

P3
MATHEMATICS
CURRICULUM
BRIEFING



Curricula Goal

Competent Problem-Solvers

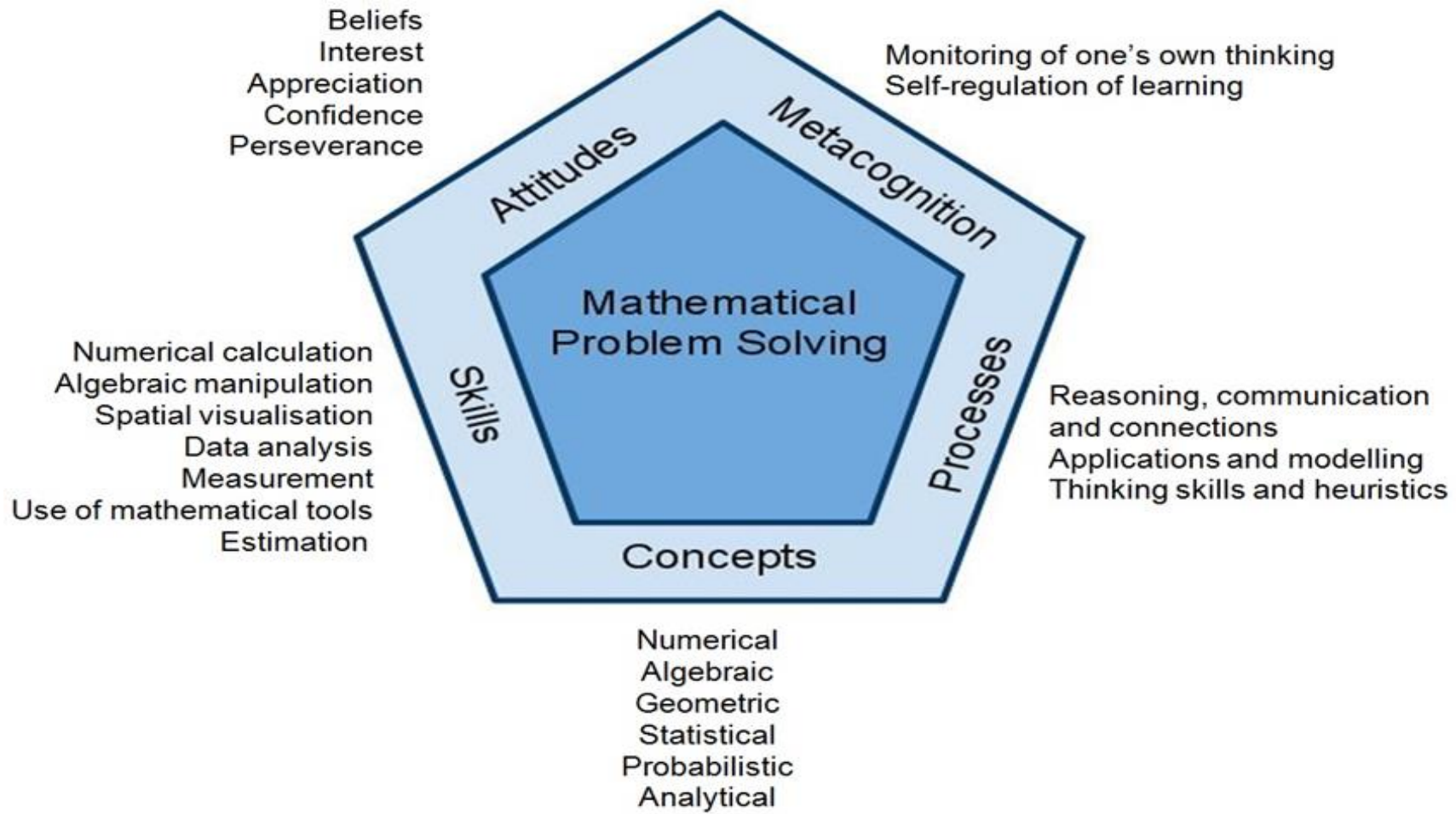
- attained a level of mastery of and interest in Mathematics.
- strong foundation for them to pursue Mathematics at the secondary level and beyond.

Curricula Goal

Competent Problem-Solvers

- The development of mathematical problem solving ability is dependent on five inter-related components, namely, *Concepts, Skills, Processes, Attitudes* and *Metacognition*.

