



Anglo-Chinese School  
(Independent)

A Methodist Institution  
(Founded 1886)

# Integrated Programme Science

Biology, Chemistry, Physics, Accelerated Class  
for Science & Computer Studies

# Science Deans

- Mr See Boon Tiam
  - Dean, Biology
- Mr Dennis Sim
  - Dean, Chemistry
- Ms Colleen Ng
  - Dean, Physics & Computer Studies



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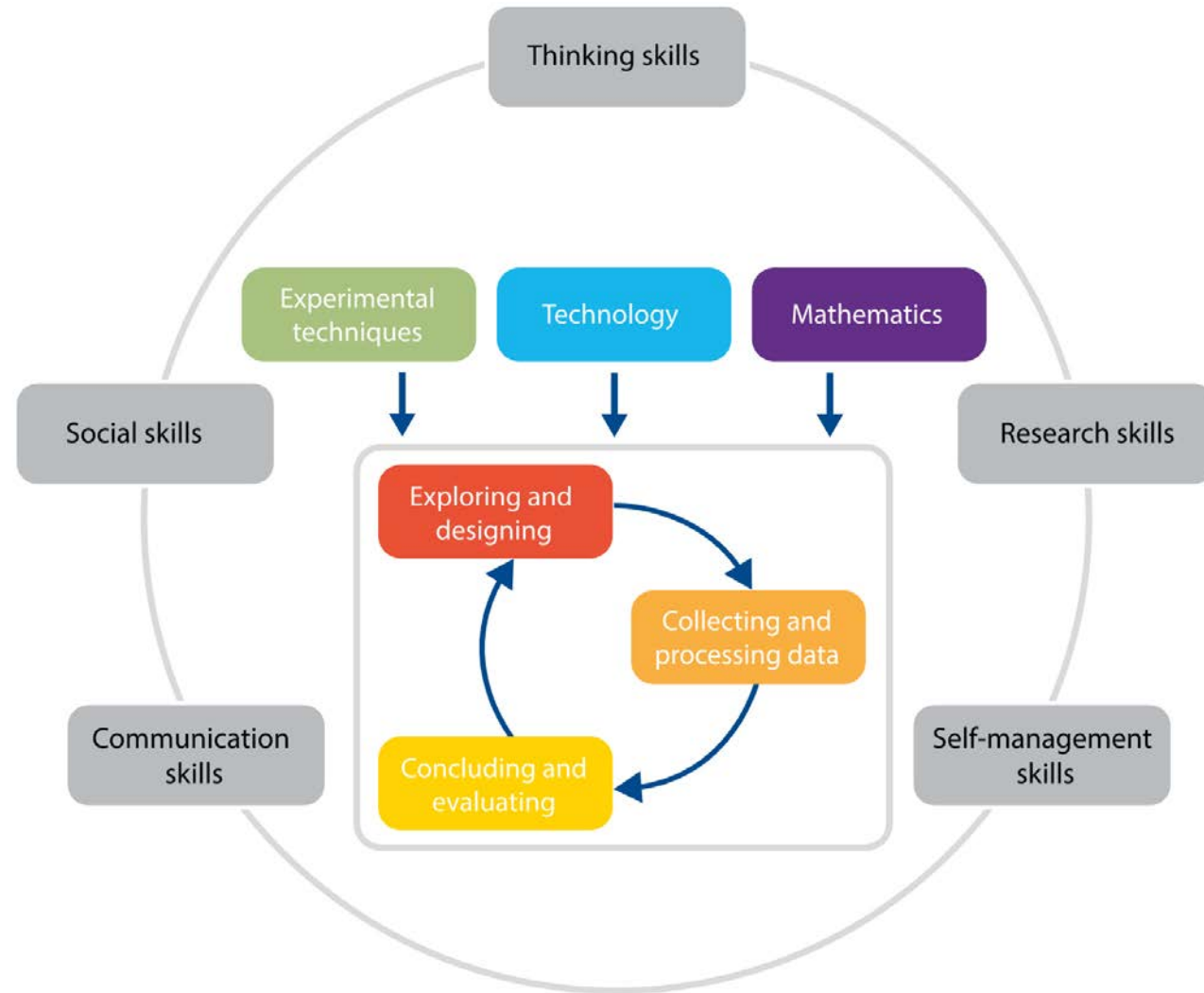
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# CURRICULUM AIMS

