International School Moshi

IB Middle Years Programme Handbook

2009-2010

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Information obtained from:

International Baccalaureate Organization. 2002. *Schools Guide to the Middle Years Programme* Switzerland: IBO.

International Baccalaureate Organization. 2005 - 2008. *MYP Subject Guide* (Arts, Humanities, Language A, Language B, Mathematics, Physical Education, Sciences, Technology). Switzerland: IBO.

Revised June 2009

International School Moshi Mission Statement

International School Moshi inspires individuals to be lifelong learners in a global community.

Philosophy and Objectives

We are a vibrant and diverse community of learners of many nationalities. Established by Christian foundations in 1969, we build upon years of experience to offer a fully-accredited, academically rigorous international education for students of ages three to nineteen years. ISM's student-centred approach to learning takes place in a secure environment, which nurtures the needs, challenges the abilities and supports the beliefs of each student with mutual respect to unite rather than divide. Our well-qualified and widely-experienced educators embody a passion for lifelong learning and provide educational opportunities that are relevant and engaging for all.

We are a school in Moshi and Arusha, in Tanzania, in Africa. Our setting between Mount Kilimanjaro and the Serengeti is complimented by a rich, traditional culture and history. The combination of this exceptional locale and our sound curriculum promotes the development of individuals who are perceptive, versatile, qualified and prepared for life in an ever-changing world. We respect and learn from our surroundings while striving to accept responsibility to take action towards making a positive impact in our local community. We enquire into issues of global significance and encourage our learners to discover their own place in the world.

ISM motivates all members of our learning community to become:

- **INQUIRERS**, nurturing natural curiosity and acquiring the skills necessary to conduct purposeful, constructive research.
- **REFLECTORS**, giving thoughtful consideration to our own learning and analysing our personal strengths and weaknesses in a constructive manner.
- **CRITICAL THINKERS**, exercising initiative in applying thinking skills critically and creatively to make sound decisions and to solve complex problems.
- **COMMUNICATORS**, receiving and expressing ideas and information confidently and in a variety of ways.
- **RISK-TAKERS**, approaching unfamiliar situations without anxiety; having the confidence and independence to explore new roles, ideas and strategies; and defending those things in which we believe courageously and articulately.
- **KNOWLEDGEABLE**, spending time exploring issues of global relevance and importance and acquiring a critical mass of significant knowledge.
- **PRINCIPLED**, having a sound grasp of the principles of moral reasoning and demonstrating personal integrity, honesty and a sense of fairness and justice.
- **WELL-BALANCED**, understanding the importance of physical and mental balance and personal well-being.
- **CARING**, showing sensitivity towards the needs and feelings of others and demonstrating a sense of personal commitment to action and service.
- **OPEN-MINDED**, seeking and considering a range of perspectives, and respecting the views, values and traditions of other individuals and cultures
- **ACCOMPLISHED**, attaining personal success in every task we endeavour to achieve, utilising our skills and knowledge to the best of our ability.
- **COMMITTED**, demonstrating a strong sense of perseverance and determination in approaching and completing tasks, always working with excellence and sincerity.

The IB Middle Years Programme at ISM

The Middle Years Programme of the International Baccalaureate Organisation covers the age range 11 to 16 (Years M1 to M5 at ISM). It is a curriculum model that aims to combine academic rigour with skills and attitudes appropriate to the challenges and opportunities of contemporary society, through international perspectives.

The curriculum provides for ease of movement between national systems and International Schools, as well as providing students with the opportunities to gain internationally recognized **Records of Achievement** and **Certificates** at the age of 16.

Three fundamental concepts underpin the Middle Years Programme

- **Intercultural Awareness** - concerned with developing students' attitudes, knowledge and skills as they learn about their own and others' social and national cultures. It not only fosters tolerance and respect, but also leads to empathy and understanding.

- **Holistic Education** - the programme emphasizes the disciplined study of traditional subject groups. However, through the application of the areas of interaction, students realize that most real world problems require insights gained from a variety of disciplines, they develop the skills of inquiry and understand the similarities and differences between different approaches to human knowledge.

- **Communication -** the MYP stresses the central importance of communication, verbal and non-verbal, as a vehicle to realize the aims of the programme.

Each student is also required to participate in at least one activity in the C & S (Community and Service) programme and is encouraged to take part in more. This will give him/her the opportunity to explore his or her abilities in community service projects.

The Areas of Interaction

Five broad areas known as the *areas of interaction* give the MYP curriculum its distinctive core and reflect the programme's focus on students' intellectual and social development. These are not academic subjects like the specific disciplines, but rather are *common* perspectives embedded within and visible across academic subjects. They provide a framework of learning, allowing connections among the subjects themselves.

The five areas of interaction are the following:

• APPROACHES TO LEARNING
(How do I learn best? How do I know? How do I communicate my understanding?)

• COMMUNITY AND SERVICE
(How do we live in relation to each other? How can I contribute to the community? How can I help others?)

• HUMAN INGENUITY
(Why and how do we create? What are the consequences?)

• ENVIRONMENTS
(Where do we live? What resources do we have or need? What are my responsibilities?)

• HEALTH AND SOCIAL EDUCATION
(How do I think and act? How am I changing? How can I look after myself and others?)

The Personal Project

The five areas of interaction are perspectives rather than specific subjects, and are not directly assessed nor awarded individual grades.

They are indirectly assessed through the personal project, an independent piece of work that is intended to be the culmination of the student's sustained involvement with the five areas.

The personal project allows the student to complete a significant piece of work over an extended period of time, through a process led by the student with supervision by a teacher.

The choice of type of project and its topic is made by the student in consultation with one or more of the MYP teachers responsible for supervising the project's execution according to IBO-published guidelines.

The personal project must be accompanied by a document in which the student describes the approach and the method that has been followed and provides a personal response to the issues concerned.

The school uses published assessment criteria to assess the personal project.

Certificates and Records of Achievement

Because of the truly international and authentically assessed nature of the MYP, there are no formal externally set or externally marked examinations. Instead, the International Baccalaureate Organization validates the standards of the authorized school's assessment through a process of external moderation. This procedure is required for all schools wishing the IB to issue certificates to their graduating students.

ISM is authorised to submit candidates for the **MYP Record of Achievement** and the **MYP Certificate** – formal documents certifying the student's performance in the Middle Years Programme. This is limited to schools electing to have the internal assessment of their students validated by the IBO through external moderation. The **Record of Achievement** lists results in all moderated subjects in which the student has been awarded a grade by the school.

The **Certificate** is issued only to students who complete stated requirements.

The IBO will issue an MYP certificate to each student who satisfies the following conditions. The student must:

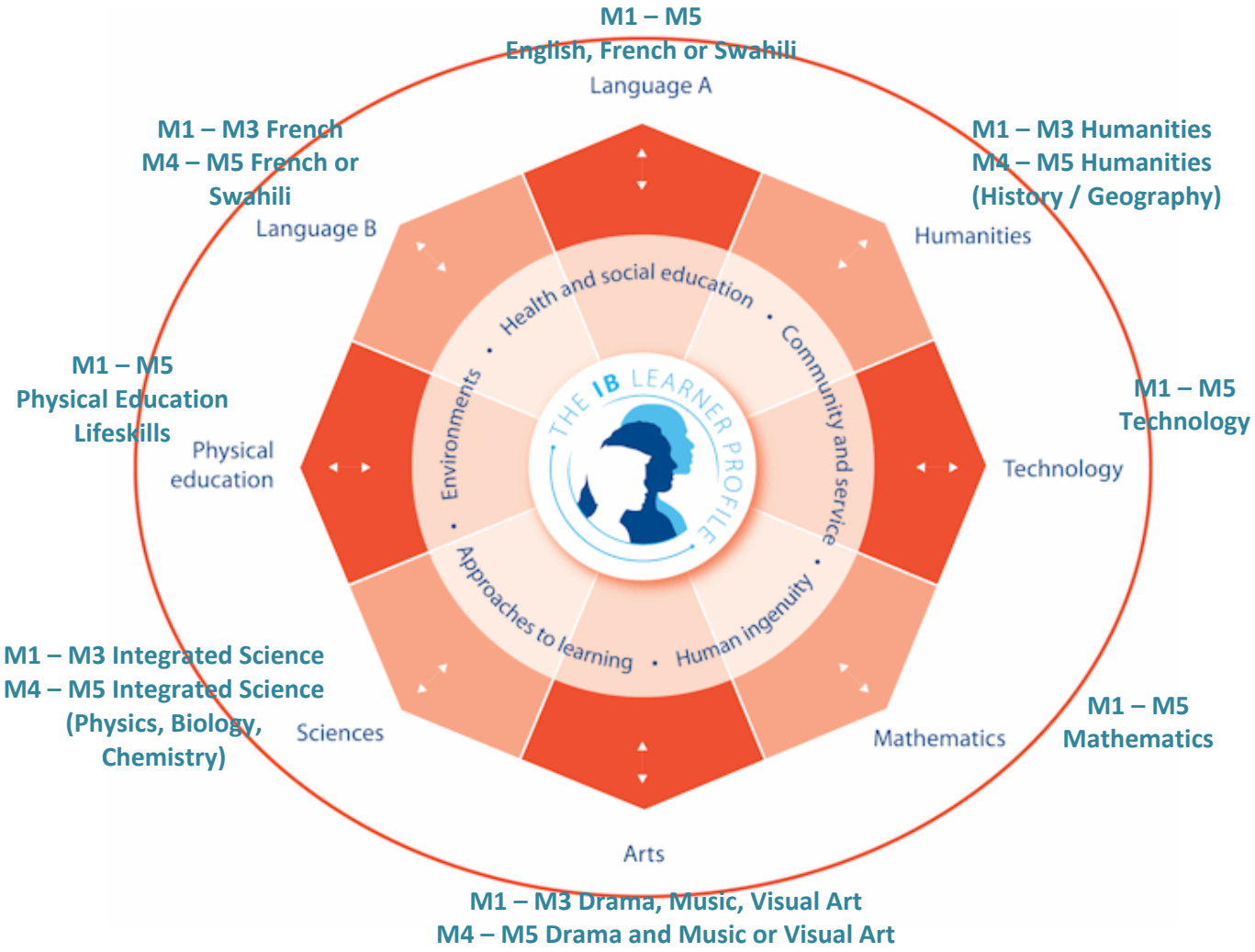
- be registered, and have gained at least a grade 2 in at least one subject per subject group of the MYP. (Please note that a second language A may be taken instead of a language B.)
- have gained at least a grade 3 for the personal project
- have participated in the programme for at least the final two years
- have met the expectations of community and service to the satisfaction of the school
- have gained a grade total of at least 36 from the eight subject groups and the personal project combined, out of a possible maximum of 63. (This total and the maximum will be different in the case of the mother-tongue language option or if a student has gained an exemption due to special educational needs.) If more than one subject has been entered in a given subject group, only the single best grade will count towards certification, although all subject results will appear on the MYP record of achievement.