The Mathematics Framework



Primary 1

Whole Numbers

Measurement

Geometry

Data Analysis

Primary 2/3

Whole Numbers

Measurement

Geometry

Data Analysis

Fractions

Primary 4

Whole Numbers

Measurement

Geometry

Data Analysis

Fractions

Decimals

Primary 5

Whole Numbers

Measurement

Geometry

Data Analysis

Fractions

Decimals

Percentage

Ratio

Primary 6

Whole Numbers

Measurement

Geometry

Data Analysis

Fractions

Decimals

Percentage

Ratio

Speed

Primary Maths Curriculum

Focus

P1 - P2

Building on
Foundation
in Numeracy

P3 - P4

Leverage on
Strengths
and Work on
Weaknesses

P5 - P6

Mastery in
Preparation
for PSLE

How we are going to ACHIEVE

P3 - P4

- ❖ Strengthening concepts, skills and processes
- ❖ Developing problem solving strategies
- ❖ Developing analytical and logical reasoning
- ❖ Developing the habit of self-regulating of learning progress

P3 Maths Assessments

- Common Test 1 (Term 1)
- Mid-Year Examination
- Common Test 2 (Term 3)
- End-of-Year Examination

P3 Maths Assessments

- Assess the extent which students have achieved the learning outcomes specified in the syllabus.
- Pencil and Paper assessments to be completed within 1 hr 30 minutes to 1 hr 45 minutes depending on the type of assessments.

Format of Assessment

Common Item Types

Multiple Choice Questions (MCQ)	<ul style="list-style-type: none">• 1 to 2 marks per question• Four options are provided of which only one is correct
Short Answer Questions (SAQ)	<ul style="list-style-type: none">• 1 to 2 marks per question• Workings are optional but preferred• Marks are awarded for the correct answer written in the answer space provided.
Long Answer Questions (LAQ) Problem Sums	<ul style="list-style-type: none">• 3 to 5 marks per question• Workings are to be shown• Method marks are awarded for critical steps of workings

Cognitive Levels	Standard Mathematics
Level 1	Recall mathematical facts, concepts, rules and formulae; perform straightforward computations and algebraic procedures.
Level 2	Interpret information; understand and apply mathematical concepts and skills in a variety of contexts.
Level 3	Reason mathematically; analyse information and make inferences; select appropriate strategies to solve problems.

Examples of different level questions

Questions	Cognitive Levels
<p>In 6573, the value of the digit 7 is _____.</p> <p>1) 7 2) 70 3) 700 4) 7000</p> <p>()</p>	<p>Level 1</p>

Examples of KCA questions

Questions	Cognitive Levels
<p>Arrange the following fractions in order, beginning with the greatest.</p> $\frac{4}{8} \quad \frac{4}{7} \quad \frac{4}{5} \quad \frac{4}{10}$ <p>_____ ' _____ ' _____ ' _____</p> <p>Greatest</p>	<p>Level 1</p>

Examples of KCA questions

Questions	Cognitive Levels
Find the product of 495 and 6.	Level 1

Examples of KCA questions

Questions	Cognitive Levels
<p>Which digit is in the hundreds place when 4785 is added to 2904?</p> <p>1) 9 2) 8 3) 7 4) 6</p> <p>()</p>	<p>Level 2</p>

Examples of KCA questions

Questions	Cognitive Levels
<p>967 visitors were in Universal Studio on Saturday. There were 3 times as many visitors in Universal Studio on Sunday than on Saturday. How many visitors were there in Universal Studio on both days?</p>	<p>Level 2</p>

Examples of KCA questions

Questions	Cognitive Levels
<p>Jessie bought some items at a store and paid the cashier with a ten-dollar note. The cashier returned her 2 two-dollar notes, 3 twenty-cent coins and 1 ten-cent coin as change. How much money did Jessie spend?</p>	<p>Level 2</p>

Examples of KCA questions

Questions	Cognitive Levels
<p>John baked twice as many cookies as Terry. After selling 234 cookies, John had 16 cookies more than Terry. How many cookies did John bake at first?</p> <p>1) 218 2) 250 3) 500 4) 750</p> <p>()</p>	<p>Level 3</p>

