Contents

Welcome Note

Dear Reading Champion,

Welcome to the programme! We are excited that you have chosen to impact children's lives by encouraging a love of reading through support in a school.

Nurturing strong foundational skills in mathematical problem-solving from an early age is vital not only for success in science, technology, engineering, and mathematics (STEM) fields but also for empowering everyday decisions through quantitative reasoning. The journey of acquiring mathematical skills unfolds through the profound interactive specialization of functional brain networks throughout development. This review embraces a systems neuroscience perspective to illuminate the neurodevelopmental pathways of mathematical learning, showcasing the remarkable functional brain architecture that underpins these processes and celebrating the diverse ways individuals achieve mastery in mathematics.

This manual is your guide to delivering exciting listening and reading opportunities and activities, as your first step to enticing children to become readers themselves.

Additionally, the manual supports your important work by including information on the responsibilities and the tools you need to manage Reading Aloud, Shared Reading, Paired Reading and Independent reading. Strategies for readers struggling with basic reading is also included.

Remember, you are not alone: an orientation workshop, a refresher workshop, and Community of Practice (COP) meetings all provide support, encouragement, and assistance to ensure your successful implementation of the reading programme. This includes instructions on how to find materials on the NECT website and on how to use digital sites.

Thank you for joining this necessary and exciting programme. Your efforts are valued.

We look forward to working with you!

Sincerely,

The Department of Basic Education

Overview of the Programme - Rationale for Maths Readers

- The statement "***<u>The problem with mathematics is English</u>***" reflects a powerful insight into one of ***the hidden barriers to learning mathematics - language comprehension***.
- While mathematics is often viewed as a ***universal subject based on numbers and logic, learners must still understand verbal instructions, word problems, and conceptual terms expressed*** in English (or another language of instruction).
- Many **mathematics problems are embedded in linguistically complex sentences**, which require learners to ***unpack meanings before applying mathematical reasoning***.

EXAMPLE

A learner might understand subtraction in a numerical context, but struggle when asked:

"How many more apples does Sam have than Thabo?"

This question demands comprehension of **comparative language** ("more than"), **context interpretation**, and **translation into a mathematical operation.**

If a learner is not proficient in English or is unfamiliar with the phrasing, their cognitive load shifts to decoding language, not solving the math.

Roles and Responsibilities

MATHEMATICS READING CHAMPION	DISTRICT OFFICIAL
KEY ROLE: A designated trained MRC to read mathematics texts aloud with: - meaning and comprehension - supporting learners in making sense of mathematics concepts through language. **KEY RESPONSIBILITIES:** • Pre-read mathematics texts aligned to the ATP before classroom instruction. • Read mathematical content aloud during lessons or small group activities to enhance access to meaning. • Identify and highlight key vocabulary, symbols, and operations for understanding. • Support struggling readers in peer-group settings using structured mathematics reading strategies that relate to the pedagogy of CPA • Liaise regularly with the class teacher or mentor to align mathematics reading activities with classroom goals.	**KEY ROLE**: System-level support providing oversight, training and guidance on the integration of mathematics reading strategies. **KEY RESPONSIBILITIES:** • Support school-level rollout and monitor MRC implementation across multiple schools. • Provide training to DHs and teachers on how to support mathematics reading in classrooms. • Evaluate the effectiveness of the programme through lesson observations and school visits. • Include mathematics reading practices in school development support and reviews. • Share best practices and successes across districts to encourage scaling.

DEPARTMENT HEAD	PRINCIPAL
KEY ROLE: • The implementation and oversight of the Mathematics Reading Champion initiative within the mathematics department. • Responsibilities: • Select suitable learners for each MRC in collaboration with teachers – identify those learners in need of support. • Ensure that weekly mathematics readings are aligned with the Annual Teaching Plan (ATP). • Monitor integration of MRC support into daily teaching routines.	**KEY ROLE:** • Enables whole-school support for the Mathematics Reading Champion initiative. • Responsibilities: • Provide formal endorsement and time allocation for MRC activities – ensure effective and efficient planning schedules within curriculum demands/limitations. • Allocate resources (e.g., DBE workbooks, reading corners, dictionaries) to support the initiative.

• Organize regular briefings or reflections with MRCs and teachers to assess progress and challenges. • Report on programme outcomes to the school management team.	• Promote the programme during staff briefings and encourage teacher buy-in. • Monitor implementation progress through SMT meetings and school improvement plans. • Celebrate learner participation and success in assemblies or parent meetings. • Incentivize progress

TEACHER MENTOR	LEARNER
KEY ROLE: • Capacity builder supporting teachers and MRCs to develop consistent reading strategies for mathematics learning based on differentiation principles – our learners are at different reading levels. • Key responsibilities: • Model the integration of mathematical reading into lessons • Coach MRC on how to scaffold vocabulary and language development in mathematics • Provide individual feedback to MRCs on their reading performance and learner impact. • Help develop mathematics reading prompts (visuals/pics plus words), vocabulary lists or comprehension tools for learners. • Support classroom-based monitoring of MRC effectiveness.	**KEY ROLE:** • Active participant in the learning process who benefits from and engages with mathematics reading. • Key responsibilities: • Listen attentively and engage with the Mathematics Reading Champion during sessions. • Ask clarifying questions about language, meaning and concepts during readings – ask to see pics as a clarifying/meaning tool • Collaborate willingly in group mathematics reading tasks, vocabulary activities or teaching sessions. • Respect the reading process and provide constructive feedback when appropriate. • Use reading support to build confidence in solving and interpreting mathematical problems. • Do not fake understanding through false information

Who is the MATHS READER?

The Mathematics Reader is a specially selected student/assistant/parent who supports classroom understanding by reading and unpacking mathematical language for learners who struggle with reading for meaning. Positioned as a bridge between words and meaning, the Mathematics Reader plays a crucial role in helping learners, especially those struggling with language, make sense of mathematics texts, symbols and vocabulary. They are not just a fluent reader, but a meaning-maker who prepares ahead of the class, familiarises themselves with the upcoming mathematics content and reads it one-on-one sessions, paired sessions or small group sessions in a clear, accessible manner.

