



MIC Curriculum

Broadly Based on the New Zealand Curriculum, MIC's curriculum is based on the idea of core competencies which should be achieved by the time that children reach Class 6. There are 7 core areas:

1. English language
2. Mathematics
3. Arts (two & three dimensional, dance, drama & music)
4. Health & Well-being (Sports, swimming & bush craft, and nutrition)
5. Social Sciences (history, human geography, cultural studies, languages)
6. Science (environmental sciences, physics, chemistry)
7. Technology/Engineering

The first three years focus more on the first four areas. They then have the tools to successfully take on the extra topic areas from Class 4-8.

MIC's curriculum is based on understanding foundational principles, rather than presenting a huge amount of facts and figures to be learnt in a rote manner. The issue at hand is to give children the mental tools to apply their thinking skills outside their class room and apply their knowledge in everyday life. That does not mean that facts and figures are not learnt. In fact facts and figures will be learnt as this is the 'language' in which children can express their thinking. However, their use of these facts and figures is not confined to simply repeating them back parrot fashion, rather they will learn how to use them in innovative and creative ways.

The curriculum's emphasis on the 7 core areas does not preclude other topics from being studied. These might be tailored to the interests of the teachers that are at the school in any one time, however, it is expected that these specialised topics will be offered on a voluntary basis and they will still overlap with the seven core areas in one way or another; theatre production or mat weaving for instance might be offered as a specialised topic.

Each of the broad topics is outlined in more detail below. The tables give very broad guidelines, the text in the table cells represents what we imagine a typical child will be able to achieve by the end of that year. Some children maybe ahead, others may be behind. In the early years we try not to force the child that is 'behind' but we do strive to find alternative ways to make the information accessible. Children however, may simply not be 'ready' to absorb the information in those early years. By Class 4 however, we start to gently 'push' the children that are not achieving what we think is our minimum standard.

It is worth reminding readers that curriculum refers to the standards that a school believes is important in a child's education. This does not necessarily say *how* the information will be taught. This comes under a different heading of *Pedagogy*. So parents may feel concern that their children may already be quite advanced from their early childhood education, or their home schooling and feel that the tasks are 'too easy'. However, the pedagogy at MIC allows these children to advance well beyond the 'minimum' requirements.

Class Naming Structure & When to Put Your Child in MIC

For all intents and purposes the classes are simply numbered 'Class 1' through to 'Class 8'. Class 7 & 8 are considered 'early secondary' school years - sometimes titled 'Form 1 & Form 2' respectively in many secondary schools.

It is expected that normally children would arrive in Class 1 on or after their fifth birthday at the very earliest. We would expect most children to either be turn 6 years old during their Class 1. If a child is born in the early months of the year (January-March) we would expect them to join Class 1 as a 6 or just turning 6 year old. We would urge parents to not try to

'force the pace'. Children grow up fast enough as it is, we believe that children should enjoy their childhood and not be in a hurry to become an adult. All else being equal, we spend more time in our lives as an 'adult' than as a 'child'.

English

The main language of instruction at MIC is in English. English along with Mandarin, Spanish & French is one of the most spoken and written languages of the world. Being good communicators in English, both orally, reading and writing will equip the child for the future. The broad aims are outlined in the table below.

