

Mathematics Learning @ SKGPS

We are happy to have you and your child join our big family.



P1 Parent-Engagement-Session 2024

1

Our Vision

Every SKGian a Confident Problem Solver.



2

Our Mission

By the end of Primary 6, every SKGian will

- Acquire mathematics concepts and skills for everyday use and continue learning in Mathematics
- Develop Critical, Adaptive and Inventive Thinking, Communication, Problem Solving and Metacognitive skills
- Cultivate curiosity and foster interest in Mathematics
- Become independent and self-directed learners ready for lifelong learning



3

Our Game-Changer

Developing confidence through the learning of Mathematics.

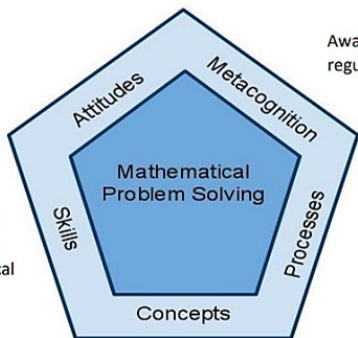
What and How our students learn matter

Building strong foundations and developing emerging 21st cc skills to prepare students to be future-ready.

Mathematics Curriculum Framework

Belief, appreciation, confidence, motivation, interest and perseverance

Proficiency in carrying out operations and algorithms, visualising space, handling data and using mathematical tools



Understanding of the properties and relationships, operations and algorithms

Awareness, monitoring and regulation of thought processes

Competencies in abstracting and reasoning, representing and communicating, applying and modelling

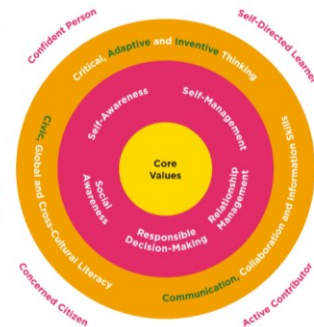
Framework for 21st Century Competencies and Student Outcomes

Adaptive Thinking

- i. Assesses different contexts and situations in order to make connections and draw new insights
- ii. Manages complexities and ambiguities by adjusting one's perspective and strategies

Civic Literacy

- i. Demonstrates understanding of values, ideals and issues of personal, community and national significance
- ii. Plays active and constructive roles to improve the school, community and nation



Inventive Thinking

- i. Explores possibilities and generates novel and useful ideas
- ii. Evaluates and refines ideas to formulate novel and useful solutions

Communication

- i. Effectively communicates information and co-constructs meaning
- ii. Engages empathetically with diverse perspectives

What are we learning?

An overview of the curriculum. (subject to minor changes.)

Term 1	Term 2	Term 3	Term 4
Numbers to 10	Numbers to 20	Add and Subtract within 100	Division
Add and Subtract within 10	Add and Subtract within 20	Length	Money
Shapes	Picture Graph	Multiplication	Time
Ordinal Numbers	Numbers to 100		

How does learning look like?

How students learn matter!

Learning experiences are designed to provide opportunities for students to :

- ✓ **First**, develop conceptual understanding. **Then**, procedural fluency.

Number Bonds

Ken and Siti pick 6 seashells each.

Ken

part part
2 4
whole
6
2 and 4 make 6.

Siti

part part
5 1
whole
6
5 and 1 make 6.

Is there another pair of numbers that makes 6?

1

(a) Leila and Xinyi pick 5 starfish in two different ways.

Leila

?
1 4
5
1 and make 5.

Xinyi

?
2 3
5
 and 2 make 5.

(b) Find two numbers that make 9.

Are there other pairs of numbers that make 9?

and make 9.

Addition Stories

There are 4 red apples.
There are 3 green apples.

4 3
7
4 and 3 make 7.

We **put** the apples **together** and count.
We write the addition equation:

$$4 + 3 = 7$$

four plus three equals seven

$$7 = 4 + 3$$

There are 7 apples altogether.

We can also say, $4 + 3$ is the same as 7.

Adding 4 and 3 equals 7.

