

National Digital Literacy Programme

The National Digital Literacy Programme (NDLP)

Digital technology is becoming increasingly pervasive in jobs, workplaces and society.

The NDLP was launched in March 2020 to **make digital learning inclusive** by **equipping students with the digital literacies** to be future-ready.

The National Digital Literacy Programme (NDLP)

Through the NDLP, all secondary school students will **own a school-prescribed personal learning device (PLD)** by end 2021, Singapore Citizen students can use their **Edusave Account to pay for the PLD.**

The device will be used to facilitate an environment that **encourages personalised learning.**

Intended Outcomes of a Personalised Learning Environment

The use of the personal learning device for teaching and learning aims to:



**Support the
Development of Digital
Literacies**

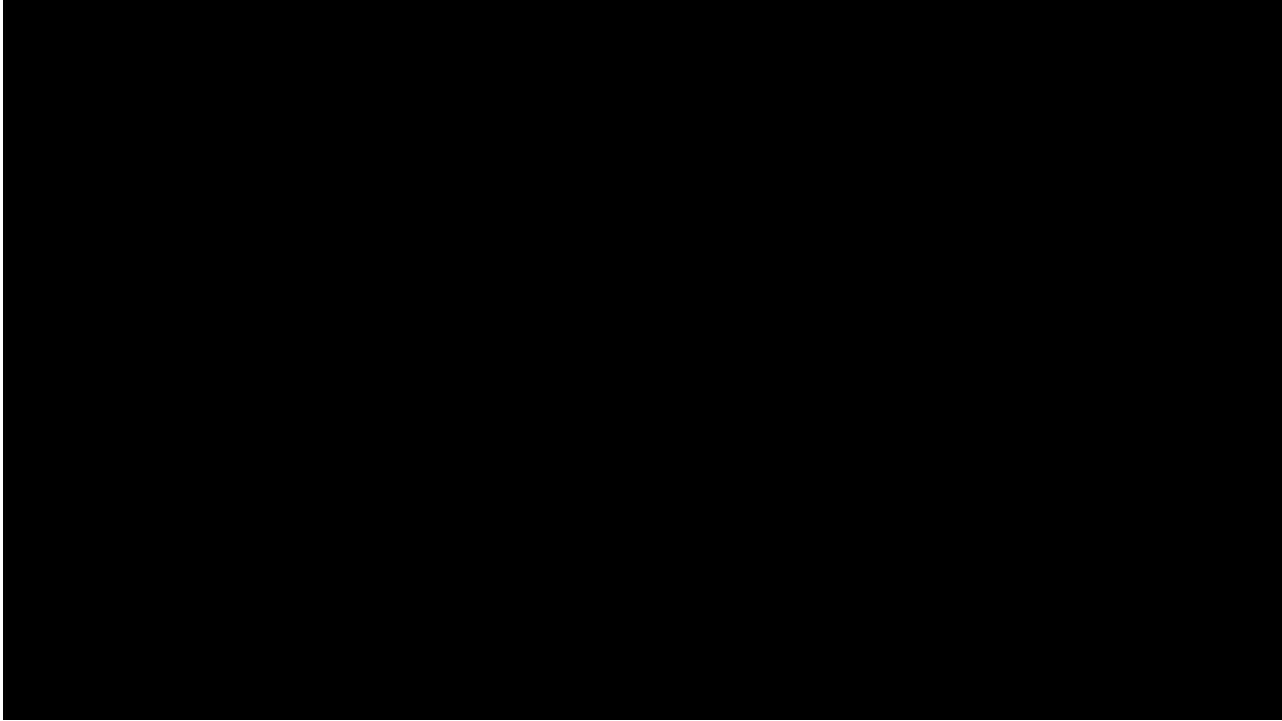


**Support self-directed
and collaborative
learning**



**Enhance Teaching and
Learning**

Personal Learning Device for Teaching and Learning



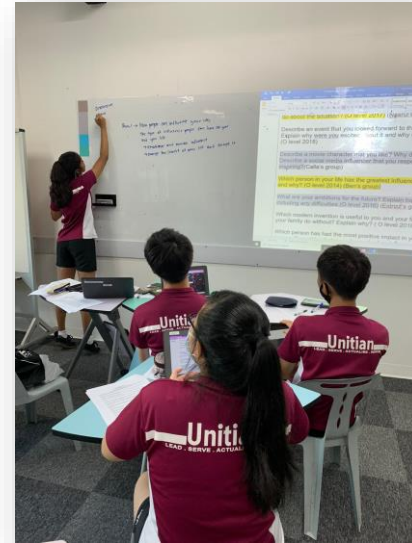
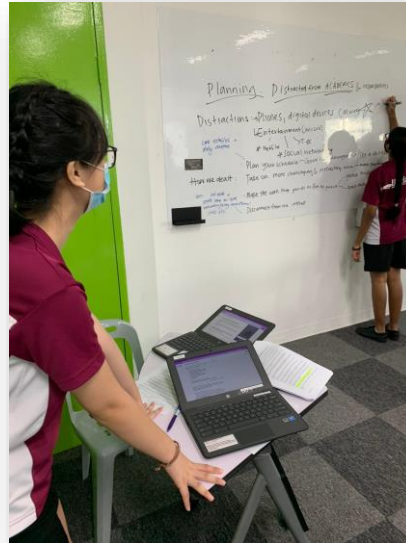
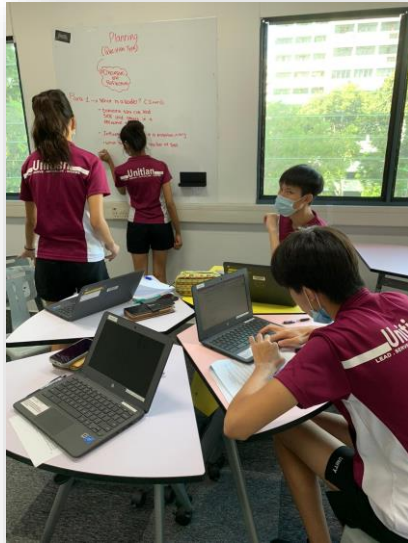
Our 1:1 Programmes

Unity Secondary School

How will your child use the Personal Learning Devices?

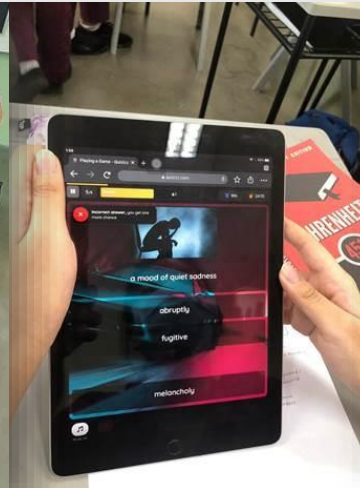
At **Unity Secondary**, your child will ...

1. experience active learning with technology.



Active learning with technology ...

Students will **'Do'**
e.g. talk, write, draw to make thinking visible



Active learning with technology ...

Students will **'Think'**

e.g. use thinking strategies to monitor and evaluate own learning



Claim-Evidence-Reasoning (CER) - For generating a claim, investigating and explaining own claims with evidence to form new conclusions

Think Like a Scientist: Using Claim-Evidence-Reasoning

Claim, Evidence and Reasoning help you work through a complex problem or a complex situation so you are able to communicate your thoughts clearly and effectively.

<p>Claim</p> <p>What do you think will happen?</p> <p>What do you think will happen?</p> <p>What do you think will happen?</p>	<p>Evidence</p> <p>What data do you have?</p> <p>What data do you have?</p> <p>What data do you have?</p>	<p>Reasoning</p> <p>How does the evidence support the claim?</p> <p>How does the evidence support the claim?</p> <p>How does the evidence support the claim?</p>
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Math GCs

Self-assessment tool - For gauging own understanding and asking for help after a lesson/activity

Prayer Model - For summarising and defining the concepts, which may include facts, characteristics or properties, and examples & non-examples

