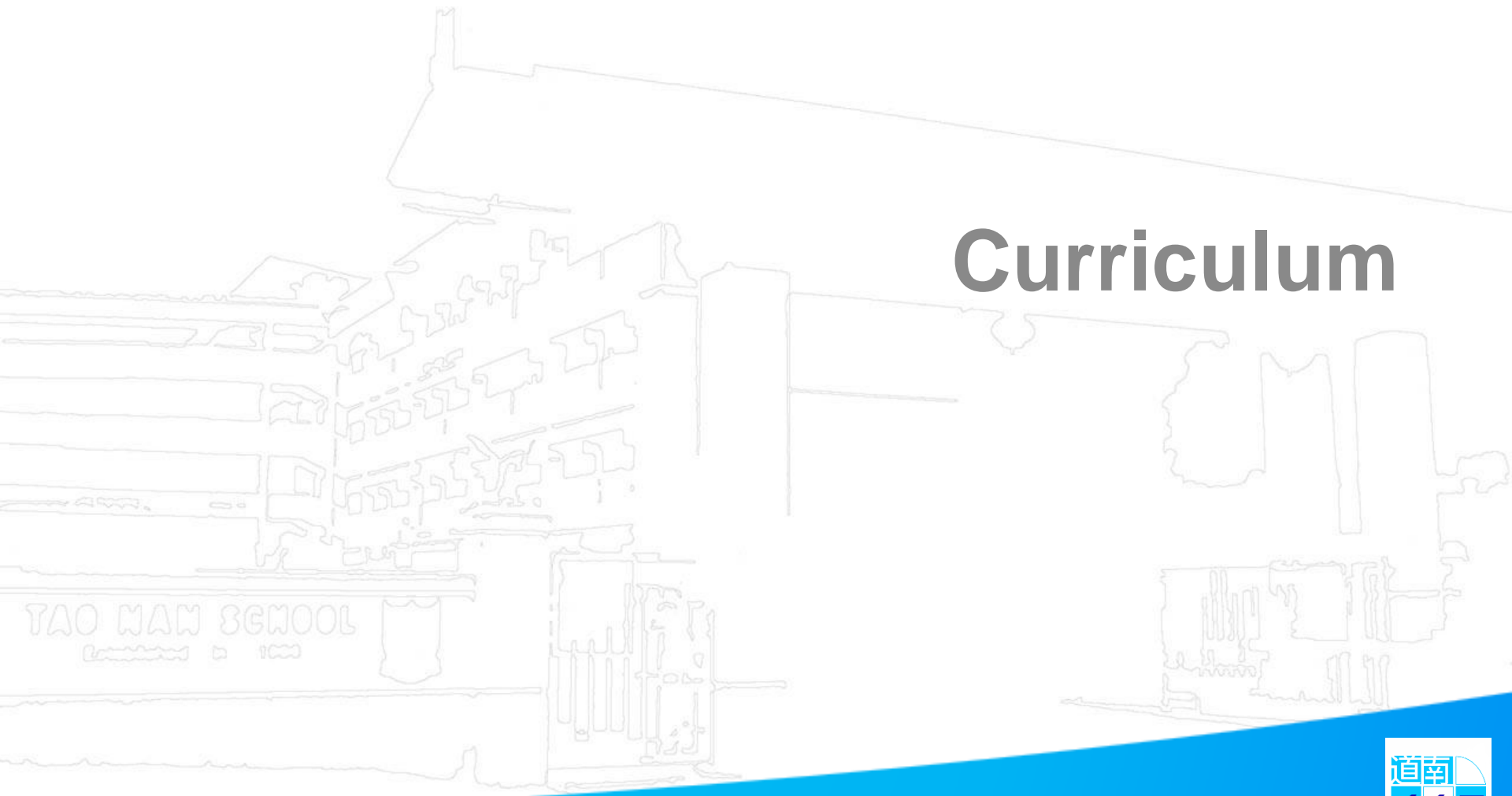# Primary 1 Mathematics Curriculum Information

2022

Curriculum

NEW

Primary Mathematics (2021) Syllabus

The Primary Mathematics Syllabus aims to enable all students to:

- acquire mathematical concepts and skills for everyday use and continuous learning in mathematics

- develop thinking, reasoning, communication, application and metacognitive skills through a mathematical approach to problem-solving; and

- build confidence and foster interest in mathematics.

