



**SIR
MANASSEH
MEYER**

International School

Secondary School

Grade 7 Curriculum

August 2024



Grade 7 Curriculum

English

Maths

Science

Humanities

Jewish Education

Languages

Art

PE

Drama

Music

Makerspace

PSHE

World Religions



GRADE 7 CURRICULUM

English

Students will be empowered to become independent, creative, critical thinking readers, writers and orators.

Assessment focuses on the three key skills of reading, writing, and speaking and listening. Through the year we will study the following units of work:

- Inspirational Speeches (study of argument/persuasive writing)
- 'Where the World Ends' by Geraldine McCaughrean (study of a novel)
- Frankenstein (playscript) adapted by Philip Pullman (study of a dramatic play)
- Poetry: Text Worlds (a linguistic approach to the study of poetry)

Reading

Students will be encouraged to build their skills of inference and analysis in order to understand the writer's craft. They will be taught how to write convincingly about texts, and to appreciate the importance of context.

Writing

Students will be supported to learn how to independently plan and structure extended pieces of writing. They will extend their repertoire of methods to engage the reader, including using literary devices. Accurate grammar, punctuation, vocabulary and spelling underpin good writing and these skills are taught throughout all units of work.

Speaking and Listening

Students will learn through discussion and debate; role play, and presentation activities. Speaking and listening tasks also develop social skills such as appropriate modes of speech (e.g. levels of formality; how to express disagreement politely) and turn taking in discussion.



GRADE 7 CURRICULUM

Maths

We follow the Singapore Maths curriculum. In Grade 7 the topics and skills acquired are outlined below.

Numbers and Operations

Students will learn about:

- i Primes and prime factorization
- ii Finding highest common factor (HCF) and lowest common multiple (LCM), squares, cubes, square roots and cube roots by prime factorization.
- iii Negative numbers, integers, rational numbers, real numbers and their four operations.
- iv Calculations with calculator
- v Representation and ordering of numbers on the number line.
- vi Use of symbols; greater than, smaller than, greater and equals to, smaller and equals to
- vii Approximation and estimation (including rounding off numbers to a required number of decimal places or significant figures, and estimating the results of computation)

Ratio and Proportion

Students will learn about:

- i Ratios involving rational numbers
- ii Writing a ratio in its simplest form
- iii Problems involving ratio

Percentage

Students will learn about:

- i Expressing one quantity as a percentage of another
- ii Comparing two quantities by percentage
- iii Percentages greater than 100%
- iv Increasing/decreasing a quantity by a given percentage (including concept of percentage point)
- v Reverse percentages
- vi Problems involving percentages



Rate and Speed

Students will learn about:

- i Concepts of average rate, speed, constant speed and average speed.
- ii Conversion of units (e.g. km/h to m/s)
- iii Problems involving rate and speed

Algebraic expressions and formulae

Students will learn about:

- i Using letters to represent numbers
- ii Interpreting algebraic notations
- iii Evaluation of algebraic expressions and formulae
- iv Translation of simple real-world situations into algebraic expressions.
- v Recognising and representing patterns/relationships by finding an algebraic expression for the nth term
- vi Addition and subtraction of linear expressions.
- vii Simplification of linear expressions
- viii Use brackets and extract common factors

Functions and Graphs

Students will learn about:

- i Cartesian coordinates in two dimensions
- ii Graph of a set of ordered pairs as a representation of a relationship between two variables
- iii The idea of linear functions
- iv Graphs of linear functions
- v The gradient of a linear graph as the ratio of the vertical change to the horizontal change (positive and negative gradients)

Equations and Inequalities

Students will learn about:

- i Concept of equation
- ii Solving linear equations in one variable
- iii Solving simple fractional equations that can be reduced to simple linear equations
- iv Formulating a linear equation in one variable to solve problems



Angles, triangles and polygons

Students will learn about:

- i Right, acute, obtuse and reflex angles
- ii Vertically opposite angles, angles on a straight line, angles at a point
- iii Angles formed by two parallel lines and a transversal: corresponding angles, alternate angles, interior angles.
- iv Properties of triangles, special quadrilaterals and regular polygons (pentagon, hexagon, octagon and decagon), including symmetry properties
- v Angle sum of interior and exterior angles of any convex polygon.
- vi Classifying special quadrilaterals on the basis of their properties.
- vii Properties of perpendicular bisectors of line segments and angle bisectors.
- viii Construction of simple geometrical figures from given data (including perpendicular bisectors and angle bisectors) using compasses, ruler, set squares and protractors, where appropriate.