Start of lesson	My Learning Goals	End of lesson	How OK Code to assess friend
1	When this unit is completed, I will be able to ...	1	
2		2	
3		3	
4		4	
5		5	

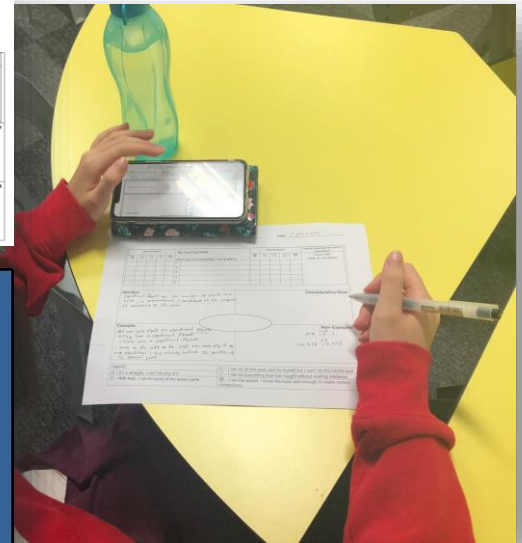
Definitions

Characteristics/ Draw

Examples

Topic

Non-Examples



V-charts - For identifying and describing what "I see", "I hear", "I feel" or what "I imagine" might be there, including positive/negative, fair/unfair, safe/unsafe, easy/difficult, strengths/threats, etc.

TASK: Describe how the filled-necked lizard has adapted to its habitat.

<p>Looks Like</p> <ul style="list-style-type: none"> Holding still for long periods of time, waiting for prey (ambush predators) Out in the open when basking 	<p>Feels Like</p> <ul style="list-style-type: none"> A sprinter when it gets up on its hind feet to run quickly - bipedal motion About 91 cm in length - big enough to scare off a lot of predators Different colours in different environments - camouflage
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Sounds Like

- Cunching noises as insects are being eaten
- The quiet scratching of claws on bark while climbing the tree
- Fights during mating season between males

Feels Like

- Cold - needs to bask to maintain good body temperature
- Vulnerable to attack when basking for 40 minutes
- Angry or afraid when it puffs up its tail to scare enemies
- Safe while sitting up in a tree
- A very full belly after a large dinner during the wet season

UNITY SECONDARY SCHOOL

Student Handbook 2021

Leading Self, Serving Others; Actualising Self, Inspiring Others

Active learning with technology ...

Students will **'Apply'**

e.g. use learning in real life context and learn beyond



Active learning with technology ...

Students will **'Refine'**

e.g. reflect to deepen understanding and continue learning

The screenshot displays a grid of student posts and comments on a digital learning platform. The posts are organized into two columns. The left column contains posts by Dini Haryuni Binte Roszali, Nur Fateha Binte Hirman, and Muhammad Naufal Bin Abu Bakar. The right column contains posts by Dillon Poh Zhi Xiang, Nuri Syakirah Binte Mohamad Tahir, Sri Antasha Binte Sun'an, and Nur Muhammad Isa Bin Musa. Each post includes a title, a main text area, a comment count, and a comment input field. Some posts feature mathematical diagrams or equations. The platform interface includes user avatars, names, and various interactive elements like edit buttons and comment counts.

Post 1 (Left): DINI HARYUNI BINTE ROSZALI. They have different types of working that is all equals to 25. 4 comments.

Post 2 (Left): NUR FATEHA BINTE HIRMAN. Their calculations are wrongly presented. 0 comment.

Post 3 (Left): MUHAMMAD NAUFAL BIN ABU BAKAR. They all quarreling for the place value (Zhan Li and Naufal). 0 comment.

Post 4 (Right): DILLON POH ZHI XIANG. $5 \times 5 = 25$ They add them and subtract them. 2 comments.

Post 5 (Right): NUR SYAKIRAH BINTE MOHAMAD TAHIR. 2 same shapes combine together. 0 comment.

Post 6 (Right): SRI ANTASHA BINTE SUN'AN. They forgot how to calculate numbers correctly. 0 comment.

