal statement and finds that it has helped her develop new perspectives and a deep interest in community issues.

The personal project is a very important part of the MYP for all students. It involves planning, research and a high degree of personal reflection.

- The personal project is a significant piece of work produced over an extended period, and is a direct application of skills acquired over the course of the MYP through ATL.

- The process of completing the personal project is led by the student, with supervision by a teacher. The student is required to demonstrate the appropriate commitment, as well as the ability and initiative to work independently.

- Furthermore, the student is asked to reflect in a formal way on the whole process of completing the project. The student's personal statement describes the inspiration, research and influences guiding the work, analyses the process of completion of the project and the significance of his/her findings as a result. The areas of interaction must be explicitly developed within this analysis, as the core elements of the project.

- The assessment of the personal project is a form of summative assessment of the student's ability to conduct independent work according to the aims of the areas of interaction. It includes explicit reference to the treatment of the areas of interaction through its assessment criteria.

- The personal project is prepared over the five years of the MYP in different ways. The progression of skills within ATL is essential to its completion. Students should have become sufficiently familiar with the vocabulary and key concepts of the areas of interaction to go beyond the identification of links to the areas of interaction and be able to explore chosen dimensions of these areas critically. They should also be able to link related aspects of these interactive areas in a way that demonstrates a deep understanding of their implications.

Example 2

Marina has chosen to direct the play *Living with Lady Macbeth* by Rob John as her personal project. Her reflection on the areas of interaction has guided her choice, as explained in the introduction to her personal statement.

> I found that the play choice was a very important part of my project, as directing itself doesn't necessarily cover the areas of interaction very well, while the play can address them all or most of them. I looked for a short and simple play, which used accessible language (as I wanted to work with younger students), and which dealt with modern and relevant issues that would be appropriate for a school assembly. I also found that a comedy would capture the attention of students for longer. This play also turned out to be the most suitable, as it already focused on one area of interaction- health and social education- in its plot because of its theme and critical aspects. It had simple and familiar everyday characters, the types that you would recognize in school life stereotyping. The play dealt with situations to which the students would be able to relate, raising awareness of existing prejudice and discrimination in these situations… I wanted to raise awareness and alert students to the prejudice and stereotyping problems that happen all over the world, even in our school, and as Living with Lady Macbeth deals with these themes, it seemed like the perfect choice.

Later in her personal statement, Marina reflects on the total experience of her project and develops the ways in which it has focused on community and service, health and social education, and *homo faber*. The following is an extract focusing on two of these areas.

> My project relates strongly to the area of community and service, as the play that deals with important and relevant problems in school life, like prejudice, discrimination and stereotyping, was presented in assembly, raising awareness of these problems. The play uses everyday situations and examples, so that students can more clearly relate and recognize these, perhaps preventing or stopping this in future. I believe that the presentation of the play was not only educational and informative, but also entertaining, fulfilling important aspects of community and service.

> This theme also links closely to health and social education, as it shows us wrong conduct in school through prejudice and stereotyping, showing the effects that these have on others. It deals with relevant themes for the audience – adolescence, emotions, friends, family life and pressure groups. It teaches and demonstrates the influence of friends

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and pressure groups on our lives, dealing with relationship issues and teaching us the necessities not to 'judge a book by its cover'.

One of the questions I had put to myself during the personal project process, was whether I would be able to stage this play successfully with my basic knowledge of directing, since I was dealing with a group of younger students… My main research into directing, apart from my previous knowledge from my summer camp experience, where I learned a tremendous amount, and my drama lessons at school, was done through reading. This helped me particularly in finding new exercises for the actors to improve specific aspects of their performance…Each rehearsal I did with the cast varied, as each week I had different foci and scenes to rehearse. The focus was usually brought up from a previous week's problem, also depending very much on the actors' behaviour and state of mind… From the many things I learned in the making of this project, one truly stood out – directing is much harder than it seems, but definitely worth it. One of my main problems and concerns, that made this directing hard, was to always try and find new and innovative ways to make rehearsals fun and relaxed to keep the actors' interest, yet still productive… I really liked the bond that I created with the actors in the end, as even though the whole process was a great deal of work, it was tremendously rewarding to see the final product that we had created together, thus being one of the most positive outcomes of the play… I believe my aims were accomplished: I think I directed successfully with my limited knowledge, and I feel that the actors learned a lot through this whole process, as I have concluded from their feedback. I decided that it was very important to discuss everything with my cast, so that we both thought and shared the same ideas on the play, and that we were all heard, and it wasn't only me inflicting my views upon them. Discussions ranged from the play's plot, to character objectives to the atmosphere of the play, bring very productive, though quite time-consuming – but definitively worth it. It made the actors happy to be able to give me some insight on what they thought of my directing — what they liked and disliked—and what they thought I should do to make some scenes better.