Mensuration

Students will learn about:

- i Area of parallelogram and trapezium
- ii Problems involving perimeter and area of plane figures
- iii Volume and surface area of prism and cylinder
- iv Conversion between square centimetres and square metres, and between cubic centimetres and cubic metres.
- v Problems involving volume and surface area of composite solids

Statistics and Probability

Students will learn about:

- i Analysis and interpretation of tables, bar graphs, pictograms, line graphs and pie charts.
- ii purposes and uses, advantages and disadvantages of the different forms of statistical representations
- iii Explaining why a given statistical diagram leads to misinterpretation of data



GRADE 7 CURRICULUM

Science

Plant and Animal nutrition

Learners build on their previous knowledge of the characteristics common to all living things to develop their knowledge of:

- i The need of plants for carbon dioxide, water and light for photosynthesis and that this process makes biomass and oxygen
- ii The constituents of a balanced diet and the functions of various nutrients
- iii The effects of nutritional deficiencies
- iv The relationship between diet and fitness
- v The organs and functions of the alimentary canal
- vi The function of enzymes

Elements, mixtures and compounds

Learners build on their previous knowledge of the particle theory of matter and how this can explain the properties of solids, liquids and gases, to develop their knowledge of:

- i Changes of state, gas pressure and diffusion.
- ii The chemical symbols for the first twenty elements of the Periodic Table
- iii Elements, compounds and mixtures

Light

Learners build on their previous knowledge of different types of energy and energy transfers to develop their knowledge of:

- i How light travels and the formation of shadows
- ii Reflection at a plane surface and using the law of reflection
- iii Refraction at the boundary between air and glass or air and water
- iv The dispersion of white light
- v Colour addition and subtraction, and the absorption and reflection of coloured light



Transport in plants and animals

Learners build on their previous knowledge of the characteristics of living things to develop their knowledge of:

- i How water and mineral salts are absorbed and transported in flowering plants.
- ii They also develop their knowledge of transporting chemicals in humans by finding out about:
 - The basic components of the circulatory system and their functions
 - The basic components of the respiratory system and their functions
 - Gaseous exchange
 - The effects of smoking
 - Aerobic respiration

Metals and Non-metals

Learners build on their previous knowledge of the Periodic Table and properties of materials and develop their ideas on:

- i The differences between metals and non-metals
- ii Chemical reactions
- iii Word equations

Sound

Learners build on their previous knowledge of the types of energy to develop their knowledge of:

- i The properties of sound in terms of movement of air particles
- ii The link between loudness and amplitude, pitch and frequency.

Reproduction and growth

Learners build on their previous knowledge of grouping together materials and living things with similar properties and characteristics to develop their knowledge of:

- i The human reproductive system, including the menstrual cycle, fertilisation and foetal development
- ii The physical and emotional changes that take place during adolescence
- iii How conception, growth, development, behaviour and health can be affected by diet, drugs and disease.



