MATHEMATICS

Grade 1

TERM 4 2020

Lesson Plans

Acknowledgement:

These lesson plans have been developed based on previous sets of lesson plans (GPLMS and PILO) which have been adapted to align with the Mathematics Framework for South Africa: Teaching Mathematics for Understanding.
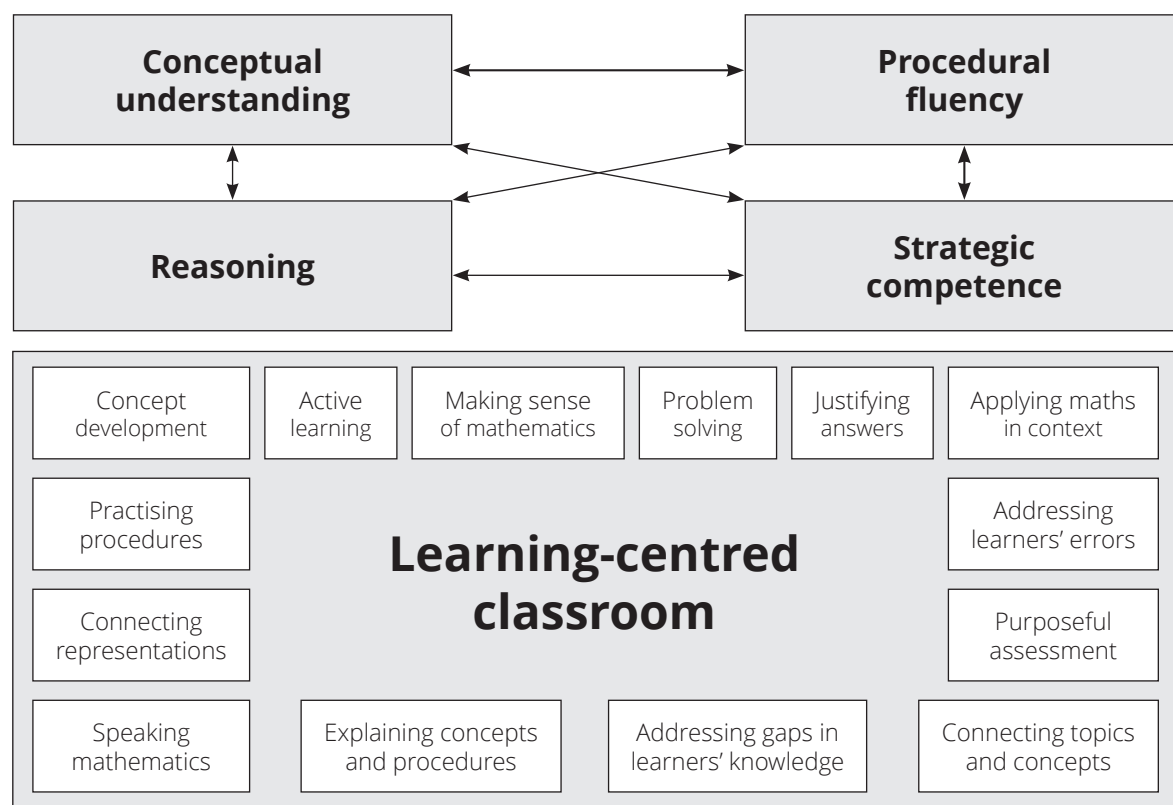
Contents

Teaching mathematics for Understanding (TMU)

You are participating in the pilot implementation of the Mathematic Framework – which calls for *Teaching Mathematics for Understanding*. Diagrammatically the framework is represented as shown below.

The Framework proposes that steps should be taken to bring about the transformation of mathematics teaching in South Africa. Mathematical examples of the dimensions can be found in the framework document. There are also examples of the four dimensions at the start of each new unit in the lesson plans. Teachers should strive to:
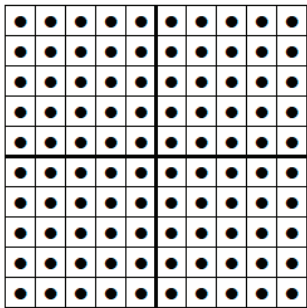
- teach mathematics for **conceptual understanding** to enable comprehension of mathematical concepts, operations, and relations;
- teach so that learners develop **procedural fluency** which involves skill in carrying out procedures flexibly, accurately, efficiently, and appropriately;
- develop learners' **strategic competence** – the ability to formulate, represent, and decide on appropriate strategies to solve mathematical problems;
- provide multiple and varied opportunities for learners to develop their mathematical **reasoning** skills – the capacity for logical thought, reflection, explanation and justification; and
- promote a **learning-centred classroom** which teachers support by engaging with learners in ways that foreground mathematical learning, thus enabling all of the above.

The lesson plans you will follow are designed to help you teach according to the framework dimensions.

TMU summary of maths teaching approaches

CPA APPROACH

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

Number Symbols	100	10	1
Number Nmaes	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
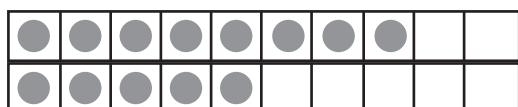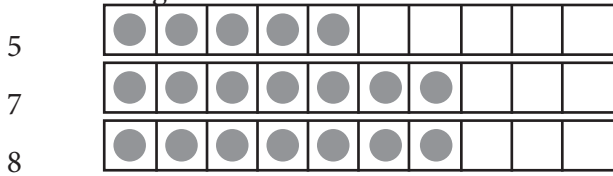
- Subitising
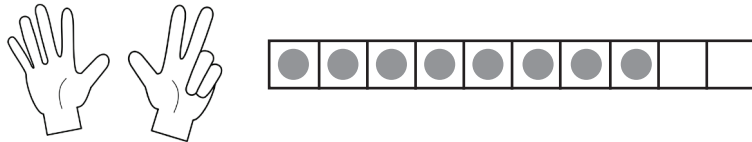
All the following problems are based on the same concept. Manipulating concrete objects in a ten frame helps learners to visualise the concept.

$8 + \square = 10,$ $10 - 8 = \square,$ $8 + 2 = \square$

10	
8	

10
make

8
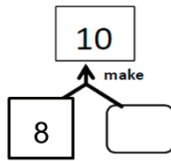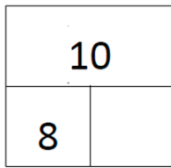
b. Make-a-ten method (Grade 1)

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

Add 5 counters

Remove 3 counters
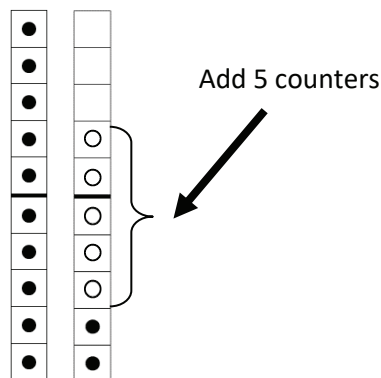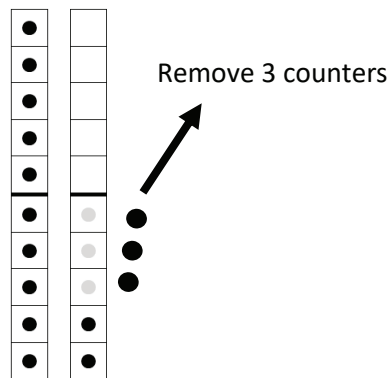
10 and 7 make 17.   10 and 2 make 12.

- Addition with carrying and subtraction with borrowing.

3) 9 + 4   4) 15 – 9
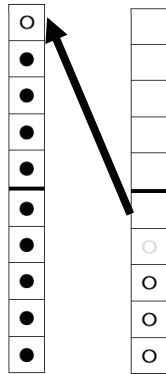
Move a bottle top

Remove 9 bottle tops
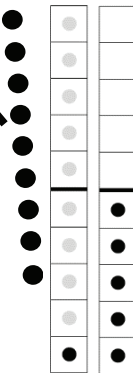
Remove 5 bottle tops
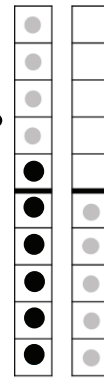
10 and 3 make 13.   1 and 5 make 6.   5 and 1 is 6.

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

1) 45 + 12

Step 1. Add bottle tops in each place.

Add 1 ten

Add 2 ones

Tens	Ones
Use base ten kits →	
5 tens 7	ones
57	

$$
\begin{array}{r}
\ \ T\ \ O\\
\ \ 4\ \ 5\\
+\ \ 1\ \ 2\\
\hline
\ \ 5\ \ 7
\end{array}
$$

Step 2. Write numbers in each place.

Step 3. Write the answer.

2) 42 – 19

Step 1. Exchange 1 ten for 10 ones.

Use base ten kits →

Tens	Ones
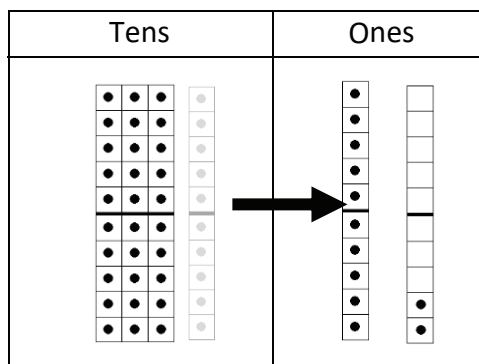
Step 2. Remove bottle tops from each place.

Use base ten kits →

Tens	Ones
2 tens	3 ones
23	

	T	O
	3	1
	4	2
−	1	9
	2	3
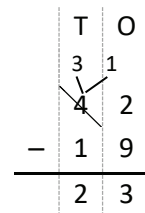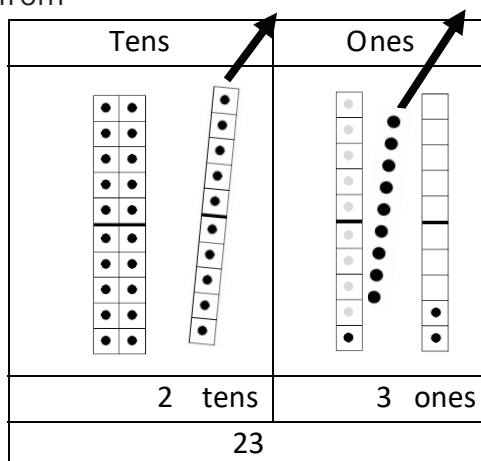
Step 3. Write numbers in each place.

Step 4. Write the answer.

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
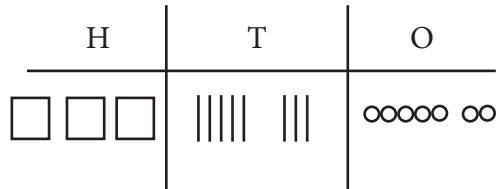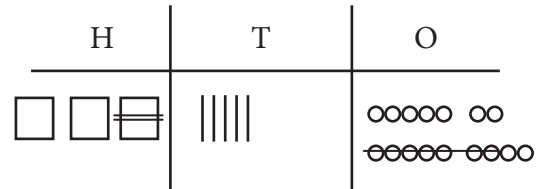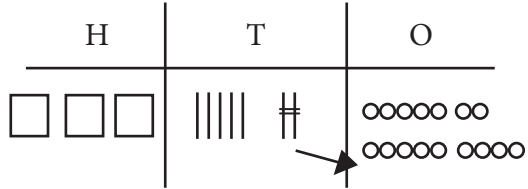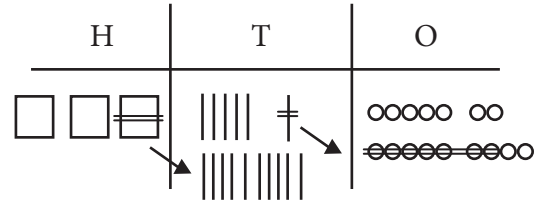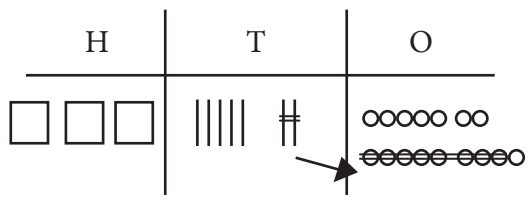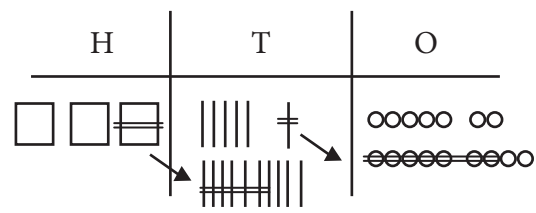
as follows.

1) 384 + 139

Step 1. Draw 384 and 139 vertically.	Step 3. Since 8 + 4 in the tens place exceeds 10, exchange 10 tens for 1 hundred (carrying).
Step 2. Since 4 + 9 in the ones place exceeds 10, exchange 10 ones for 1 ten (carrying).	Step 4. Write the answer.

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

2) 367 – 78

Step 1. Draw 367.	Step 4. Since we can't do 5 – 7 in the tens place, exchange 1 hundred for 10 tens (borrowing).
Step 2. Since we can't do 7 – 8 in the ones place, exchange 1 ten for 10 ones (borrowing).	Step 5. 15 – 7 = 8 in the tens place.
Step 3. 17 – 8 = 9 in the ones place.	Step 6. Write the answer. The answer is 289.

