



# **Primary 6 Science Curriculum and Assessment Briefing**

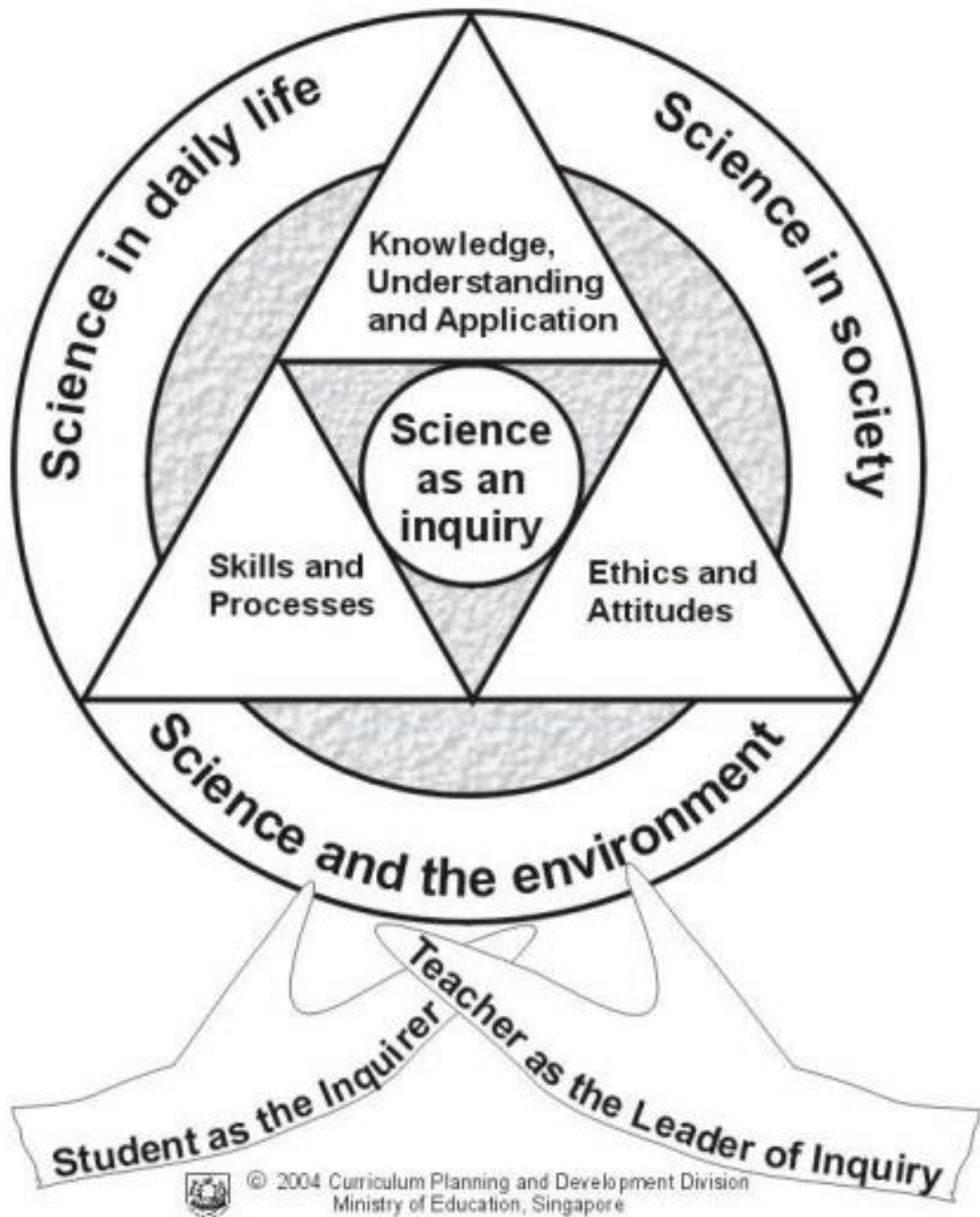
## **(Standard & Foundation)**

**24 January 2025**



# Content

- A. Coverage of Topics and Concepts
- B. Assessment
  - Knowledge-type and Application-type Questions
- C. Strategies to Support our Pupils



