P1 MATHEMATICS CURRICULUM BRIEFING
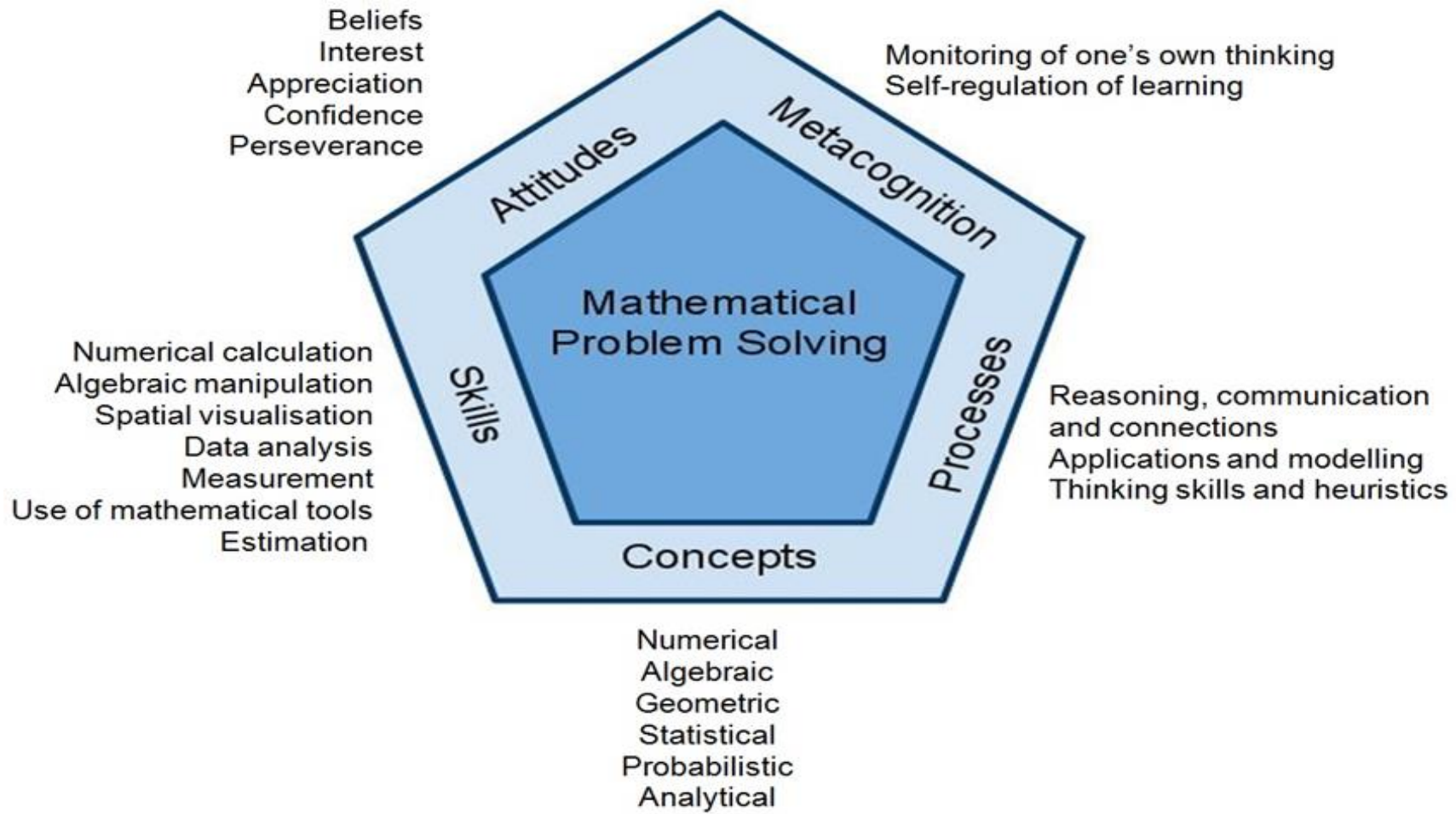
Curricula Goal

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

Beliefs
Interest
Appreciation
Confidence
Perseverance

Monitoring of one's own thinking
Self-regulation of learning

Attitudes

Metacognition

Mathematical
Problem Solving

Numerical calculation
Algebraic manipulation
Spatial visualisation
Data analysis
Measurement
Use of mathematical tools
Estimation

