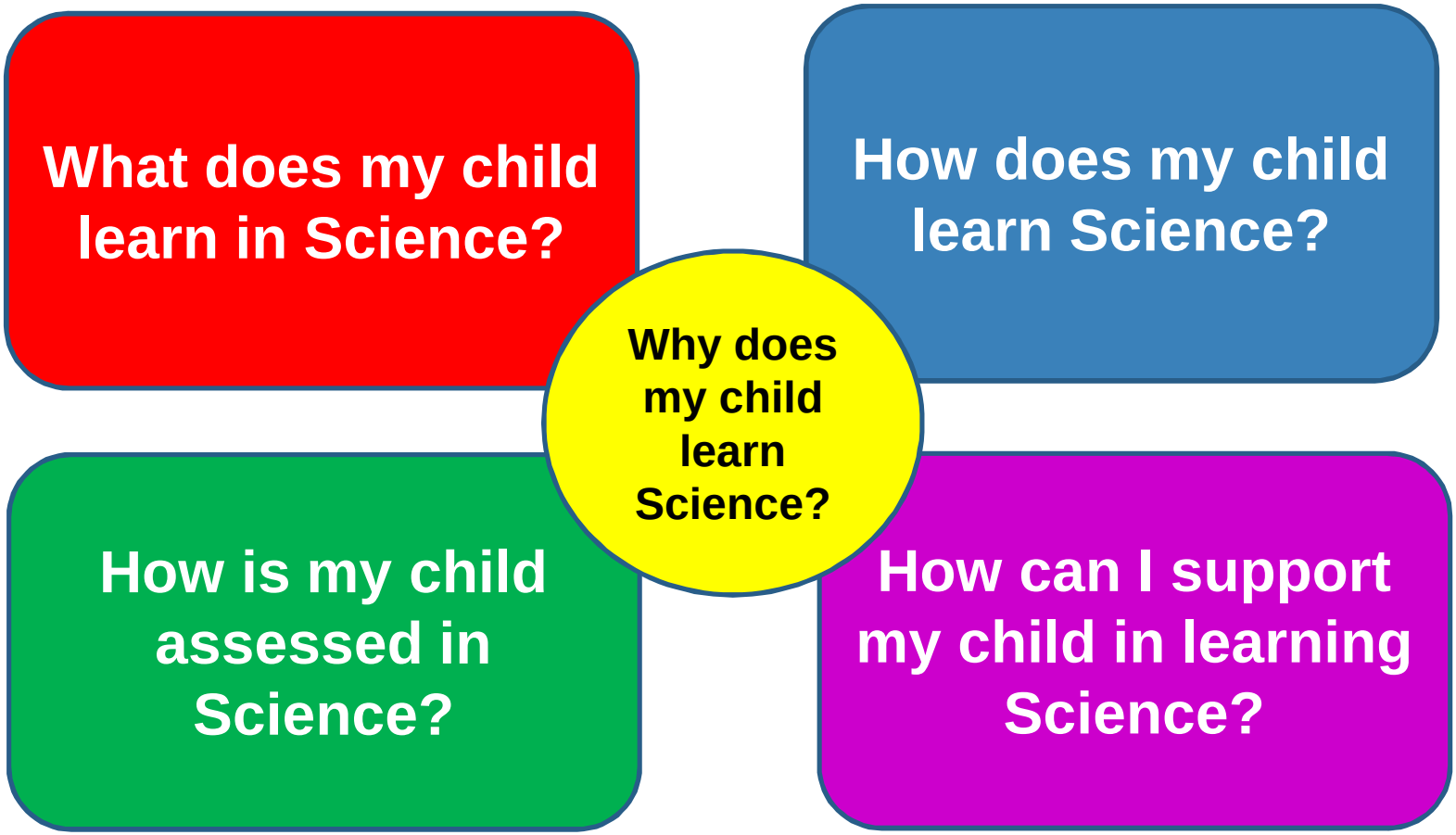
# SCIENCE

RESPECT

TEAMWORK

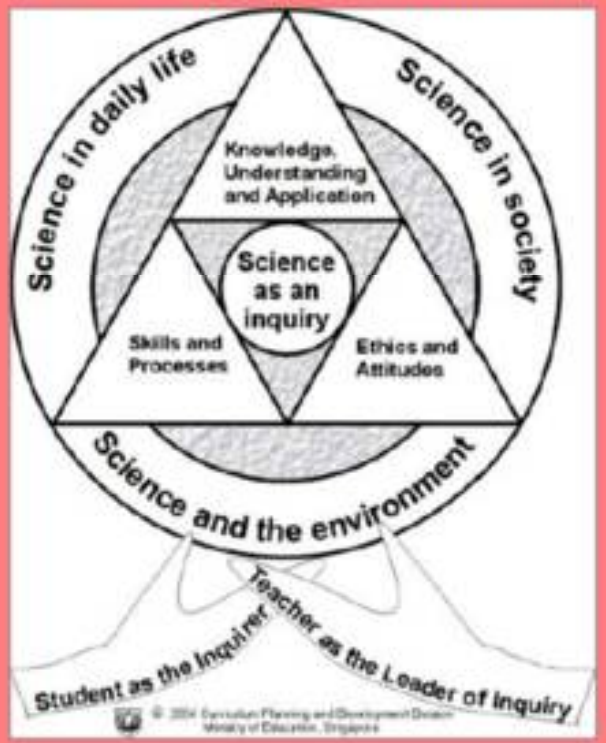
RESPONSIBILTY

LIFELONG LEARNING


What does my child learn in Science?
How does my child learn Science?
Why does my child learn Science?
How is my child assessed in Science?
How can I support my child in learning Science?

# 2014 Primary Science Syllabus…

## Science Curriculum Framework




## Primary Education Review & Implementation

**Balancing Knowledge with Skills and Values**

Engaging pedagogy to teach skills and values

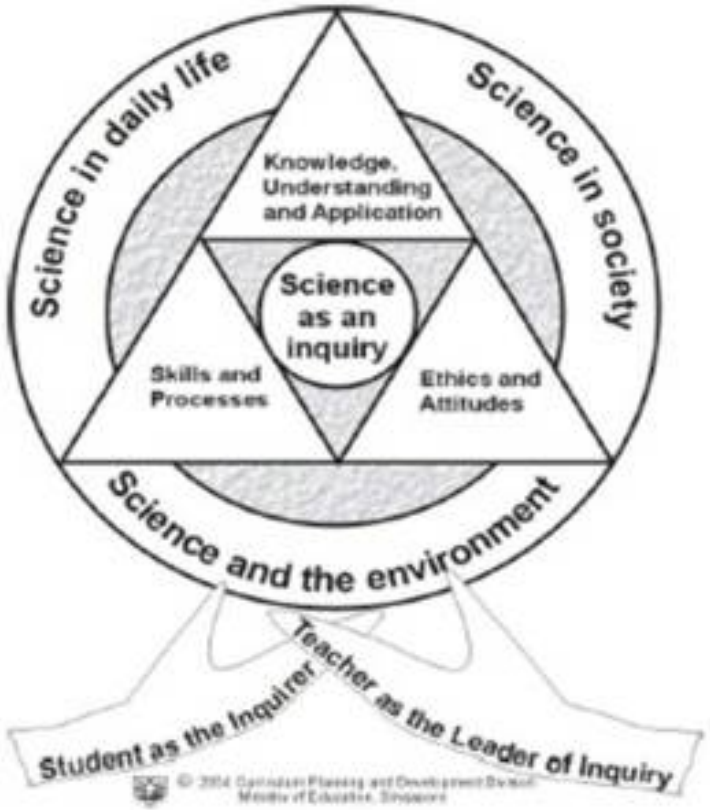
More holistic assessment to support learning

**Investing in a Quality Teaching Force**

Equipping teachers well through training and Professional development

## 21st Century Competencies Framework

**The Science Curriculum Framework is derived from the Policy Framework for the Teaching and Learning of Science. 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.**




| Skills and Processes | Engaging with an event, phenomenon or problem through: | Collecting and presenting evidence through: | Reasoning; making meaning of information and evidence through: |
|---|---|---|---|
| Skills | • Formulating hypothesis<br>• Generating possibilities<br>• Predicting | • Observing<br>• Using apparatus and equipment<br>• | • Comparing<br>• Classifying<br>• Inferring<br>• Analysing<br>• Evaluating |
| | Communicating | | |
| Processes | Creative problem-solving, investigation and Decision-making | | |
| Essential Features of Inquiry | Question | Evidence | Explain Connect |
| | Communication | | |

