Mathematics
P1 2026
Orientation Briefing

Mr Tay Lip Seng

Leaders of Character, Championing Service and Excellence

Importance of Learning Mathematics

Mathematics contributes to the development and understanding in many disciplines and provides the foundation for many of today's innovation and tomorrow's solution.

Aims of Mathematics Education

Acquire and apply mathematical concepts and skills

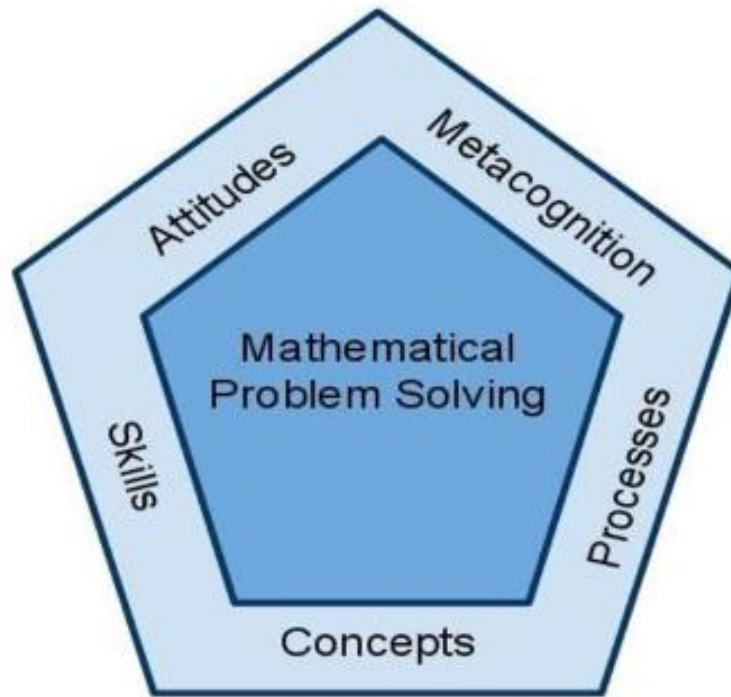Develop cognitive and metacognitive skills through a mathematical approach to problem solving

Develop positive attitude towards mathematics.
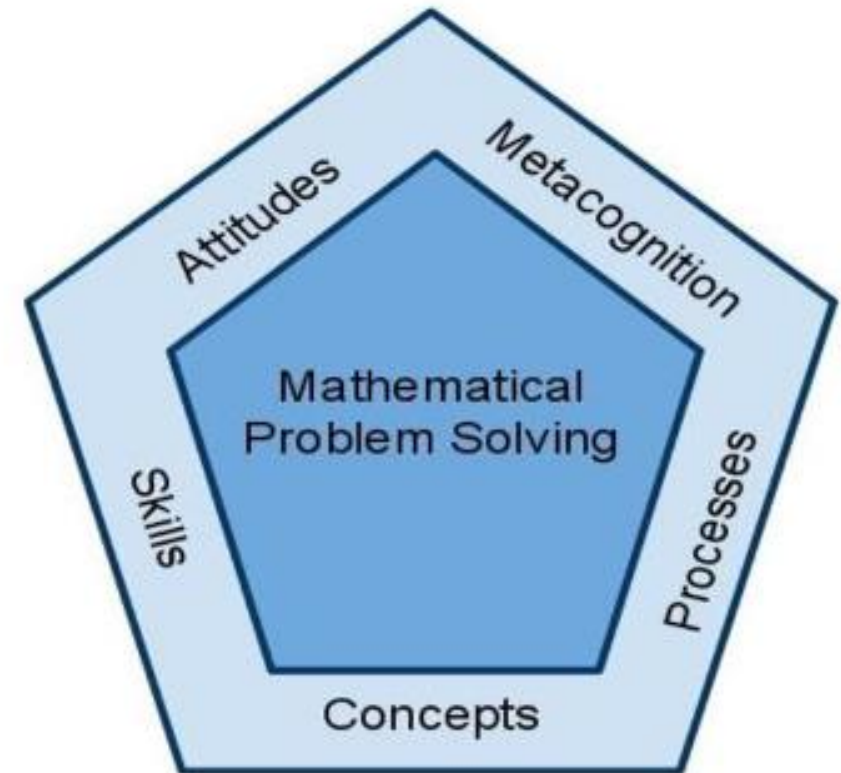
3

The Primary Mathematics Curriculum

The teaching and learning of mathematics is encapsulated by the pentagonal framework. It shows the five components underpinning the teaching and learning of mathematics from primary up to pre-university levels.