Skills

Processes

Reasoning, communication
and connections
Applications and modelling
Thinking skills and heuristics

Concepts

Numerical
Algebraic
Geometric
Statistical
Probabilistic
Analytical

Primary 1	Primary 2/3	Primary 4	Primary 5	Primary 6
Whole Numbers	Whole Numbers	Whole Numbers	Whole Numbers	Whole Numbers
Measurement	Measurement	Measurement	Measurement	Measurement
Geometry	Geometry	Geometry	Geometry	Geometry
Data Analysis	Data Analysis	Data Analysis	Data Analysis	Data Analysis
	Fractions	Fractions	Fractions	Fractions
		Decimals	Decimals	Decimals
			Percentage	Percentage
			Ratio	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

P1 – P2

❖ Building strong basic concepts and skills

❖ Starting to solve word problems

❖ Fostering opportunities for early successes

❖ Starting the habit of putting in efforts to learning

How we are going to ACHIEVE

P3 – P4

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

How we are going to ACHIEVE

P5 – P6

❖Consolidating and extending concepts and skills

❖Mastering problem solving

❖Becoming fluent in analytical and logical reasoning

❖Becoming adapt at self- regulating of learning progress

Focus

P5 – P6

Mastery in Preparation for PSLE

P3 – P4

Leverage on Strengths and Work on Weaknesses

P1 – P2

Building on Foundation in Numeracy

STUDENT-CENTRIC LEARNING EXPERIENCES

❖ Students are actively-engaged in sense making through;

➢ Learning by Doing

➢ Learning by Teaching Others

➢ Learning by Interacting

➢ Learning by Inquiring

Various Formative Assessments

❖ Questioning / Exit Pass / Entrance Ticket/White Board/Worksheets
  - To check the understanding of concepts and skills in class during the daily classroom interactions.

❖ Maths Journal Writing
  - To check fluency in the use of Mathematical vocabulary and language and thinking processes.
  - To have a glimpse of our students' feelings about their learning in Mathematics.

Various Assessments

- ❖ Diagnostic Assessments

- ❖ Review Tests

- ❖ Performance Task

P1 Holistic Assessment Plan

Topics	Term 1	Term 2	Term 3	Term 4
Whole Numbers (65%) • Numbers to 100 • Addition • Subtraction • Numbers Showing Positions • Multiplication • Division	Diagnostic Assessment 1 • Numbers to 10 • Number Bonds Diagnostic Assessment 2 • Addition within 10 Diagnostic Assessment 3 • Subtraction within 10	Review Test 1 (10%) • Number to 20 • Addition and Subtraction within 20	Review Test 2 (10%) • Numbers to 40 • Addition and Subtraction within 40 Review Test 3 (25%) • Numbers to 100 (15%) • Addition and Subtraction within 100 (5%)	Review Test 4 (25%) • Multiplication and Division • Problem Sums on Whole Numbers
Measurement (30%) • Length • Money • Time		Performance Task 2 (10%) • Length		Review Test 5 (20%) • Money • Time
Data Analysis (5%) • Picture Graphs			• Picture Graph (5%)	
Geometry • Basic Shapes • Patterns		Performance Task 1 • Basic Shapes • Patterns		
Weighting (Total 100%)	0	20	35	45
Number of Weighted Assessments	0	2	2	2
On-going formative assessment practices and strategies used in class e.g. making explicit the learning targets and success criteria, providing descriptive feedback, allowing for self- and peer-assessment, and engaging students in goal setting and questioning				
Learning Skills and Work Habits: Motivation, Teamwork Communication Skills and Responsibility				

Diagnostic Assessments & Review Tests

❖ To check our students' mastery of the concepts and skills at the end of a unit of study.

❖ Pencil and Paper assessment to be completed in 30 to 45 minutes .

Diagnostic Assessments & Review Tests

Cross out the number that is greater.

37   32

Fill in the blanks.
  (a) 20 + 4 = _____
  (b) 40 = _____ tens _____ ones

Diagnostic Assessments & Review Tests

Ann has 12 stickers.
Betty has 7 more than her.
How many stickers does Betty have?

Betty has _____ stickers.

Performance Task

- Allows students to use the concrete materials provided to solve the questions and students make meaning to their learning through these experiences.

Performance Task

❖ involve making quick decisions for problem-solving and it tests some skills that can not be tested through the paper and pencil assessment.

Infusing Literature in Mathematics

- Use stories to arouse interest in learning Maths.