It encapsulates the thrust of science education in Singapore to **prepare our students to be sufficiently adept as effective citizens, able to function in and contribute to an increasingly technologically-driven world.**



# A. Themes and Topics

Syllabus Requirement		
Themes	* Lower Block (Primary 3 and 4)	**Upper Block (Primary 5 and 6)
Diversity	<ul style="list-style-type: none"><li>• Diversity of living and non-living things (General characteristics and classification)</li><li>• Diversity of materials</li></ul>	
Cycles	<ul style="list-style-type: none"><li>• Cycles in plants and animals (Life cycles)</li><li>• Cycles in matter and water (Matter)</li></ul>	<ul style="list-style-type: none"><li>• Cycles in plants and animals (Reproduction)</li><li>• Cycles in matter and water (Water)</li></ul>
Systems	<ul style="list-style-type: none"><li>• Plant system (Plant parts and functions)</li><li>• Human system (Digestive system)</li></ul>	<ul style="list-style-type: none"><li>• Plant system (Respiratory and circulatory systems)</li><li>• Human system (Respiratory and circulatory systems)</li><li>• <u>Cell system</u></li><li>• Electrical system</li></ul>
Interactions	<ul style="list-style-type: none"><li>• Interaction of forces (Magnets)</li></ul>	<ul style="list-style-type: none"><li>• Interaction of forces (Frictional force, gravitational force, <u>force in springs</u>)</li><li>• Interaction within the environment</li></ul>
Energy	<ul style="list-style-type: none"><li>• Energy forms and uses (Light and heat)</li></ul>	<ul style="list-style-type: none"><li>• Energy forms and uses (Photosynthesis)</li><li>• <u>Energy conversion</u></li></ul>

Topics which are underlined are not required for students taking Foundation Science.



## A. Topics and Concepts

### Thematic Approach (Upper Block)

- 4 themes: Cycles, Systems, Energy and Interactions (over the span of 2 years)
- Appreciate the links between different themes / topics to allow the integration of scientific ideas.
- More advanced concepts and skills are built on basic ones learnt at the lower block.



# Science Skills and Processes

Skills	Processes
Observing Comparing Classifying Using apparatus and equipment Communicating Inferring Formulating hypothesis Predicting Analysing Generating possibilities Evaluating	Creative problem solving Decision-making Investigation



# 2014 Science (Primary) Syllabus

For more details, visit the link : <https://moe.gov.sg/education/syllabuses/sciences>

## Science Syllabus Primary

Implementation starting with  
2014 Primary Three Cohort



Ministry of Education  
SINGAPORE

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## B. Assessment

Purpose?

- Understanding of core concepts
- Readiness of child
- Close learning gap

How?

### Non-Weighted Assessments

#### **WA1: Pen and Paper (50 marks, \*35 marks)**

Booklet A: MCQ

Booklet B: Open-ended / & Structured Question\*

#### **WA2: Pen and Paper (50 marks, \*35 marks)**

Booklet A: MCQ

Booklet B: Open-ended / & Structured Question\*

**Preliminary Exam  
100%**

**FSC: 70 marks**

**PSLE (30 Sept)**



# PRELIM & PSLE Format



**JUNYUAN PRIMARY SCHOOL**

Future-Ready Learners . Leaders of Character

## Standard Science

- 28 MCQ (56%)
- Open-Ended Questions (44%)

## Foundation Science

- 18 MCQ (36 marks)
- Structured and Open-Ended Questions (34 marks)



