Foreword

Why choose us? We...

1. offer a unique and student-centric curriculum

Graduation

2. don’t just teach Math and Science, but all the other subjects as well...

3. are Centres of Excellence

4. have the heart

5. provide a strong research culture

6. nurture you to scale your own peak

7. mould the ‘Humanitarian’

8. help you gain a global perspective

Launching your first step...

Vision
To be the wellspring of inspiration for Math & Science Education and Research

Mission
The NUS High School will nurture well-rounded and world-ready scientific minds to make distinguished contributions as Pioneers, Achievers, Thinkers and Humanitarians

Motto
Experiment. Explore. Excel.

Contents
Foreword

The NUS High School of Mathematics and Science, affiliated to the National University of Singapore (NUS), is an independent, specialised, co-educational school for students who have the aptitude in and passion for mathematics and the sciences. Offering our own six-year diploma programme, we were set up in 2005 by MOE and NUS. All our graduates are presented with the NUS High School Diploma, which is recognised by local and international universities, including top universities in the UK and the USA.

We aim to nurture well-rounded and world-ready scientific minds to make distinguished contributions as Pioneers, Achievers, Thinkers & Humanitarians. The curriculum has a special emphasis on mathematics, the sciences and research to sustain and enhance students’ understanding and passion in these areas. The school also provides platforms and opportunities for students to develop their character and leadership skills. All our students will be given an opportunity to travel overseas. This allows them to broaden their global outlook and learn to operate within multi-national settings in the future.

Students are admitted to the school in Year 1 (13 years old) or Year 3 (15 years old) after a rigorous selection process comprising tests and group activities in which they are assessed on their understanding of and passion for mathematics and the sciences. The six-year high school programme attracts the top 10% of Singapore’s national cohort of primary school students. Annually, it receives about 2000 applications for its Year 1 admissions. The school enrols up to 170 Year 1 students and 70 Year 3 students annually.

Why choose us?

We...
Our curriculum adopts a modular and spiral approach to teaching and learning to ensure that our students are provided with a well-rounded education in the following domains:

**Foundation Years**
- Mathematics & Sciences
  - Mathematics, Biology, Chemistry, Physics & Computing Studies
  - Astronomy & Robotics
- Humanities, Art & Music
  - Integrated Humanities, English Literature Economics, Art, Music, Geography, History

**Specialisation Years**
- Mathematics & Sciences
  - 3 Majors - Mathematics* & 2 Sciences*
- Humanities, Art & Music
  - 4th Major (Optional) - Any other subject from Sciences*, Humanities, Art & Music

**Languages**
- English & Mother Tongue**
  - French Language, Japanese Language, Chinese Special Programme & Malay Special Programme

**Research, Innovation & Enterprise**
- da Vinci Foundation, Design & Engineering, Science Presentation & Research Methodology

**Affective and Character Education**
- Values in Action, Student Leadership, Discipline, National Education, Mentoring, Pastoral Counselling & College Counselling

**Physical Education**

**Co-Curricular Activities**
- Note: Subjects in grey are optional subjects.
  *For Mathematics and the Sciences, students can read the subject at Major or Major with Honours level.
  **Fulfill MOE Mother Tongue Language requirement

NUS High School designs and implements a unique and student-centric curriculum that is relevant, challenging and inspiring to students who have the aptitude in and passion for Math and Science. The curriculum allows students to have greater flexibility for deeper exploration in their learning as they move up from the Foundation to the Specialisation Years.

**Foundation Years**
Years 1 - 3
Students will acquire the fundamentals and build their base knowledge. They will have the opportunity to enhance and apply their knowledge.

**Specialisation Years**
Years 4 - 6
Students will be engaged in doing advanced courses in their areas of specialisation. There are up to 424 possible subject combinations and hence students can truly specialise in areas of their interests.
Exemption & acceleration of modules, university modules & Advanced Research Project

Exemption and Acceleration of Modules

Students who are granted exemption of a module may proceed to read another module at a higher academic level in lieu as acceleration. For example, MA1110 (a prerequisite for MA2112) is normally read by a Year 1 student. A student granted exemption of MA1110 may accelerate to read MA2112 in his/her Year 1 of study.

University Modules

Acceleration can be extended to reading NUS or Singapore Management University (SMU) undergraduate modules. Students who are highly gifted in certain academic areas may take selected NUS/SMU modules after approval has been given by the relevant department in NUS High School and the respective universities.

Advanced Research Project

Students must successfully complete a graded Advanced Research Project as a graduation requirement. The completion status of the project is documented in the student’s transcript and details described in the student’s portfolio. Apart from the benefits of individual growth and development gained through this experience, college/university admission tutors have indicated that annotation of a successfully completed Research Project in the student transcript can have a strong positive effect on the college admissions process. While grades will be awarded towards the completion of the research project, they will not be used in the computation of the Cumulative Average Point (CAP).