The external moderation procedure in all MYP subjects and the personal project exists to ensure that students from different schools and different countries receive comparable grades for comparable work, and that the same standards apply from year to year.

All MYP assessment is carried out by the students' own classroom teachers (or by the supervisors in the case of the personal project). The IBO moderation procedures ensure that the final judgments made by these teachers all conform to an agreed scale of measurement on common criteria.

INTERNATIONAL SCHOOL MOSHI

The International Baccalaureate
Middle Years Programme



IB MYP SUBJECT TIME ALLOCATION

Subjects		Minutes of Tuition per Week	
		M1 – M3	M4 – M5
Arts	Drama	60	60
	Music	60	160 (option – Music or Visual Art)
	Visual Art	80	
Humanities		200	200
Language A	English	200	200
	French	180	180
Language B	French	180	200
	Swahili	80	200
	English	180	200
Mathematics		200	200
Physical Education		120	120
Sciences		200	300
Technology		160	120
Other programmes	Tutor	20	20
	Lifeskills	40	40
	Creative, Service, Sports activities	120	120
	Guidance Period	40-60	40-60

IB MYP SUBJECT DETAILS

ARTS

The arts subject group of the curriculum encompasses visual arts and performing arts and is of particular interest in an international program.

From the earliest times, artistic expression has been common to all cultures as human beings make statements through a variety of non-verbal forms and create objects which are aesthetically pleasing. Beyond the barrier of languages, the discovery of the cultural values of civilizations through their artistic production is one of the best ways to promote international understanding.

The coursework brings students into contact with the art forms and aesthetic values of other cultures as well as their own, and helps to develop perceptions between ideas and art. Students are encouraged to identify particular creative abilities and to master techniques appropriate to that form of expression. In addition to developing the student's own imagination and skills, the programme seeks to acquaint young people with the creations of men and women whose works have proven to be of enduring worth.

MYP arts is designed to help the student become a developing artist, one who is able to assess the level of skill and target the areas that need development. It organizes learning around the creative cycle, a dynamic, ongoing process of sensing, planning, creating and evaluating art, and one in which all the senses are involved. This cycle involves creative energy, communication, interaction and reflection.

Assessment Criteria

Criterion A: Knowledge and Understanding *Maximum 8*

Students are expected to have a knowledge and understanding of the art form(s) studied.
This criterion includes:

- knowing and understanding the theoretical basis of the art form(s) studied
- developing an understanding of themes and issues studied through the arts
- using subject-specific terminology to show aesthetic and critical awareness when discussing their work or the work of others
- understanding how historical developments and cultural perspectives have shaped the arts
- understanding how theorists, practitioners and artists have contributed to the arts.

Criterion B: Application *Maximum 10*

Students are expected to apply knowledge, understanding, skills and strategies to develop and elaborate ideas, themes or compositions. This criterion includes:

- planning and organizing effectively to define and set goals, negotiate and make decisions
- experimenting through both spontaneous and structured activities
- choosing appropriate forms for the expression of ideas, thoughts and feelings in a creative manner
- demonstrating a range of techniques and skills
- finding original and inventive solutions
- developing and elaborating ideas, themes and compositions to a point of realization
- presenting work through formal or informal exhibitions and performances.

Criterion C: Reflection and Evaluation *Maximum 8*

Students are expected to reflect on the themes and issues encountered during the course, and to evaluate creative development and processes. This criterion includes:

- using a developmental workbook throughout the creative cycle
- reflecting upon, evaluating, assessing and appraising work to support and promote creative development
- using feedback and discussion on artwork to support creative development.

Criterion D: Artistic Awareness and Personal Engagement *Maximum 8*

Students are expected to develop an aesthetic, cultural and critical awareness, and to engage with arts. This criterion includes:

- showing sensitivity to one's own and different cultures
- inviting and accepting views from others
- showing self-motivation, initiative and a willingness to take artistic risks
- supporting and encouraging peers towards a positive working environment.

Course Content / Topics

See Appendix A.

HUMANITIES

Humanities in the MYP consists of both geography and history and is intended to be taught throughout the full sequence of the Middle Years Programme. The school itself determines whether humanities is taught in distinct units, in an integrated way, or as part of an existing social studies programme. Key concepts contained within the subjects are intended to provide the foundation for further study in many fields. The programme is presented as a conceptual framework within which teachers are free to select and design individual courses that are adapted to available resources, local requirements and the specific needs of students.

The study of geography is intended to lead students from an understanding of the immediate environment to an appreciation of spatial phenomena at regional, national and global levels. Through the use of a body of major geographical concepts relating to orientation, geographical position, spatial representation, development, and environment, the student acquires the ability to analyse, classify, explain and record spatial phenomena with increasing sophistication at each level.

The study of history in the MYP demands a truly international approach. It addresses a variety of cultures and times, and stresses their increasing interaction in our modern world. History within an international curriculum stresses the ability to analyse evidence, to use historical sources in a critical way, to detect bias, and to argue empathetically. Beyond factual knowledge, students are encouraged to develop the capacity to think and write historically and to enjoy and value the past for its own sake as well as a means by which to understand and appreciate the present.

Assessment Criteria

Criterion A: Knowledge *Maximum 10*

Knowledge is fundamental to studying humanities, and forms the base from which to explore concepts and develop skills. Knowledge and understanding can be assessed through a wide variety of tasks that involve factual recall or description, and explanation. Tasks may include tests, examinations, written assignments, oral interviews and presentations, extended writing, projects and exhibits.

Criterion B: Concepts *Maximum 10*

Concepts are powerful ideas that have relevance within and across the Middle Years Programme, and students must explore and re-explore these in order to develop understanding. Learners develop their understanding of a concept to increasing levels of sophistication by applying acquired knowledge and skills. Assessment tasks should allow students to demonstrate and apply the full extent of their understanding of the concepts specified within, or across, disciplines. It is not intended that any one piece of work will assess all of the humanities concepts (time, place and space, change, systems and global awareness). Suggested tasks for assessment include extended writing, oral presentations, research projects, case studies, essays and tests, and must give students the opportunity to demonstrate the requirements of the highest level descriptor.

Criterion C: Skills *Maximum 10*

The development of skills in humanities is critical in enabling the student to undertake research and demonstrate an understanding of knowledge and concepts. Developments in the student's technical, analytical, decision-making and investigative skills will be invaluable in transferring these skills to other subject groups in the MYP, and for lifelong learning. Assessment tasks may give the student the opportunity to demonstrate one or more of the skills described in the objectives. Tasks for assessment may include fieldwork, data analysis, map analysis, evaluation of sources and/or evidence, a research paper or similar piece of extended writing, case studies, and oral presentations/interviews.

Criterion D: Organization and Presentation *Maximum 8*

Students need to develop the ability to organize and present information and ideas in order to be able to demonstrate their grasp of humanities knowledge, concepts and skills. Criterion D is more suited to assessing extended pieces of work, for example, fieldwork, research projects or essays. Teachers should use only the relevant elements of the descriptors when assessing organization and presentation. Schools must ensure that there is a set of recognized conventions for students to adhere to when documenting sources.

Course Content / Topics

See Appendix A.

LANGUAGE A

Language A is defined as the student's best language. It is typically but not necessarily the language of instruction in the school, and is obviously fundamental to the curriculum as it crosses the boundaries of the traditional disciplines. It is the basic tool of communication in the sense of enabling one to understand and to be understood, and to establish one's own identity. Language is also the avenue by which one gains access to literature and thereby to the cultural treasury of civilization. The Middle Years Programme thus distinguishes between the instrumental function of language when it emphasizes listening, viewing, speaking, reading and writing skills, and the study of literature, which encompasses a variety of periods and genres.

