

Mrs Lata Krishnan

**Head of Department
SCIENCE**



A 2016 TVPS PRODUCTION



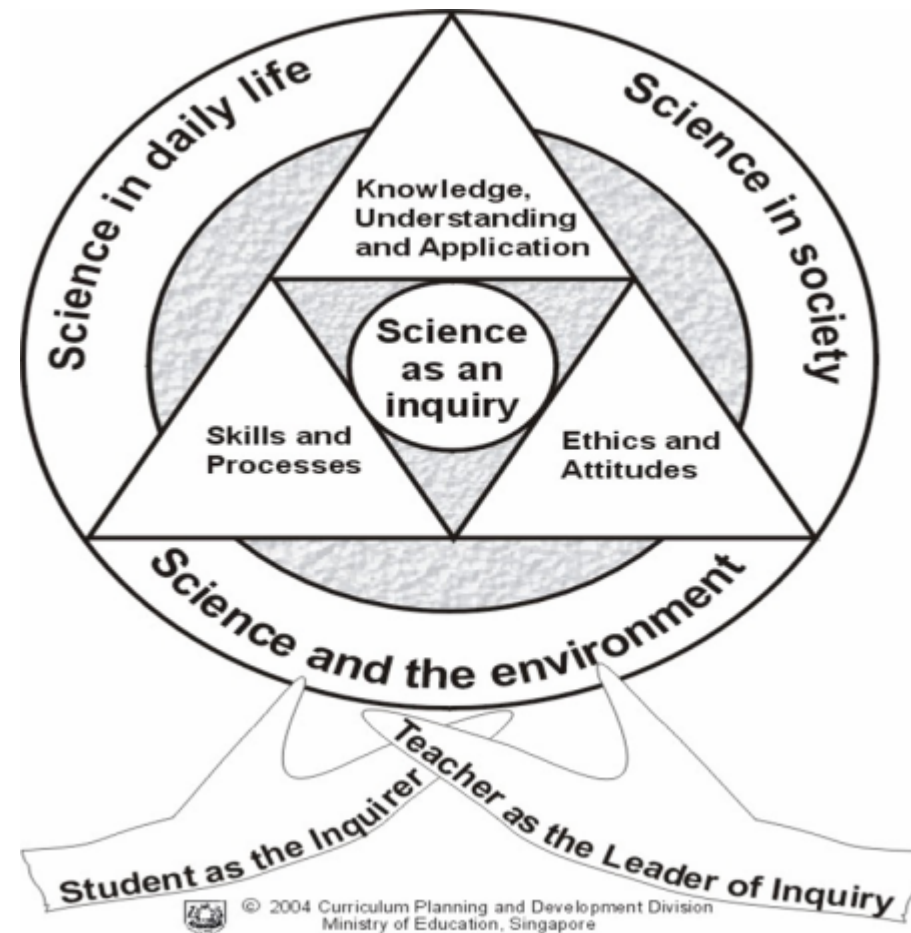


A Hands-on, Minds-On Approach



A 2016 TVPS PRODUCTION

MOE Science Curriculum Framework



© 2004 Curriculum Planning and Development Division
Ministry of Education, Singapore



A 2016 TVPS PRODUCTION

SCIENCE

The Primary Science Syllabus aims to:

- provide experiences which build on their interest
- stimulate their curiosity about their environment
- provide them with basic scientific terms and concepts
- provide opportunities to develop skills, habits of mind and attitudes



SCIENCE

The Primary Science Syllabus aims to:

- **prepare students towards using scientific knowledge and methods in making personal decisions**
- **help students appreciate how science influences people and the environment**