Subject Major and Major with Honours

The following academic tracks are offered by the respective subjects:

Subject Major
(offered by Mathematics, Biology, Chemistry, Physics, Computing Studies, Geography, Economics, History, English Literature, Art and Music)

- Broadly defined as a curriculum leading to academic competency equivalent to ‘A’ Level or AP Examination
- It is also the minimum level of subject requirement for award of the NUS High School Diploma

Subject Major with Honours
(offered by Mathematics, Biology, Chemistry, Physics and Computing Studies)

- Direct students to higher level of learning and competency, preparing students for university-level courses
- To qualify for reading a Subject Major with Honours, students have to consistently maintain good results in core modules

Modular System and Types of Modules

The curriculum in NUS High School is based on a modular system which aims to provide a healthy diversity of learning opportunities so that students can develop to their fullest potential at their own pace.

Types of Modules

- Core Modules: Essential modules that students must pass
- Elective Modules (Optional): Modules that build on the core modules to give a greater depth and deeper understanding of the subject
- Enrichment Modules (Optional): Modules that are offered to students who wish to broaden their interests
- Honours modules (Optional): Advanced modules designed at university undergraduate level for students who plan to do a Major with Honours in a specific subject area upon graduation with the NUS High School Diploma

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“Be not afraid of greatness: some are born great, some achieve greatness, and some have greatness thrust upon them.”

- William Shakespeare
Graduation

Requirements

• Obtain a minimum Graduation CAP of 2.5
• Pass all core modules for English Language
• Complete respective Mother Tongue modules, as required
• Pass all core modules for Mathematics, Biology, Chemistry and Physics in Foundation Years
• Pass all core modules for Mathematics and two Science Majors
• Pass respective core modules for Humanities, Art and Music in Foundation Years, and Year 6 (for non-Humanities/Art/Music Majors), as required
• Obtain at least a Satisfactory grade for Advanced Research Project
2. don’t just teach Math and Science, but all the other subjects as well...

The mathematics curriculum at NUS High School is built upon important mathematical concepts such as number and algebra, geometry and measurement, function and graph, as well as probability and statistics.

Students will be able to apply these concepts in multiple ways using numbers, graphs, symbols, diagrams, and words. The learning process emphasises concept attainment through problem solving and reasoning, mathematical skills and tools, mathematical computation and modelling, and putting mathematics to work.

In the Foundation Years, students are given a broad-based mathematical study of algebra, geometry, statistics and trigonometry. These topics serve as a foundation for many modules offered in the later years.

Pre-calculus topics such as functions, trigonometry, sequences and series will also be taught. Students must be familiar with the properties of functions, the algebra of functions, the graphs of functions, the language of functions, and the values of trigonometric functions. Vectors, numerical methods and mathematical proofs will also be touched upon. Simple concepts of calculus are introduced too.

Students in the Specialisation Years are required to read calculus at an extensive level that is comparable to calculus courses in colleges and universities. They will also further their knowledge in pure mathematics and statistics. In addition, they have a range of electives to choose from to deepen their knowledge and widen their exposure to Math.

Students keen on computing can take up elective modules in Computing Studies (CS) from Year 1 onwards. Students must take the CS electives in the Foundation Years, if they wish to read Computing Studies as a major or major with Honours in the Specialisation Years.
The exciting and rigorous chemistry curriculum aims to develop the student to be a world-ready scientific enquirer who values the importance of chemistry in daily life, in society, in the environment and its role in the advancement of science and technology. The delivery of this six-year programme is achieved through a variety of teaching approaches that are contextualised, inquiry-based, conceptually focused and informed by assessment. The experimental nature of Chemistry is also reflected throughout the course.

Chemistry is an experiential science that combines the academic study with the acquisition of practical and inquiry skills. With this in mind, our Foundation Years place emphasis on hands-on experiences as part of the learning and inquiry. Students begin their journey by understanding the behaviour of our physical world from the viewpoint of atoms and molecules. They then progress to examine natural phenomena from the perspective of unifying concepts of structures, reactions, patterns and energy.

With the body of scientific knowledge and skills acquired in the Foundation Years, students in the Chemistry Major course are poised to take on the study of more complex phenomena in the Specialisation Years. Many of the unifying concepts are revisited in more advanced topics like equilibria, thermodynamics and organic chemistry. Students will also deepen their understanding and appreciation for the intricate relationship between theoretical knowledge and observed phenomena that exist and complement each other in the scientific world. Students’ learning will culminate in an experimental module in chemical synthesis and analysis, which exposes them to the scientific processes carried out by chemists today.

Our Honours programme builds upon the students’ knowledge of physical, organic and inorganic chemistry and delves into the essential principles of analytical Chemistry in the areas of separation science and structural elucidation. The programme also caters to the needs of the students by providing them the flexibility to select two Honours options from a range of advanced topics in Chemistry.

Besides the core modules, the department also offers a range of enrichment and elective modules to cater to the different interests and abilities of the students.

The Biology curriculum is uniquely designed to cover both breadth and depth of the subject. Modules adopt a spiral and thematic approach that aims to enable students to build a solid foundation and prepare them for advanced studies of Biology and Biology related disciplines.

Modules in the Foundation Years will cover basic concepts of the various fields of Biology, while allowing them to develop observation and inquiry skills. Besides equipping them with a good foundation, the experiential and hands-on learning will also provide an opportunity for them to pick up good habits of the mind and effective scientific skills. The topics covered include Cell Biology, Human Biology, Botany, Animal Physiology, Genetics and Molecular Biology.