NEW
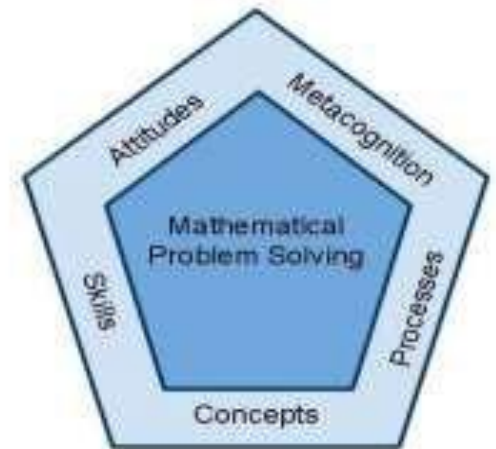
Primary Mathematics (2021) Syllabus

The document will be available from MOE Website in 2021.

(1) WHOLE NUMBERS

Numbers to 100

Addition & Subtraction

Comparing Numbers

Numbers Showing Positions
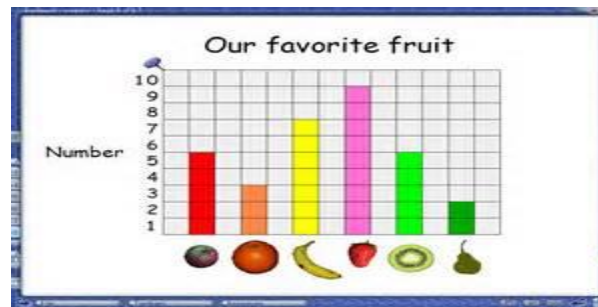
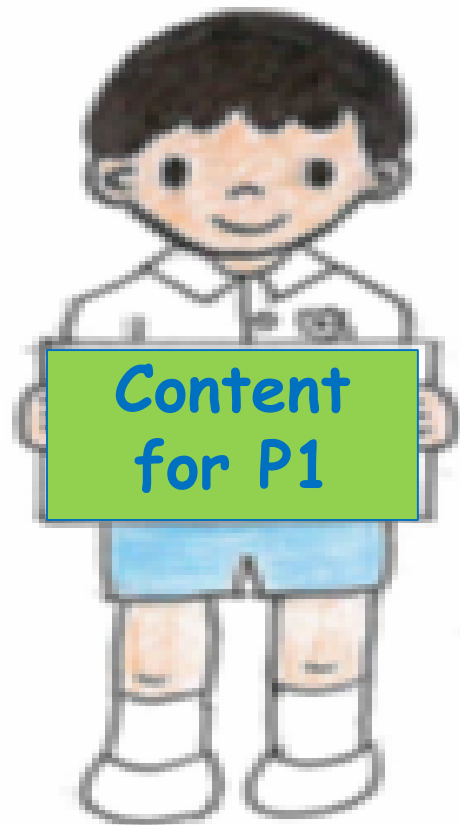Multiplication & Division

(2) MEASUREMENT & GEOMETRY

Length   Time   Money

Shapes & Patterns

(3) STATISTICS

Picture Graphs

Content for P1

WHOLE NUMBERS : Numbers up to 100

❏ counting to tell the number of objects in a given set

❏ comparing the number of objects in two or more sets

❏ use of ordinal numbers (first, second, up to tenth) and symbols (1st , 2nd, 3rd , 4th, etc.)

ordinal numbers

tenth

1st 2nd 3rd 4th 5th
6th 7th 8th 9th 10th

WHOLE NUMBERS : Numbers up to 100

❒ number notation and place values (tens, ones)

❒ reading and writing numbers in numerals and in words

❒ comparing and ordering numbers

❒ number patterns

Concepts of Addition and Subtraction

❑ use of the addition symbol (+) or subtraction symbol (−) to write a mathematical statement for a given situation

❑ comparing two numbers within 20 to tell how much one number is greater (or smaller) than the other

❑ recognising the relationship between addition and subtraction

Concepts of Addition and Subtraction

❒ building up the addition bonds and committing to memory

❒ addition of more than two 1-digit numbers

❒ addition and subtraction within 100 involving

∗ a 2-digit number and ones

∗ a 2-digit number and tens

∗ two 2-digit numbers

<u>Make Ten Facts</u>

These pairs of #'s make 10.