The Unique Features in the Singapore Primary Mathematics Curriculum

- A Spiral Curriculum

- The Model Method

- Teaching Approaches (C-P-A)
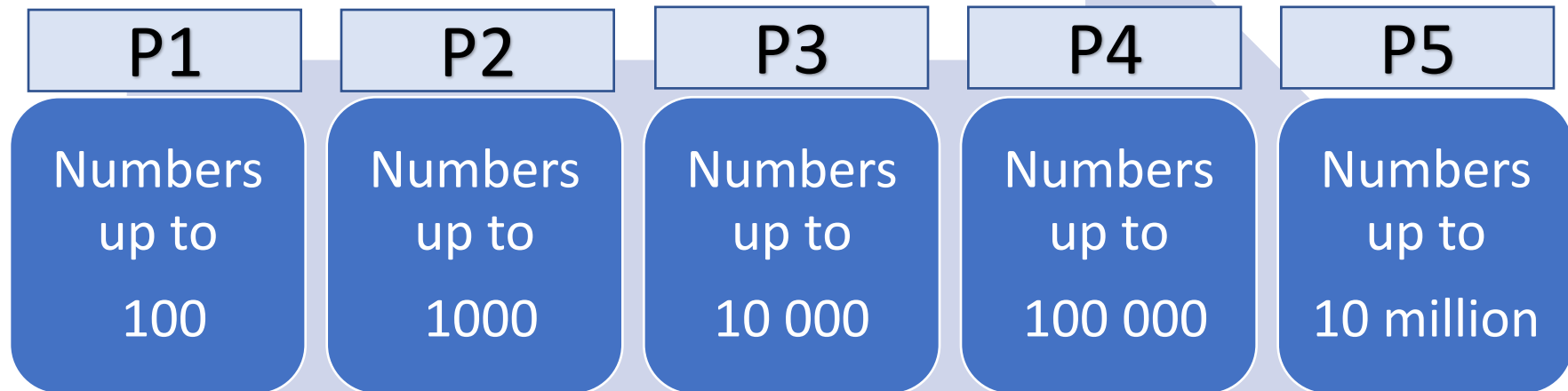
A Spiral Curriculum

The Singapore primary mathematics curriculum adopts a spiral structure in the development of <u>concepts</u>, <u>skills</u> and <u>processes</u>.
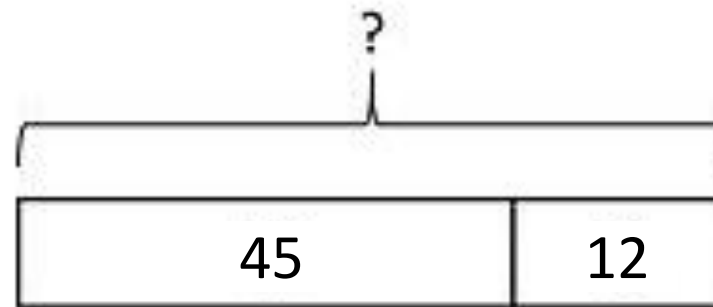
Example:

P1	P2	P3	P4	P5
Numbers up to 100	Numbers up to 1000	Numbers up to 10 000	Numbers up to 100 000	Numbers up to 10 million

