GRADE 3

Mathematics

Teacher Toolkit: CAPS Planner and Tracker

2019 TERM 1

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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

DOT 13	
DO	DON'T
Teach with a SMILE	
Give learners enough time to think/even struggle	Explain everything.
and discover something on their own and to keep	
quiet while they are thinking/working individually.	
Plan the lesson with enough time to let learners	Rush learners into saying/doing something by saying
deepen their own thinking. Be patient!	'quick, quick'.
Share a variety of answers/thinking with all the	Erase/remove incorrect answers.
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.	
Ask learners 'why did you think so', either if their	
answer is correct or not correct.	Say 'No', 'Wrong', 'Next', 'Right', 'Yes', 'Correct',
Assist learners to discover why and where she/he	etc. immediately after learners give the answer.
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)			0

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

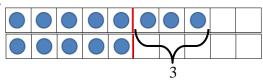
a. Pre-number concepts using a ten frame (Grade 1)

Ten frames can make all critical activities easier and clearer. (CAPS P93 English version)

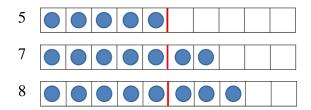
- Matching (one-to-one correspondence)
- Sorting



Comparing



Ordering



Subitising





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

 $8 + \Box = 10$,

$$10 - 8 = \Box$$
,

$$8 + 2 = \square$$







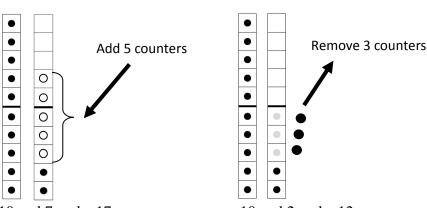
b. Make-a-ten method (Grade 1)

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

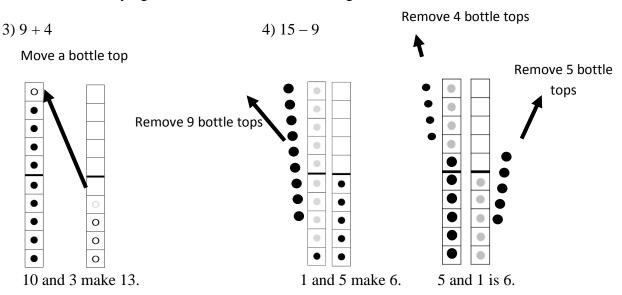
$$2) 15 - 3$$



10 and 7 make 17.

10 and 2 make 12.

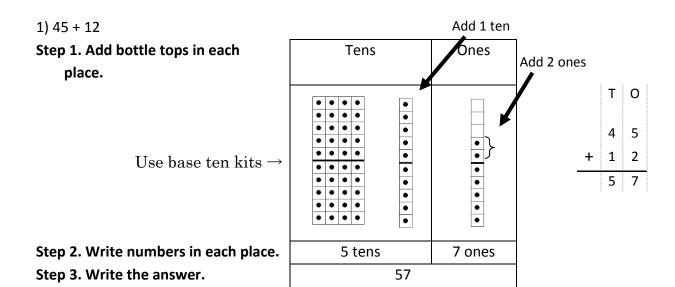
Addition with carrying and subtraction with borrowing.



Column method using a base ten kit [concrete objects] (Grade 2, 3)

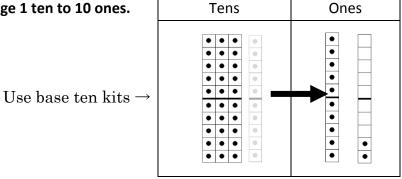
It is critical to show the connection between the place value table and the column method.

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



2)42 - 19



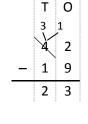


Step 2. Remove bottle tops from each place.

• • Use base ten kits \rightarrow • 2 tens 3 ones 23

Tens

Step 3. Write numbers in each place. Step 4. Write the answer.



Remove 1 ten Remove 9 ones

Ones

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.

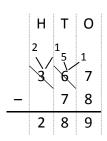
1) 384 + 139

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).	
H	Т	0	H T O	
		0000	□□□	
	III	00000 0000		
Step 2. Since 4 + 9 in the ones place exceeds 10, exchange 10 ones into 1 ten (carrying).		•	Step 4. Write the answer.	
Н	Т	О	н т о	
		0 000		
				
			5 2 3 The answer is 523.	

