MATHEMATICS
P3 Curriculum Briefing

Haig Girls' School

Vision

A community of <u>confident</u> and <u>motivated</u> pupils who are both **effective problem-solvers** and **team-players**.
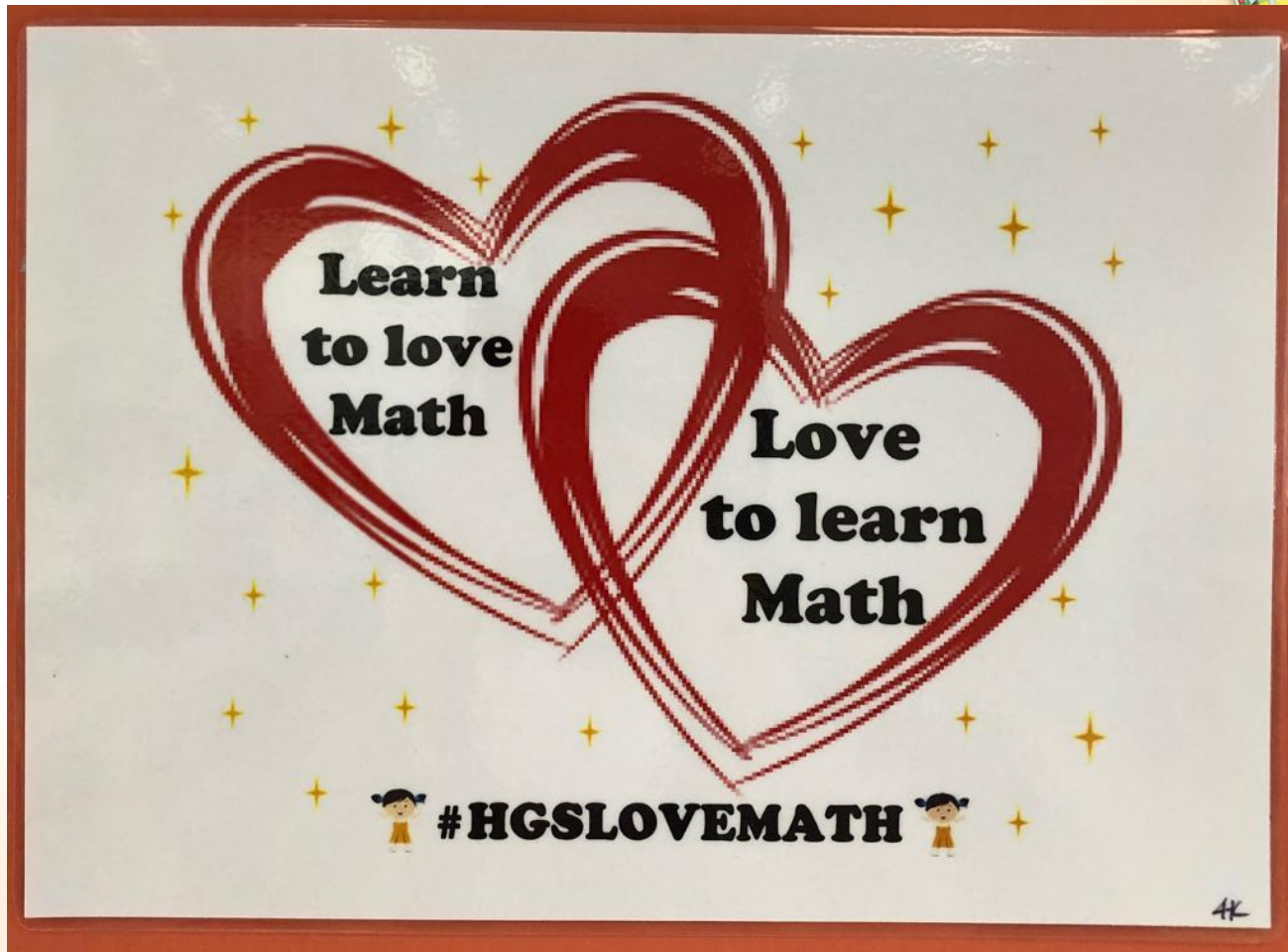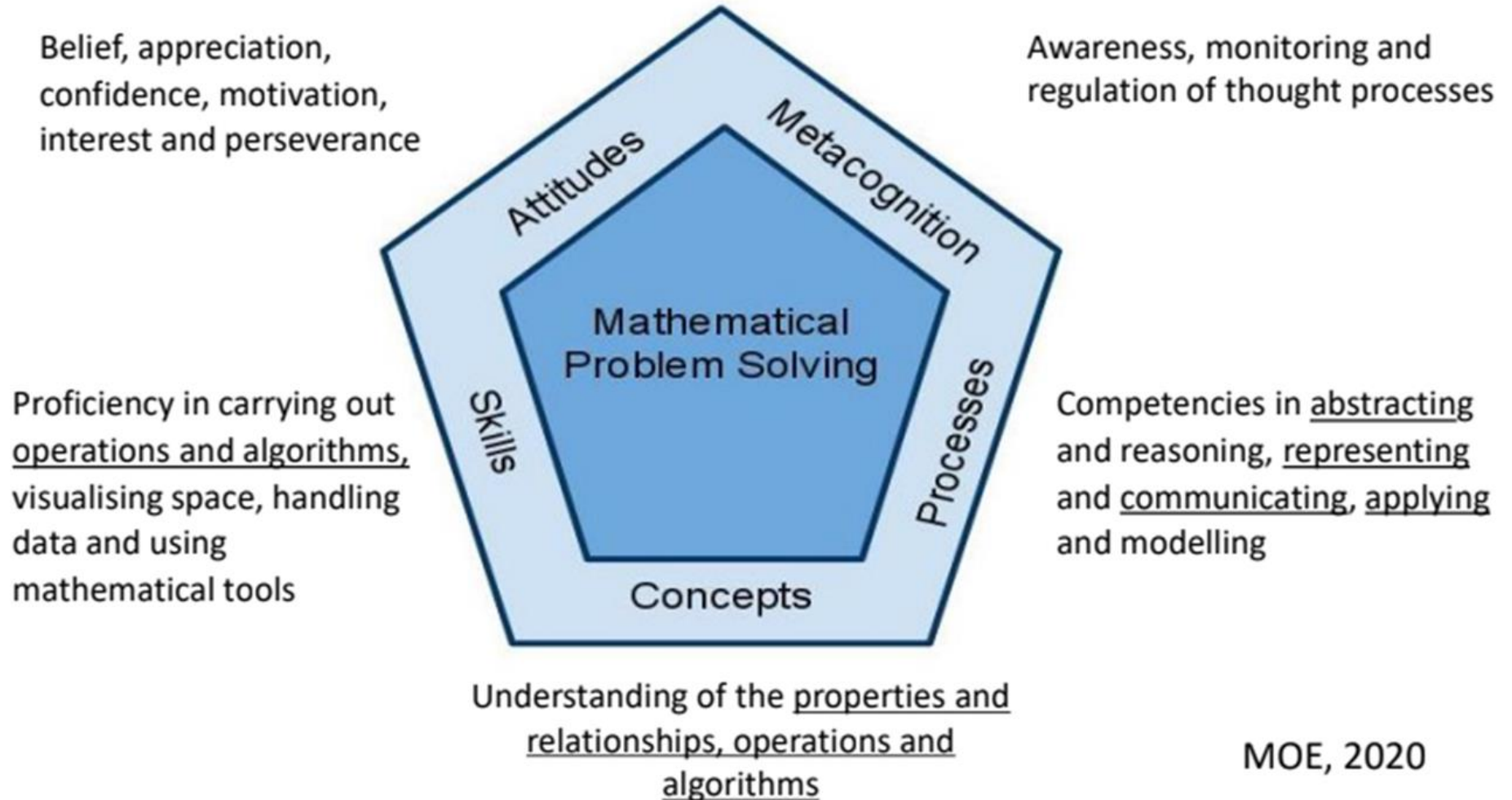
Mission