In the Specialisation Years, students who are interested in pursuing Biology related disciplines in universities will continue their learning in Biology beyond the basics. The topics covered include Evolutionary Biology, Ecology, Biodiversity, Molecular Genetics and Biochemistry. Students will explore biological phenomena, learn more extensively via outdoor field trips and engage in more in-depth investigations. There is more exposure to critical thinking and analytical skills in the more demanding modules, as well as an emphasis towards more knowledge application in broader and concept-oriented perspectives. Students will also become more independent in their learning approaches.

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The Physics & Engineering curriculum in NUS High School spans 6 years. The Foundation Years are designed to ensure that students receive a strong grounding in fundamental concepts in mechanics, thermal physics, waves & optics, electricity & magnetism and nuclear physics. There is an emphasis on active learning and hands-on activities to enable students to develop their conceptual understanding of these concepts.

The Specialisation Years build on what has been introduced in the Foundation Years and include topics in Modern Physics. Honours students will extend their study in mechanics and electromagnetism through the use of calculus. The emphasis is on deepening students’ understanding through a greater level of analytical and mathematical sophistication in order to provide the necessary foundation for students to take university modules in physics and engineering.

Besides the core modules, the department offers an excellent variety of elective and enrichment modules, which are intended to cater to students’ varied interests and passions in physics. Examples of these areas include robotics and astronomy.
The English Language curriculum aims to nurture students who communicate effectively in varied contexts as a result of their development in listening, reading, speaking and writing. More importantly, it seeks to cultivate in students a broad and mature understanding of a range of subject matter pertaining to the world affairs as well as the ability to analyse and evaluate them critically and creatively. In addition, the programme hopes to cultivate students’ lifelong interest in the language, love for and appreciation of texts of varied genres.

The curriculum adopts a constructivist approach, which engages the learner in making meaning from authentic texts and using language in real-world contexts. For every module, an integrated and holistic strategy is used, to ensure acquisition of key language skills in listening, reading, speaking and writing. Class time will be devoted to thinking, decision-making, learning-focused interaction and problem-solving in authentic contexts.

In Years 1 and 2, the focus is on the appreciation and creation of literary works and functional texts. Through text types such as personal recounts, narratives, descriptive works, poetry, and plays, the modules aim to develop students’ language and literary skills. The study of Literature and skills of literary analysis will be incorporated in the English Language modules. In addition, students will be introduced to a wide range of functional texts like factual recounts, information reports and formal letters. They will apply knowledge of textual and linguistic features to communicate effectively for real-world purposes.

In Years 3 and 4, students will be introduced to expository texts. Through a broad selection of literary works which include representative works from various genres and periods, the Literature programme aims to:

- nurture students to be readers for life who can appreciate different genres of Literature and its contribution to the human civilisation
- groom students to be proficient in understanding various literary forms and its features in achieving specific desired ends
- facilitate students to form perceptive thoughts and original ideas towards what they read
- guide students towards an objective, conscious and critical discussion reflective of both emotional and intellectual awareness of themes, characters, settings and contexts
- develop students to be able to communicate and present effectively and convincingly with proper analysis and evaluation in both the written and spoken mode

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The foundation Literature module is incorporated into the Year 1 and 2’s English Language modules EL1108 and EL2108. These foundation modules are pre-requisites for all higher level modules offered in the subject.

Years 3 and 4 will form the introductory and developing stage of exposure to the 3 main genres of Literature – Prose, Poetry and Play. For Prose, students will actively engage in the study of Fiction in the forms of a Novel and Short Fiction. For Poetry, students will experience a broad selection of poetry from different cultures. Students will also explore both local and international theatre in their study of Play.

Years 5 and 6 will progress students from developed students of Literature to being advanced students with a richer and more diverse experience of Literature whilst simultaneously rooting them deeper into the study of specific ideas of critical reading and thinking. Students will have to read extensively and intensively representative works of recognised literary merit spanning across different eras, movements and genres. The modules will be categorised according to periods and topics. Their study will culminate in an independent research programme which will take the form of an extended essay. The extended essay will be an investigation into the transformation of literary works either across genres or periods.

The English Language modules to fulfil the requirements for graduation with the NUS High School Diploma. As English Language is a process skills subject, the department does not allow for exemption or acceleration of modules. Class attendance and participation are imperative for skill development, hence they are not optional.
The four-year French and Japanese courses prepare students for DELF (Diploma in French Studies) and the JLPT (Japanese Language Proficiency Test) respectively. The four-year Chinese as a 3rd Language and Malay as a 3rd Language courses equip students with language competencies required for sitting the GCE ‘O’ Level Chinese/Malay as 3rd Language Exams.

Upon completion of any of the four Third Language courses, students are expected to achieve basic communicative competence. Attaining this level of proficiency would indicate that students have acquired the language foundation necessary to take up the respective advanced Third Language course.

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The Elective Modules include French, Japanese, Chinese as a 3rd Language and Malay as a 3rd Language. The modules are offered to students who:

1. display a strong interest to study a Third Language in addition to their Mother Tongue Language
2. opt to do French or Japanese in lieu of their MTL (with approval from MOE)
3. desire to take up one of these languages although they are exempted from studying the MTL modules. (This applies to some of the foreign students.)