- To lay the foundation for IBDP Group 4 subjects
  - Attitudes & *Skills acquisition* towards the Sciences
  - Internal Assessment via course work with a look into *collaboration skills*.
  - *STEM development*
- Provide opportunities for **creative** and **specialized study**
- Detailed curricula can be found in the respective subject brochures



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# ASSESSMENT DETAIL (Year 3 & Year 4)

Common Test	15%
Coursework	15%
Final Examination	70%
<b>Total</b>	<b>100%</b>



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# Year-End Examination Format

Paper	Format	Marks	Duration
1	MCQ	40	1 hour
2	Structured, Data Based & Free Response Questions	80	1 hour 45 minutes



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# Brief Subject Descriptions

- **Chemistry**
  - Explores the interactions between matter and energy
  - Currently the central discipline of science which is the main prerequisite for most university courses
- **Physics**
  - Explores the interactions between fundamental forces and energies from the macro to micro.
  - Provides foundation for engineering courses in universities and a problem-solving discipline to life.
- **Biology**
  - Explores life and living organisms
  - Provides foundation for medical and life science related courses in universities



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# COMBINATIONS OF SCIENCE SUBJECTS

- Chemistry & Physics
- Chemistry & Biology
- Chemistry, Physics & Biology
- Chemistry, Physics & Computer Studies



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# CONSIDERATIONS FOR SUBJECT CHOICES

- Grades obtained in Mathematics, Physical and Life Sciences in Year 2
- Students should have a genuine keen interest in the relevant sciences



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# FUTURE PROSPECTS

- Pre-requisite for IB Subjects
  - Higher Level – At least a **grade 6** in the relevant science at Year 4 IP
  - Standard Level – At least a **grade 4** in the relevant science at Year 4 IP
- Limitations for students who do not offer Physics
  - some limitations with respect to Engineering and technology-related courses.
- Medicine
  - Most medicine courses require Chemistry with one other science, which need not be Biology, although preferred.
  - ***It is important to note that these are general guidelines which may, and will, differ between universities. It is essential for students and parents to check the prospectus of universities which they are specifically interested in.***



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# Accelerated Class for Science (ACS)

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2-year talent development programme (Only for selected Year 3–4 IP students)

One in-tact class; timetabled time; no extended school hours

Accelerated Sciences - Biology, Chemistry and Physics

Relevant advanced level content & competencies introduced

# Accelerated Class for Science (ACS)



## • Subject Combination

1. Language Arts
2. Mother-Tongue Language or Higher Mother-Tongue Language
3. **Biology (IP and Accelerated)**
4. **Chemistry (IP and Accelerated)**
5. **Physics (IP and Accelerated)**
6. Core Mathematics
7. Advanced Mathematics
8. International Studies

For Y3–4 IP Final Exams, an additional 1.5-hour combined paper comprising all 3 Accelerated Sciences.

Accelerated Sciences are individually reflected in the progress report as '**Distinction**' or '**Merit**'.

# Accelerated Class for Science (ACS)



## Programme highlights



**ENHANCED  
STEM-INFUSED  
CURRICULUM**



**RESEARCH  
OPPORTUNITIES**



**COMPETITIONS**



**ENRICHMENT  
ACTIVITIES AND  
LEARNING  
JOURNEYS**

# Accelerated Class for Science (ACS)



## STEM-infused Curriculum and Research opportunities



Integrated STEM lesson at Science Centre Singapore



Gold awardees in the NTU Nanyang Research Programme Jr.