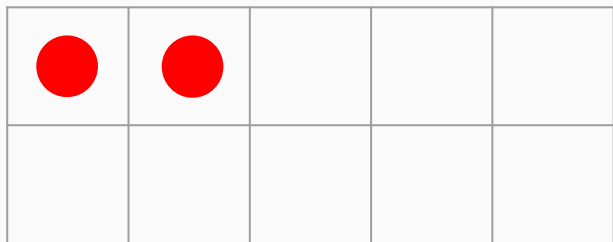
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Learning experiences are designed to provide opportunities for students to:

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Using a Ten Frame to practise
Making numbers bonds of 10.



$$2 + \underline{\quad} = 10$$



$$1 + 9 = 10$$

$$2 + 8 = 10$$

$$3 + 7 = 10$$

$$4 + 6 = 10$$

.....

$$10 - 1 = 9$$

$$10 - 2 = 8$$

$$10 - 3 = 7$$

.....

How does learning look like?

How students learn matter!

To help the children to generalise :

1. Given a part and another part, we can find the whole by addition.
2. Given a part and a whole, we can find the other part by subtraction.

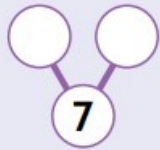
How does learning look like?

How students learn matter!

Learning experiences are designed to provide opportunities for students to :

- ✓ Finally, applying concepts and skills to solve problems in varied contexts.

- 2 There are 5 blue bean bags and 5 green bean bags in a basket. When Ken takes out any 7 bean bags from the basket, how many are blue and how many are green?



Ask your child to pose questions.

Children, are there missing information?

Did something puzzle you?

What questions would you like to ask?

- What are the colours of the 7 bean bags that Ken take out?)
- Did Ken take out 5 blue and 2 green?
- Did Ken take out 3 blue and 4 green?
- Did Ken take out 7 blue bags? Why not?
- Did Ken take out 1 blue and 6 green? Why not?

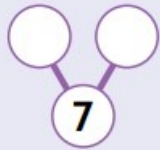
When students pose questions, they are engaging in mathematical reasoning and **critical thinking!**

When they craft different strategies to solve such open-ended tasks, they are engaged in **inventive thinking!**

e?

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in varied contexts.

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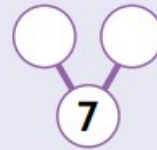
Learning experiences are designed to provide opportunities for students to :

- ✓ **Finally, applying concepts and skills** to solve problems in varied contexts.

When students can tell the differences in the contexts although the two problems are related, and they vary their strategy, they are engaged in **adaptive thinking!**

2 There are 5 blue bean bags and 5 green bean bags in a basket. When Ken takes out any 7 bean bags from the basket,

How many bean bags are left in the basket?



How does learning look like?

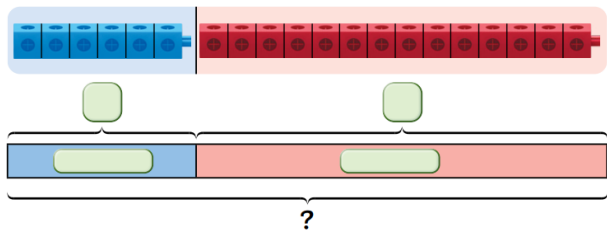
How students learn matter!

Through learning with understanding, we hope to develop the students' confidence and motivation in learning so that they are able to make connections across topics and across levels and foster the interest and resilience in solving higher-order or more challenging problems.

Examples of part-whole concepts

(P2) Drawing part-part-whole model to solve word problems.

Abel has 6 pencils. Bella has 14 pencils.
How many pencils do they have in all?



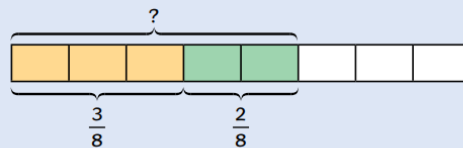
$$\square + \square = \square$$

They have pencils in all.

(P4) Fraction as part of a set of objects

Luke ate $\frac{3}{8}$ of a pie. His brother ate $\frac{1}{4}$ of the same pie.

What fraction of the pie did they eat in all?



$$\frac{3}{8} + \frac{1}{4} = \frac{3}{8} + \frac{\square}{8}$$

$$= \square$$

They ate of the pie.

How does learning look like?

How students learn matter!

