GRADE 2

Mathematics

Teacher Toolkit:

CAPS Planner and Tracker

2019 TERM 1

Contents

About the Planner and Tracker

The curriculum and assessment planner and tracker is a tool to support teachers in several ways by:

- Providing a plan of what should be taught each day of the term based on the daily lesson plans. By following the programme in the tracker and the lesson plans, you will be sure to cover the curriculum in the allocated time, and to complete the formal assessment programme.
- Enabling you to track your progress through the curriculum during the term. By noting the date when each lesson is completed, you can see whether or not you are 'on track'. If you are not, you can strategise with your head of department and peers on how to ensure that all the work for the term is completed. You should file your completed tracker at the end of each term.
- Encouraging you to reflect on what worked well in your lessons, and where your work could be strengthened. This kind of reflection can support continuous improvement in teaching practice.

A suggested mark record sheet is located at the back of this tracker

The sheet has columns in which you can record the marks for the assessments provided in the lesson plans. You can copy this sheet and add your learners' names in the left hand column. The record sheet will help you when you have to enter marks into SA SAMS. If the 'out of' marks for the assessment activities you have used are not the same as those shown in SA SAMS, these can be changed in SA SAMS. The weightings and levels are done automatically in SA SAMS.

It is important to note that:

The first term is not always the same length. If the term in which you are using the lesson plans and tracker is longer or shorter than 11 weeks, you will need to adjust the pace at which you work to complete the work in the time available, or make another plan to stay on track.

The following components are provided in the columns of the planner and tracker tables for each week:

1. Day (Monday to Friday)
2. Lesson Plan number (The numbered lesson from the lesson plans)
3. Lesson objective (The work to be covered in the lesson)
4. Lesson resources (The resources you need to prepare for the lesson)
5. Date completed (this needs to be filled in each day).

You can make the learning and teaching of maths more effective by remembering a few simple DOs and DON'Ts

DO	DON'T
Teach with a SMILE	
Give learners enough time to think/even struggle and discover something on their own and to keep quiet while they are thinking/working individually.	Explain everything.
Plan the lesson with enough time to let learners deepen their own thinking. Be patient!	Rush learners into saying/doing something by saying 'quick, quick, quick'.
Share a variety of answers/thinking with all the learners and let them compare, think and explain which ones are OK/not OK and why. Discuss important errors so that everyone can learn from them.	Erase/remove incorrect answers.
Ask learners 'why did you think so', either if their answer is correct or not correct.	Say 'No', 'Wrong', 'Next', 'Right', 'Yes', 'Correct', etc. immediately after learners give the answer.
Assist learners to discover why and where she/he made a mistake. Use other learners as well to explain why something is not correct.	
	Answer the phone.

Weekly reflection

The tracker gives you space to reflect on your Mathematics lessons. You can share this reflection with your HOD and discuss things that worked or did not go so well in your lesson. Together with your HOD, you can think of ways of improving on the daily work that the learners in your class are doing. When you reflect you could think about things such as:

- Was your preparation for the lesson adequate? For instance, did you have all the necessary resources? Had you thought through the content so that you understood it fully and could therefore teach it effectively?
- Did the purpose of the lesson succeed? For instance, did the learners reach a good understanding of the key concepts for the day? Could they use the language expected from them? Could they write what was expected from them?
- Did the learners cope with the work set for the day? For instance, did they finish the classwork? Was their classwork done adequately? Did you assign the homework?

Briefly write down your reflection weekly, following the prompts in the tracker.

- *What went well?*
- *What did not go well?*
- *What did the learners find difficult or easy to understand or do?*
- *What will you do to support or extend learners?*
- *Did you complete all the work set for the week?*
- *If not, how will you get back on track?*
- *What will you change next time? Why?*

The reflection should be based on the daily lessons you have taught each week. It will provide you with a record for the next time you implement the same lesson. It also forms the basis for collegial conversations with your head of department and your peers.

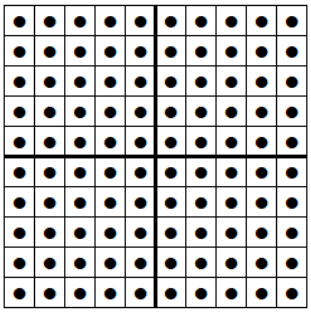
Reflect on this as you prepare lessons that follow the CPA approach

Learners need to make the move from concrete to abstract – but this does not happen suddenly or on one move. They may need to go backwards and forwards between representations in the CPA method many times until they have fully achieved abstraction. That is why in your lessons you will continue to provide concrete and pictorial representations – but as soon as a learner shows he/she can work abstractly, you should not hold them back, allow them to do so. When they need the support of concrete/pictorial, offer it to them again.

