

# Science@BTPS

To nurture **Every**  
**Child** to be a **Self-**  
**directed Inquirer** of  
**Science Around Us**

## P4 Science

# Parents Briefing 2022

Kiriel Lim  
4 Compassion 2021

Official-open/Non-Sensitive



# P4 Science Assessment

Term	Assessment	Weightage	Topics Tested
2	Semestrial Assessment 1	30%	Cycles (Life cycle & Matter), Systems (Human and Plant), P <sub>3</sub> Topics
3	Topical Test	10%	Cycles (Matter), Energy (Heat)
4	Semestrial Assessment 2	60%	All P <sub>3</sub> and P <sub>4</sub> topics
	TOTAL	100%	

# P4 Assessment Format

## SA 1 (Term 2) and SA2 (Term 4)

Booklet	Type of Questions	1 h 45 mins	Marks
A	MCQ	28 Q	56
B	Open-ended	12-13 Q	44
	TOTAL	40-41 Q	100

## Topical Test – Term 3

Section	Type of Questions	30 min	Marks
A	MCQ	7 Q	14
B	Open-ended	3 Q	11
	TOTAL	10 Q	25



# After School Class (Science)

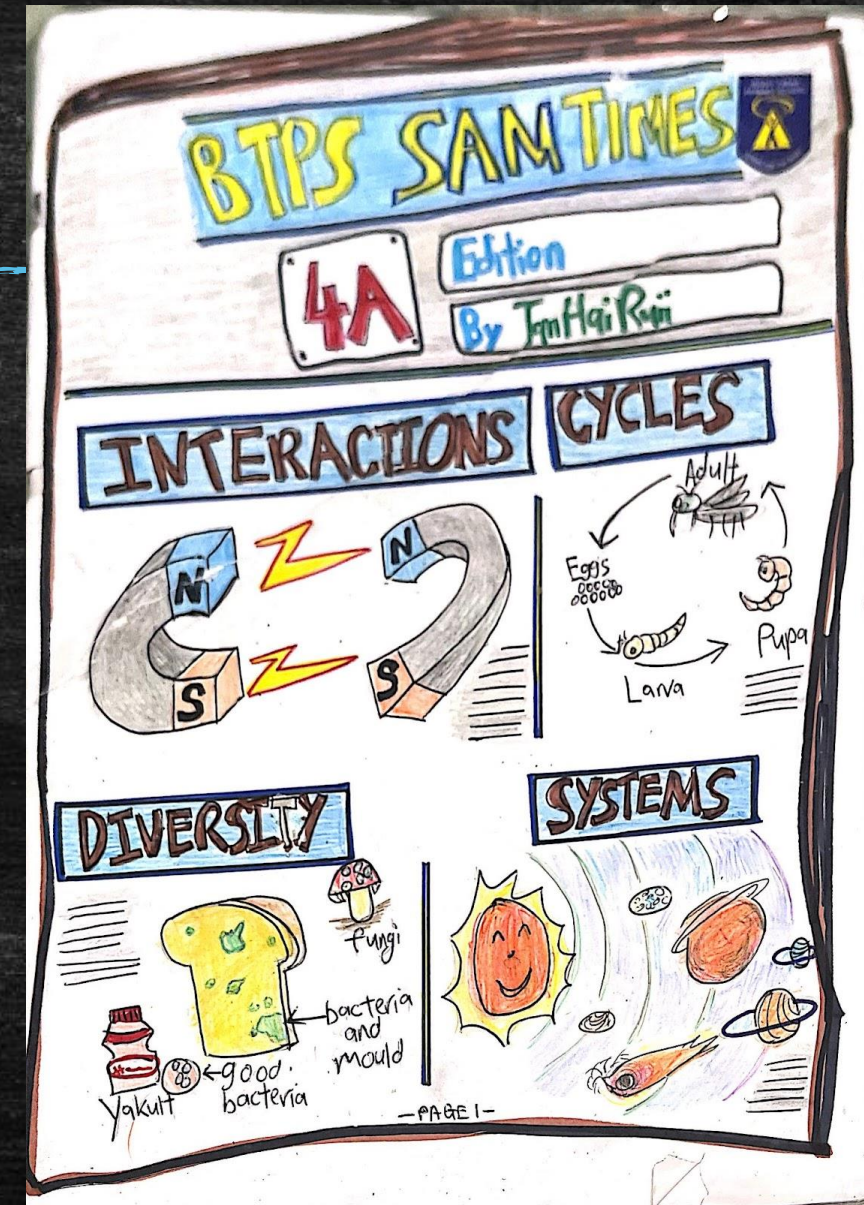
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- Based on Review paper results.
- Class will focus on revisiting P3 topics for pupils who need more support. Starts week after CNY.
- PG message will be sent to selected students.



