

2022

Singapore Mathematics Advanced Program Syllabus

K2

Most Suitable Primary

Most suitable for K2 students , it is the fastest year for the development of children's thinking ability.

Class Format

Living class(up to 6).

Value

Master challenging knowledge in advance and gain more advantages than classmates in Primary 1.

March

Module	Chapter	Lesson	Knowledge
Geometry	Graphic Combination	T-puzzle	<ul style="list-style-type: none"> Identify square, parallelogram, right triangle, right-angled trapezoid and pentagon Identify the 2D shapes that make up a given figure Complete the puzzle
		Advanced T-puzzle	
		Tangram	
		Advanced Tangram	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Step-by-step Thinking Method
- Visuospatial Ability

Align with MOE Syllabus

Identifying the 2D shapes that make up a given figure

Align with Text Books

MY PALS ARE HERE 1A: Chapter 5 《Shapes and Patterns》
—Getting to know shapes

Module	Chapter	Lesson	Knowledge
Number and Operations	Addition and Subtraction within 10	Addition and Subtraction 1, 2	<ul style="list-style-type: none"> Add Using Number Lines Subtraction Using Number Lines Practice of Addition and Subtraction Continuous Addition Continuous Subtraction
		Addition and Subtraction 3, 4	
		Addition and Subtraction within 10	
		Continuous Addition or Subtraction	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Mapping Method
- Numeracy Skills

Align with MOE Syllabus

Relationship between Addition and Subtraction

Align with Text Books

MY PALS ARE HERE 1A: Chapter 3 《Addition within 10》
—Count on from the greater number
MY PALS ARE HERE 1A: Chapter 4 《Subtraction within 10》
—Subtract by counting back

Align with Math Olympiad

SMKC: Continuous Addition

April

Module	Chapter	Lesson	Knowledge
Number and Operations	Time and Money	Telling Time	<ul style="list-style-type: none"> The Hour and the Half Hour Counting Time Money Paying and Getting Change
		Counting Time	
		Money	
		Paying and Getting Change	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Mapping Method
- Inquiry Skills

Align with MOE Syllabus

Duration of one hour/half hour

Align with Text Books

MY PALS ARE HERE 1B: Chapter 16 《Time》
—Telling time to the hour
MY PALS ARE HERE 1B: Chapter 16 《Time》
—Telling time to the half hour
MY PALS ARE HERE 1B: Chapter 20 《Money》
—Getting to know our money
MY PALS ARE HERE 1B: Chapter 20 《Money》
—Tell the amount of money

Module	Chapter	Lesson	Knowledge
Number and Operations	Number Bonds	Number Bonds of 5, 6, 7	<ul style="list-style-type: none"> Concepts of Addition Concepts of Subtraction Making Addition Stories Making Subtraction Stories
		Number Bonds of 8, 9, 10	
		Addition with Graphics	
		Subtraction with Graphics	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Visual Thinking Method
- Numeracy Skills

Align with MOE Syllabus

Concepts of Addition and Subtraction

Align with Text Books

MY PALS ARE HERE 1A: Chapter 2 《Number Bonds》
—Making Number Bonds
MY PALS ARE HERE 1A: Chapter 3 《Addition within 10》
—Making Addition Stories
MY PALS ARE HERE 1A: Chapter 4 《Subtraction within 10》
—Making Subtraction Stories

May

Module	Chapter	Lesson	Knowledge
Computational Thinking	Sudoku	4x4 Sudoku	<ul style="list-style-type: none">• Unique Number Method• Row or Column Exclusion• Block Exclusion Method
		Advanced 4x4 Sudoku	
		Jigsaw Sudoku	
		Advanced Jigsaw Sudoku	

Chapter Test + Summary of Learning

HOTS (Higher Order Thinking Skills)	<ul style="list-style-type: none">• Method of Exclusion• Logical Thinking
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Align with Math Olympiad

GEP/SMKC: Logic Reasoning

Module	Chapter	Lesson	Knowledge
Computational Thinking	Patterns	Repeat Patterning	<ul style="list-style-type: none">• Repeat Patterning• Increasing Changes• Decreasing Changes• Mensa Graphics• Analogy
		Increasing or Decreasing Patterning	
		Reasoning Position	
		Analogy	

Chapter Test + Summary of Learning

HOTS (Higher Order Thinking Skills)	<ul style="list-style-type: none">• Inductive Reasoning• Logical Thinking
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Align with Text Books

