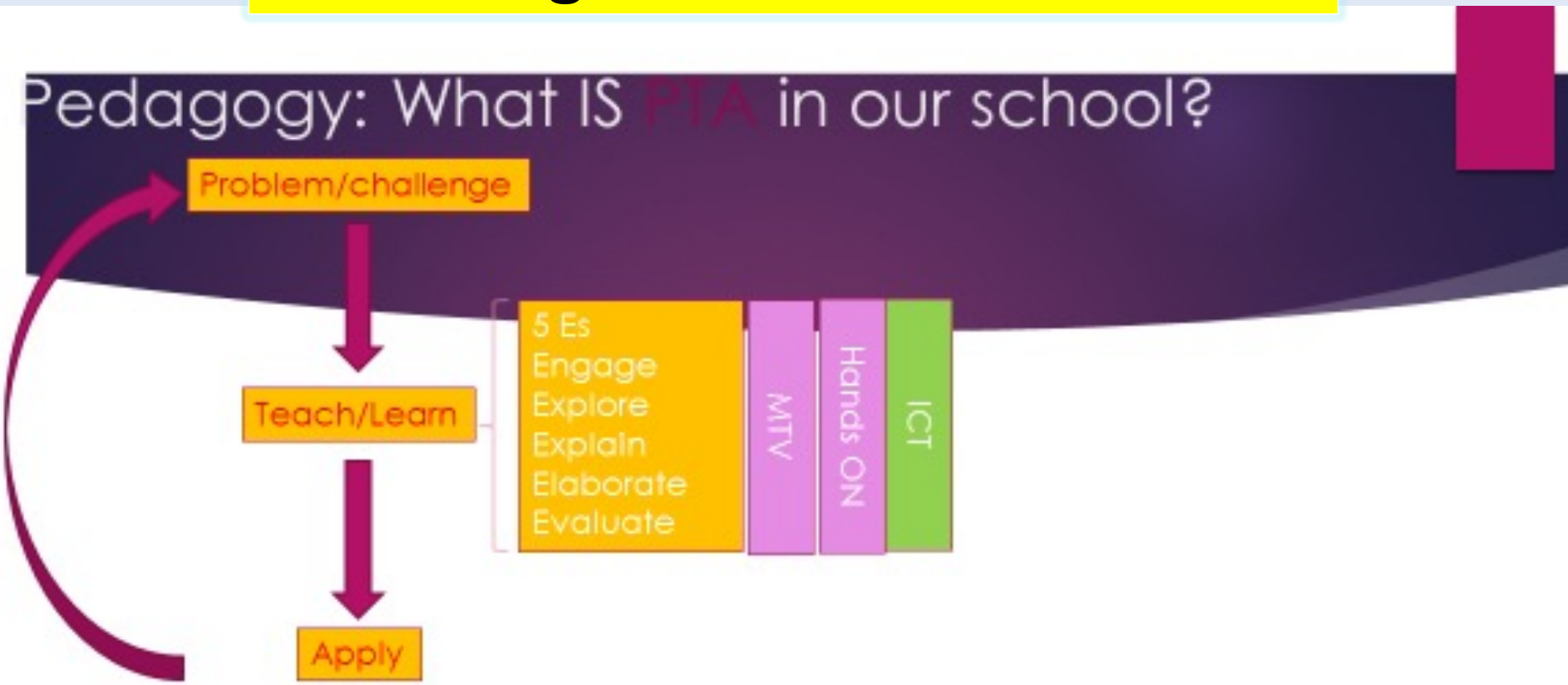
Saint Andrew's Junior School
Science Department