## P4: Science Programme

- Inquiry-based Learning Approach
- SAM Journal → Document learning, Important Science Words
- Formative assessment: Topical Checklist, Examination Review
- Revision: Topical papers, Exam Practice
- Themes: Cycles (Life cycle & Matter), Systems (Plant and Human), Energy
- Process Skill: Graphing & Inferring from given data



Tan Hai Rui  
4 Adaptability 2021



# Topical Checklist and Examination Review

Name: Aimee ( ) Parent's signature: \_\_\_\_\_

## Self-Assessment on: Diversity- Living and Non-living things

Choose the level that describes how well you have understood each of the Science ideas.

Levels	Descriptors
1	I have understood this Science idea <b>the least</b> . (I don't get it)
2	I have <b>some understanding</b> about this Science idea. (I partially get it)
3	I have understood this Science idea <b>very well</b> and can explain it to my friend. (I get it)

No.	Science ideas and Skills	Levels		
		1	2	3
1.	I can describe the characteristics of living things.			✓
2.	I can describe the characteristics of non-living things.			✓
3.	I can describe the similarities and differences of plants and animals.			
4.	<b>Skill:</b> I use the following senses like sense of sight, sense of smell, sense of hearing, sense of touch and sense of taste in making observations.			✓
5.	<b>Skill:</b> I can make some measurements in my observations.			✓

## Primary 4 Science SA1 Review 2019

Pupils have generally done well in the following areas:

### Process Skills: Observation and Classification

Pupils were able to identify living things and non-living things (Q1). They were able to identify the characteristics of living things based on the data given (Q2). Pupils were able to identify the correct property of material based on the bar graph given (Q4). Pupils can identify life cycles of the animal that they are required to know and stating similarities or differences based on the diagram given (Q5 and Q6). Pupils were able to identify how a seed germinates (Q12) and what happens as it grows from a seedling to an adult plant (Q7 and Q9).

They were able to identify a non-example of matter (Q13) and understand the properties of matter (Q14). Pupils were able to conclude the characteristics of solid, liquid or gas in a given set-up (Q15, Q16, Q17 and Q20). They were able to identify that digestion ends in the small intestine (Q24).

They are generally able to read flowcharts and tables by using the information for answering of the question (Q11, Q27 and Q28).

