

Saint Andrew's Junior School

Science Department

Mission: To develop each Science pupil to be an inquirer, innovator and environmentalist

Vision: Inculcate in pupils a sense of wonder/curiosity and equip them with skills in exploring and discovering such that they aspire to make a positive impact in future



Pedagogy: What IS PTA in our school?

Problem/challenge

Teach/Learn

Apply

5 Es
Engage
Explore
Explain
Elaborate
Evaluate

MTV

Hands ON

ICT

Dept pedagogy remains- only change is addition of "challenge" to the problem



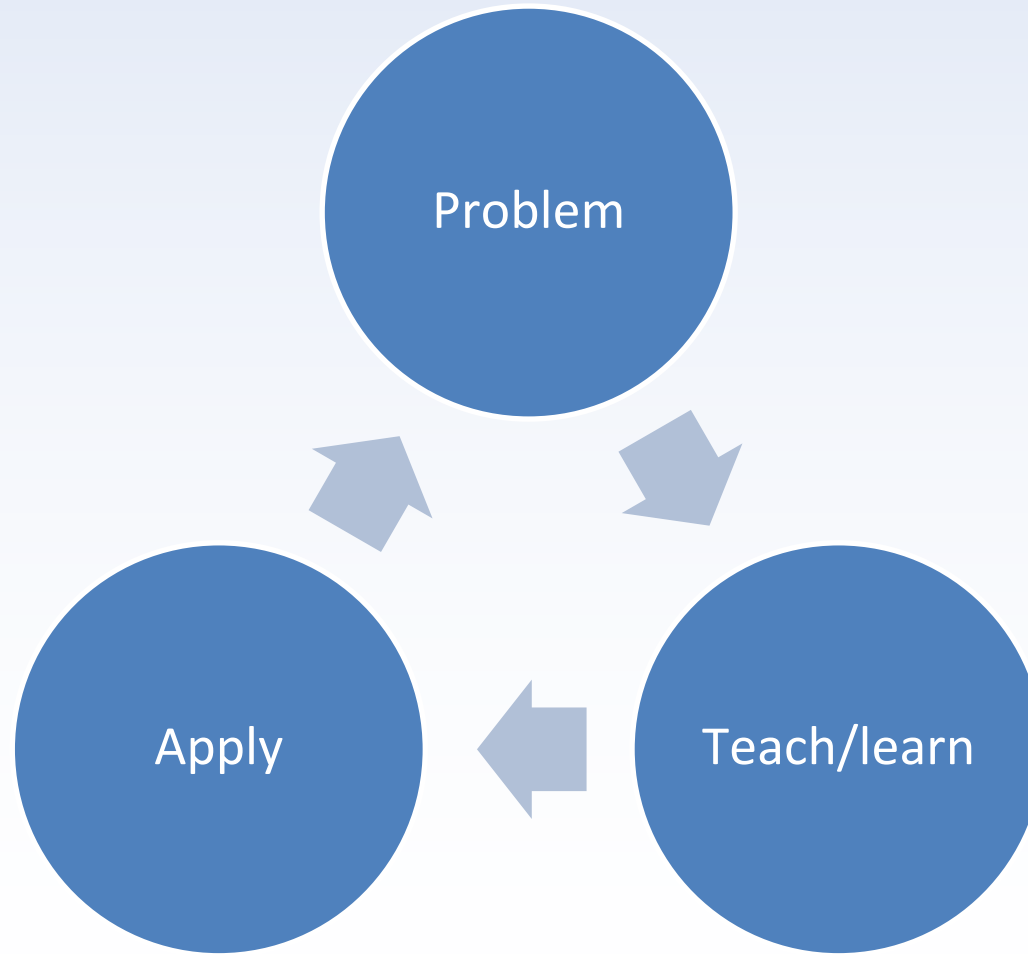
5Es pedagogical approach

-  Engage
-  Explore
-  Explain
-  Elaborate
-  Evaluate



Science Pedagogical Process Flow

Problem (P), Teach/learn (T), Apply (A)

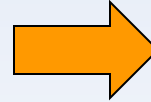


Problem-Teach-Application

Problem (Reproduction in flowering plants)

A plant species is in danger of being extinct. As a scientist, you have discovered that the seeds can't be dispersed far away from the parent plant. At the end of this topic, recommend what can be done to the design of the seed to overcome this problem. In doing so, you hope to prevent the extinction of this plant species.

1. State what way(s) that seeds can be dispersed by.



Video Introduction

What do you see in the video?

Problem-Teach-Application

Application (Reproduction in flowering plants)

A plant species is in danger of being extinct. As a scientist, you have discovered that the seeds can't be dispersed far away from the parent plant. Recommend what can be done to the design of the seed to overcome this problem. In doing so, you hope to prevent the extinction of this plant species.