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

Nurturing the Holistic Thinker

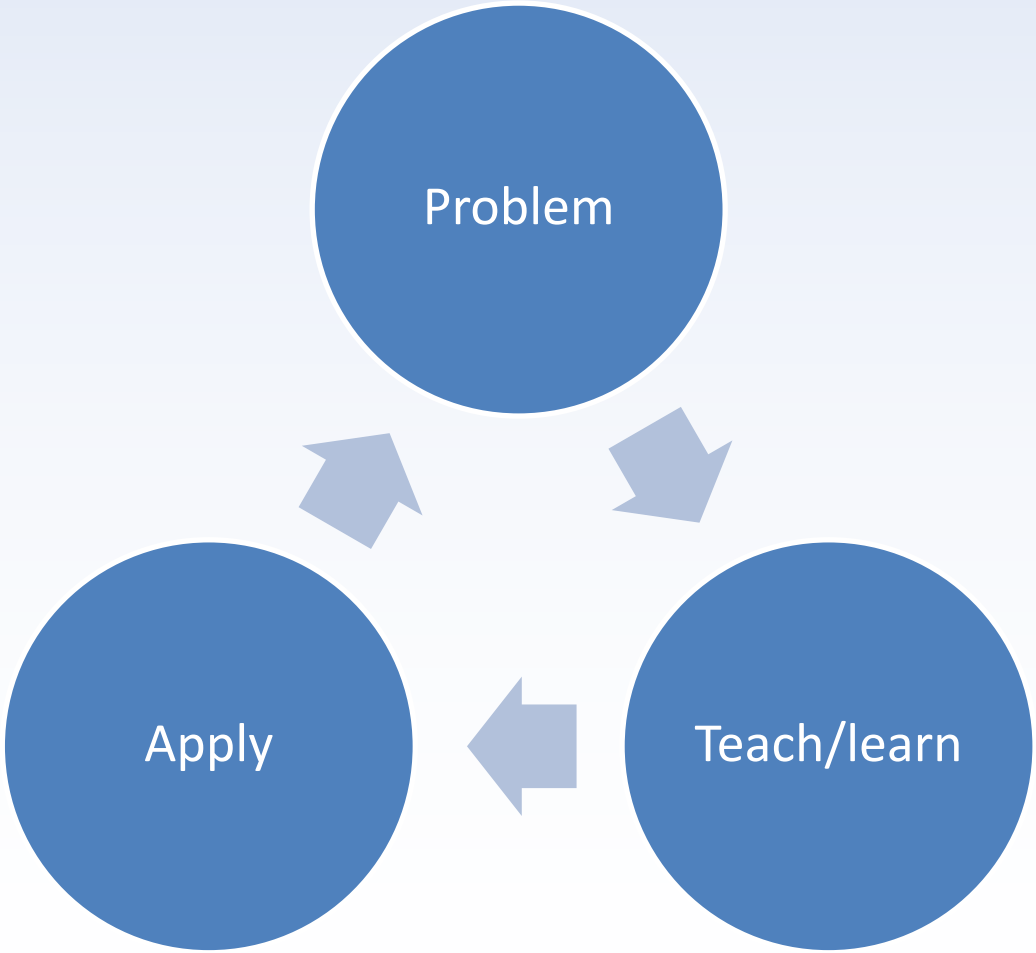


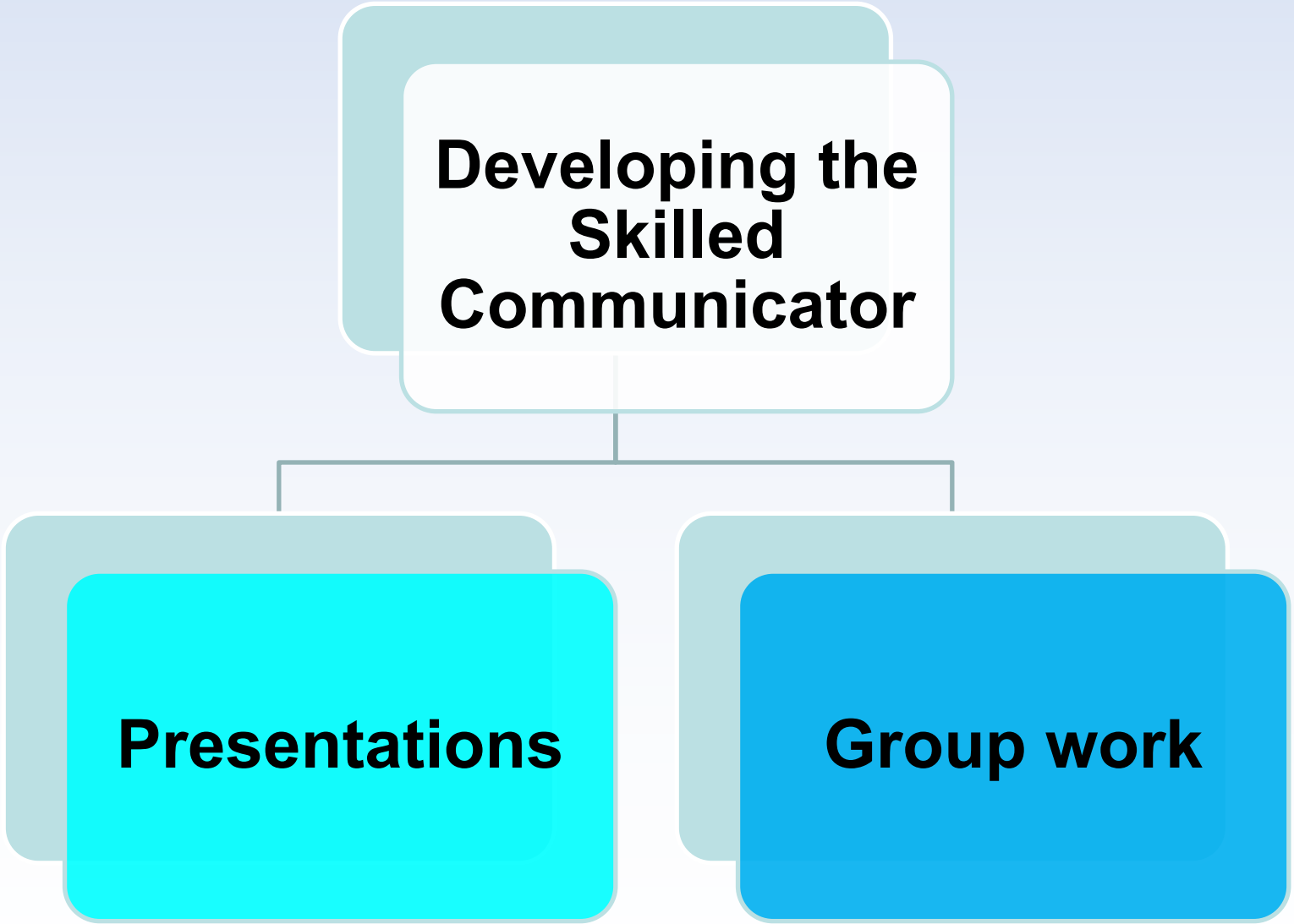
Dept pedagogy remains- only change is addition of "challenge" to the problem

5Es pedagogical approach

- **Engage**
- **Explore**
- **Explain**
- **Elaborate**
- **Evaluate**

Science Pedagogical Process Flow
Problem (P), Teach/learn (T), Apply (A)