Many schools allow students to make a visual and verbal presentation of their personal project to other students and/or parents. This occasion can be quite inspirational for younger students starting to prepare their own project, as well as an excellent way for the students to express their creativity, problem-solving and critical thinking skills in a public way.

The *Personal Project* guide provides further details on the organization and assessment of the personal project.

Monitoring the Areas of Interaction

The MYP coordinator, supported by the school's educational team and the departmental structure, is responsible for monitoring the effective integration of the areas of interaction within teaching and school activities. In turn, this monitoring allows the collective discussion of, and adjustments to, the ways in which the school delivers this essential dimension of the MYP. There are several issues to consider:

- the induction of new teachers, and professional development needs
- the allocation of resources and establishment of priorities
- individual teacher appraisal and support
- curriculum review and development in the school
- preparation for regular programme evaluation.

In schools with high staff turnover, this regular process of monitoring and collective discussion is particularly crucial to the continued success of the programme. In all schools, however, it is a very important condition for the ongoing development of the MYP. In evaluating the implementation of an area of interaction, some of the questions that could be asked are:

- Has a framework for the integration of the area of interaction been devised?
- Are curricular strategies specified to identify where and how issues will be addressed in the curriculum?
- Does this plan of action ensure progression in learning from years 1 to 5?
- Are parents informed of the school's programme and do they support it?
- Is there coordination with other areas of interaction to ensure appropriate coverage and linkage?
- Is the school using available resources adequately?

Coordinators and individual teachers within the school can use a number of tools to help them monitor the effectiveness of the implementation of the areas of interaction:

- evidence of reflection in student work, process journals, portfolios and self-assessment documents
- evaluation of action projects directly linked to the areas of interaction, such as community and service activities and environmental projects
- staff reflection on specific units of work or projects, self-evaluation and goal-setting tools
- ongoing discussions of, and adjustments to, the planning of the integration of the areas of interaction, remembering that long checklists do not equate with real change in the classroom
- evaluation of the integration of the areas of interaction in subject-specific and interdisciplinary teaching
- use of the *Self-study Questionnaire* devised by the IBO for MYP programme evaluation
- requests for guidance such as monitoring of assessment by the IBO.

> The *Implementation and Development* of the Programme guide provides examples of questionnaires and other tools used by schools to stimulate discussion on the part of their staff regarding key principles of the MYP.

Glossary of MYP Terms

aims
Aims state, in a general way, what the teacher may expect to teach or do, what the student may expect to experience or learn and how the student may be changed by the learning experience.

approaches to learning (ATL)
One of the areas of interaction; it is concerned with the development of thinking skills, strategies and attitudes and the ability to reflect on one's own learning.

area leaders
Schools may designate leaders for each of the areas of interaction; they are entrusted with liaison between the teachers involved, parents, students and, if necessary, the community.

areas of interaction
The five central elements of the MYP, embedded within and across the subject groups of the programme. They are:
- approaches to learning (ATL)
- community and service
- *homo faber*
- environment
- health and social education.

assessment criteria
Criteria against which a student's performance is measured as evidenced by work produced. Subject guides provide assessment criteria to be used for final assessment for each subject group, and for the personal project.

assessment grid (rubric)
A matrix used to assess a student's performance according to specific criteria. Rubrics consist of a fixed number of levels and specific descriptors of performance for each level.

assessment task
A teacher-designed assignment used to measure student success with meeting objectives. The task will generate work that can be assessed using previously agreed assessment criteria.

community and service
One of the areas of interaction; it is concerned with developing community awareness and a sense of responsibility through service activities.

criterion levels total
The sum of the levels awarded in each criterion for final assessment in each MYP subject. The levels total is then converted to a grade from 1–7 by applying the grade boundaries.

criterion-referenced assessment
An assessment process based on awarding grades against previously agreed criteria. MYP assessment is criterion referenced.

descriptors
These describe the levels of achievement that are assessed within each criterion.

environment   One of the areas of interaction; it is concerned with the interdependence of human beings and their environments, and with sustainable development.

external moderation   see **moderation**

final assessment   The summative assessment of student work at the end of the final year of the MYP.

formative assessment   Ongoing assessment aimed at providing information to guide teaching and improve student performance.

fundamental concepts   The basic educational principles of the MYP. They include holistic learning, intercultural awareness and communication.

grade boundaries   The lowest and highest criterion levels totals corresponding to a particular grade in final assessment. These are determined for each subject group and published in the *MYP Coordinator's Handbook.*

grades   Schools must assess student work from "very poor" to "excellent" on a 1–7 scale for final assessment. Schools can also use this scale for assessment other than final assessment.

