- Aims of Mathematics Education
- Mathematics Framework
- P1 Mathematics Syllabus
- P1 Math Programmes
- Samples of P1 Learning Objectives

READY TO SERVE

Relate Mathematics in Daily Life

# Laying a Strong Foundation

Aims of the Primary Mathematics Syllabus:

For students to:

 Acquire mathematical concepts and skills for everyday use and continuous learning in mathematics

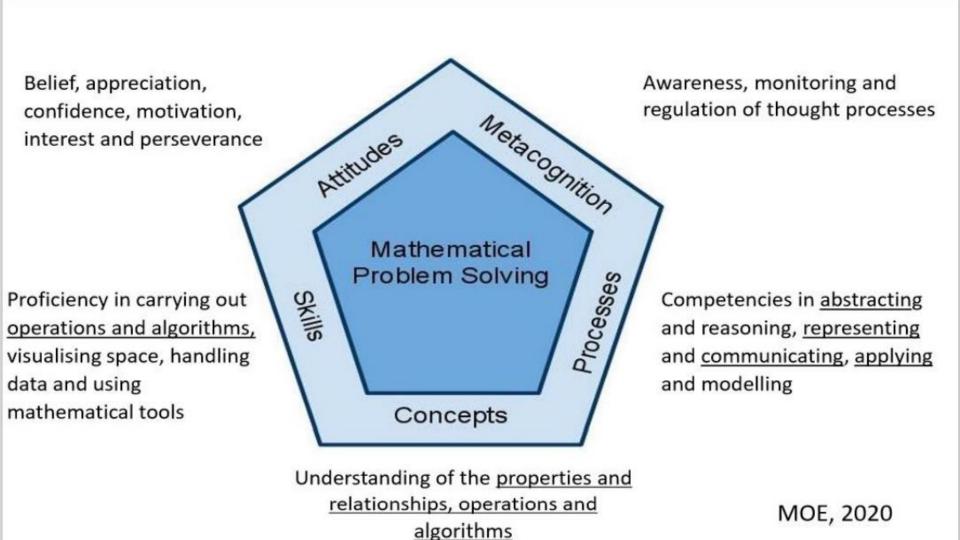
# Laying a Strong Foundation

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

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 Build confidence and foster interest in mathematics.

### **Mathematics Framework**



# P1 Syllabus

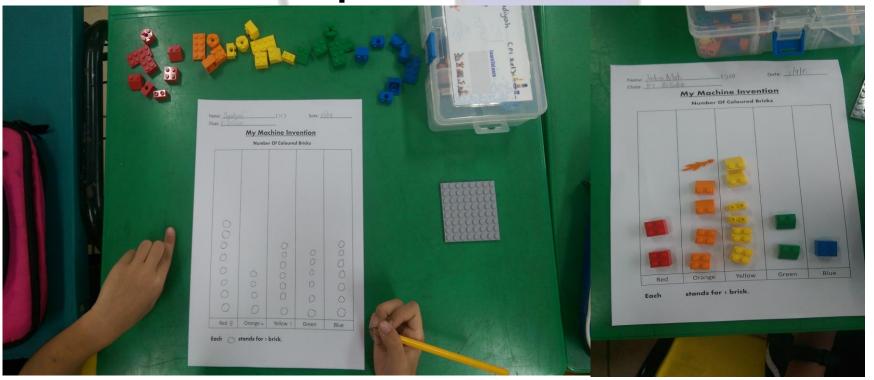
Whole Numbers

Numbers up to 100
Addition and subtraction
Multiplication and division

- Measurement
  - Length, time, money
- Geometry
  - Shapes and patterns
- Data Analysis
  - Picture graphs

 Learner-centred activities: Concrete-Pictorial-Abstract approach (CPA)

Use of math manipulative for hands-on activities.



Use of manipulatives in Mathematics



\*STAR approach to Problem Solving:

- S Study the question
- T Think of a plan
- A Act on the plan
- R Reflect on your answer

John has \$28.

Peter has \$3 less than John.

How much does Peter have?

Study the problem

J - \$28

P - \$3 less than J

Think of a plan

Is it a addition problem?

Is it a subtraction problem?

Reflect on your answer-

Have I answered the question?

**N**umber (Does the final answer make sense?)

<u>Transfer</u> (Did I transfer the numbers correctly?)

<u>U</u>nits (Did I leave the final answer in the correct units?)