The Model Method

The construction of the pictorial model to represent the know or unknown quantities and their relationship in a problem, students gain a better understanding of the problem and develop their abilities in mathematical thinking and problem solving.
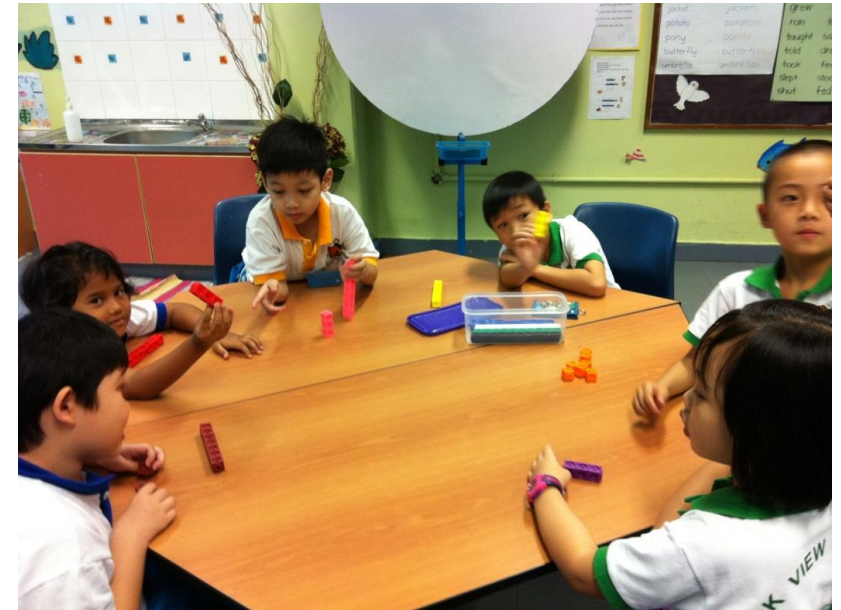

$$45 + 12 = ?$$

Teaching Approaches

Selection of appropriate activities that promote sound mathematical understanding is important.

Activities are introduced to enable students to progress from concrete and pictorial to abstract mathematical concepts.

Use of Concrete-Pictorial-Abstract

- The concrete-pictorial-abstract is an important consideration in the sequencing of learning.

- For the concepts in Numbers, the use of concrete manipulatives are useful in helping students to make sense of the operations.

- This is followed by the pictorial and abstract presented in the textbook and workbook.

PVPS Mathematics Curriculum

Approaches		
Support	**Enrich**	**Stretch**
• Learning support for Mathematics (LSM) • Remedial Programme • Heartware Programme • Mastery Programme (P6)	• STAR Math Problem Solving • Hands-on learning experiences • Real world context • Financial Literacy • Math Adventures • STEM Programme	• STAR Math Problem Solving Package • E2K Programme • Olympiad Competition

Primary 1 Content

Numbers

Measurement

Geometry

Statistics

Numbers

- Counting to tell the number of objects in a given set
- Number notation, representations and place values (tens, ones)
- Reading and writing numbers in numerals and in words
- Comparing the number of objects in two or more sets
- Comparing and ordering numbers
- Patterns in number sequences
- Ordinal numbers (first, second, up to tenth) and symbols (1st, 2nd, 3rd, etc.)

The children are queuing to buy a drink.
(a) In which position is Jiahao?
(b) In which position is Leila?
(c) Who is in the eighth position?

Anna   Ken   Wendy   Siti   Leila

Numbers

Addition and Subtraction

- Use of +, – and = and relationship
- Adding and subtracting within 100
- Adding and subtracting using algorithms
- Mental calculation involving addition and subtraction

Multiplication and Division

- Concepts of multiplication and division
- Use of x
- Multiplying within 40
- Dividing within 20

Numbers

Money

- Counting and comparing amount of money
  - in cents up to $1
  - in dollars up to $100

Write each amount of money.

(a) $\boxed{5}$ ¢

(b) $\boxed{20}$ ¢

(c) $ $\boxed{1}$

(d) $ $\boxed{10}$

(e) $ $\boxed{2}$

(f) $ $\boxed{50}$

Measurement

Length

- Measuring length in centimetres
- Use of abbreviation cm
- Comparing and ordering lengths in cm
- Measuring and drawing a line segment to the nearest cm

Find the length of the objects.

pencil

paper clip

eraser

glue stick

GLUE

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

The length of the pencil is ☐ cm.

Measurement

Time

- Telling time to 5 minutes
- Use of 'am' and 'pm'
- Use of abbreviations h and min
- Duration of one hour/half hour

It is [ ] minutes after 6 o'clock.

