2026 Primary 6
Science Sharing

Scope of Briefing

- Primary Science Syllabus
- HPPS Science Curriculum
- Science Assessment
- Exemplars and Mark Scheme
- Answering Strategies
- Home Support

2023 Primary Science Syllabus

The Primary Science Syllabus aims to provide students with experiences/ opportunities to:

- Build on their interest and stimulate their curiosity about themselves and their environment.
- Acquire basic scientific concepts to help them understand themselves and the world around them.
- Develop skills, dispositions, and attitudes for scientific inquiry.
- Apply scientific concepts and skills in making responsible decisions.
- Appreciate how Science influences people and the environment.

P6 Science Curriculum Updates

P6 Science Topics:

Semester 1:

1. Photosynthesis
2. Energy Conversion
3. Forces
4. Physical Characteristics of the Environment
5. Food Chains and Food Webs
6. Populations and Communities

Semester 2:

1. Adaptations
2. PSLE Revision Package

P6 Science Lessons

- Hands-on Activities
- Learning Journey
- Outdoor Learning
- Written work
- SLS Lessons
- PSLE Revision Package

Hands On Lessons

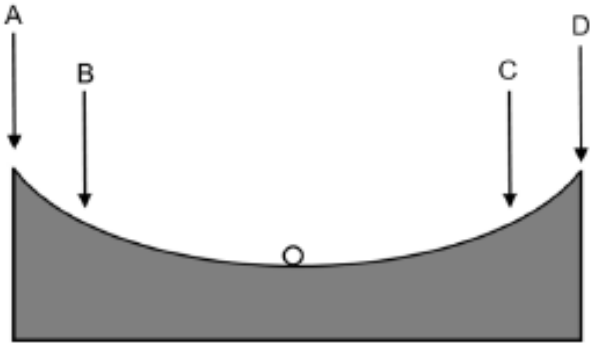
Rationale

- Learning by doing
- Practising process skills
- Improve critical and creative thinking skills using the 5 senses
- Promotes
  - Inquiry
  - Questioning
  - Applied Learning
  - Self-directed and Collaborative Learning

Hands On Lessons

Sample Experiment and Discussion

You have been given a stringless pendulum and a ball bearing as shown below.