MOE Science Mentorship Programme students with their external mentor.

## Exposure to Various Competitions

### National STEM Championship winners



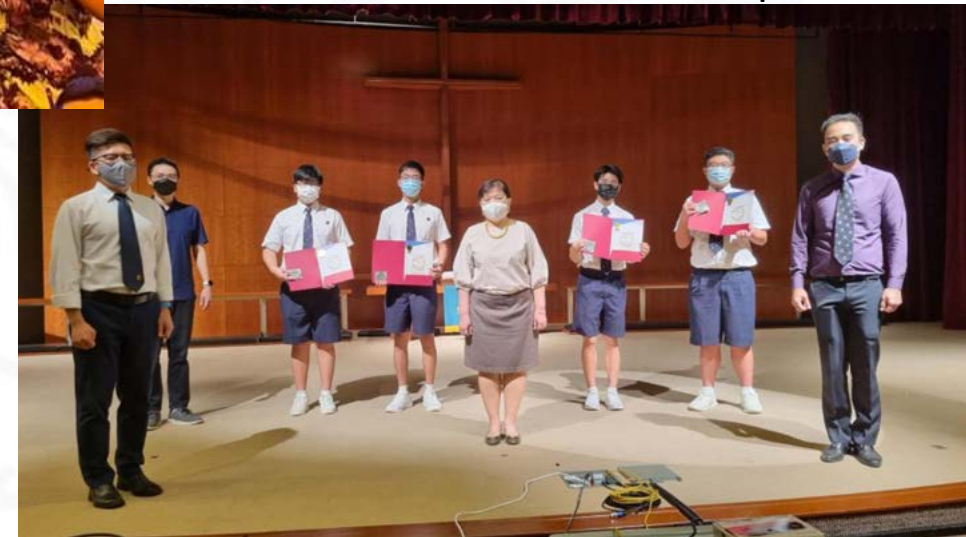
Singapore Junior  
Biology Olympiad  
Practical round



2023 National STEM Challenge  
finalists presenting to the judges



2024 National STEM Challenge  
First-runner up



Top performing Singaporean team  
at the ASEAN +3 Student Camp

# Accelerated Class for Science (ACS)



## Enrichment & Learning Journeys



**Sakura Science High School  
Programme in Tokyo, Japan**

**Professional Sharing  
by Renowned Alumni**



**Nobel Prize Dialogue**



**Learning journeys to SSEF (above),  
ExxonMobil (left)**



# Accelerated Class for Science (ACS)



## Two Selection Criteria

### Criterion 1: Do well for Final Exam

Final Exam	80% or higher	65% or higher
Y2 Exp	Physical Science, Life Science & Math	English Language

Subject Criteria will be strictly followed. Final Exam scores (not Overall) considered.

### Criterion 2: Do well for Selection Test (Only Students who meet Criterion 1 are eligible)

Selection test to sieve out students who exhibit abilities beyond that tested in Final Exam.

#### Held post-final exam.

Parents of students who meet Criterion 1 will be notified via PG.

No make up test will be administered.



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# Computer Studies

# SUBJECT BRIEF:

## Computer Studies

- Involves solving problems in real world scenarios using principles of computing
- ***Logical problem solving is require:***  
Solve problems logically using Python through decomposition and pattern recognition.
- Learn machine learning to analyze data and build predictive models.



# SUBJECT NOTES

- Computer Studies can replace a ***non-core subject***
- Cannot replace Physics, Chemistry or Biology in counting of the year-end aggregate score
- Leading to IB HL Computer Science
- Not a pre-requisite for HL Computer Science, but recommended



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# CLOSING THOUGHTS

- **Holistic development** aims to create well-rounded individuals who are not only academically competent but also socially, emotionally, and physically capable. It helps children develop a wide range of skills and knowledge that can be applied in real-life situations.
- Pursue development of student's attitudes, aptitudes and personal strengths through the subjects offered.



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