MY PALS ARE HERE 1A: Chapter 5 《Shapes and Patterns》
——Making Patterns with Shapes

Align with Math Olympiad

GEP/SMKC: Looking for a Pattern

Termly Test

June

Module	Chapter	Lesson	Knowledge
Word Problems	Comparison	Comparing Numbers	<ul style="list-style-type: none"> • Comparison • Make Balance • Comparing Model
		Make Balance	
		More than and Less than	
		Comparing Model	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Mapping Method
- Inquiry Skills

Align with MOE Syllabus

Relationship between Addition and Subtraction

Align with Text Books

MY PALS ARE HERE 1A: Chapter 1 《Numbers to 10》
— Comparing Numbers

Align with Math Olympiad

GEP: Word Problems
SMKC: Comparison

Module	Chapter	Lesson	Knowledge
Word Problems	Basic Word Problems	Making Calculation Stories	<ul style="list-style-type: none"> • Making Calculation Stories • Word Problems with Addition • Word Problems with Subtraction • Square Matrix
		Basic Word Problems	
		Challenging Word Problems	
		Square Matrix Problems	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Visual Thinking Method
- Reading Comprehension

Align with MOE Syllabus

Use of “+”, “-” and “=”

Align with Text Books

MY PALS ARE HERE 1A:
Chapter 8 《Addition and Subtraction within 20》
— Solving Word Problems

Align with Math Olympiad

GEP/SMKC: Word Problems

July

Module	Chapter	Lesson	Knowledge
Computational Thinking	Visualising Numbers	Light Cross Puzzles	<ul style="list-style-type: none"> Analyze Special Numbers Analyze Overlap Locations Analyze Mutual Exclusion
		Advanced Light Cross Puzzles	
		Puzzle-Shikaku	
		Advanced Puzzle-Shikaku	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Hypothetical-deductive Method
- Visuospatial Ability

Align with Math Olympiad

GEP:Limit Analyze

Module	Chapter	Lesson	Knowledge
Number and Operations	Addition and Subtraction within 20	Number Bonds	<ul style="list-style-type: none"> Number Bonds Ones Addition Ones Subtraction Add by Making 10 Subtract from 10
		Addition and Subtraction without Regrouping	
		Addition with Regrouping	
		Subtraction with Regrouping	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Visual Thinking Method
- Numeracy Skills

Align with Text Books

MY PALS ARE HERE 1B:Chapter 17 《Numbers to 100》

— Counting to 100

MY PALS ARE HERE 1A:

Chapter 8 《Addition and Subtraction within 20》

—Add by making 10/ Subtract from 10

August

Module	Chapter	Lesson	Knowledge
Number and Operations	Tricks for Calculation within 20	Basic Addition Tricks	<ul style="list-style-type: none">• Make Tens• Regroup• Change Operation Order• Quick Calculation Skills
		Advanced Addition Tricks	
		Basic Subtraction Tricks	
		Advanced Subtraction Tricks	

Chapter Test + Summary of Learning

HOTS (Higher Order Thinking Skills)	<ul style="list-style-type: none">• Transform Thinking• Inquiry Skills
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Align with Math Olympiad

GEP: Make Tens

Module	Chapter	Lesson	Knowledge
Word Problems	Spatial Application	Queue Problems (1)	<ul style="list-style-type: none">• Application of Ordinal Numbers• Queue Problems• Path Planning• Compare Length• Operations Research
		Queue Problems (2)	
		Path Planning (1)	
		Path Planning (2)	

Chapter Test + Summary of Learning

HOTS (Higher Order Thinking Skills)	<ul style="list-style-type: none">• Visual Thinking Method• Visuospatial Ability
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Align with MOE Syllabus

Ordinal Numbers; Measuring Length

Align with Text Books

MY PALS ARE HERE 1A: Chapter 9 《Length》
——Measuring Length in Units

Align with Math Olympiad

GEP: Queue Problems
SMKC: Compare length; Operations Research

September

Module	Chapter	Lesson	Knowledge
Number and Operations	Understanding Multiplication and Division	Sharing Equally (1)	<ul style="list-style-type: none"> • Sharing Equally • Concepts of Multiplication • Adding the same number
		Sharing Equally (2)	
		Finding the Number of Equal Groups	
		Adding the Same Number	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Mapping Method
- Inquiry Skills