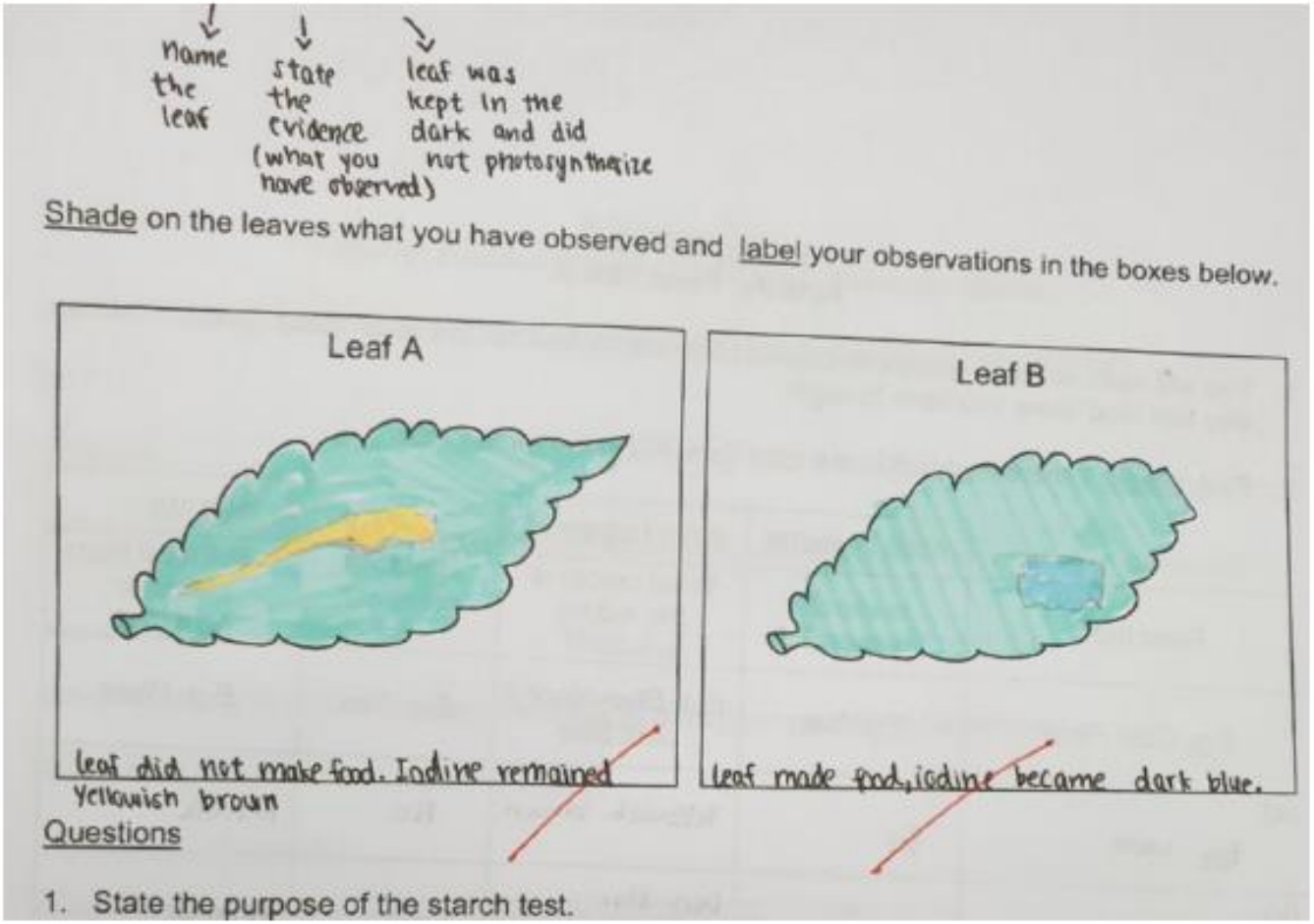
Stringless pendulum and ball bearing

Questions

- What do you do to show the ball bearing has potential energy?
- Where do you think this energy is stored? Explain.
- What can you do to increase the potential energy the ball bearing has?
- How would you prove the potential energy of the ball bearing has increased?
- Suggest another way the potential energy of the ball bearing can be increased. Explain.

Expectations: Quality of Work

- Neat and complete



name the leaf

state the evidence (what you have observed)

leaf was kept in the dark and did not photosynthesize

Shade on the leaves what you have observed and label your observations in the boxes below.

Leaf A

Leaf B

leaf did not make food. Iodine remained yellowish brown

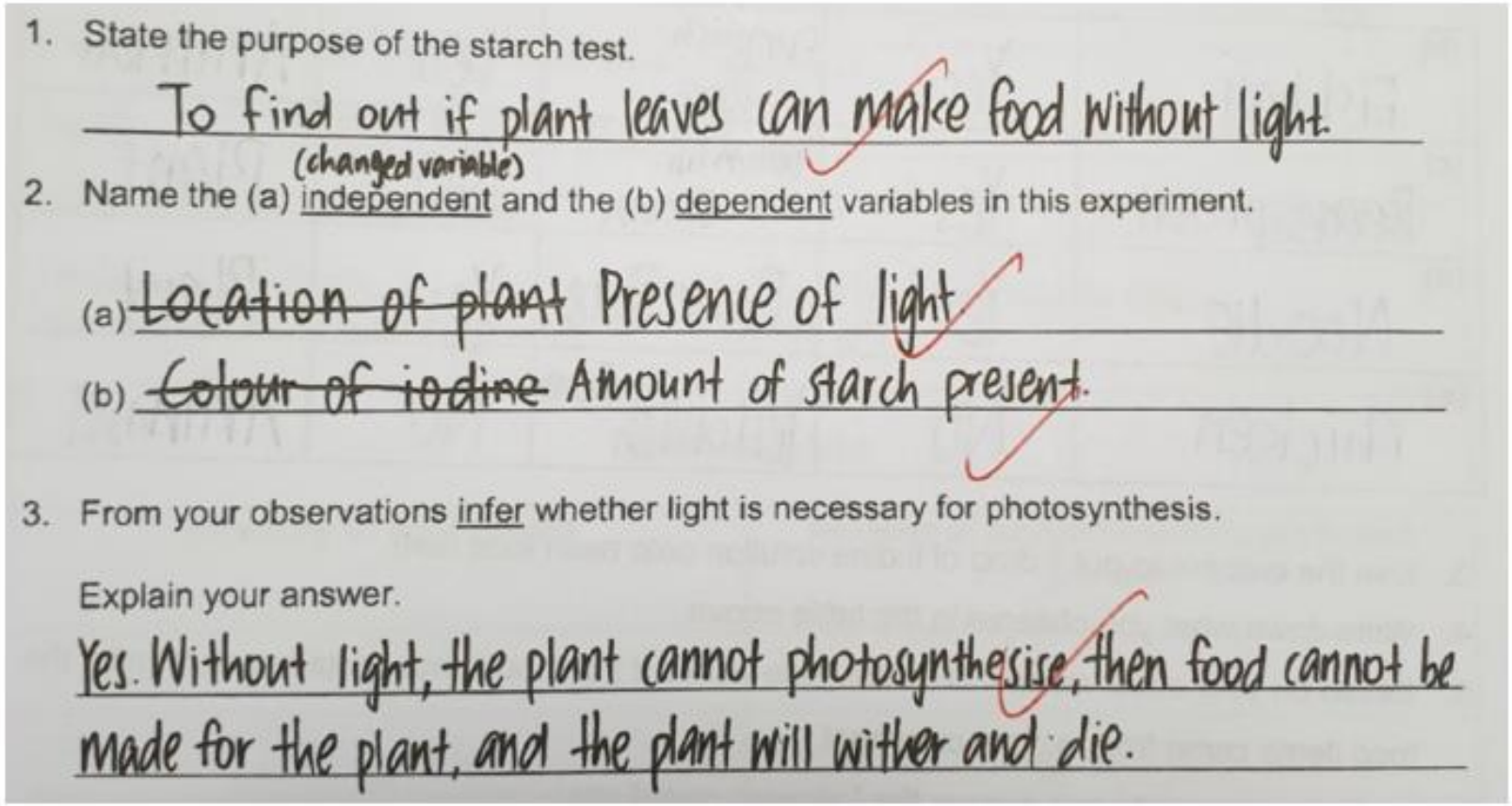
leaf made food, iodine became dark blue.