The Mathematics Reader works closely with the teacher and follows the Annual Teaching Plan (ATP), often using the DBE workbook as the base text and catalyst for learning. Their task is not simply to pronounce words but to support learners in grasping the conceptual meaning behind the text/words explaining terms, highlighting key phrase, and encouraging mathematical thinking through guided reading. In this way, the Mathematics Reader becomes a vital tool for shifting classroom practice from procedural repetition to conceptual understanding, helping build a more inclusive, literate and mathematically confident classroom environment.

MATHS READER TRAINING

PURPOSE

The Mathematics Readers program is designed to support learners who struggle with reading by giving them a second opportunity to engage in mathematical texts before their teacher formally introduces the topic in class. The goal is to improve comprehension, confidence, and participation in mathematics lessons. In this program, selected learners will read the upcoming mathematics section a week in advance, guided by structured reading strategies. This pre-exposure allows them to familiarize themselves with key terminology, concepts, and problem-solving approaches without solving the problems or doing any computations. When the teacher later presents the material in class, these learners will hear it again for a second time, reinforcing their understanding and reducing cognitive overload.

Trained Mathematics Readers will:

- Learn how to break down mathematical text into manageable parts.
- Focus on understanding vocabulary, terminology, notation, and key ideas.
- Engage in discussions with learners to clarify difficult concepts.
- Build confidence in reading and comprehension before the classroom lesson.

By implementing Mathematics Readers, we provide struggling learners with a crucial support system, ensuring they are not left behind due to reading difficulties. This approach strengthens both literacy and mathematical thinking, ultimately leading to improved academic performance.

METHODOLOGY

The Mathematics Readers Program is a structured intervention aimed at supporting learners who struggle with reading, ensuring they can access and understand mathematical concepts before their formal instruction in class. The program follows a systematic approach that aligns with the Annual Teaching Plan (ATP) and utilizes the Department of Basic Education (DBE) workbook as the core reading resource. The methodology consists of four key phases: identification, weekly structured reading, resource utilization, and skills development for deep learning.

1. Identification of Learners Who Struggle with Reading

To ensure that the program effectively supports those in need, learners are identified through diagnostic assessments - Conducting reading and comprehension assessments to determine which learners struggle with mathematical texts. Teacher observations - teachers identify learners who show difficulty in reading word problems, instructions, or mathematical explanations.

2. Weekly structured reading based on the ATP

The program aligns with the school's Annual Teaching Plan (ATP) to ensure that learners pre-read the exact topics that will be covered in the following week's mathematics lessons. The process follows these steps - A Mathematics Reader session is conducted every day – each learner receives 30 minutes daily – taken out of class and engage with Mathematics Reader. Learners engage in guided reading of the DBE workbook and other mathematics texts related to the topic, ensuring that struggling learners receive targeted support. Key focus areas include mathematical terminology, notation, and word problem comprehension.

3. Using the DBE Workbook as the Primary Reading Resource

The DBE workbook serves as the foundational text for the program because:

- It is structured according to the curriculum and ATP (mostly at least), ensuring consistency.
- It provides graded exercises that progressively build understanding (teachers can add more worded problems additionally to the text.
- It includes real-life problem scenarios that improve application skills.

- It reinforces concepts through visual aids and step-by-step explanations.

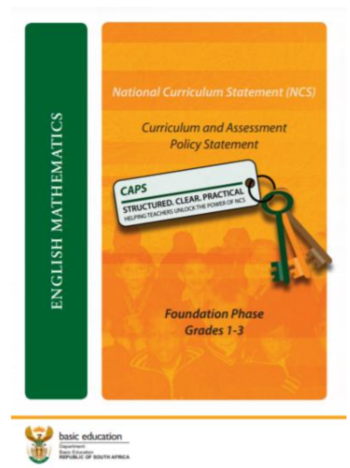
Learners acquire key skills to enhance their ability to read and extract important terms, ultimately fostering deep mathematical understanding. The training includes:

- Vocabulary development
- Identifying and understanding mathematical terminology.
- Using word maps and glossaries to reinforce meaning.
- Contextualizing terms within real-life mathematical problems.
- Comprehension Strategies

SCHEMA

POLICY

Mathematics is a language that makes use of symbols and notations for describing numerical, geometric and graphical relationships. It is a human activity that involves observing, representing and investigating patterns and qualitative relationships in physical and social phenomena and between mathematical objects themselves. It helps to develop mental processes that enhance logical and critical thinking, accuracy and problem-solving that will contribute to decision-making.



Mathematics Grade R-9 covers five content areas namely:

- Numbers, Operations and Relationships
- Patterns, Functions and Algebra
- Space and Shape (Geometry)
- Measurement and
- Data Handling.

Each content area contributes to the acquisition of specific skills.