1+9=10

2+8=10

3+7=10

4+6=10

5+5=10

Multiplication

❏ multiplication as repeated addition (within 40)

❏ use of the multiplication symbol (×) to write a mathematical statement for a given situation

❏ division of a quantity (not greater than 20) into equal sets:

  * given the number of objects in each set/group

  * given the number of sets/groups

❏ solving word problems with pictorial representation

Length

❒ measurement and comparison of the lengths of two or more objects in non-standard units

❒ measure in cm

❒ use of the following terms:
- – long, longer, longest
- – short, shorter, shortest
- – tall, taller, tallest
- – High, higher, tallest
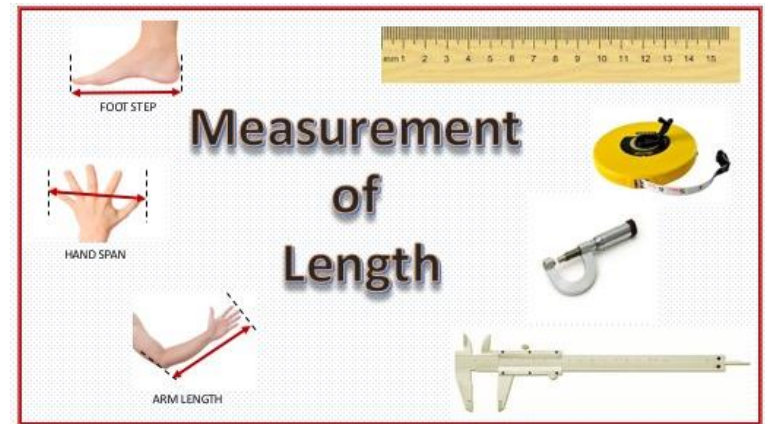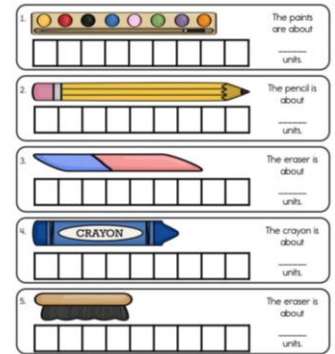
Time

- ❏ telling and writing time to 5 minutes
- ❏ Use of a.m. and p.m.
- ❏ Use of abbreviations in h and min
- ❏ duration of one hour/half hour

I count by fives. 5, 10, 15, 20, 25, 30 minutes.

9:30

The time is 9:30.
It is 30 minutes or **half an hour** after 9 o'clock.
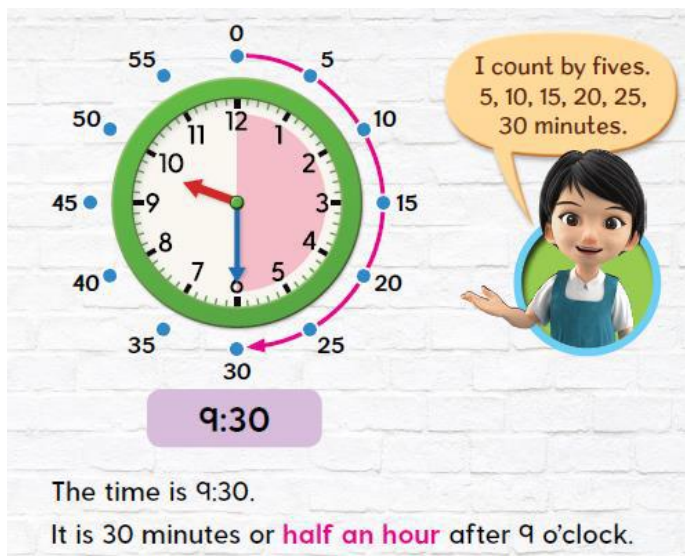
Money

❏ identifying coins and notes of different denomination

❏ matching a coin/ note of one denomination to an equivalent set of coins/ notes of another denomination

❏ telling the amount of money

❏ use of the symbols $ and ¢

❏ solving word problems involving addition and subtraction of money in dollars only (or in cents only)
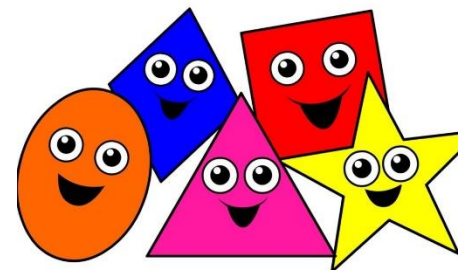
Geometry