| | oral | reading | writing |
|----------------|---|--|---|
| Class 1 | exposed to the idea of presenting ideas to a larger group | associates sounds with letters and some two letter combination | can block write the alphabet (lower case). Can write name of child, and her/his immediate family members. |
| Class 2 | can start to present ideas with supporting information. Exposed to the idea of questions in formal presentations. | understands the association of text with sounds. Progressing onto 3-5 letter word recognition. Recognises simple grammar rules such as plurals. | can easily write both upper and lower case of the alphabet. Can spell high frequency 2-4 letter words |
| Class 3 | Starts to understand and demonstrated different forms of oral presentation. | comfortable in trying to produce sounds from written text. Can parse text into smaller discrete elements for reading. Recognises different tones of text (such as 1st vs. 3rd person perspectives). | Is starting to write complete paragraphs. The rudimentary grammatical rules are being applied consistently (plurals and simple cases). |
| Class 4 | Understand the idea of cadence and tone to vary the presentation style; ability structure an oral presentation; can confidently stand up to a 'critical' question during a presented oral submission. | Children at this age should just be on the 'breakthrough' of reading their own novel by themselves. | cursive writing is now possible; beginnings of writing a structured piece of text, can use appropriate grammatical tense constructions to accurately convey a set of actions historically. |
| Class 5 | | Increasingly able to comprehend written text across a variety of presentation formats (story, vs. factual vs. historical vs. commentary) including drawing inferences; understands conventions in writing text, grammatical, syntax and layout. Easily able to read age related novels and encouraged to do so outside of school curriculum. | deliberately choose content, language and text constructions to convey intentions, situations and levels of formality to express characteristics and determinants such as backgrounds, interests and motivations. Understand how to do this with different voices to create levels of engagement and therefore ability to maintain interest. By the end of this block, can write acceptable prose for publication such as letters to the editor of national newspapers. |
| Class 6 | Can confidently present a 10 minute structured presentation, with appropriate use of novel material; shows adaptation to questions from audiences | Comprehension of texts such as that typically written in editorial sections of national newspapers and an ability to evaluate with some critique the ideas contained therein. | |

Mathematics

The emphasis on mathematics at MIC, is on maths skills that will be used for life, arithmetic, statistics, geometry, and algebra. There is a heavier loading on arithmetic and statistics. The aim of the Maths curriculum is above all to let children understand that maths is like another language, albeit steeped in logic. The striving for our children at MIC is to learn not to fear mathematics. We believe that maths education is one of our strengths, even though we appear to have a softer 'touch' when teaching maths.

| | arithmetic | statistics | geometry | algebra |
|----------------|--|--|---|---|
| Class 1 | able to count up to 100 | start to place objects into categories | recognise basic shapes (circle, square etc.) | n/a |
| Class 2 | can confidently count forwards and backwards to 100. Knows in principle how to count to 1,0000. 5x & 10x tables. | start to understand histograms as a way of presenting data. | understand conservation of volume, start to show awareness of transformations (flips, & enlargements) | n/a |
| Class 3 | Understands basic addition & subtraction. 2x, 3x, & 4x times table. | formal expression of frequencies. Can plot histograms & bar graphs. Conceptual awareness of percentages. | can position using x,y co-ordinates, aware of rotation & mirror transformation, can describe planes of intersection | Understands and can work with the convention of $a + b = c$ |
| Class 4 | Multiplication & Division. Completion of the multiplication tables up to 12. | Plot & interpret simple linear relationships. Familiarity with percentage notation | calculation of area for squares, rectangles, triangles and trapezoids, understands | Understand and work with the convention of $a \times b = c$ |
| Class 5 | familiarity with fractions, negative numbers, understand decimal conventions and powers | introduction of probability theory, fully familiar with percentage conventions | ability to spot symmetry, calculations of angles, ability to work with maps and plot compass bearings. | Understand work and manipulate the convention of $a^2 + b = c$, & $a^2 \times b = c$, as well as $a^2 + \cdot b = c$, & $a^2 \times \cdot b = c$. |
| Class 6 | Classification of numbers as integer, real, categorical, ordinal, interval & ratio, ability to convert between measurement units | understand central tendency measures (mean, mode, median) can plot and interpret scattergrams, can plot and compare & evaluate the central tendency measures of two groups | graph gradients, understand relationships between 2D drawings to 3D objects. Can make a verbal description of landscape from contoured map. | Understand and can work with simple quadratic equations, simultaneous equations |

