RMPS	Science Department	2024

FAMILIARISING YOURSELF WITH THE SCIENCE SYLLABUS

Parents' Symposium 26 JAN 2024

Presenters:

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AGENDA

1 SCIENCE SYLLABUS

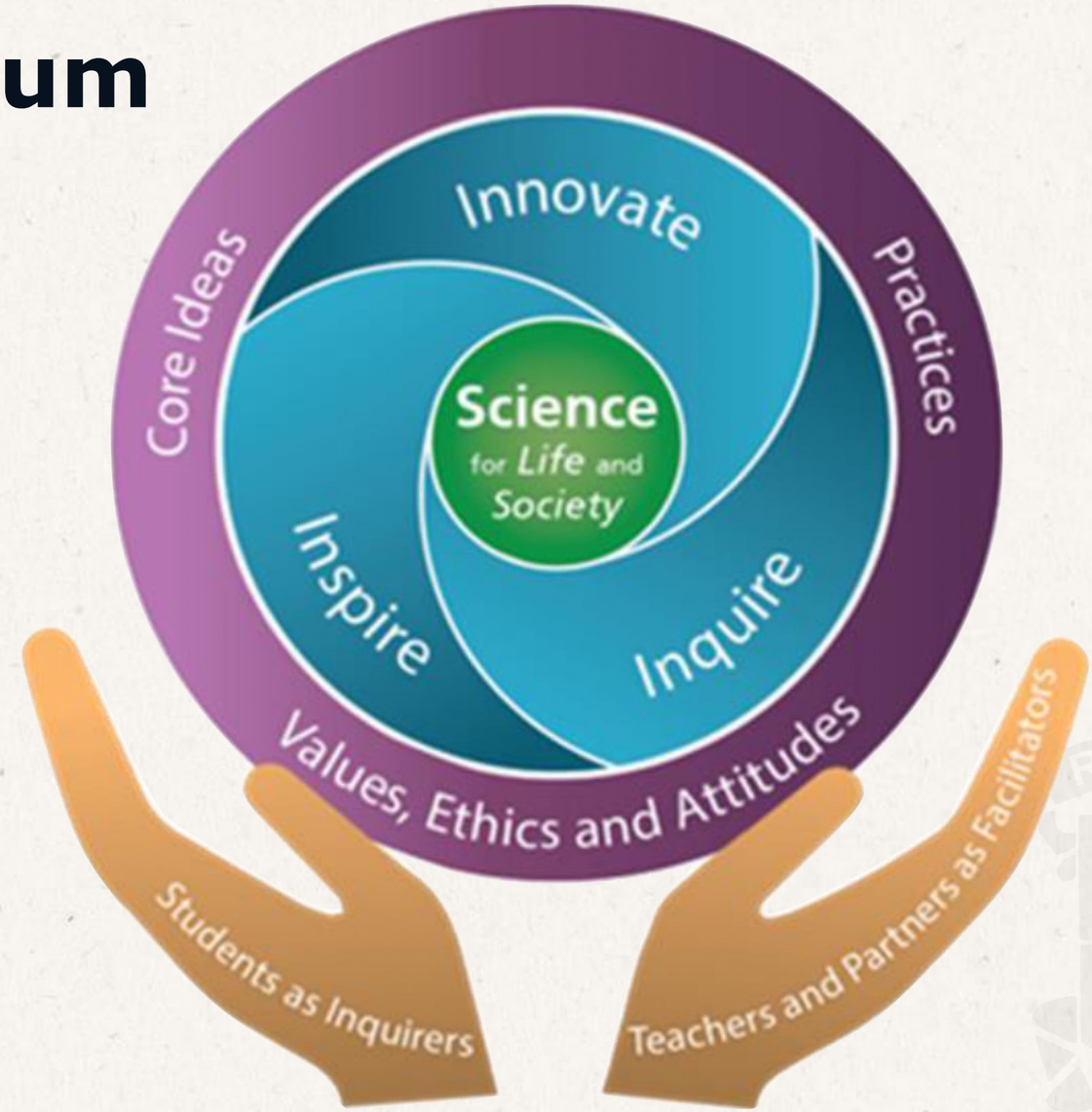
2 TEACHING & LEARNING

3 ASSESSING & MARKING

4 TIPS

Science Syllabus

Science Curriculum Framework



Levels	P3	P4	P5	P6
Topics	• Diversity of living and non-living things • Materials • Life cycles • Magnets	• Plant system • Human system • Matter • Light • Heat	• Reproduction • Water • Plant Transport System • Human Respiratory and Circulatory Systems • Electrical System	• Photosynthesis • Forms of Energy • Energy Conversion* • Forces* • Interactions within the environment

* Excluded in Fdn Sci, also Elastic Spring Force

Ways of Thinking & Doing (WOTD)