A 2016 TVPS PRODUCTION

Primary Science Syllabus

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

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

Sequence of Standard Topics

LEVEL	TERM	THEME	TOPIC
P5	1	CYCLES SYSTEMS	<i>Water</i> <i>Cells</i>
	2	CYCLES	<i>Reproduction in Plants</i> <i>Heredity & Reproduction in Animals</i>
	3	SYSTEMS	<i>Air & Living Things</i> <i>Plant Transport System</i> <i>Electrical system</i>
	4	ENERGY	<i>Forms of Energy</i>
P6	1	ENERGY INTERACTIONS	<i>Energy and the Sun</i> <i>Forces</i>
	2 & 3	INTERACTIONS	<i>Interactions within the Environment</i>



Sequence of Foundation Topics

LEVEL	TERM	THEME	TOPIC
P5	1	CYCLES	<i>Water</i> <i>Heredity & Reproduction in Animals</i> <i>Reproduction in Plants</i>
	2	CYCLES	<i>Reproduction in Plants</i>
		SYSTEMS	<i>Plant Transport System</i>
	3	SYSTEMS	<i>Electrical system</i>
	4	ENERGY	<i>Energy and the Sun</i>
P6	1 & 2	ENERGY INTERACTIONS	<i>Forces</i> <i>Interactions within the Environment</i>



Science Process Skills in the Primary Syllabus

- **Observing**
- **Comparing**
- **Classifying**
- **Measuring**
- **Communicating**
- **Analysing**
- **Generating**
- **Evaluating**



Progression of Science Process Skills

Skills	Observing, Comparing and Classification	Measuring and using apparatus	Communicating (verbal, pictorial)	Communicating (tabular)	Analysing Generating	Evaluating Creative Problem solving Decision making	Investigation
P3	√	√	√		√		
P4	√	√	√	√	√	√	
P5	√	√	√	√	√	√	√
P6	√	√	√	√	√	√	√



Assessment

The purpose of the **Science examination** is to **assess students' attainment in Science with respect to the objectives of the primary Science curriculum.**



Assessment Objectives

- ✓ demonstrate knowledge and understanding of scientific facts, concepts and principles.
(Knowledge with Understanding)
- ✓ apply scientific facts, concepts and principles to new situations. *(Application of Knowledge)*
- ✓ use one of a combination of the following basic process skills:
 - *Observing, comparing, classifying, communicating, analysing, generating and evaluating.**(Application of Process Skills)*



Examination Format

- **Testing understanding of concepts**
- **Test ability to make sense of new information**
- **Questions with many possible answers**



Exam Format- Standard Science (P5& P6)

- 2 booklets
- Duration is 1h 45 min

Booklet	Type	No.	Marks	Weighting
A	MCQ	28	2	56%
B	Open-ended	12 - 13	2-5	44%



Exam Format- Foundation Science (P5& P6)

- Duration of paper is 1h 15 min

Booklet	Type	No.	Marks	Total (70 marks)
A	MCQ	18	36	51%
B	Fill-in-the-blank	6 - 7	14	49%
	Open-ended	5 - 6	20	



Foundation Science MCQ

For each question, *three options* are provided of which only one is the correct answer. A candidate has to choose one of the options as his answer.



Answering Open-ended Questions

4-step process In Answering Open-Ended Questions In Primary Science



T	C	C	R
----------	----------	----------	----------



Answering Open-ended Questions

- Use **TCCR**

T	Topic	eg Magnets
C	Clues	highlight or underline the key words in the question
C	Concept/ Key Ideas	eg a magnet has 2 poles
R	Reasoning	logical answer to the question

* Can also be used for MCQ questions



How you can help your child in Science

- Advise your child to *read up* on the topic learnt in class after every Science lesson using the textbook. Highlight or underline important points
- Assist in planning a guide/ schedule to *revise the Lower block topics* (P3 & P4). Start *EARLY*
- Use the PSLE Revision Guide book (orange) for *self-study and revision*
- *Important/ key points to be written* in the Practical Note book
- Encourage your child to *find out more* by reading beyond the textbook and/ or through internet search
- Must have *clear understanding of the basic concepts learnt* in order to handle application/ more difficult questions. Remind them to use TCCR



Science syllabuses

Science syllabuses can be obtained from:

<https://www.moe.gov.sg/education/syllabuses/sciences>