Developing the Skilled Communicator
Presentations
Group work

- Teaching slides
- Conducting experiments
- Worksheets (Activity, Process Skill, Check-out and Thematic Paper)

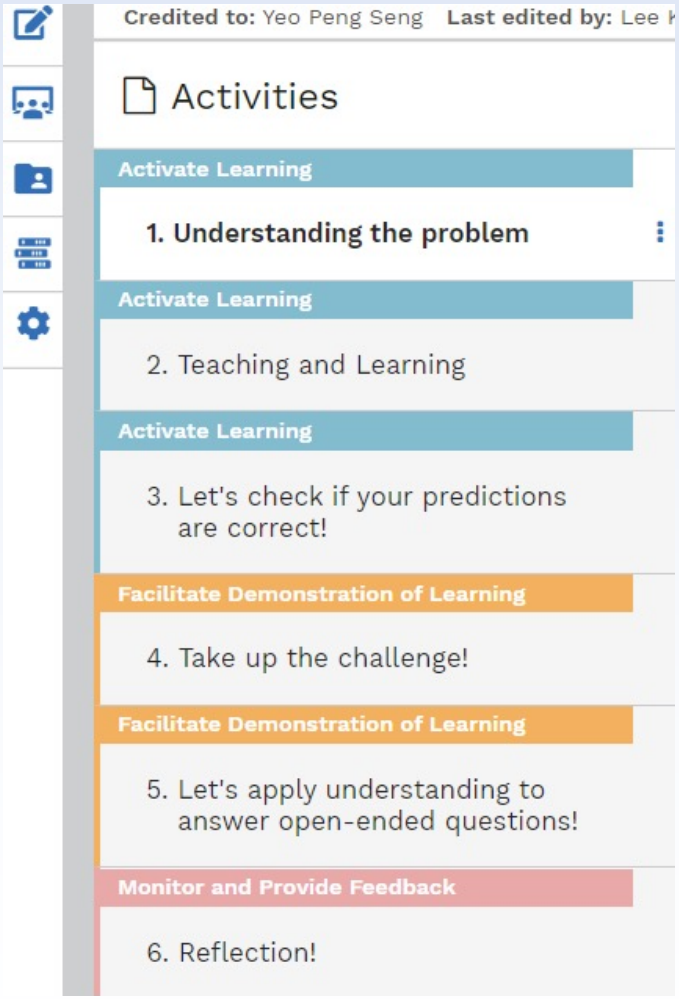
In addition….

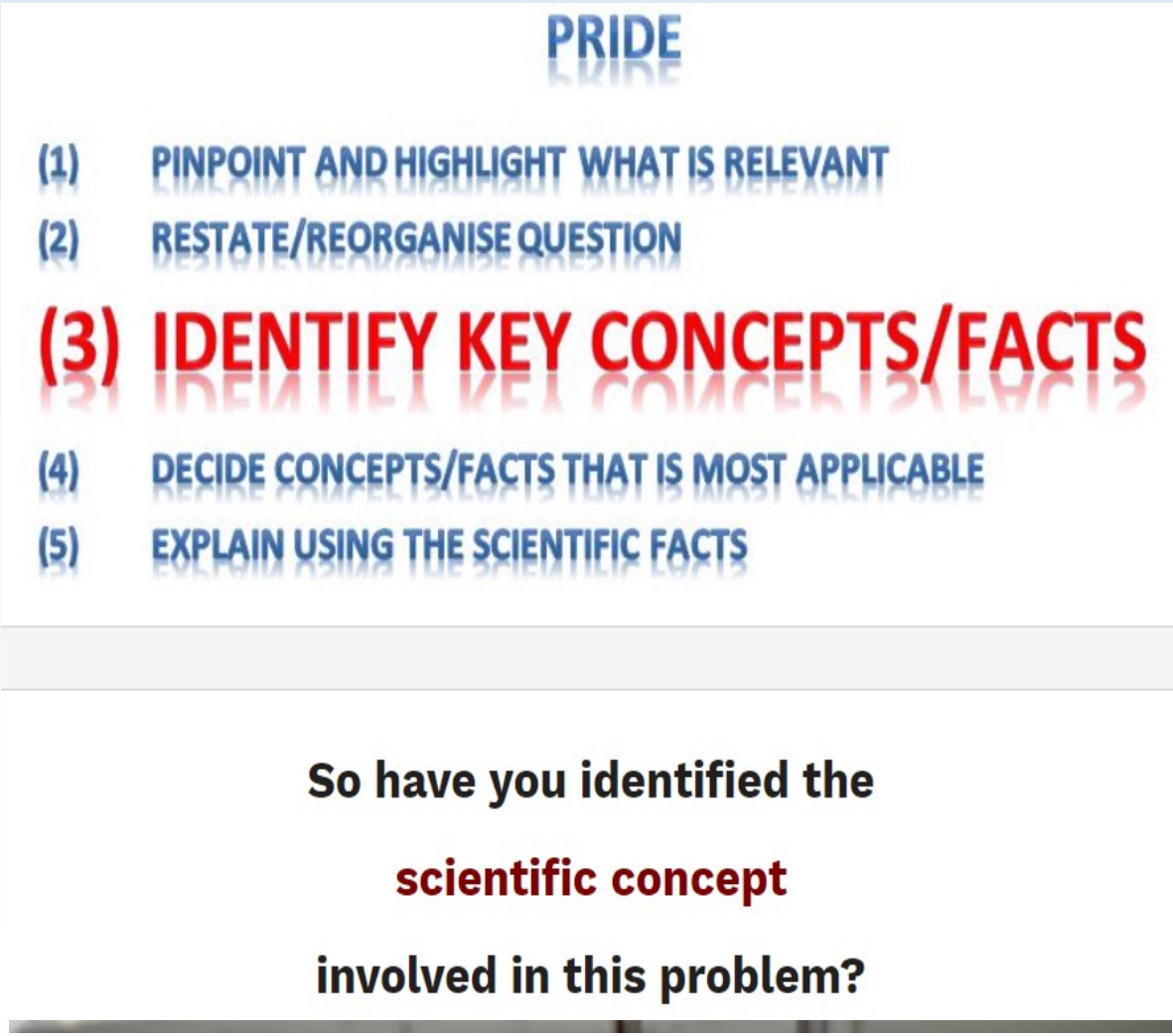
- SLS (Blended learning)
- Creating PPT slides
- Attempting SLS Weekly/Topic quizzes