SOME USEFUL WORDS\*

SON

1	amphibian	39	magn	1	amphibian
2	attract	40	magn	2	attract
3	battery	41	mamm	3	battery
4	blood	42	mass	4	blood
5	boil	43	metlin	5	boil
6	breathe	44	metal	6	breathe
7	bulb	45	muscl	7	bulb
8	carbon dioxide	46	nitrog	8	carbon dioxide
9	circulation	47	nympl	9	circulation
10	condense / condensation	48	oxyge	10	condense / condensation
11	conductor	49	overc	11	conductor
12	contract / contraction	50	photo	12	contract / contraction
13	deforestation	51	poles	13	deforestation
14	digestion	52	pollin:	14	digestion
15	earth	53	pollut	15	earth
16	electricity / electrical circuit	54	preda	16	electricity / electrical circuit
17	energy	55	prey		
18	evaporate / evaporation	56	produ		
19	expand / expansion	57	reflec		
20	fertilise / fertilisation	58	repel		
21	flexible	59	repro		
22	float	60	reptile		
23	food (chain)	61	seed	10	condense / condensation
24	force	62	shadc	11	conductor
25	freeze	63	shape	12	contract / contraction
26	friction	64	sink	13	deforestation
27	fungi	65	skelet	14	digestion
28	germinate / germination	66	space	15	earth
29	global warming	67	spore	16	electricity / electrical circuit
30	gravity	68	stear		
31	gullet	69	steel		
32	heart	70	stoma		
33	heat	71	switch		
34	insect	72	tempe		
35	insulator	73	therm		
36	intestine	74	volum		
37	light	75	water		



## B. Assessment

- There are different question types:

### Knowledge and Application Type Questions

Pupils will be able to **apply facts / concepts to new situations** and **use one or a combination of basic process skills.**

**Familiarity with the terms used in the question stems will benefit pupils:**

*Spend less time writing unnecessary information (correct facts but not answering to the point, marks are not awarded)*

# C. Strategies in Science



## Good practices to meet demand for the assessment

Apply strategies taught when answering

This benefits pupils as they approach the question systematically.

### MCQ

Elimination method

**ETC**

### Open-Ended (OE)

ETC3ER

(**ETC**CER)

**CER**



## ETC Strategy in Answering Science Questions

### Extract Information

Circle key  
information in  
diagrams / text

### Topic Identification

Use key  
information in  
the diagrams or  
stem as clues to  
identify topic  
tested

### Concept Identification

Identify concept  
within topic



## C. Supporting our Pupils

- Accurate understanding of concepts is important
  - MAKE CONNECTIONS between concepts learnt
  - APPLY concept(s) in new situations
  - EXPLAIN clearly, completely and accurately referencing to science concepts/ facts
- Revision of concepts learnt from P3 to P6. Home support from parents/ guardians is important.
- Practice
  - Important to practice an array of thinking skills (e.g. creative problem solving, decision making & investigation skills) that support scientific inquiry



Frictional Force

- Frictional force is a contact force.
- It is present when two surfaces are in contact.
- It can slow down or stop a moving object as it acts in the opposite direction of motion.
- A force that opposes motion when two surfaces are in contact.
- The texture of a surface affects frictional force.
- A moving object moves a shorter distance and more slowly on the rough surfaces.
- There is greater frictional force between a moving object and a rough surface than between the object and a smooth surface.
- The amount of frictional force between the moving object and a surface does not depend on the surface area in contact.
- When we rub our hands together, there is frictional force between our palms.
- When we strike a match, the frictional force between the matchstick and matchbox causes the matchstick to light.
- Frictional force from the rubbing of sticks together can start a fire.

Frictional force can be useful

- Frictional force helps us to grip objects without dropping them.
- It prevents us from slipping and falling when we are walking.
- It helps to slow down or stop a moving object.
- (It helps to light a match/lighter)

notes taking

Name: Aayil Class: 4Respect

I used to think that Matter doesn't have weight.

But now I know that matter has weight mass.