	Н	Т	0
	1	1	
	3	8	4
+	1	3	9
	5	2	3

2) 367 – 78

Step 1. Draw 367.			-		7 in the tens place,
			exchange 1 hun	dred into 10 t	ens (borrowing).
H	Т	0	H	Т	0
		0000000		 	0000000
	'	'	`	*	-00000 000 00
-		8 in the ones place,	Step 5. 15 – 7 =	 8 in the tens	l place.
exchange 1 ten	into 10 ones	(borrowing).		i	
Н	Т	0	Н	Т	0
	‡ \	0000000			0000000
	,	00000 00000	`	 	00000 000 00
Step 3. 17 – 8 =	9 in the ones	place.	Step 6. Write th	e answer.	
Н	Т	0	Н	Т	0
	 	0000000			0000000
		00000 000 00		 	*************************************
			2	8	9
			The answer is 2	289.	•



$\textbf{Column method [abstract representation]} \ (Grade \ 2, \ 3)$

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

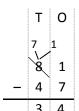
$$2)42 - 19$$

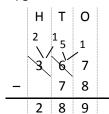
	Т	0	
	4	5	
+	1	2	
		7	0:5
	5	0	T: 40
	3	9	

	3	1	
	4	2	
-	1	9	
		3	
	2	0	
	2	3	

ТО

Grade 3





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 diagram4 steps to solve word problem

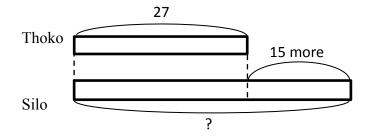
Step 1. Understand the problem.

- 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 <u>27</u> 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 Track	ker			
Revision and baseline assessment						
Topic	CAPS topic	Resources	Comment			
1	Number concept	100 board (see <i>Printable Resources</i>).				
2	Place value	Flard cards (see <i>Printable Resources</i>).				
3	Addition and subtraction	n/a				
4	Repeated addition leading to multiplication	100 board (see <i>Printable Resources</i>).				
5	Shapes and fractions	Pictures of 2-D shapes (see <i>Printable Resources</i>).				
6	3-D objects	Collect many different 3-D objects at home.				
7	Measurement	Prepare a collection of some objects for this lesson that you can use to talk about length, mass and capacity to revise the vocabulary.				
8	Data Handling	n/a				
		Reflection				
how wil	ind or do? What will you do to l you get back on track?		complete all the work set for the week? If not,			
		HOD	Date			

Week 1					
Day	LP	Lesson objective	Lesson Resources	Date completed	
Mon	1	Understand how to read and represent numbers up to 999 (hundreds)	100 board (see <i>Printable Resources</i>), base ten kit (see <i>Printable Resources</i>)		
Tue	2	Representing 3-digit numbers where either the tens or ones are zero. (e.g. 206, 350) as part of reading and writing number symbols up to 999.	Base ten kit (see <i>Printable Resources</i>), place value table (see <i>Printable Resources</i>)		
Wed	3	Expanded notation of numbers up to 999.	Base ten kit (see <i>Printable Resources</i>), flard cards (see <i>Printable Resources</i>), place value table (see <i>Printable Resources</i>)		
Thur	4	Counting forwards and backwards up to 999 to consolidate reading and writing number symbols up to 999.	Scrap paper, counters		
Fri	5	Consolidation of work done this week.	Learner resource activities		
difficult	t or eas	and make a note of: What went well? We to understand or do? What will you do not for the week? If not, how will you get to the week? If not, how will you get change next time? Why?	lo to support or extend learners? Did y	-	
HOD_		Date			