ANNUAL TEACHING PLAN(ATP) FOR TERM 4 GRADE 3

TERM 4	WEEK 1 AND 2 END-LINE ASSESSMENT	WEEK 3 AND 4	WEEK 5 AND 6	WEEK 7 AND 8	WEEK 9 AND 10
CONTENT AREAS AND TOPICS	**NUMBERS, OPERATIONS AND RELATIONSHIPS**				
	Counting – integrated with number patterns and mental maths				
NUMBER CONCEPT DEVELOPMENT *Building number sense*	Count forwards and backwards in • 1s from any number between 0 to 700 • 10s, 5s and 2s, 3s, 4s and from any multiple of 10, 5, 2, 3, 4 between 0-700 and in • 20s, 25s, 50s, 100s to at least 1000 – use relationship between + and – – emphasise more than, less than – ascending and descending order	Count forwards and backwards in • 1s from any number between 0 to 800 • 10s, 5s and 2s, 3s, 4s and from any multiple of 10, 5, 2, 3, 4 between 0-800 and in • 20s, 25s, 50s, 100s to at least 1000 – use relationship between + and – – emphasise more than, less than – ascending and descending order	Count forwards and backwards in • 1s from any number between 0 to 900 • 10s, 5s and 2s, 3s, 4s and from any multiple of 10, 5, 2, 3, 4 between 0-900 and in • 20s, 25s, 50s, 100s to at least 1000 – use relationship between + and – – emphasise more than, less than – ascending and descending order	Count forwards and backwards in • 1s from any number between 0 to 1000 • 10s, 5s and 2s, 3s, 4s and from any multiple of 10, 5, 2, 3, 4 between 0-1000 • 20s, 25s, 50s, 100s to at least 1000 – use relationship between + and – – emphasise more than, less than – ascending and descending order	Count forwards and backwards in • 1s from any number between 0 to 1000 • 10s, 5s and 2s, 3s, 4s and from any multiple of 10, 5, 2, 3, 4 between 0-1000 • 20s, 25s, 50s, 100s to at least 1000 – use relationship between + and – – emphasise more than, less than – ascending and descending order
	Mental maths: number range 750. Ask quick maths questions to promote quick thinking. Calculation strategies: Put the big number first in order to count on or count back, number line, doubling or halving, build up or break down				
	• Order a given set of numbers • Compare numbers to 750 and say which is: 1, 2, 3, 4, 5, 10 more or 1, 2, 3, 4, 5, 10 less – use relationship between + and – – use relationship between × and ÷ • Rapid recall addition and subtraction facts to 30 • Add or subtract multiples of 10 from 0-100 • Multiplication and division facts for: – two times table up to 2×10 and 20÷ 2 – ten times table up to 10×10 and 100 ÷ 10	• Order a given set of numbers • Compare numbers to 800 and say which is: 1, 2, 3, 4, 5, 10 more or 1, 2, 3, 4, 5, 10 less – use relationship between + and – – use relationship between × and ÷ • Rapid recall addition and subtraction facts to 30 • Add or subtract multiples of 10 from 0-100 • Multiplication and division facts for: – two times table up to 2×10 and 20÷ 2 – ten times table up to 10×10 and 100 ÷ 10	• Order a given set of numbers • Compare numbers to 900 and say which is: 1, 2, 3, 4, 5, 10 more or 1, 2, 3, 4, 5, 10 less – use relationship between + and – – use relationship between × and ÷ • Rapid recall addition and subtraction facts to 30 • Add or subtract multiples of 10 from 0-100 • Multiplication and division facts for: – two times table up to 2×10 and 20÷ 2 – ten times table up to 10×10 and 100 ÷ 10	• Order a given set of numbers • Compare numbers to 1000 and say which is: 1, 2, 3, 4, 5, 10 more or 1, 2, 3, 4, 5, 10 less – use relationship between + and – – use relationship between × and ÷ • Rapid recall addition and subtraction facts to 30 • Add or subtract multiples of 10 from 0-100 • Multiplication and division facts for: – two times table up to 2×10 and 20÷ 2 – ten times table up to 10×10 and 100 ÷ 10	• Order a given set of numbers • Compare numbers to 1000 and say which is: 1, 2, 3, 4, 5, 10 more or 1, 2, 3, 4, 5, 10 less – use relationship between + and – – use relationship between × and ÷ • Rapid recall addition and subtraction facts to 30 • Add or subtract multiples of 10 from 0-100 • Multiplication and division facts for: – two times table up to 2×10 and 20÷ 2 – ten times table up to 10×10 and 100 ÷ 10
	Count objects reliably to 1000				
	• Count out concrete objects to 700 • Estimate, check by counting reliably up to 700 • Encourage group counting	• Count out concrete objects to 800 • Estimate, check by counting reliably up to 800 • Encourage group counting	• Count out concrete objects to 900 • Estimate, check by counting reliably up to 900 • Encourage group counting	• Count out concrete objects to 1000 • Estimate, check by counting reliably up to 1000 • Encourage group counting	• Count out concrete objects to 1000 • Estimate, check by counting reliably up to 1000 • Encourage group counting
	Number symbols and number names				
	• Recognise, identify, read number symbols up to 1000 • Write number symbols and number names to 0-1000				
	Describe, compare and order numbers to 999				
	• Describe and compare numbers to 700 – smaller than, greater than • Describe and order numbers from smallest to greatest and greatest to smallest	• Describe and compare numbers to 800 – smaller than, greater than • Describe and order numbers from smallest to greatest and greatest to smallest	• Describe and compare numbers to 900 – smaller than, greater than • Describe and order numbers from smallest greatest and greatest to smallest	• Describe and compare numbers to 999 – smaller than, greater than • Describe and order numbers from smallest to greatest and greatest to smallest	• Describe and compare numbers to 999 – smaller than, greater than • Describe and order numbers from smallest to greatest and greatest to smallest