Grade 1   Very poor
Grade 2   Poor
Grade 3   Mediocre
Grade 4   Satisfactory
Grade 5   Good
Grade 6   Very good
Grade 7   Excellent

health and social education   One of the areas of interaction; it is concerned with mental and physical health, and the interactions between the student and community.

holistic learning   One of the fundamental concepts of the MYP; it stresses the interrelatedness of various disciplines and issues.

homo faber   One of the areas of interaction; it is concerned with the evolution, processes and products of human creativity, and their impact on society and on the mind.

IBNET   A service that allows MYP coordinators to complete administrative procedures and obtain news and information from the IBO via a password-protected web server.

integrated subjects   School-specific subjects that integrate elements of several disciplines within or across MYP subject groups.

internal assessment   The assessment of a student's work that is carried out by the student's teacher.

internal standardization

The process by which teachers of one subject or subject group in a school ensure a common understanding and application of criteria and descriptors.

issue of results

The issue of MYP records of achievement and certificates by the IBO, following the moderation of the schools' internal assessment. The documents are sent directly to schools following their submission of internal assessment results (this applies only to schools that request IBO-validated grades).

judgment

The consideration of a student's work against an individual assessment criterion.

marksheets

These forms are completed by schools on IBNET. They provide criterion levels totals for MYP subjects and the personal project, and an estimated final grade on a 1–7 scale.

Middle Years Programme (MYP)

The IBO's programme designed for students between the ages of 11 and 16 years. It is organized according to the fundamental concepts of holistic learning, intercultural awareness and communication.

moderation

The procedure by which sample assessed work from teachers is reviewed and adjusted externally to ensure assessment has been carried out according to MYP criteria and standards (this applies only to schools that request IBO-validated grades).

moderation factor

A moderation factor is applied to the internal assessment results sent in by the school, where samples of students' work submitted by the school show that the standards applied by the teachers vary significantly from MYP standards.

moderation registration

All schools requesting IBO-validated final grades for their students are required to register subjects for moderation using the IBNET online moderation registration form.

monitoring of assessment

A service that provides support and guidance to MYP schools with regard to internal assessment procedures. It is offered to all schools, and required as part of the programme evaluation procedure for schools not submitting to moderation.

MYP certificate

The official IBO document stating that the student has fulfilled a number of requirements, as stated in the *MYP Coordinator's Handbook*.

MYP coordinator

The pedagogical leader of the MYP in the school who oversees the effective development of the programme. The MYP coordinator ensures effective communication about the programme within the school, and between the school and the IBO.

norm-referenced assessment Norm-referenced assessment distributes students' scores above and below a pre-set pass or fail line, and students are measured against each other. MYP assessment is not norm-referenced.

objective One of a set of statements for a subject or the personal project, describing the skills, knowledge and understanding that will be assessed in the course/project. The assessment criteria correspond to the objectives.

online curriculum centre (OCC) A web-based service to schools that aims to support the Primary Years Programme, Middle Years Programme and Diploma Programme. Teachers can: take part in online discussions, access selected IBO publications, exchange ideas and resources, read news and information from the IBO, and participate in special events.

personal project The manifestation of a student's experience of the areas of interaction. It is completed during the last year of the MYP.

personal project supervisor The member of staff within a school who is responsible for working directly with the student on the completion of the personal project.

portfolio of achievement A folder provided by the IBO for each of a school's graduating students, whether or not they have registered for IBO-validated grades. The school and the student include IBO documents as well as school-produced records and statements in this portfolio.

programme evaluation A mandatory process for all authorized MYP schools, whereby the IBO assists schools in their own self-evaluation procedures as well as ensuring the quality of programmes.

record of achievement The official IBO document issued to all students registered for IBO-validated grades. It lists final grades in each subject and the personal project and, where relevant, the satisfactory completion of community and service.

sample schemes of work These samples, published in subject guides, provide some suggested means of enabling students to achieve the prescribed objectives. Schools may use these examples or write their own schemes of work.

samples of work Samples of students' work are submitted by schools for moderation or monitoring of assessment, on the instructions of IBCA. They are then reviewed by IBO-appointed moderators/assessors.

student registration All schools requesting IBO-validated final grades are required to register each student with the IBO using the IBNET student registration form.

subject groups

The MYP curriculum model includes eight subject groups: language A, language B, humanities, sciences, mathematics, arts, physical education and technology.

subject group guide

A guide, published by the IBO for each of the subject groups, stating the mandated objectives, assessment details, and providing sample schemes of work.

summative assessment

The culminating assessment for a unit, term or course of study, designed to provide a report on the student's level of achievement against specific objectives.

teacher support material

Teacher support material published by the IBO includes examples of units of work and assessed student work for the subject groups and the personal project. This material may appear as paper documents or online publications. It is intended to give practical help to aid understanding and implementation of the theory in the subject guides.

teaching hour

The length of teaching periods varies from school to school. For practical reasons, the IBO refers to one teaching hour as the equivalent of 60 minutes.

weighting

A measure of the relative importance of each assessment criterion.