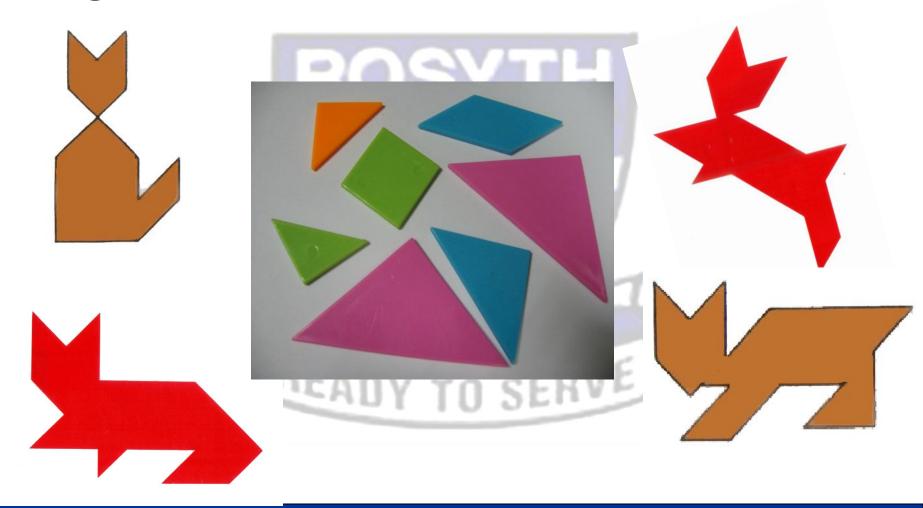
**C**alculations (Did I miscalculate?)

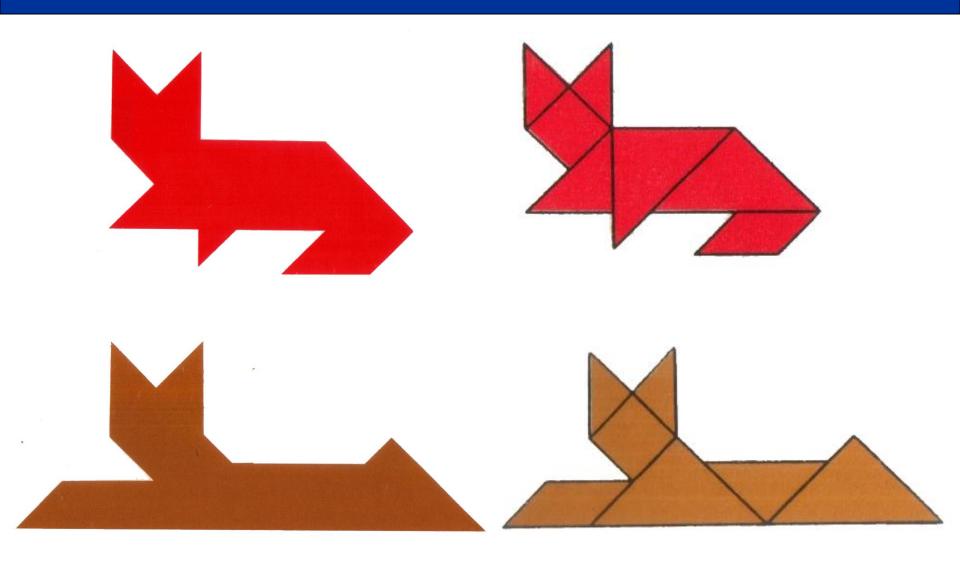
Act on the Plan

28 - 3 = 25

Peter has \$25.

Tangram





## **Tangram**

- To build pupils' spatial visualization skills to solve problems.
- To cultivate perseverance in pupils.
- To build pupils' ability to monitor their own thinking process in problem solving.

#### **Math Factual Fluency**

What is math factual fluency?

Math factual fluency is the ability to recall the answers to basic math facts automatically and without hesitation.

#### **Factual Fluency**

- Why is math fact fluency important?
- Without the ability to retrieve facts directly or
- automatically, students are likely to experience a high
- cognitive load as they perform a range of complex tasks.
- The added processing demands resulting from inefficient
- methods such as counting (vs. direct retrieval) often lead
- to procedural errors.

Learning Support Programme



### **Formative Assessment**

Math Journal

Performance Tasks

**Unit Review** 

Daily – Lesson Questioning Techniques

## Sample of a Unit Review

#### Teacher's Assessment

Your child is able to:	Question	Getting there	Got it!
Subtract by 'taking away' from a set.	1		
Associate addition and subtraction with the part-whole concept of number bond.	2, 3		
Use the subtraction symbol (-) to write a mathematical equation.	4, 5, 6		

Teacher's Feedback (if any):

### Sample of P1 Learning Objectives (LO)

- Understand numbers up to hundred.
- Understand addition and subtraction.
- Add and subtract numbers.
- Understand multiplication and division.
- Identify, name, describe and sort shapes.
- Tell time to the hour/half hour.
- Measure and compare lengths using everyday objects.
- Read and interpret picture graphs.

## Math in Daily Life

- Talk to your children about mathematics and help them to see the usefulness of math in our daily life.
- Addition and subtraction of money when your child purchase things

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Telling time

### Thank you

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