TMU summary of maths teaching approaches

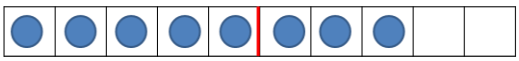
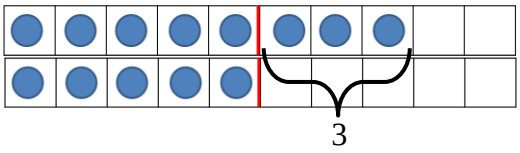
CPA APPROACH

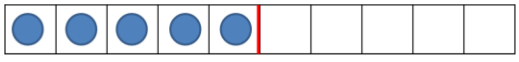
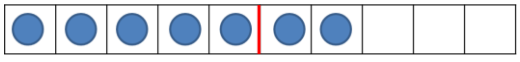
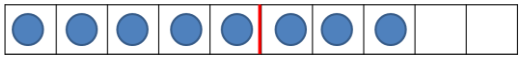
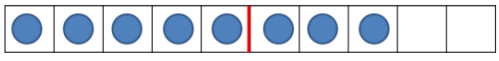
The Concrete-Pictorial-Abstract (CPA) approach helps learners develop the concepts of numbers. The CPA approach uses several different representations for the concepts of numbers 1, 10 and 100. For instance, a number '5' can be represented by 5 bottle tops (concrete objects), 5 circles (pictorial representations and a number symbol '5' (abstract). The following table shows the materials used in the TMU lesson plans. It is important to connect one representation to the other representations.

Number symbols	100	10	1
Number names	hundred	ten	one
Base ten kit (manipulatives)			
Simplified pictorials (drawing)			

In the CPA approach, the following methods are of great importance.

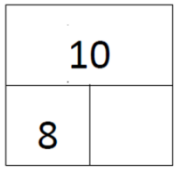
a. Pre-number concepts using a ten frame (Grade 1)
Ten frames can make all critical activities easier and clearer. (CAPS P93 English version)

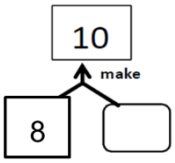
- Matching (one-to-one correspondence)
- Sorting 
- Comparing 

- Ordering
  5 
  7 
  8 
- Subitising  

All the following problems are based on the same concept. Manipulating concrete objects in a ten frame helps learners to visualise the concept.

8 + ☐ = 10, 10 – 8 = ☐, 8 + 2 = ☐



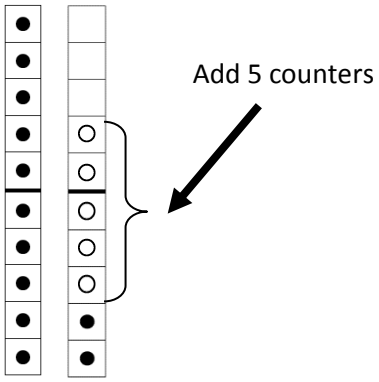


b. Make-a-ten method (Grade 1)

The 'Make-a-ten' method assists learners in shifting methods from counting to using the base-ten number system. The idea of number bonds 2 to 9 and subitising are critical for using the make-a-ten method. 'Make-a-ten' helps learners to develop the concept of place value.

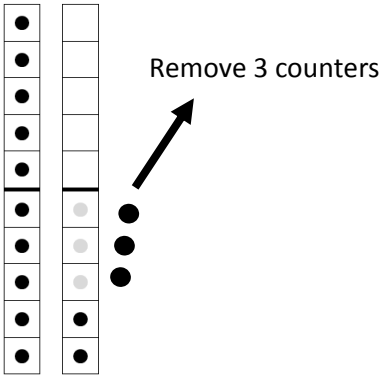
- Addition without carrying and subtraction without borrowing. There is no change in the tens place.

1) 12 + 5



10 and 7 make 17.