Different platforms

Student learning Space
(SLS)
Topic:
P4 Heat and Temperature

Blended learning (SLS)





Activate Learning

1. Understanding the problem

Activate Learning

2. Teaching and Learning

Activate Learning

3. Let's check if your predictions are correct!

Facilitate Demonstration of Learning

4. Take up the challenge!

Facilitate Demonstration of Learning

5. Let's apply understanding to answer open-ended questions!

Monitor and Provide Feedback

6. Reflection!

What is the difference between heat and temperature?

- The difference between heat and temperature:

Beaker A

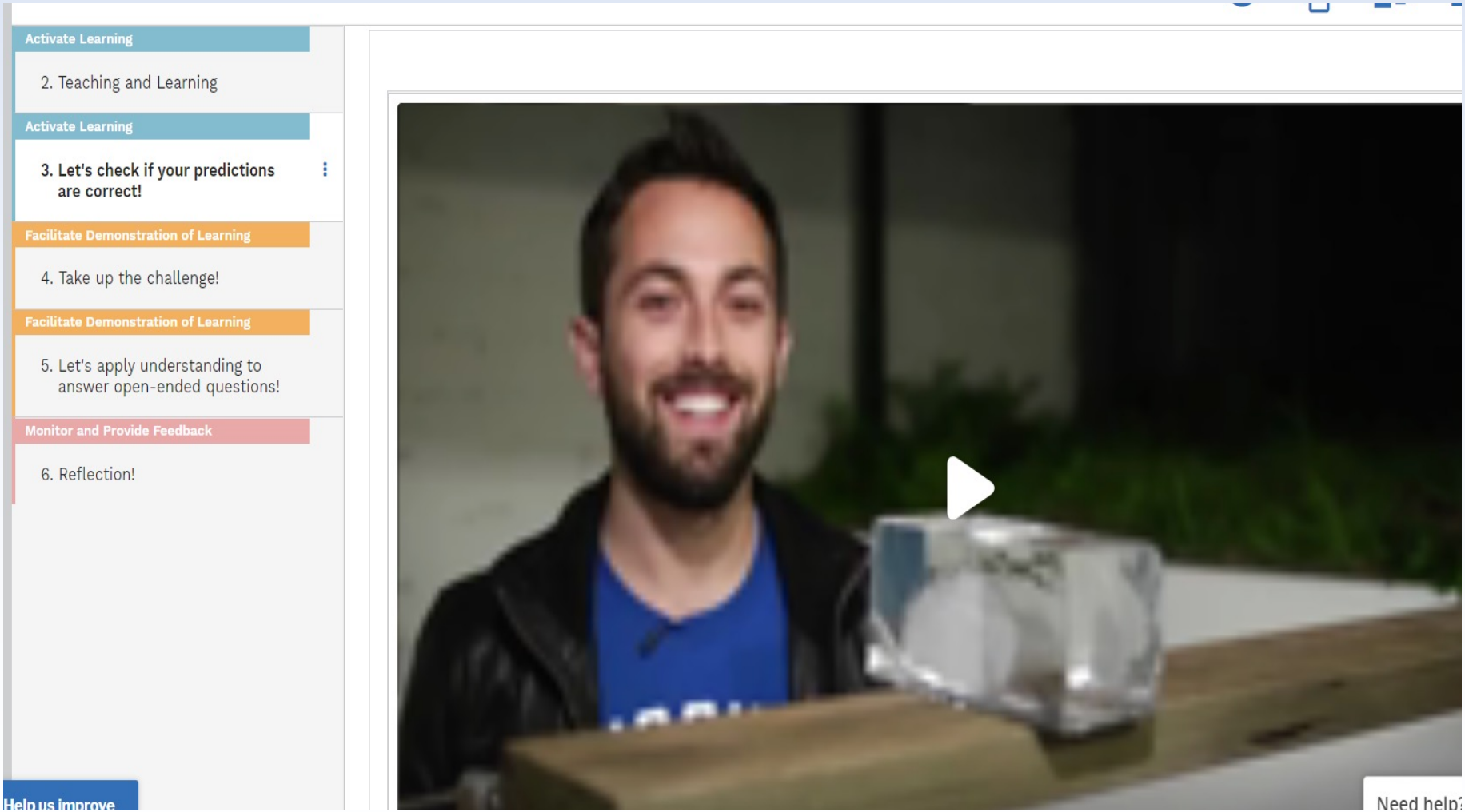
60°

30° C

Beaker B

To heat up the same amount of water to a higher temperature, more heat is needed. Thus, the water in beaker A has more heat than the water in beaker B.