### Science ideas that need review:

Areas for Improvement	Answers Given	Learning Point
Incomplete explanation		





**Engage**  
I Pose Questions



**Explore**  
I Actively  
Look for  
Answers



**Explain**  
I Explain my  
Thinking

# 5 Learning Behaviours



**Elaborate**  
I Link what I  
Learn to Life



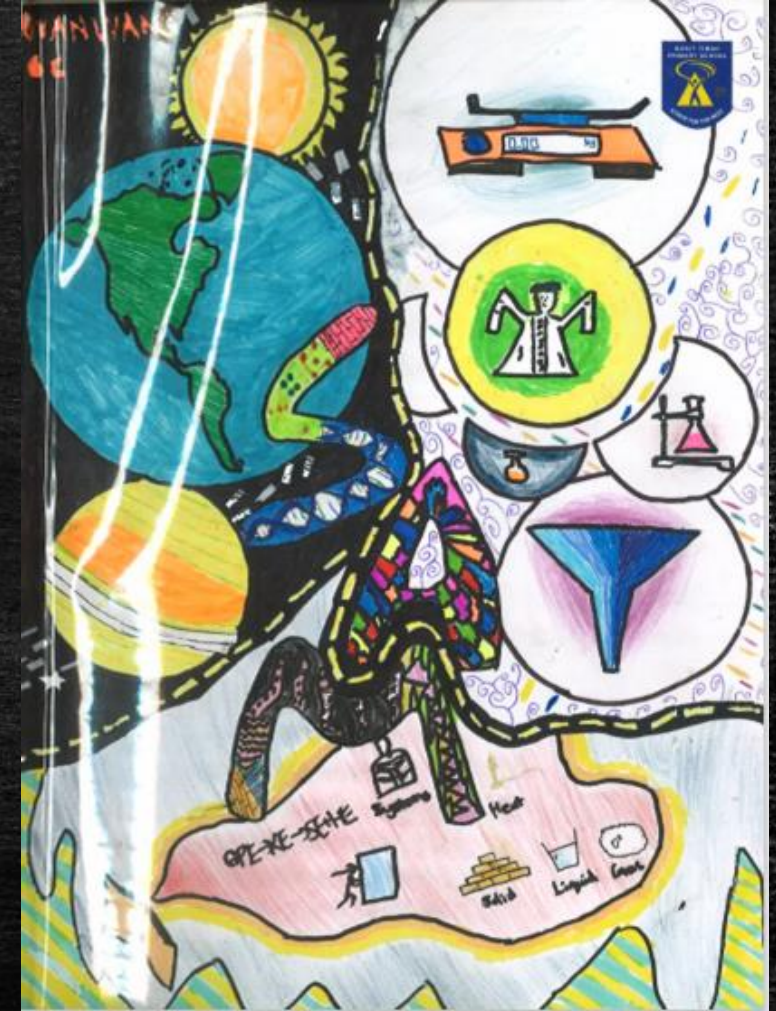
**Evaluate** I Reflect on my Learning



# 4 Things we want to see in the Journals

- 1) Strives for the best
- 2) Poses questions to find out more
- 3) Explain thinking using relevant science concepts
- 4) Links science learning to life

Lakshaya  
4 Respect 2021






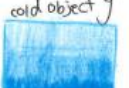
# 4 Graciousness 2021 – Best Entries

Annabelle Yong

6 July 2021

## heat flow / heat transfer

from **hot** OBJECT to **COLD** OBJECT

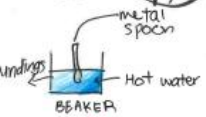
hot object X  → cold object Y 

X will **LOSE HEAT** to Y.

Heat from X is transferred to Y.

Y **GAINS HEAT** from X.


### examples



**HEAT** from hot water is transferred to metal spoon / surroundings.

Hot water **loses heat** to metal spoon / surroundings.

Metal spoon / surroundings **gains heat** from hot water.



**HEAT** from metal spoon is transferred to **ICE**.

**HEAT** is transferred from metal spoon to **ICE**.

surrounding / metal spoon is **losing** heat to **ICE**.

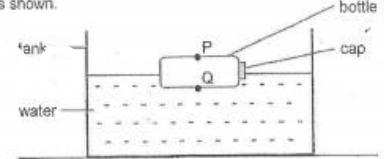
**ICE** gains heat from surrounding / metal spoon.

Chin Lok

Primary 4 - Matter

Name: Chin Lok Yi Class: 4G

Minghan placed an empty bottle with two holes at points P and Q into a tank of water as shown.



Connect: (Write words / phrases related to matter based on the diagram above)

Matter is something that have mass and occupy space.

Properties:

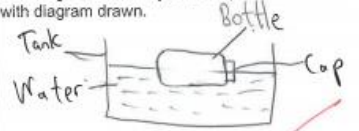
Solid	definite shape	definite volume
Liquid	definite volume	definite volume
Gas	definite volume	definite volume

Extend: Use the related words above to describe what may happen to the bottle after sometime.

The bottle may sink as water can enter through hole Q while air escapes from hole P.

Water displaced air.

Challenge: What can you do to prove the above statements made? You can explain with diagram drawn.





# 4 Respect 2021 – Best Entries

He Zhihao

Questions and answers

Q How fast does a peanut grow?  
A About 3 months.

Q How many peanuts will one plant produce?  
A 25 to 50 peanuts.

Q Does peanut grow very fast?  
A Yes, peanuts mature three weeks faster than other types of plant.

Q How often should you water peanuts?  
A About one inch of water is needed for weeds during the growing season.

Q What is the best month to plant peanuts?  
A The April, May and June.

Q Is peanut good for your health?  
A Yes but if you eat too much it will be bad.

