

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 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



National Approach

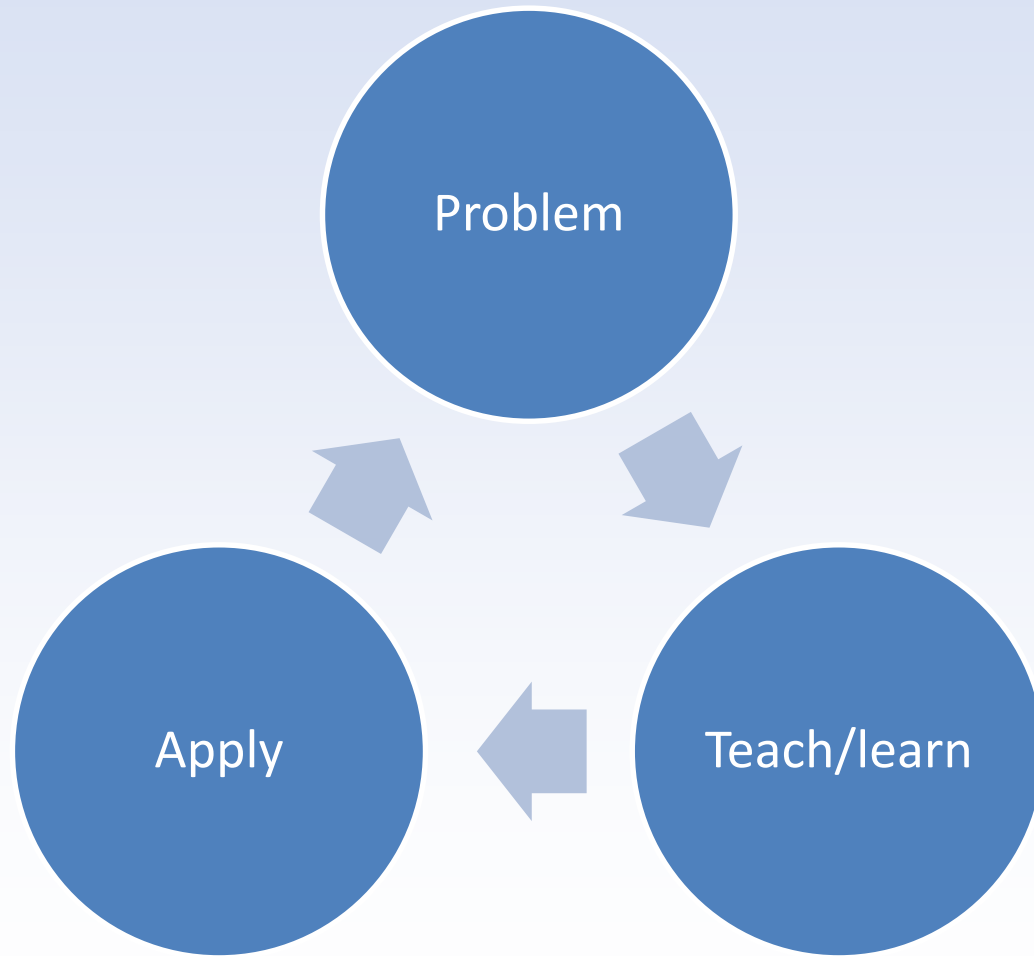
5Es pedagogical approach

- Engage
- Explore
- Explain
- Elaborate
- Evaluate



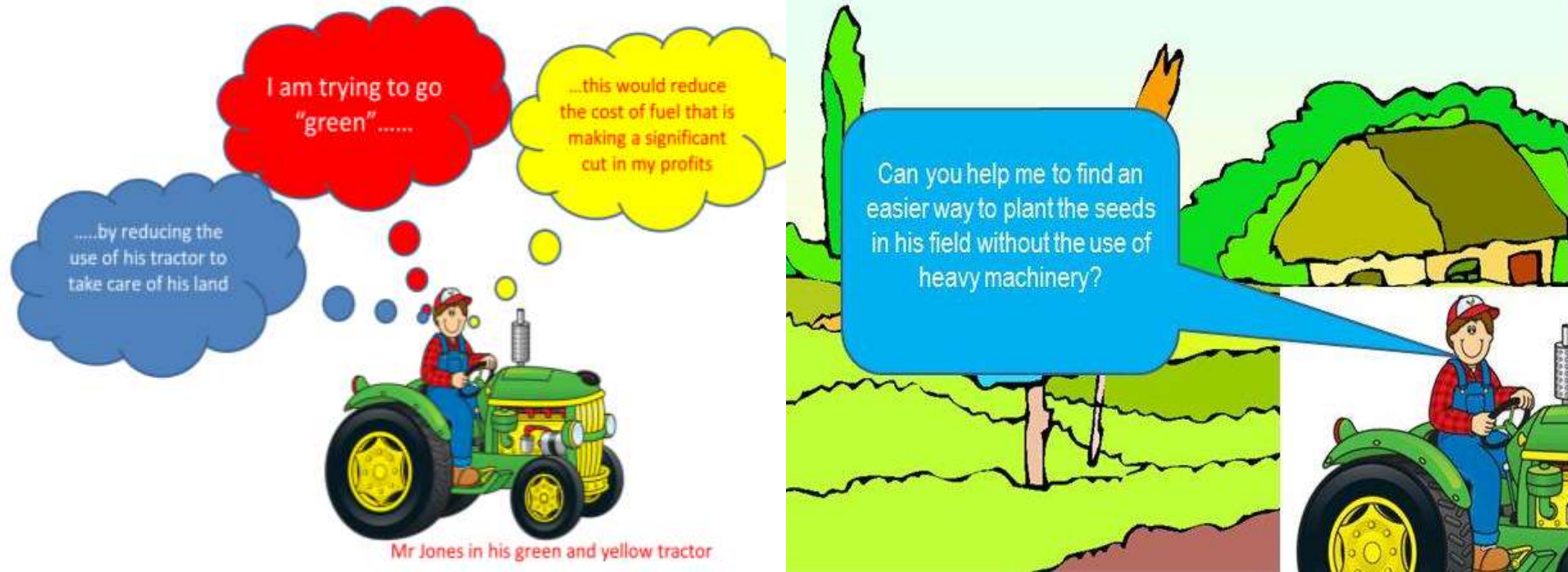
Science Pedagogical Process Flow

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



P: Problem

PROBLEM



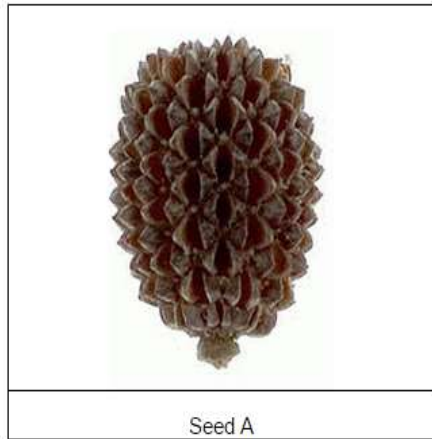
The boys will be given a problem to solve.
The problem usually will be set in a real world context to provide authentic learning and problem solving experience.

- (1) Engage
- (2) Explore and Explain
- (3) Evaluate

T: Teaching and Learning

Let's test if you are able to identify the dispersal methods of the following fruits and seeds! Observe the following fruit and seeds, and answer the questions that follow.

Part 1



Answer Question 1 and 2



Evaluation - Seed Dispersal 1 - Wonder

For Seed A, B, C and Fruit D

Your username (chorhong.ngin@saintandrewsjunior.moe.edu.sg) will be recorded when you submit this form. Not [chorhong.ngin](#)? [Sign out](#)
* Required

(1) How is Seed A dispersed? *

- Wind dispersal
- Water dispersal
- Explosive action
- Animal dispersal

(2) Explain your choice of dispersal method for Seed A.

(3) How is Seed B dispersed? *

- Wind dispersal
- Water dispersal

Pupils watch videos showing different dispersal methods. They will then be tested on their learning through on-line questions. Pupils will be required to explain their answers.

Elaborate

A: Application



Create a *Super-Seed* !

- **Able to disperse most quickly and effectively** within the shortest possible time



Your task - 15 minutes

- (1) Work in your group and solve his problem.
- (2) Design a fruit/seed that can be used on Mr Jone's farm without the use of heavy machinery.
- (3) This fruit can have special properties. Use a dried bean as the base of the seed. You can use (e.g. sticks, cream sticks, toothpicks, cardboard, egg cartons, cotton balls, string and rubber bands), to design a seed.