Post 7 (Right): NUR MUHAMMAD ISA BIN MUSA. Some examples of congruent figures are same length or same shapes. 0 comment.

Post 8 (Right): NUR FATEHA BINTE HIRMAN. Same shape equal length and size. 0 comment.

How will your child use the Personal Learning Devices?

At **Unity Secondary**, your child will ...

2. have access to quality resources and learning anytime, anywhere, at own pace.

SINGAPORE
STUDENT
LEARNING
SPACE

SINGAPORE

STUDENT
LEARNING SPACE

LEARN ANYTIME, ANYWHERE, ANYWHERE

Username

Username

Password

Password

[FORGOT PASSWORD](#)

STUDENT LEARNING SPACE ASSIGNMENTS TOUR



Secondary 1 Express

GEOGRAPHY

What can line graphs tell us about the uses of wat...

272



Secondary 1 Express

GEOGRAPHY

What can bar charts tell us about the trends in...

447



Secondary 2 Normal (A)

GEOGRAPHY

[Water - Jurong Lake] GI Stage 2: Collecting Data

32



Secondary 2 Normal (A)

GEOGRAPHY

What do you know about the sustainable...

92



Secondary 2 Normal (A)

GEOGRAPHY



Secondary 2 Normal (A)

GEOGRAPHY



Secondary 2 Normal (A)

GEOGRAPHY



Secondary 2 Normal (A)

GEOGRAPHY

[Help us improve](#)

Activities

Activate Learning

1. [Activity 1A] The Gene Scene in Our Class

Activate Learning

2. [Activity 1B] Quiz: Prerequisite Concepts

Activate Learning

3. [Activity 1C: Optional] Reviewing Concepts

Promote Thinking and Discussion

4. [Activity 2A] Sex Determination

Promote Thinking and Discussion

5. [Activity 2B] Law of Dominance

Promote Thinking and Discussion

6. [Activity 2C] Laws of Inheritance (Incomplete Dominance)

Promote Thinking and Discussion

7. [Activity 2D] Hierarchy of Dominance

Facilitate Demonstration of Learning

8. [Activity 3] Performance Task: Build-a-bird

Facilitate Demonstration of Learning

9. [Activity 4] Solving Genetics Problems

[Activity 1B] Quiz: Prerequisite Concepts

Teacher Notes:

Activity 1C: Quiz on Prerequisite concepts

Teacher informs that students will need to reference concepts learnt in the previous chapters on Cell division and Molecular Genetics. Students are instructed to complete the following Quiz.

The screenshot displays a genetics simulation interface. At the top, four birds are shown on a wire, labeled "Potential parent birds". Above them are alleles: the first two birds have "Z Z" alleles, the third has "Z W", and the fourth has no alleles. Below the wire, a "Goal bird" is shown with a red "X" on its chest, indicating it is not yet complete. The goal bird has a "CREST" trait and a "SEX" trait. The "SEX" trait is currently blank, with "Z" and "W" alleles shown below it. The "CREST" trait is currently blank, with a "CREST" icon shown below it. The text "Offspring with blank spaces to insert parental alleles" is visible. The background shows a city skyline. At the bottom left, there are icons for "male, crest", a question mark, and a speaker. At the bottom right, there is a pause icon.

Students move at their own pace. Maximize their progress in learning. Optimize their time in class.

Activities

Activate Learning

1. Read/Watch/Listen - How are fraction and ratio used or shown in real life situations?

Promote Thinking and Discussion

2. Study the Information - What kind of problems can I solve by using ratios?

Facilitate Demonstration of Learning

3. Apply Understanding - How do I use ratio and rate reasoning to solve real-world and mathematical problems?

Activity Instructions:

1. Select and watch at least 2 videos to learn about ratios.

Key Understandings

[Introduction to Ratios \(Maths Antics\)](#)

[Introduction to Ratios](#)

(This video starts off a bit slowly, but eventually explains key understandings with a good visual example)

[Introduction to Ratios \(Khan Academy\)](#)

More Advanced Understandings

[How we use ratios to solve problems](#)

[Proportions \(Ratios\) - Maths Antics](#)