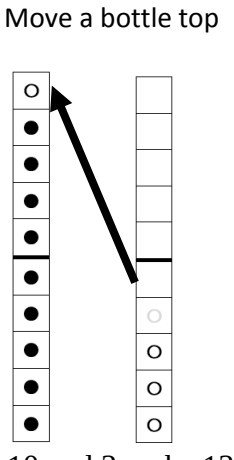
2) 15 – 3



10 and 2 make 12.

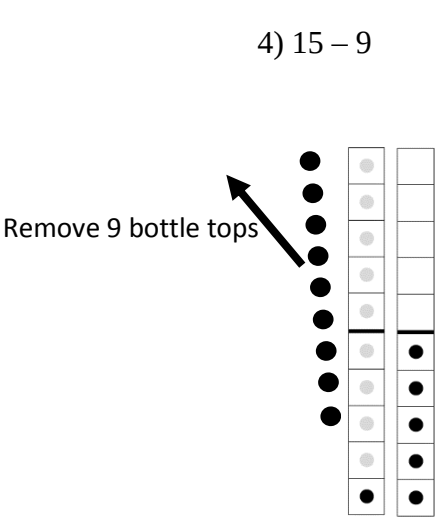
- Addition with carrying and subtraction with borrowing.

3) 9 + 4

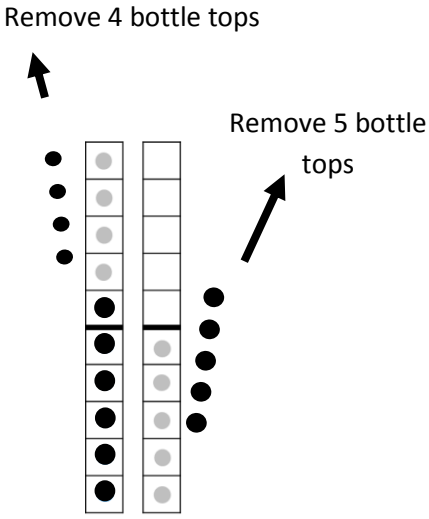


10 and 3 make 13.

4) 15 – 9



1 and 5 make 6.



5 and 1 is 6.

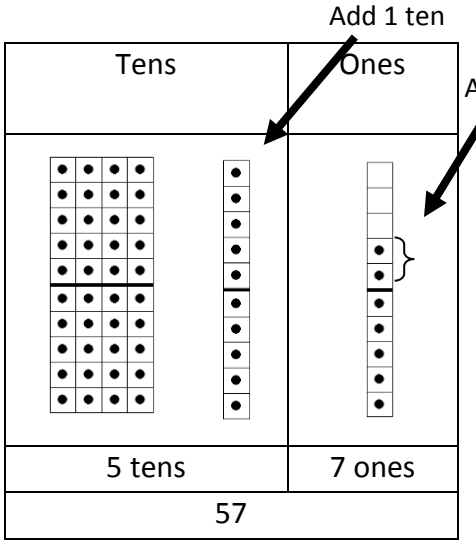
c. Column method using a base ten kit [concrete objects] (Grade 2, 3)
It is critical to show the connection between the place value table and the column method.

In Grade 2 and 3, learners use base ten kits on a place value table.

1) 45 + 12

Step 1. Add bottle tops in each place.

Use base ten kits →



	T	O
	4	5
+	1	2
	5	7

Step 2. Write numbers in each place.

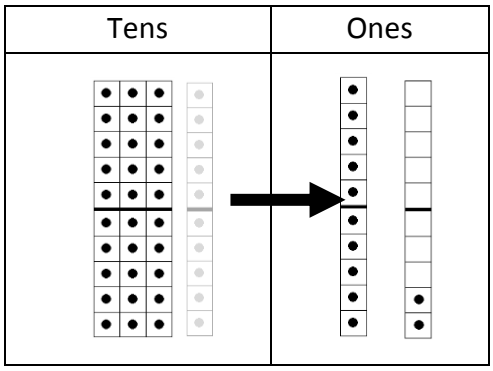
Step 3. Write the answer.

5 tens	7 ones
57	

2) 42 – 19

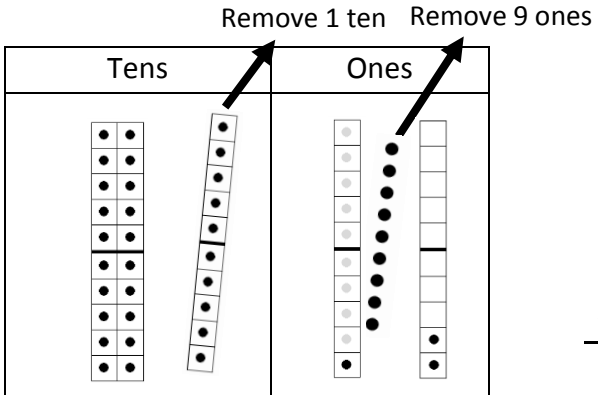
Step 1. Exchange 1 ten to 10 ones.