TERM 4	WEEK 1 AND 2 END-LINE ASSESSMENT	WEEK 3 AND 4	WEEK 5 AND 6	WEEK 7 AND 8	WEEK 9 AND 10
CONTENT AREAS AND TOPICS	**Place value**: Recognise place value of numbers to **999**				
	• Know what each digit represents • Decompose two-digit numbers up to 700 into multiples of hundreds, tens and ones up to 700 • Identify and state the value of each digit		• Know what each digit represents • Decompose two-digit numbers up to 900 into multiples of hundreds, tens and ones up to 900 • Identify and state the value of each digit	• Identify and state the value of each digit	• Know what each digit represents • Decompose two-digit numbers up to 999 into multiples of hundreds, tens and ones up to 999 • Identify and state the value of each digit
NUMBER CONCEPT DEVELOPMENT *Building number sense*	**Solve Problems** in context up to 999 – building up and breaking down, doubling and halving, number lines, rounding off in tens; *See pp. 79-80 in CAPS for problem types.*				
	• Solve problems in context and explain solutions – repeated addition leading to multiplication – equal grouping and sharing leading to division that may include remainders. – sharing leading to fractions	• Solve problems in context and explain solutions – addition and subtraction with 3 -digit numbers – repeated addition leading to multiplication – equal grouping and sharing leading to division that may include remainders. • Solve money problems involving totals & change	• Solve problems in context and explain solutions – sharing leading to fractions • Solve money problems involving totals & change	• Solve problems in context and explain solutions – equal grouping and sharing leading to division that may include remainders.	• Solve money problems involving totals & change • Solve problems in context and explain solutions
	Calculations (context-free): Building up and breaking down, doubling and halving, number lines, rounding off in tens				
	• Practise number bonds to 30 • Multiply 1-10 by 2 and 5 to 100 (×, □, =) • Divide numbers to 99 by 2, 5, 10 (÷, □, =)	• Addition and subtraction to 900 (+, -, =, □) • Practise number bonds to 30 • Multiply 1-10 by 2 and 5 to 100 (×, □, =) • Divide numbers to 99 by 2, 5, 10 (÷, □, =)	• Addition and subtraction to 999 (+, -, =, □) • Practise number bonds to 30 • Multiply 1-10 by 2 and 5 to 100 (×, □, =) • Divide numbers to 99 by 2, 5, 10 (÷, □, =)	• Addition and subtraction to 999 (+, -, =, □) • Practise number bonds to 30 • Multiply 1-10 by 2 and 5 to 100 (×, □, =) • Divide numbers to 99 by 2, 5, 10 (÷, □, =)	• Addition and subtraction to 999 (+, -, =, □) • Practise number bonds to 30 • Multiply 1-10 by 2 and 5 to 100 (×, □, =) • Divide numbers to 99 by 2, 5, 10 (÷, □, =)
	Fractions				
	• Use, name unitary fractions and non-unitary fractions $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}, \frac{1}{6}, \frac{1}{8}, \frac{3}{4}, \frac{2}{5}, \frac{2}{4}$, etc. and note that $\frac{2}{4} = \frac{1}{2}$ and $\frac{4}{4}$ and $\frac{3}{3}$ = 1 whole • Recognise fractions in diagrammatic form		• Use, name unitary fractions and non-unitary fractions $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}, \frac{1}{6}, \frac{1}{8}, \frac{3}{4}, \frac{2}{5}, \frac{2}{4}$, etc. and note that $\frac{2}{4} = \frac{1}{2}$ and $\frac{4}{4}$ and $\frac{3}{3}$ = 1 whole • Recognise fractions in diagrammatic form		• Use, name unitary fractions and non-unitary fractions $\frac{1}{2}, \frac{1}{4}, \frac{1}{3}, \frac{1}{5}, \frac{1}{6}, \frac{1}{8}, \frac{3}{4}, \frac{2}{5}, \frac{2}{4}$, etc. and note that $\frac{2}{4} = \frac{1}{2}$ and $\frac{4}{4}$ and $\frac{3}{3}$ = 1 whole • Recognise fractions in diagrammatic form
	MEASUREMENT		**SPACE AND SHAPE**	**MEASUREMENT**	
	Telling time • Read dates on calendars, place birthdays on calendars • Use calendars to calculate the length of time in days and weeks, convert between days and weeks, convert between weeks and months		**Language of position and views** **DATA HANDLING** Analyse data from representations provided	**Length, Mass, Capacity – practise more problem solving using formal units of measuring**	
PREVIOUS KNOWLEDGE	• Count in multiples up to 700 • Compare and order objects and numbers up to 700 • Solve grouping and sharing to 75 • Number names 0-700 • Place value hundreds, tens and ones • Solve number problems in context and context free involving addition and subtraction up to 700 • Division up to 70 (with and without remainders)	• Count, compare and order objects and numbers up to 700 • Solve grouping and sharing problems in context and context free leading to division up to 75 • Recognise fractions in diagram and fraction wall • Practise number bonds to 20 • Multiply numbers 1 to 10 by 2, 5, 3, 4 (×, =, □) up to 80 • How to build the fraction wall	• Count, compare and order objects and numbers up to 800 • Place value: Hundreds, tens and ones up to 800 • Solve repeated addition problems in context leading to multiplication with answers up to 80 • Practise number bonds to 20 • Unitary and non-unitary fractions 1 half = 2 quarters	• Count, compare and order objects and numbers up to 800 using smaller than, greater than, more than, less than, equal to • Solve number problems in context and context free involving addition and subtraction up to 600 • Solve money problems • Work with halves and whole in fractions	• Add and subtract 3-digit numbers • Problem solving • Check multiplication using multiplication • Number bonds to 30 • Link counting in multiples to multiplication • Can tell analogue and digital time • Unitary and non-unitary fractions link to division

UNDERSTANDING AND BUILDING ON THE PREVIOUS(PRIOR) KNOWLEDGE

Learning is a dynamic process of connecting new information with what is already known (Vygotsky, 1978). Effective teaching involves facilitating these connections by recognising, understanding, and strategically building on the prior knowledge of each learner.