Arts

The arts curriculum is seen as an integral part to a child's successful education at primary school. We sincerely do not believe that the arts is something that should be left behind at Kindergarten, or even at Class 1-2. Instead our belief is that arts should be taught to all children through their primary and secondary years. Two and three dimensional art work assesses a child's spatial awareness. So does dance but this is combined with body awareness (kinaesthetic). Drama techniques are an ideal way to teach children both inter-

personal intelligence (knowing people well) and intra-personal intelligence (knowing ones self well).

| | 2 & 3D | Music | Drama | Dance |
|----------------|---|---|--|--|
| Class 1 | exposure to different artistic mediums for drawing/painting, and production of 3 dimensional objects, | explorations of making sounds and manipulating them to express ideas. | identify drama in everyday life, explore and play with elementary drama | Learning to communicate an idea through dance |
| Class 2 | | | identify some of the purposes of drama, explore use of drama to express personal or imaginative history. | Use of dance in a purposeful way, awareness of dance in own cultures/ contexts |
| Class 3 | begin to explore the different purposes of visual artistic expression, use visual arts to communicate ideas | music in different contexts and its purpose, generating sounds in a musical manner. Reflect on live and/or recorded music | understand drama in cultural, historical and technological contexts, imitate and develop ideas with others to create drama, respond to drama and identify techniques | explore & describe dance from variety of cultures, extending dance movements, prepare and present dance movement combinations. |
| Class 4 | visual arts in different cultural contexts, exploration of visual artistic mediums to communicate ideas, the beginnings of being able to appraise a visual art piece. | music in different contexts including historical contexts, generating sounds as a group. Reflections and responses to live and/or recorded music | | knowing how dance is used in different cultures, learning how use dance for more complete expressions, preparation of dance with an awareness of context |
| Class 5 | opportunity to explore a subset of visual artistic medium in greater detail, understanding of visual arts as a product of the social context, both contemporary & historical, in depth study of a selected visual art piece | consideration of music from historical and culture perspective to evaluate it's purpose, ability to make sounds for a performance, recognise different technologies in sound production. Reflections/ responses to live and/or recorded music | understand cultural conventions in drama (similarities & differences), apply some of these conventions in drama production | understanding dances past and present, exposure to all elements of a dance production |
| Class 6 | compare and contrast different art pieces in both production and purpose it serves(d), work on a sequence of art pieces in selected medium to express problem and/ or it's solution, investigation & evaluations of a artists work. | understanding of music in societies (past and present), to jointly prepare and produce a musical performance, to critically evaluate live and/or recorded music | recognition of drama contrasted with different historical periods, research, refine and evaluate dramatic formats to present a drama, be able to make a preliminary critical appraisal of a dramatic production. | exploration of & recognition of different dance styles even within a culture, initial attempts at self production of dance performance. |

Social Science

Understanding of groups, mechanisms and perspectives when one considers societal groups from the level of a family up to a collective of nations (eg the UN). It covers the broad discipline of history, human geography, economics, and cultural studies.

The New Zealand curriculum has of course a heavy emphasis on New Zealand, the Treaty of Waitangi and of course formal groups within New Zealand. They also have 'clustered' these studies together for the first 5 years of study and then given some differentiation between Classes 6-8. Our curriculum differs in that Fiji and our neighbouring small island states as well as Australia and New Zealand and the main Asian states, will be the focus of our studies (that does not mean that we ignore Europe or the US, but they are not a central focus). We also do not lay a heavy emphasis on economics as a separate discipline in Class 6-8 as New Zealand does. The table below gives broad outlines for areas that are covered, but they are not treated as totally separate. A particular topic might encompass two or even three of these topics. 'Cultural studies' is the foundation for what in tertiary education would differentiate into law, psychology & sociology.

