Nurturing a Holistic Thinker and Skilled Communicator in Mathematics
Our Math Department Vision
Every Saint, is a creative, self-directed problem-solver

Authentic

Creative

Holistic Thinker & Skilled Communicator

Analytical

Reflective

Confidence and Clarity

Learning Dispositions

Contextualised / Real-Life Experience

Boy-Friendly Strategies / MTV

Customised

Math Pedagogies

Embedded Values
SAJS
Signature Pedagogy
Teaching understanding of concepts through 3 representations

**E** Enactive
- Provide learning experiences through the use of concrete materials, manipulatives or hands-on activities.

**P** Pictorial
- Provide learning experiences with the use of visual medium: pictures, diagram, images, videos, etc to allow pupils to generate mathematical rules and regulations through questioning.

**A** Abstract
- Provide learning experiences for identification and application of problem-solving skills and strategies, as well as the explanation of concepts, giving examples and non-examples and justification for specific rules and solutions.
SAJS Problem-Solving Approach

- To promote cognitive and metacognitive process skills (HT skills) when applying problem-solving skills/heuristics
SAJS Problem Solving Approach

1. **Read and Understand**
   - Have I used **Structured Questioning**?
   - Have I used **chunking** to identify key information?
   - Can I restate the problem by drawing a picture or diagram to help me understand the problem?

2. **PLAN**
   - What **strategy or heuristics** can I use to solve the problem? *What makes you say that?*

3. **Carry out the Plan**
   - Did I label my steps?
   - Did I use the right mathematical symbols?
   - If I am stuck, do I have an **alternative method**? *What makes you say that?*

4. **Check**
   - Does the answer make sense?
   - Have I **check**ed for reasonableness and accuracy?
   - Have I checked for calculation errors?
   - Have I checked for transfer errors?
   - Have I transferred information correctly?
   - Have I included the correct standard units?
Key Areas of Focus

- Learning Experience in the Classroom
  - Activity-Based lesson (Manipulatives)
  - Use of Mini Whiteboards (Formative Assessment)
  - Math Vocabulary
  - Problem-Solving/Performance Tasks
  - Math Journal
Formative Assessment
(Use of Mini Whiteboard and Manipulatives)
Formative Assessment
(Use of traffic light cards)
Math Vocabulary

1 2

- 3

First we borrow from the tens
Then we subtract the ones to get the answer
NO!!!!... My mother says we must return when we borrow.
Mode of Assessment

Topical Reviews

Journal Writing

Performance Tasks

St Andrew’s Junior School
# P2 Holistic Assessment

<table>
<thead>
<tr>
<th>Mathematics</th>
<th>Term 1</th>
<th>Term 2</th>
<th>Term 3</th>
<th>Term 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Topical Review 1</td>
<td>Topical Review 2 Performance Task</td>
<td>Topical Review 3</td>
<td>SA2</td>
</tr>
<tr>
<td>Total</td>
<td>10%</td>
<td>25%</td>
<td>30%</td>
<td>35%</td>
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</table>
P2 End of Year Examination
Mathematics SA2 Paper
Duration: 1 h 30 min

<table>
<thead>
<tr>
<th>Section A: Multiple Choice Questions</th>
<th>Section B: Short Answer Questions</th>
<th>Section C: Structured / Long Answer Questions</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-28 Questions (1-2 mark each)</td>
<td></td>
<td>3-5 Questions (3-4 marks each)</td>
<td>50 Marks</td>
</tr>
</tbody>
</table>
Math Resources

My PALs Are Here! Textbooks

My PALs Are Here! Workbooks

School Designed Topical Worksheets

Mini-Whiteboard

Hands on Manipulatives

Files: Blue (Workbook) and Purple (School worksheets)
Ways we hope to partner you

Rigor

• Ensure daily practice
• Check their PO and class website
• Get child to explain concepts to you
Ways we hope to partner you

Presentation of Work (Neat and Organised)

• Ensure that there are proper steps and equations
• Ensure **proper filing** of Worksheets
• Ensure **corrections are complete** (with thorough checking)
1. Alvin scored 250 points in a game. Andrew scored 85 points more than him. How many points did Andrew score?

Alvin

Andrew

- 250
- +
- 85

Andrew scored 335 points.
Sample of Student’s Work

3. Benjamin sold 465 eggs on Monday. He sold 89 fewer eggs on Tuesday than on Monday. How many eggs did he sell on Tuesday?

Draw your own model

\[
\begin{align*}
\text{M} &: 465 \\
\text{T} &: 376
\end{align*}
\]

He sold 376 eggs on Tuesday.
Ways we hope to partner you

• Develop and prepare them the following skills
  ❖ Time Management
  ❖ Accuracy
  ❖ Mental Calculation
Thank you!