Chemical reactions

Learners build on their previous knowledge of mixtures, compounds, metals and corrosion to develop their knowledge of:

- i Some common compounds including oxides, hydroxides, chlorides, sulfates and carbonates
- ii Using word equations to describe a reaction

Forces and magnets

Learners build on their previous knowledge of the effects of forces on movement to develop their knowledge of:

- i Speed including interpreting simple distance/time graphs
- ii Magnets, electromagnets and magnetic fields

Scientific enquiry

Work focuses on:

- i Planning investigations to test ideas
- ii Identifying important variables; choosing which variables to change, control and measure
- iii Making predictions using scientific knowledge and understanding
- iv Taking appropriately accurate measurements
- v Using a range of equipment correctly
- vi Discussing and controlling risks to themselves and others
- vii Presenting results as appropriate in tables and graphs
- viii Making simple calculations
- ix Discussing explanations for results using scientific knowledge and understanding; communicating these clearly to others
- x Presenting conclusions to others in appropriate ways



GRADE 7 CURRICULUM

Humanities

Geography

In many places around the world, traditional ways of life are under threat as the result of an expanding global population and the corresponding increase in demand for resources. For many groups of people, the ways in which they have always lived are in danger of disappearing, along with the environments on which their culture is based. Standing up to a powerful majority requires bravery, both from members of the communities affected and their advocates around the world. Students will explore ways in which different indigenous groups of people try to remain true to themselves and their culture. They will examine the factors that are threatening traditional ways of life and will then investigate the people who have demonstrated their bravery in attempting to protect their ability to be true to themselves and their cultural identity.

Students will discern through the issue of climate change and enhanced global warming, developing an awareness of the challenges facing the world's population in the future, especially those relating to climate change, and how the actions chosen by individuals, governments and other groups impact upon these challenges.

The persistent pursuit of new sources of energy has brought with it incredible success. In pre-Industrial times, persistent exploitation of the power of fire, water, wind, animals and even people without doubt enabled humans to develop as a species. Students will examine the innate persistence of people, both in the past and today, who contributed to our ability to exploit the world's fossil fuels. They will investigate the future of fossil fuels: how much coal, oil and gas still remains to be used, and the debates surrounding the cost of making use of these reserves, identifying ways in which they will need to be persistent in overcoming problems with using renewable sources of energy, and ways in which their lifestyles may need to change if we are to continue to be a 'sustainable' species now, and in the future.



History

Liberal societies tend to be based on the belief that the myriad differences between individuals and groups of people are valid, important and often to be celebrated. These differences are seen to contribute to the richness and diversity of contemporary culture. Such liberalism rests on a secure basis of accepted civil rights for all individuals and their individuality. Students will analyse the way in which entire generations of Australian children were taken from their families and communities as part of the process of 'civilising' Australia initiated by the white settlers. They will explore the way in which the 'stolen generation' were prevented from being themselves, and will look at the ways in which the victims of this responded to their experiences. They will then study examples of bravery; people who resisted and tried to stay true to themselves and their culture. They will examine the process by which the government changed its policy towards aboriginal children and what measures were introduced in order to create a different kind of society, in which everyone in Australia would have the right to be true to themselves.

As individuals, we all make decisions and choices every day, all day long. Regardless of whether we give consideration to our actions or just act, we are responsible for the consequences of the actions, whether they are good or bad. Studying examples of significant success in the past gives students the opportunity to explore the journey taken by those involved before the final goal was achieved. They can identify the strategies used to determine how and why different individuals, communities and even whole societies have been successful. More importantly, they can also analyse the ways in which people in the past have responded to the setbacks they faced. In doing so, students can draw inspiration from the ways in which people in the past persisted in their aims, even when they did not immediately achieve their objectives.



GRADE 7 CURRICULUM

Jewish Education

Overview

This course provides students with opportunities to learn about Judaism and to learn from Judaism. The curriculum covers 4 key areas: Jewish Values/ Tikun Olam; Jewish History; Israel/ Zionism, and the Holocaust. The curriculum has been designed for SMMIS by our team of international educators.

Students are encouraged to respond to and reflect on the lessons being taught with a strong emphasis on an understanding of the impact that Jewish History has had on the Jewish People today. Jewish values have a central focus in this curriculum where students are encouraged to explore Jewish values from different perspectives that are thought provoking and meaningful. Each class focuses on Jewish values in a way that highlights the distinctive contribution Judaism makes to the challenges of modern life.

This course is taught in an interactive and dynamic way with students being expected to involve themselves in research projects and presentations.