Weel	Week 2						
Day	LP	Lesson objective	Lesson Resources	Date completed			
Mon	6	Representing numbers as multiples of 10.	100 board (see <i>Printable Resources</i>), scrap paper.				
Tue	7	Assessment	Assessment activity in teacher's resources				
Wed	8	The concept of the number 1 000 – extension of place value.	Base ten kit (see <i>Printable Resources</i>)				
Thur	9	Representing numbers up to 1 000 in various ways.	Base ten kit (see <i>Printable Resources</i>), flard cards (see <i>Printable Resources</i>)				
Fri	10	Consolidation of work done this week.	Learner resource activities				
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	Week 3							
Day	LP	Lesson objective	Lesson Resources	Date completed				
Mon	11	Sequencing of numbers up to 1 000; Reading, representing and comparing numbers on a number line.	n/a	,				
Tue	12	Use techniques when solving problems and explain solutions to problems; rounding off in tens using number lines.	Base ten kit (see <i>Printable Resources</i>)					
Wed	13	Operations (addition and subtraction) with numbers up to 1 000 – using various techniques.	n/a					
Thur	14	Assessment	Assessment activity in teacher's resources					
Fri	15	Consolidation of work done this week.	Learner resource activities					
Reflect	ion	1						
	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	To add and subtract up to 1 000 using multiples of 10 and 100.	Base ten kit (see <i>Printable Resources</i>)	•
Tue	17	Mental maths with single-digit numbers – making a ten.	Base ten kit (see <i>Printable Resources</i>), another ten frame (see <i>Printable Resources</i>)	
Wed	18	Mental maths with 2-digit numbers – making a ten – with carrying.	Base ten kit (see <i>Printable</i> Resources), another ten frame (see Printable Resources)	
Thur	19	Mental maths with 2-digit numbers – making a ten – with carrying.	Base ten kit (see <i>Printable Resources</i>)	
Fri	20	Consolidation of work done this week.	Learner resource activities	
What v	vill you	change next time? Why?		
HOD_		Date		

Week	x 5	T	T	
Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	21	Mental maths with 2-digit numbers –	Base ten kit (see Printable	
141011		making a ten – with borrowing.	Resources)	
Tue	22	Assessment	Assessment activity in teacher's	
			resources	
Wed	23	Solving addition of 2-digit numbers using the column method.	Base ten kit (see <i>Printable Resources</i>)	
Thur	24	Solving addition of 2-digit numbers using the column method.	n/a	
Fri	25	Consolidation of work done this week.	Learner resource activities	
What v	vill you	change next time? Why?		
HOD		Date		

Week	6			
Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	26	Solving addition of 2-digit numbers using the column method.	n/a	
Tue	27	Assessment	Assessment activity in teacher's resources	
Wed	28	Solving subtraction of 2-digit numbers from 3-digit numbers using the column method.	Base ten kit (see Printable Resources)	
Thur	29	Solving subtraction of 2-digit numbers from 3-digit numbers using the column method.	Base ten kit (see <i>Printable Resources</i>)	
Fri	30	Consolidation of work done this week.	Learner resource activities	
all the	work se	et for the week? If not, how will you get change next time? Why?		ou complete
HOD_		Date		

Week	7			
Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	31	Solving addition and subtraction problems using a variety of strategies.	Base ten kit (see <i>Printable Resources</i>)	
Tue	32	Solving addition and subtraction problems using a variety of strategies.	n/a	
Wed	33	Assessment	Assessment activity in teacher's resources	
Thur	34	Solving addition and subtraction problems using a variety of strategies.	n/a	
Fri	35	Consolidation of work done this week.	Learner resource activities	
Reflect	ion			l
all the	work se	et for the week? If not, how will you ge change next time? Why?	do to support or extend learners? Did y	ou complete
HOD_		Date		

Weel	x 8			
Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	36	To solve addition and subtraction problems using bar diagrams.	n/a	
Tue	37	Solving addition and subtraction problems using a variety of strategies.	n/a	
Wed	38	Assessment	Assessment activity in teacher's resources	
Thur	39	To find the missing number in a subtraction problem using addition.	n/a	
Fri	40	Consolidation of work done this week.	Learner resource activities	
		et for the week? If not, how will you ge		
HOD_		Date		

Week	9			
Day	LP	Lesson objective	Lesson Resources	Date completed
Mon	41	To find the missing number using addition and subtraction as inverse operations.	n/a	•
Tue	42	Assessment	Assessment activity in teacher's resources	
Wed	43	Counting forwards and backwards in 2s and 4s to identify number patterns.	n/a	
Thur	44	Counting forwards and backwards in 20s, 25s, 50s and 100s to identify number patterns.	n/a	
Fri	45	Consolidation of work done this week.	Learner resource activities	
Reflecti	ion			
all the v	work se	et for the week? If not, how will you get change next time? Why?		ou complete
HOD_		Date		