❏ basic shapes: rectangle, square, circle, triangle

❏ identifying and naming the 4 basic shapes from 2-D and 3-D objects

❏ describing and classifying shapes

❏ patterns: making/ completing patterns with 2-D cut-outs according to one or two of the following attributes:
   ∗ shape   ∗ size   ∗ colour

❏ making / completing patterns with 3-D models:
   ∗ cube   ∗ cuboid (rectangular block)   ∗ cone   ∗ cylinder

Statistics : Data Analysis

❐ collecting and organising data

❐ making picture graphs

❐ use of a symbol/picture to represent one object

❐ reading and interpreting picture graphs in both horizontal and vertical forms
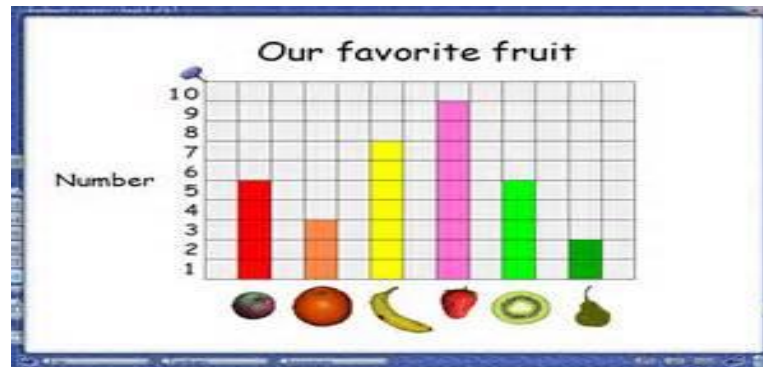
Pedagogy

Learner-centred pedagogy

Teachers will use appropriate pedagogical approaches:

- Concrete-Pictorial-Abstract approach (C-P-A)

- Hands-on learning experiences

- Co-operative learning

- E-learning, SLS Lessons , etc

Assessment

- ✓ **<u>NO</u>** Examinations, 3 Bite-sized Tests

  - ✓ Assess students' progress at different phases of learning during lessons

  - ✓ Triangulate students' learning from multiple sources of assessment information such as through observation in class, written work, classroom discussion, e-learning, etc.

  - ✓ Use of learning outcomes (LOs) to give feedback to parents on students' learning progress

- Report of child's attainment level of LOs at the end of Semester 1 and Semester 2

- Report of 4 LOs each semester

- Use 3 levels of qualitative descriptors to determine the level of attainment
  - *Developing, Competent, Accomplished*

Primary 1 Learning Outcomes (LOs) for HDP Report

Teachers will use LOs and QDs to give feedback to parents on students' learning progress

1. Understand numbers up to hundred

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

Example of Qualitative Descriptors

LO 1 Understand numbers up to hundred.

Developing	Competent	Accomplished
• *Able to count to tell the number of objects in a given set with some guidance*	• *Able to count to tell the number of objects in a given set with little guidance*	• *Able to count to tell the number of objects in a given set independently*
• *Able to read and write in numerals and in words with some guidance*	• *Able to read and write in numerals and in words with little guidance*	• *Able to read and write in numerals and in words independently*
• *Able to compare and order whole numbers correctly some of the time*	• *Able to compare and order whole numbers correctly most of the time*	• *Able to compare and order whole numbers correctly almost all the time*
• *Able to describe and continue a given number pattern some of the time*	• *Able to describe and continue a given number pattern most of the time*	• *Able to describe and continue a given number pattern almost all the time*

<u>NO</u> Mid-Year or End-of-Year Examinations

Three Bite-sized Assessment:

Three Maths Review Tests are appropriately sized
in terms of the number of questions and the duration,
so that the amount of revision and preparations needed
by the students are manageable.

More details will be given in a notification to all Parents

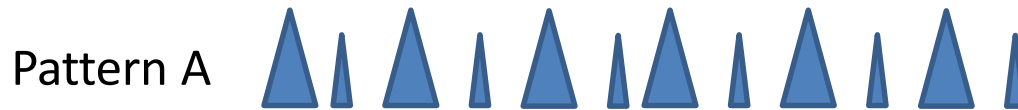| Term 2	Term 3	Term 4
Review Test 1	Review Test 2	Review Test 3
Numbers to 20 Addition & Subtraction Shapes Ordinal Numbers	Picture Graphs Numbers to 100 Addition & Subtraction Length	Multiplication Division Time Money

Formative Assessment

(1) MATHS JOURNAL

eg. Patterns : How are the shapes arranged?
Explain your answer. Draw your answer.