Questions

1. State the purpose of the starch test.

Expectations: Quality of Work

- Use of concepts / evidence is clear



1. State the purpose of the starch test.

   To find out if plant leaves can make food without light.

   (changed variable)

2. Name the (a) independent and the (b) dependent variables in this experiment.

   (a) ~~Location of plant~~ Presence of light

   (b) ~~Colour of iodine~~ Amount of starch present.

3. From your observations infer whether light is necessary for photosynthesis.

   Explain your answer.

   Yes. Without light, the plant cannot photosynthesise, then food cannot be made for the plant, and the plant will wither and die.

P6 Science Resources

- Activity Booklets (for hands-on)
- Review Practice (School WS)
- Vitamindz Booklets
- Student Handouts
- Prelim Practice Papers
- SLS Lessons & Assignments

Textbooks are important resources for revising key concepts.

All the materials from P3 onward are needed for PSLE Revision

Assessment Matters

Evaluating Learning

Class Work: Activities, Written Work & SLS Assignments

Semester 1	Semester 2
Term Review 1 and 2 (NW) 50m each	**Prelim** (100m) **PSLE**

Format of Paper (Standard Science)

Section	Item Type	No. of Qns	Marks per Qn	Weighting
A	MCQ	30	2	60%
B	OE	10 or 11	2, 3, 4 or 5	40%

Duration of Paper : 1h 45 min

Assessment Objectives (AOs)

Students should be able to

AO1: To demonstrate their **knowledge** and **understanding** of scientific concepts

AO2: To use various **process skills** to interpret and analyse data and **apply scientific concepts** to **different contexts**

P5 / P6 PSLE SCIENCE AOs Weighting

STANDARD SCIENCE	
(I) Knowledge with understanding	40%
(II) Application of knowledge and process skills	60%

FOUNDATION SCIENCE	
(I) Knowledge with understanding	50%
(II) Application of knowledge and process skills	50%

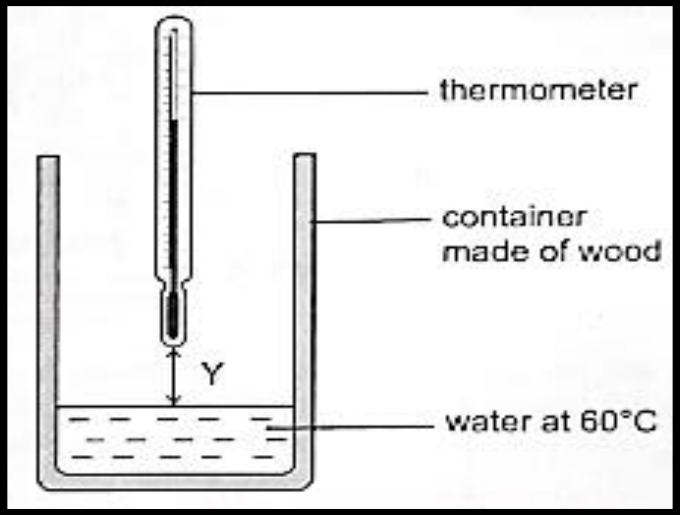
Distribution of Marks

According to Syllabus Content	
Life Science	45% - 55%
Physical Science	45% - 55%

Exemplar (PSLE TEST ITEM)

Martin filled a container made of wood with water at 60°C. The temperature of water remained at 60°C throughout the experiment.

He measured the temperature of the air at various distance, Y, from the water surface.



His results are shown below.