Blended learning (SLS)



Blended learning (SLS)

Let's design an experiment to determine which surface allows ice to melt the fastest!

Here's what you need:

(1) Ice

(2) a variety of surfaces made of different materials

- metal {like a pot or pan}
- plastic {like a lid, or a bowl}
- paper {like a paper plate}
- glass {like a bowl}

Choose a variety of surfaces for your ice to melt on. Compare metal, plastic, glass, and paper to see which makes a better conductor of heat.

State your prediction before conducting the experiment!

Blended learning (SLS)

Activate Learning

2. Teaching and Learning

Activate Learning

3. Let's check if your predictions are correct!

Facilitate Demonstration of Learning

4. Take up the challenge!

Facilitate Demonstration of Learning

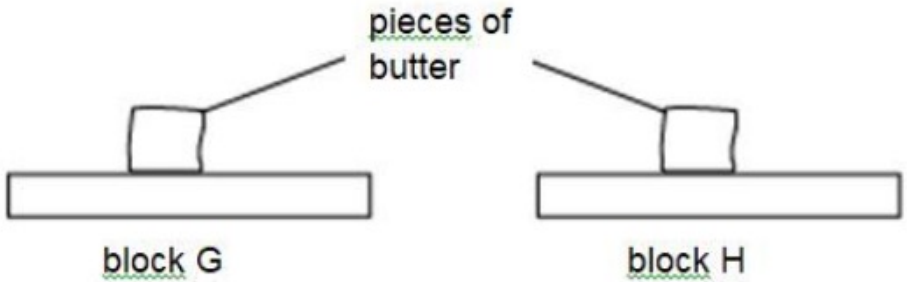
5. Let's apply understanding to answer open-ended questions!

Monitor and Provide Feedback

6. Reflection!

ADD TO MY DRIVE

Raj placed pieces of butter on two blocks G and H of similar size as shown.



(a) Raj placed the two blocks at room temperature. He observed that the piece of butter on block H melted more quickly than the one on block G. Explain his observations. [2]

Blended learning (SLS)

Activities

Activate Learning

1. Understanding the problem

Activate Learning

2. Teaching and Learning

Activate Learning

3. Let's check if your predictions are correct!

Facilitate Demonstration of Learning

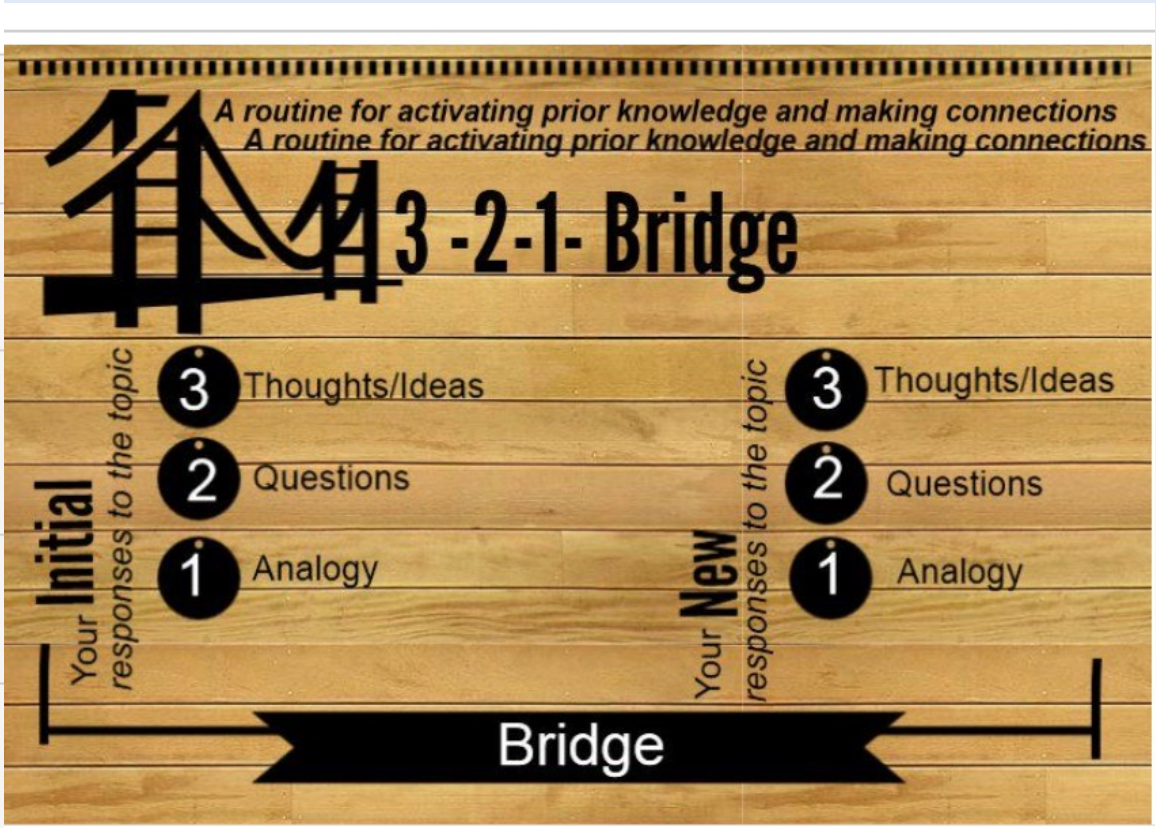
4. Take up the challenge!