Pattern A

Pattern B

Pattern A shows a change in **size.**
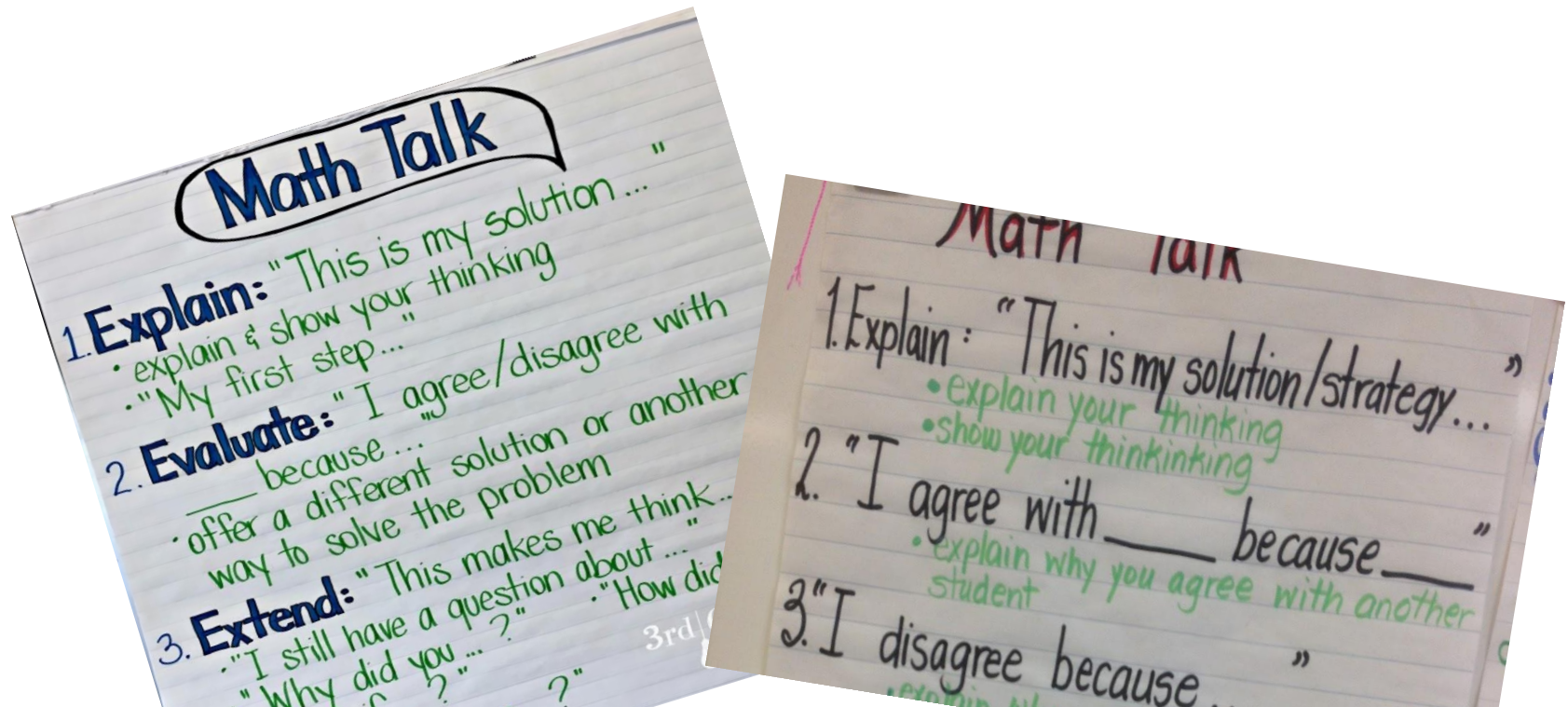
Pattern B shows a change in **colour** and **the way shapes are placed.**

Formative Assessment

(2) MATHS TALK

Ability to verbalise thoughts, communicate,
use mathematical terms in presentations in class

(3) Mental Calculations

Class observation of students' mental calculation ability in Oral Maths and Mental Calculation Exercises

Examples

- Addition and subtraction involving a 2-digit number

- Multiplication: 5 groups of 2, 2 groups of 5

- What is one more than 4?