Assessment Criteria

Criterion A: Content *Maximum 10*

This criterion refers to the student's ability to demonstrate: an awareness of the function of language A through critical and creative writing; an understanding of the works studied; and an effective response to literature.

Criterion B: Organization *Maximum 10*

This criterion covers the student's ability to: express ideas with clarity and coherence; structure arguments in a sustained and logical fashion; and support these arguments with relevant examples.

Criterion C: Style and Language Usage
Maximum 10

This criterion refers to the student's ability to use language for a variety of purposes, including description, analysis and persuasion. Appropriate register and language should be chosen, according to intention and audience.

Course Content / Topics

See Appendix A.

LANGUAGE B

Language B, an additional modern language, similarly plays a double role. It is the means by which one communicates with another linguistic community and the gateway to the understanding of another culture. For MYP purposes, the study of a language B should represent a genuine encounter with something new to the student. It fosters communication skills and the appreciation of other cultures, increasing the students' selfknowledge and their knowledge of the world. The teaching and learning of a language B, a modern language in addition to one's own, is a compulsory aspect of the MYP in every year of the programme.

Language B Levels

There are three levels for certification in MYP language B. These are:

- language B advanced
- language B standard
- language B foundation.

Please note that students taking two languages A are not obliged to take a language B in addition.

Language B advanced

Students being registered for certification in their final MYP year for language B advanced will show a high level of competence in the language B, but will not yet be ready to undertake the language as language A. Students' higher level of competence may be the result of prior exposure to the language, being able to access the language in the host community, or other special circumstances. Language B advanced students are those who need a greater challenge than that offered through language B standard.

For students in IB schools that offer the Diploma Programme (DP), aiming for the MYP language B advanced level would be good preparation for the DP language A2 course.

Language B standard

Students being registered for certification in their final MYP year for language B standard will have studied the language B for the five years of the MYP (or four years for schools taking the four-year option), and typically will have had little or no formal instruction, and will not be proficient in the language before starting the course.

For students in IB schools that offer the Diploma Programme (DP), aiming for the MYP language B standard level would be good preparation for the DP language B course.

Language B foundation

It is a requirement that language B is taught in MYP schools in **every** year of the programme. Schools are **not** permitted to allow students to complete only two or three years of language

study within the MYP. However, the language B foundation level may be necessary for students who have not studied the same language B for the entire five years of the MYP, due to school transfer or other special circumstances. The language B foundation level may also be helpful for schools undertaking the programme flexibility option, particularly those schools implementing the MYP in the two years preceding the Diploma Programme (DP). Students being registered for certification in their final MYP year for language B foundation will have studied the language for approximately two years and will have a basic level of competence in the language by the end of the MYP.
For students in IB schools that offer the DP, aiming for the MYP language B foundation level may in some cases prepare students for the DP language B course at standard level. In other cases, students may opt for the DP language *ab initio* course in a different language.

Assessment Criteria

Foundation Level

Criterion A: Speaking and listening—message and interaction *Maximum 8*

To what extent does the student show the ability to communicate ideas, interact and maintain the flow of the conversation?
To what extent can the student:
• request and/or provide information as appropriate to the task
• understand and respond to questions and statements
• present their ideas, giving details where appropriate
• demonstrate the ability to maintain a coherent and flowing conversation?

Criterion B: Speaking—language *Maximum 8*

To what extent does the student show the ability to use the language effectively and accurately?
To what extent can the student:
• use clear pronunciation and/or intonation
• correctly use a range of vocabulary
• correctly use a range of grammatical structures?

Criterion C: Writing—message and organization *Maximum 8*

To what extent does the student show the ability to communicate, organize and support relevant ideas? To what extent can the student:
• provide information and ideas
• develop ideas
• use a format and structure appropriate to the task to organize the work?

Criterion D: Writing—language *Maximum 8*

To what extent does the student show the ability to use the language effectively and accurately?
To what extent can the student:
• correctly use a range of vocabulary
• correctly use a range of grammatical structures
• show accuracy in spelling or writing of characters?

Criterion E: Reading comprehension *Maximum 16 (8 x 2)*

To what extent does the student show the ability to comprehend a piece of writing in the target language? To what extent can the student:
• identify specific factual information
• identify main ideas and supporting details
• draw conclusions?

Standard Level

Criterion A: Oral communication—message and Interaction *Maximum 8*

To what extent does the student show the ability to communicate ideas, interact and maintain the flow of the conversation?
To what extent can the student:
• communicate information, ideas and opinions
• respond and react to questions and ideas (familiar and spontaneous situations)
• contribute to the conversation and engage actively
• maintain a flow of ideas and a logical continuity in the conversation?

Criterion B: Oral communication—language *Maximum 8*

To what extent does the student show the ability to use the language effectively and accurately?
To what extent can the student:
• use clear pronunciation and/or intonation
• correctly use a range of vocabulary
• correctly use a range of grammatical structures?

Criterion C: Writing—message and organization *Maximum 8*

To what extent does the student show the ability to communicate, organize and support relevant ideas? To what extent can the student:
• provide information and ideas
• develop ideas

• use a format and structure appropriate to the task to organize the work?

Criterion D: Writing—language *Maximum 8*
To what extent does the student show the ability to use the language effectively and accurately?
To what extent can the student:
• correctly use a range of vocabulary
• correctly use a range of grammatical structures
• show accuracy in spelling or writing of characters
• write with a particular audience in mind?

Criterion E: Reading comprehension
Maximum 16 (8 x 2)
To what extent does the student show the ability to comprehend a piece of writing in the target language? To what extent can the student:
• identify both stated and implied information
• identify main ideas and supporting details
• draw conclusions and recognize implied opinions and attitudes
• identify aspects of format and style?

Advanced Level
Criterion A: Oral communication—message and Interaction *Maximum 8*
To what extent does the student show the ability to communicate ideas, interact and maintain the flow of the conversation?
To what extent can the student:
• communicate information, ideas and opinions
• respond and react in a sophisticated manner to questions and ideas (familiar and spontaneous situations)
• contribute to the conversation and engage actively
• maintain a flow of ideas and a logical continuity in the conversation?

Criterion B: Oral communication—style and language use *Maximum 8*
To what extent does the student show the ability to use the language effectively and accurately?
To what extent can the student:
• use clear pronunciation and/or intonation
• correctly use a range of vocabulary
• correctly use a range of grammatical structures
• show the ability to adapt register and style of language to the situation?

Criterion C: Writing—message and organization
Maximum 8
To what extent does the student show the ability to communicate, organize and support relevant ideas?
To what extent can the student:
• provide information and ideas
• respond to the topic in a sophisticated manner and develop ideas
• use a format and structure appropriate to the task to organize the work?

Criterion D: Writing—style and language use
Maximum 8
To what extent does the student show the ability to use the language effectively and accurately?
To what extent can the student:
• correctly use a range of vocabulary and idiom
• correctly use a range of grammatical structures and syntax
• show accuracy in spelling or writing of characters
• write with a particular audience in mind?

Criterion E: Text interpretation
Maximum 16 (8 x 2)
To what extent does the student show the ability to comprehend a piece of writing in the target language?
To what extent can the student:
• identify both stated and implied information
• identify main ideas and supporting details
• draw conclusions, infer information and recognize implied opinions and attitudes
• interpret aspects of style?

Course Content / Topics
See Appendix A.

MATHEMATICS

MYP mathematics sets out to give students an appreciation of the usefulness, power and beauty of the subject. One aspect of this is the awareness that mathematics is a universal language with diverse applications. MYP mathematics promotes an understanding of how cultural, societal and historical influences from a variety of cultures have shaped mathematical thought. Students learn to understand and discuss the international nature of mathematics.

Schools are required to develop schemes of work according to a framework that includes five branches of mathematics: number, algebra, geometry and trigonometry, statistics and probability, and discrete mathematics. Aims and objectives include understanding mathematical reasoning and processes, the ability to apply mathematics and to evaluate the significance of the results, the ability to develop flexible strategies for problems in which solutions are not obvious, and the acquisition of mathematical intuition.

Assessment Criteria

Criterion A: Knowledge and understanding

Maximum 8

Knowledge and understanding are fundamental to studying mathematics and form the base from which to explore concepts and develop skills. This criterion expects students to use their knowledge and to demonstrate their understanding of the concepts and skills of the prescribed framework in order to make deductions and solve problems in different situations, including those in real-life contexts. This criterion examines to what extent the student is able to:

• know and demonstrate understanding of the concepts from the five branches of mathematics (number, algebra, geometry and trigonometry, statistics and probability, and discrete mathematics)
• use appropriate mathematical concepts and skills to solve problems in both familiar and unfamiliar situations, including those in real-life contexts
• select and apply general rules correctly to solve problems, including those in real-life contexts.

Criterion B: Investigating patterns

Maximum 8

Students are expected to investigate a problem by applying mathematical problem-solving techniques, to find patterns, and to describe these mathematically as relationships or general rules and justify or prove them.
This criterion examines to what extent the student is able to:

• select and apply appropriate inquiry and mathematical problem-solving techniques
• recognize patterns
• describe patterns as relationships or general rules
• draw conclusions consistent with findings
• justify or prove mathematical relationships and general rules.

