

NORTHBROOKS SECONDARY SCHOOL

SOARING YET ROOTED

*Sec 2 Subject
Information:
Science
(G1)*



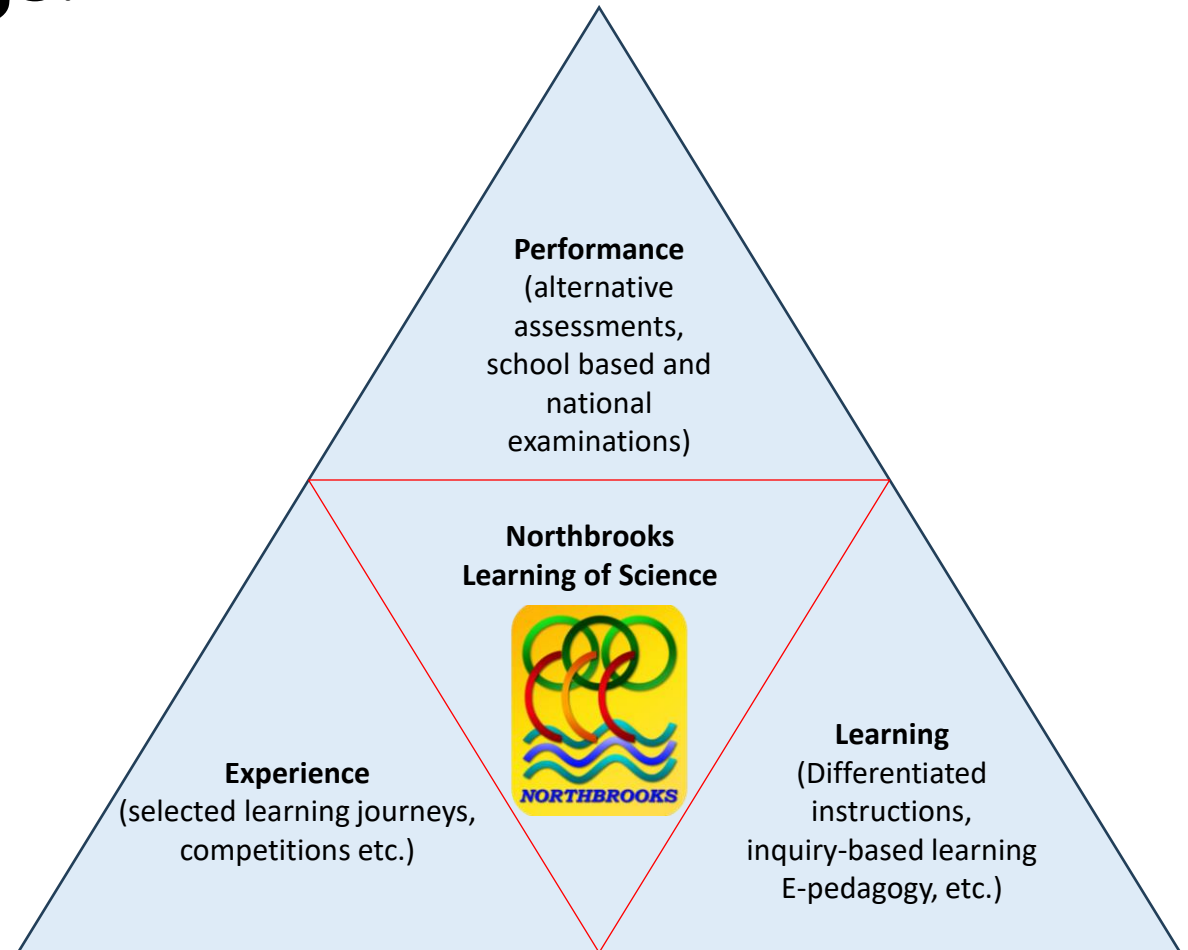
Possible subject offerings:

G1 Science

G2 Science (Physics/Chemistry)*

G2 Science (Biology/Chemistry)*

*students who are taking science at G2 level at the end of Sec 2 may be eligible to take science at G2 level at Sec 3, pending fulfilling academic requirements.



G1 Science

Overview

- provides authentic contexts that students can relate to and draw them into asking questions and seeking knowledge that can help them gain a deeper understanding of the content in each module

Module	Machines Around Us (II)	Food Matters	Our Body and Health (II)
Topic	<ul style="list-style-type: none">• Energy• Electricity• Wave• Effects of Force	<ul style="list-style-type: none">• Sources of Food• Food Chemistry• Food Safety	<ul style="list-style-type: none">• Staying Healthy• Digestion• Breathing• Blood Circulation

G1 Science

Scheme of Assessment

Paper 1: E-Examination (1 h 15 min, 50 marks)	<p>Paper 1 consists of two sections:</p> <p>Section A will carry 40 marks and consists of 30 multiple-choice questions (30 marks) and 2 to 5 selected response questions (10 marks).</p> <p>Section B will carry 10 marks and consists of 2 to 3 selected-response, short-answer and/or structured questions with video, animation or interactive stimuli.</p> <p>Selected response questions in Paper 1 may include matching, checkbox, drag and drop and fill-in-the-blanks.</p> <p>Candidates answer questions on a computer for Paper 1.</p>
Paper 2: (1 h, 50 marks)	<p>Paper 2 will carry 50 marks and consist of a variable number of compulsory short-answer and structured questions. One of the questions is a data-response question, requiring candidates to interpret, evaluate or solve problems using data and/or observations. This question will carry 8-12 marks.</p>

G2 Science (Physics)

Overview

- provides students with a coherent understanding and appreciating practical applications of physics in the real world
- develops students' investigative and problem-solving skills, effective communication of theoretical concepts and appreciation of the contribution physics makes to our understanding of the physical world