DBE WORKBOOK WORKSHEET REFERENCE ON THE ATP

TERM 4	WEEK 1 AND 2 END-LINE ASSESSMENT	WEEK 3 AND 4	WEEK 5 AND 6	WEEK 7 AND 8	WEEK 9 AND 10
SUGGESTED DBE WORKBOOK ACTIVITIES	DBE workbook 2 practice activities – Measuring using a ruler – working in centimetres – Problem solving, pp. 68-69 – Number 700-800, count and write – missing number patterns of 10,5,2, number line, smallest to biggest, etc. pp. 70-71 – Addition using flard cards and base ten blocks, number line, more than, less than, is equal to, number names, pp. 72-73 – Problem solving: Weighing things, pp. 78-79 – Problem solving: Baking day, pg. 88 – Weighing objects, problem solving pp. 80-81 – Equal parts of a whole: fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ solving problems, pp. 120-121 – More fraction problems, pp. 122-123	DBE workbook 2 practice activities – Problem solving: Watering the garden pg. 89 – Money, counting coins and notes, problem solving, pp. 90-91 – More addition and subtraction problem solving, pp. 92-93 – Number patterns: 10s up to 900, linking with groups of 10 and to patterns of 10 and multiplication, pp. 98-99 – Number patterns: 5s up to 1000, counting in 5s, noting the patterns circled and shaded, adding and subtracting five, pg. 104 – Rounding off to nearest 10, number line and solving problems, pp. 100-101 – Multiplication and division input and output diagrams, grids, break down method for division and solve problems to 100, pp.102-103	DBE workbook 2 practice activities – Numbers 800-900 count and write – missing numbers, patterns of 10, 5, 2, number line – Smallest to biggest, etc. pp. 74-75 – Addition using flard cards and base ten blocks, number line, more than, less than, is equal to, number names, pp. 76-77 – Addition and subtraction to 999 doubling numbers, adding, 125 pg. 94 – Fill in the missing numbers – complete patterns of 5 and describing it, pg. 105 – Number patterns in 2s up to 900, link to adding 2 and subtracting 2, link to odd and even numbers and solving problems, pp. 108-109 – Number patterns in 3s up to 1000, number chart with patterns, completing the patterns, adding and subtracting 3, pp. 114-115 – 3D objects: features, pp. 124-125	DBE workbook 2 practice activities – Numbers 900-1000 number board, number grids in 10, 5, 2, base ten blocks, number line, smallest to biggest, biggest to smallest, pp. 82-83 – Addition using flard cards and base ten blocks, number line, more than, less than, is equal to, number names, pp. 84-85 – Addition and subtraction to 999 base ten blocks, using doubles, near doubles problem solving, pp. 86-87 – More about symmetry, pp. 106-107 – Number patterns in 4s up to 1000, number chart with patterns, completing the patterns, adding and subtracting 4, pp. 118-119 – More fractions: Fraction wall, solve problems, pp.126-127 – More grouping and sharing: Quick calculations dividing by 3, 4, 5, 2, 10, pp. 128-129	DBE workbook 2 practice activities – What makes 1000? Addition and subtraction, add and take away 10s and 100s, pg. 95 – Measurement puzzles: pp. 96-97 – Multiplication and division: 2s to 100, grid for ×2, break down method, solving problems, pp. 110-111 – Multiplication and division: 3s to 100, grid for ×2, break down method, solving problems, pp. 112-113 – Multiplication and division: 4s to 100, grid for ×4, break down method, solving problems, pp. 116-117 – Tangram fraction: solving problems, pp. 130-131 – Measuring capacity, grids adding $\frac{1}{4}$, making a litre, how many ml, $\frac{1}{2}$, $\frac{1}{4}$, litres, pp. 132-135

STRUCTURED PLANNING OF THE ATP: WEEKLY FOCUS

EXEMPLAR GRADE 3 TERM 4 WEEK 2 DAY 7:

NECT RECOVERY PLANNER & TRACKERS - Link: https://www.nect.org.za/teachers/#

Week 2				
Day	**ATP content, concepts, skills**	**DBE workbook**	**Resources**	**Date**
6	Numbers up to 999 – rounding off to tens	Bk 2 Worksheet 112 (pp. 100, 101)	Whiteboards/scrap paper.	
7	Addition and subtraction – building up and breaking down	Bk 2 Worksheet 103 (pp. 82, 83)	Base ten blocks (see Printable Resources Term 1)	
8	Addition and subtraction – building up and breaking down	Bk 2 Worksheet 104 (pp. 84, 85)	Base ten blocks (see Printable Resources Term 1	
9	Addition using doubles Addition using near doubles	Bk 2 Worksheet 105 (p. 86, 87)	Base ten blocks (see Printable Resources Term 1)	
10	Complete and consolidate the week's assessment and work			

DBE WORKBOOK PAGES TO BE READ During WEEK 1 BEFORE WEEK 2

All these worksheets and problems text MUST/SHOULD be read to emergent or struggling learners.

The hardest part of any word problem is deciding which operation to use. There can be so many details included in a word problem that the question being asked gets lost in the whole situation. Taking time to identify what is important, and what is not, is essential. Remember, if you don't know what is being asked, it will be very difficult to know if you have a reasonable answer.

Reading

1. Read the worksheet to the learners. (I read)
2. Read the worksheet with the learners. (We read)
3. Let learners Read the worksheet until they read it fluently. (You read)
4. Underline the numbers and words.