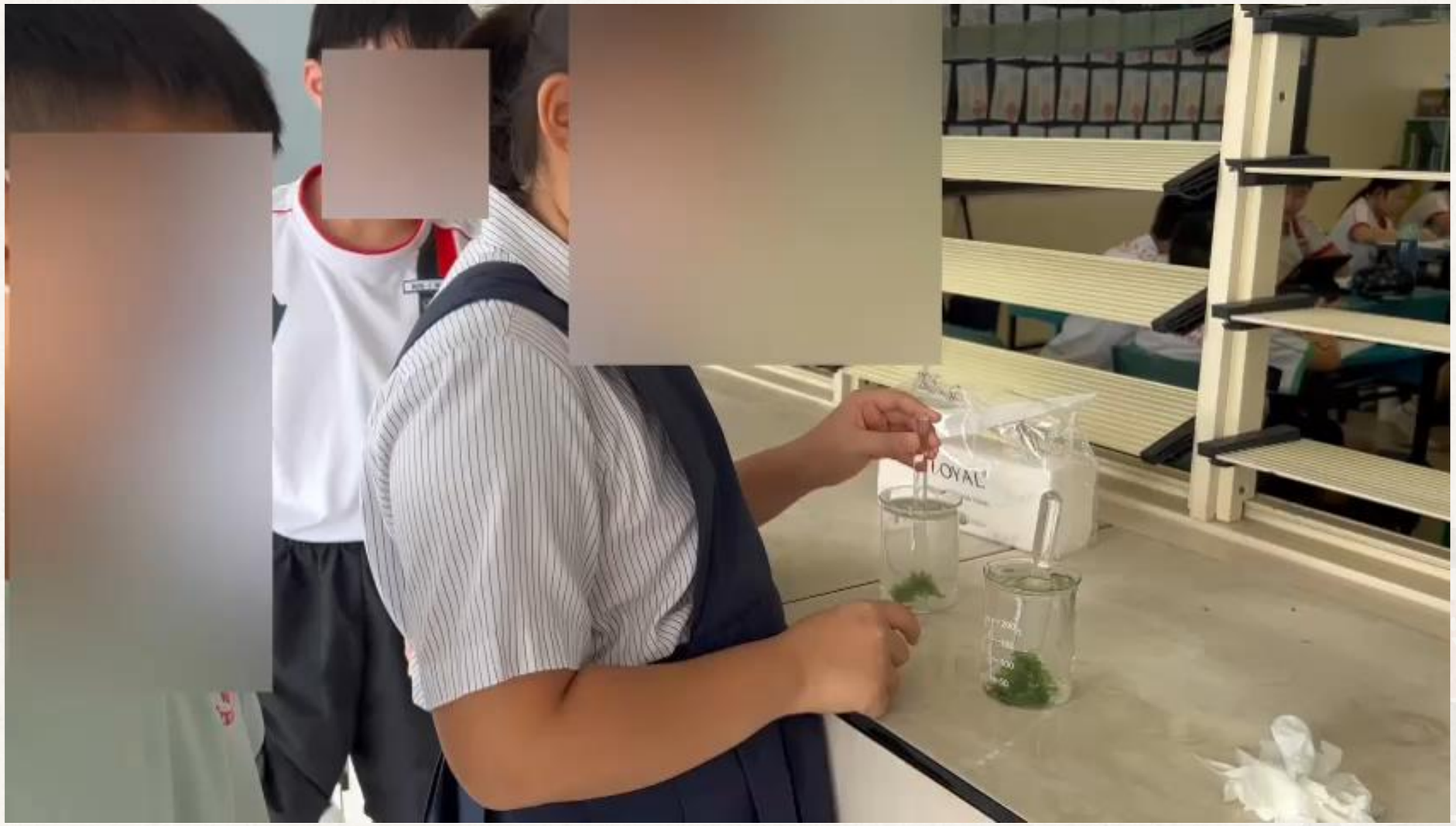
Investigating	Evaluating and Reasoning	Developing and Evaluating Solutions
Posing questions and defining problems	Communicating, evaluating and defending ideas with evidence	Using and developing models
Designing investigations	Making informed decisions and taking responsible actions	Constucting explanations and designing solutions
Conducting experiments and testing solutions		
Interpreting data		

Teaching & Learning

Posing questions and defining problems

Designing investigations

Conducting experiments and testing solutions



Interpreting data

Different temperature	Cloth T (Indoors)	Cloth U (Outdoors)
Mass before experiment(g)	6.5	6.4
Mass after experiment (g)	3.9	3.5
Mass of water lost (g)	2.6	2.9

greatest water loss ---> greatest rate of evaporation

Wind	Cloth V (no fan)	Cloth W (placed under fan)
Mass before experiment(g)	6.5	6.2
Mass after experiment (g)	4.8	3.8
Mass of water lost (g)	1.7	2.4