Use base ten kits →



Step 2. Remove bottle tops from each place.

Use base ten kits →



	T	O
	3	1
	4	2
–	1	9
	2	3

Step 3. Write numbers in each place.

Step 4. Write the answer.

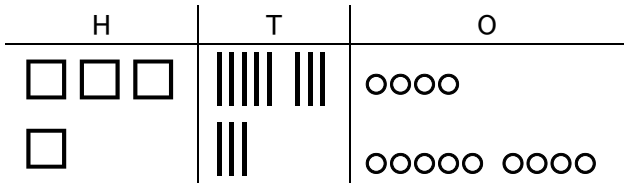
2 tens	3 ones
23	

d. Column method using simplified pictorials [pictorial representation] (Grade 3)

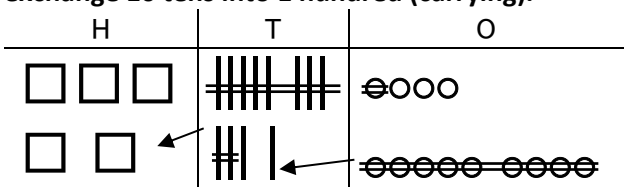
In Grade 3, learners use simplified pictorials. In the following diagrams, all the steps can be drawn in one diagram. Let learners make a group of five to show numbers 6 to 10 by organising pictorials as follows.

1) 384 + 139

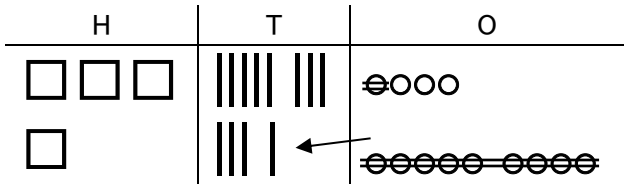
Step 1. Draw 384 and 139 vertically.



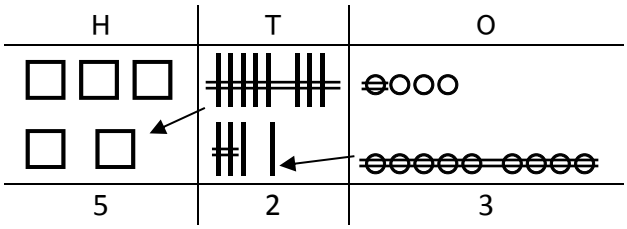
Step 3. Since 8 + 4 in the tens place exceeds 10, exchange 10 tens into 1 hundred (carrying).



Step 2. Since 4 + 9 in the ones place exceeds 10, exchange 10 ones into 1 ten (carrying).



Step 4. Write the answer.

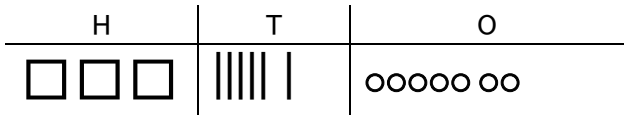


The answer is 523.

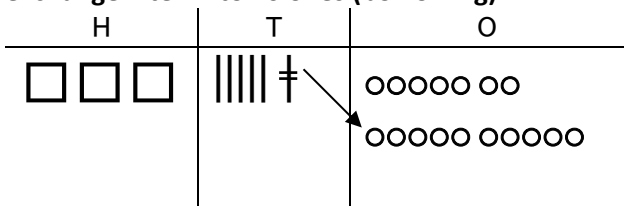
	H	T	O
	1	1	
	3	8	4
+	1	3	9
	5	2	3

2) 367 – 78

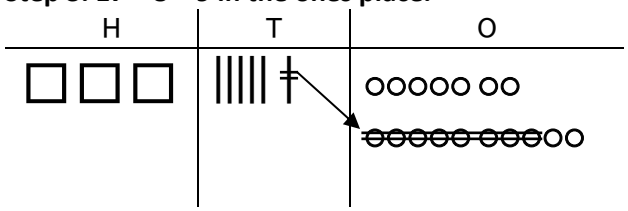
Step 1. Draw 367.