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

In Grade 2, learners are shown how 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 use one row.

Grade 2

1) 45 + 12

T	O
4	5
+ 1	2
	7
5	0
3	9

O: 5 + 2 = 7
T: 40 + 10 = 50

2) 42 Đ 19

T	O
3	1
4	2
Đ 1	9
	3
2	0
2	3

O: 12 Đ 9 = 3
T: 30 Đ 10 = 20

Grade 3

3) 26 + 38

T	O
1	
2	6
+ 3	8
6	4

4) 81 Đ 47

T	O
7	1
8	1
Đ 4	7
3	4

5) 384 + 139

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

6) 367 Đ 78

H	T	O
2	1	
	5	1
3	6	7
Đ	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 the learners work on it individually.
3. (Work in pairs or groups of less than 4).   * This step can sometimes be skipped.
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 the learners correct their work in their classwork books if necessary.

b. Word problem solving with manipulatives or diagrams
 4 steps to solve word problems

Step 1. Understand the problem.

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

Thoko has 27 sweets.

Silo has 15 more than Thoko.

How many sweets does Silo have?
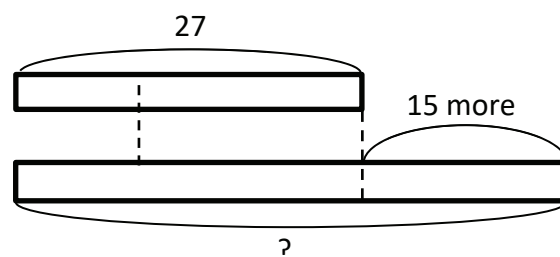
Step 2. Devise a plan.
1. Determine the operation.
2. Write a number sentence.

Step 3. Carry out the plan.
1. Find the answer to the number sentence.

Step 4. Look back.
1. Compare the learners' solutions.
2. Do the corrections.
3. Let the learners record all the work in their classwork books.

Glossary of important terms used in the TMU lesson plans

The following terminologies are used in the TMU lesson plan s for Grades 1 to 3. Some of them also appear in CAPS. This is a general glossary which has been prepared for Grades 1 to 3. Terms used in the TMU that expand on the CAPS repertoire are indicated.

Calculation

ADDITION WITH CARRYING (TMU)

The type of addition which occurs when we bridge ten, in single digit (or 2-digit or 3-digit) calculations. For example 9 + 4; 57 +26; 83 + 19. The term 'carrying' is used since the terminology is familiar to teachers. What happens when we 'carry' is that in order to bridge ten, 10 ones are 'exchanged' to make 1 ten.

SUBTRACTION WITH BORROWING (TMU)

The type of subtraction which occurs when the units involved in the subtraction create an impasse (a temporary hurdle). For example 14 – 5; 52 – 27; 102 – 19. The units do not allow for subtraction 'on their own'. The term 'borrowing' is used since the terminology is familiar to teachers. What is happens when we 'borrow' is that 1 ten is 'exchanged' for 10 ones and grouped with the other ones in the question, to overcome the impasse so that the subtraction can be done.

BASE-TEN NUMBER SYSTEM

The most commonly used number system across the world. Our number system uses a base of ten which means that it involves grouping in tens. There are ten units in one ten, ten tens in one hundred and so on. Each digit in a number has a value according to its position in the number. The only digits we need to represent a number of any size are the digits 0 to 9. One focus of the TMU framework is to move from mathematics based on counting methods to methods governed by the base-ten number system.

MAKE-A-TEN METHOD (TMU)

A calculation technique that learners can use to do addition with carrying and subtraction with borrowing. This method helps learners to progress beyond calculation by counting.

COLUMN METHOD (TMU)

A calculation technique used in addition and subtraction that helps to reinforce number concept or number sense. Also known as the vertical algorithm or vertical method. This structured method consolidates learners' understanding of place value because it is

structured using place value. This should help learners to understand the concept of place value and to work meaningfully with numbers (rather than making tallies and counting).

NUMBER BONDS

A calculation technique that consists of building up (composition) and breaking down (decomposition). For instance, 4 can be broken down into 1 and 3, 2 and 2 and 3 and 1. These are the number bonds of 4. The number bonds of 10 are the most important since they are used in all calculation strategies.

EXPANDED NOTATION

Representation of a number by writing it out using place value. In Grades 1 and 2, learners can use expanded notation to write out numbers. For example, 18 = 10 + 8. In Grade 3, 3-digit numbers are expanded. For example, 467 is expanded in the following way: 467 = 400 + 60 + 7. 'Expanded notation' and 'building up and breaking down of numbers' are used interchangeably in CAPS. In the lesson plans, building up and breaking down are used only with regard to number bonds. Flard card can help learners to acquire knowledge of expanded notation.

SUBITISING

Subitising is 'an instant cognition of the number of objects'. This is one of the most important skills that learners should acquire in the Foundation Phase. A ten frame is a useful tool to help learners to subitise objects. In the example below, it is easier to recognise the number of dots by putting them in a ten frame.
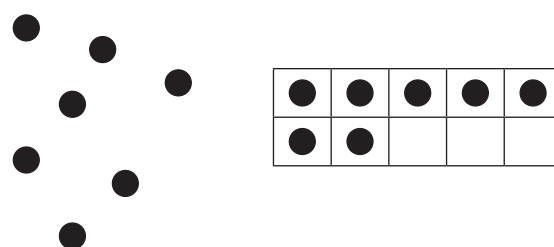
JUMPING STRATEGIES ON A NUMBER LINE

When we solve addition or subtraction with number line, we use 'jump' strategies. This strategy builds on learners' knowledge of numbers and it can also help reinforce number concept or number sense. There are many ways in which 'jumps' can be made on number line, but efficient jumps (such as jumping to the next ten or jumping in tens) make the calculations easier. Choosing these 'efficient jumps' develops learners' number sense.

Representations

CPA APPROACH (ALSO KNOWN AS THE CRA APPROACH)

The Concrete-Pictorial-Abstract (CPA) approach helps learners develop the concepts of numbers. The CPA approach uses several different representations for the concept of numbers 1, 10 and 100.

- **Concrete** objects are any materials that can be touched. In TMU, bottle tops are recommended as concrete objects.
- **Pictorial** representations are drawings that represent concrete objects.
- **Abstract** representations consist of number symbols and symbols such as '+', '−', '×', '÷'.

SIMPLIFIED PICTORIALS (OF THE TMU BASE TEN KIT WHICH IS SIMILAR TO DIENES BLOCKS)

A simplified pictorial representation of hundreds, tens and ones is used to depict numbers on paper. The concept of the numbers represented by the pictorials is reinforced when the learners draw simplified pictorials. By using simplified pictorials, an enormous time of writing can be saved compared to drawing tallies, circles etc. Simplified pictorials are much more effective than tallies. Tallies should not be drawn beyond a maximum of 20 items and preferably not for more than ten items.

hundred ten one
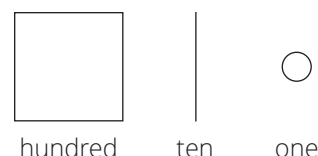
PLACE VALUE TABLE (GR 2, 3)

A diagram showing a number using a display of concrete/semi-concrete objects (bottle tops as units or base ten kit tens and hundreds) and abstract representations (numbers and number names). The following is an example of the number 37 shown in a place value table.

ARRAY DIAGRAM (GR 2, 3)

The following is the array diagram of 2 × 4. The order of multiplication is important and is consistent with CAPS.

MULTIPLICATION TABLE (GR 2, 3)

Multiplication tables show the multiples of numbers – the answers to the multiplication of several 1x1 digit multiplications, depending on the number of the multiplication table. For example, the 5 times table is □ × 5 and will show all the multiples of 5 by the numbers 1 to 10. Learners must memorise the multiplication tables, because once learners master the multiplication tables, they will be able to divide by applying their knowledge of multiplication.

BAR DIAGRAM

A diagram representing the relationships of numbers in word problems. The following is an example of a bar diagram showing addition (combine).

```
┌──────── 27 boys ────────┬──────── 20 girls ────────┐
│                         │                          │
│                         │                          │
└──────────── ? children altogether ────────────────┘
```
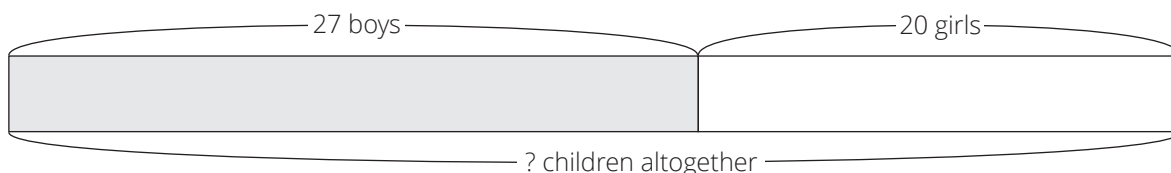
Resources

MANIPULATIVES

These are concrete apparatus such as counters, printed tens, printed hundreds, box and ball shapes, etc. that can be manipulated by learners.

COUNTERS

These are any (loose) concrete objects that learners can manipulate when counting. In the TMU, bottle tops are recommended since they are freely available but other counters can also be used such as interlocking cubes (e.g. Unifix cubes). Teachers are expected to use concrete counters such as bottle tops on a big ten frame to help learners to develop their number concept as they learn how to count and work with numbers, starting from the number 1. An abacus can be used for counting but since the numbers of the abacus are fixed onto the bars, learners cannot manipulate them as freely. In the lesson plans, all counters are referred to as bottle tops.

DOUBLE-DECKER TEN FRAME (GR1, TERM 1 AND 2)

A ten frame which is made of 2×5 frames. Double-decker ten frames are very helpful when working in the number range 0 to 10. The double-decker ten frame helps learners to understand the numbers 6 to 10 as 5 + 1, etc. (numbers 1 to 5) by subitising. Learners must put bottle tops onto ten frames themselves when they learn about numbers. The double-decker ten frame gives visual clues about the numbers shown on it. This is the number 2 represented on a double-decker ten frame:

```
┌───┬───┬───┬───┬───┐
│ ● │ ● │   │   │   │
├───┼───┼───┼───┼───┤
│   │   │   │   │   │
└───┴───┴───┴───┴───┘
```