Wind	Cloth X (Largest SA)	Cloth Y (smaller SA)	Cloth Z (smallest SA)
Mass before experiment(g)	6	6.2	5.7
Mass after experiment (g)	4.4	5.2	5.2
Mass of water lost (g)	1.6	1	0.5

Communicating, evaluating and defending ideas with evidence

Using and developing models

Assessing & Marking

Format of Written Exam Paper (1h 45 min)

Multiple Choice Qs	Open-ended Qs
28 x 2 marks **= 56 marks**	~ 10 to 12 Qs (2, 3, 4, 5 marks) **= 44 marks**

P3 Topics included

Assessment

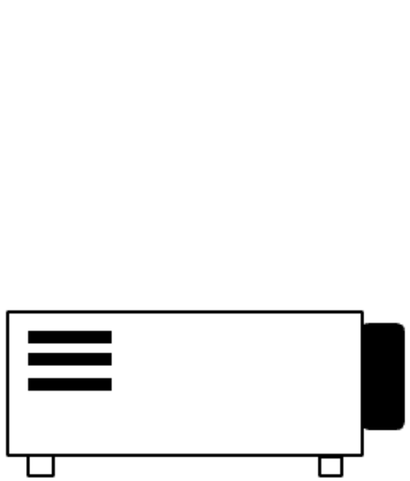
Weighted Assessments	SA2
15% + 15%	70%

Differences - From Lower P to Upper P

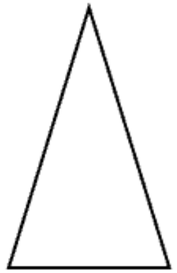
- More complex (includes graphs/ table of data)
- Answers need elaboration

P4 Example:

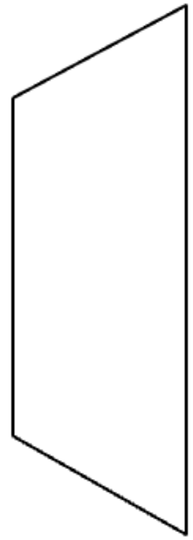
Selvam placed a projector in front of a cone. A shadow is formed on a smooth white wall when he switched on the projector.