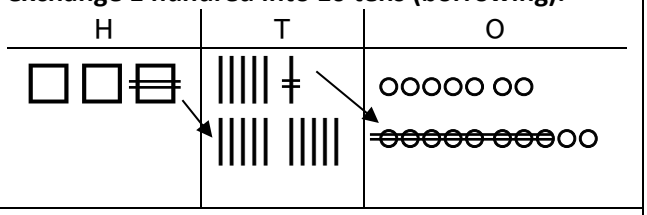
Step 2. Since we can't do 7 – 8 in the ones place, exchange 1 ten into 10 ones (borrowing).



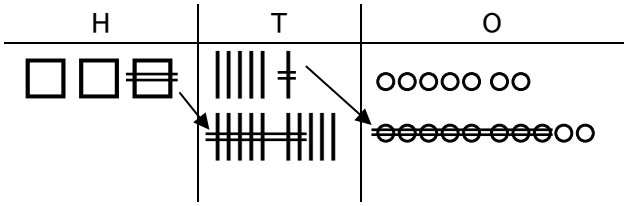
Step 3. 17 – 8 = 9 in the ones place.



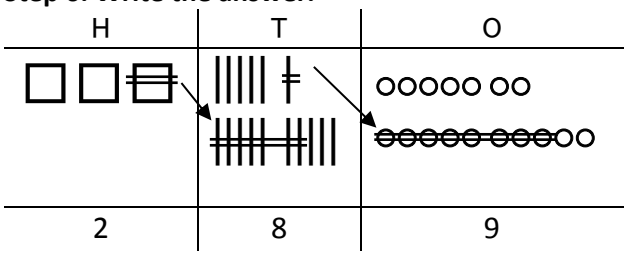
Step 4. Since we can't do 5 – 7 in the tens place, exchange 1 hundred into 10 tens (borrowing).



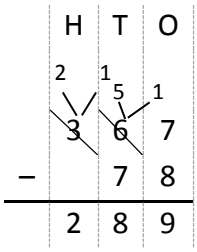
Step 5. 15 – 7 = 8 in the tens place.



Step 6. Write the answer.



The answer is 289.



e. Column method [abstract representation] (Grade 2, 3)

In grade 2, learners are expected to write the column method using two rows as follows. Each row shows the number place of ones and tens. In grade 3, learners can write in one row.

Grade 2

1) 45 + 12

	T	O	
	4	5	
+	1	2	
		7	O: 5 + 2 = 7
	5	0	T: 40 + 10 = 50
	3	9	

2) 42 – 19

	T	O	
	3	1	
	4	2	
–	1	9	
		3	O: 12 – 9 = 3
	2	0	T: 30 – 10 = 20
	2	3	

Grade 3

3) 26 + 38

	T	O
	1	
	2	6
+	3	8
	6	4

4) 81 – 47

	T	O
	7	1
	8	1
–	4	7
	3	4

5) 384 + 139

	H	T	O
	1	1	
	3	8	4
+	1	3	9
	5	2	3

6) 367 – 78

	H	T	O
	2	1	
	3	6	7
–		7	8
	2	8	9

PROBLEM SOLVING

a. Problem solving in general

1. Present a problem (e.g. a number sentence) to learners.
2. Let learners work on it individually.
3. (Work in pairs or groups of less than 4). * This step can be skipped sometimes.
4. Ask several learners to give their answers.
5. Discuss the answers that are presented and find the correct one. Discuss errors as well.
6. Let learners correct their work in their classwork books if necessary.

b. Word problem solving with manipulatives or diagram

4 steps to solve word problem

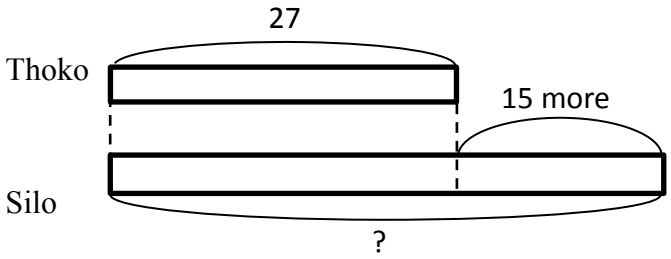
Step 1. Understand the problem.