This is the number 7 represented on a double-decker ten frame (visually 5 plus 2):

```
┌───┬───┬───┬───┬───┐
│ ● │ ● │ ● │ ● │ ● │
├───┼───┼───┼───┼───┤
│ ● │ ● │   │   │   │
└───┴───┴───┴───┴───┘
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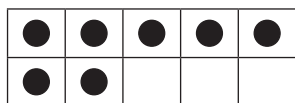
TEN FRAME CARDS (GR 1)

Ten frames with counters already shown in the cards. The example of 5 and 8 are presented. These are also called number picture cards. Learners can start to recognise these cards after working with real ten frames and bottle tops themselves in class.
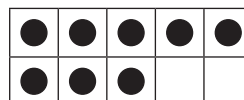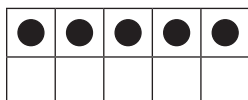
STRAIGHT TEN FRAME (GR 1 TERM 3 AND 4, GR 2, 3)

A ten frame which is straight. The thicker line in the middle shows the 5. This line is important because it helps learners to recognise the numbers 6 to 10 by using the building up skill of 5 and … (numbers 1 to 5). A straight ten frame is helpful to deal with numbers bigger than 10.

PRINTED TEN

Printed version of a group of 10 ones. You should call them 'ten(s)' when you use them in a lesson.

PRINTED HUNDRED (GR 3)

Printed version of a group of 100 ones. You should call them 'hundred(s)' when you use them in a lesson.
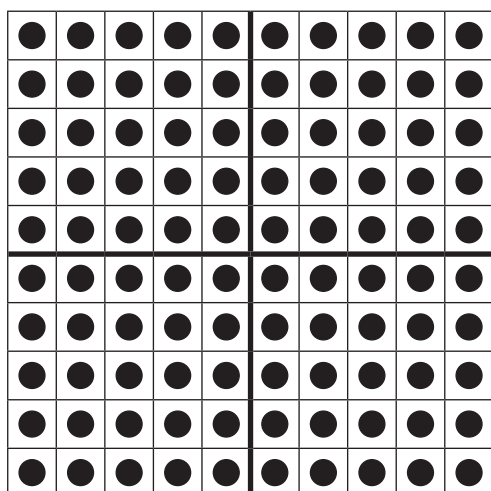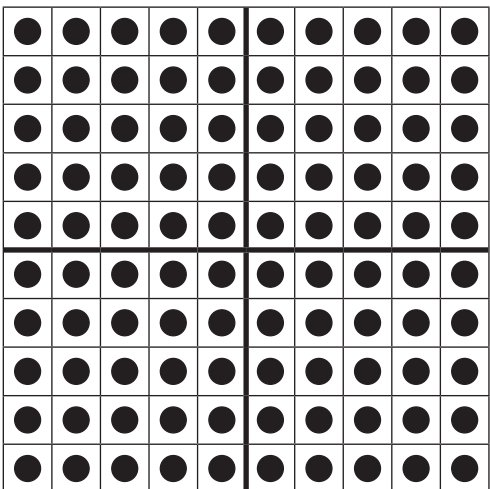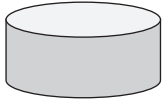
BASE TEN KITS (ALL)

The concrete number representations used in the TMU lesson plans as 'counters' for ones, tens and hundreds. Bottle tops are used as single counters (to count ones), printed tens are used to count tens and printed hundreds are used to count hundred places. Each learner

needs 1 printed hundred, 20 printed tens and 20 or 30 bottle tops. Teachers need 10 big printed hundreds, 20 big printed tens and 20 big bottle tops.

(In the TMU bottle tops are used as counters. Throughout the lesson plans, counters are thus referred to as bottle tops. One bottle top represents one. The use of bottle tops with the base ten kit is carefully introduced and is used repeatedly throughout the TMU lesson plans. Teachers could of course use other counters should they have them.)

100	10	1
hundred	ten	one

PROBLEM TYPES (SEE CAPS PAGE 45)

CHANGE

Noluthando had five apples. Silo gave her eight apples. How many apples does she have now?

Noluthando had 13 apples. She gave five apples to Silo. How many apples does she have now?

COMBINE

Nosisi has five green and eight blue marbles. How many marbles does she have?

Nosisi has 13 marbles. Five are green and the rest are blue. How many blue marbles does Nosisi have?

COMPARE

Nosisi has 13 bananas. Themba has five bananas. How many more bananas does Nosisi have than Themba?

Assessment for learning

Teaching is an engagement with learners that is ongoing. The engagement should be planned o the achievement of learning goals in a meaningful way. Particularly in the Foundation Phase, teaching and assessment should be closely aligned so that teachers draw on knowledge gained through assessment to inform and enrich their classroom activities. This is assessment for learning. The TMU pilot has planned assessment activities. You should use these activities to find out what has been learned in your class and what you need to do to take this learning further. The planned lesson activities also provide opportunities for you to listen to your learners (while you teach) and to think diagnostically about learners' responses in discussions.

You can then build on what you have learned through this activity to deepen the learning that takes place in your class. The teachers' notes in the TMU lesson plans indicate daily objectives. Another way of thinking about the lesson objectives is to think about the Learning Intentions and Success Criteria for a lesson. This provides teachers a cognitive and conceptual reference for the lesson.

Definition of learning objectives and success criteria

> '… we must help students develop a deep understanding of what they are supposed to learn, help them understand what success will look like, how the lesson's tasks relate to the lesson objectives, and at the end of the lesson, how much closer they have come to achieving the success criteria."
> "Success criteria let students know when they have achieved the learning goal."

SOURCE: (HATTIE, 2012)

One of the most important things you can do as a teacher is focus on classroom activities; in other words on discussions that make a difference to learning in the classroom.

Your task is to make sense of the TMU lesson plans so that you can strive to enact better quality teaching and learning in your classroom. Lesson plans provide useful information, but you need

to make good sense of the lesson plans in order to use them well and extend their possibilities.

Below is an instructional framework that you can use as a tool to understand classroom work.

The instructional framework is made up of the following components, which align to the components of the TMU lesson plans.

Lesson Topic
Learning Objectives
Success Criteria
Dialogue Oral
Written
Homework
Assessment

We suggest that you write up the lesson objectives and success criteria for at least one lesson in every unit of the TMU lesson plans. Take time to do this, in your own words and in relation to your own classroom context, as this will help you to develop as a professional teacher. After teaching the lesson using the instructional framework, reflect on its successes and gaps to adjust your teaching for future lessons.

Lesson objectives	Lesson 36. Ordinal numbers.
Success criteria	The learner can the position of a number or shape shown in an ordered sequence. The learner can sit in the correct position according to a given ordinal number. The learner can understand the meaning of first, second, third … The learner can draw a shape in a given position (using ordinal numbers). The learner can distinguish between left and right. The learner can name shapes or objects. The learner can draw shapes or objects.

The table below gives you a framework to use as you draw up lesson objectives and Success Criteria when you work through the TMU lesson plans. Each time:

- Go back to the Maths lesson plan you are considering.
- Align the contents of the lesson plan to the instructional framework.
- Do this by filling in the table below with sections from the lesson plan.
- Answer the questions that follow.

Grade	
Subject	Maths
Week	
Lesson	
1 Learning Objectives	
2 Success Criteria	a) The learner can b) The learner can c) The learner can

3. Oral Dialogue / Activity	
4. Written Activity / Task	
5. Homework	
6. Assessment Questions	

Further reading:

Black, P., & Wiliam, D. 1998. Inside the black box : raising standards through classroom assessment. London: King's College London School of Education 1998.
CITY, E. A., ELMORE, R. F., FIARMAN, S. E. & TEITEL, L. 2010. Instructional Rounds in Education, Cambridge, Massachusetts, Harvard Education Press.
HATTIE, J. 2012. Visible Learning for Teachers, USA, Routledge

Programme of Assessment

CONTENT AREA	ASSESSMENT TYPES	LESSON NUMBER	ASSESSMENT TYPE	MARKING GUIDE
NUMBER OPERATIONS & RELATIONSHIPS (NOR)	2 orals 2 practical 6 written	Lesson 4	Written	Memo
		Lesson 10	Written, oral and practical	Memo, rubric and checklist
		Lesson 16	Written	Memo
		Lesson 20	Written	Memo
		Lesson 27	Written, oral and practical	Memo, rubric and checklist
		Lesson 39	Written	Memo
MEASURMENT (M)	1 oral 1 written	Lesson 35	Written and oral	Memo, rubric and checklist
DATA HANDLING (DH)	1 written	Lesson 30	Written	Memo

CAPS calls for ongoing assessment which should be made up of both formal and informal assessment. TMU fully endorses this approach. The TMU material does not distinguish between formal and informal assessment. This is to be agreed on by users of the material in collaboration with teacher CoP groups and supporting officials. The assessment provided in the TMU documentation is all linked to the suggested mark sheet which can be found in the Teacher's Resource document. This sheet is to be used at the professional discretion of the teacher based on decisions made in terms of formal and informal assessment. Formal assessment marks can then be entered into SA SAMS from the suggested mark sheet since the mark sheet shows totals per content area, per term. In this way, the TMU assessment programme has been designed to fully support teachers in assessment each term.

GRADE 1 MATHEMATICS TERM 4: Suggested formal assessment mark record sheet

TASK/TOPIC/COMPONENT	Week	(Out of) marks	LEARNER NAME AND SURNAME
Term Total		153	
TOTAL FOR DATA HANDLING		17	
Data Handling: Written	6	10	
Data Handling: Pracitical	6	7	
TOTAL FOR MEASUREMENT		21	
Measurement: Written	7	14	
Measurement: Oral	7	7	
TOTAL FOR NUMBER		115	
Number: Written	8	12	
Number: Written	6	15	
Number: Oral	6	7	
Number: Written	4	20	
Number: Written	4	26	
Number: Oral	2	7	
Number: Written	2	16	
Number: Written	1	12	

About the Lesson Plans and Resources

The lesson plans and resources in this book are part of the Grade 1 Term 4 Teacher Toolkit for the pilot implementation of the mathematics framework.

The other documents in the toolkit are:
- a bilingual Learner Activity Book
- a bilingual Teachers' Resource pack
- a bilingual Dictionary of Mathematical Terms

A ABOUT THE LESSON PLANS

The lesson plans give detailed information about how to teach a CAPS-aligned lesson every day. By following the lesson plans, you will ensure that you cover the content and assessment tasks specified in the curriculum and give your learners the best possible chance of developing the knowledge and skills required for Mathematics in this grade.

1 CURRICULUM ALIGNMENT

The lessons are sequenced according to a reorganised CAPS unit planner. The content is CAPS aligned (all topics are covered and the CAPS weighting has been adhered to) but it covers a slightly different sequence to the regular CAPS. Your school has been given permission by the Minister to follow this special reorganised curriculum. Lessons plans do show each lesson's links to the CAPS content and skills being focussed on in the lesson.

2 DBE WORKBOOKS

Pilot implementation schools have been given permission not to use the DBE workbooks. You will use your CAPS- and lesson plan-aligned Learner Activity Books (LAB) instead. The LAB has been designed to include activities from the DBE workbook wherever possible. Bilingual LAB material is provided in English and the LoLT of the school in accordance with the Foundation Phase language policy. The DBE workbook could be used for extension or additional activities if the teacher has time and wishes to do so.

3 BROAD OVERVIEW OF THE CONTENT OF THE LESSON PLANS

Each lesson plan provides a set of steps to guide you in delivering the lesson. In addition, it contains learner activities that will help learners develop the concepts and skills set for the lesson. There are mental maths activities, whole class activities led by the teacher, classwork and homework activities. The answers for the classwork and homework are included in the lesson plans. The classwork and homework activities form the content of the LAB which is provided in a bilingual workbook format.

4   ASSESSMENT

Assessment is provided for in the sequence of lessons. There is also a recommended mark record sheet in the tracker. You can first record your marks in the tracker and then transfer the marks to the SA SAMS marksheets.

In the Learner Activity Book, there is a blank page on the day that an assessment is done. This provides the teacher with a space for learners to write corrections or do additional problems that the teacher may want them to solve after going over the written test with the class.

The programme of assessment suggested in the lesson plans complies with revised CAPS Section 4. Written, oral and practical assessments are provided. Rubrics and checklists with criteria for the oral and practical assessments are also included.

The checklists that are provided enable teachers to allocate a mark that can be entered onto SA SAMS. Each criterion in the checklist is allocated a mark (1 = achieved and a 0 = not achieved). Teachers could vary this system should they wish to.

The rubrics that are provided have 7 levels which can be used to allocate a mark from 1 to 7 that can also be used to enter marks into the SA SAMS marksheets.

5   MANAGING YOUR TEACHING USING THE LESSON PLAN

A set of revision activities on eight different topics aligned with the CAPS baseline assessment requirements is provided for the start of the first term. You should use all or a selection of these activities in the first week of term before the formal teaching of the numbered lesson plans begins. The formal curriculum for Term 4 of Grade 1 is covered in a set of 50 numbered lesson plans, paced to cover a 50-day teaching term. This includes 32 fully planned lessons, 8 assessment lessons and 10 consolidation lessons.

Each of the 32 fully planned lessons is designed to last 90 minutes. Each school should allow seven hours for Mathematics each week so it should be possible to fit in all the work for the week, even if the lengths of periods are not the same as in the lesson plans.

6   SEQUENCE ADHERENCE AND PACING

Each of the fully planned lessons and its contents has been carefully sequenced. You should not skip any of these lessons. Should you miss a school day for any reason, rather skip a consolidation lesson near to the lesson that you are busy teaching. You might choose to speed up the pace of delivery to catch up a missed lesson by covering the lesson concept contents of two consecutive days in one day. To do this, you could cut out or cut back on some of the routine activities like mental mathematics or homework reflection to save time until you are back on track with the expected delivery of the plans.