Facilitate Demonstration of Learning

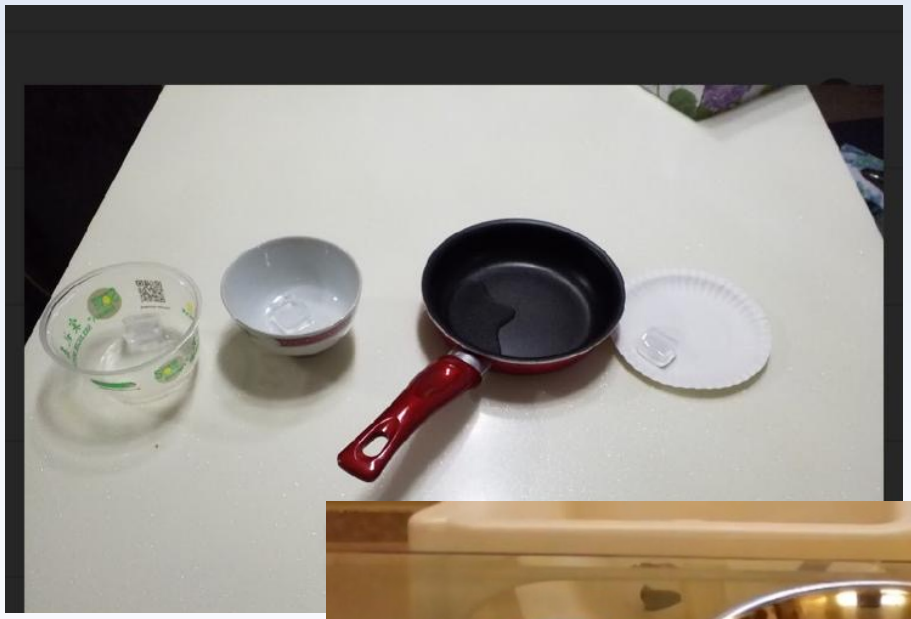
5. Let's apply understanding to answer open-ended questions!

Monitor and Provide Feedback

6. Reflection!



Sample of students' work



Creating PPT slides
Topic: P4 Life cycle of Animal

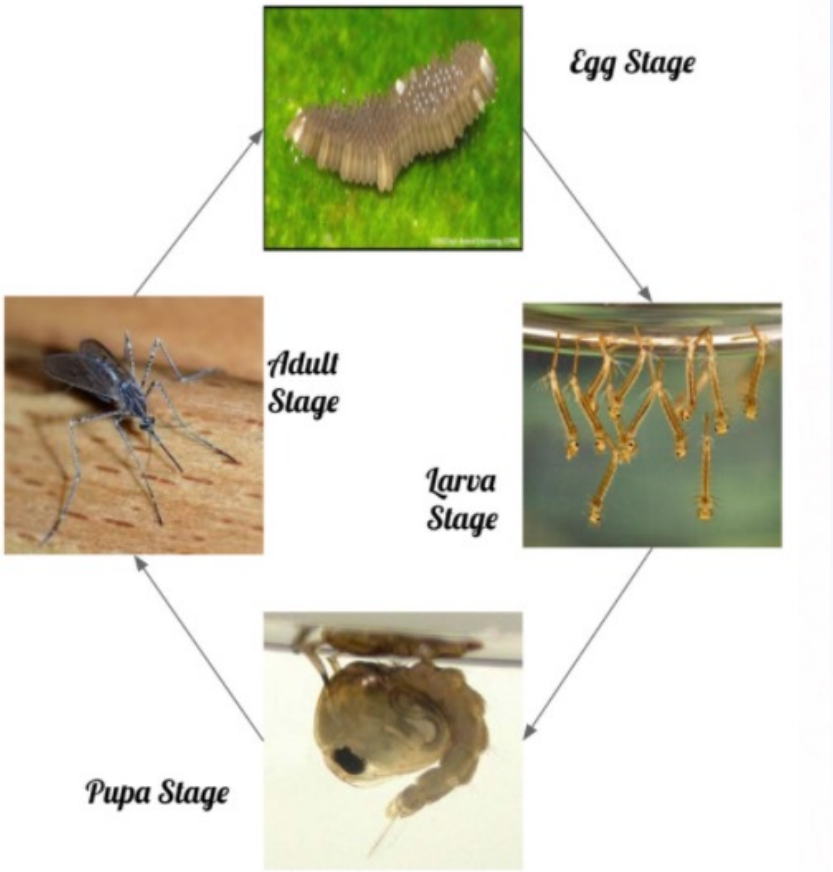
PROJECT: POSTER DESIGN/ POWER-POINT PRESENTATION(MOSQUITO)

i) Common places for breeding of mosquitoes.