To equip pupils with the necessary mathematical <u>knowledge and skills</u> for **everyday life** and for **continuous learning** in mathematics and related disciplines.

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We hope our girls will...

Belief, appreciation, confidence, motivation, interest and perseverance

Awareness, monitoring and regulation of thought processes

Attitudes

Metacognition

Mathematical Problem Solving

Skills

Processes

Concepts

Proficiency in carrying out operations and algorithms, visualising space, handling data and using mathematical tools

Competencies in abstracting and reasoning, representing and communicating, applying and modelling

Understanding of the properties and relationships, operations and algorithms

MOE, 2020

2021 Primary Math Syllabus

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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

Spiral Approach in Math Curriculum
Concepts taught are built on concepts taught in previous years.

Topics	P 2	P 3
Whole Numbers	Numbers up to **1000** Addition & Subtraction Multiplication & Division	Numbers up to **10 000** Addition & Subtraction Multiplication & Division
Money	Comparing Converting	**Addition & Subtraction**
Measurement	Length Mass Time Volume	Length Mass Volume Time
Geometry	2-D Shapes 3-D Shapes	**Angles Perpendicular and Parallel lines Area and Perimeter (square and rectangle)**
Data Representation and Interpretation	Picture Graphs (with scales)	**Bar Graphs** (with scales)
Fractions	Fractions of a Whole Addition & Subtraction	**Equivalent Fractions** Addition & Subtraction

Mathematics Syllabus (MOE)

https://www.moe.gov.sg/primary/curriculum/syllabus

Primary school subjects and syllabuses

Primary school students will be introduced to subject-based learning where they will learn subjects such as languages, mathematics, science, art, music and social studies. Learn more about the syllabus taught in the classroom.

Subjects

Ask Jamie @ MOE
Ask about P1, S1, JAE, MK, DSA, RS, PSEA, School Fees, SCC

- 2021 Mathematics Syllabus (Primary 1 to 6) (starting with 2021 Primary One cohort)

- 2013 Mathematics Syllabus (Primary 1 to 6)

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Books and Materials Used

❖ *My Pals Are Here!* Pupil's Book 3A and 3B
❖ *My Pals Are Here!* Workbook 3A and 3B
❖ *My Pals Are Here!* Topical Tests
❖ P3 HGS Heuristics WS
❖ Math File (red folder)
❖ Math Bank Book

Problem Solving Heuristics
are general methods or strategies of achieving a solution to a given problem.

Whole School Heuristics Approach

No.	Heuristics	P1	P2	P3	P4	P5	P6
1	Model Drawing: Part and Whole	√	√	√	√		
2	Model Drawing: Comparison	√	√	√	√		
3	Model Drawing: Multiplication and Division		√	√			
4	Model Drawing: Before and After			√	√	√	√
5	Systematic Listing	√	√	√	√	√	√
6	Find a Pattern	√	√	√	√	√	√
7	Draw a Diagram	√					√
8	Restate The Problem					√	
9	Guess and Check			√	√	√	√
10	Working Backwards			√		√	√
11	Make an Assumption				√	√	√

Types of Assessments

When are pupils assessed?	Non-weighted Assessments	Weighted Assessments

Term 1 to 4	• Class activities
	• Math Practices
	  eg. Workbook
	     Test Book
	      Heuristics worksheets
	• Questioning and Feedbacks
	• Math Journal
	• Practice Papers
		<u>Term 2</u>
		• Weighted Assessment
		
		<u>Term 3</u>
		• Weighted Assessment
		
		<u>Term 4</u>
		• End-of Year Exam
		
		Question Types:
		MCQs, Fill in the Blanks and Word Problems
		
		* Dates and topics to be tested will be provided in the HA letters.

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Format for P3 Weighted Assessments

	Term 2 Weighted Assessment	Term 3 Weighted Assessment	Term 4 End-of-Year Exam
Duration	50 min	50 min	1h 45 min
Weightage	15%	15%	70%
Total Marks	30	30	80
Format: (No. of Questions)			
- MCQ	5	5	15
- Short- Answer Question	10	10	20
- Word Problem	5	5	6

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Common codes used during marking of Math questions/word problems

Codes	Representations
WM	Wrong method to arrive at the same answer
CC	Careless calculation (method is correct)
MU	Missing Units
ME	Missing Equation

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Some examples of how marking codes are used
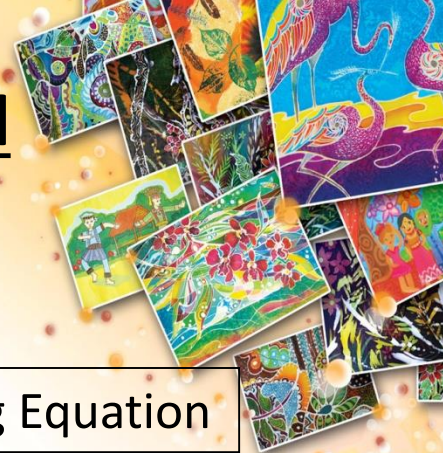
What was their total score?

```
   3 3 6
 +   4 2
   3 7 8

   3 7 8
 -   6 1
   3 1 7

   3⁷8
 + 3 1 7
 + 3 3 6
   1 0 3 1
```

Jane → 336 + 42 = 378) ME!