In order to further develop the capacity and interest for Mother Tongue languages, the school also offers elective modules to students taking MTL or HMTL course. Elective modules such as Basic Translation Skills, The Math and Science Achievements of Ancient China, Learning Math and Science in Chinese, Appreciation of Chinese Language and Culture and The Culture behind Chinese Philology, aim to strengthen the language acquisition of students and develop in them the ability to appreciate the culture associated with the language.
Humanities

The Humanities curriculum aims to nurture our students to become world-ready learners with humanitarian values. It also aspires to develop in students an appreciation of and a sustained interest in the world around them. They will also be encouraged to think critically and creatively, inspiring varied possibilities for the betterment of our society.

The department offers a choice of three subject disciplines: History, Geography and Economics. The Integrated Humanities curriculum will introduce students to the three independent disciplines. They will then have the option of pursuing History, Geography or Economics in the higher years.

Integrated Humanities

The Integrated Humanities curriculum serves to lay the foundation for the three Humanities disciplines. Concepts and skills fundamental to the respective disciplines are imparted to prepare students to manage the subjects at higher levels.

Students will examine the development of different cultures and the contributions of the various communities in fostering cultural identities. They will also study Singapore’s road to independence and will be introduced to the different systems of governance in the world. The Singapore Story of nation building – the trials and triumphs and her arduous journey of economic, industrial and urban development, demographic transitions and evolving challenges will also be discussed.

In addition, students will study the role of the community and local organisations in uniting people from culturally diverse backgrounds. They will also analyse global issues such as economic competitiveness, international relations, environmental sustainability and terrorism.

History

The History curriculum aims to provide students with a broader world view and a better understanding of present global trends and international relations through a contemporary study of regional and international developments in the twentieth century. It highlights the importance of understanding and interpreting history in all its complexity – its people, events, developments and issues are explored in a historical context and examined from a range of perspectives. It enables students to better understand how the world they live in is shaped by the historical forces of the recent past.

The curriculum adopts a multi-faceted approach and is designed around knowledge that is enduring and organised around key themes and concepts. Constructivist teaching is emphasised which focuses on developing students to be active learners, as they engage in the learning to construct their own meanings.

Geography

The Geography curriculum is designed to manifest the dynamism of the subject as students study the interactions between man and the environment over time and space on the local, regional and global scales. It integrates both physical and human geography, and provides for the acquisition of scientific and socio-economic methodologies. The curriculum focuses on the study and investigation of cause-effect relationships between man and the environment through the identification of trends and patterns, and the processes behind them. This is followed by the subsequent investigation into the adaptations, measures and management strategies meant to cope and deal with these interactions. Through the use of examples and case studies, the curriculum ensures that varied perspectives, ideas and views are considered. The Geography curriculum thus aims to develop in our students, the values and attitudes of responsible citizens in an increasingly interconnected world. It will also strive to motivate them to reach a level of personal commitment to resolve the issues at different scales.

Economics

The study of Economics aims to provide students with a broad understanding of national and international economic issues and challenges them to think critically through experiential learning and research. It aims to challenge students to investigate economic issues, efficiency, market failure and macroeconomic developments in the regional and international economies. Students will examine real world case studies, provide economic insights and conduct research and explore alternatives to achieve key economic goals. Economics as a social science will broaden students’ thinking as they examine human behaviour in response to changes. Economics has a vital role to play in promoting international cooperation and mutual understanding because of its focus on global issues. To achieve this understanding, students will need to learn to consider economic theories, ideas, and events from the points of view of different stakeholders in the world economy.

Tell me and I forget, teach me and I may remember, involve me and I learn.”
~ Benjamin Franklin

Silver for IGO 2014
Music

Music education in the NUS High School aims to refine the aesthetic sensitivities of all disciplines. Although music is not a compulsory subject, students will be privy to a quality music programme which is integral to a well-rounded educational experience. School and community resources are used to facilitate the exploration of music in both a meaningful and relevant manner to students. Students majoring in music (upon recommendation) will also enjoy the collaboration opportunities with the NUS Yong Siew Toh Conservatory of Music. The music programme will enhance students’ learning through the acquisition of

• Music Knowledge
• Music Reading, Listening and Analysis
• Music Composition and Performance

The music curriculum helps students develop and achieve basic competencies and to strive for excellence within the limits of their individual capabilities, as well as to develop music leadership skills, musical understandings, and positive attitudes that enable students to enjoy a meaningful musical journey, not only for the present but also in later life.

Requirements
Applied Instrument – Students majoring in Music must attain a standard of the Associated Board of Royal School of Music (ABRSM) Grade 8 or beyond, for the first musical instrument and a standard of ABRSM Grade 5 for the second instrument by Year 6. They will study or continue to learn the applied instruments with their external music teachers who will prepare them for one of the examination boards, the Associated Board Royal School of Music (ABRSM) or the Trinity College London (TCL).