Criterion C: Communication in mathematics

Maximum 6

Students are expected to use mathematical language when communicating mathematical ideas, reasoning and findings—both orally and in writing. This criterion examines to what extent the student is able to:

• use appropriate mathematical language (notation, symbols, terminology) in both oral and written explanations
• use different forms of mathematical representation (formulae, diagrams, tables, charts, graphs and models)
• move between different forms of representation. Students are encouraged to choose and use appropriate ICT tools such as graphic display calculators, screenshots, graphing, spreadsheets, databases, drawing and word-processing software, as appropriate, to enhance communication.

Criterion D: Reflection in mathematics

Maximum 6

Reflection allows students to reflect upon their methods and findings. This criterion examines to what extent the student is able to:

• explain whether his or her results make sense in the context of the problem
• explain the importance of his or her findings in connection to real life
• justify the degree of accuracy of his or her results where appropriate
• suggest improvements to the method when necessary.

Course Content / Topics

See Appendix A.

PHYSICAL EDUCATION

Physical education has a unique and significant contribution to make, since its aim is to facilitate physical, intellectual, emotional and social development. The Middle Years Programme intends to cultivate a healthy and active lifestyle for students and consequently advocates activities which are not only enjoyable but also contribute to healthy living. Students are helped to develop the motor skills necessary to enable them to participate successfully in a variety of physical activities, and learn the benefits of a regular exercise regime.

MYP physical education enables students to establish links between different areas of experience. It is also a useful area in which to incorporate intercultural awareness, as physical education is a reflection of elements of history, culture and values. The course requires schools to allow students to experience and appreciate a wide range of physical activities in and outside the school. MYP physical education also provides opportunities for different forms of self-reflection, communication and team work.

Assessment Criteria

Criterion A: Knowledge and Understanding
Maximum 6
Students are expected to have a knowledge and understanding of the physical activities or themes studied. This criterion includes understanding the principles related to a variety of physical activities, the importance of physical activity to a healthy lifestyle and the various components that contribute to health-related fitness.

Criterion B: Movement Composition
Maximum 6
Students are expected to develop compositional skills by creating, selecting and linking movements into sequences.

Criterion C: Performance/Application
Maximum 10
Students are expected to display the motor skills learned in a variety of physical activities. They should be able to apply tactics, strategies and rules in individual and group situations. It is also important that students use movement concepts appropriately and apply health and fitness principles.

Criterion D: Social Skills *Maximum 6*
This criterion covers students' ability to work cooperatively while respecting themselves and their social and physical environment. They should also show the ability to support and encourage others, develop appropriate attitudes and strategies for interrelating with others and show sensitivity through intercultural awareness.

Course Content / Topics

See Appendix A.

SCIENCE

The study of science aims to provide the student with both a body of knowledge and an understanding of the scientific approach to problem solving. This dual role makes science an important means to investigate and understand the natural world. The ability to formulate hypotheses, design and carry out strategies to test them, and evaluate results constitutes the framework within which specific content is presented. Among other skills, the student is expected to use basic laboratory equipment safely and efficiently, to measure and make sensible estimates, and to classify things logically.

Within MYP sciences are the traditional subjects of biology, chemistry and physics, as well as topics, concepts and issues from other branches of science, such as earth and health sciences. As with other areas of the curriculum, students are encouraged to relate the content of the classroom and laboratory to the realities of life as they develop critical thinking and problem-solving skills.

As well as providing a sustained, valuable academic experience, the MYP sciences subject group promotes an awareness of the increasingly international context of scientific activity, its impact and limitations, as well as the constant evolution of scientific knowledge and understanding. Students are encouraged to consider science as a constantly evolving cooperative venture between individuals and among members of the international community, influenced by its social, economical, technological, political, ethical and cultural surroundings.

Assessment Criteria

Criterion A: One world *Maximum 6*

Students should understand the interdependence of science and society. Students are expected to discuss how science is applied and used to solve specific problems in life and society. Students should be given the opportunity to explore local and global scientific issues and evaluate the interaction between science and scientific developments with social, economic, political, environmental, cultural and ethical factors.

Criterion B: Communication in science *Maximum 6*

Students should be able to demonstrate understanding when communicating scientific information. Students should use appropriate scientific language, a range of communication modes and the most appropriate communication format.

Criterion C: Knowledge and understanding of science *Maximum 6*

Students should show their understanding of the main scientific ideas and concepts of science, by applying these to solve problems in familiar and unfamiliar situations. Students should develop critical-thinking skills to analyse and evaluate scientific information.

Criterion D: Scientific inquiry *Maximum 6*

Students are expected to design and carry out scientific investigations independently. Students should be able to (i) state a problem that can be tested by an investigation; (ii) formulate a suitable hypothesis; (iii) identify and manipulate variables; (iv) plan an appropriate investigation including the method and materials; (v) evaluate the method.

Criterion E: Processing data *Maximum 6*

Processing data refers to enabling students to organize and process data. Students should be able to organize and transform data by numerical calculations into diagrammatic form (tables, graphs and charts) and draw and explain appropriate conclusions.

Criterion F: Attitudes in science *Maximum 6*

This criterion refers to encouraging students' attitudes of safety, respect and collaboration. Students are expected to:

- carry out scientific investigations using materials and techniques skillfully and safely and showing respect for the living and non-living environment
- work effectively as a member of a team, collaborating, acknowledging and respecting the views of others as well as ensuring a safe working environment.

Course Content / Topics

See Appendix A.

TECHNOLOGY

Technology in the MYP aims at establishing the foundations for technological literacy and know-how. Students become aware of the practical solutions people have devised to satisfy their basic need for food, clothing and shelter as well as to communicate, to preserve their health, to learn, and to enjoy themselves. Technology in the MYP is essentially concerned with solving problems in an effort to stimulate students' ingenuity and to encourage them to combine intellectual talents and practical skills.

While allowing schools great flexibility in the choice of subjects, the teaching of technology in the MYP provides a balance among three key areas: systems, information and materials. All technology courses chosen by schools should allow students to display ingenuity and creativity and to devise practical solutions to given tasks by following the design cycle of investigation, planning, creation and evaluation. This subject area offers great potential for reinforcing and integrating skills learned in other disciplines, especially in the presentation and handling of data and the processes involved in the design and manufacture of a product. At the same time, it fosters awareness of the social and ethical implications of technological development.

Assessment Criteria

Criterion A: Investigate *Maximum 6*

Investigation is an essential stage in the design cycle. Students are expected to identify the problem, develop a design brief and formulate a design specification. Students are expected to acknowledge the sources of information and document these appropriately.

Criterion B: Design *Maximum 6*

Students are expected to generate several feasible designs that meet the design specification and to evaluate these against the design specification.
Students are then expected to select one design, justify their choice and evaluate this in detail against the design specification.

Criterion C: Plan *Maximum 6*

Students are expected to construct a plan to create their chosen product/solution that has a series of logical steps, and that makes effective use of resources and time. Students are expected to evaluate the plan and justify any modifications to the design.

Criterion D: Create *Maximum 6*

Students are expected to document, with a series of photographs or a video and a dated record, the process of making their product/solution, including when and how they use tools, materials and techniques. Students are expected to follow their plan, to evaluate the plan and to justify any changes they make to the plan while they are creating the product/solution. Students will sometimes embark upon a very ambitious project, or they may encounter unforeseen circumstances. In some circumstances a product/solution that is incomplete or does not function fully can still achieve one of the levels awarded for this criterion.

Criterion E: Evaluate *Maximum 6*

Students are expected to evaluate the product/solution against the design specification in an objective manner based on testing, and to evaluate its impact on life, society and/or the environment. They are expected to explain how the product/solution could be improved as a result of these evaluations. Students are expected to evaluate their own performance at each stage of the design cycle and to suggest ways in which their performance could be improved.

Criterion F: Attitudes in technology *Maximum 6*

This criterion refers to students' attitudes when working in technology. It focuses on an overall assessment of two aspects:

- personal engagement (motivation, independence, general positive attitude)
- attitudes towards safety, cooperation and respect for others.

By their very nature these qualities are difficult to quantify and assess, and assessment should therefore take into account the context in which the unit of work was undertaken.

Course Content / Topics

See Appendix A.

LIFE SKILLS

All IB MYP students follow a five year course in Life Skills. The course is a continuation of the Life Skills curriculum that runs throughout the secondary school. At IB MYP level lessons aim to cover social, personal and practical skills and topics which relate particularly to young adults and adaptation to secondary school and preparation for the IB Diploma. To begin with, transition and reinforcement of skills needed in secondary school (organization, homework, time management). A variety of other topics are examined, ranging from drug abuse to friendship to study skills to health related issues.

The Personal Project

The personal project is a significant body of work produced over an extended period. It is a product of the student's own initiative and should reflect his/her experience of the MYP.

The personal project holds a very important place in the programme. It provides an excellent opportunity for students to produce a truly creative piece of work of their choice and to demonstrate the skills they have developed in approaches to learning.

As shown in the MYP curriculum model, and exemplified in the subject group guides and other MYP documents, the five areas of interaction form the core of the programme: they are addressed through the subjects; they bind various disciplines together; they are the basis of varied learning experiences through project work, interdisciplinary activities, and real-life community involvement. Although the areas of interaction are not awarded individual grades, they are central to the experience of the personal project, which is intended to be the culmination of the student's involvement with the five areas of interaction; the project is therefore normally completed during the **last year** of the student's participation in the MYP.