1. Write the word problem on the chalkboard
2. Read the problem.
3. Let learners read the problem until they read it fluently.
4. Underline the number.
5. Underline the question with a wavy line.
6. Let learners reproduce the story with manipulatives or diagrams.

Thoko has 27 sweets.

Silo has 15 more than Thoko.

How many sweets does Silo have?



Step 2. Devise a plan.

1. Determine the operation.
2. Write number sentence.

Step 3. Carry out the plan.

1. Find the answer of the number sentence.

Step 4. Look back.

1. Compare the learners' solutions.
2. Do the corrections.
3. Let the learners record all the work.

Planner and Tracker

Revision and baseline assessment

Topic	CAPS topic	Resources	Comment
1	Number concept	Bottle tops Ten frame	
2	Building up and breaking down numbers	Bottle tops Ten frame	
3	Addition and subtraction	SA coins and notes (cut out or examples)	
4	Repeated addition and patterns	Bottle tops	
5	Grouping, sharing and 2-D shapes	Shape cut outs	
6	Balls, boxes and position	Balls and boxes (collect from home)	
7	Measurement	Measurement worksheet *(Term 1 Printable Resources).*	
8	Data Handling	Data Handling worksheet *(Term 1 Printable Resources).*	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 1

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	1	Recognise, identify, compare, read and write number symbols and names 0 to 20.	20 bottle tops per pair of learners, 2 ten frames per learner (see *Printable Resources*), number symbol and number name cards (see *Printable Resources*).	
Tue	2	Decompose two-digit numbers into multiples of tens and ones and state the value of each digit.	100 board per learner (see *Printable Resources*), 1 hundred and 10 printed tens for the teacher and the learners (see *Printable Resources*), 20 bottle tops per learner, place value table per learner (see *Printable Resources*).	
Wed	3	Identify the place value of two-digit numbers to 99 and find number patterns.	100 board per learner (see *Printable Resources*), 20 bottle tops per learner, 10 printed tens, 1 ten frame and some bottle tops for the teacher (see *Printable Resources*), place value table per learner (see *Printable Resources*).	
Thur	4	Expanded notation of numbers up to 99; Read and write numbers up to 30.	100 board (see *Printable Resources*), ten frames (see *Printable Resources*) and bottle tops, place value table per learner (see *Printable Resources*).	
Fri	5	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 2

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	6	To read and write numbers that make up 100.	100 board per learner (see *Printable Resources*), 10 bottle tops per learner.	
Tue	7	Sequence and compare numbers up to 100.	Number symbol and name cards 21 to 50 (see *Printable Resources*), ten frames (see *Printable Resources*), place value table per learner (see *Printable Resources*).	
Wed	8	Assessment	Assessment activity in teacher's resources	
Thur	9	Order and compare whole numbers to 100.	A copy of a book (e.g. an old DBE workbook).	
Fri	10	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 3

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	11	Counting forwards and backwards in 5s and 10s up to 100.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*), 1 printed hundred (teacher).	
Tue	12	Counting forwards and backwards to 100.	100 board (see *Printable Resources*), a board game for each pair of learners (see *Printable Resources*), bottle tops and dice.	
Wed	13	Learners count forwards and backwards in fives and tens from any number – they use this to investigate ways of building up and breaking down numbers.	100 board (see *Printable Resources*)	
Thur	14	Assessment	Assessment activity in teacher's resources	
Fri	15	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 4

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	16	Solve addition and subtraction problems using a place value table.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Tue	17	Solve addition and subtraction problems using a number line	Ten frames (see *Printable Resources*)	
Wed	18	Assessment	Assessment activity in teacher's resources	
Thur	19	To add and subtract up to 100 using multiples of 10.	10 printed tens per learner (see *Printable Resources*), bottle tops, place value table (see *Printable Resources*), 100 board (see *Printable Resources*)	
Fri	20	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 5

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	21	Addition and subtraction of 2-digit numbers and one-digit numbers.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Tue	22	To solve addition and subtraction problems with 2 digit numbers and multiples of 10.	100 board (see *Printable Resources*), Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Wed	23	Assessment	Assessment activity in teacher's resources	
Thur	24	To check learners' readiness for addition/subtraction for 2 digits by 2 digits.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Fri	25	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 6

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	26	Adding 2-digit numbers using the column method.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Tue	27	To practice adding 2-digit numbers using the column method	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Wed	28	Solve 2-digit addition problems using a number line.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Thur	29	Assessment	Assessment activity in teacher's resources	
Fri	30	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 7