Performing Opportunities: Senior Recital and CCA Performing Arts

Aside from fulfilling the applied instruments requirement, music majors are required to:
• present a Senior Recital in Year 6
• participate in one of the CCA Performing Arts group: School Orchestra, Chinese Orchestra or Choir (based on their 1st instrument)

Every student may take up the opportunity to participate in internal or external music activities and to study an orchestra instrument.
Aesthetic Perception
Students will learn to perceive the aesthetic value in nature and will be able to articulate their ideas using the language of the visual arts specific to their immediate surroundings.

Artistic Expression
Through the process of art making, students will learn to express themselves and the art of visual communication through various forms.

Historical and Cultural Context
Students will understand historic contributions and cultural context in the visual arts. They will analyse the role of visual art in the development of human cultures all around the world.

Critical Analysis
Students will learn to analyse aesthetic principles and verbalise their understanding of the issues through constructive criticism of their peers’ work.

Practical Applications
Students will apply creative skills in problem solving, communication and organisation of resources and time. They will also learn aesthetic appreciation, expression through visual language and experience first-hand the process of cross-disciplinary interaction. These abilities will help students understand how the arts are applied in everyday life and what careers are related to the visual arts.

Requirements
Majoring students are required to:
• sit for AP Studio Art (2-D Design or Drawing portfolio)
• present an Art Grad Show by Year 6
• be a member of the Art or Media Club

Art
The Art curriculum in NUS High School aims to cultivate the students’ interest and curiosity in all fields of art study. Students can put into practice what they have learnt in the art classroom to enhance skills required in Math and Science modules: Geometry in perspective drawing, Chemistry in ceramics, Physics in sculpture, Biology in figure drawing and environmental sculptures, Psychology in interactive art and computer technology in New Media Arts. Art can also be used as a neutral ground when talking about social or controversial subjects. The programme will enhance students’ learning through:

You see things; and you say, ‘Why?’
But I dream things that never were;
and I say, ‘Why not?’

~ George Bernard Shaw
The Centre for Curriculum Leadership in Math and Science (CCLMS) at NUS High School was established in line with the school’s vision: “To be a Wellspring of Inspiration for Math & Science Education and Research.” Without the constraints of a prescribed curriculum to prepare students for the national exams, NUS High School teachers have developed the content, pedagogy and assessment for math and the sciences differently from the other schools. The CCLMS is the platform where NUS High School can help schools with established niches in math and science provide for higher ability students while facilitating the building of capacity for other schools in effectively engaging students to learn and apply mathematics and science. The Centre also strives to engage in practitioner-based research so as to develop an integrated and holistic approach to promote educators’ professional development and curriculum leadership.

The CCLMS exerts its influence to promote excellence in math and science education from the cluster to the international arena. Notably, within the cluster and zone, the work of the CCLMS is supported by the West Zone Centres of Excellence (WZCoEs) for Math, Science and Research. Both CoEs are run by NUS High School.

Signature programmes for teachers supported by CCLMS are the biennial Physics Education Seminar and the educators’ programme in the Singapore International Mathematics Challenge. Other highlights for teacher development include workshops such as ‘Authentic Learning Tasks in Science’ and ‘How to Generate Math Problems Suitable for Investigation’, which are truly derived from NUS High School teachers’ curriculum development and teaching experience. The Centre also facilitates the professional development of laboratory officers by conducting workshops to create DIY set-ups for demonstrations of Physics principles and laws.

The signature programmes for students in CCLMS are the da Vinci Junior Programme for primary school students as well as the ‘Exploring Science the Nobel Way’ series and the Nobel Science Camp for secondary and junior college students.
Vision
To be a wellspring of inspiration for Math & Science Education and Research

Mission
To nurture well-rounded and world-ready scientific minds to make distinguished contributions as Pioneers, Achievers, Thinkers & Humanitarians

Core Values
Hold the Line
Get the Best
Debate
Christen
Zone Colours Award Winners

Academic Programmes
Core, Elective & Enrichment Modules
Research, Innovation & Enterprise
Acceleration & NUS Modules
Continuous Assessment
Talent Development
Olympiad Training
SAT & AP Test
Ma, Bio, Chem
Phy, Stat, Comp
Engineering
EL, MT & FL
Geo, His & Lit
Music & Art

Co-curricular Programmes
Community Involvement
Student Leadership
College Counselling
Pastoral Counselling
Sexuality Education
Internationalisation
Mentoring
Boarding
Discipline
ACE
CCA
NE
PE
ICT

...4. have a heart
Our Guiding Philosophy and Aims

The school is guided by our belief that student development takes place inside and outside of the classroom, in a safe and nurturing environment that is student-centric and values-driven. Through effective and caring student-teacher engagement, rigour and standards, and a diversity of pathways and opportunities, the school aims to:

- nurture well-rounded and world-ready scientific minds;
- inculcate sound moral values and moral ethics;
- build a generation proud and firmly rooted to their culture and heritage;
- equip our students with social-emotional competencies and 21st century skills;
- develop students to become active contributors to their community; and
- develop students to become distinguished Pioneers, Achievers, Thinkers and Humanitarians.

Core of the Student Development Framework

a. Core Values

Values are the foundational principles that guide and provide purpose to an individual’s behaviour. Values refer to the national and school values that are explicitly taught in the formal and informal curriculum. Enactment of actions without grounding in values would lead to inconsistency in purpose and actions.