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APPENDIX A: ARTICULATED CURRICULUM

ARTS

	VISUAL ART	***MUSIC***		***DRAMA***
M1	Colour & tone Drawing Media 2D-3D Pattern & symbol (mark making) Cultural Studies	Basic Music Reading Study of Baroque Period Study of Classical Period Interval Training (basic) Rhythmic and melodic dictations (basic) Baroque form composition Classical form composition Singing in multiple parts Musical terminology Conducting Patterns	Rhythm and pulse - Samba Rhythmic Notation Instruments of the Orchestra Graphic Scores Ostinato & Drone in World Music Simple Structures AB ABA ABACAD Steel bands of Trinidad	AOI skits Community (image building) Tableaux Melodrama Choral Dramatization Narrative Theatre
M2	Cultural Studies (Sub-Saharan Africa) Self Portrait sculpture Perspective/Viewpoints Fastenings (drawing – pattern – print) Design & construction (Games) Observational Drawing Colour 2D into 3D Tourist artists Movement in Art Mask-making / sculpture	Basic music reading Study of Classical period Circle of 5ths Major/ minor scales Role of the conductor	World Dance Music Blues Music – Chords – Bass line – Improvisation – Pop Rock Verse Chorus Verse Chorus Mid 8 Chorus (Pop/Rock Structure, Similarities between Pop Styles) Sequencing rhythms loops and ostinato. Song writing Indian music	Movement Laban Theory Creative Movement Dancedrama Anthology
M3	Self Portraiture Wire sculpture Landscape Op Art Self as Object Distortion (IT/ Digital work) Tonal work (light/dark) Installation Art Resist methods Composition, tone & form	Basic music reading Study of Romantic period Development of opera Circle of 5ths Major/minor scales and chords	World Exploration –More Samba Japanese - Africa – Thailand - Homophonic Polyphonic Music Hip Hop 21st Century Music - Modern Dance Styles – Sequencing & Multi Media Production Soundscapes & Atmoshpheres Live & Computer FL Studio	Survival (image building) Tableaux Monologue Anthology Staging scenes from *Across The Barricades*

M4	Motif design from natural foces East African Textiles Stencil design and print on fabric Repeat patterns and tessellations Colour mixing, texture & painting skills Artists – critical studies Still life Issue based art from contemporary artist studies	World Music 20th and 21st century music Augmented/diminished chords Counterpoint Composition Familiarity with classical works Ensemble skills	Indonesian Music African Percussion Music – Poly Rhythms Performance Technique – Review & Relfection Romantic Era Choice - Instrumental Performance or Computer Programming Music history	Origins (image building) Taking a stand – Greek tragedy conventions Choral dramatization Character development through comedy and *Commedia dell'arte* Docudrama
M5	Creative cycle & own development Further development from contemporary artist studies and research Observational drawing / painting in oils Sculpture – different media Photography & ICT Transition to IB Visual Arts	Japanese music Eastern tonalities Ternary form composition Familiarity with classical works 20th and 21st century music 12-tone composition Aural chord recognition Realizing of figured bass	Composition Performance & The Recording Process Chinese music Salsa music Score reading Aural training	Story building Radio Plays Scripted scenes (scene and character analysis, staging) One Act Plays

Humanities

Articulated Overview: Why is our world the way it is today? Where is it headed?

	Topics	Humanities Concept	Cross-curricular Links
M1	Brief introduction to humanities Earth Power Ecocrazy Why here? (Global stories of origins) Game of live (Nomads to civilisation)	 Change / Place and Space / Time Systems / Place and space / Global awareness Change / Global Awareness / Time Place and Space / Systems / Change	 Maths – co-ordinates, data collection, tally charts, bar graphs
M2	Story of the coast Tourism Middle Ages Renaissance	Place and space / change Global awareness /Place and Space / Change Systems / Change / Time Change / Time	Class trip – maths (cliff surveying), drama, music Art – Renaissance art study
M3	Forms of government Exploration Geography of disease Agricultural systems Enlightenment	Systems / Global awareness Place and space / change / Global awareness Global awareness / Place and space Systems / Place and space / Change Change / Time	

	Geography Topics	Concepts	History Topics	Concepts
M4	Population Industrial Change Weather and Climate Fragile Environments	Change / Global awareness Change / Place and space Systems / Place and space Global awareness / change / place and space	-Industrial Revolution -Imperialism -Causes and events and results of WW1 -Treaty of Versailles	Change / Time Place and space / Time Global awareness
M5	Maps Development Future of the Environment	Place and space Global awareness / change Global awareness / change / systems	-Role of League of Nations (1919-1930's) -Causes and events and results of WW2 -Cold War -Role of U.N.	Global awareness / change Global awareness Systems Global awareness / Systems

Language A English

MYP English A Curriculum Overview

	Short Story / Fiction	Novel	Poetry	Drama	Non-fiction
M1	Stories from Other Cultures" (Pre 20th C) Comprehension Writing story with moral	"The Red Pony" Comprehension Creative Response "The Silver Sword" Book Review Report Writing	"Animal Poetry" "A Bag of Poems" Reading Aloud Writing Poetry	"The Silver Sword" / Set a Scene Performance	Autobiography – childhood experience "First Day Feelings"
M2	Writing for Children Writing a Children's Story	"The Pearl" Comprehension Creative Response "Skellig" Literary Essay	"Animal Poetry" "A Bag of Poems" Reading Aloud Writing Poetry	"Four Babies" Performance	Animal Rights Discursive Writing
M3	"The Lonely One" Analysis Writing Suspense Story	"A Christmas Carol" Comprehension Creative Response "Buddy" Letter / Book Review	Ballads (Pre 20th C) Reading Aloud Writing Poetry	"A Midsummer Night's Dream" (Pre 20th C) Performance Recreative Writing	Teacher Profiles Discursive Writing
M4	Selected Short Stories: Lessing / Barstow Hemingway / Dahl Analysis Writing Short Story	"Of Mice and Men" Literary Essay "Lord of the Flies" Literary Essay	Selected Poetry: D'Aguilar / Soyinka / Motion / Achebe Reading / Analysis Writing Poetry	"The Crucible" Performance / Literary Essay	Foxhunting Discursive Writing
M5	Global Tales Comprehension Creative Response	"Animal Farm" Writing in Different Forms: Text Conventions and Creative Response "To Kill a Mockingbird" Literary Essay	"Tragic Young Love" Anthology (Pre 20th C) Reading / Analysis Writing Poetry	"Romeo and Juliet" (Pre 20th C) Performance Literary Essay	Selected Essays Comprehension / Analysis

Language A

MYP French A curriculum Overview

	Short story/fiction	Novel	Poetry	Drama	Non fiction
M1	Les fables de la Fontaine Writing story with moral	Le petit prince A.de Saint Exupery	Reading aloud / poetry for performance Comprehension, writing poetry		Letters (formal, informal)
M2	Les fables d'Esope The difference between a explainer text and a story	Le château de ma mère Marcel Pagnol Movement and point of view in a novel		Introduction to theatre text	Autobiography Why writing ? to give a message or to tell a story or both ?
M3	La main écorchée G. de Maupassant Atmosphere of a story Chronology of a story	Le lion Kessel Description and its organization The role of the dialogue in a novel	Reading analysis Writing about poetry	Repliques et didascalies	Travel story
M4	Le veston ensorcelé D.Buzzati Tell a story, identify the narrator and his/her point of view	Vipère au poing Bazin The role of description in a novel Analyze the rhythm of the narration	L'orientalism Le poète épique Le poète engage	George Dandin ou le mari confondu Molière	The art of persuasion and argumentation Persuasive and argumentative writing study, write a persuasive and an argumentative piece of work
M5	La métamorphose Kafka Tell a story description	Au bonheur des Dames E.Zola	Lyrism Poems of the XX century	Rhinocéros Ionesco Read and write a scene	Identify the theme and thesis of an argumentation Influence of the media

Language B French

	Topics	***Grammar***
M1	My classroom Me, my family, my pets Dates, celebrations, festivals Weather forecast Sports and hobbies Places in town Time and routine Food and meals	Masculine and feminine nouns Adjective agreements Question words Prepositions of places Possessive constructions Verbs in –er, aller, être and avoir Reflexive verbs (introduction) Partitive articles
M2	Description of a town Future plans School and school life Food and eating out Travels Appearances Short novel study (dependent upon resources available)	Question words Partitive articles Futur proche Reflexive verbs Perfect tense of verbs using avoir Perfect tense of verbs using être Imperative Agreement of past participles Direct personal pronouns
M3	Traveling in a big city Describing daily routines Talking about the past Traveling in France Future plans Leisure activities Short novel study (dependent upon resources available)	Question words Passé composé including negative Negative (ne rien, ne jamais, ne personne…) Reflexive verbs in Passé composé Imperfect tense Direct and indirect personal pronouns Perfect vs imperfect tense Future tenses Comparatif/superlatif Qui/que pronoun relatifs
M4	Friendship Family Young people's lives Describing your environment; city vs. countryside Traveling Visiting French/Swahili-speaking countries Food and Eating out Hobbies	Question words Adjective agreement Comparative Use of "depuis' Directions Revision of perfect vs. imperfect Pronom personnel "y', "en" Revision of all tenses with preposition of time
M5	Holidays Hobbies – sports, cinema, TV, reading Future plans – exams, jobs (letter writing, C.V, interviews), money Exam preparation 2008-	Revision of all tenses including prepositions of time Revision of all former topics Conditional

