



# Primary 6 Science





# An Overview : Big Ideas in the Primary Science Syllabus

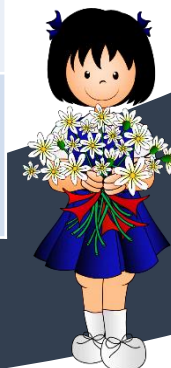
| Big Ideas (Themes) | Key Inquiry Questions  |
|--------------------|--|
| Diversity          | <ul style="list-style-type: none"><li>• What is the environment made up of?</li><li>• Why is it important to maintain diversity?</li><li>• How do we go about understanding the diverse range of living and non-living things?</li></ul> |
| Systems            | <ul style="list-style-type: none"><li>• What are different parts of a system?</li><li>• How do parts of a system or different systems interact together to perform a function?</li></ul>   |
| Interactions       | <ul style="list-style-type: none"><li>• How does Man interact with the surroundings?</li><li>• What are the consequences of Man's interactions with his surroundings?</li></ul>  |
| Cycles             | <ul style="list-style-type: none"><li>• What are the cycles in our everyday life? • How are cycles important to life?</li></ul>  |
| Energy             | <ul style="list-style-type: none"><li>• How does energy affect Man and his surroundings?</li><li>• Why is it important to conserve energy?</li></ul>   |





# Overview of the Primary Science Syllabus

| Themes       | Lower Block (P3 & P4)  | Upper Block (P5 & P6)   |
|--------------|--|---|
| Diversity    | <ul style="list-style-type: none"><li>• Diversity of living and non-living things</li><li>• Diversity of materials</li></ul>               |   |
| Cycles       | <ul style="list-style-type: none"><li>• Cycles of 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 /Human system (Respiratory and circulatory systems)</li><li>• Cell system</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, gravitational forces, force in springs)</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>• Energy conversion</li></ul>  |





# Components of lessons

- Theory : Acquisition of basic scientific terms and concepts
- Practical : Carry out experiments in the science laboratory (Term 1 and Term 2)
- Science Workbooks required at P6 (Interactions/Energy)
- Supplementary / Process Skills Worksheets
- Practice Papers
- PSLE Booklets

**NOTE : Files will be returned for parents' checking and signature upon completion.**





# Supplementary Lessons

- Commence in Term 1
- June and Sept Holidays – supplementary classes (schedule will be given at a later date)

Focus for supplementary lessons:

- Reteach concepts taught in class.
- Use diagnostic approach to reinforce concepts.
- Focused on areas that pupils are weak at.
- Revision (P3 – P6 topics)
- Use PSLE booklet to expose pupils to a variety of authentic PSLE questions.





# Science Assessment

The P6 pupils will sit for the followings:

Conditioning  
Exercise  
(Term 1-ungraded)

Mid-Year Examination  
(MYE)

Preliminary  
Examination





# Standard Science Format

## Booklet A

- 28 Multiple Choice Questions (MCQ)
- 4 options given, choose the correct answer
- Total :  $28 \times 2\text{marks} = 56$  marks





# Standard Science Format

## Booklet B

- 12 Open-Ended Questions (OE)
- May consist up to 4 parts e.g. (a), (b), (c) ,(d)
- Each part could be 1 mark or 2 marks
- Each question could be up to 5 marks
- Total : 44 marks







# Foundation Science Format

## Booklet A

- 18 Multiple Choice Questions (MCQ)
- 3 options given, choose the correct answer
- Total :  $18 \times 2\text{marks} = 36 \text{ marks}$





# Foundation Science Format

## Booklet B

- Structured and Open-ended questions
- May consist up to 4 parts e.g. (a), (b), (c) ,(d)
- Structured questions: 2 to 3 marks (14 marks)
- Open-ended questions: 2 to 4 marks (20 marks)
- Total : 34 marks





# How do we guide your child in constructing scientific explanations?





The Science department adopted the **Claim-Evidence-Reasoning (CER)** Framework (developed by McNeill and Krajick) to guide pupils when constructing science explanations.

CER stands for:



Claim

Evidence

Reasoning





# Why use CER answering technique?

Three key areas during constructing science explanations:

- Identify and use **Evidence**.
- Providing **Reasoning** for why their evidence supports their **Claim**.





## Components

- Make a **Claim** about the problem. |
- Provide **Evidence** for the claim.
- Provide scientific **Reasoning** that links the evidence to the claim.

## What is Claims, Evidence and Reasoning?

|   |  |
|---|--|
| <b>Claim</b> :  | A <u>conclusion</u> that <u>answers</u> the original <u>question</u> . [Usually one sentence]  |
| <b>Evidence</b><br><div>How do you know that?</div> : | Scientific <u>data</u> that supports the claim that must be appropriate and sufficient. <ul style="list-style-type: none"><li>- Can come from something you observe from the question e.g. data in the form of graphs, tables, observations from diagrams etc.</li></ul> |
| <b>Reasoning</b><br><div>What's the link?</div> :     | <u>Scientific concept</u> that links the claim and evidence. [Usually many sentences in length] <ul style="list-style-type: none"><li>- Shows why the data count as evidence to support the claim, using appropriate scientific principles and terms.</li></ul>          |





# Q & A Session

CHIJ Our Lady of the Nativity  
*Simple in Virtue, Steadfast in Duty*