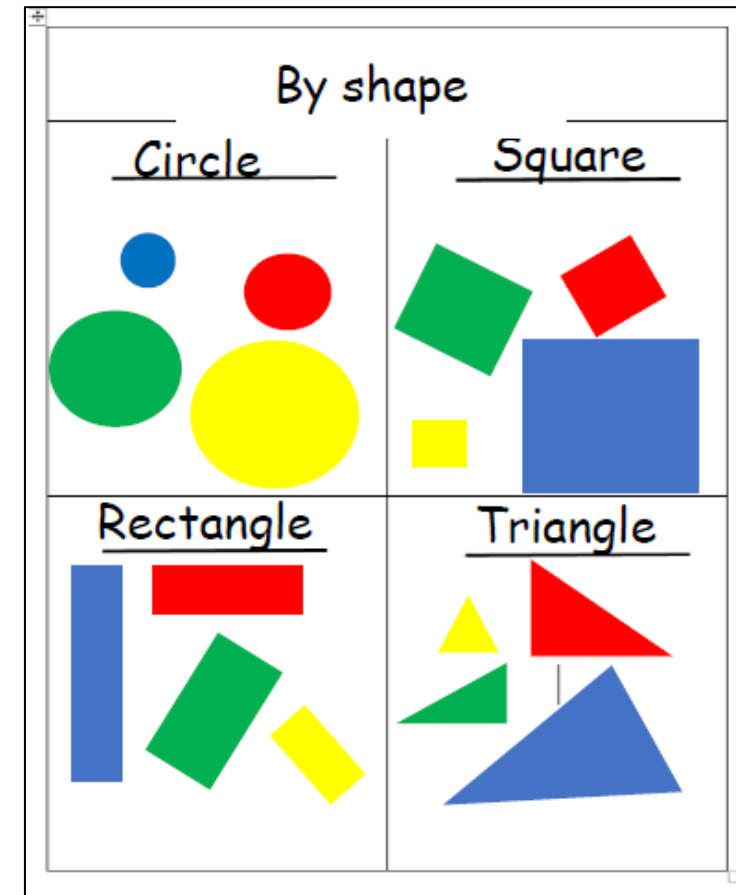Jiahao eats his breakfast at 6:30.

Geometry

2D Shapes

- Identifying, naming, describing and classifying 2D shapes
- Forming different 2D figures
- Identifying 2D shapes that make up a given figure
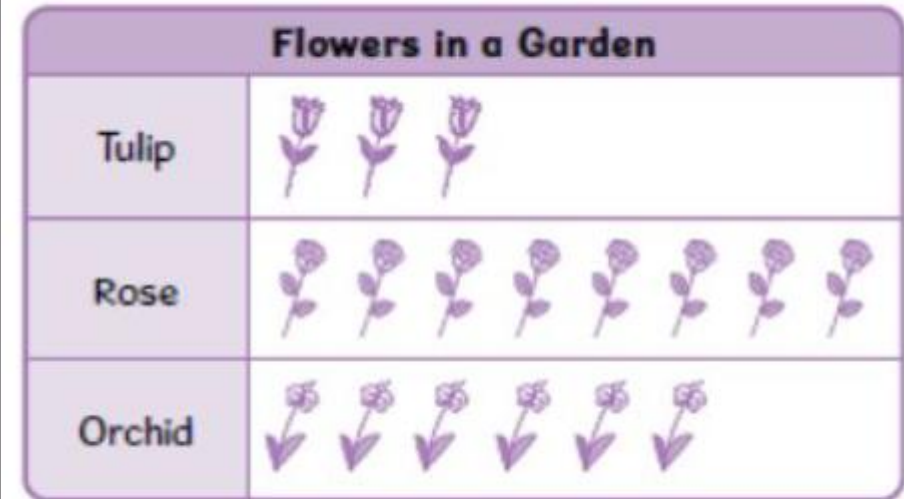- Copying figure on dot grids or square grids

Statistics

Picture Graphs

- Reading and interpreting data from picture graphs

The picture graph shows the types of flowers in a garden.