Language B Swahili

	Foundation	Standard	Advanced
M1	1. Numbers, days, months, dates, and telling time 2. The home 3. Physical description – daily life and body parts, types of illness 4. Shopping 5. Weather and seasons 6. Sports and hobbies	1. Sports and hobbies 2. Future plans 3. Village, town and cities 4. Weather and seasons 5. Travelling in Tanzania and holidays 6. Environment and pollution	1. Introduction to language & culture 2. Literary terminology and techniques 3. Introduction to literature readings 4. Reading literature 5. More on advanced literature 6. Non-fiction 7. Speech and commentaries (oral and written) 8. Letter writing
M2			
M3			
M4	1. Personal details 2. Family, food, cultural routines 3. Life style, exchange / friendship 4. Adolescent issues 5. School, education, future plans and employment 6. Means of communication 7. Environment – describing and comparing natural environments of vilages, twons and cities. 8. Environment hazards and pollution		
M5	1. Profile of the target language country & politics of the target language country 2. Short stories and poems 3. The Media (current affairs, news reports, newspaper articles) 4. Careers (Discussion: “Where do I go from here?” 5. Technology (simple programs in the target language) 6. Art forms (Comprehension exercises on art from the target language country)		

Mathematics

ISM Mathematics Articulated Overview M1-M5

M1	1) Beginnings in Number a. Long division b. Powers c. Estimating 2) Working Mathematically a. Trial and error b. Drawings, diagram, model c. List,chart, tally, table d. Working backwards e. Simpler problems 3) Number a. Order of operations b. Distributive property c. Factors and multiples d. Divisibility tests 4) Decimals a. Adding and subtracting b. Multiplying and dividing c. Fractions to decimals	5) Directed Numbers a. Graphing points b. Number plane c. Adding and subtracting d. Multiplying and dividing 6) Fractions, Percents, Probability a. Adding and subtracting b. Multiplying and dividing c. Fractions & Decimals to % d. Percent of a quantity 7) Calculators a. Estimates b. Problem solving 8) Patterns and Algebra a. Number patterns b. Pronumerals and rules c. Graphs of patterns	9) Algebra a. Substitution b. Simplifying expressions c. Graphing tables d. Algebraic sentences 10) Angles a. Measuring b. Types of angles c. Parallel lines 11) Shapes a. Triangles b. Quadrilaterals c. Angle sum of polygon d. Symmetry e. Solids & Nets 12) Measurement a. Length b. Perimeter c. Time d. Longitude e. Timetables	13) Area & Volume a. area rectangle b. Area triangle c. Volume of rec. prism 14) Geometrical Instruments a. Ruler b. Set square c. Compass d. Constructing triangles and quadrilaterals 15) Sets a. Intersection & union b. Empty sets, subsets c. Venn diagrams
M2	1) Review M1 a. Fractions b. Decimals c. Percentage d. Geometry e. Directed numbers 2) Working Mathematically a. Problem solving strategies 3) Percentages a. Estimates b. % of a quantity c. Percent change d. Commission e. Simple Interest 4) Ratio, Rates & Scale Drawings a. Equivalent Ratios b. Dividing quantity in a given ratio c. Rates d. Scale drawings	5) Calculators & Spreadsheets a. Special keys b. Applications 6) Patterns and Algebra a. Combining like terms b. Multiplying and dividing pronumerals c. Index notation d. Factorising e. Algebraic fractions 7) Equations, Formulae and Inequations a. Solving equations b. Formulae c. Graphing inequations d. Solving inequations 8) Number Plane a. Coordinates b. Straight line graphs c. Vertical and Horizontal lines	9) Graphs and Tables a. Bar, Line, Pie b. Conversion Graph c. Drawing Graphs d. Travel Graphs 10) Reasoning in Geometry a. Adjacent angles b. Angles at a point c. Angle sum of triangle d. Angle sum of quadrilateral e. Isosceles & Equilateral triangles 11) Area and Volume a. Areas of special quadrilaterals b. Volumes of prisms c. Surface Area of prisms 12) Circles a. Circumference b. Area	13) Constructions & Congruence a. Constructing regular polygons b. Congruence c. Transformations 14) Statistics a. Collecting, sorting and analyzing data b. Grouped data c. Dot plots and scatter diagrams d. Stem-and-leaf plots 15) Probability a. Complementary events 16) Graph Theory a. Subgraphs, connectivity and trees b. Eulerian trails

M3	1) Number Skills a. Calculations b. Conversion facts c. Rational numbers d. Ratios & rates e. Significant figures f. Estimation 2) Working Mathematically a. Problem solving b. Venn diagrams 3) Ratio and Proportion a. Increasing and decreasing by a ratio and percentage b. Proportional change 4) Algebraic Expressions a. Four operations b. Simplifying algebraic fractions c. Factorising	5) Pythagoras' Theorem a. Calculating hypotenuse b. Calculating short sides 6) Indices a. Index laws b. Negative indices 7) Equations and Inequations a. Inverse operations b. Solving equations c. Equations with fractions d. Solving and graphing inequations 8) Coordinate Geometry a. Graphing straight lines b. Intercepts c. Intersections of lines d. Gradient e. Gradient-intercept form f. Distance-time graphs	9) Formulae and Problem-Solving a. Evaluating the subject b. Translating problems into equations 10) Geometry a. Alternate, corresponding and co-interior angles b. Triangles c. Polygons 11) Lccus a. Bisecting angles b. Constructing specific angles (60°, 120°, 30°) c. Constructing parallel and perpendicular lines 12) Perimeter, Area and Surface Area a. Perimeter of sectors and composite figures b. Area of sectors and composite figures c. Surface area of prism d. Surface area of composite figures	13) Statistics a. Frequency b. Cumulative frequency c. Analysing data d. Grouped data 14) Probability a. Experimental probability b. Theoretical probability 15) Networks and Topology a. Graph Networks b. Weighted Graphs c. Directed Graphs d. Topology
M4	1) Number skills a. Rational numbers b. Recurring decimals c. Significant figures d. Estimation 2) Working Mathematically a. Rates and ratio b. Reverse percentage c. Measurement d. Venn Diagrams 3) Consumer Arithmetic a. Budgeting b. Best buy c. Discounts d. Profit & loss 4) Indices and Surds a. Index laws b. Negative and zero indices c. Fractional indices d. Standard form e. Irrational numbers f. Operations with surds	5) Algebraic Expressions a. Substitution b. Simplifying c. Algebraic fractions d. Binomial products e. Rationalizing the denominator 6) Equations, Inequations and Formulae a. Equations with fractions b. Inequations c. Formulae d. Literal equations 7) Factorizing Algebraic Expressions a. Common Factor b. Trinomials c. Algebraic Fractions 8) Co-ordinate Geometry a. Distance, midpoint, gradient b. Gradient-intercept form c. Inequalities on number plane	9) Simultaneous equations a. Graphical method b. Algebraic method 10) Graphs of physical phenomena a. Distance/time graphs b. Linear & non-linear graphs 11) Deductive Geometry a. Polygons b. Congruent Triangles c. Pythagoras' Theorem 12) Vectors 13) Measurement a. Perimeter and Area b. Surface Area c. Volume d. Limits of Accuracy	14) Trigonometry a. Trig ratios b. Unknown sides c. Unknown angles 15) Statistics a. Frequency and cumulative frequency b. Grouped data 16) Probability a. Experimental and theoretical probability b. Addition Principle c. Transformations

M5	1) Review a. Consumer arithmetic b. Indices and Surds c. Co-ordinate geometry d. Vectors e. Trigonometry 2) Number and Arithmetic a. Simple interest b. Compound interest c. Depreciation d. Loans 3) Quadratic Equations a. Completing the square b. Quadratic formula 4) Special Graphs a. Parabola b. Hyperbola c. Circle d. Cubics	5) Further Algebra a. Simultaneous equations b. Understanding variables 6) Linear Programming 7) Curve Sketching Expressions a. Form $y=ax^n+d$ b. Form $y=a(x-r)^n+d$ c. Cubics 8) Polynomials a. Sum and difference b. Multiplying and dividing c. Remainder and factor theorems	9) Functions and Logarithms a. Functions b. Inverse Functions c. Logarithms d. Exponential graphs e. Logarithm Laws 10) Surface Area and Volume a. Pyramids, cones, spheres 11) Similarity a. Similar triangles b. Finding unknown sides c. Proofs d. Areas of similar triangles 12) Trigonometry a. Obtuse angles b. 3 figure bearing c. sine rule d. cosine rule e. area of triangle	13) Circle Geometry a. Chord properties b. Angle properties c. Tangent properties 14) Statistics a. Histograms with unequal intervals b. Interquartile range c. Box and whisker plots d. Standard deviation 15) Probability a. Compound events b. Dependent and independent events c. Tree and dot diagrams d. Venn diagrams and tables e. Matrices and Transformations

Physical Education

Physical Education Articulated Overview

	Athletic Activities	***Aquatic Activities***	***Motor Skills and Games***	***Health Related Fitness***	***Expressive Movement***	***Adventure Learning***
M1	**Athletics** How can I run faster, jump further and throw greater distances?	**Swimming** How can I move through the water more efficiently?	**Invasion Games** How can help my team to score more points than the opposition? How is my team like a community? **Net Games** What are the most effective ways to get the implement over the net? How can I change the flight of the ball? **Striking Games** How can my team score more than the opposition? How can I change the flight of the ball?	**Am I in good health?** What are health, well-being and fitness?	**Gymnastics** What sequence can I create using balance and locomotion? **Dance** What patterns are there in this dance? (Based on Creek Falls dance)	**Introduction to an 'Adventure Race'**
M2	**Athletics** How can I develop the athletic skills taught, so that I become a more effective athlete?	**Swimming** How can develop my strokes, so that I can move through the water more efficiently?	**Invasion Games** What are the different skills needed to be an effective member of my team? **Net Games** What are the different skills needed to be an effective member of my team? **Striking Games** What are the different skills needed to be an effective member of my team?	**Cardio-vascular fitness** How can I improve my cardio-vascular fitness?	**Gymnastics** What symmetrical and asymmetrical sequences can I create representing the Jungle? **Dance (linked to Pangani Trip)** Creative dance on theme of slavery.	**Eco Challenges** What do my team and I need to do to get safely round the course in the quickest time possible, and safely?