*Well done! Keep asking good questions.*

PLANTING PEANUTS

STEPS

Plant inside home

1. Fill a large, four-inch-deep plastic bowl  $\frac{3}{4}$  full of moist potting soil. Scatter four peanuts, and place them on top of the soil. Then cover with one inch of soil. Plants will sprout quickly. Transplant seedlings outside after the threat of frost has passed.

Plant outside

2. Place the peanut seeds two inches deep in loose well-drained soil. Add sand and aged compost to soil to loosen.

Caring for Peanut Plants

3. When the plants are six inches high cut them to leave the soil so that the pegs will penetrate it easily.
4. They will then as you would potatoes, and mulch with two inches of straw or grass clippings.
5. Small yellow, pea-like flowers will develop along the lower part of the stems. After the flowers fade the green pods will start to grow towards the ground and then, later, into the soil.

Tara

What are the cycles in everyday lives?  
How are cycles important to life?

I SEE I THINK I WONDER

What are the cycles in everyday lives?  
I think it helps the Earth move. I think it moves slowly, but the seasons still begin. I think some cycles are important, while others are not. I think it is because the earth's one side feels the sun first.

How are cycles important to life?  
I wonder why can't the Earth move without it? I wonder why the Earth needs to move? Why can't we do that? Why are cycles important? (with the exception of day & night, which is important?) Which side we are on now?

Q1 ANS Reproduction of animals, plus US! Eg. Our cycle is  
baby, child, adult. For animals, eg. egg, chick, chicken. Every living thing has a life cycle, (I think). THERE ARE ALSO of life cycles. Some of the most interesting life cycles I think is interesting, is frogs.

Tip Some cycles have 2 stages, some have 3, some 4!

Tip Some insect months in a cycle.

Q2 ANS NON of us can live without some cycles.  
Without the day & night cycle, we won't survive. If it is only moon, we would be too cold. If we only have sun, we would also die. The moon makes some tides or waves in the sea, (I'm not sure) which sometimes we cannot survive without it. Another example, the season cycle is also important. I think that if it's only winter, it will be too cold plus the snow will be dirty after the first day. Summer will also be sickening after a while. I think another cycle, IS VERY IMPORTANT. It helps us reproduce. At first, we are a baby, then a child, then an adult. The adult gives birth, then the process follows. Imagine a baby never growing up, we won't be able to reproduce. THAT IS THE SAME FOR OTHERS. Others as in animals.

Good thinking.

is a pattern of change that repeats itself.



# 4 Adaptability 2021 – Best Entries

## Claim

Matter

matter is... liquid, solid and gas

These are matter

- masks
- tables
- water
- air
- whiteboard
- magnets
- gim
- chairs
- freshcan
- phone
- fans
- door
- wall
- ceiling
- swimming
- hair
- light
- visualiser
- pencil case
- wheels
- water bottles
- grass

They are matter because.....

support

these are matter.....

## Question

(I wonder if.....)

- is death matters? → wow! interesting?
- What is the other common matters other than solids, liquid and gas?
- Why do we need matter in our lives?
- How is mostly every thing made of matter?
- Is gravity matters?
- Is directions matter?

What are the questions that you need to ask yourself?

## THINK

Why do you think that take away cups are usually made of Styro foam/Paper?

Styrofoam is waterproof and it is a poor conductor of heat and will lose heat more slower.

## PUZZLE

How do you think this helps it to perform its function?

Why can't I have it made of metal?

1. It is made of styrofoam so it can trap the heat in the cup as styrofoam is a poor conductor of heat.

2. As metal is a good conductor of heat and it will lose heat more faster

## EXPLORE

How does a cooler box work

Wall of cooler box

A poor conductor of heat

Plastic

hot air

Air is a poor conductor of heat

It slows down → heat gain from the surrounding

heat loss from the top to the surrounding

Wee Kai Jing

a) One important Science idea I have learnt about Heat Energy is heat is not the same as temperature. They are two different things.

b) I would like to learn more about how heat transfer down.

I will find out (tick one):

on my own ☐ by asking my friend ☒

c) Write down or draw what you have learnt after you have carried out step (b).