Example of part-whole concepts

(P6)

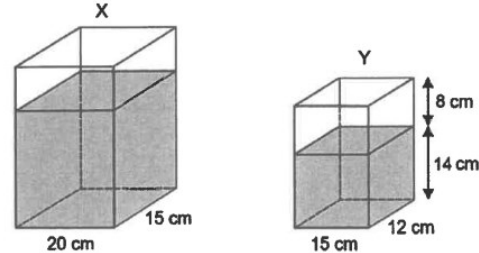
To solve this problem, the student has to be adapt at applying

- Fraction of a set concept (P4)
- Volume of cuboid concepts (P5 & P6)

Pose questions:

- What information is missing?
- What can we infer from the diagrams and information?

The figure shows the amount of water in two rectangular containers, X and Y, at first.



Ray poured $\frac{1}{5}$ of the water from X into Y to fill it to the top, without overflowing.

(a) How much water was there in X at first?

Ans: (a) _____ [2]

(b) Ray then poured all the water from Y into X. 120 cm^3 of water overflowed from X. What was the height of X?

How does assessment look like?



✗ **Weighted Assessment**



✓ **Focus on Formative assessment**

How does assessment look like?

Emphasize on Formative Assessment where

- **Teachers** provide ongoing monitoring of students' learning and regular feedback to students.
- **Students** use review exercises or revision practices to reinforce learning as they apply feedback and reflection to refine their learning.

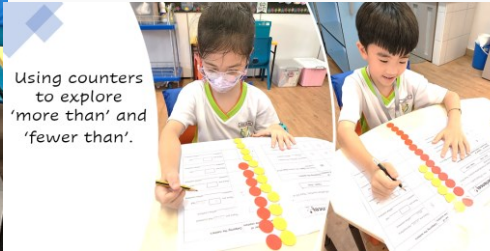
I Can... Assess Myself

-  I can do this! I'm ready to move on or explain to a friend.
-  I'm almost there! I may need more practice or help.
-  I don't understand. I need more work or help on this.

Made by Juelia a Simple Teacher



Performance Task



How does assessment look like?

Emphasize on Self Assessment where Students :

- Set Learning Goals through WALT.
- Monitor Learning Progress through WILF.
- Regulate and adjust learning strategy through reflecting on learning goals, process, thoughts, attitudes and actions.

Communicate thinking through clear workings (equations), annotations, diagrams

Chapter 3 Length

Practice 1 Recall

1 Fill in the boxes and blanks.

(a) The pen is 13 cm long.

(b) The ice cream stick is 12 cm long.

WALT : LENGTH WILF :

- 1 I know that 100 cm = 1 m.
- 2 I can estimate and measure length in cm or m.
- 3 I can measure length from the '0' mark.
- 4 I can measure length that is not at the '0' mark.
- 5 I can compare length using words such as shorter than, longer than, shortest, longest, as long as.



Date: 16 February

WALT: Craft our success criteria for model drawing.

Success Criteria for model drawing.

1. I can draw the model correctly.
2. I can see where to put the numbers.
3. I can do equation properly.
4. I can use ppw and a model.
5. I can write my titles at the correct place.

How does assessment look like?

Holistic Development Profiling (Semestral HDP Reporting)

8 Learning Outcomes

Beginning

Developing

Competent

LO1 – Understand numbers up to hundred

LO2 – Understand addition and subtraction

LO3 – Add and subtract numbers

LO4 – Understand multiplication and division

LO6 – Tell time to 5 minutes

LO5 – Identify, name, describe and sort shapes

LO7 – Measure and compare lengths of objects

LO8 – Read and interpret picture graphs

How can you support your child?

1. Develop self-directed learning competency by building routines
 - in preparing for school eg Bring stationery, mini-whiteboard, books etc
 - how to pay attention during learning
 - homework routine
 - revision routine
2. Motivate your child by focusing on efforts and learning from mistakes
3. Focus on understanding why the methods work or do not work , not just about getting the correct answers.
3. Encourage your child to think and work through the work independently.
Do not be quick to provide support to your child.
5. Talk about Mathematics in everyday activities.

Should you have queries or maybe provide affirmations, you may contact us @

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Thank You!



Addition of numbers with renaming

A short hands-on session for Parents

Learning experiences are designed to provide opportunities for students to:



First, develop conceptual understanding.
Then, procedural fluency.

E.g. Learning addition of numbers involving renaming using the standard algorithm **with understanding.**