Flowers in a Garden

Tulip	🌷 🌷 🌷
Rose	🌹 🌹 🌹 🌹 🌹 🌹 🌹 🌹
Orchid	🌸 🌸 🌸 🌸 🌸 🌸

(a) There are [3] tulips.

(b) There are [8] roses.

PVPS Mathematics Assessment

Assessment FOR Learning	Assessment AS Learning
• Topical Review (Non-weighted) • Math Performance Task • Math Investigative Tasks	• Math Journal • Daily Observation • Students' Reflection

PVPS Mathematics Assessment

No weighted assessment	≠	No assessment

Does not mean

- Use **non-weighted assessment** to
  - Analyse their progress in learning
  - Address learning gaps
  - Support and stretch students' learning

Primary 1 Learning Outcomes (LO)

No.	Learning Outcomes
1	Understand numbers up to 100
2	Understand Addition and Subtraction
3	Add and Subtract Numbers
4	Understand multiplication and division
5	Identify, name, describe and sort shapes
6	Tell time to 5 minutes
7	Measure and compare lengths of objects
8	Read and interpret picture graphs

Student Assessment

Information about children's learning are gathered from the learning process such as

- Topical Review
- Daily Observation
- Classwork/ Homework
- Journal Writing / Reflection

Reporting Learning Outcome (Sample)

LO	Progress Booklet Stems	Assessments
Add and Subtract Numbers	• Able to add/subtract numbers without regrouping • Able to add/subtract numbers with regrouping • Able to solve word problems involving addition and subtraction within 20	- Topical Review - Daily Observations - Classwork/ Homework - Journal Writing

Sample of rubric used

We can access our students' understanding of these concepts and skills through classroom activities, worksheets, journals and non-weighted topical reviews.

LO: Add and Subtract Numbers

Accessing Student's Understanding on	Emerging	Developing	Proficient	Exceeding
Add numbers within 100 without regrouping	Able to perform addition without regrouping with a **lot of guidance**	Able to perform addition without regrouping with **some guidance**	Able to perform addition without regrouping with **little guidance**	Able to perform addition without regrouping **independently**
Add numbers within 100 with regrouping	Able to perform addition with regrouping with a **lot of guidance**	Able to perform addition with regrouping with **some guidance**	Able to perform addition with regrouping with **little guidance**	Able to perform addition with regrouping **independently**
Subtract numbers within 100 without regrouping	Able to perform subtraction without regrouping with a **lot of guidance**	Able to perform subtraction without regrouping with **some guidance**	Able to perform subtraction without regrouping with **little guidance**	Able to perform subtraction without regrouping **independently**
Subtract numbers within 100 with regrouping	Able to perform subtraction with regrouping with a **lot of guidance**	**Able** to perform subtraction with regrouping with **some guidance**	**Able** to perform subtraction with regrouping with **little guidance**	Able to perform subtraction with regrouping **independently**
Solve 1-step word problems within 20	Able to solve one-step word problems with **a lot of guidance**	Able to solve one-step word problems with **some guidance**	Able to solve one-step word problems with **little guidance**	Able to make addition and subtraction stories **independently**

Leaders of Character, Championing Service and Excellence

Parents' Support at Home

- **Activate child's interest** – show your child that you believe learning Math is both enjoyable and useful in their daily life.

- **Know what your children are learning in school:** read their Math journals, check their homework, get them to explain what they have learnt.

- **Give them target and follow up -** take actions, reward and recognize their efforts, monitor their progress.

Helpful Tips Learning P1 Mathematics

1. Write numbers clearly (e.g. 0 and 6, 1 and 7 etc.)

2. Process is more **important** than solution

3. Mental calculation involving addition and subtraction within 20
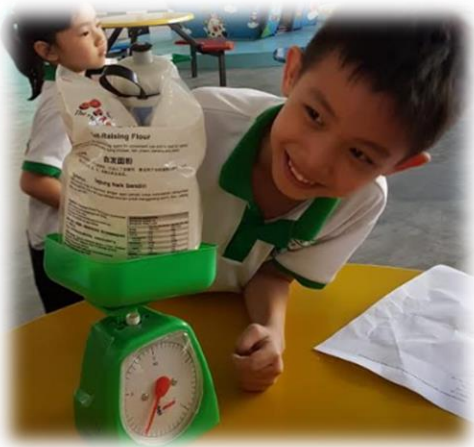
4. Reinforce class teaching and avoid pre-teach