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b. Core Social and Emotional Competencies

Social and Emotional Learning (SEL) refers to an individual’s acquisition of skills to recognise and manage emotions, develop care and concern for others, make responsible decisions, establish positive relationships, and handle challenging situations effectively.

Core social-emotional competencies are taught to students to ensure that they acquire the skills, knowledge and dispositions that will help them face future challenges with resilience and tenacity.

- Self Awareness
- Social Awareness
- Relationship Management
- Responsible Decision Making

Teaching of these associated skills can be through structured learning experiences or through incidental learning moments. Students equipped with these skills, anchored in sound moral values will be able to demonstrate good character and responsible citizenship.

c. 21st Century Competencies

To better position our students to take advantage of opportunities in a globalised world, they need to possess life-ready competencies such as creativity, innovation, cross-cultural understanding and resilience.

- Civic Literacy
- Critical and Inventive Thinking
- Cross-Cultural Skills
- Information and Communication Skills
- Global Awareness

d. Structures and Programmes

- Mentoring Programme: The teacher is a mentor who acts as the caregiver and role model for the students.
- Character-based Discipline: The school adopts a restorative approach to discipline.
- Affective Character Education (ACE) programme: RICH 3 (Respect, Responsibility, Resilience, Integrity, Care and Harmony), Social-Emotional Learning of Self, Family and Community, Cyber-wellness, and Sexuality Education programmes aim to develop and equip our students with sound moral values, good character, resilience and tenacity in life.

Pastoral Counsellors

We have pastoral care counsellors who attend to students’ needs especially when they are facing difficult times. The helping process may involve a wide range of issues (e.g. mental health, family relationships, peer relationships, grief & loss, academic matters etc.). The counsellors would work with the students to deal with their issues positively and resolve them amicably.

“One smile, can start a friendship,
One word, can end a fight,
One look, can save a relationship,
One individual, can change your life.”

~We Chang, Pastoral Counsellor
Values in Action Programme

Our school is committed to developing our students, employing a six-year structured programme where the students will gradually be given opportunities and autonomy to chart their progress in being active contributors and life-long volunteers in community work.

“Head”, “Heart” and “Hands” will be the focus of engagement at all levels, but with varying emphases as appropriate to the age and maturity of the students.

In line with our mission to nurture pioneers, NUS High School seeks to groom our students to be trailblazers in their field of work and take up leadership roles at their workplace. Our school places a strong emphasis on student leadership development and it is our mission to mould them to become role models and leaders who can influence and inspire others. There are many opportunities provided for students to hold leadership positions during their four or six-year stay with us.

We have student leaders in the six areas as shown below:

- Student Council
- Mentor Representatives
- House Leaders
- Special Interest Group Leaders
- CCA Leaders
- Boarding Leaders

Our Framework

- Opportunities and exposure for students’ active contribution through level-based programmes.
- Raise self-awareness and social awareness and to develop empathy.
- Opportunities to start small scale Service-Learning projects through CCAs guided by their teachers.
- Apply interests and strengths in CCA towards serving the community.
- Empower students with the opportunity to plan, monitor, implement and review an activity.
- Create autonomy and ownership to take charge of their Service-Learning Projects to meet genuine community needs.
- Staying active in the community and undertake surveys/ evaluations to determine genuine community needs so as to carefully craft their projects to meet these needs.
- Opportunity to participate in school-organised Oversea Community Involvement Project.

Years 1 - 2

- Raising awareness of community needs
- Participate in projects initiated by teachers
- Fostering positive attitude of students towards community work

Years 2 - 4

- Opportunity to take on more responsibilities in CCA work
- Opportunity to lead activities in CCA
- Opportunity to take up mentoring roles

Years 5 - 6

- Opportunity to lead CCA and help in the planning and implementation of projects
- Opportunity to take on leadership roles in community projects

Student Leadership Programme

In line with our mission to nurture pioneers, NUS High School seeks to groom our students to be trailblazers in their field of work and take up leadership roles at their workplace. Our school places a strong emphasis on student leadership development and it is our mission to mould them to become role models and leaders who can influence and inspire others. There are many opportunities provided for students to hold leadership positions during their four or six-year stay with us.

We have student leaders in the six areas as shown below:

- Student Council
- Mentor Representatives
- House Leaders
- Special Interest Group Leaders
- CCA Leaders
- Boarding Leaders
NUS High School provides a wide range of Co-Curricular Activities (CCAs), catering to our students’ diverse abilities. These activities offer students opportunities to develop life-long interests and broaden experiences outside the classroom. CCAs provide a critical platform for character and leadership development. In addition, they promote the acquisition and application of social and cooperative skills.

All students are required to take part in at least one CCA from the four main CCA groups, i.e. Clubs and Societies, Performing Arts, Sports & Games and Uniformed Groups.