1. Refer to your answers in page 2, what new way(s) you have learnt that allows the seeds to be dispersed by.

2. Least effective way of seed dispersal.

3. What can be done to improve the design of the seed?

Activity 1.1 – A complete flower

Aim: To identify the parts of a flower.

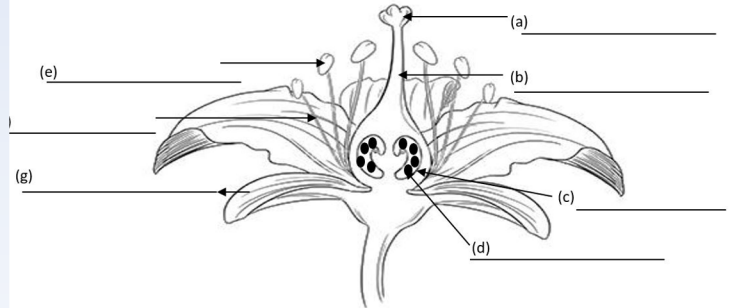
Materials: (1) Tiger lily (2) Magnifying glass

Procedures:

1. Your teacher will provide each group with a dissected tiger lily.
2. Observe the dissected tiger lily carefully with a magnifying glass and identify the male and female reproductive parts.

Observations:

1. Label the diagram showing the parts of the tiger lily.



2. Remove the petals. What is the sticky liquid that is found at the base of the petals? What role does this liquid have in the process of pollination?



Blended learning on SLS

Activities

Activate Learning

1. Spark Curiosity

Activate Learning

2. Decide on Inquiry Question and Hypothesis

Promote Thinking and Discussion

3. Conduct Investigation

Promote Thinking and Discussion

4. Provide Explanation

Facilitate Demonstration of Learning

5. Apply Understanding


Spark Curiosity

Use surprising or contradictory facts or events presented in different media types to help students form question(s).

Example of Activity Instructions:

Watch a video on the motion of skydivers and record your observations using the "Think-Puzzle-Explore" SLS Interactive Thinking Tool.

For this activity, you could also use the Teaching Action *Discrepant Events* or *Generating Questions* from the Singapore Teaching Practice.



1280 x 720

What is food coma?

Decide on Inquiry Question and Hypothesis

Which activity will cause the heart rate to increase the most?

- Walking on the spot for 1 minute
- Doing jumping jacks for 1 minute
- Watching a scary movie for 1 minute
- Doing push-ups for 1 minute

VOTE

Activity List

- [Introduction](#)
- [1 Spark Curiosity](#)
- [2 Decide on Inquiry Question and H...](#)**
- [3 Conduct Investigation](#)
- [4 Provide Explanation](#)
- [5 Apply Understanding](#)
- [Completion](#)

Previous activity 2/5 Next activity

Developing the Skilled Communicator

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graph TD; A[Developing the Skilled Communicator] --> B[Presentations]; A --> C[Group work]
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Presentations

Group work



P5 Checkpoints

Term 1	Term 2	Term 3	Term 4
<p><u>Weighted (10%)</u> <u>Topical Review</u></p> <p>Reproduction of flowering and non flowering plants Reproduction in Human</p>	<p><u>Weighted (10%)</u> <u>Topical Review</u></p> <ul style="list-style-type: none"> · Unit of life · Water and changes of state. · The water cycle 	<p><u>Weighted (10%)</u> <u>Topical Review</u></p> <p>Forms of Energy Electricity systems Using electricity The plant transport system</p> <p><u>Practical Assessment</u> <u>(Formative) Non weighted</u></p> <p>P3- P5 Topics</p>	<p><u>Semestral Assessment 2</u> <u>(70% of overall)</u></p> <ul style="list-style-type: none"> · Booklet A, 28 MCQs (56 marks) · Booklet B, 12-13 OEs (44 marks) · Total: 100 marks · Duration: 1h 45 min <p><u>Topics</u></p> <p>P3 – Diversity, Systems, Interactions P4 – Cycles, Energy P5 - Cycles, System, Energy</p>



Format of PSLE Science

Booklet	Item Type	No. of Questions	Weightage	Duration
A	MCQ	28	56%	1hr 45min
B	Open-ended/ Short-answer	12-13	44%	



Home routines that can support learning of Science

- Linkage of Science to everyday activities or phenomena.
- Guide him in research – information from books / websites
- Ensure that he completes all assignments / corrections.



- Science Notes
 - Weekly MCQ on SLS
 - Supplementary Lessons
 - Answering technique
 - P.R.I.D.E
 - C.E.R
- Guide books
- Science PSLE Revision Guide



Thank you!