projector



cone



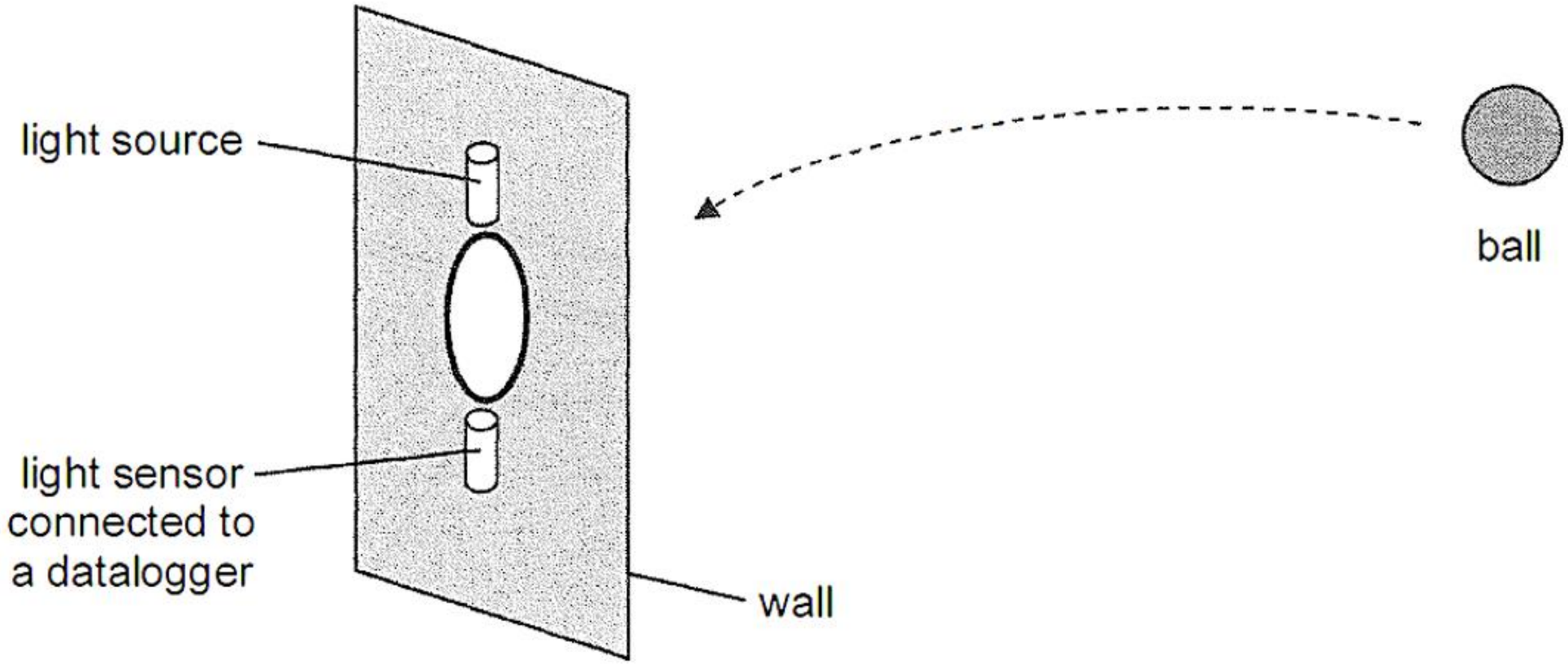
wall

(a) A shadow is formed when light is _____ by an object. [1]

(b) Draw the shadow of the cone that is formed on the wall [1]

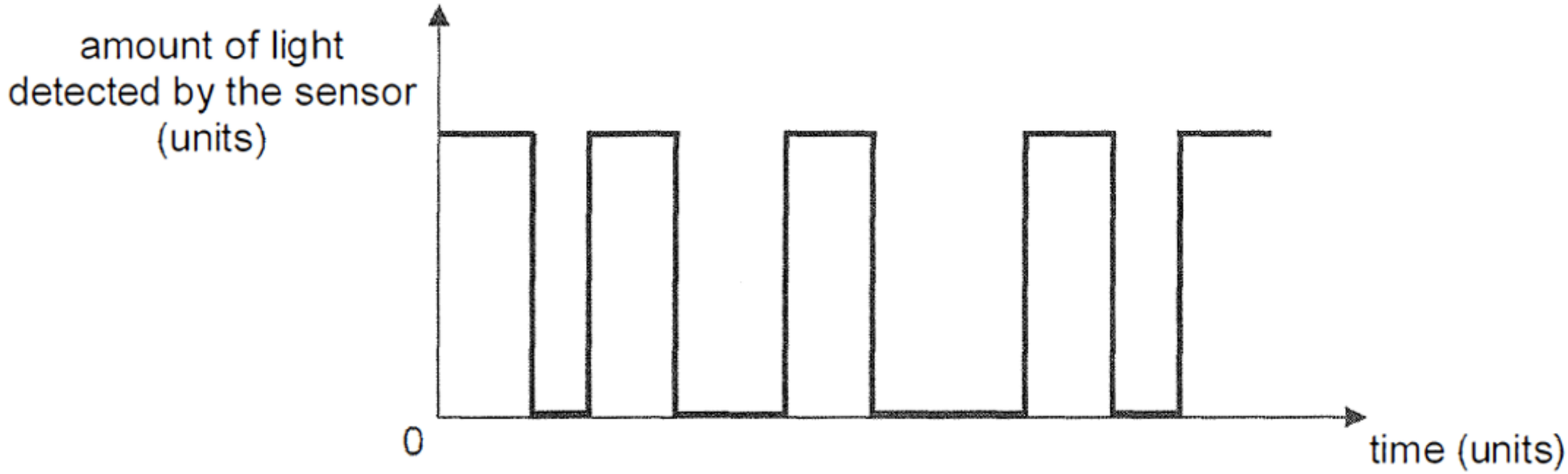
P6 Example:

Ridzwan set up a light source and a light sensor to count the number of balls going through a hole as shown.



P6 Example:

Ridzwan threw a few identical balls one at a time and recorded the following results.



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(a) Explain how Ridzwan could count the number of balls going through the hole using the set-up. [2]