[Introduction to Ratios \(Khan Academy\)](#)

[Using Ratios to Solve Problems](#)

[Using Ratios with Cooking Recipes](#)

2. Record and share your understandings using the 321:RIQ on the SLS Custom Thinking Routine Tool.
3. Read two other peers' 321:RIQ, ask clarifying questions (using the sentence starters below) and respond to the 1Q:
 - *Do you mean...?*
 - *Are you saying that...?*
 - *What do you mean by...?*

Students could choose based on learning preference, or assessment of own knowledge level

← → 📄 **B** *I* A Work Sans Formats ✓ ↻ ☰ 📄 📺 🔗 </> 🌸

Watch the video and describe what you imagine Xiao Le is going through using the thinking routine “It looks like ... it sounds like ... it feels like ...” by submitting a video recording. Use the Y-chart provided below to plan your script and write your script in the table provided.



Allow file submission

Students practise their oral for EL & MT by using a Y-chart graphic organiser “It looks like, it sounds like, it feels like ..” to guide their responses before submitting their video recordings.

TOPIC:

LOOKS LIKE
(WHAT YOU CAN ACTUALLY SEE OR IMAGINE COULD BE THERE)

...

SOUNDS LIKE
(WHAT YOU CAN HEAR, CAN'T HEAR, THOUGHTS, IMAGINED CONVERSATIONS)

...

FEELS LIKE
(PHYSICAL AND EMOTIONAL/ TACTILE FEELINGS INVOLVED)

...

Looks like ...

Sounds like ...

Students could plan their script before recording, see one another's response, give feedback to each other, refine own before submitting their final recording for grading.

Activities

Activate Learning

1. Activity 1 (Option A): Identifying Polygons

Activate Learning

2. Activity 1 (Option B): Identifying Polygons

Activate Learning

3. Test Myself (Choose 1 out of 3 Questions) - Finding Polygons

Promote Thinking and Discussion

4. CHALLENGE Myself! (Optional)

Promote Thinking and Discussion

5. Activity 2 (Option A): Classifying Polygons

Promote Thinking and Discussion

6. Activity 2 (Option B): Classifying Polygons

Promote Thinking and Discussion

7. Test Myself - Grouping Polygons

Facilitate Demonstration of Learning

8. Activity 3: Writing My Own Mathematical Argument - Sum of Angles in an n-gon

Facilitate Demonstration of Learning

9. Define "Polygon" in My Own Words

Define "Polygon" in My Own Words

Students to apply and share their understanding of the concept of "Polygon" using the "Concept Definition Map" or "Frayer Model" in ITT. They could also use different media types to articulate their new understanding.

Activity Instruction:

Define "Polygon" in your own words, using examples and attributes from previous activities of the

- 1) "Concept Definition Map" OR

- 2) Frayer Model Template on collaborative google slides.

You may work on your own OR with 1 other classmate.

The screenshot shows a Google Slides presentation titled "Frayer Model Template". The slide content is as follows:

Notice that the top two boxes are titled "Definition" and "Facts/Characteristics". How does thinking about non-examples clarify your understanding about the word?

Definition	Facts/Characteristics
An equation is a mathematical statement that shows that two expressions are equal.	<ul style="list-style-type: none">- always has exactly one equal sign- the left side is equivalent to the right side- some equations have 0, 1, 2 or more solutions- some equations contain just numbers- some equations are algebraic models for relationships and they have corresponding graphical models and numerical models (e.g., tables)
Examples	Non-examples
<ul style="list-style-type: none">$3x - 2 = 4x + 7$ (linear equation)$ab = ba$ (an identity)$F = 1.8C + 32$ (a formula)$5 + 6 = 11$ (a number statement)$P = 2l + 2w$ (a formula)$x = 3$ (statement of value)	<ul style="list-style-type: none">$2x + 3y$ (expression)3 (number)perimeter (word)$x < y$ (inequality)$= 4.2$ (has no left side)

Click to add speaker notes

Students could choose how they want to demonstrate their learning e.g. using different graphic organisers, and whether to work on their own or with others (f2f or online).