7. UNIT OVERVIEW

Each unit is introduced with a description of the unit content. Links to the four framework dimensions are included in the introduction to the unit. The introduction is followed by a unit overview which gives a tabulated summary of the lessons contained in the unit. The lesson objectives and resources required for each lesson are included in the table. There is also a column provided for you to use to keep a record of your teaching progress.

It is a good idea to reflect on your teaching. You could write about what went well, or not so well, when you taught the lessons and how you would teach the lessons again the next time. Use the space provided at the end of each unit overview to record your thoughts. Some questions are provided to guide your reflection.

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 in 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 material, offer it to them again.

Preparing to teach a lesson

The lesson plans provide a detailed lesson design for you to follow. However, to deliver the lessons successfully **you must do the necessary preparation yourself**.

Before you get started, study the contents page of the lesson plan document. This will give you an overview of the mathematics content you will cover during the term.

The information below outlines some key aspects of the preparation required before you teach are the lessons.

a **Prepare resources:** The resources needed for each lesson are listed in each lesson plan and in the tracker. It is very important that you check what is required for each lesson ahead of time, so that you have all your resources ready for use every day (e.g. bottle tops, number grids, paper cut-outs, examples of shapes, etc.).

  • **Your lessons will not succeed if you have not prepared properly ahead of time.**
  • If you do not have all the necessary resources readily available, see how best you can improvise, e.g. get learners to collect bottle tops or small stones to be used for counting, or make your own flard cards/number grids using pieces of cardboard and a marker pen.
  • Collect empty cool drink cans, cereal boxes, washing powder boxes, plastic bottles etc. for the **shop activity** in the week long in advance, so that you have all the necessary goods to stock your shop.
  • Use newspapers and magazines to cut out pictures that could be used in your teaching. If you have access to the internet, search for and print out pictures that you may need to use as illustrations in your lessons.

b **Prepare for the written classwork and homework activities:** When preparing your lessons, check the lesson activity requirements. In some instances, you will need to write information or draw some diagrams on the board that you will use while you do the interactive whole-class-teaching component of the lesson. Also, mark the homework activities as often as you can, so that you can give useful feedback to the learners each day, and become aware of any difficulties the learners are having as soon as they become apparent.

c **Prepare to teach the concepts and skills associated with the lesson topic:** Think carefully about what it is that you will teach your learners in the lesson. Prepare a short introduction to the topic, so that you can explain it in simple terms to your learners. Make sure you have prepared for the teaching of the concepts before you teach – you need to be able to explain new Mathematics content and skills to the learners. Be sure you have gone through the oral teaching activities provided in the lesson plans. Also make sure that you have thought about how to use the resources in the lesson effectively. This preparation needs to be done in advance, so that you do not waste time during the lesson. Be sure you are familiar with the sequence of activities in the lesson plan. Prepare yourself to assist learners with any questions they might have during the lesson. Also give some thought to how you will accommodate learners with barriers to learning.

d **Lesson pace:** Think about how much time you will spend on each activity. It is important to plan how you will manage the pace of the lesson carefully; otherwise you will not manage to cover all the lesson content. Not all learners work at the same pace. You need to determine the pace – be guided by the average learner and the recommendations in the lesson plans. Be careful not to slow down to the pace of the slowest learners as this will disadvantage the other learners.

e **Organisation of learners:** Think about how you will organise learners when they do the classwork activities. Will they work alone, in pairs or in small groups? How will you organise the pairs or groups if you choose to use them? You need to organise the learners quickly at the beginning of the lesson, so that you do not waste too much time on this.

f **Inclusive education:** Consider the needs of any learners with barriers to learning in your class, and how best you can support them. The DBE has published some excellent materials to support you in working with learners with learning barriers. Two such publications are:

- Directorate Inclusive Education, Department of Basic Education (2011) *Guidelines for Responding to Learner Diversity in the Classroom Through Curriculum and Assessment Policy Statements.* Pretoria. www.education.gov.za, www.thutong.doe. gov.za/InclusiveEducation.
- Directorate Inclusive Education, Department of Basic Education (2010) *Guidelines for Inclusive Teaching and Learning. Education White Paper 6. Special needs education: Building an inclusive education and training system.* Pretoria. www. education.gov.za, www.thutong.doe.gov.za/InclusiveEducation.

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/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. Say 'No', 'Wrong', 'Next', 'Right', 'Yes',
Ask the learners 'why did you think so', regardless of whether their answer is correct or incorrect.	'Correct', etc. immediately after learners give you their answers.
Assist learners to discover where and why they made mistakes. Use other learners as well to explain why something is not correct.	Answer the phone.

It is important to note that:

There is **one week** of planned baseline assessment activities and **10 weeks** of teaching planned in this set of lesson plans.

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.

Lesson Plan Outline

Each lesson plan has several components. Information about each one is given in the table below. This information tells you how to use each of the components of the lesson plans and how they fit together to create a well-paced and properly scaffolded Mathematics lesson each day. You should read this outline as you prepare each lesson until you are fully familiar with the general lesson plan components, pace and structure.

Teacher's notes

These notes include information for the teacher about the CAPS content to be covered in the lesson and the learning objective for the lesson.

A list of the lesson vocabulary is included in the teacher's notes. This is a list of the important mathematical vocabulary used in the lesson. The vocabulary, with explanations and diagrams, is also provided in the bilingual dictionary that is part of your Toolkit. You should go through the lesson vocabulary each day as you prepare for the lesson. These terms are important as they are the language of Mathematics that each learner needs to learn and understand in order to build a solid foundation and understanding of this subject. It is important to explain these words to your learners and encourage learners to use them as well. If you have learners in your class who are not yet comfortable in the Language of Learning and Teaching (LoLT), try to explain the word in a language they understand. Use gestures, pictures or enlist the help of another learner who is familiar with the home language of the learner who is struggling with a language barrier.

Finally, the resources that you should prepare for the days lesson are listed. You need to check which resources you need in advance for each lesson so that you are ready to teach the lesson each day.

Mental mathematics (10 minutes)

This is the first active component of the lesson. We recommend that you take at most 10 minutes to do the mental mathematics activity. The mental mathematics activity consists of a set of questions to drill number facts and basic mathematical strategies that are linked to the day's lesson.

Mental mathematics is not a concrete activity (as the title suggests). Remember that a concrete activity uses actual material to scaffold learning. However, if there are learners who need concrete aids to complete the mental mathematics activities, we suggest that you allow them to count on their fingers.
* Observe which learners struggle with mental activities, and make sure that you spend time later to help them reach the required level of competence by offering remediation activities using concrete aids.

- The answers to the mental mathematics questions are given in the answer column in the lesson plans.
- You should try to complete all of each day's mental mathematics questions, but if you find that your learners struggle to finish these in ten minutes, do a minimum of five questions.

Lesson content – concept development (45 minutes)

This is the second component of the lesson. It is the body of the lesson, in which learners are introduced to the new work planned for the day. We recommend that you actively teach your class for 45 minutes, going through the activities interactively with your learners.

- Activities on the content that you will teach with worked examples and suggested explanations are given. These activities have been carefully sequenced and scaffolded so that they support the teaching of the concepts for that day. You should work through each of these with your class.
- It is important to manage the pace of the lesson carefully otherwise you will not manage to cover all the lesson content. Once you have introduced the new concept, work through Activity 1 of the lesson with the whole class (or with learners in groups). Then immediately move on to the next activity, and provide a reasonable time for the learners to complete Activity 2, but do not wait for the last learner to finish before proceeding. If there are further activities, continue pacing yourself in this way, so that you work through all of the activities in each lesson. A few activities are marked as *optional* – these need only be done if you have sufficient time.

Classwork activity and correction of homework (25 minutes)

This is the third component of the lesson. We recommend that you allocate 25 minutes to going over the previous day's homework and giving time to the learners to do the classwork.

First, take a minute or two to reflect on the homework. You might read out answers to all of the homework questions, allowing learners/peers to mark the work. Try to check the homework yourself as often as you can. If you notice a question that many learners struggled with, especially if it is important for today's lesson, you could work through it in full with the whole class. Allow learners the opportunity to write corrections as needed.

When you assign the classwork, you could go over one or two of the classwork activities orally with the whole class before allowing the class to complete the activities independently (individually or in groups).

- Learners should do their classwork in their mathematics exercise books.
- Learners should work individually, in pairs and in groups so that they experience working alone as well as with their peers.
- Individual work is so important. Sometimes, in group work, only one or very few learners lead the group: they do all the work and present it to the class for the group.

Group work does not guarantee every learner's learning and understanding. Some of the group members may have been left behind without knowing exactly what has been has done. Learners should first work individually and then discuss what they have done with the rest of the group, based on what they have in their classwork books or worksheets.

- Wrap up the classwork activity each day by giving the learners the answers to the classwork and allow time for corrections to be written when necessary. You should reflect on questions that learners have struggled with if necessary.

The bilingual learner resources contain all of the daily classwork activities.

Homework activity (5 minutes)

This is the fourth component of the lesson. We have allocated five minutes to give you time to tell the learners about the homework each day .

Homework consolidates the content that you have taught each day. Homework also promotes learner writing and development of their mathematical knowledge.

The bilingual learner resources contain all of the daily homework activities.

Reflection (5 minutes)

This is the fifth component of the lesson. You should wrap up each day's lesson by focussing the learners on the content covered and the concepts they should have learned.

Week 1

Unit 1 Introduction

This unit focuses on the relationship between addition and subtraction. In this unit learners will further develop what they have learned over the course of the year, and begin to recognise the inverse relationship between addition and subtraction. This is an important skill as they will become able to use their knowledge of these operations to help them solve a variety of problems.

In this unit you will be able to focus on the four framework dimensions in the following way:

- **Conceptual understanding**: In this unit learners will begin to understand that they can use subtraction to find the missing number in addition problems, and addition to find the missing number in subtraction problems (e.g. Lesson 1 Activity 1).