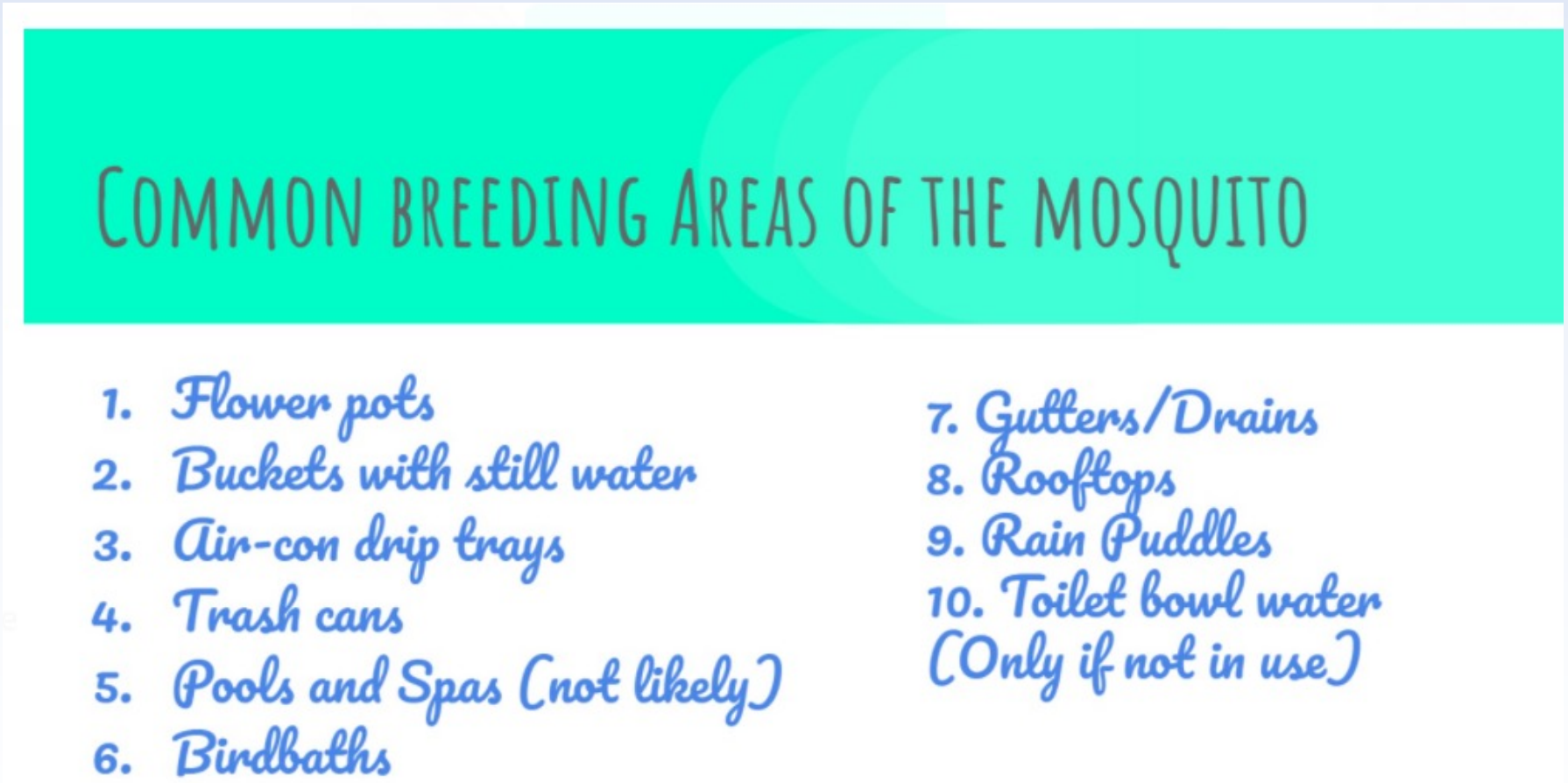
ii) Ways to prevent mosquitoes from breeding.