	Athletic Activities	*Aquatic Activities*	*Motor Skills and Games*	*Health Related Fitness*	*Expressive Movement*	*Adventure Learning*
M3	**Athletics** What are the more advanced skills required to perform the different athletic disciplines effectively?	**Swimming** **Lifesaving** (Linked to First Aid in Lifeskills) How can I respond to a situation where someone else's survival is threatened, without putting myself or others in danger?	**Invasion, Net and Striking and Fielding** Defence, Attack - what can I be doing to help improve the efficiency of my teams performance?	**My HRF** What are my strengths and weaknesses in relation to fitness, and how can I improve them?	**Dance** How can we reflect, through our actions, a chosen theme in a dance or gymnastic routine? **Exploration Gym – Circus and Sport Acrobatics**	**Adventure Challenge** Which is the best route?
M4	**Athletics** What can I do to improve my performance in my three chosen events?	**Water Polo** What are the skills needed to participate in this game?	**Invasion, Net and Striking and Fielding Games** What are the skills needed to participate in this game?	**What are the different methods to achieve total HRF/wellness?** What are the principles behind designing a personal training programme?	**Movement Composition – develop sequence or choose theme**	**Adventure race** Demonstrate advanced orienteering skills. Design and participate in an adventure race in local environment.
M5	**Athletics** What can I do to improve my performance in my three chosen events?	**Swimming** Stroke Improvement Plan a training programme.	**Invasion, Net and Striking and Fielding Games** What are the skills needed to participate in this game?	**My HRF Programme**. My fitness; how can it be improved? Produce a comprehensive programme that addresses a particular need identified by the student, carry the programme out. Evaluation and adjustment halfway through the programme.	**Movement Composition** Students identify a theme in pairs and choreograph a 2-3 minute movement sequence to based on "street dance" theme	**Adventure Race** Refine skills required to participate in a long distance adventure race in an unfamiliar environment. Participate in an adventure race.

Science

Articulated Overview

	Science-General	*Biology*	*Chemistry*	*Physics*
M1 (Integrated Science with one teacher)	• Introduction to Science	• Living Things • The Importance of Plants	• Particle Theory	• Energy
M2 (Integrated Science with one teacher)	• Energy resources	• Nutrition and Digestion • Body Systems	• Acids and Bases	• Electricity and Magnetism • Light and Sound, stimulus and response.
M3 (Integrated Science with one teacher)	• Earth and Space • Science Fair	• Energy and the Environment • Healthy Individuals and communities	• Chemical Reactions and Patterns	• Forces and Movement • Heat Energy and Transfers

	Biology	*Chemistry*	*Physics*
M4	**What is life? (Origins)** The origin of life. Conditions for life Cells Cell division Osmosis/ diffusion Classification/ diversity. Conservation **Diet and health** Biochemistry (foods) Enzymes. **Energetics,** Photosynthesis respiration carbon cycle **Maintaining balance in the environment** Energy flow\ populations \ sustainable use of resources in agriculture for water & soil	**Origins** Atomic theory/ states of matter Periodicity. Bonding Stoichiometry Chemical reactions Acids Bases Acid Rain Rates of Reaction Energetics **Organics… production of fossil fuels** Biochemistry Plants Amino Acids Enzymes Polymers… Synthetic/organic Analytical Analysis Unit Identification of a number of unknown chemical substances. Students identify substances using scientific proofs.	Structure of matter. Conservation of mass/ energy Mass conversion into energy. Fusion and fission. Origin of universe and matter. Stars as matter factories. Mechanics. Work done power and efficiency, machines. Mechanics – kinematics Motion, N2, momentum. w.r.t. Propulsion rockets jet engines. Circular motion. Gravity and the orbit of planets. Thermal physics Kinetic Theory, 2nd law, heat engines. Thermal effects. Solids liquids and diffusion. Gas laws. Transfer methods. Waves, reflection, refraction, interference, Light and sound, lenses EM spectrum. Solar energy.

	Biology	***Chemistry***	***Physics***
M5	Transport and defence against disease Reproduction in plants and animals. Non flowering plants. Genetics and evolution. DNA, RNA, Protein synthesis Genetic engineering, monohybrid crosses. Homeostasis & Coordination excretory system, heat exchange and temperature Regulation, coordination, response, muscles, nerves and senses	Periodicity Trends and use of table. Stoichiometry, dimensional analysis. Bonding, covalent bonds, Physical and chemical properties. Organics addition and substitution reactions. Chemical reactions. Equilibrium. Acids and bases. Redox. <u>Health of Planet</u> Geology, erosion, minerals, etc. N2 cycle – fertilizers, eutrophication Water Cycle and Quality and Hardness <u>Patterns & Predictions:</u> Reactions in Chemistry Stoichiometry (Quantitative Chemistry) <u>Transition:</u> Redox, Metals and Ores, Electrolysis, Batteries <u>Balance:</u> Air & Water Non-metals (H2, Cl2, O2, S8, Carbon)	Mechanics 2. Radioactivity. Electricity. Static electricity Circuitry power dissipation in circuits. Electromagnetism. Transformer, generator, solenoids. motors. Transmission of power. Thermal physics Specific heats and latent heat and evaporation. Climate change.

Technology

Articulated Overview

	Design Technology	Information Technology
M1	**Souvenirs:** *Materials*	**Souvenirs:** *Information* graphics (paint), Internet, server, computer systems
	Solar Energy Device: *Materials / Systems* (Interdisciplinary Unit with Science)	Solar Energy Device: *Information* Presentation, word processing (MS Word basics), Internet, Encarta, MS Excel and charts (basic spreadsheets)
	Information Influencing Change (MS Publisher)	
	Fashion: *Materials* Fashion Show Culminating Activity	**Fashion:** *Information* Internet issues, paint shop pro (photo-editing software)
M2	**Powered Car:** *Systems / Materials* Wood strips, joints, motors Exhibit: Competition of distance travelled	**Powered Car:** *Information* MS Publisher Advanced
	Kindergarten Game: *Systems*	**Kindergarten Game:** *Information* Creating a teacher tool webpage using MS FrontPage
	Draw Bridge: *Systems / Materials* Wood sticks, art straws, glue	**Draw Bridge:** *Information* Spreadsheets (intermediate)
	Solve a Problem in Tech: *Systems* Explain how a basic machine functions	**Solve a Problem in Tech:** *Information* Communicate the solution using one IT format.
M3	**Timing Device:** *Materials / Systems*	**Timing Device:** *Information* Advanced PowerPoint, Advanced MS Word
	Webpage and Flash Animation: *Materials, Information*	
	Sailing Vessels: *Materials*	**Sailing Vessels:** *Information* Spreadsheets (Advanced)
	Information Database / MovieMaker: Information / Systems	
M4	**Nutritious Dessert:** *Materials* Design & create a nutritious & tasty meal. Interdisciplinary unit with Science.	
	Journalism: *Information / Systems* Internet – reliability of information / privacy / security.	
	Hydraulics: *Systems / Materials* Hydraulics – how to move radioactive waste using hydraulics.	
	New from the Future: *Information* Video, newspaper, websites…	
M5	**Emergency Procedure:** *Systems* Emergency / safety / evacuation procedures with cameras and camcorders.	
	Classroom Resource: *Materials* Create puzzles / games / learning tools.	
	Stop Animation: *Information* Animation / Life Cycles (Interdisciplinary Unit with Science)	
	Open Challenge: *Information, Materials & Systems* Find and solve a problem around the school	