- **Procedural fluency**: Learners will play games using the skills that they have learned in order to become more efficient in using the strategies and procedures (e.g. Lesson 3 Activity 1).
- **Strategies**: Learners will be able to use the inverse operation to solve problems (e.g. Lesson 3 Activity 1).
- **Reasoning**: Learners are encouraged to verbalise their strategies so that they can develop their reasoning skills (e.g. Lesson 1 Activity 1).

Building a **learning centred classroom** in this unit will involve (amongst other things) attention to:

- **Concept development**: Learners will begin to understand that addition and subtraction are inverse operations, and that they can use these operations when trying to find the missing numbers in problems.
- **Connecting topics and concepts:** Learners will see the relationship between addition and subtraction, and be able to use this relationship as a strategy for solving problems.

Unit 1 overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Mon	1	Using subtraction to find the missing number in addition problems.	Bottle tops, ten frames.	
Tue	2	Using addition or subtraction to find the missing number in subtraction problems.	Bottle tops, ten frames.	
Wed	3	Practise addition with carrying and subtraction with borrowing, recognising addition and subtraction as inverse operations.	Bottle tops, ten frames, addition-with-carrying cards and subtraction-with-borrowing cards (see Term 3 *Printable Resources*), number cards (11 to 18 and 2 to 9) (see Term 3 *Printable Resources*).	
Thur	4	Assessment	Assessment activity in teacher's resources.	

Assessment for learning

Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

Lesson 1: Find the missing number (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.12 Techniques (methods or strategies); 1.13 Addition and subtraction (context free).
Lesson Objective: Using subtraction to find the missing number in addition problems.
Lesson Vocabulary: Make-a-ten, add +, and, more, subtract, take away, less.
Resources: Bottle tops, ten frames.
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	3 + 9 = __	12	**6**	13 – 5 = __	8
2	4 + 7 = __	11	**7**	16 – 9 = __	7
3	9 + 8 = __	17	**8**	12 – 8 = __	4
4	5 + 7 = __	12	**9**	15 – 6 = __	9
5	6 + 8 = __	14	**10**	14 – 7 = __	7

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson learners will revise what they learned in Term 3 about finding the missing number. Learners will investigate how solving a problem using a number bond table and ten frames will result in the same answer. Learners will also discuss the relationship between addition and subtraction, recognising that these are inverse operations.

Today we are learning to find the missing number in addition problems.

Activity 1: L earners work in pairs

- Make sure that each pair of learners has 2 blank ten frames and some bottle tops.
- Write a number sentence with a blank on the board.
  For example: 9 + □ = 14
- Ask: **What do you think you need to do to find the missing number?** (I know 9 + 5 = 14, so 5 goes into the box. We can take 9 away from 14 to find the missing number as we practiced in Term 3; 14 – 9 = 5).
- Allow time for the learners to draw a number bond table in their classwork books and solve the problem.

14	
9	?

- Let the learners check that '5' is correct using bottle tops and ten frames.
- *Learners can:*
  - *Place 9 bottle tops (in one colour) on one ten frame. Learners can then place one more bottle top (in a different colour) on the ten frame to make 10, and then place 4 bottle tops on the second ten frame. They then subitise and add 1 + 4 to find the number of the bottle tops (in the second colour).*
  - *Place 10 bottle tops on one ten frame, and 4 bottle tops on the other ten frame (in the same colour). If learners take away 9 bottle tops from 10, they will see that there are 5 bottle tops left across the 2 ten frames.*
- Encourage the learners to discuss and realise that they can use subtraction to solve the problem when they see a box (an unknown number) in an addition problem.
- Repeat the steps above using the problems listed below, encouraging learners to solve the problems using different methods (number bond table and ten frames) so that they can compare the different methods themselves:
  - $7 + \Box = 12$ $(12 - 7 = 5)$
  - $\Box + 9 = 15$ $(15 - 9 = 6)$

Activity 2: Learners work in pairs

- Make sure that each pair of learners has 2 blank ten frames and some bottle tops.
- Write the following number sentence on the board, with the number bond table shown below next to it:

$\Box + 6 = 13$

- Let the learners copy a blank number bond table and the number sentence into their classwork books.
- Let the learners write the numbers given into their blank number bond tables and ask a learner to present what he/she wrote in the number bond table on the board.

13	
?	6

- Ask: **What do you think you need to do in order to find the missing number?** (Learners may say We can subtract 6 from 13 to find the missing number as we practised in Activity 1; 13 – 6 = 7, I know 6 + 7 = 13, so 7 goes into the box.).
- Encourage the learners to move away from the counting on method by using the number bond table to help them solve the problem more efficiently. Help the learners to see that the layout of the number bond table suggests using subtraction as the operation

to find the missing number. This way learners can work out 13 − 6 = 7, rather than counting on from 6.

- Ask: **What have you learned about addition and subtraction?** (Encourage the learners to realise that addition and subtraction are inverse operations, and that they can sometimes use one operation to find the missing number of the inverse operation.)
- Say: **Check if the answer '7' is correct using your ten frames and bottle tops.**
- Encourage the learners to find the missing number in different ways using their ten frames.
- *Learners can:*
  - *Place 13 bottle tops on the ten frames, and then remove 6.*
  - *Place 6 bottle tops on a ten frame, and see how many more are needed to get to 13.*
- Ask a learner to come up to the board to write the answer in the number bond table.

13	
7	6

- Discuss and confirm with learners that subtraction can be used to find the missing number when one of the bottom boxes of the number bond table is empty.
- After rewriting the problems in the number bond tables in their classwork books, let the learners solve the problems listed below:
  - □ + 3 = 11 (11 − 3 = 8)
  - 5 + □ = 12 (12 − 5 = 7)

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Find the missing number in the number bond tables.

Write the number sentence that you used to solve the problem on the line.

a   7 + □ = 15

15	
7	(8)

(15 − 7 = 8)

b   □ + 6 = 11

11	
(5)	6

(11 − 6 = 5)

c   9 + □ = 12

12	
(3)	9

(12 − 9 = 3)

d   8 + □ = 14

14	
8	(6)

(14 − 8 = 6)

e   □ + 9 = 18

18	
(9)	9

(18 − 9 = 9)

f   9 + □ = 16

16	
9	(7)

(16 − 9 = 7)

4   HOMEWORK ACTIVITY (5 MINUTES)

Find the missing number in the number bond tables.

Write the number sentence that you used to solve the problem on the line.

a $5 + \square = 13$

13	
5	(8)

$(13 - 5 = 8)$

b $\square + 6 = 12$

12	
(6)	6

$(12 - 6 = 6)$

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to use subtraction to find the missing number in addition problems.

Lesson 2: Find the missing number (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.12 Techniques (methods or strategies); 1.13 Addition and subtraction (context free).
Lesson Objective: Using addition or subtraction to find the missing number in subtraction problems.
Lesson Vocabulary: Make-a-ten, add, and, more, subtract, take away, less.
Resources: Bottle tops, ten frames.

Date:	Week	Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	5 + 9 = __	14	**6**	11 – 6 = __	5
2	8 + 7 = __	15	**7**	15 – 8 = __	7
3	4 + 8 = __	12	**8**	17 – 9 = __	8
4	9 + 7 = __	16	**9**	13 – 7 = __	6
5	7 + 6 = __	13	**10**	12 – 6 = __	6

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson follows on from what was covered in Lesson 1. Learners will continue to investigate the relationship between addition and subtraction and will be able to find the missing numbers in number sentences by using number bond tables and ten frames.

Today we are learning to find the missing number in subtraction problems.

Activity 1: Learners work in pairs

- Make sure that each pair of learners has 2 blank ten frames and some bottle tops.
- Write the following number sentence on the board, with the number bond table shown below next to it:

14 – ☐ = 8

- Let the learners copy a blank number bond table and the number sentence into their classwork books.
- Let the pairs discuss how to write the numbers given into the blank number bond table.

- Ask one pair to present how they think the numbers should be written in the bond table on the board.
- Confirm with the whole class that the number bond table looks like the following:
  (The biggest number goes into the biggest box on the top of the number bond table.)

14	
?	8

- Ask: **What do you think you need to do in order to find the missing number?**
  (Learners are expected to say that they could subtract 8 from 14 because they confirmed in Lesson 1 that subtraction can be used to find the missing number when one of the bottom boxes of the number bond table is empty; 14 – 8 = 6.)
- Say: **Check that the answer '6' is correct using your ten frames and bottle tops.**
- Encourage the learners to find the missing number in different ways using their ten frames.
- *Learners can:*
  - *Place 14 bottle tops on the ten frames, and then remove 8.*
  - *Place 8 bottle tops on a ten frame, and see how many more are needed to get to 14.*
- Ask a learner to come up to the board to write the answer in the number bond table.

14	
6	8

- Ask: **What number sentences can you write from this number bond table?** Learners can suggest number sentences which can then be written on the board:
  8 + 6 = 14
  6 + 8 = 14
  14 – 8 = 6
  14 – 6 = 8
- Ask: **What have you learned about addition and subtraction?** (Encourage the learners to realise that addition and subtraction are inverse operations, and that the numbers on the number bond table can be used in different ways to help them find the missing number.)
- After rewriting the problems in the number bond tables in their classwork books, let the learners solve the problems listed below:
  - 15 – ☐ = 7 (15 – 7 = 8)
  - 11 – ☐ = 8 (11 – 8 = 3)

Activity 2: Learners work in pairs

- Make sure that each pair of learners has 2 blank ten frames and some bottle tops.
- Write the following number sentence on the board, with the number bond table shown below next to it:

$\square - 6 = 7$

- Let the learners copy a blank number bond table and the number sentence into their classwork books.
- Ask: **Do you think the missing number is bigger or smaller than 7 and 6? Why?** (Learners may say that the missing number is bigger than 7 (and 6) because we take away 6 from the missing number and we still have 7 left.)
- Say: **Let's represent the number sentence with our ten frames and bottle tops to check that the missing number is the bigger than other two numbers.**
- Advise learners that they can find the missing number by working backwards from the end of the number sentence when the number sentence starts with the missing number.
- Let the learners follow the steps below:
    - *Place 7 bottle tops on the ten frame.*
    - *Because you took away 6, you must return that 6 to know the missing number.*
    - *Fill up the first ten frame. (Learners add 3 on 7 to make 10.)*
    - *How many more you have to return? (3 more)*
    - *Place the last three bottle tops in the second ten frame.*
    - *What is the number you get? (13)*
    - *'13' is the missing number.*
- Ask: **What did we do with bottle tops and ten frames, addition or subtraction?** (Addition; 7 + 6 = 13).
- Let the learners write the answer in the box of the number sentence. (13 – 6 = 7)
- Let the learners fill up the number bond table, reminding them that the biggest number goes into the biggest box on the top. (see Activity 1)
- Ask a learner to come up to the board to write the answer in the number bond table.

- Help learners to see that the layout of the number bond table shows them what to do:
When the missing number is in the box on the top, you use addition to find the answer.
When the missing number is in one of the bottom boxes, you use subtraction to find the answer.
    - After rewriting the problem in the number bond tables in their classwork books, let the learners solve the problems listed below: $\square - 5 = 9$ (9 + 5 = 14)
    - $\square - 8 = 4$ (4 + 8 = 12)

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Find the missing number in the number bond tables.

Write the number sentence that you used to solve the problem on the line.

a $14 - \square = 6$

14	
(8)	6

$(14 - 8 = 6)$

b $\square - 7 = 5$

(12)	
7	5

$(5 + 7 = 12)$

c $16 - \square = 9$

16	
(7)	9

$(16 - 9 = 7)$

d $\square - 3 = 8$

(11)	
3	8

$(8 + 3 = 11)$

e $\square - 9 = 4$

(13)	
9	4

$(4 + 9 = 13)$

f $15 - \square = 8$

15	
(7)	8

$(15 - 8 = 7)$

4   HOMEWORK ACTIVITY (5 MINUTES)

Find the missing number in the number bond tables.

Write the number sentence that you used to solve the problem on the line.

a $16 - \square = 8$

16	
8	(8)

$(16 - 8 = 8)$

b $\square - 8 = 4$

(12)	
8	4

$(4 + 8 = 12)$

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to use addition or subtraction to find the missing number in subtraction problems.

Lesson 3: Addition and subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.6 Problem-solving techniques; 1.7 Addition and subtraction (in context); 1.12 Techniques (methods or strategies); 1.13 Addition and subtraction (context free).