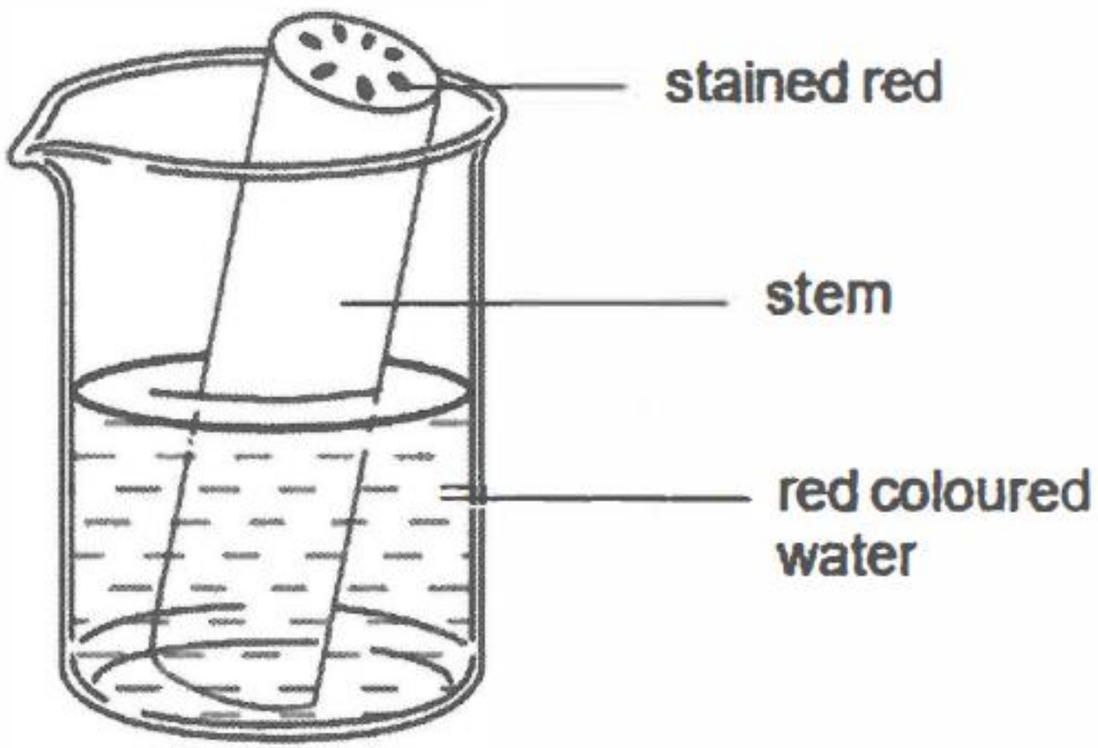
Assessing
Conceptual Understanding

Using the correct concept and skill

in a given situation appropriately

Assessing Concepts (simple)

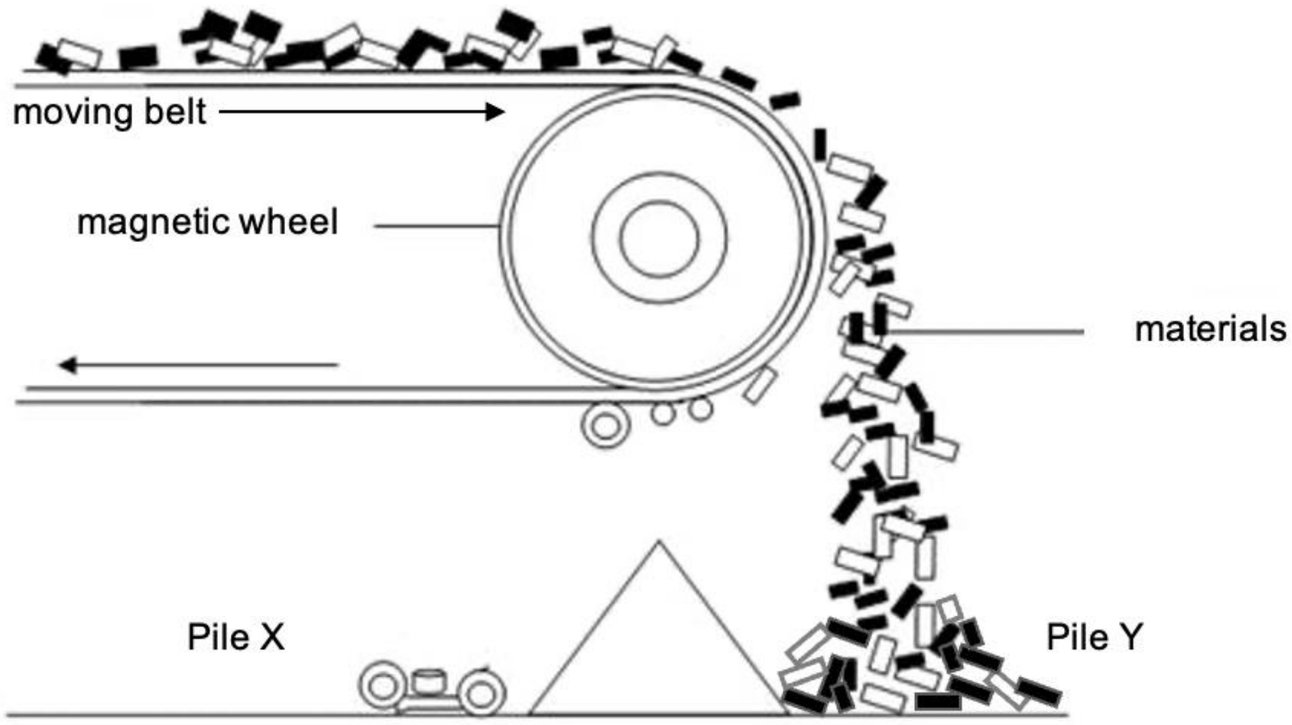
John left a piece of stem standing in red coloured water for one hour as shown.