Key Outcomes

Jewish/Universal Values – Tikun Olam

- To know and understand how the Jewish People have engaged in Social Action throughout the ages
- To understand that Jews have a responsibility to have a positive impact on the world
- To understand the many similarities Judaism has with other cultures and shared values
- To develop a lifelong commitment to engaging with the universal values and integrating them into their lives
- To engage in Social Action, as an expression of Jewish values, both inside and outside of the Jewish community

Jewish History and the Jewish People

- To know about and understand the origins and the development of Jewish History and the Jewish People
- To identify with the diversity of individuals and groups that make up the Jewish People
- To understand the impact Jewish History has had and continues to have on the Jewish People today



Israel: Zionism

- To know about and understand the history and development of the modern State of Israel
- To appreciate Israel as central to the Jewish People
- To develop a meaningful and life long relationship with the State of Israel

Holocaust Studies

- To know and understand the causes of World War Two and the Holocaust (Shoah)
- To identify the evolution and spread of antisemitism, Anti-Jewish policies and propaganda
- To identify the consequences of the Holocaust
- To understand the impact the Holocaust has had and continues to have on the Jewish People today
- To develop a meaningful way to remember and ensure that history doesn't repeat itself



GRADE 7 CURRICULUM

Languages

MFL: Mandarin

The Mandarin curriculum aims to develop the 4 essential skills of listening, speaking, reading and writing. Students who study Mandarin sit the Youth Chinese Test (YCT) qualification appropriate to their level at the end of every academic year. Below is an outline of the curriculum content.

- Core vocabulary list of 300 words
- Develop listening and speaking of high-occurrence sentence patterns relating to social interaction
- Comfortable in recognizing high-occurrence Mandarin characters and ability to utilize electronic medium in Mandarin application
- Able to use Mandarin to do simple and direct conversation about familiar topic in social settings
- Chinese culture appreciation in selected topics



MFL: Ivrit

At SMMIS we follow the philosophy of full immersion of the Hebrew language, creating a rich Hebrew environment, which leads to a mastery of conversational and written Hebrew. A progressive Hebrew language programme is introduced through the use of themes and concepts which are explored in Hebrew.

Hebrew vocabulary holds a main focal point in the study of Hebrew and is emphasised with weekly lists and various games and activities. The students practice their language skills by reading and writing Hebrew in correlation to the topics taught in class.

Secondary School students are expected to be able to write book reports and keep a journal in Hebrew using all the skills acquired. They practice and reinforce these skills through various level appropriate workbooks. Each class is given a set of Matarot, goals to achieve throughout the year.



GRADE 7 CURRICULUM

Art

The Art curriculum follows the International Middle Years Curriculum (IMYC) framework that revolves around the eight central learning dispositions: responsibility, adaptability, enquiry, morality, thoughtfulness, respect, communication and reliance. The curriculum aims to incorporate these life skills through the students' appreciation of art. We seek to promote enthusiasm, a sense of increased personal responsibility and a sense of pride in the artwork produced.

Skills

Students will learn how to effectively apply the elements of art (line, shape/form, colour, space, and texture) and the principles of design (unity, balance, movement, rhythm, emphasis/focal point and scale/proportion) in order to accurately portray one and two-point perspectives, as well as draw and shade objects, people and faces in a realistic manner. They will also be able to combine these techniques with the application of tempera, water colours, and acrylic paints.

Application

Besides the mediums mentioned above, students will be working with clay by using the pinch-pot, slab and coil methods of hand building, and multi-media such as art/colour pencils, oil/chalk pastels, charcoals, colour construction paper, scissors, glue, clay, cloth, paints, ink, bushes, beads, feathers, gems, mosaics, craft sticks, card board, etc. Students will be encouraged to work with various artistic styles of the past and modern time (Realism, Impressionism, Fauvism, Cubism, Pop, Surrealism and Abstract Expressionism) to broaden their artistic horizon.