The following list shows the CCAs offered in our school:

<table>
<thead>
<tr>
<th>Clusters &amp; Societies</th>
<th>Performing Arts</th>
<th>Sports &amp; Games</th>
<th>Uniformed Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Club</td>
<td>Chinese Orchestra</td>
<td>Badminton</td>
<td>NCC Land</td>
</tr>
<tr>
<td>Astronomy Club</td>
<td>Choir</td>
<td>Basketball</td>
<td>Scouts</td>
</tr>
<tr>
<td>Chess Club</td>
<td>Dance Club</td>
<td>Football</td>
<td>St. John Brigade</td>
</tr>
<tr>
<td>Gavel/ Debate Club</td>
<td>Drama Club</td>
<td>Netball</td>
<td></td>
</tr>
<tr>
<td>Infoscomm Club</td>
<td>Gamelan Ensemble</td>
<td>Table Tennis</td>
<td></td>
</tr>
<tr>
<td>Journalism Club</td>
<td>School Orchestra</td>
<td>Tennis</td>
<td></td>
</tr>
<tr>
<td>Media Club</td>
<td></td>
<td>Track &amp; Field</td>
<td></td>
</tr>
<tr>
<td>Youth Flying Club</td>
<td></td>
<td>Water Sports</td>
<td></td>
</tr>
<tr>
<td>Robotics Club</td>
<td></td>
<td>(Years 3-6 only)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Outdoor Adventure Club</td>
<td>(Years 5 &amp; 6 only)</td>
</tr>
</tbody>
</table>
The school aims to develop students with world-ready scientific minds. This is achieved via the rigorous Math and Science curriculum together with the six-year da Vinci Programme. The programme develops values, habits of mind and competencies for research, innovation and enterprise.

Students’ values, habits of minds and competencies are slowly nurtured and developed via structured programmes. These include the da Vinci Foundation, Science Presentations, Research Methodology and Design & Engineering modules.

Students have to complete an Advanced Research Project in any Mathematics, Science or Engineering domain, which is one of the graduation requirements. Training, preparation and some part of the research are done in our Specialised Research Labs.

Besides setting aside every Wednesday afternoon for the da Vinci programme and research, the School also makes special arrangements for some students to attend an 8-week full-time research attachment from May to July. This attachment will allow students and scientist mentors to have a meaningful and productive research attachment experience.

The school provides a wide range of research projects with the support of research institutes and universities. Some teachers also offer internal projects since many of them have PhDs or are working towards one. All projects by external mentors are co-supervised by our teachers. Students can also propose to work on their projects.

All research projects will be presented at the annual NUS High School Research Congress and many move on to participate in the Singapore Science and Engineering Fair (SSEF). Apart from presenting their projects on the local front, many students are also given the opportunity to present at international fairs and conferences.
Exposure

The programme provides opportunities for students to learn beyond the classroom. Some of the activities will be as follows:

- NUS High School Overseas Student Academic Programme (NUSHS OSAP)
  Students selected can choose to do a two-week academic programme in countries such as Australia, Germany, Switzerland, United Kingdom and the United States of America. Students will get an excellent opportunity in learning areas that are not available locally. These would include interacting with Nobel Laureates, distinguished scientists and working with talented students from different cultural backgrounds in experiment work and scientific learning.

- Interaction with local distinguished scientists
- Talks by distinguished Fields Medalists and Nobel Laureates in our NUSHS Distinguished Visitor Programme

Achievement

Students will be given various opportunities to showcase their learning via competitions, fairs and conferences. These will help to encourage knowledge sharing and provide an invaluable opportunity to benchmark their work with the best at national and international levels.

Service

As potential leaders, these students will also be given a greater responsibility to contribute to the community.
The Music and Art Department aims to:

• develop the aesthetic sensitivity of all students regardless of their individual levels of musical/artistic talent
• develop the talents of those who are gifted through quality Music and Art programmes

Besides the music and art modules in the formal curriculum, the school has the Aesthetic Appreciation Programme for all students. The objective of this programme is to promote awareness, cultivate values, develop knowledge and perception. It also aims to help each student develop his/her aesthetic potential through Seeing, Creating, Appreciating, Listening, Expressing (S.C.A.L.E).

The programme allows students to explore music and art in a manner both meaningful and relevant to them. While students can apply their knowledge of the Arts, they are effectively equipped with skills and competencies which will allow for life-long learning and appreciation of the Arts.
At NUS High School, students have opportunities to go beyond the core Humanities and the English Language & Literature curriculum requirement. Students who excel in these areas are invited to sign up for the Moot Parliament Programme and the Humanities & Social Science Research Programme, in which participants carry out research under the guidance of legal professionals and university professors respectively. Students can also join the Humanities Interest Group INSIGHT or the Sustainable Development Youth Convention (SDYC). INSIGHT members meet regularly to debate on current affairs, while SDYC members organise the annual convention that brings together the humanities and the sciences, providing fresh perspectives on issues revolving around sustainable development.

Within the school, students who have flair and interest in public speaking are selected for emcee training, and later apply their skills in various school events. In the same vein, students who are interested in creative writing can look forward to creative writing elective modules, workshops and personalised mentorship. A myriad of exciting learning opportunities await these students as they could be groomed for various inter-school events such as Creative Writing Competitions, Current Affairs Competitions and Pre-University Seminars.

Big win at WE Model United Nations Conference 2014

...8. help you gain a global perspective
NUS High School believes in developing students’ global outlook to their fullest potential, and nurturing world-ready scientific minds who will make distinguished contributions as Pioneers, Achievers, Thinkers & Humanitarians. The Internationalisation Programme embraces the world as its classroom as we enable our students to learn from overseas experiences.