Lesson Objective: Practise addition with carrying and subtraction with borrowing, recognising addition and subtraction as inverse operations.
Lesson Vocabulary: Make-a-ten, add, and, more, subtract, take away, less.
Resources: Bottle tops, ten frames, addition-with-carrying cards and subtraction-with-borrowing cards (See Term 3 *Printable Resources*), number cards (11 to 18 and 2 to 9) (See Term 3 *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	$6 + 9 =$ __	15	**6**	$16 - 8 =$ __	8
2	$9 + 8 =$ __	17	**7**	$13 - 9 =$ __	4
3	$7 + 6 =$ __	13	**8**	$14 - 6 =$ __	8
4	$8 + 7 =$ __	15	**9**	$12 - 5 =$ __	7
5	$5 + 9 =$ __	14	**10**	$11 - 8 =$ __	3

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

Learners will consolidate their understanding of addition and subtraction as inverse operations. They will use addition and subtraction cards to reinforce the knowledge they have gained in Lessons 1 and 2.

Today we are learning to add (with carrying) and subtract (with borrowing), recognising that addition and subtraction are inverse operations.

Activity 1: Learners work in pairs

- Make sure that each pair of learners has a set of addition cards and a set of subtraction cards.
- The first 2 number sentences are done with the whole class to assist learners to understand the game rule.
- One learner in the pair can work with the addition cards and the other learner in the pair can work with the subtraction cards.
- One learner begins by selecting a card and placing it with the number sentence facing up on the desk.

- For example, the card 9 + 2 may be selected.
- The learner with the subtraction cards then finds a corresponding card which shows the relationship between addition and subtraction.
- For example, the learner could put the card with the number sentence 11 – 2 and/or the number sentence 11 – 9 on the desk.
- Give the learners time to discuss the number sentences, and to verbalise why they think these number sentences are linked together.
- The learner with the subtraction cards can then select a different number sentence and lay the card on the desk (with the number sentence facing up).
- For example, the card 13 – 9 may be selected.
- The learner with the addition cards then finds a corresponding card which shows the relationship between addition and subtraction.
- For example, the learner could put the card with the number sentence 9 + 4 and/or the number sentence 4 + 9 on the desk.
- Give the learners time to discuss the number sentences, and to verbalise why they think these number sentences are linked together.
- *This activity then continues with the learners continuing to select a number sentence card, and then find the corresponding number sentences.*
- *NOTE: It is important to walk around the classroom and observe the learners as they participate in this activity. Observing their selection of number sentences and listening to their verbalisation of the relationship between the number sentences will provide great insight into the learners' understanding of this concept.*

Activity 2: Whole class activity

- Make sure that each learner has a set of number cards (2 to 9 and 11 to 18), and two ten frames with some bottle tops.
- Write a number sentence with a blank on the board.
  - For example: $4 + \square = 13$
- Write a number sentence with a blank on the board.
  - For example: $4 + \square = 13$
- Encourage the learners to find the missing number by filling in numbers in a number bond table in their classwork books, or by using their ten frames and bottle tops.

13	
4	**9**

- When the learners have solved the problem, they can hold up their number cards to show their answers.
- *NOTE: This is important as each learner will be actively involved in finding the missing number, and so they will be able to consolidate their knowledge. By having the learners show their number cards, it is possible to assess the learners' understanding at a glance.*

The learners' selection of the card provides feedback which makes it clear whether or not they have grasped the concept of addition and subtraction being inverse operations.
- Repeat the steps above, using different number sentences:
  - $\square + 5 = 11 \ (11 - 5 = 6)$
  - $13 - \square = 6 \ (13 - 6 = 7)$
  - $\square - 9 = 8 \ (8 + 9 = 17)$

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Today the learners will play with the Term 4 addition and subtraction cards. Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game. Then circulate and make sure that they are all playing the game correctly.

Rules of the games.

1 Learners play with subtraction-with-borrowing cards in pairs.

   a Give each pair of learners a set of subtraction-with-borrowing cards and a set of number cards (2 to 9).

   b The pairs of learners take one number card and place it face (number side) up on top of the pile between them.

   c The learners should then shuffle all the subtraction-with-borrowing cards and pile them up between them, with the number sentence side showing.

   d The learners must then each try to find as many number sentences matching the number card as they can, as quickly as possible.

   e The learners can check that they have selected the correct number sentences once they have found all the matching number sentence cards. Keep the cards that are correctly selected.

   f The winner of the round is the learner with the most cards.

   g Play another round of the game by changing the number card on top of the pile. Make sure that all the number sentence cards are returned to the pile, shuffled and laid out between the learners again before beginning the second round.

2 Learners play with addition-with-carrying cards in pairs.

   a Give each pair of learners a set of addition-with-carrying cards and a set of number cards (11 to 18). Make sure the addition-with-carrying cards are shuffled.

   b One learner gets the addition-with-carrying cards and the other learner gets the number cards.

   c The learner with the addition-with-carrying cards selects one number sentence to show to the other learner.

   d The learner with the number cards must quickly find the answer to the number sentence in the number cards pile and holds it up.

> **e** The learner with the addition-with-carrying cards should then check the answer on the back of the number sentence card.
>
> **f** Continue doing this until all of the addition-with-carrying cards have been used.
>
> **g** Play another round of the game by reshuffling the addition-with-carrying cards and swapping which learner holds the addition-with-carrying cards and which learner holds the number cards.

Play the addition and subtraction card games. Your teacher will explain the rules.

4 HOMEWORK ACTIVITY (5 MINUTES)

Find the missing number in the number bond tables.

Write the number sentence that you used to solve the problem on the line.

a $16 - \square = 9$

16	
(7)	9

(16 – 7 = 9)

b $\square - 4 = 7$

(11)	
4	7

(11 – 4 = 7)

c $\square + 5 = 13$

13	
(8)	5

(13 – 5 = 8)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to add (with carrying) and subtract (with borrowing), recognising that addition and subtraction are inverse operations.

Lesson 4: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.6 Problem-solving techniques; 1.7 Addition and subtraction (in context); 1.12 Techniques (methods or strategies); 1.13 Addition and subtraction (context free).
Resources: Printable assessment in teacher's resources.
Date: Week   Day

1   SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

2   DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
*   use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
*   speak about misconceptions that may have arisen in learners' responses.

NOTE: Learners that finish the test early can play the addition-with-carrying card game. Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game.

Addition-with carrying card game: Rules of the game

1   Learners play with addition-with-carrying cards in pairs.
2   Give each pair of learners a set of addition-with-carrying cards and a set of number cards (11 to 18).
3   Make sure the addition-with-carrying cards are shuffled.
4   One learner gets the addition-with-carrying cards and the other learner gets the number cards.
5   The learner with the addition-with-carrying cards selects one number sentence to show the other learner.
6   The learner with the number cards quickly finds the answer to the number sentence in the number cards pile and holds it up.
7   The learner with the addition-with-carrying cards checks the answer on the back of the number sentence card.
8   Continue doing this until all of the addition-with-carrying cards have been used.
9   Play another round of the game by reshuffling the addition-with-carrying cards and swapping which learner holds the addition-with-carrying cards and which learner holds the number cards.

3   ASSESSMENT

WRITTEN ASSESSMENT (12)

1   Find the missing number in the number bond tables.
    Write the number sentence that you used to solve the problem on the line.

a $6 + \square = 14$

14	
6	(8)

$(14 - 6 = 8)$

b $\square + 9 = 15$

15	
(6)	9

$(15 - 9 = 6)$

c $13 - \square = 9$

13	
(4)	9

$(13 - 9 = 4)$

d $\square - 5 = 7$

(12)	
5	7

$(7 + 5 = 12)$

e $\square + 7 = 14$

14	
(7)	7

$(14 - 7 = 7)$

f $\square - 7 = 6$

(13)	
7	6

$(6 + 7 = 13)$

2   Learners who finish the assessmet early can play the addition-with-carrying game in pairs.

Unit 2 Introduction

This unit focuses on the introduction of numbers up to 100. Learners will develop their understanding of the use of place value in the base ten number system and they will also learn how to write numbers using expanded notation. Learners will be able to read and write the number names and symbols up to 100, and they will practise sequencing and comparing numbers in this range.

In this unit you will be able to focus on the four framework dimensions in the following way:

- **Conceptual understanding**: Learners will develop their understanding of large numbers, applying what they have learned previously to the new number range (e.g. Lesson 5 Activity 1).
- **Procedural fluency**: Learners will practise sequencing and comparing numbers in a variety of ways so that they can develop fluency in making comparisons (e.g. Lesson 6 Activity 2).
- **Strategies**: Learners will begin to develop their ability to solve problems using their understanding of more than and less than, and working with multiples of 10 (e.g. Lesson 8 Activity 1).
- **Reasoning**: Learners will verbalise their solutions of problems, demonstrating their understanding of concepts and strategies (e.g. Lesson 9 Activity 1).

Building a **learning centred classroom** in this unit will involve (amongst other things) attention to:

- **Addressing gaps in learners' knowledge**: This unit provides opportunities to address gaps in learners' knowledge as they further develop concepts and skills developed throughout the year.
- **Addressing learners' errors**: Learners are given multiple opportunities to sequence and compare numbers in this unit, so it becomes possible to address learners' errors in a variety of ways.

Unit 2 Overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Fri	5	Develop an understanding of the concept of numbers up to 99 focusing on place value as tens and ones.	Ten frames, bottle tops, demonstration ten frames (teacher).	
Mon	6	Develop an understanding of the base ten number system - numbers up to 99.	Ten frame, bottle tops, demonstration printed tens, number symbol cards (0 to 9), 100 board (demonstration size), at least 6 tubs of small concrete items for counting, place value table (see Printable Resources).	
Tue	7	Read and write number symbols and number names and use expanded notation for numbers up to 99.	Printed tens (see Printable Resources) and ten frames (learner and demonstration size), bottle tops, place value table (see Printable Resources).	
Wed	8	Sequence (order) and compare numbers up to 99.	Bottle tops, printed tens (see Printable Resources), number line, demonstration hundred board.	
Thur	9	Compare and order numbers up to 99.	n/a	
Fri	10	Assessment	Assessment activity in teacher's resources.	
Mon	11	Understand 100 by using the base ten system and by locating numbers on a number line and 100 board.	Ten frames, bottle tops, printed tens (see Printable Resources), 1-100 number cards (see Printable Resources).	
Tue	12	Sequence and compare numbers up to 100.	Printed tens (see Printable Resources), 100 board, tens number cards (see Printable Resources), number cards (1 – 9).	
Wed	13	Sequence and compare numbers up to 100.	Tens number cards (see Printable Resources), number cards (1 – 9), game board (see Printable Resources), coloured counters.	
Thur	14	Compare numbers up to 100, and build up and break down 100.	Printed tens (see Printable Resources), tens number cards (see Printable Resources), number cards (1 – 9), game board (see Printable Resources), coloured counters.	
Fri	15	Add and subtract tens and ones by using the place value table.	Printed tens (see Printable Resources), bottle tops, ten frames, place value table (see Printable Resources).	

| Mon | 16 | Assessment | Assessment activity in teacher's resources. | |

Assessment for learning
Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

Lesson 5: Numbers up to 99 (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.1 Count objects; 1.5 Place value; 2.2 Number patterns.
Lesson Objective: Develop an understanding of the concept of numbers up to 99 focusing on place value as tens and ones.
Lesson Vocabulary: Place value, tens, ones.
Resources: Ten frames, bottle tops, demonstration ten frames (teacher).
Date: Week Day

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	5s up to 20	5, 10, 15, 20