VTR

**Our Class Chart**

Matter	Not matter
pencil	music
fire extinguisher	thunder
blood	shadow
air	heat
table	light
boy	
water	
air freshener	
door	
shark	

Consolidated post-lesson discussion print-out

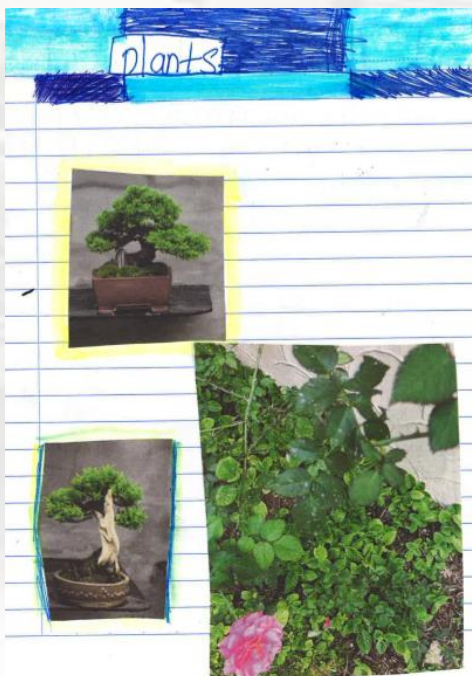
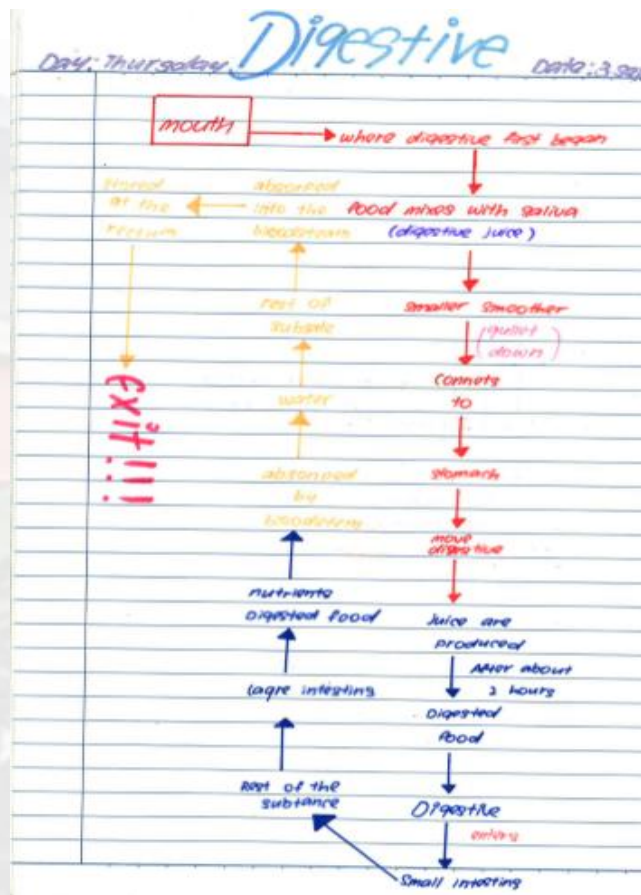
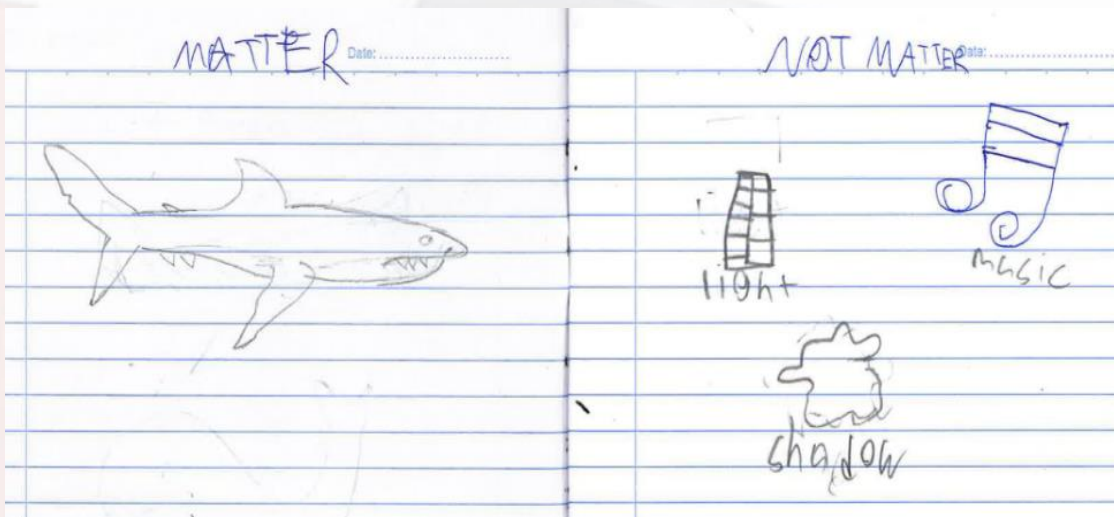
Characteristic of living things