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	31	Subtracting 2-digit numbers using the column method.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Tue	32	To practice subtracting 2-digit numbers using the column method.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Wed	33	Solve 2-digit subtraction problems using a number line.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Thur	34	To solve addition problems using bar diagrams.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Fri	35	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 8

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	36	To solve subtraction problems using bar diagrams.	Bottle tops	
Tue	37	To solve addition and subtraction problems using bar diagrams.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Wed	38	To consolidate strategies for solving addition and subtraction problems.	Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).	
Thur	39	Assessment	Assessment activity in teacher's resources	
Fri	40	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 9

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	41	Estimate, measure, compare, order and record length using non-standardised measures, e.g. hand spans, paces, pencil length, bottle tops etc. as part of informal measuring.	Paper, scissors, pencils, sticks, bottle tops.	
Tue	42	Estimate, measure, compare, order and record length using non-standardised measurement units.	Collect empty matchboxes before the lesson, a broom. (Collect from home.)	
Wed	43	Estimate, measure, compare, order and record length using metres as the standard unit of length, using either metre sticks or metre-long lengths of string.	Enough for each child in the class: 1 m lengths of string (not wool since it will stretch), balls, scrap paper.	
Thur	44	Estimate, measure, compare, order and record length using metres as the standard unit of length.	Objects in the classroom, metre stick.	
Fri	45	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Week 10

Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	46	Estimate, measure, compare, order and record length using metres as the standard unit of length.	Metre stick, 3 pieces of scrap paper per group.	
Tue	47	Assessment	Assessment activity in teacher's resources	
Wed	48	Use ordinal numbers to show order, place or position up to 31st.	100 board (see *Printable Resources*), ordinal number cards (see *Printable Resources*).	
Thur	49	Assessment	Assessment activity in teacher's resources	
Fri	50	Consolidation of work done this week.	Learner resource activities	

Reflection

Think about and make a note of: *What went well? What did not go well? What did the learners find difficult or easy to understand or do? What will you do to support or extend learners? Did you complete all the work set for the week? If not, how will you get back on track?*

What will you change next time? Why?

HOD _____ Date _____

Term 1 Assessment

The assessment for the term is designed into the lesson plans. Oral, practical and written assessment activities sequenced into the plans and located in the numbered lesson sequence.

The assessment that will be found in the lesson plans is the following:

1. Week 2 - Lesson 8
    a. Written: Number concept – place value (17 marks)
    b. Oral: Counting (7 marks)

2. Week 3 - Lesson 14
    a. Written: Place value – order and compare numbers (23 marks)
    b. Oral: Patterns of 5 and 10 (7 marks)

3. Week 4 - Lesson 18
    a. Written: Place value and addition (15 marks)

4. Week 5 - Lesson 23
    a. Written: Place value, addition and subtraction (35 marks)
    b. Practical: Place value (7 marks)

5. Week 6 - Lesson 29
    a. Written: Place value, addition and subtraction (25 marks)

6. Week 8 - Lesson 39
    a. Written: Addition, subtraction and problem solving (15 marks)

7. Week 10 - Lesson 47
    a. Written: Length (9 marks)
    b. Practical: Length (7 marks)

8. Week 10 - Lesson 49
    a. Written: Cardinal and ordinal numbers (20 marks)

The mark sheet on the following page can be used to record the marks achieved by learners for the various assessment activities throughout the term and to calculate the final marks to be entered into SA SAMS for the Term 1 Assessment Task.

The total marks possible on all of the tests for number and operations this term is 157. You might want to select some questions form the longer tests and not mark them all if you want a lower total. SA SAMS can adjust any mark.

GRADE 2 MATHEMATICS TERM 1: Suggested formal assessment mark record sheet

TASK/TOPIC/COMPONENT	Number: Written	Number: Written	Number: Written	Number: Written	Number: Practical	Number: Written	Number: Written	Number: Written	**TOTAL FOR NUMBER**	Patterns: Oral	Patterns: Oral	**TOTAL FOR PATTERNS**	Length: Written	Length: Practical	**TOTAL FOR LENGTH**	**Term Total**
Week	2	3	4	5	5	6	7	10		2	3		10	10		
(Out of) marks	17	23	15	35	7	25	15	20	157	7	7	14	9	7	16	
LEARNER NAME AND SURNAME																