Objective

Our aim is to develop aesthetic values by providing students with the technical skills needed to perceive and interpret visual images in various media through realism and by using their imagination. Students will be exposed to the design process, creative problem solving, and to help them to see the connections beyond the art studio. Student will be able to recognize, distinguish and appreciate art and cultural influences of different cultures and historical periods and to analyse, compare, interpret, and evaluate one's own art, the art of other students and of major artists. This is with the aim of enhancing creativity and to develop an awareness of each student's inherent creative potential.



GRADE 7 CURRICULUM

PE

The P.E. curriculum is underpinned by the International Middle Years Curriculum (IMYC), facilitating an environment for pupils to develop holistically focusing on academic, social and lifelong skills such as respect, resilience and caring for others in a sporting context. These life skills are enhanced through real-life situations in outdoor and adventure activities.

Through a skills-centred approach, we aim to provide students with an opportunity to acquire advanced sports skills and strategies focusing on effective performance (attacking, dribbling, teamwork) through a broad range of physical activities:

- Ball games
- Striking games
- Athletics
- Dance
- Swimming activities

By the end of grade 7, pupils are expected to perform a broad range of advanced sports skills, including the monitoring and evaluation of their own performance and that of their peers. Furthermore, pupils should be able to swim a distance of over 50 meters in two different swimming strokes and perform a basic water rescue technique, as well as understanding the importance of leading a physical and active lifestyle. Our curriculum ensures that our pupils acquire a knowledge of the benefits of physical activities at both a local and at an international context.



GRADE 7 CURRICULUM

Drama

Our Drama curriculum focuses on developing the key dramatic skills of:

Making (exploring, devising, shaping, interpreting)

Performing (presenting and producing)

Responding (evaluating and applying knowledge and understanding).

Students will learn drama games, movement, acting and stagecraft skills. The students can expect to develop; self-confidence, imagination, cooperation, concentration, empathy, communication, coordination, problem solving, physical fitness and to develop an appreciation of the arts.

GRADE 7 CURRICULUM

Music

Our Music curriculum aims to develop an appreciation and love of Music in all students through the following aims and activities:

- perform, listen to, review and evaluate music across a range of historical periods, genres, styles and traditions, including the works of the great composers and musicians
- learn to sing and to use their voices, to create and compose music on their own and with others, have the opportunity to learn a musical instrument, use technology appropriately and have the opportunity to progress to the next level of musical excellence
- understand and explore how music is created, produced and communicated, including through the inter-related dimensions: pitch, duration, dynamics, tempo, timbre, texture, structure and appropriate musical notations



GRADE 7 CURRICULUM

Makerspace

The SMMIS Secondary School students apply innovative Makerspace concepts to real-world problems, underpinned by practical skills, including communication, inquiry, collaboration, creativity, problem solving and critical thinking skills.

What Learning Outcomes are Achieved in a Makerspace?

Making and makerspaces are complementary to curriculum driven classes. The SMMIS Secondary School Makerspace Programme involves what are often described as “the 4 C’s” of necessary 21st century skills:

- Creative thinking
- Critical thinking
- Collaboration
- Communication

The SMMIS Secondary School Makerspace programme is unique; supportive of our student cohort and their willingness to partake in an exciting, skills-focussed, innovative programme.

Students will partake in a skills-based, hands-on curriculum.
The types of tasks students will participate in include:

Microbits

- Microbit mini projects

Microbit Programming

- Students will be able to create simple coding with DIY projects

Introduction of 3D Modeling

- Fusion 360-2D to 3D CAD designing
- Cura software
- 3D printing

PBL – Project Based Learning Collaborative Tasks



GRADE 7 CURRICULUM

PSHE (Personal Social, Health Education)

PSHE is a developmental program of learning through which children in all grades acquire the knowledge, skills and understanding to manage their lives now and in future. PSHE builds on the skills for students to develop effective relationships, assume greater responsibility and manage personal safety. It will introduce the students to a wider world and enable them to make an active contribution to their communities.

World Religions

Students study how religious beliefs influence values, practices, and daily life in different communities. They begin to compare how faith shapes identity, relationships, and celebrations across traditions. Lessons encourage respectful dialogue and thoughtful reflection on diversity in Singapore.