1. Grow
2. Reproduce
3. Respond to changes
4. Grow Grow

Quizzes

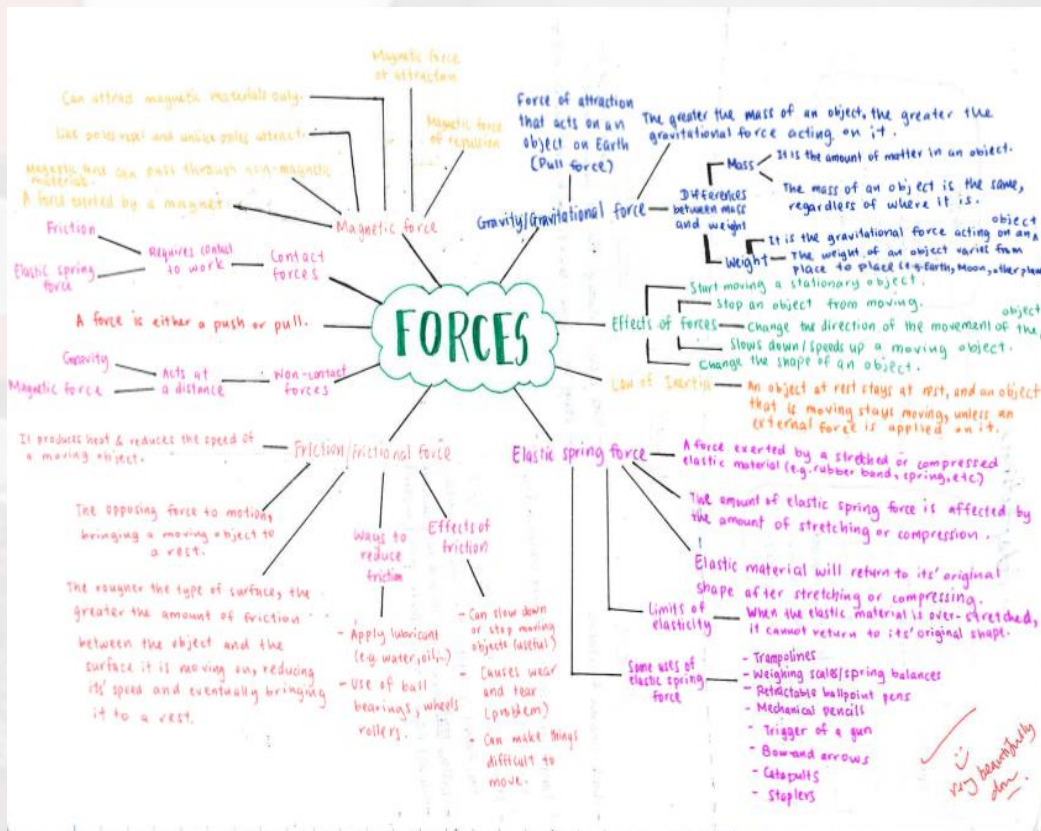
Allow No light to pass through	Allow some light to pass through	Allow No light to pass through
clear glass clear plastic water air	some fabrics some plastic Frosted glass Ice thin paper	rock cardboard wood metal rubber ceramic