(a) Name the part of the stem that was stained red and state its function. [1]

Assessing Concepts (harder)

The diagram below shows a part of a system used in a toy factory to separate iron toy parts from other toy parts made of other materials. It has a magnetic wheel which moves in the direction shown by the arrows. The materials are separated into two different piles, X and Y.

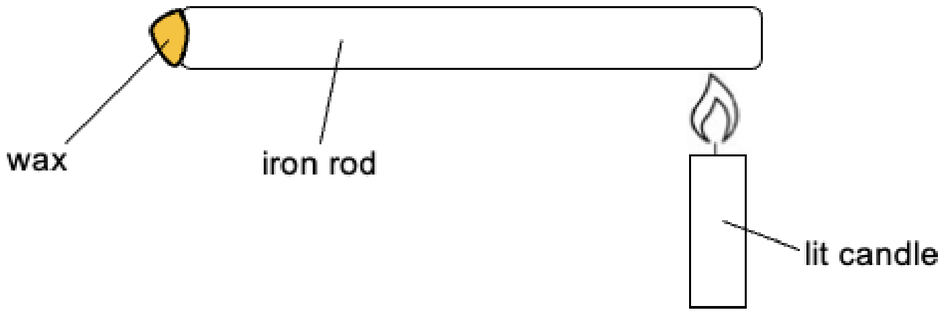


(a) In which of the piles, X or Y, will you find the iron toy parts? Explain your answer. [2]

_____

Assessing Skill of Data Interpretation (table)

Messi set up an experiment shown below. He attached some candle wax on one end of an iron rod. A lit candle was placed at the other end. He recorded the time it took the wax to melt.



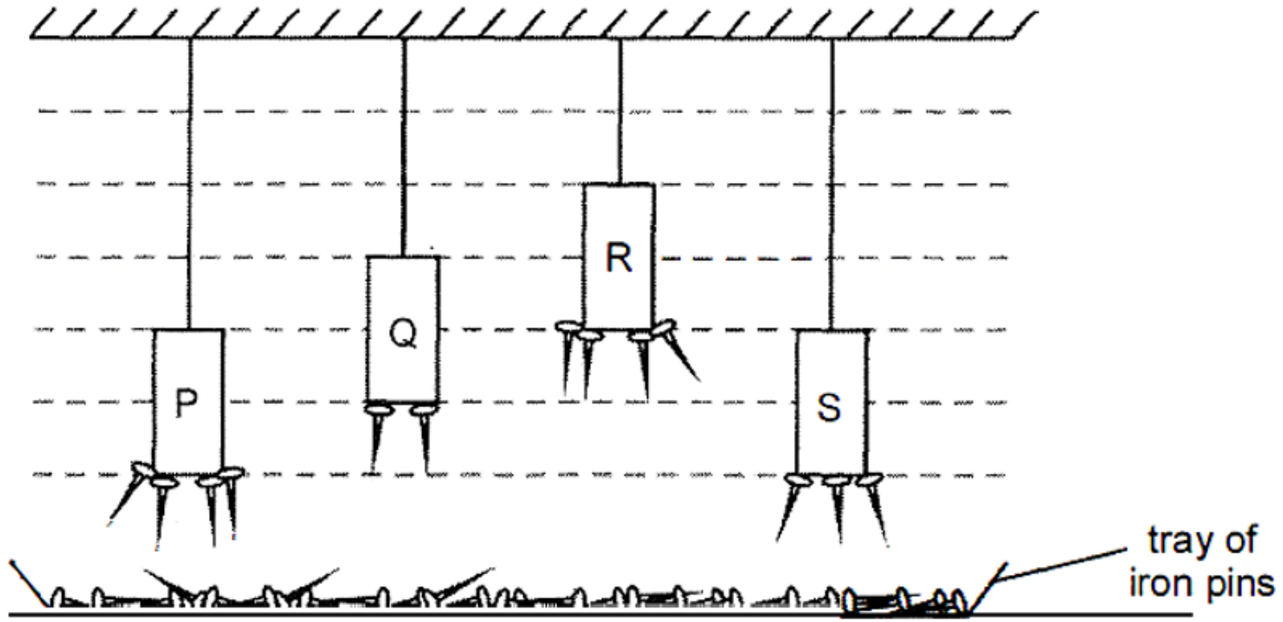
Messi repeated the experiment using identical equipment except a different rod. He called this Set-up B and recorded his observations in the table below.