Peter → 378 - 61 = 317)

Total → 378 + 317 + 336)
         = 1031

Answer: 1031

Missing Equation

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(2) Farisha buys 17 hairclips.
     Sarah buys 3 more hairclips than Farisha.
     How many hairclips does Sarah buy?

Sarah → 17 + 3 = 19 X u
              (20)c

Sarah buys ___19X___ hairclips.
              (20)c

Careless Calculation

Lesson 4   Solving Word Problems: Additi

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Expectations of Our Students

- Listen and participate actively

- Be on task

- Be prepared

    - bring the necessary books

    - handing in work on time

- Ask when in doubt

- Take pride in her work

    - check through, neat handwriting

- Persevere – Keep Trying and Don't Give Up

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Neat and Clear Presentation of Mathematical Solutions

1. All mathematical equations to be written.
2. Models are to be labelled properly.
3. Workings to be shown and aligned on the right hand side of each page.

Kat bought 1345 balloons.

Dinah bought 2895 more balloons than Kat.

How many balloons did Dinah buy?

1345   **2895**

Kat

Dinah

Check!

?
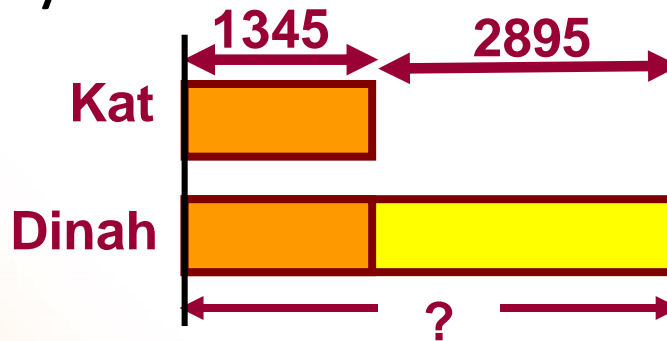
$$1345 + 2895 = 4240$$

Dinah's Balloons → 1345 + 2895 = 4240

Ans: 4240

How Parents Can Help

- Please ensure **school work** is completed **first**.

- Work and **communicate** closely with your child's Math Teacher.

- **Follow up** on homework daily
  - ask questions that guide without telling them the answer.

Prompt Further Thinking
- How do you know that …?
- What does this tell us about …?
- How can we explain …?
- What did you see / know ?
- What did you see/ know that makes you say so?

Probe Understanding
- Is it possible that …? Give examples
- What would happen if …?
- Why …?
- Why not …?

How Parents Can Help

- Train your child to show proper and detailed **working** steps.

- Encourage your child to **share** her **solutions** with you.

- Go through the **steps** in problem solving**.**

- Encourage her to **persevere**.

Mathematical Problem Solving Process

Understand
- C — (Circle) the numbers
- U — **Underline** the question
- B — **Box** the key words
- E — **Explain** and Write Notes

Plan
Choose a Strategy/Heuristics
- Model Method
- Find a Pattern
- Make a List
- Working Backwards
- Guess and Check
- Others

Solve
- Write number equations clearly
- Add, subtract, multiply, divide
- Use mathematical tools such as ruler, protractor and set-squares
- Apply formula

Check
- Have I answered the question?
- **S** : Standard Units of Measurement
- **T** : Transfer Error
- **A** : Accuracy
- **R** : Reasonableness
- Is there another way I can solve and check my answer?

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How Parents Can Help

- Ensure your child knows the **multiplication tables well especially 6, 7, 8 and 9**.

- **Relate** Math concepts to **daily life examples.** E.g mass of a packet of rice, cutting the pizza into equal parts is about fractions, 3D objects around us

- Provide a positive environment – **encourage** and **praise** your child's effort.

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