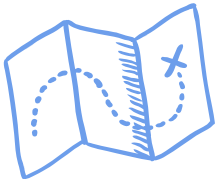
SCIENCE @ RMPS
2024

Vision

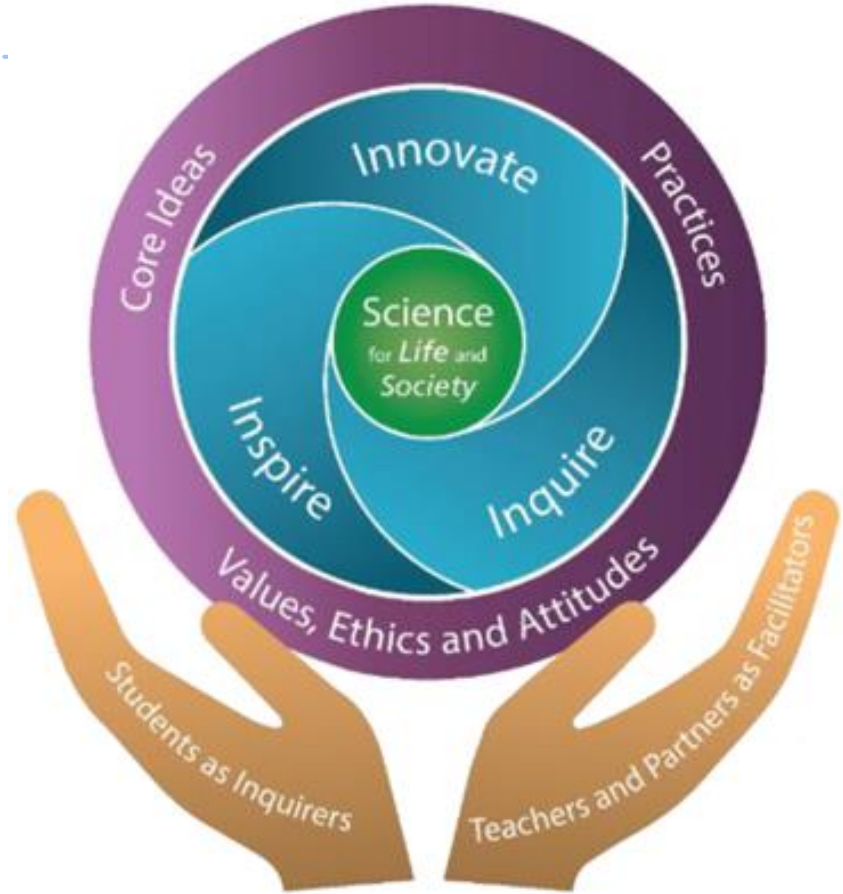
An inquirer with a passion for Science.



Mission

- To develop students with an inquiring mind.
- To equip students with scientific knowledge and skills.
- To make the learning of Science fun, meaningful and relevant.

Science Curriculum Framework



Practices

- Demonstrating ways of thinking and doing Science
- Understanding Nature of Scientific knowledge
- Relating Science – Technology – Society – Environment

Ethics & Attitudes

Curiosity, Creativity, Integrity, Objectivity, Open-mindedness, Resilience, Responsibility, Healthy sceptism

Skills & Processes

Observing, Comparing, Classifying, Using Apparatus & Equipment, Communicating, Inferring, Formulating hypothesis, Predicting, Analysing, Generating possibilities, Evaluating

Inquiry-based Learning

Inquiry-based learning starts by posing questions, problems or scenarios rather than simply presenting established facts or portraying a smooth path to knowledge. The process is facilitated by the teacher.

Good content knowledge is not enough…

Content Knowledge

+

Skills and Processes
(Scientific Method and
Experimental Design)

+

Application and articulation of **concepts** into **authentic situations**

What is Conceptual Understanding?

- Conceptual understanding requires students to **organise facts and ideas** into a meaningful concept and making connections in science.

- Moving beyond rote memorisation of facts. Therefore, students can **apply their understanding of concepts to multiple contexts**.

(Kang, N. G., & Howren, C., 2004)

- While there are certain scientific terms and concepts taught, pupils can demonstrate their understanding by using their own words.
- The focus of learning science is **not** on giving "standard answers" or keywords, but on **developing students' ability to inquire, understand and explain scientific phenomena.**

Mr Sng Chern Wei, Director, CPDD1
From The Straits Times Forum, May 09, 2015
Mr Sng is now Deputy Director-General of Education (Curriculum)

- The learning of science **does require a certain level of clarity though**, in the way concepts are explained, given the **context of the question**.
- Otherwise, **we may end up endorsing misconceptions** in students or rewarding them for ambiguous responses.