## EXPANSION AND CONTRACTION OF SOLIDS

my experiment

before

after heating

after putting in hot water

after putting in cold water

spoon can fit through gaps

The spoon cannot fit through the fork

conclusion

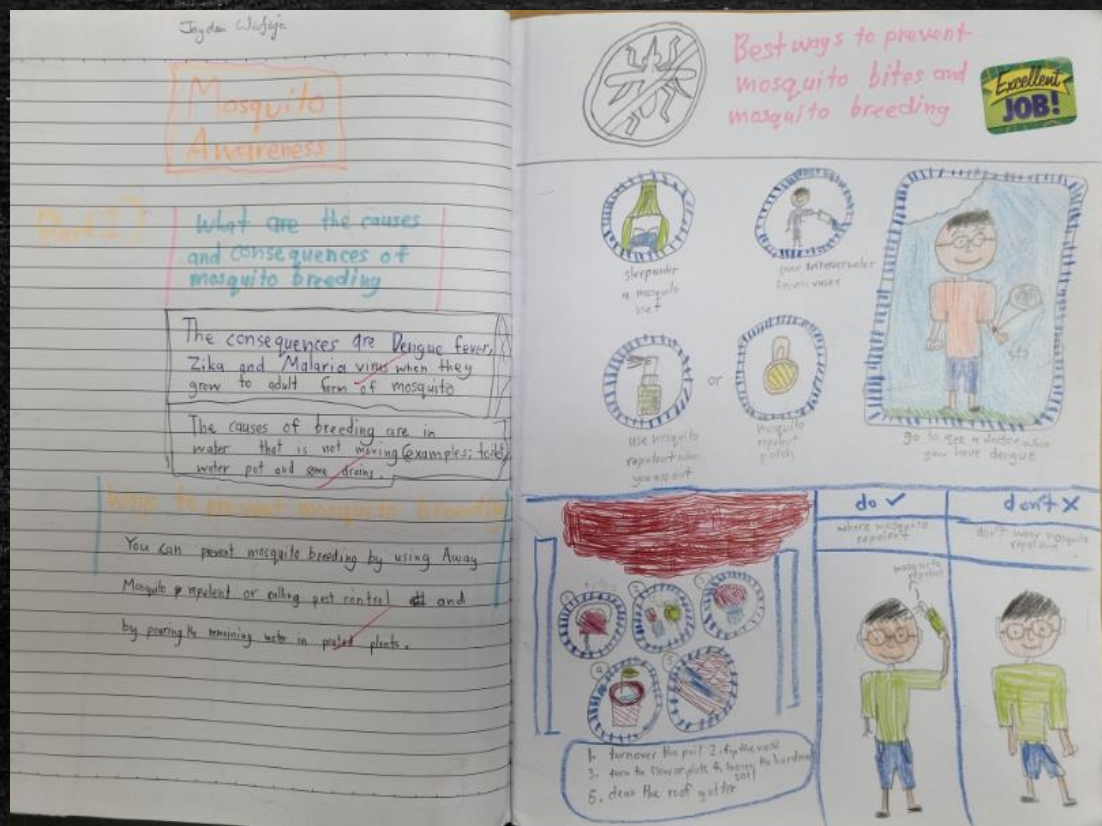
SOLIDS EXPAND WHEN IT IS HOT AND CONTRACTS WHEN IT IS COLD

Claire Phua Kai Xuan

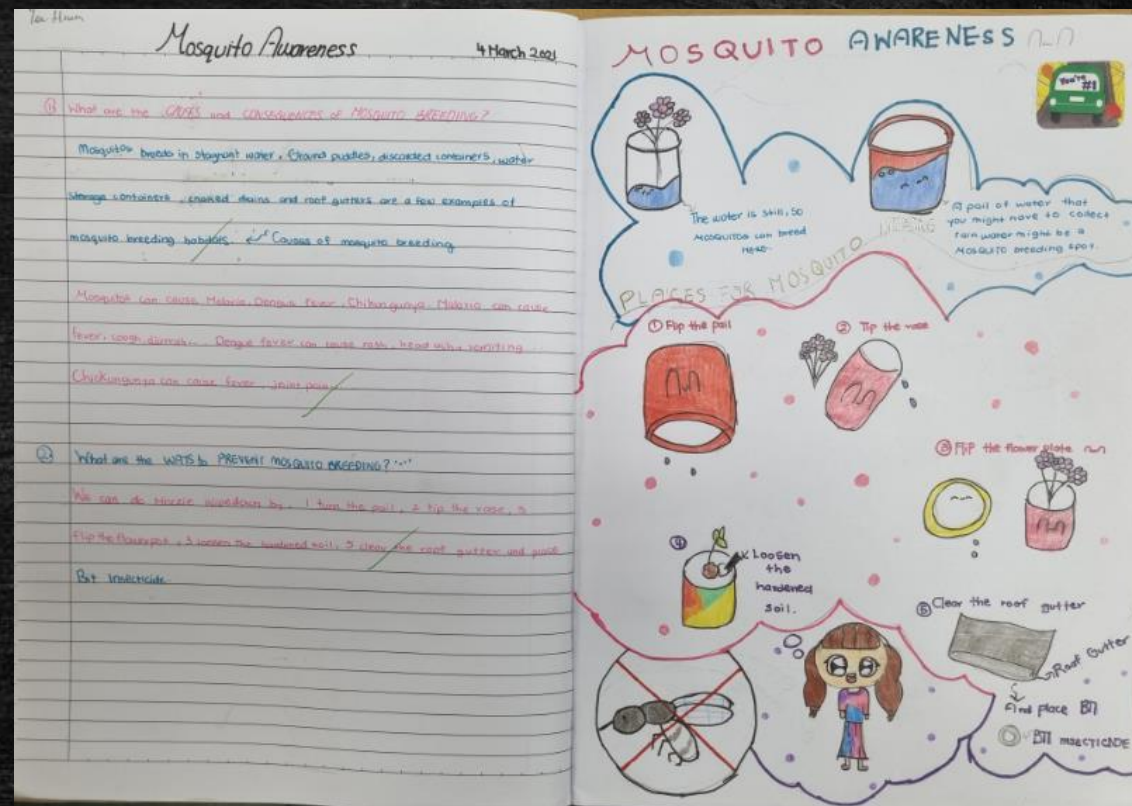


## 4 Compassion 2021 – Best Entries