| Syllabus Requirement | | |
|---|---|---|
| **Themes** | * **Lower Block (Primary 3 and 4)** | ** **Upper Block (Primary 5 and 6)** |
| Diversity | • Diversity of living and non-living things (General characteristics and classification) **BPPS P3**<br>• Diversity of materials | |
| Cycles | • Cycles in plants and animals (Life cycles) **BPPS P4**<br>• Cycles in matter and water (Matter) | • Cycles in plants and animals (Reproduction) **BPPS P5**<br>• Cycles in matter and water (Water) |
| Systems | • Plant system (Plant parts and functions)<br>• Human system (Digestive system) **BPPS P3** | • Plant system (Respiratory and circulatory systems)<br>• Human system (Respiratory and circulatory systems)<br>• Cell system<br>• Electrical system **BPPS P5** |
| Interactions | • Interaction of forces (Magnets) **BPPS P3** | • Interaction of forces (Frictional force, gravitational force, force in springs) **BPPS P6**<br>• Interaction within the environment |
| Energy | • Energy forms and uses (Light and heat) **BPPS P4** | Energy forms and uses (Photosynthesis)<br>Energy conversion **BPPS P6** |

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

# 2016 Primary 4 Assessment Plan

| Subject | Term 1 (10%) | Term 2 (20%) | Term 3 (10%) | Term 4 (60%) |
|---|---|---|---|---|
| Science | ▪ Practical (10 marks)<br>• Basic Process Skills<br>• (Term 1 Week 6)<br>▪ CA1 (50 marks) | ▪ Energy: Light - My Lantern<br>▪ SA1 (100 marks) | ▪ Practical (10 marks)<br>• Basic Process Skills<br>▪ CA2 (50 marks) | ▪ Energy: Heat – The best insulator<br>▪ SA2 (100 marks) |

# P4 Science Continual Assessment in BPPS

| | Booklet | Type of questions | No. of questions | Number of Marks per Question | Weighting |
|---|---|---|---|---|---|
| 1h | **A** | Multiple-choice | 15 | 2 | **30** |
| | **B** | Open-ended | 7 | 2-5 | **20** |
| | | | | Subtotal | **50** |
| | **+ Practical (focussing on process skills)** | | | | **10** |
| | **TOTAL** | | | | **60** |

# P4 Science Semestral Assessment in BPPS

1h 45min

| Booklet | Type of questions | No. of questions | Number of Marks per Question | Weighting |
|---|---|---|---|---|
| A | Multiple-choice | 28 | 2 | 56 |
| B | Open-ended | 12 - 13 | 2-5 | 44 |
| | | | | |
| TOTAL | | | | 100 |

This is according to the new PSLE Science format to be implemented from 2017

# Formative Assessment

| Skills and Processes | Engaging with an event, phenomenon or problem through: | Collecting and presenting evidence through: | Reasoning: making meaning of information and evidence through: |
|---|---|---|---|
| Skills | • Formulating hypothesis<br>• Generating possibilities<br>• Predicting | • Observing<br>• Using apparatus and equipment<br>• | • Comparing<br>• Classifying<br>• Inferring<br>• Analysing<br>• Evaluating |
| | Communicating | | |
| Processes | Creative problem-solving, investigation and Decision-making | | |
| Essential Features of Inquiry | Question | Evidence | Explain Connect |
| | Communication | | |

# Formative Assessment Task 1 – My Lantern

## Topic – Light

Assessment Indicator:

- Demonstrate and explain how **shadows are formed using the lantern**
- Demonstrate how different materials are used in the lantern to show t**he amount of light passing through a material can vary**

## Formative Assessment Task 2 – The best insulator

# Topic – Heat

Assessment Indicator:

- State that materials differ in their ability to conduct heat.
- Show an understanding that rate of heat gain and heat loss of an object is affected by how well it conducts heat.

# What tips can I use to help my child?

- Be positive about Science!
- Try to avoid saying "I was never good at Science" or "I never liked Science".
- Let your child know that everyone can learn Science and Science is around us.
- Use **household items** to reinforce Science concepts.
- Let your child know that you think Science is important and **fun**.
- Carry out **Science activities** with your child.
- Ask your child **questions** and encourage your child to ask **questions**.
- Encourage him/her to find out more on his/her own.
- Be positive about your own Science knowledge.
- Learn, and discover together.

**Features of Inquiry**

**Question Evidence Explain**
**Connect Communicate**

***Your presence and involvement in your child's learning will make a difference.***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