Concrete

5. Let learners reproduce the story with manipulatives

Pictorial

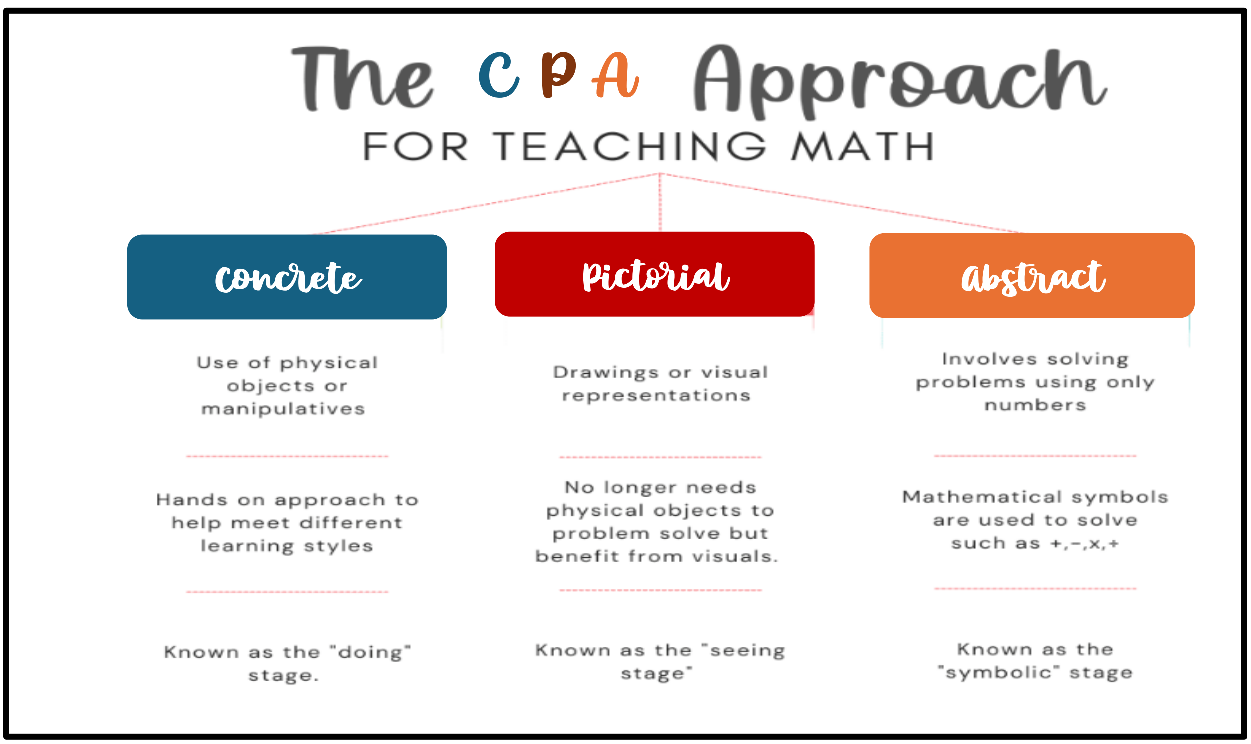
6. Let learners reproduce the story using a representation such as a *diagram/drawing/word(s)* as per their manipulative/s

Abstract

7. Let learners reproduce the story in writing using symbols

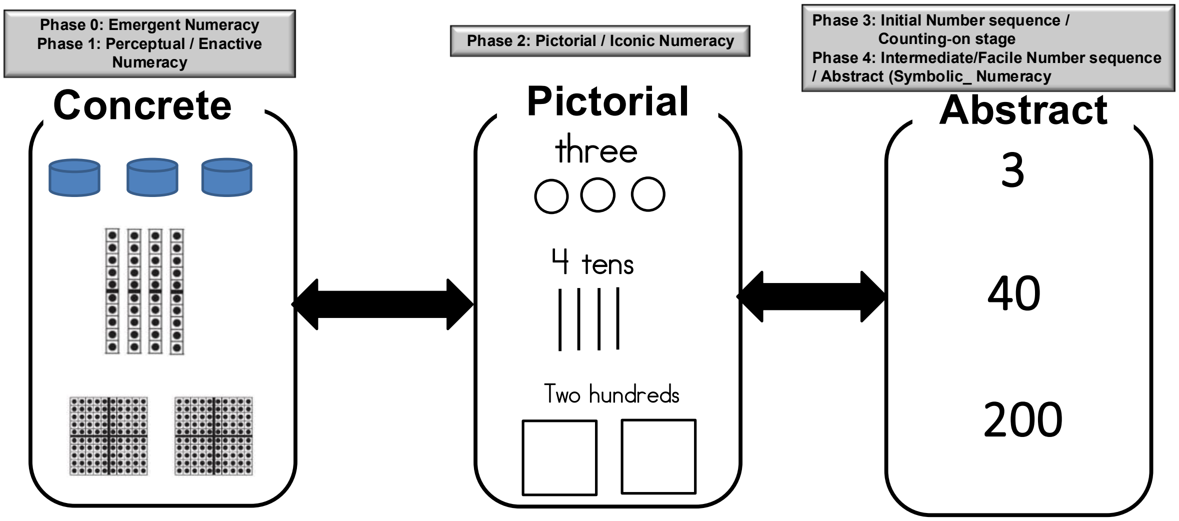
- **Break down complex word problems into understandable parts.**
- **Explain vocabulary using visuals or real-world examples.**
- **Help learners link words to operations (e.g., "altogether" → addition).**
- **Emphasize reasoning over rote.**

UNDERSTANDING THE CPA APPROACH



PHASE ON NUMERATE LEARNING

CPA means concrete, pictorial and abstract.