Classification table

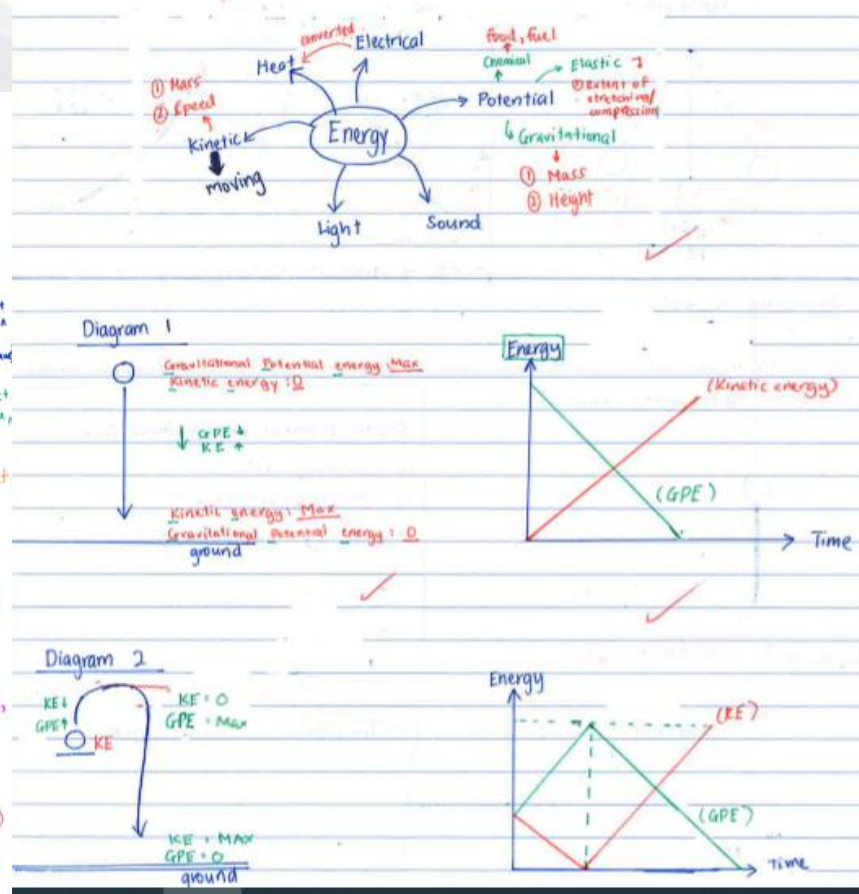


Students using different styles that they consolidate/validate their own learning





Concept Mapping



Graph/Diagram



## C. Supporting our Pupils

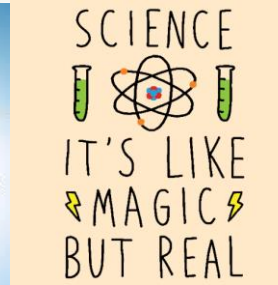
Support if child is keen on  
investigative work

Repository  
for revision

SINGAPORE  
STUDENT  
LEARNING  
SPACE



Actively engaging the mind



Sky Map

This one started out as a project at Google, and then became open source. If you don't know where to start, point it at the sky and have it direct you toward something cool.

ANDROID

Daily happenings around us

- Weather patterns
- Fungi growing along roadside
- Technology/research



Reading

Interest building – Some apps online/mobile apps



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Thank You