Mr Sng Chern Wei, Director, CPDD1
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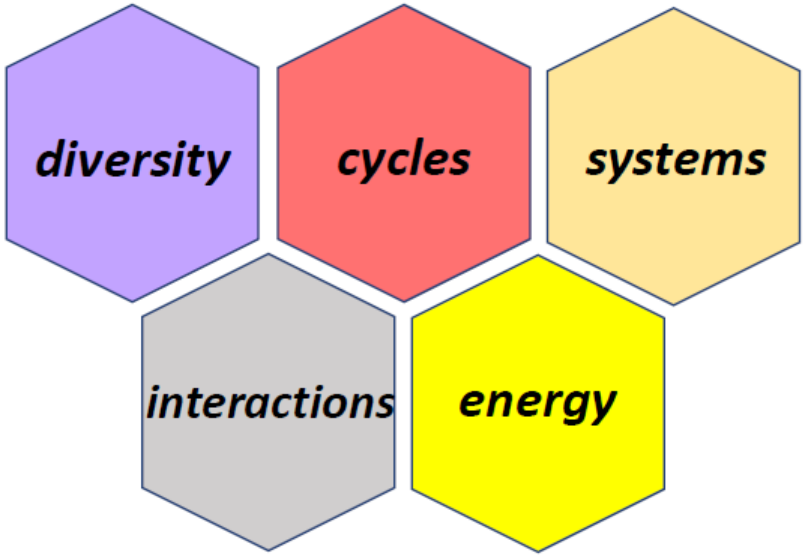
Strategies

- **Read the questions carefully**.
- Identify (highlight) key phrases and words in the question stem before attempting to answer.
- **Identify the concept** tested.
- **Model** answering techniques.
- Reinforce use of answering techniques taught in class.

Themes in Primary Science



Primary Science Syllabus Overview (P3)

Themes	**Lower Block (P3)**
Diversity	• Diversity of living and non-living things • Diversity of materials
Cycles	• Cycles of plants and animals (Life cycles)
Interactions	• Magnets

Assignments

- P3 Workbook
- Worksheets (filed in the Science file)
- SLS assignments

**Please keep the P3-P6 work for revision!*

Assessment

Weighted Assessments in Term 2, 3 (30%)	Semestral Assessment Term 4 (70%)
In the form of Performance Tasks / Topical Review Term 2 (15%) Term 3 (15%)	1 hour 30 minutes 80 marks Booklet A: 24 questions Booklet B: 10-12 questions All topics covered in P3 will be tested.

Key Programmes

Integrated Trail

STEAM Week

Green Ambassadors

Take home kits e.g. Seed planting

Parents as Facilitators

- ✓ Speaking
- ✓ Doing
- ✓ Visiting
- ✓ Reading

Speaking

Why X is a bird?

- It can fly.

X

Speaking

- **Concept**: Characteristics of bird

- It has feathers, a beak and a pair of wings.

Doing

Growing

- Green beans
- Chilli seeds
- Peanuts
- Mould on food (bread)
- Mushroom kits

Keeping small animals

- Mealworms
- Fish
- Caterpillars

**Bear in mind – responsibilities involved in pet ownership

Doing – E.g. growing green beans

Science Concepts:

- Characteristics of living things:
  - Living things need food, air and water.
- Conditions needed for germination
  - Air, warmth, Water

Observing, Comparing, Classifying, Using apparatus and equipment, Communicating, Predicting, Formulating Hypothesis

Doing – Scientific investigations

Science experiments:

Hypothesis: Seeds do not need sunlight to germinate.

- Variables to keep the same
- Fair test

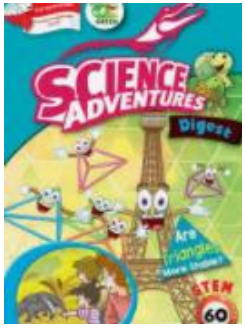
Observing, Comparing, Classifying, Using apparatus and equipment, Communicating, Predicting, Formulating Hypothesis

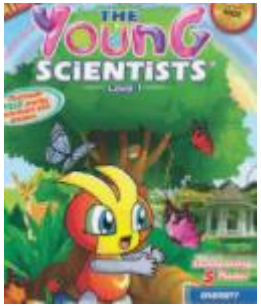
Visiting

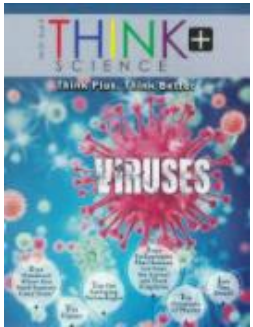
- Singapore Zoo / Night Safari / River Safari
- Bird Paradise
- S.E.A. Aquarium, Sentosa
- Marina Barrage
- Kranji Farms
- Gardens by the Bay / Botanics
- Sungei Buloh Wetland Reserve / Nature parks
- Singapore Science Centre
- **Everywhere and Anywhere!**

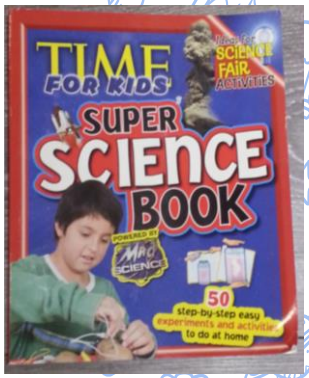
Reading

- Science Books
- Newspapers
- Magazines (National Geographic)
- THINK Science
- Science Adventures
- Young Scientists









Our Contacts

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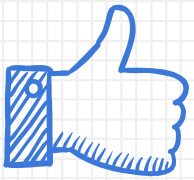

Thank you.