The New General Mathematics Primary 5 Pupil’s Book (PB) consists of 34 units. Each unit starts with a list of objectives, or commonly known as performance objectives (as listed in NERDC, 2013), that will be covered in each unit. In addition, the exercises in the PB have been carefully developed to ensure integration of the performance objectives from the curriculum, and a steady progression of skills throughout the year. It is important that you follow the order of the units, especially for related sub-topics, as units build on the knowledge and skills acquired in preceding units.

The units follow a ‘teach and practise’ approach:
• New concepts are explained and given context in their meaning.
• Worked-through examples show pupils how to approach problem solving.
• Exercises allow pupils to practise on their own.
• Revision exercises round off each unit as a mixed exercise covering all the problems addressed in the unit.

Summative assessment activities are provided at the end of every term in the form of Term assessments, along with a term project. These assessments test pupils on all the knowledge and skills they have gained in each term, and the projects enable the pupils to apply the work they have learnt in practice.

Additional features include:
• Key words: Key terminology is highlighted for the pupils. Definitions are given in the PB and in the Teacher’s Guide (TG).
• Puzzles: Additional problems, usual in a real-life context to help grow an appreciation of mathematics in everyday life.
• Challenges: extension problems for stronger pupils to attempt. These exercises generally extend the scope of content covered in each unit.
• Teaching notes: advice and ideas for teachers in dealing with the content on each page.

Features of the Teacher’s Guide
This New General Mathematics Primary 5 TG is lesson-based. The units of the PB are organised into a series of lessons. Units include most of the following features:
• The performance objectives from the curriculum that are covered in the unit.
• A list of suggested resources you will need
• Definitions for the key words in the PB, as well as some additional key words and their descriptions
• Frequently asked questions relating to teaching the unit’s content (not always applicable)
• Common errors pupils make (not always applicable)
• An evaluation guide showing the key learning milestones.

Each lesson includes the following:
• Preparation for the lesson (all the suggested resources) – remember, these can be tailor-made to suit the requirements of your classroom situation
• A starter activity, which helps you focus on the topic, or revise previous required knowledge
• Lesson focus, which suggests how you should teach the lesson, and the main strategies you can incorporate
• Answers to all exercises, puzzles and challenges in the PB and Workbook (WB)
• Assessment guidance on how to effectively assess pupils in each lesson
• Extension activities (not always applicable)
• Suggestions for homework activities, where necessary.

Note: The lesson-based guidelines are suggestions only. You, as the teacher, will need to assess how much your pupils are able to cover in each lesson.
Features of the Workbook

The New General Mathematics Primary 5 WB provides a worksheet for every unit in the PB. Pupils use these worksheets to practise the specific mathematical skills and concepts covered in each unit. It forms as a consolidation of the pupils' understanding and is a useful resource for homework assignments.

Pupils can record their answers and calculations in the spaces provided on each of the worksheets.

The answers to these worksheets are all provided in the TG.

Methodology

Mathematics teaching and learning goes beyond reaching the correct answer. Many mathematical problems have a range of possible answers. Pupils need to understand that Mathematics is a tool for solving problems in the real world; not just about giving the correct answers.

The Mathematics classroom must therefore provide an environment in which problem-solving is seen as integral to the teaching programme, and where learning activities are designed to provide pupils with opportunities to think.

Working mathematically involves:

- questioning
- applying strategies
- communicating
- reasoning
- reflecting.

Pupils will require some, or all of the above processes, to make sense of any mathematical concept.

Problem-solving strategies include:

- trial and improvement
- acting it out
- making a model
- drawing a diagram or picture
- looking for patterns
- working backwards (inverse operations)
- using tables and data
- making a list.

Primary level 5 focuses on reinforcing the first five strategies listed above, and then builds on the other strategies. Alongside developing these problem-solving strategies, it is important for pupils to gain specific mathematical knowledge as tools for problem-solving. At Primary level 5, these tools include:

- counting, reading and writing whole numbers in thousands and millions
- identifying prime numbers from 1 to 100
- changing fractions to decimals and decimals to percentages
- finding the ratios between numbers
- adding and subtracting 3 or more digit numbers, mixed fractions and decimal fractions, and by using number lines
- multiplying 3-digit by 3-digit numbers, by 0 and 1
- calculating squares and roots
- dividing whole numbers and decimals by 100 and 200
- working with open sentences
- converting currencies
- finding the perimeter and the circumferences of circles
- working with time and temperature
- calculating the area of right-angled triangles
- working with volume and capacity (cubes, cuboids, litres and cubic centimetres)
- working with the structure of the earth
- identifying parallel and perpendicular lines, and stating the properties of equilateral, isosceles and equilateral triangles
- working with the properties of 3-D shapes
- identifying the radius, diameter, and circumference of a circle
- collecting data and presenting it (tallies, finding the mean and mode).