| | Cultural Studies | Human Geography | History |
|----------------|--|---|--|
| Class 1 | understanding personal contexts | recognising differences in immediate nation states | introduction of a historical timeline |
| Class 2 | understanding others have different personal context (learning different points of view) | Pacific neighbours | Where do current Fiji citizens come from. |
| Class 3 | cultural practices may differ but have similar purposes, the role of formal and informal groupings in society | Migration patterns around the Pacific | How people remember and record their past. |
| Class 4 | structures of leadership in Fiji, similarities & differences to other countries. | the role of environment in affecting the society in which we live | the role that passing on heritage and culture has on society |
| Class 5 | inter-cultural relationships and it's effect on people, resource management and it's impact on societies. | modern migration patterns and it's effects on the modern world. | historical figure case studies as a consequence on modern lives today. |
| Class 6 | differences between culture and tradition, human rights and responsibilities, the barter system as an economy. | humanities impact on the local and global environment. | observing different view points of the same historical event(s). Basic archeology. |

Science

Science studies at primary school are more about learning the way knowledge is acquired and acted on in the scientific method. It focusses on 4 major areas of scientific knowledge: astronomy, environmental science, physical sciences and the material/chemical sciences. These areas also provide the context to learn about the nature of scientific enquiry, that is the 'logic behind science as a way of knowing, the actual practice of doing science and the way that scientific findings are formally communicated.

| | Physical Geography & Cosmology | Environmental | Physical | Material (chemistry) |
|----------------|---|---|---|---|
| Class 1 | Earth's basic structure | Adaptation of living things to the environment. Recognition & classification of three kingdoms | Introduction to different forms of energy. | Different material properties, introduction of chemical reactions. |
| Class 2 | Understanding the differences between suns, planets and moons, description of the solar system | Requirements for 'life', recognition of extinct life forms compared to today. | Different phases of material and the impact energy has on it | chemical building blocks, broad definitions of elements |
| Class 3 | Planetary and lunar motion in the solar system, | Classification and basic description of life to the <i>Phylum</i> level. | Introduction to atomic structure, basic description of forces in motion. | Understanding differences between pure chemicals and mixtures |
| Class 4 | Major determinants of weather patterns, long term global changes (tectonics, erosion) shaping the earth, astronomical bodies outside the solar system. | The cell as a building block, inter-connectedness of living systems (ecology), classification to the <i>Class</i> level, intro to bio-geography. | Aristotelean vs. Newtonian physics, further exploration of atomic structure, description of electro-magnetic spectrum. Forces considered in basic civil engineering. | simple chemical reactions as a function of chemical structure and physical environment. |
| Class 5 | Climatology, learning to read weather maps. Basic physical geology. Forces that dictate solar planetary motion. Description of movement in galaxy structures. | cellular processes, concepts of eco-spheres as a unit of study, selected classification to the <i>Order</i> level, introduction to evolutionary theory | Simple Newtonian relationships in physical world, introduction to sub-atomic particles, properties of electro-magnetism. Forces involved in moving parts (eg. transport). | chemical reactions and introduction to bio-chemistry. |
| Class 6 | Seeing weather patterns and being able to predict the weather. Impact of human activity (eg global warming). Big Bang Theory. Relativity theory. | basic genetics, environmental (mis-) management, selected classification to the <i>Species</i> level, including Human species, evolutionary theory and introduction of behavioural ecology. | Newtonian vs. Einsteinian vs. quantum mechanics, introduction to nuclear physics. Electromagnetism in everyday life. Applying physics to everyday life. | The relationship between atomic theory and chemical reactions. Seeing chemistry in everyday life. Simple bio-chemical reactions including enzyme reactions. |

Health & Wellbeing

Traditionally this strand of education was relegated to simply 'physical education'. However, recent studies show that not only are much of the world's developed nation's children considered 'obese', also have high levels of depression by the time they reach adulthood. In addition, there are many other factors ranging from increasing multi-culturalism, to the break up of the extended family, the impact of globalism and increasing migration patterns. Our children have to face modern challenges that we or our parents rarely encountered. Thus the focus is not just on physical personal health, but on a relationship with others in

the community. Above all we want to contribute to children’s education in respecting the opinions of others, being polite, being open and tolerant to different ways of living, and learning how to secure meaningful relationships with family and friends, on top of learning how to look after themselves physically. This area combines physical education, home economics, religious studies (and we don’t mean ‘Bible studies’) and health psychology. Children in the ‘Relationships with Communities’ not only get to learn about the ‘theory’ of relating to the community but also strive to get to practice some aspects of contributing to the community depending on the year that they are in.