Distance Y (cm)	2	4	6	8	10	12
Temperature of air (°C)	42	36	32	29	27	27

(a) Explain how using a container made of wood helped to make the experiment more accurate. [1]

(b) Give a reason why the experiment had to be conducted over a short period of time. [1]

(c) Based on the above results, what is the relationship between the temperature of the air and distance Y? [1]

General Points

- An experiment is given as a scenario for the first part of the question. Students need to recognise the key idea based on the experiment and data given.
- In the second part of the question a real-world context will be given for students to apply this key idea.
- This type of test item that comes with a parallel example is the current trend observed in Primary Science Assessment.

Analysing part (a) - Key ideas

(a) Explain how using a container made of wood helped to make the experiment more accurate. [1]

- Wood is a poor conductor of heat; it conducts heat away slowly (from the water to the surrounding)
- This ensures that temperature of hot water does not drop quickly. Otherwise, it will affect the temperature of the air that is being measured.

Analysing part (b) - Key ideas

(b) Give a reason why the experiment had to be conducted over a short period of time. [1]

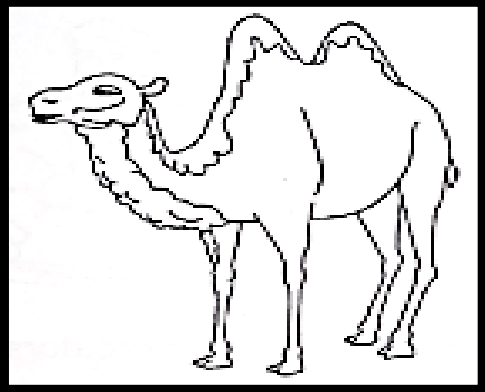
- The temperature of water will not remain constant as water will lose heat to the surrounding.
- It will affect the temperature of the air that is being measured.

Analysing part (c) - Key ideas

(c) Based on the above results, what is the relationship between the temperature of the air and distance Y? [1]

- Key idea → Relationship between distance Y and the temperature of air
- As distance Y increases temperature of air decreases

(d) Animal H lives in the desert.



It stands on the hot sand with its four long legs.

(i) Based on Martin's findings, explain why having long legs is an advantage for animal H. [1]

(ii) The temperature in the desert gets very low at night. Animal H has thick fur to help it adapt to life in the desert. Explain why having thick fur is an advantage for animal H. [1]

Answering part (di) - Key ideas

(di) Based on Martin's findings, explain why having long legs is an advantage for animal H. [1]

- Long legs help to keep the camel's body away from the hot sand
- Reduces the amount of heat the body gains from the hot sand

Answering part (dii) - Key ideas

(dii) The temperature in the desert gets very low at night. Animal H has thick fur to help it adapt to life in the desert. Explain why having thick fur is an advantage for animal H. [1]

- Heat from the body would not be lost quickly to the cold surroundings

Concepts from different topics are tested here. (Heat and adaptation)

Mark Scheme

- Broad and flexible
- Marks awarded for conceptual understanding
- Student's answers that are different from the mark scheme are carefully evaluated and included as acceptable answers if they are conceptually correct
- Marks are not awarded for merely stating 'correct' key words in the answer statement.
- Answer must be specific to the context.
- Answers must show evidence of understanding of relevant concepts and mastery of skills. Such answers will be given due credit.

Content and Application

- Knowing and understanding scientific knowledge is important. Some items will test on definitions (*what is temperatur*e) and functions (*function of small intestine*)

- But simply acquiring scientific knowledge does not prepare a student sufficiently for the examination.

- Scientific knowledge is only useful when a student knows which situations to apply it in and how to modify it for new situations.

Implications

- Accurate understanding of concepts is very, very important
  - ✓ **Make connections** between concepts learnt
    - Materials & Magnets
    - Heat & Energy
    - Global Warming
  - ✓ **Apply** concepts / skills in new situations (YIP / STEM)
  - ✓ **Give reasons** for choices made
- Revision of concepts learnt from P3 to P4

Gearing towards PSLE

- Revise P3, P4 and P5 work which forms the bulk of PSLE Questions

- Concepts covered in P3 and P4 are tested through more challenging questions

Answering Technique
Claim → Evidence → Reasoning

Claim → Evidence → Reasoning (CER)

Claim

- Answer to the question
- Usually, the easiest for the students

Evidence

- Must be appropriate / precise (usually quantitative data)
- Must be sufficient

Reasoning

- Explains how the evidence supports the claim
- Often includes scientific principles

Support at Home

- Read widely, beyond the text book.
  For example, Singapore Scientist

- Watch Science Programmes - Documentaries on TV
  For example, Animal Planet and Discovery Channel

- Helps to understand how concepts can be applied in varied contexts

Support from School

In school, we provide our P5 students ample opportunities for experiential learning in our Science Curriculum, in the event they do not have sufficient time at home.

- Outdoor Learning
- Learning Journeys
- Enrichment at SSC
- Hands-on Activities
- YI Project
- Use of Environment Blog
- ICT and STEM Infusion
- HPPS Library for reading materials

Thank You