Set-up	Material of rod	Time taken for wax to melt
A	Iron	2 min
B	X	5 min

(b) Explain why the wax in Set-up B took a longer time to melt. [1]

Assessing Skill of Data Interpretation (diagram)

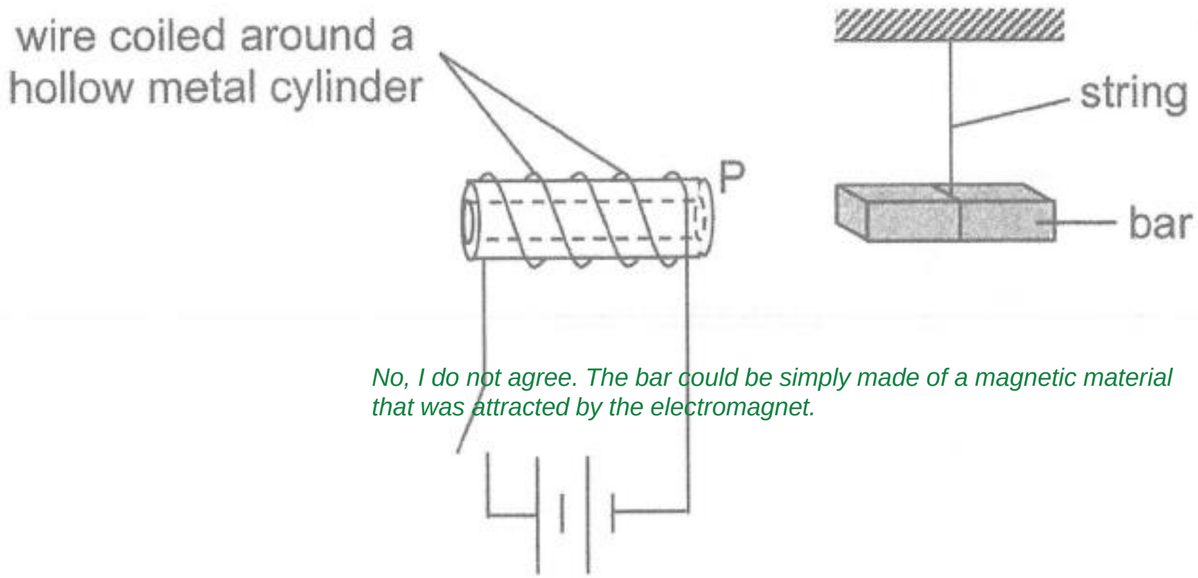
Jasmine hung four magnets, P, Q, R and S, above a tray of identical iron pins.
Her observation is shown below.



(a) Based on her observation, name the strongest magnet.
Explain how you arrived at your answer. [1]

Important thing to take note:

Kumar set up the apparatus in Diagram 1.



No, I do not agree. The bar could be simply made of a magnetic material that was attracted by the electromagnet.

Diagram 1

When he closed the switch, the bar swung towards the point P. Kumar concluded that the bar is a magnet.

(a) State if you agree with Kumar's conclusion. Explain your answer. [1]

No, I don't agree.

No marks awarded as the claim is not supported by an explanation

Kumar set up the apparatus in Diagram 1.

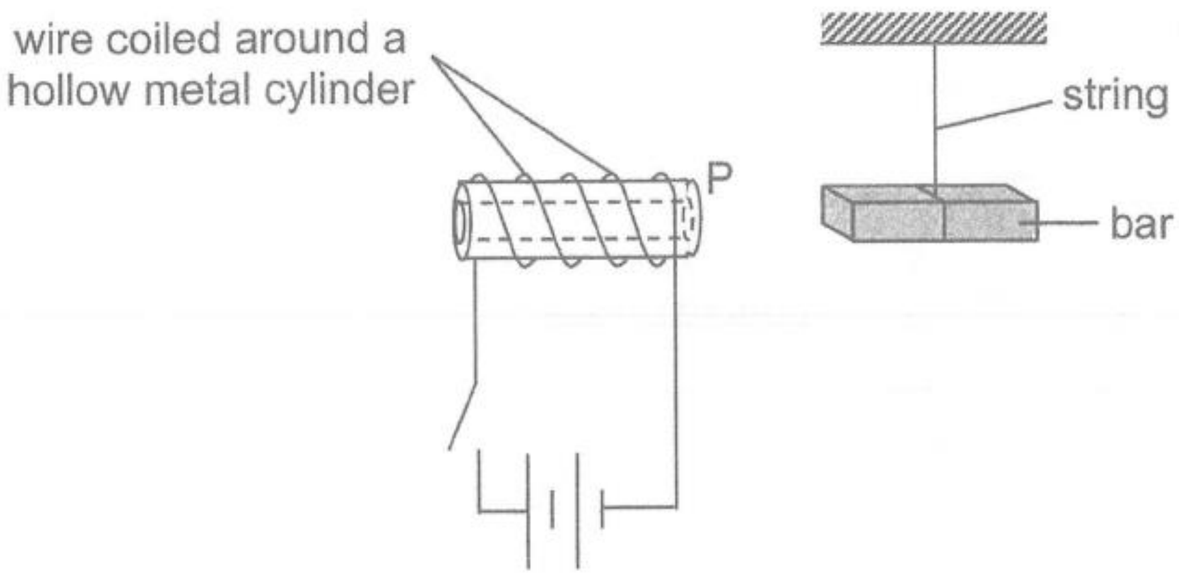


Diagram 1

The claim is supported by an explanation

When he closed the switch, the bar swung towards the point P. Kumar concluded that the bar is a magnet.