Health & Wellbeing are a direct ‘tap’ into the ‘personal intelligences’, even though personal intelligences are needed and required throughout all the other study areas.

| | Personal Health | Motor Skills | Relationships with Others | Relationships with Communities |
|------------------------|--|---|--|---|
| Class 1 & 2 | being able to describe oneself, safety around water, safety on the road | Basic athletic skills, swimming instruction, road crossing skills and movement on or around the road. | listening skills, scripts to talk to strangers | different community groupings, ethnicity & religions of Fiji. |
| Class 3 | Regular exercise (including after hours), survival skills in the tropics | exposure to different athletic activities, simple floor gymnastic skills, swimming, bush walking | communication skills, identification of societal pressures to change behaviour | As above plus formal government influences in community. |
| Class 4 | Regular exercise (including after hours), nutrition & health | Exposure to individual and team sports, | learning appropriate assertive techniques to respond to pressure | As above plus non-government organisations and their roles in the community |
| Class 5 | Regular exercise (including after hours), planning a balanced nutritional diet, | Acquire complex motor skills in a learnt sporting activity | learning to recognise when and where to make reasonable choices in social situations | learn about and study at least one group that actively contributes to the well being of the community or an aspect of it. |
| Class 6 | Regular exercise regimen self setting skills, Self defence (reading situations and verbal response scripts). | Basic First Aid, & life saving skills (without entering water). | understanding rights and responsibilities of individuals, learning to handle being challenged in social situations | understanding the similarities and differences of opinions of individuals vs. those of the community. |

Technology

It can be argued that one of the defining features of humanity is the way that it has adapted technology to help live life, from the plough, to writing, to the semi-conductor chip, these are all technologies that have leveraged humanities capacity to adapt to hostile environments. A focus on technology which tries to place appropriate technologies and perhaps to be exposed to the utility of technology, may help our children to appreciate where and when technology can be most appropriately used. A focus on technology does **not** mean pushing a sequence of buttons or using an internet, since it is virtually guaranteed that by the time primary school children leave school the technology

will be redundant. Learning about the principles of technology and its' place in our society, may help children to use it appropriately and perhaps in creative ways that were not originally anticipated. Technology projects include 'building' something but it is normally small scale and not inherently of value (such as building a transport mechanism to move an egg across a room with elastic bands and plastic straws), but the focus is on the principles involved and the process needed to construct the machine.

Whilst it may seem as if studies in technology are suited best for children with an engineering frame of mind, in fact it may be studied under a variety of overlapping topics such as history (building pyramids), or social studies (the impact of telecommunication & computing industries on globalism) or ethical concerns in biological sciences (genetic engineering), or economic competitiveness of companies utilising an emergent technology.

| | Practice | Nature of technology | Knowledge |
|------------------------|---|--|--|
| Class 1 & 2 | Exposure to the principles of planning, development and evaluation of technology practice | Understanding of technology being a deliberate attempt to attain 'leverage' in living | Learning the language of modelling, performance properties and technology systems (inputs, transformations & outputs). |
| Class 3 | First attempts at descriptions of planning, development and evaluation of a simple technological outcome. | societal impacts of technology | Systems representations (black box systems). |
| Class 4 | Refinements at the above cycle. | review of technologies impact on humanity and the characteristics that made technologies successful, or not. | The language and use of prototypes as an exploratory process in technology development. |
| Class 5 | | | properties of materials based on performance criteria. |
| Class 6 | The full cycle of planning, evaluating and constructing a technology | Understanding of the inter-disciplinary and inter-related nature of technology(ies) | Model building to assess feasibility studies and risk management of new technologies. |