2	2s up to 20	2, 4, 6, 8, 10, 12, 14, 16, 18, 20
3	10s up to 20	10, 20
	Count backwards in:	Answer
1	5s from 20	20, 15, 10, 5
2	2s from 20	20, 18, 16, 14, 12, 10, 8, 6, 4, 2
3	10s from 20	20, 10

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will be focusing on the concept of numbers up to 99. Learners will investigate how many tens and ones there are in given numbers. Learners will circle groups of 10 pictures in order to help them to count in 5s and then 10s (5 and 5 makes 10). This will also help them to understand the number symbols of two-digit numbers, recognising what is being represented by each of the number symbols.

Today we are learning about the concept of tens and ones in numbers up to 99.

Activity 1: Whole class activity

- Place 26 bottle tops on one desk at the front of the class and 40 bottle tops on another desk at the front of the class.
- Bring two learners to the front, and ask them to each stand behind one of the desks.
- Ask: **Which learner has more bottle tops?** (The learner with the bigger pile of bottle tops.)
- Ask: **How can you find out how many bottle tops they each have?**

- Learners may respond:
  - Counting one by one.
  - Counting in 2s (3s, 4s, 5s or 10s).
  - Sorting all the bottle tops into ten frames.
- Ask: **Which way requires less counting?** (Sorting into ten frames.)
- Put three large ten frames on the board.
- Call one more learner to the board to sort the 26 bottle tops onto the ten frames on the chalkboard using Prestik to stick them onto the board.
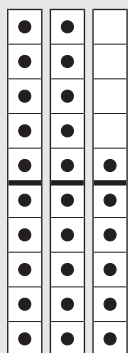
- Say: **We call a ten frame that is full of bottle tops 'one ten' and we call the bottle tops that cannot fill up a ten frame 'ones'.**
- Point to the ten frames showing 26 and ask: **How many tens do you see in these ten frames?** (2 tens)
- Ask: **How many bottle tops do you have if you have two tens?** (20 bottle tops)
- Ask: **How many ones do you see on the board?** (6 ones; 6 bottle tops)
- Ask: **If we put 20 and 6 together, what number will we make?** (Let some learners come up to the board to write the number symbol.)
- Encourage the learners to verbalise the reasons for their answers (regardless of whether the answers are correct or incorrect):
  - Correct: Because I know that 10 and 6 is 16, that means that 20 and 6 is <u>26</u> (twenty-six).
  - Incorrect: Because 10 and 6 make 16, 20 and 6 make 206 (twenty-six).
- *Make sure that the learners know that the correct symbol is 26, but keep all the suggested number symbols on the board without correction for now. If some learners say 'when we see 10 and 6 and write 16 we do not write the 0 of the 10. Why did someone write 206 instead of 26?' that is a very good observation. All learners should realise why they should not write 206 in the end.*
- *NOTE: If none of the learners gives the incorrect answer (such as 206), just move on. Do not confuse learners by suggesting an incorrect answer that they had not thought of.*
- Call another learner to the front of the class to help to place the bottle tops from the second desk (the 40 bottle tops) on the ten frames on the chalkboard.

40
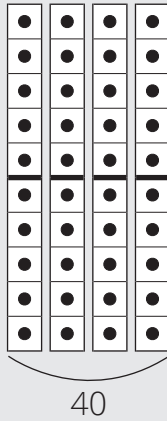
- Ask: **How many tens do you see in this number?** (4 tens)
- Ask: **How many ones do you see?** (none / zero)
- Ask: **If we have 4 tens, what number do we have?** (Let some learners come up to the board to write the number symbol.)
- Make sure that learners realise that when you have 4 tens, it is the same as 40 (forty).
- Write the number symbol 40 under the ten frames.
- *NOTE: Learners are not yet required to write number names. However, they are expected to be able to say the number names correctly.*

Activity 2: Whole class activity

- Ask the learners to turn to Activity 1 in the LAB for today's lesson.

How many tens?	How many ones?
tens	ones

- Ask: **How can we find the total number of balls? Can we use bottle tops and frames?** (No, we cannot, because the balls are too small for us to put bottle tops onto them).
- Ask: **So what can we do instead?**
- Learners could respond:
  - Count the balls in 2s, 3s, 4s or 5s. It is faster than counting them one by one.
  - Count balls to make groups of 10. A group of 10 is the same as a ten frame, so we can count the number of groups of 10.
  - Count in 5s and two 5s makes 10. We repeat this until we cannot count in 5s anymore.

- Allow time for the learners to count all the balls by drawing circles around groups of 10 balls.
- Walk around and check how the learners count the balls. They may:
  - Draw slashes / lines on the balls as they count them.
  - Mark dots on the balls as they count them.
  - Tap each ball as they count it.
- *NOTE: Learners are expected to be able to count in groups by Term 4. When the learners are making groups of 10 or 5, they must use some mark to indicate which objects have already been counted, otherwise, they might count an object more than once and end up with the wrong total number.*
- Ask: **How many tens do you have?** (3)
- Encourage the learners to write the number of tens in the correct space in the activity table.
- Ask: **How many ones do you have?** (4)
- Encourage the learners to write the number of ones in the correct space in the activity table.
- Ask: **If we have 3 tens, what number do we have?** (Let some learners come up to the board to write the number symbol 30.)
- Ask: **If we put 30 and 4 together, what number will we make?** (Let some learners come up to the board to write the number symbol 34.)
- Say: **We write this number as 34** (thirty-four).
- Encourage the learners to write the number symbol 34 in the correct space in the activity table.
- Read the number symbol 34, letting the learners follow along with you.
- Confirm with the whole class that the 3 represents 3 tens (30) and the 4 represents 4 ones by showing the connection between them using arrows as shown below.

How many tens?	How many ones?
3 tens	4 ones
34	

- *NOTE: This table must be drawn on the board for learners to see.*
- *NOTE: This would be a good opportunity to discuss the way that learners wrote the number symbol 26 in Activity 1. As discussed above, some learners may have written 26 as 206. Here, they may have written 34 as 304. It is important to discuss what the number symbol in the tens place represents. Remind the learners that the number symbol in the tens place tells us how many tens there are (for example 2 in the tens place is 2 tens, or 3 in the tens place is 3 tens), and the number in the ones place tells us the number of ones.*
- Give any learners who wrote the numbers incorrectly a chance to correct what they wrote.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Ask learners to turn to the classwork activities for this lesson in the LAB. Work through the first activity with them, following the steps below. Learners should complete the second part of the activity on their own.

- Allow the learners time to count all the apples by circling groups of 10 apples.
- Ask: **How many tens do you have?** (4)
- Encourage the learners to write the number of tens in the correct space in the activity table.
- Walk around, helping learners to write down the number of tens and ones in the correct spaces.
- Ask: **How many tens do we have?** (4 tens.)
- Ask: **When we have 4 tens, what number do we have?** (40)
- Ask: **How many ones do you have?** (9)
- Encourage the learners to write the number of ones in the correct space in the activity table.
- Ask: **If we put 40 and 9 together, what number will we make?** (Let some learners come up to the board to write the number symbol.)
- Encourage the learners to write the number symbol 49 in the correct space in the activity table.
- The following tables must be drawn on the board so that when you confirm the correct answer, the learners can see where and how to write the answer.

How many tens?	How many ones?
4 tens	9 ones
49	

3 How many apples?
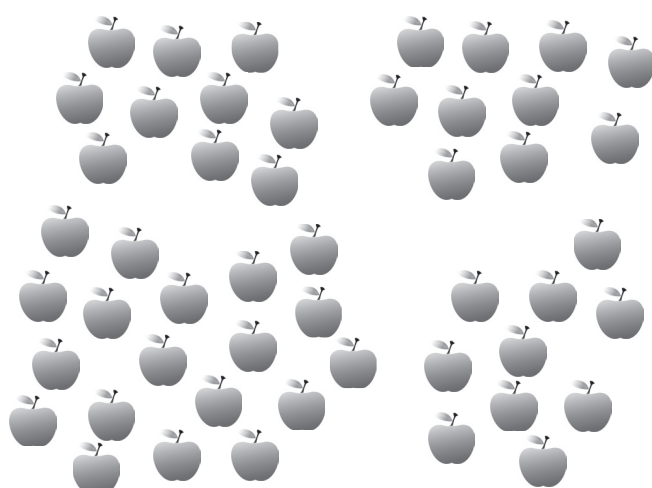
How many tens?	How many ones?
tens	ones

4 Count using groups of 10.

a
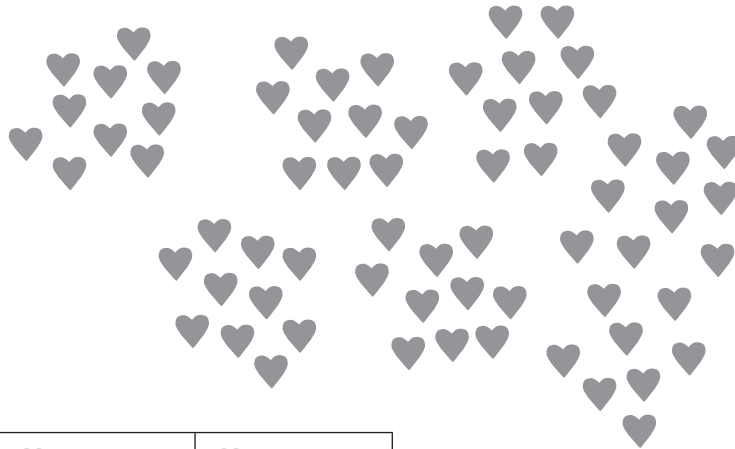
How many tens?	How many ones?
tens	ones

b
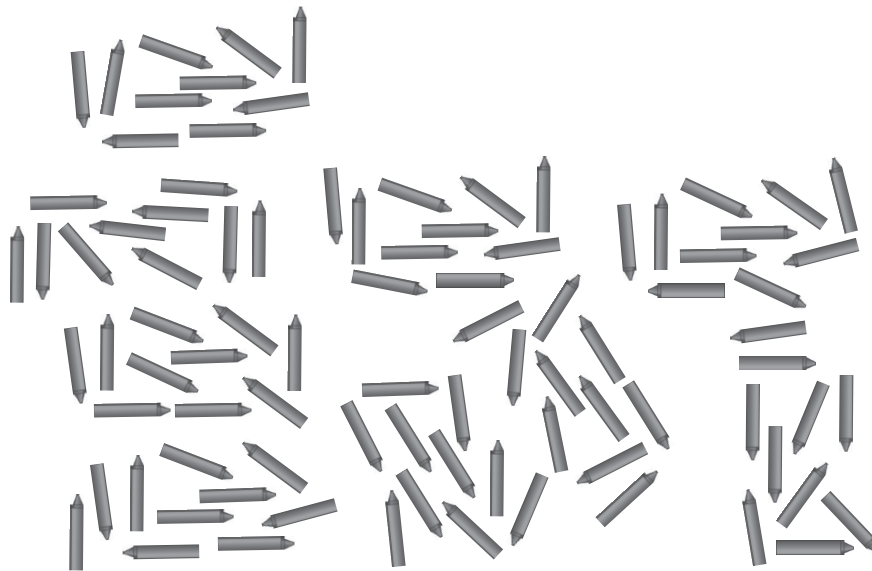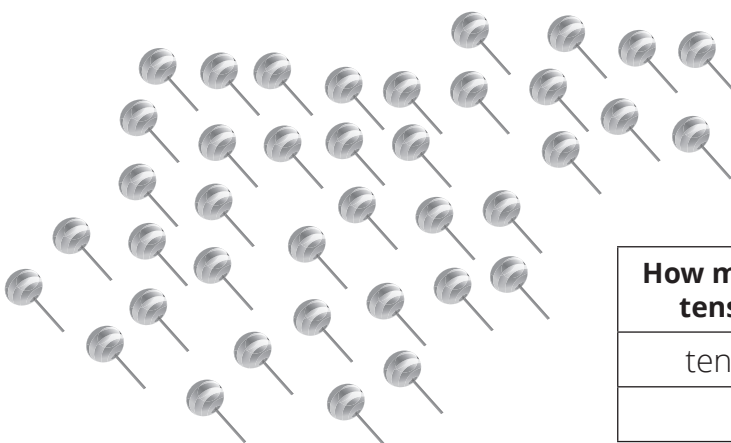
How many tens?	How many ones?
tens	ones

c

How many tens?	How many ones?
tens	ones
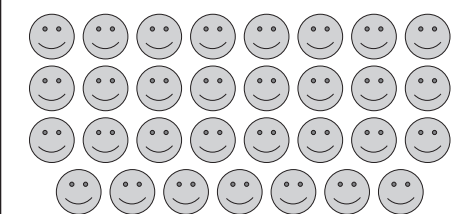
d

How many tens?	How many ones?
tens	ones

4 HOMEWORK ACTIVITY (5 MINUTES)

1 How many tens and how many ones?

		How many tens?	How many ones?	What is the number?
a		(4)	(7)	(47)
b		(3)	(1)	(31)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned about the concept of tens and ones in numbers up to 99.

Week 2

Lesson 6: Numbers up to 99 (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.1 Count objects; 1.5 Place value; 2.2 Number patterns.
Lesson Objective: Develop an understanding of the base ten number system – numbers up to 99.
Lesson Vocabulary: Place value, tens, ones.
Resources: Ten frame, bottle tops, demonstration printed tens, number symbol cards (0 to 9), 100 board (demonstration size), at least 6 tubs of small concrete items for counting, place value table (see *Printable Resources*).

Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	5s up to 50	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
	Count backwards in:	**Answer**
1	5s from 50	50, 45, 40, 35, 30, 25, 20, 15, 10, 5

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

Learners will continue to work with numbers up to 99, as they did in Lesson 5. Learners are moving away from seeing numbers as a system of ones, and recognising them as a system of tens and ones. Understanding the base ten number system enables learners to work with two digit numbers, with the knowledge of what each number symbol represents. This lesson will help the learners to become aware that every time you reach '10', you have made a 10, which is written as a 1 in the tens place (and 0 in the ones place). This is the basis of **the base-ten number system.**

Today we are learning more about tens and ones, in order to find out how to work with numbers up to 99.

Activity 1: Whole class activity

- Place 47 bottle tops on a desk in the front of the classroom without telling the learners how many bottle tops you put there.
- Draw a large place value table on the board and paste a demonstration ten frame in it using Prestik.

Tens	Ones
tens	ones

- Say: **We want to find out how many bottle tops there are**.
- Let two learners come up to the board and start putting bottle tops into the ten frame from the bottom.
- Stop the learners once they have put the 9th bottle top in the ten frame.
- Ask: **When you add 1 more bottle top to the 9 on the ten frame, how many bottle tops will you have?** (10)
- Say: **This is 10, when the ten frame is filled with bottle tops.**
- Ask: **Can this '10' stay here in the Ones place?** (Help learners to see the place value table as having two 'places'. The 'place' on the left is the Tens place, and the 'place' on the right is the Ones place).
- Learners may respond:
    - No, the group of 10 must go into the Tens place.
    - No, this '10' must be in the Tens place.
- Move the ten frame with 10 bottle tops into the Tens place on the table.
- Once you have a full ten frame, you can then exchange it for a printed ten instead of using a ten frame with real bottle tops. It is a good idea to remind learners of the fact that the printed ten is the same as a ten frame with real bottle tops.
- Take the bottle tops from the full ten frame (that you removed from the board) and keep these counted bottle tops separated from the rest because you have already counted them. It is a good idea to give them to the 2 learners who are at the front of the class.
- Let another 2 learners come to the front of the class in order to place more bottle tops in the ten frame in the ones place.
- When the ten frame is full, ask: **Where must the full 10 go?** (To the Tens place.)
- Put a printed ten frame into the Tens place.
- Ask: **Why do we put a printed 10 into the tens place?** (Because it represents the full ten frame that we just filled. It has ten dots to show the ten botte tops.)
- Take the bottle tops from the ten frame and give them to the second 2 learners at the front of the class.

- Repeat the steps above until there are 4 printed 10s (representing the 4 ten frames that were filled with bottle tops) in the Tens place.
- *Make sure that the whole class knows that we can only have a maximum of 9 ones in the Ones place.*
- Ask 2 new learners to come and place the remaining bottle tops on the ten frame in the tens place.
- When the learners have finished placing all the bottle tops, ask: **Can this ten frame go to the Tens place?** (No, because the ten frame is not full.)
- Confirm with the whole class that the remaining 7 bottle tops must stay in the Ones place.
- Ask: **How many tens do we have?** (4)
- Ask: **How much is 4 tens?** (40)
- Let a learner come and place a large number symbol 4 card in the tens block of the place value table on the chalkboard.
- Ask: **How many ones do we have?** (7)
- Let a learner come and place a large number symbol 7 card in the ones block of the place value table on the chalkboard.
- Ask: **How do we write this number?** (47)
- Ask: **How do we say this number?** (forty-seven)
- Let another learner come and write 47 on the chalkboard in the bottom block of the place value table.
- Read the number 47 and let the learners copy you.

Tens	Ones
4 tens	7 ones
47	

Activity 2: Whole class activity

- Ask learners to turn to the 100 board in the LAB.
- Place a large 100 board on the chalkboard.
- Ask: **What can you tell me about the 100 board?** (Allow time for the learners to describe what they see; learners can mention the numbers they see, the patterns they notice, the layout of the 100 board, etc.)