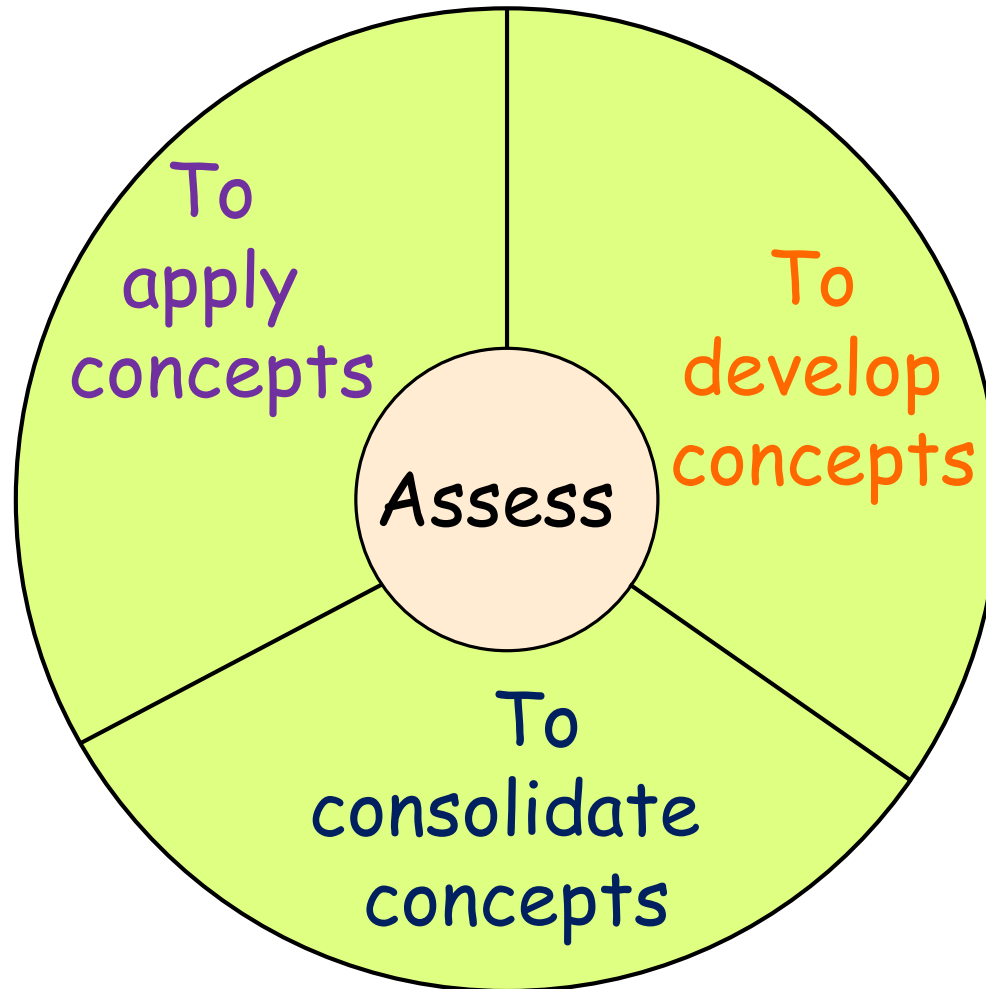
Examples of KCA questions

Questions	Cognitive Levels
<p>Cupcakes are sold in boxes of 3. Each box of cupcakes is sold at \$4. Mrs Lynn has \$22 to buy the cupcakes. How many cupcakes can Mrs Lynn buy at most?</p>	<p>Level 3</p>

Difficulty levels of items

- ❖ Mathematical concepts and skills assessed also contribute to the difficulty of each item.
- ❖ Not all the Level 3 questions are equally difficult and not all the Level 1 and 2 questions are equally easy.

Types of Lessons



Develop Problem Solving Skills

❖ **Teaching of Heuristics**

- Heuristics are strategies that are essential to problem solving
- Focuses on the underlying processes in problem solving.

Develop Problem Solving Skills

❖ **Heuristics for P3**

- Model Drawing
- Systematic Listing
- Look for a Pattern
- Work Backwards

Develop Thinking Skills

❖ **Thinking Skills**

- Comparing
- Analysing parts and whole
- Identifying Pattern and Relationship
- Deduction

Develop Mathematical Process Skills

❖ **Maths Learning Log**

- To verbalise and communicate the Mathematical ideas concisely and logically.
- To make connections among different Math ideas and make sense of their learning.