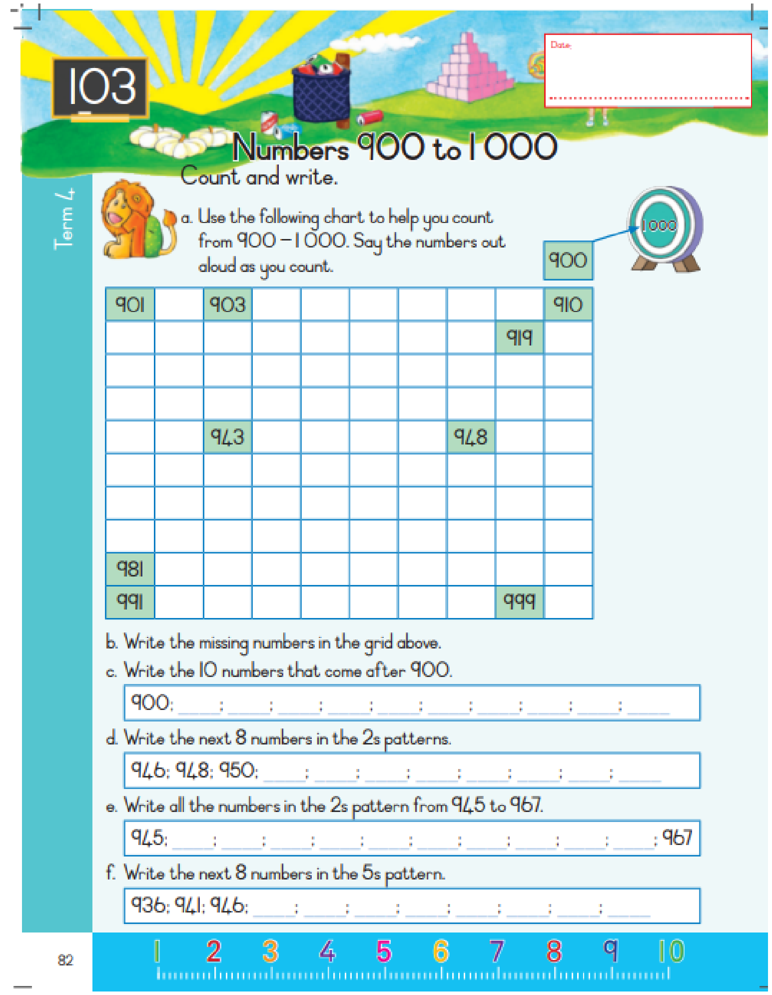


Why are MATHEMATICS READERS important?

- Mathematics is a language of precision, and many learners struggle to decode it.
- Misunderstanding terms like "more than", "difference", or "product" affects problem-solving.
- A Mathematics Reader bridges this gap by clarifying vocabulary and structure.

EXEMPLAR LESSON

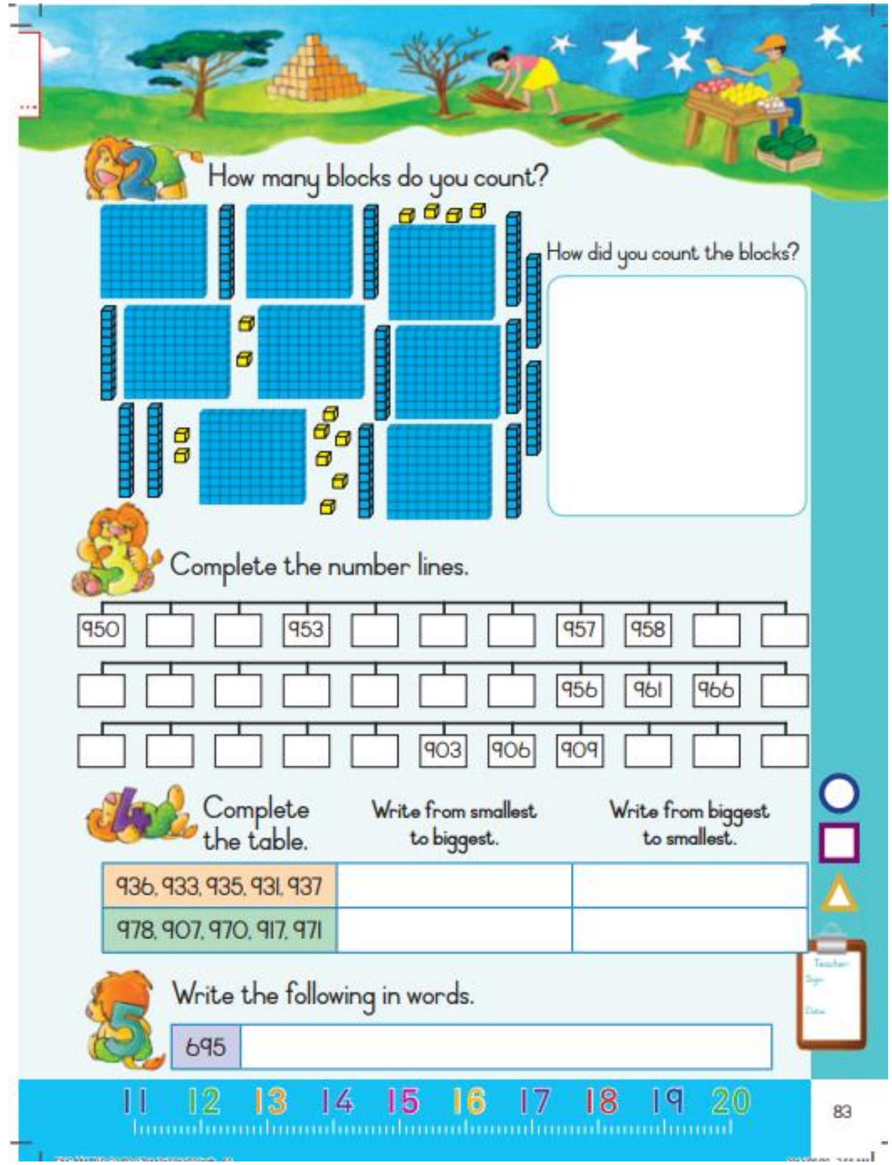
Decoding: Recognize and interpret text to derive meaning.	
Active Reading: Engage actively with the text. *(I read, We Read, You read)*	
Vocabulary and Language Skills: Understand word meanings.	
Critical Thinking: Analyze and evaluate the text.	
Focus and Concentration: Stay attentive while reading.	
Purposeful Reading: Read with a specific goal in mind.	
Visualisation: Create mental images based on the text. (use CPA Approach Concrete, Pictorial, Abstract)	
Decoding: Recognize and interpret text to derive meaning.	



901		903							910
								919	
		943					948		
981									
991								999	

Match the questions to the strategies below:

1. What do you see on the worksheet?
2. What do you think the worksheet is about?
3. How do you know it is about__? And why?
4. Identify all the words that are the same
5. Identify all pictures / symbols that are the same?
6. Why are these the same?
7. Can you show me ____ (number name, number symbol, shape, a word that means…etc.)
8. At home have you seen…?
9. Do you think…
10. Do you agree with…
11. In your view…
12. How does the symbol___ relate to the word___?



