

SCIENCE @ RMPS

2023

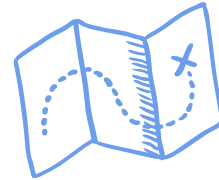


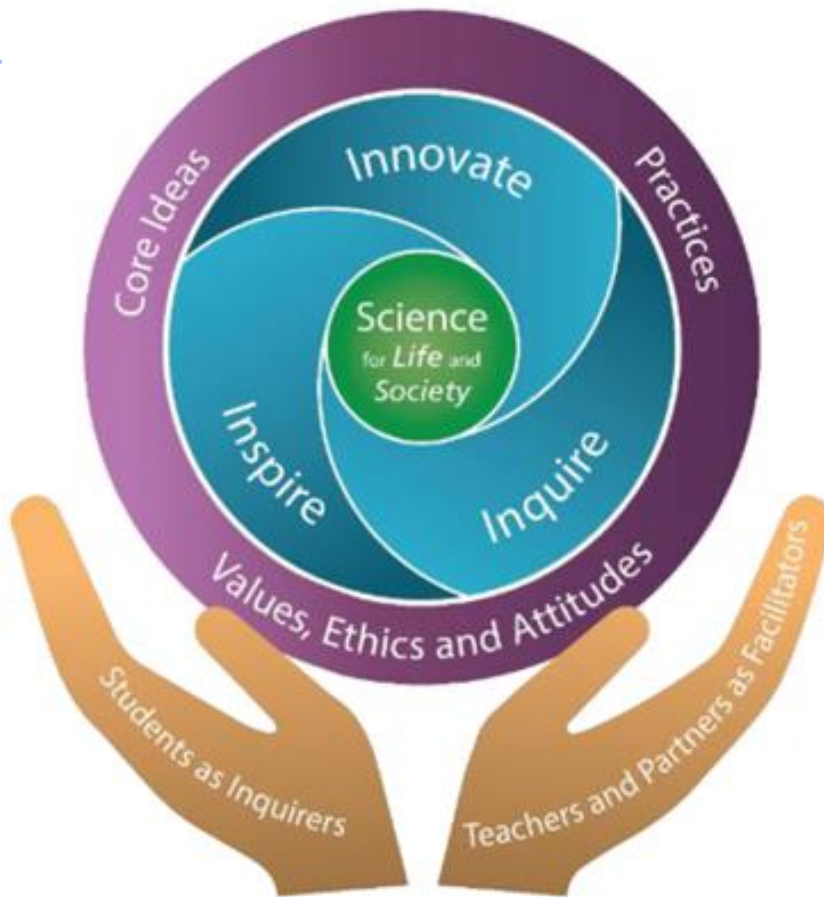
Vision

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.





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.



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Application and articulation of
concepts into authentic situations

What is Conceptual Understanding?

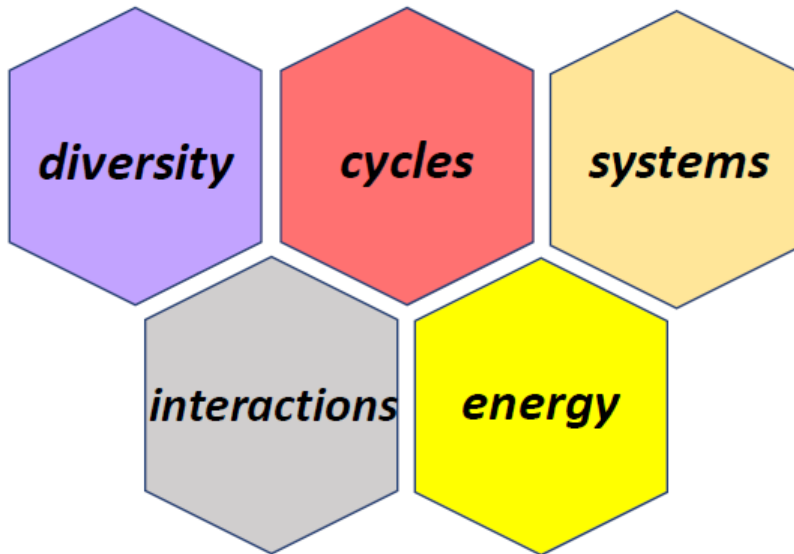
- Conceptual understanding requires students to **organise facts and ideas** into a meaningful concept and making connections in science.
- Moving beyond rote memorisation of facts. Therefore, students can **apply their understanding of concepts to multiple contexts.**

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

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- A collection of blue line-art icons representing various scientific fields, including biology (cell, microorganism), chemistry (flask, atom, molecular structure), physics (lightbulb, plug, magnet, planet Saturn), and general science/math (globe, graph, DNA helix, pi symbol, abacus, test tube, microscope, and the equation
- $E=mc^2$
-).
- 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.**

- 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.

- **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.



Primary Science Syllabus Overview (P3)

Themes	Lower Block (P3)
Diversity	<ul style="list-style-type: none">• Diversity of living and non-living things• Diversity of materials
Cycles	<ul style="list-style-type: none">• Cycles of plants and animals (Life cycles)
Interactions	<ul style="list-style-type: none">• Magnets

Assignments

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

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



Assessment

Weighted Assessments Terms 1 to 3 (35%)	Semestral Assessment Term 4 (65%)
<p>In the form of Performance Tasks / Topical Review</p> <p>Term 1 (10%) Term 2 (15%) Term 3 (10%)</p>	<p>1 hour 30 minutes 80 marks</p> <p>Booklet A: 24 questions</p> <p>Booklet B: 10-12 questions</p> <p>All topics covered in P3 will be tested.</p>

STEAM Week

Green Ambassadors

$$E = mc^2$$

Parents as Facilitators

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



- It can fly.



- **Concept:** Characteristics of bird
- It has feathers, a beak and a pair of wings.

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

- 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

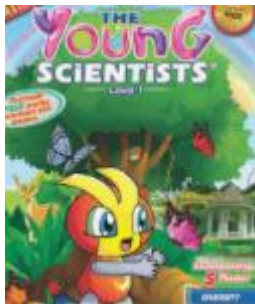
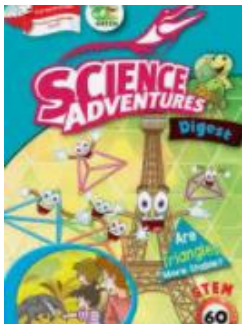
Observing, Comparing, Classifying, Using apparatus and equipment, Communicating, Predicting, Formulating Hypothesis



- Singapore Zoo / Night Safari / River Safari
- Jurong Bird Park
- S.E.A. Aquarium, Sentosa
- Marina Barrage
- Kranji Farms
- Parks (E.g. Hortpark)
- 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



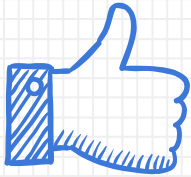
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Thank you.