Day LP Lesson objective Lesson Resources Mon 46 Working with number patterns in 2s, 3s, 4s, 5s, 20s, 25s, 50s and 100s. Tue 47 To practise solving multiplication flow diagrams and tables. Wed 48 To solve word problems using tables and flow diagrams. Thur 49 Assessment Assessment activity in teacher's resources Fri 50 Consolidation of work done this week. Reflection Think about and make a note of: What went well? What did not go well? What did the lead difficult or easy to understand or do? What will you do to support or extend learners? Did yeall the work set for the week? If not, how will you get back on track? What will you change next time? Why?				10	Week
Tue 47 To practise solving multiplication flow diagrams and tables. Wed 48 To solve word problems using tables and flow diagrams. Thur 49 Assessment Assessment activity in teacher's resources Fri 50 Consolidation of work done this week. Reflection Think about and make a note of: What went well? What did not go well? What did the learn difficult or easy to understand or do? What will you do to support or extend learners? Did you all the work set for the week? If not, how will you get back on track?	Date completed	Lesson Resources	Lesson objective	LP	Day
Tue 47 To practise solving multiplication flow diagrams and tables. Wed 48 To solve word problems using tables and flow diagrams. Thur 49 Assessment Assessment activity in teacher's resources Fri 50 Consolidation of work done this week. Reflection Think about and make a note of: What went well? What did not go well? What did the lead difficult or easy to understand or do? What will you do to support or extend learners? Did ye all the work set for the week? If not, how will you get back on track?	,	•		46	Mon
Wed 48 To solve word problems using tables and flow diagrams. Thur 49 Assessment Assessment activity in teacher's resources Fri 50 Consolidation of work done this week. Reflection Think about and make a note of: What went well? What did not go well? What did the lear difficult or easy to understand or do? What will you do to support or extend learners? Did you all the work set for the week? If not, how will you get back on track?			To practise solving multiplication	47	Tue
Thur 49 Assessment Assessment activity in teacher's resources Fri 50 Consolidation of work done this week. Reflection Think about and make a note of: What went well? What did not go well? What did the lear difficult or easy to understand or do? What will you do to support or extend learners? Did you all the work set for the week? If not, how will you get back on track?		n/a	To solve word problems using tables	48	Wed
Fri 50 Consolidation of work done this week. Reflection Think about and make a note of: What went well? What did not go well? What did the lead difficult or easy to understand or do? What will you do to support or extend learners? Did you all the work set for the week? If not, how will you get back on track?				49	Thur
Reflection Think about and make a note of: What went well? What did not go well? What did the lead difficult or easy to understand or do? What will you do to support or extend learners? Did you all the work set for the week? If not, how will you get back on track?				50	Fri
			I change next time? Why?	ill you	What w
HOD Date			Date		HOD_

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 7
 - a. Written: Numbers to 999 (22 marks)
 - b. Oral: Number patterns (7 marks)
- 2. Week 3 Lesson 14
 - a. Written: Numbers to 1 000 (15 marks)
- 3. Week 5 Lesson 22
 - a. Written: Mental maths with 2-digit numbers (18 marks)
- 4. Week 6 Lesson 27
 - a. Written: Addition (20 marks)
 - b. Oral and practical: Addition (7 marks)
- 5. Week 7 Lesson 33
 - a. Written: Subtraction (20 marks)
 - b. Oral and practical: Subtraction (7 marks)
- 6. Week 8 Lesson 38
 - a. Written: Addition and subtraction (16 marks)
- 7. Week 9 Lesson 42
 - a. Written: What's the missing number? (15 marks)
- 8. Week 10 Lesson 49
 - a. Written: Number patterns (16 marks)
 - b. Oral: Number patterns (7 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.

GRADE 3 MATHEMAT	ICS TE	RM 1:	Sugg	ested	formal	assess	sment	marl	k reco	rd shee	t				
TASK/TOPIC/COMPONENT	Number: Written	Number: Written	Number: Written	Number: Written	Number: Oral and practical	Number: Written	Number: Oral and practical	Number: Written	Number: Written	TOTAL FOR NUMBER	Patterns: Oral	Patterns: Oral	Patterns: Written	TOTAL FOR PATTERNS	Term Total
Week	2	3	5	6	6	7	7	8	9		2	10	10		
(Out of) marks	22	15	18	20	7	20	7	16	15	140	7	7	16	30	170
LEARNER NAME AND SURNAME															