- Use stories to set the context for the learning of the concepts.

Infusing Literature in Mathematics

- Stories allow probing for ways in which the answers are found .

- Stories require inferential and evaluative comprehension in reading instruction.

- All numerical and one-word answers are supported with justification.
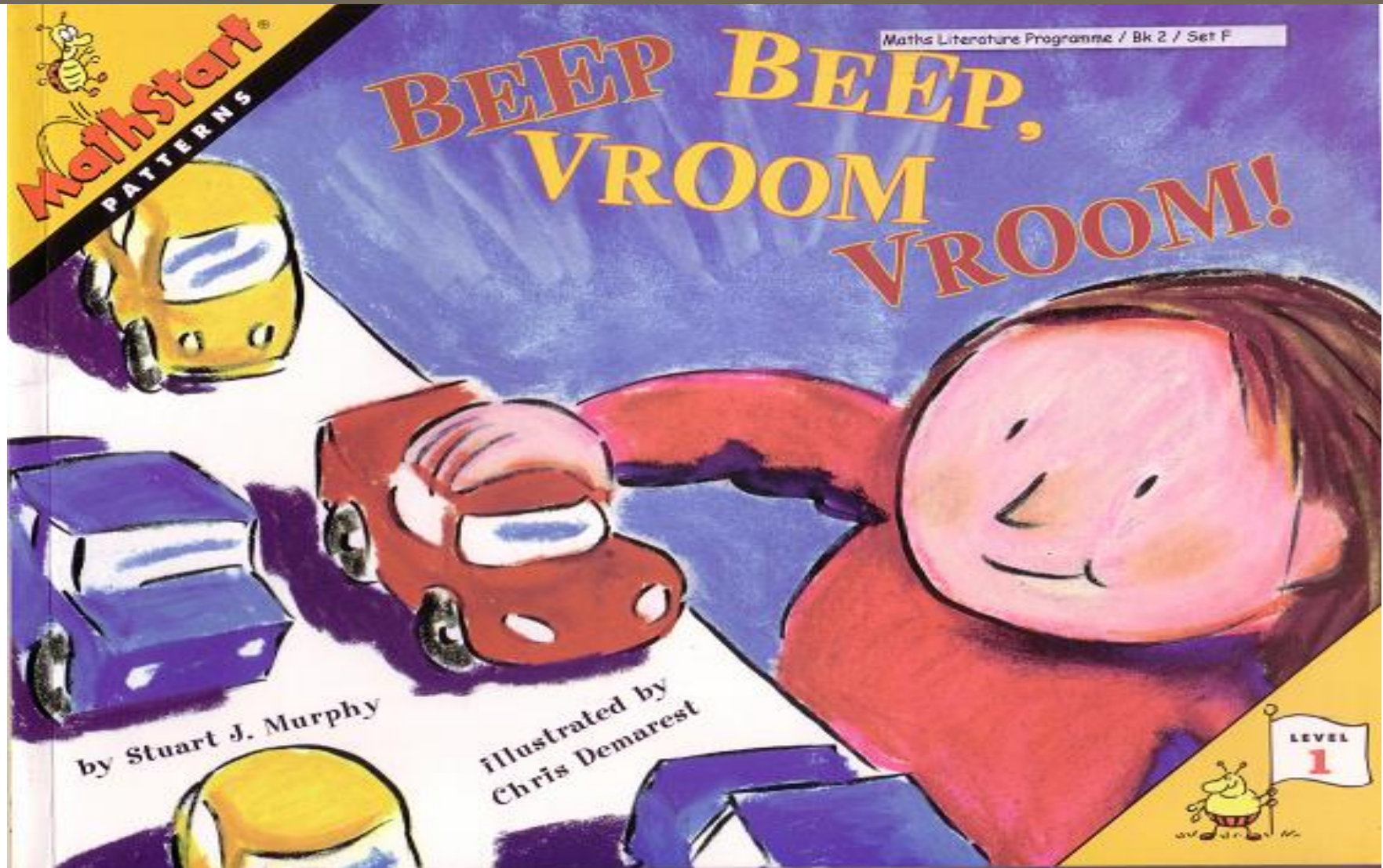
MATHS JOURNAL WRITING

- Develop students' metacognitive skills

- Monitor one's own thinking

- Self-regulate one's own learning

MATHS JOURNAL WRITING

- Gain insights and feedback about the Mathematical problem solving process.