The objectives of the programme:

• Develop in our students the global awareness and cross-cultural skills and sensitivities of the 21st century
• Expose students to Asia and the world and sensitise them to the place of Singapore in the world
• Deepen students’ commitment and rootedness to Singapore

Every student will be offered an opportunity to extend their learning overseas through student exchange programmes, NUS High School Overseas Student Academic Programme (OSAP), academic learning field trips, service learning programmes and overseas conferences, fairs or competitions.

NUS High School has established exchange and research programme collaborations with top Math and Science schools in many countries and regions, including Australia, Brunei, China, Denmark, Germany, Japan, Russia, South Korea, Taiwan, Thailand, the United Kingdom and the United States of America. Students will observe lessons, present their research projects and participate in cultural activities during the Student Exchange Programme.

Students selected to participate in the OSAP can look forward to learning math or science in renowned overseas universities and research institutes. They will engage in challenging academic work in the company of their peers who share similar interests in math or science.

Motivated and enthusiastic students will be identified to represent the school in overseas conferences, science fairs and/or competitions, as we recognise the need for students to learn with the best, and aspire to be the best in the international arena. This will spur talented students to achieve their fullest potential.
College Counselling

College Counselling at NUS High School aims to help students prepare themselves for life after high school. To accomplish this goal, we work with students and parents to identify suitable education options, career pathways and scholarships. Our guidance programme includes individual counselling and various activities such as exploring students’ strengths and interests, learning about university admissions requirements, preparing for college applications among others.

“As a college counsellor, I help to guide and shape the thoughts of the smartest students in the country during their formative years. Going to NUS High School is a very unique experience, where students are able to be themselves. I help them as they come of age and have to decide on a number of things from what they want out of their education, how to manage their time and their commitments, what values and habits will be developed, and eventually the type of person they want to become. These kids do amazing things, they have more responsibilities than I ever had when I was their age, and I am always humbled by their attitude and outlook on life.” - Mr. Allan Uy, College Counsellor

NUS High School Study Awards

Besides the 100% school fees subsidy under the MOE ISB scheme, NUS High School provides additional financial assistance to needy Singapore Citizen pupils so that all Singaporeans, regardless of their financial background, can benefit from the best opportunities in education.

Study Awards are given to NUS High School students who receive 100% school fees subsidy under the Ministry Of Education Independent School Bursary (ISB) scheme.

Quantum: $2,000/year
Launching your first step...

Admissions

ELIGIBILITY & ADMISSIONS PROCESS

We welcome both local and overseas applicants. Basic admission requirements are as follows:

Eligibility for Year 1 Admission
For admission to Year 1 at NUS High School, local applicants must currently be in Primary Six. Overseas applicants must either be currently in or have completed Primary Six education in Singapore (or its equivalent). In addition, applicants should not be older than 14 years of age at the point of registration.

Eligibility for Year 3 Admission
For admission to Year 3 at NUS High School, local applicants must currently be in Secondary Two. Overseas applicants must either be currently in or have completed Secondary Two education in Singapore (or its equivalent). In addition, applicants should not be older than 17 years of age at the point of registration.

Please note that applicants who have gained successful admission via the DSA process to schools 2 years ago, as Secondary 1 / Year 1 students are not eligible to apply.

Admissions Process
There are two admission phases for Year 1:
(a) Direct School Admission (DSA) Phase 1 - Selection Test, Camp & Interview
(b) Direct School Admission (DSA) Phase 2 - PSLE & Interview

There is only one admission phase for Year 3:
(a) Direct School Admission (DSA) Phase - Selection Test & Interview

Year 1 (DSA Phase 1 - Selection Test, Camp & Interview) Application Process
The registration period for Phase 1 will open for 3 months every year. It will normally begin in April and end in June. Year 1 DSA Phase 1 comprises a Selection Test, Selection Camp and Selection Interview. All applicants will have to sit for the Selection Test – Mathematics and Science. Only shortlisted applicants will attend the Selection Camp. Some applicants will attend the Selection Interview.

90% of the available vacancies in NUS High School will be offered in Phase 1.

Year 1 (DSA Phase 2 - PSLE & Interview) Application Process
The NUS High School DSA Phase 2 - PSLE application is open only to P6 students who have not been admitted to a school through the DSA-Sec Exercise. As our school is not in the list of schools participating in the Secondary One Posting Exercise, interested applicants who wish to apply using PSLE score must apply via our online portal.

The registration for Phase 2 is open for a week from the date of release of PSLE results.

Please note that successful DSA applicants are not allowed to transfer schools after the announcement of PSLE results, unless there are extenuating circumstances. They are also NOT allowed to participate in the Secondary One Posting Exercise to opt for secondary schools after the release of the PSLE results.

The remaining 10% of the vacancies will be offered in Phase 2.

Year 3 (DSA Phase - Selection Test & Interview) Application Process
The Year 3 DSA registration period will be the same as Year 1 DSA Phase 1. It will normally begin in April and end in June every year. The Year 3 DSA comprises a Selection Test and a Selection Interview. All applicants will have to sit for the Selection Test – Mathematics and Science. Only shortlisted applicants will need to sit for an English Test and attend a Selection interview.