LIFESKILLS
Overview of Programme of Study M1-M5

	Objectives	Student Outcomes - At the end of this unit students should be able to:
M1	**Time Management** • Why is Time Management Important? • How does one become a good Time manager? • How do I manage my time for success in Secondary School?	• Understand why secondary students need to manage their time effectively • Develop strategies for effectively managing their time i.e. completion of homework, use of the library/IT rooms, use appropriate secondary school procedures • Are able to follow their timetable and ensure that they always have the correct equipment and are fully prepared for lessons
	Developing Potential • What is potential? • What are some strategies for developing our potential? • How do we know when we are maximizing our potential?	• Describe what potential is • Develop strategies for ensuring that they are reaching their potential • Set realistic and measurable targets in order to assist them in measuring their potential
	Puberty and Nutrition • What biological changes take place during puberty and how do we cope with them? • What types of social changes take place during puberty and how do we cope with them? • What is the best diet for peak body performance in Puberty and beyond?	At the end of this unit students should be able to: • Describe the biological changes that occur in boys and girls as they go through puberty • Understand how they might be affected social due to the changes in their body • Develop strategies to cope with changes • Understand the principles behind a health diet
	Health Related Fitness **Integrated project with PE** • What is health, well-being and fitness?	• Describe what being health and fit consists of • Understand that fitness is made up of different components • Complete an individual fitness profile
	Study Skills: Exams • What is the best way to prepare for exams? • What are the most effective strategies for taking an Exam? • How should we eat, sleep, and behave during Exams?	• Have an awareness of different revision strategies and utilize the ones they feel are most effective for them • Recognize their preferred Learning Style • Describe how to look after their body when revising

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M2	**Diseases** • What are Bacteria, viral, and fungal diseases? • What are waterborne diseases and how do they affect us? • What can we do to help reduce the risks of getting sick? • What areas of the schools have the most bacteria?	• Describe the differences between Bacteria, Viral and Fungal diseases • Give examples of the different types of diseases • Understand the impact waterborne diseases have on society • Suggest strategies for minimizing infection rates • Undertake an investigation of the school, find out where possible sources of infection are to be found
	First Aid • What is First Aid and in what situations might you have to use it? • What should I do in the case of bleeding, burns/scolds, choking, soft tissue injuries, broken bones, poisoning and animal bites?	• Understand the principles and limitations of First Aid • Know what to do in the case of bleeding, burns/scolds, choking, soft tissue injuries, broken bones, poisoning and animal bites?
	Smoking • Why do people smoke? • What are the biological affects of smoking? • What impact can smoking have on your social life? • How to deal with peer pressure?	• Explain why some people choose to smoke while others choose not too • Understand the biological effects of smoking • Be able to describe how smoking can impact your social life • Develop strategies to deal with peer pressure regarding smoking • Have an understanding of how smoking is viewed in different cultures and communities, including here in Tanzania
	Friendship and Self-Esteem • What is the purpose of friendship? • What is a good friend? • How does one develop positive self-esteem? • To what extent can positive Self-Esteem help you develop your friendship?	• Describe what friendship is and why it is important. • Develop strategies for developing and creating friendship • Describe what self-esteem is and develop strategies to improve their personal self-esteem • Understand the link between self esteem and friendship
	Health Related Fitness **Integrated project with PE** • What is the cardio-vascular system? • How can I improve my cardio-vascular fitness**?**	• Understand how the cardio-vascular system works • Describe how different intensities of exercise affect the cardiovascular system. • Understand how to improve the efficiency of the c-v system be able to work out their individual target zone and produce a training session where the heart rate is in that zone.
	Study Skills: Exams • What is the best way to prepare for exams? • What are the most effective strategies for taking an Exam? • How should we eat, sleep, and behave during Exams?	• Use a variety of revision methods • Develop an ability to effectively take notes • Recognize their preferred Learning Style • Develop strategies for looking after themselves during the exam period

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M3	**Rules, rights and responsibilities** (linked to World Studies) • What would life be like in Anarchy? • Why do we have rules? • Are all rules good? • What are your rights and responsibilities?	• Understand why society needs to follow rules • Form opinions regarding the rights and wrongs of rules • Understand what their rights as a child are • Understand what their responsibilities are
	HIV/AIDS • What is HIV and AIDS? • How is it transmitted? • How does it affect your body? • How is it distributed worldwide? • What effect does it have on communities and the individual? • What prevention and cures are there?	• Describe the difference between HIV and AIDS • Explain how HIV is transmitted • Understand how HIV and Aids affect the human body • Describe the steps that can be taken to prevent the spread of HIV and minimise it's affect on the body • Understand how HIV/AIDS effects a person socially and its effects on the wider community, especially here in Tanzania
	Alcohol • Why do some people drink and why do others choose not to drink? • How does alcohol affect your body? • What are some of the consequences of drinking? • How to deal with peer pressure?	• Describe why some people choose to drink and why others choose not too. • Understand the affect of alcohol on the body, including gender differences • Understand what the consequences of drink might be and how these might be minimised • Develop strategies to cope with peer pressure to drink • Have an understanding of how drinking is viewed in different cultures and communities, including here in Tanzania
	First Aid **(linked to life saving in PE)** • What did you learn in M2? • How to respond to a situation? • How should you deal with an unconscious person**?**	• Demonstrate the first aid skills learnt in M2 • Develop the ability to assess the needs of swimmer/s in trouble and prioritize who needs help first • Demonstrate the ability to deal with an unconscious person who is a)breathing, b)not breathing, but has a pulse and c) not breathing and has no pulse. • Understand the importance of getting fully qualified medical help
	Health Related Fitness **Integrated project with PE** • What are my strengths and weaknesses in relation to fitness, and how can I improve them?	• Describe the different components of health and sports related fitness • Understand how they can be measured. • Develop an understanding of the methods used to improve these different components of fitness. • Evaluate their own level of fitness and plan a training session to improve areas they feel are in need of strengthening
	Teen Sexuality and Relationships • How do you develop trust in a relationship? • What are the 'bases' and what is the best way to round them? • To what extent can sex complicate a relationship**?**	• Describe the different types of relationships they have with different people • Understand how trust is developed and maintained in a relationship • Understand that relationships have different 'bases' and that different individuals reach these bases at different times • Understand that teenaged relationships may well be complicated by sexual behaviour • Have an understanding of how teen sexuality is viewed in different cultures and communities, including here in Tanzania

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M4	**Contraception** • How are babies conceived? • What are the different types of contraception available? • What are the advantages and disadvantages of the different methods?	• Describe the biological process of conceptions in humans • Describe what the different methods of contraception are including abstinence • Understand the advantages and disadvantages of these different methods in relation to effectiveness of preventing conception, short and long-term effects on the body and protection from STDs • Demonstrate an understand of the correct way to use selected methods of contraception • Have an understanding of how teen sexuality is viewed in different cultures and communities, including here in Tanzania
	Sexually Transmitted Diseases • What are STD's? • How can I identify and treat different STD's? • How can we prevent STD's	• Describe what STDs are • Understand how STDs are transmitted and how this transmition can be prevented • Describe the short term and long term effects on the body of different STDs • Recognise the symptoms of STDs and appropriate treatments.
	Work Experience? • What type of career might I be interested in? • What would I need to do to do to get into this job? • How should I write an application letter? • What makes a good CV? • What is an interview and how should I prepare myself?	• Have a better idea of what type of career they might be interested in • Develop an understanding of what the entry requirements for this career are • Demonstrate the ability to write an application letter and construct a CV • Understand what is required of them in an interview • Undertake a weeks work experience that they have arranged
	Gender Issues • How do we Gender identity: nature or nurture? • What are the stereotypes and the problems faced by men and women in society and what can be done about this? • What is Homosexuality and how is it viewed in different societies?	• Describe what we mean by gender • Discuss the stereotypes held regarding gender and understand how this can cause problems for men and women • Understand how specific gender related behaviors are often socially learnt (nature vs nurture) • Develop strategies for dealing with barriers them might come across due to stereotypes commonly held • Understand the problems often faced by Homosexuals due to gender related stereotypes. • Relate the issues above to the situation in Tanzania

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M5	**Stress Management** • How do different people deal with stress? • How are tobacco, drugs and Alcohol used to deal with stress? • How do relationships, death, moving cause stress and how can you deal with it? • Why do some people feel suicidal?	• Identify different causes of stress and suggest ways that people deal with them • Understand how Alcohol, Drugs and Tobacco are used to deal with stress and the possible consequences of this • Understand why some people feel suicidal • Develop strategies for dealing with different types of stress
	Drugs • Why do some young people use drugs? • What are the different types of drugs? • How do different drugs affect the human body? • How might the use of drugs affect your relationship with family and friends? • How to deal with peer pressure?	• Understand why some people decide to take drugs • Identify the different types of drugs and describe how they affect the human body • Describe how the use of drugs might effect relationships with friends, family, school work and the wider community • Describe the legal consequences for drug use • Develop strategies for dealing with peer pressure regarding the use of drugs • Have an understanding of how drug use is viewed in different cultures and communities, including here in Tanzania
	Where are you going next? • Where do you plan to be next year? • What would you like to be doing once you leave school? • What do you need to do in order to achieve this?	• Develop a better idea of possible career paths that they might wish to follow • Understand the options open to them after they finish MYP both at ISM and other post 16 education institutions in Tanzania and abroad • Develop a plan of action that they and their parents need to follow
	Nutrition; Stress and bad diets • What constitutes a balanced diet? • As a class plan and run a snack bar at break time	• Describe what constitutes a balance and healthy diet • Understand how stress often affects eating patterns. • Develop an understanding of eating disorders and develop strategies to avoid them • Identify weakness in their own eating pattern • Create a healthy menu for a snack bar and operate a snack bar at break time
	Study Skills for final exams.	• Independently prepare themselves for their final examinations