- Provide great assessment technique for individuals and instructors.

P1 Learning Journey - TRIP TO THE ZOO

P1 MATH TRAIL - TRIP TO THE ZOO

Pit-stop 3 : Snakes

👁 **Look at the exhibits to find your answer.**

Activity 8

Circle your answer.

Which is longer?

The Reticulated Python or The King Cobra

How do you know?

_____

_____

Name a snake that is shorter than the King Cobra?

It is _____.

How do you know?

_____

P1 MATH TRAIL - TRIP TO THE ZOO

Pit-stop 4

👁 **Look at the information on the wall beside the sun bear exhibit.**
Activity 9 : "Bears of the world"
How many bears are there? _____ bears

Activity 11 : LEGS!
How many legs does each animal has?
• A flamingo has _____ legs.
• A gibbon has _____legs.
• A giraffe has _____legs.

Put on your thinking caps.
There are 3 flamingoes,2 gibbons and 1 giraffe.
How many legs are there altogether?

Checklists & Rubrics

FEEDBACK TO PARENTS

Punggol View Primary School
Primary 1 Mathematics (2013)
Review Test 3

Checklist

TOPICS and SIO	Question Number	☆	Need to revise
Counting to tell the number of objects in a given set	1		
Number notation, representations and place values (tens, ones)	4		
	7a		
	7b		
Reading and writing numbers in numerals and in words	2a		
	2b		
	3a		
	3b		
Comparing the number of objects in 2 or more sets	5a		
	5b		
Comparing two numbers with different tens or equal tens	6a		
	6b		
Finding missing numbers in a pattern (pattern in number sequence)	8a		
	8b		
Making greatest or smallest number from given digit	9		
Comparing and Ordering numbers	10a		
	10b		
	11a		
	11b		
	11c		

Punggol View Primary School
Mathematics
Performance Task 1
Ordinal Numbers and Position

20

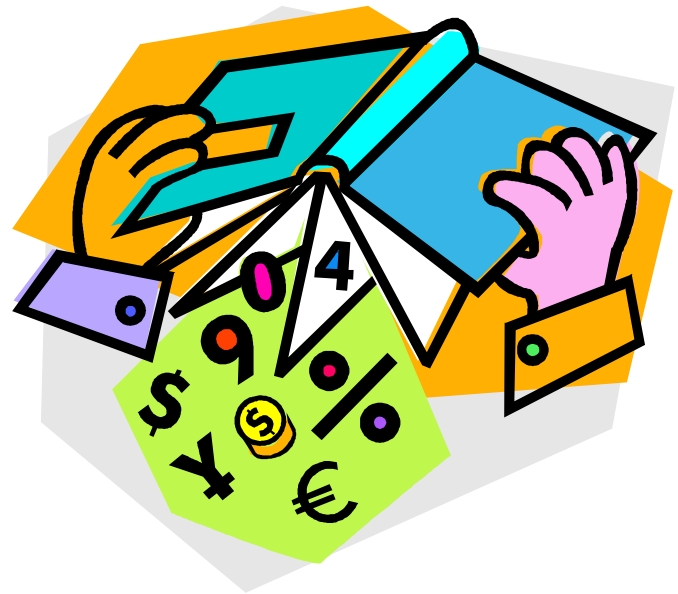Name: _____ (   )

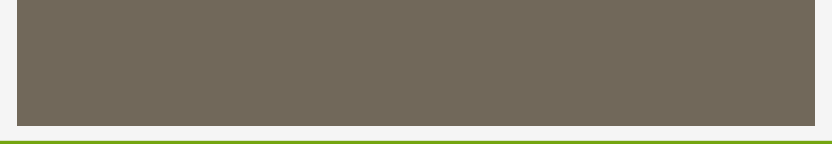Class: Primary 1 _____

Date: _____

Parent's
Signature:_____

Instruction to Candidates

1. Follow all the instructions clearly.

2. Do not turn over the page until you are told to do so.

3. Answer all the questions.

4. Do not take any of the items away with you.

Ordinal Numbers and Position			
Specific Instructional Objectives	Questions	Tick (✓)	
		*Yes ☺	No ☹
Use ordinal numbers to tell order and position	1a, 1b, 1c, 1d		
Use position words to name relative position	2a, 2b, 2c, 2d *(6 out of 8)		

I hear and I forget
I see and I remember
I do and I understand