(a) State if you agree with Kumar's conclusion. Explain your answer. [1]

No, I do not agree. **The bar could just be made of a magnetic material and was attracted because P had become an electromagnet.**

Tips for Parents

How can I help my child?

- Be **encouraging and patient** when doing revision with him/her.
- Watch science programmes (e.g National Geographic on YouTube) with him/her and **encourage discussion**.
- Use **"teachable moments"** when going to the parks etc…
- Do **hands on activities** at home.

How can I help my child?

- Ensure that he/she has **access to Student Learning Space (SLS)**. Please inform the teacher if a password reset is needed.
- Ensure that he/she is a responsible **self-directed learner** and completes his/her assigned work.
- Ensure that he/she **studies** for the weighted assessments. After the paper has been returned, that all corrections are done.

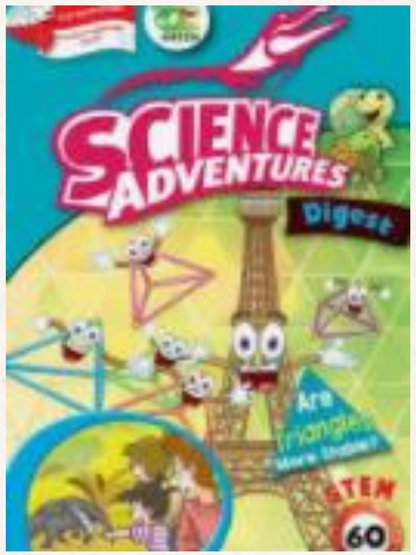
How can I help my child?

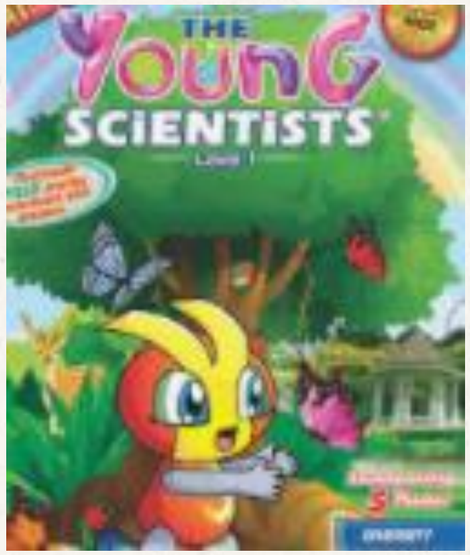
- Bring them out to **experience nature**.

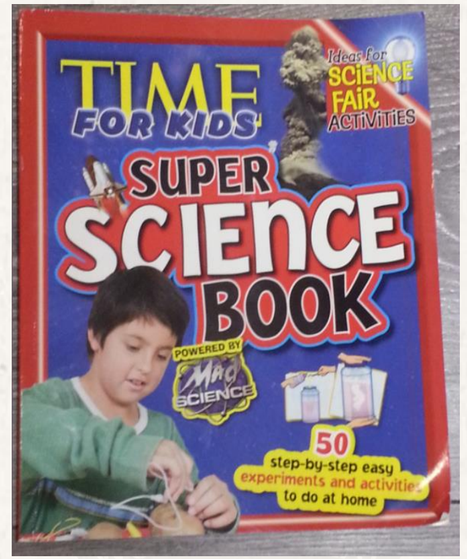
- ✓ Singapore Zoo / Night Safari / River Safari
- ✓ Jurong Bird Park
- ✓ S.E.A. Aquarium, Sentosa
- ✓ Marina Barrage
- ✓ Kranji Farms
- ✓ Parks (E.g. Hortpark)
- ✓ Gardens by the Bay
- ✓ Botanic Garden
- ✓ Sungei Buloh Wetland Reserve
- ✓ Singapore Science Centre

How can I help my child?

- Expose them to **science resources**







PSLE Preparation @ P6

- Science handbook – Approach, Tackling different science questions
- PSLE By The Topic series + Video explanations (on SLS)
- PSLE 5-year series
- Prelims Papers from other schools

Q & A

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THANK YOU!