Cultivate the Joy of Learning Mathematics at Home

Link math to everyday use

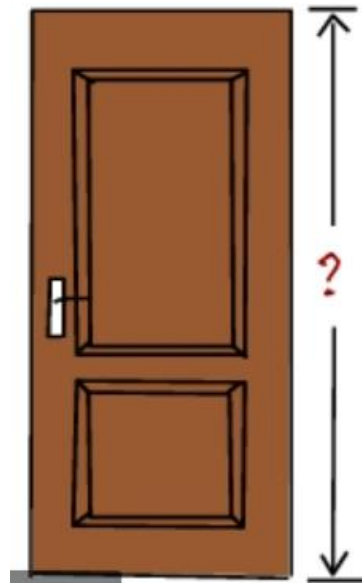Play Math Games

Telling mathematics stories

Link Math to Everyday Use for P1 Students

<u>Show how Mathematics is used in our daily lives</u>

- Telling time to 5 minutes and understanding durations of one hour or half an hour *(e.g. What is the time now?)*

- Identify the basic shapes such as rectangle, square, triangle, half circle and quarter circle round us.*(e.g. Look around to find shapes like rectangles in doors or triangles in roofs during a walk or at home.)*

- Create awareness of the size of items they see. *(e.g. Estimate the height of a door.)*

- Use of money in cents up to $1 and in dollars up to $100. *(e.g. Count coins and notes to find out how much money you have now.)*
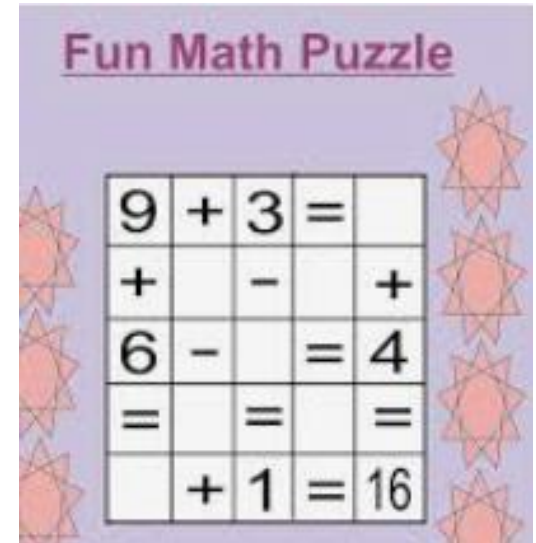
Play Math Games

Have fun while learning mathematics

- _Real-World Context Games_

  (e.g. Spot a car license plate - **Rearrange the digits** to form the largest or smallest 4-digit number.)

- _Math Puzzles & Logic Games_

  (e.g. Sudoko, puzzle)

- _Online mathematics games_

  (e.g. Koobits)

Fun Math Puzzle

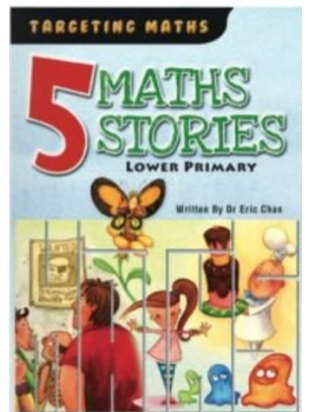| 9	+	3	=	
+		−		+
6	−		=	4
=		=		=
	+	1	=	16

Telling Mathematics Stories

Stories Spark Interest and Reduce Anxiety

- Share real-life experiences where mathematics played a key role

  (e.g. I was late for an appointment because I miscalculated the time needed to get there)

- Read captivating math stories or magazines

  (e.g. Smart Mathematician)

Thank You!

Email:

Head of Department
Mr Tay Lip Seng
tay_lip_seng@schools.gov.sg

Level Head
Mdm Angeline Loo
loo_nga_hoonangeline@schools.gov.sg

Leaders of Character, Championing Service and Excellence