(4) HANDS-ON

Examples:

- Shapes & Patterns
  - Hands-on activity using manipulatives (shapes) to form patterns/pictures

- Measuring length with a ruler or non-metric object (eg. paper clip, straw)

- Completing patterns with 3-D models

Home-School Partnership

How can parents help?

Early numeracy skills such as matching, counting, sorting, comparing and recognising simple patterns are useful in providing a good grounding for students to begin learning at Primary 1 .

We seek to partner you to help your child:

❑ Attain a good mastery of the basic number concepts and skills
   - recognise, read and write number symbols (numerals) 0 to 20

❑ Achieve the ability to count, understanding that:
   - we count to tell how many there are
   - the counting words are said in a fixed order

   Activities such as matching, sorting, pairing, ordering and patterning would help your child develop his number sense and basic number concepts.

You may wish to practise this with your child:

❏ Understand the concept of 'manyness' of numbers
Example: '5 is one more than 4' and '5 is one less than 6'

❏ For small sets of up to 5 objects, help your child to visualize the number instead of counting one by one.

❏ Give your child opportunities to count objects in various arrangements, and do counting back from 10 to 0.
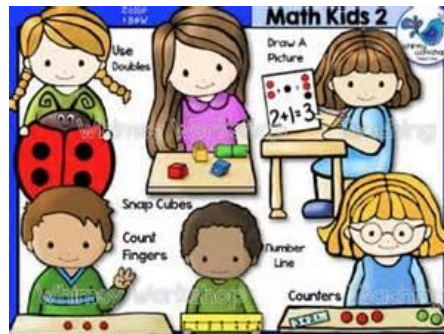
How can parents further help?

Ensure that your child

- **does his/her own work**
- **shows you what he/she has learnt**

  Primary Mathematics Practice Book A & B

  P1 Critical Thinking & BEST ANS Exercises

Please acknowledge (signature) that you have reviewed your child's work.

Books for Primary 1

Primary Mathematics Textbooks 1A & 1B

Practice Books 1A & 1B

Enrichment :
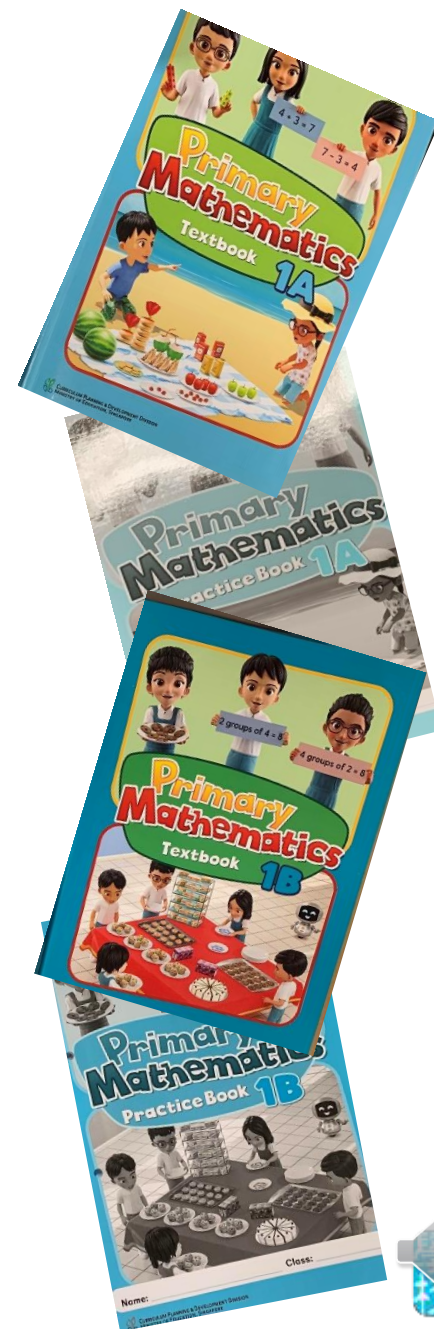Critical Thinking & BEST^{ANS} Exercises

Recommended Supplementary Materials
(available from the School Bookshop)
My Pals Maths Test 1, Homework Book 1A & 1B
Shaping Maths - Maths Builders
Amazing Mathematics

In Partnership with Parents to Develop your Children to their Fullest Potential