Students have to apply what they have learnt from their exploration to help them create a solution to the problem posed.

Navigation

Home

▼ Reproduction in flowering plants - seed dispersal

▶ 1. P5 Thanksgiving

▶ 2. P5 Resilience

▶ 3. P5 Unity

▶ 4. P5 Empathy

▼ 5. P5 Wonder

(1) Engage

(2) Explore and Explain

(3) Evaluate

(4) Elaborate

(5) Skilled communicator

▶ 6. P5 Integrity

▶ 7. P5 Self Discipline

▶ Prototype for teachers discussion

[Reproduction in flowering plants - seed dispersal](#) > [5. P5 Wonder](#) >

(5) Skilled communicator


• Prepare a PowerPoint presentation consisting of NOT MORE THAN TWO SLIDES.

• The following **must** be in your slides:

1. Picture of your seed

2. Explain briefly the dispersal mechanism of your seed.

3. State what type of conditions would be necessary for your seed to be dispersed effectively.

 Add files

Developing the Skilled Communicator



Presentations

Group work



Assessment

Term 1	Term 2	Term 3	Term 4
<p><u>Topical Reviews</u></p> <ul style="list-style-type: none"> ✓ From parents to young ✓ Reproduction of flowering and non flowering plants 	<p><u>Semestral Assessment 1 (30% of SA1)</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> P3 – Diversity, Systems, Interactions P4 – Cycles, Energy P5 - Cycles</p>	<p><u>Topical Reviews</u></p> <ul style="list-style-type: none"> ✓ Electricity ✓ The plant transport system <p><u>Practical Assessment (Formative)</u></p> <p>P3- P5 Topics</p>	<p><u>Semestral Assessment 2 (70% of SA2)</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> P3 – Diversity, Systems, Interactions P4 – Cycles, Energy P5 - Cycles, System</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%	



Developing the Skilled Communicator



Presentations

Group work



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.



Resources

- Class Science Website
 - Science Notes
 - Weekly MCQ on class department website
 - Supplementary Lessons
 - Answering technique
 - P.R.I.D.E
- Guide books
- Science PSLE Revision Guide



Thank you!