Sample of students' work

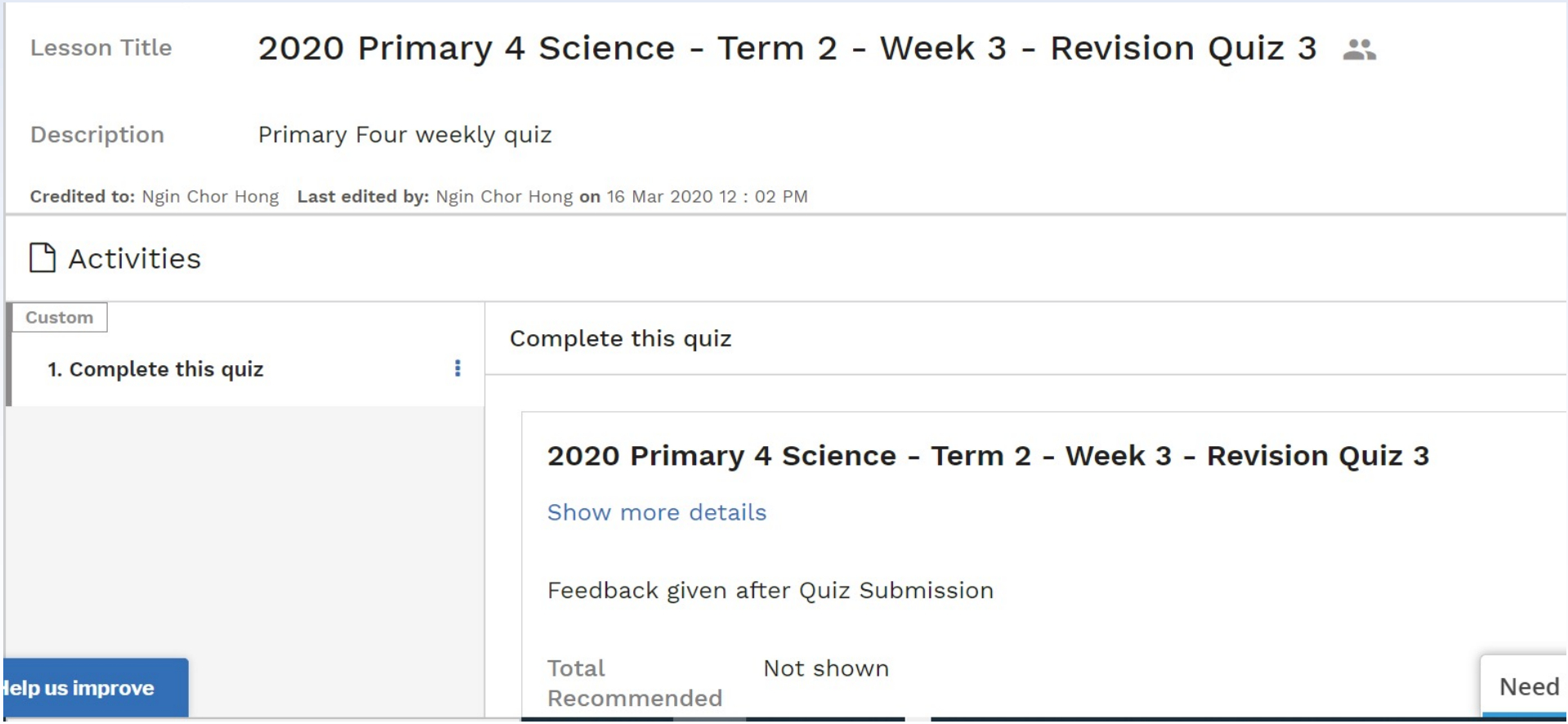
Life cycle of mosquito



Sample of students' work

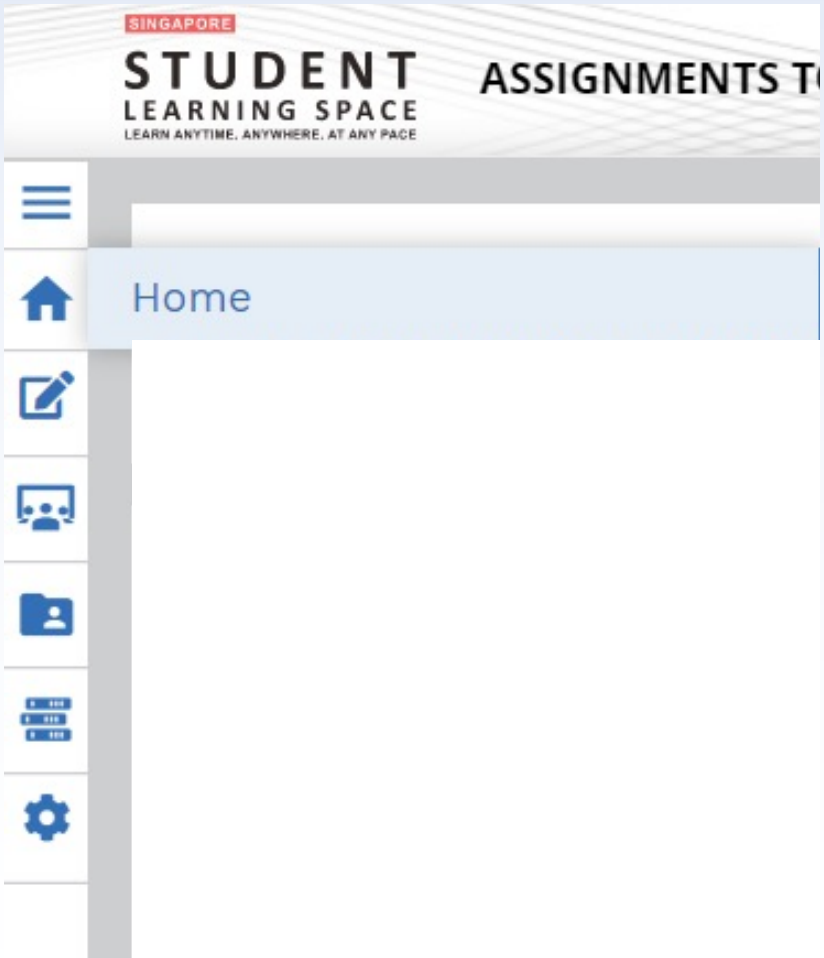


Weekly/Topic SLS quizzes



How find these quizzes?

- Login to SLS then
- click Home page



P4 Checkpoints

Themes	Term 1	Term 2
P3 topics • **Diversity** • **Systems** • **Interactions** **P4 topics** **Cycles** • **Life cycles of some animals** • **Life cycles of plants** • **Matter** **Energy** • **Light and shadows** • **Heat and temperature**	Topical review 1 (Not weighted) MCQs and Open ended questions Topics • Include all P3 topics • Life cycles of some animals	Semestral Assessment 1 (30%) Booklet A, 28 MCQs (56 marks) Booklet B, 12-13 OEs (44 marks) • Total: 100 marks • Duration: 1h 45 min Topics • Include all P3 topics • P4 topics Cycles 1) Life cycles of some animals 2) Life cycles of plants 3) Matter

P4 Checkpoints

Themes	Term 3	Term 4
P3 topics • **Diversity** • **Systems** • **Interactions** **P4 topics** **Cycles** • **Life cycles of some animals** • **Life cycles of plants** • **Matter** **Energy** • **Light and shadows** • **Heat and temperature**	Performance-based assessment, PA1 (Formative) • Practical Assessment • 1 booklet • 2 to 3 questions • 10 marks • Duration: 20 min Topical review 2 MCQs and Open ended questions Topics Light and shadow	Semestral Assessment 2 (70%) • Booklet A, 28 MCQs (56 marks) • Booklet B, 12-13 OEs (44 marks) • Total: 100 marks • Duration: 1h 45 min • 30% basic items Topics • Include all P3 and 4 topics

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
- Answering techniques
  - P.R.I.D.E
  -C.E.R