Align with MOE Syllabus

Concepts of multiplication and division

Align with Text Books

MY PALS ARE HERE 1B: Chapter 14《multiplication》
 — Adding the same number
 MY PALS ARE HERE 1B: Chapter 15《Division》
 — Sharing Equally
 MY PALS ARE HERE 1B: Chapter 15《Division》
 — Finding the number of equal groups

Module	Chapter	Lesson	Knowledge
Algebraic Thinking	Logical Reasoning	Univariate Equations (1)	<ul style="list-style-type: none"> • Addition Equations • Subtraction Equations • Part and Whole • Unit Substitution • Sharing Equally
		Univariate Equations (2)	
		Multivariate Equations (1)	
		Multivariate Equations (2)	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Transform Thinking
- Logical Thinking

Align with Math Olympiad

Solve by comparison and replacement

October

Module	Chapter	Lesson	Knowledge
Word Problem	Graphics Transformations	Area on a Grid (1)	<ul style="list-style-type: none">• Area Comparison• Make the Same Area• Working Backwards
		Area on a Grid (2)	
		Working Backwards (1)	
		Working Backwards (2)	

Chapter Test+Summary of Learning

HOTS (Higher Order Thinking Skills)	<ul style="list-style-type: none">• Transform Thinking• Inquiry Skills
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Align with MOE Syllabus

GEP:Working Backwards
SMKC:Area Comparison

Module	Chapter	Lesson	Knowledge
Computational Thinking	Number Patterns	Arithmetic Sequences	<ul style="list-style-type: none">• Arithmetic Sequences• Second Order Sequences• Fibonacci Sequences• Sequences and Positions• Expanded Number Bonds
		Mixed Sequences	
		Sequences and Positions	
		Expanded Number Bonds	

Chapter Test + Summary of Learning

HOTS (Higher Order Thinking Skills)	<ul style="list-style-type: none">• Inductive Reasoning• Logical Thinking
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Align with MOE Syllabus

Patterns in Number Sequences

Align with Text Books

MY PALS ARE HERE 1A: Chapter 7 《Numbers to 20》
— Making Number Patterns

Align with Math Olympiad

GEP:Patterns in Number Sequences
SMKC:Expanded Number Bonds

November

Module	Chapter	Lesson	Knowledge
Word Problems	Classic Application Questions	Tree Planting Problems	<ul style="list-style-type: none">• Tree Planting Problems• Plus 1 Model• Before and After• Difference of Ages• Sum of Ages
		Plus 1 Model	
		Age Problem (1)	
		Age Problem (2)	
Chapter Test + Summary of Learning			
HOTS (Higher Order Thinking Skills)		<ul style="list-style-type: none">• Visual Thinking Method• Reading Comprehension	
Align with MOE Syllabus			
GEP:Problems from planting trees-intervals;Age Problems			

Module	Chapter	Lesson	Knowledge
Algebraic Thinking	Equal and Unequal	Equal Substitution (1)	<ul style="list-style-type: none">• Barter• Complex Barter• Learn $<$ and $>$• Maximum Value Calculation
		Equal Substitution (2)	
		Understanding Inequality	
		Extrapolation Inequality	
Chapter Test + Summary of Learning			
HOTS (Higher Order Thinking Skills)		<ul style="list-style-type: none">• Holistic Approach• Logical Thinking	
Align with Math Olympiad			
GEP/SMKC:Solve by comparison and replacement			

December

Module	Chapter	Lesson	Knowledge
Geometry	Shape Change	Axial Symmetry	<ul style="list-style-type: none">• Axial Symmetry• Rotational Symmetry• Reorganize• Change Formula
		Rotational Symmetry	
		Matchstick Game (1)	
		Matchstick Game (2)	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Mapping Method
- Visuospatial Ability

Align with MOE Syllabus

Copying figures on dot grid or square grid

Align with Math Olympiad

GEP: Axial Symmetry; Rotational Symmetry
SMKC: Axial Symmetry

Module	Chapter	Lesson	Knowledge
Number and Operations	Odd and Even	Odd and Even Numbers	<ul style="list-style-type: none">• Odd and Even Numbers• Match Odd or Even Numbers• Look for Patterns• Application of Odd or Even Numbers• Keep Winning
		Odd Even Conversion	
		Look for Patterns	
		Strategic Games	

Chapter Test + Summary of Learning

HOTS
(Higher Order Thinking Skills)

- Transform Thinking
- Inquiry Skills

Align with Math Olympiad

GEP: Odd and Even

Final Test