# Widjaja Jaden



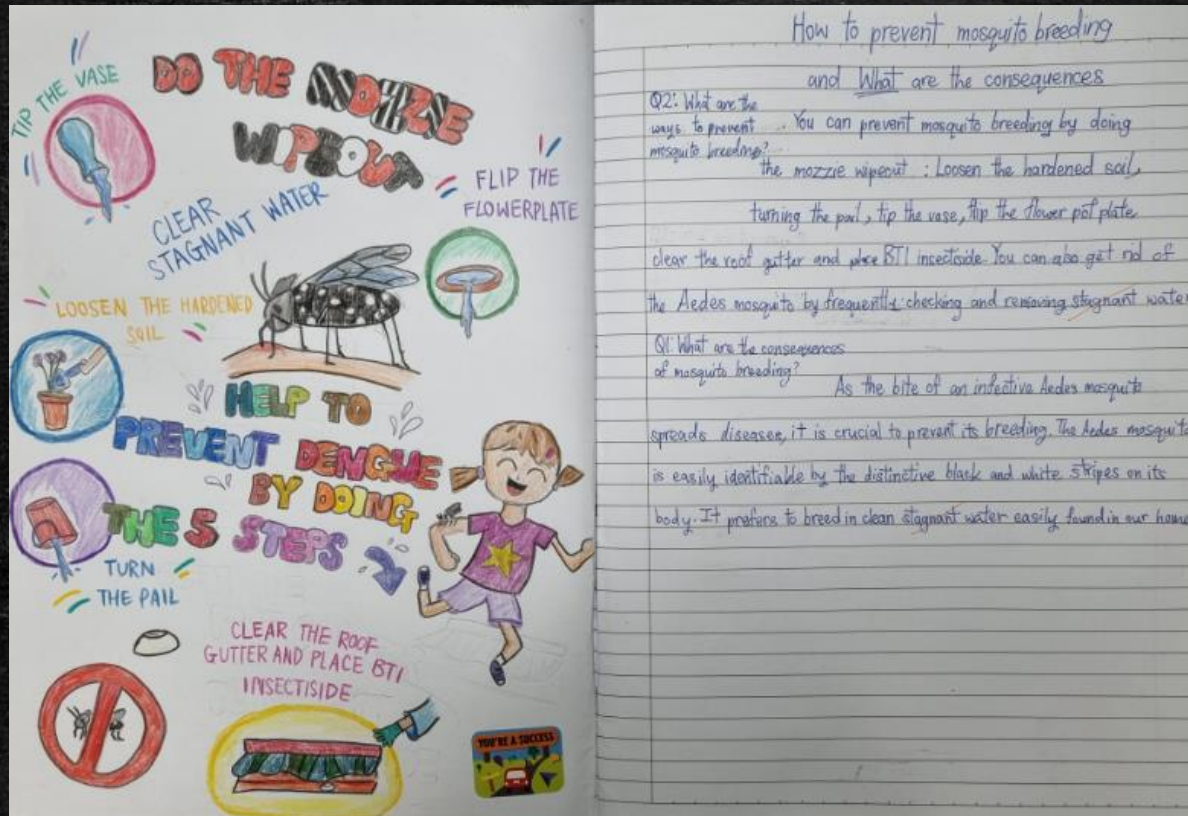
# Yee Hsuen



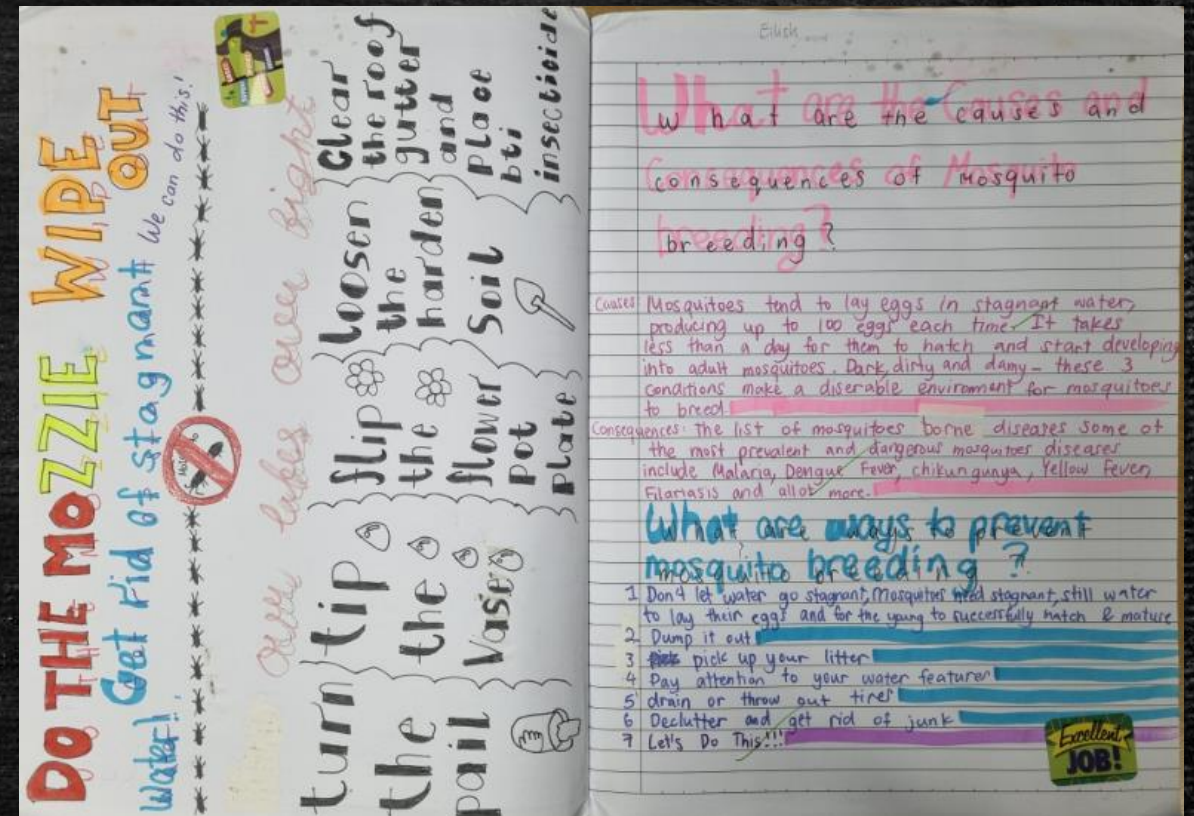


# 4 Integrity 2021 – Best Entries

Victoria



Eilish







Thank you!

Mikayl  
4 Integrity 2021