Section
Measurement
Newtonian Mechanics
Thermal Physics
Waves
Electricity & Magnetism
Radioactivity

G2 Science (Physics) Syllabuses and Topics

Sections	Topics
Measurement	Physical Quantities, Units and Measurements
Newtonian Mechanics	Kinematics
	Force and Pressure
	Dynamics
	Energy
Thermal Physics	Kinetic Particle Model of Matter
	Thermal Processes
Waves	General Wave Properties
	Electromagnetic Spectrum
Electricity and Magnetism	Electric Charge and Current of Electricity
	D.C. Circuits
	Practical Electricity
Radioactivity	Radioactivity

G2 Science (Biology)

Overview

- enables students to deepen their interest in biology for future learning and work
- develops a way of thinking to understand how living organisms work to sustain life and use the disciplinary ideas in biology to approach, analyse and solve problems in biological systems

Section
Cells and Chemistry of Life
The Human Body – Maintaining Life
Living Together – Plants, Animals and Ecosystems

G2 Science (Biology) Syllabuses and Topics

Sections	Topics
Cells and Chemistry of Life	Cell Structure and Organisation
	Movement of Substances
	Biological Molecules
The Human Body – Maintaining Life	Nutrition in Humans
	Transport in Humans
	Respiration in Humans
	Infectious Diseases in Humans
Living Together – Plants, Animals and Ecosystems	Nutrition and Transport in Flowering Plants

G2 Science (Chemistry)

Overview

- enables students to appreciate practical applications of chemistry in the real world,
- develops in students a way of thinking to approach, analyse and solve problems by explaining macroscopic characteristics and changes in chemical systems

Section
Matter – Structures and Properties
Chemical Reactions
Chemistry in a Sustainable World



G2 Science (Chemistry) Syllabuses and Topics

Sections	Topics
Matter – Structures and Properties	Experimental Chemistry
	The Particulate Nature of Matter
	Chemical Bonding and Structure
Chemical Reactions	Chemical Calculations
	Acid-Base Chemistry
	Qualitative Analysis
	Patterns in the Periodic Table
Chemistry in a Sustainable World	Organic Chemistry
	Maintaining Air Quality

G2 Level Science Assessment Objectives

Papers 1, 2, 3, 4, 5 and 6

- A** Knowledge with Understanding, approximately 45% of the marks with approximately 20% allocated to recall.
- B** Handling Information and Solving Problems, approximately 45% of the marks
- C** Experimental Skills and Investigations, approximately 10% of the marks*

*new – students should be able to select and use techniques, apparatus and materials, take readings and record observations, interpret and evaluate experimental data and observations, and evaluate methods and suggest possible improvements



G2 Level Science

Scheme of Assessment

Paper	Type of Paper	Duration	Marks	Weighting
1	Multiple Choice (Physics)	1 hour 15 minutes	20	20%
2	Structured (Physics)		30	30%
3	Multiple Choice (Chemistry)	1 hour 15 minutes	20	20%
4	Structured (Chemistry)		30	30%
5	Multiple Choice (Biology)	1 hour 15 minutes	20	20%
6	Structured (Biology)		30	30%

Frequently Asked Questions

Q1: Can my child continue to take G2 Science at Upper Secondary?

[for students who were offered G2 Level Science during Secondary 1 / Secondary 2 intake]

Q2: Can my child convert back to G1 Science if he/she is not able to cope with the demand of G2 Science?

[for students who were offered G2 Level Science during Secondary 1 / Secondary 2 intake]



Q₁: Can my child continue to take G₂ Science at Upper Secondary?

A1:

- Your child will continue to be offered to take Science at a higher level, if he/she meets the eligibility criteria:
 - > **Attained at least 50%** for Science
 - AND**
 - > **Meets the progression criteria**
- Students who are eligible for G₂ Science at a higher level should also consider their
 - > **manageability** of Science, as well as other subjects
 - > **interest** towards the Sciences disciplines
 - > **preferences** of post-secondary courses or future pathways



Q1: Can my child continue to take G2 Science at Upper Secondary?

- Different categories of ITE courses come with **different entry requirements**.
- Students applying for admission to full-time NITEC courses must first **satisfy the entry requirements including passes in the pre-requisite subjects** for the courses applied. Admission is **merit-based**, and posting to a course is based on **aggregate of best 4 relevant examinable subjects**, including pre-requisite subjects and bonus points where applicable and is subjected to availability of vacancies.
- For students who are interested to apply for NITEC Science courses via **Early Admission Exercise (EAE)**, taking G2 Science may help to build their portfolio.

Q2: Can my child convert back to G1 Science if he/she is not able to cope with the demand of the G2 Science?

A2:

- Your child is **strongly encouraged** to complete the two years curriculum of the course of the more demanding course, if he/she **meets the criteria and chooses** to be offered the subjects.
- The syllabuses covered at Secondary 3 **differs significantly** for G2 Science and G1 Science. It is not advisable for your child to convert back to G1 Science and he/she is required to make up for the syllabus missed, if he/she converts back to G1 Science.
- Your child may only convert to G1 Science (at the end of Secondary 3) on a **case by case basis**, with special considerations.



Examination Syllabus of G₂ and G₁ Sciences

G1 Science (Syllabus 5148)



<https://go.gov.sg/2025syllabus-5148>

G2 Science

Science: Physics, Chemistry
(Syllabus 5105)

Science: Chemistry, Biology
(Syllabus 5107)



<https://go.gov.sg/2025syllabus-5105-5107>

Thank you.

You may email or contact us at **6752 4311**, if you have other queries.

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