LINK : https://www.education.gov.za/Home

Obtaining, Using and Managing Reading Resources

DBE WORKBOOK

- Covered with plastic
- Use a pencil to write in

MAKING A WHITEBOARD

- Plastic sleeve or plastic
- White paper
- Sellotape

Drawing a blank number line on the chalkboard

- Use a mixture of sugar and water
- Soak the chalk in the sugar solution
- Use the soaked chalk to draw on the chalk board

Alternative to UNIFIX BLOCKS/COUNTERs

- Bottle Tops

DBE workbook page reference for resources:

Book 1

TOPIC	Grade 1 – Book 1	Grade 2 – Book 1	Grade 3 – Book 1	Notes
Fraction wall	Pages 98–100 (under "Doubling and halving" and "Shapes")	Grade 2: Pages 132–134 (Halves, sharing 20–50)	Grade 3 : Pages 16, 72, 128–132 (multiple Lesson on fractions)	Not in cut-outs but in WORKSHEETS
Flard Card			Cut Out Pg 143-144	
Dice	Cut Out Pg 141 and 142			
Tangram			Cut Out Page 130	G3 has 'Tangram fractions'
Number sense	Page 5: Simple number sentences are introduced with visual prompts (e.g., "2 + 3 = ___"). Pages 90–96: Focused lessons on addition and subtraction sentences up to 10, including: Page 90: Adding Page 94: Addition to 10: counting on Page 96: Addition: building and breaking to 10 .	Page 10: Addition and subtraction – includes structured number sentences like "6 + 5 =". Page 46: Addition – more complex number sentence practice begins. Pages 50–54: Continued practice with number sentences in money and addition contexts	Page 3: Learners write addition number sentences with visuals. Page 5: Transition from addition to multiplication as number sentences. Page 12: Addition and subtraction – writing five number sentences with the same result. Pages 38–44: Adding on number lines; structured as number sentences. Page 90: Solve it! – applying number sentences to solve problems	

Book 2

TOPIC	GRADE 1 – BOOK 2	GRADE 2 – BOOK 2	GRADE 3 – BOOK 2	NOTES
Fraction wall		Page 56	Page 54	
Tangram			Cut Out Page 137	G3 has 'Tangram fractions'
Number Concept	Number Ranges and Patterns Numbers 500 to 600 – Page 2 More numbers 500 to 600 – Page 4 Numbers 600 to 700 – Page 6 Numbers 650 to 750 – Page 12 Numbers 700 to 750 – Page 14 Numbers 700 to 800 – Page 70 Numbers 800 to 900 – Page 74 Numbers 900 to 1000 – Page 82	Numbers and Place Value Numbers 50 to 99 – Page 2 Numbers 100 to 150 – Page 4 Numbers 150 to 170 – Page 10 Numbers 170 to 200 – Page 74 Numbers 0 to 200 – Page 78 Numbers and Place Value – Page 62	Understand Number 11–15 Understand number 11 – Page 2 Understand number 12 – Page 4 Understand number 13 – Page 6 Understand number 14 – Page 8 Understand number 15 – Page 10	

WHEN YOU GET TO SCHOOL

Before receiving training, please take the following steps at your assigned school:

- ✓ Conduct an inventory of availability of the DBE Workbooks.
- ✓ Familiarize yourself with the school's layout, timetable, number of learners, and languages offered.
- ✓ Check for availability of other Maths resources (Maths Kit, Worksheets).
- ✓ Work with the Department Head to create the Maths Reader opportunities on the timetable- **HINT:** Maths periods.
- ✓ Meet your Teacher Mentors.
- ✓ Engage with community stakeholders through the principal or School Management Team (SMT) to share/orientate about the programme.

IMPLEMENTATION

The implementation of a Mathematics Reader programme is a structured process aimed at improving learners' conceptual understanding of mathematics through targeted support in reading mathematical language. The following steps outline the key stages of implementation:

1) Programme orientation and stakeholder buy-in - engage key stakeholders (principal, HODs, teachers and district officials) to explain the purpose and benefits of the Mathematics Reader initiative. Secure school leadership endorsement and integration into school improvement plans. Identify a coordinator or teacher mentor to lead the programme at school level.
2) Selection of Mathematics Readers - Identify students/assistants/parents with reading fluency, confidence and interest in mathematics. Should conduct a short reading assessment or oral task to confirm suitability.
3) Alignment with curriculum and materials - Use the Annual Teaching Plan (ATP) and DBE workbooks to plan weekly reading tasks. Teachers identify the mathematics content to be pre-read by the Mathematics Reader ahead of instruction. Develop a simple weekly reading schedule tied to curriculum pacing.
4) Training and orientation of Mathematics Readers - Train selected MRC on: How to read aloud with meaning and clarity? How to highlight key terms, symbols and operations? How to support learners without providing answers? Provide simple tools such as vocabulary lists, highlighters, pictures and reading templates.
5) Classroom Integration – Mathematics Readers pre-read content weekly and then asks learners to read aloud during lessons or in small groups. Teachers reinforce reading through guided questioning and discussion and provide solutions – MRC does not offer solutions to problems, tasks or exercises. Mathematics Readers may also work with small peer groups during independent work time.

6) Monitoring and support - Teachers provide weekly feedback to Mathematics Readers. HODs and mentors observe lessons periodically to support effective integration. Readers reflect on their role through simple checklists or journaling.
7) Review and Expansion - At end of term, conduct a feedback session with teachers and MRC, plus learners. Identify successes and challenges to improve the programme. Consider scaling the model to other grades or subjects if effective.

This implementation process ensures that the Mathematics Reader becomes a structured support strategy, helping all learners access mathematical meaning, especially those who struggle with reading comprehension in English and other languages depending on the focus of the school. The result is a classroom culture where language and mathematics come together to build deeper understanding.

CONCLUSION

By implementing the Mathematics Readers Program, learners who struggle with reading will have an additional opportunity to engage with mathematical content before their teacher introduces it in class. This pre-reading approach, aligned with the ATP and utilizing the DBE workbook, ensures that learners build confidence, enhance comprehension, and develop deep learning skills. The program ultimately fosters improved mathematical achievement by addressing reading barriers that impact understanding.