- Ask the learners to place their fingers on the number 10.
- Ask: **If you move your finger along the row until you get to 1, what do you notice about the numbers?** (The numbers get smaller.)
- Ask: **Place your finger back on 10. If you move your finger down the column from 10 to 100, what do you notice about the numbers?** (The numbers get bigger; the numbers go up in 10s.)
- Say: **Put your finger on 5. If you move your finger down the column, what do you notice?** (The numbers get bigger; the numbers all end in 5; the numbers increase in 10s.)
- Ask: **How many numbers/number symbols are there in a row?** (10)
- Ask: **So if there are 10 numbers in a row, how many numbers are there from 5 to 15?** (10, not counting 5). **From 3 to 13?** (10, not counting 3.) **From 9 to 19?** (10, not counting 9)
- Write 5 … 15, 3 … 13 and 9 … 19, leaving a certain space in between the number pairs on the board.
- Allow the learners to count from the number (the count starts with the next number) you indicate up to the goal number.
- Say: **So this means we can count in 10s from any number, not just from 10. Look at your 100 board, and talk to the person sitting next to you about how you can count in tens starting from 4, for example.**
- Ask: **What do you notice about counting in 10s?** (You count straight down; you count down the columns; all the numbers end in the same number symbol; it is only the number of tens that changes.)

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: In preparation for this activity, find small concrete items that can be counted. You can use items such as stones, sticks, beans, the plastic rings from milk bottle tops etc. Learners can be encouraged to collect these as well and they can be stored in clean margarine tubs. Each tub must have between 30 and 90 items, so that learners have to sort and count large numbers. Make enough tubs to give one tub of concrete items to each group of learners. You need at least 6 different tubs of items to count, labelled a, b, c, d, e and f (or more if you have more than 6 groups of learners in your class). Learners should count the items using their ten frames and record their findings using a **place value table** (see back of LAB). You should exchange the tubs of items between groups, so that each group receives all of the different tubs of items to count by the end of the lesson. *The answers learners will record in the LAB will be recorded in the place value tables provided. They must work with the bottle tops and ten frames and record what they find.*

How many? Record what you found.

a

Tens	Ones
___ tens	___ ones
_____	

b

Tens	Ones
___ tens	___ ones
_____	

c

Tens	Ones
___ tens	___ ones
_____	

d
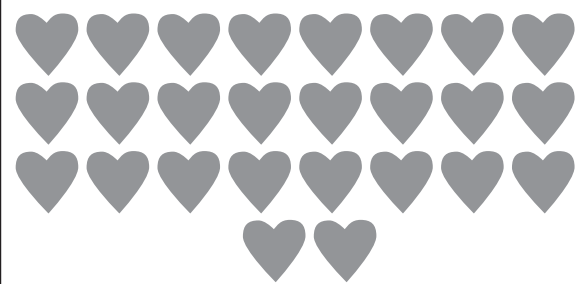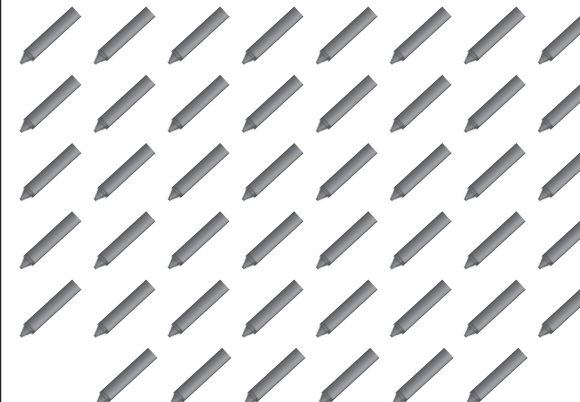
Tens	Ones
___ tens	___ ones
_____	

e

Tens	Ones
___ tens	___ ones
_____	

f

Tens	Ones
___ tens	___ ones
_____	

4 HOMEWORK ACTIVITY (5 MINUTES)

How many tens and how many ones?

		Number of tens	Number of ones	Total number
a		(2)	(6)	(26)
b		(4)	(6)	(46)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned about the base ten number system with numbers up to 99.

Lesson 7: Numbers up to 99 (3)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.3 Number symbols and number names; 1.5 Place value.
Lesson Objective: Read and write number symbols and number names and use expanded notation for numbers up to 99.
Lesson Vocabulary: Number names (up to 99), tens, ones, place value, expanded notation.
Resources: Printed tens (see *Printable Resources*) and ten frames (learner and demonstration size), bottle tops, place value table (see *Printable Resources*).

Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	10s up to 90	10, 20, 30, 40, 50, 60, 70, 80, 90
	Count backwards in:	**Answer**
1	10s from 90	90, 80, 70, 60, 50, 40, 30, 20, 10

*Learners can use their 100 number boards to help them count.

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will investigate numbers up to 99. The learners will practise reading and writing number names and symbols. At this stage of Grade 1, it is not necessary for learners to be able to write every number name. However, it is important for learners to understand the naming conventions of numbers. Allowing learners the opportunity to write some number names can contribute to the development of this understanding. Learners also need to be able to use expanded notation, identifying the tens and ones in numbers. They will use the place value table to break down numbers into tens and ones, and then write 2-digit numbers as tens and ones.

Today we are learning to read and write number symbols and number names and to use expanded notation for numbers up to 99.

Activity 1: Learners work in pairs

- Make sure that each pair of learners has a ten frame, some bottle tops and a set of small printed tens.
- Draw a large place value table on the board.
- Ask the learners to place their ten frames in the Ones place on the place value table at the back of the LAB.

- Every time you indicate something, demonstrate it on the board. (Put a ten frame in the ones place of the place value table on the board.)
- Ask the learners to place **many** bottle tops on their desk.
- Walk around and make sure that each pair of learners has put out more than 20 bottle tops (estimate quickly by looking at the piles they have).
- Ask: **How could you find out how many bottle tops you have?**
- Learners may respond:
  - We could fill up our ten frame using bottle tops. When the ten frame is full, we could move that 10 to the Tens place, replacing it with a printed ten.
  - We can sort out all the bottle tops using the ten frame and the place value table, then we can count how many tens and how many ones we have. That way, we will know how many bottle tops we have.
- Ask: **How do we work with the bottle tops? (**We could fill up our ten frame using bottle tops. When the ten frame is full, we could move that 10 to the Tens place, replacing it with a printed ten.)
- Give the learners time to investigate the number of bottle tops that they have put on their desks.
- Walk around and help the learners who aren't sure about how to sort their bottle tops or who can't work together.
- Call a learner to the chalkboard to explain what they found on their place value table to the class.
- For example, a learner may explain:
  'There are 6 tens. That is 60. There are 4 ones. We have 64 bottle tops.'
- Let the whole class read the number 64.
- The picture below is the bottom part of the place value table that the whole class should see on the board.

Tens	Ones
6 tens	4 ones
64	

- Write and confirm that '6 tens and 4 ones is 60 + 4 = 64.' under the table on the board.
- Encourage other learners to present their place value tables to the class.

- *NOTE: It is a good idea to select learners who have shown numbers such as 30, 40, 50 etc. (i.e. tens only). This will help learners to develop their understanding of numbers up to 99 further (of course, not all examples should be like this).*
- If time allows, repeat the steps above after letting the learners select a different amount of bottle tops.

Activity 2: Learners work in pairs

- Continue working with the place value table at the back of the LAB (with a ten frame, some bottle tops and a set of small printed tens).
- Encourage one learner in each pair to create a number on the place value table using the printed tens in the Tens place, and some bottle tops in the Ones place.
- For example, the learner could create the number 56:

Tens	Ones

- The other learner then needs to identify which number is being represented on the place value table.
- Ask learners to turn to the recording tables (like the one shown below) in the LAB, to record the number that is shown.

tens	ones
+ =	

- For example, the learner should write:

5 tens	6 ones
50 + 6 = 56	

- The learners in the pair will then swap roles, so that they each take turns to make numbers on the place value table and to write the number using expanded notation in their LAB.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   How many tens and how many ones?

a

63	
(6) tens	(3) ones

b

95	
(9) tens	(5) ones

c

40	
(4) tens	(0) ones

d

37	
(3) tens	(7) ones

e

79	
(7) tens	(9) ones

f

50	
(5) tens	(0) ones

2   What number?

g

(21)	
2 tens	1 ones

h

(64)	
6 tens	4 ones

i

(83)	
8 tens	3 ones

j

(96)	
9 tens	6 ones

HOMEWORK ACTIVITY (5 MINUTES)

How many tens and how many ones?

a

45	
(4) tens	(5) ones

b

89	
(8) tens	(9) ones

c

73	
(7) tens	(3) ones

d

50	
(5) tens	(0) ones

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to read and write number symbols and number names, and to use expanded notation for numbers up to 99.

Lesson 8: Ordering and comparing numbers (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.3 Number symbols and number names; 1.4 Describe, compare and order numbers; 1.5 Place value.
Lesson Objective: Sequence (order) and compare numbers up to 99.
Lesson Vocabulary: Number names (up to 99), tens, ones, place value, before, after, between, smaller than, bigger than.
Resources: Bottle tops, printed tens (see *Printable Resources*), number line, demonstration hundred board.
Date: Week Day

WEEK 2

1   MENTAL MATHS (10 MINUTES)

	How can these numbers be expanded?	Answer		How can these numbers be expanded?	Answer
1	63	60 + 3	**6**	54	50 + 4
2	45	40 + 5	**7**	39	30 + 9
3	86	80 + 6	**8**	27	20 + 7
4	72	70 + 2	**9**	68	60 + 8
5	91	90 + 1	**10**	99	90 + 9

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will focus on ordering and comparing numbers. They will use their understanding of place value to help them compare two-digit numbers. Learners will look at the number symbol in the tens place as they compare 2-digit numbers and locate them on a number line. Learners need to start reading calibrated number lines that do not have all the numbers indicated on the calibrations. When creating a number line that is calibrated in ones, it is a good idea to indicate the multiples of 5 and 10 with different length calibration lines. This way, by applying their knowledge of the bonds of 5 and 10, learners can easily find the numbers on the number line even without all the numbers indicated. It is important to introduce this kind of calibration, as it will be used when learners deal with a larger range of numbers and formal units of measurement in higher grades.

Today we are learning to order and compare numbers up to 99.

Activity 1: Whole class activity

- Draw a number line (from 40 to 70) and put a place value table and a 100 board on the board.

Tens	Ones
___ tens	___ ones
___	
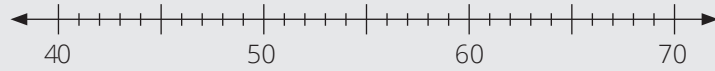
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- Write the numbers 49 and 63 on the chalkboard.
- Ask: **Which number is bigger and why?**
- Learners may respond:
  - 63 is bigger than 49 because there would be more bottle tops to show 63 than 49 on the place value table.
  - 63 is bigger than 49 because 63 has 6 tens and 49 has 4 tens.
  - 63 is bigger than 49 because 63 is on a lower row than 49 on the 100 board.
  - 63 is bigger than 49 because 49 is on the left-hand side of 63 on the number line.
  - 49 is bigger than 63 because 9 is bigger than 3.
- Call learners to the chalkboard to test their reasons using the resources on the board.

Tens	Ones
4 tens	9 ones
49	

Tens	Ones
6 tens	3 ones
63	

smaller ← → bigger

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

bigger
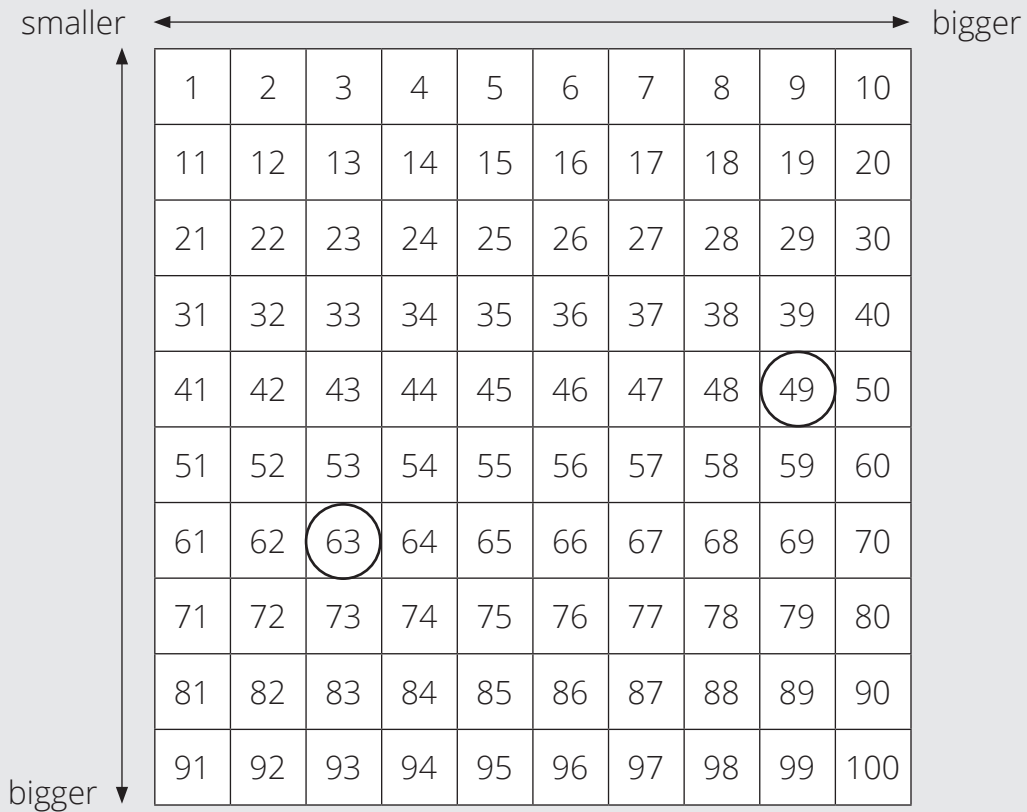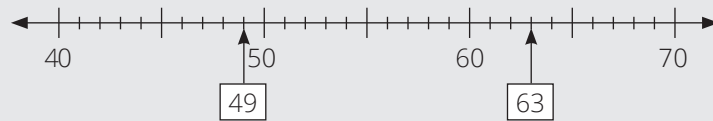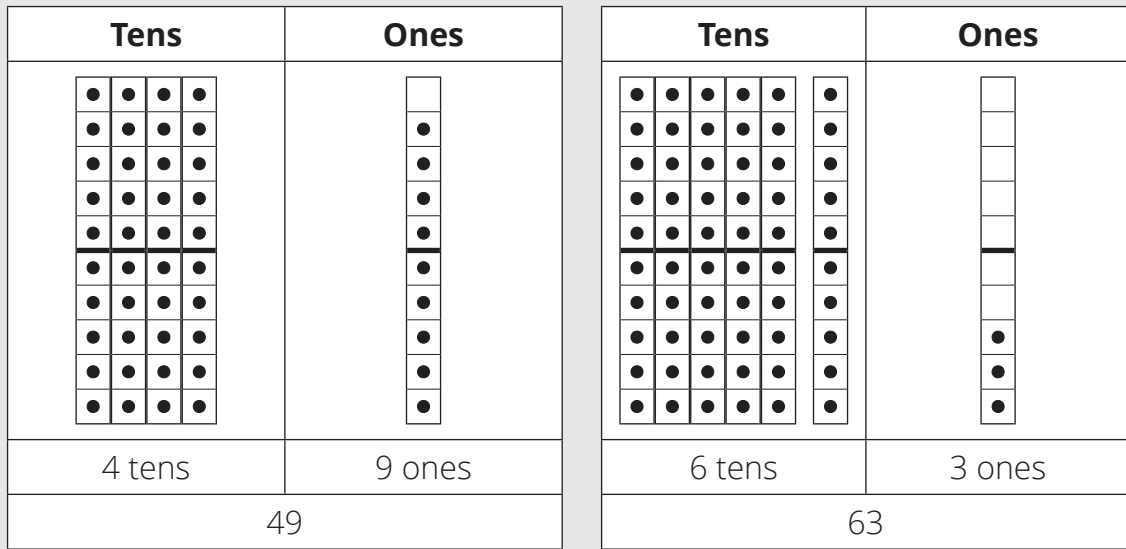
- Make sure that learners understand that when they compare numbers, they start by comparing the tens value first.
- Check whether the learners who compared the numbers by looking at the ones first come to understand their error through listening to the explanations using the place value table, number line and 100 board.

Activity 2: Whole class activity

- Divide the class into two teams. You can do this by simply telling learners on the left-hand side of the classroom that they are in one team and the learners on the right-hand side of the classroom that they are in another team.
- Allow the learners to select names for their teams.
- Draw a line down the middle of the chalk board, and write the teams' names on either side of the line.
- Write a number (from 1–99) on the board as the number symbol.
- For example: 45.
- Learners will need to put up their hands as quickly as they can when they have identified the number.
- The learner who responds first will then come up and say the number.
- If the answer is correct, the learner will earn a point for their team.
- Then write another number (from 1 – 99) on the board as the number name.
- For example: seventy-two.
- Learners will need to put up their hands as quickly as they can when they have identified the number.
- The learner who responds first will then come up and say the number.
- *NOTE: The teacher should balance the turns between the two teams.*
- If the answer is correct, the learner will earn a point for their team.
- *NOTE: The learners should judge whether a given answer is correct or wrong, not the teacher. The teacher always checks that the right call was made.*
- If the answer is not correct, the other team gets a chance to try it. The right to answer moves between two teams until they find the correct answer.
- Leave the number symbols and names on the board after each question is answered.
- Write different numbers on the board, varying whether you write the numbers as symbols or number names (the teacher should write more number names than number symbols).
- The team with the most points at the end of the activity will win the game.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: This classwork is to be done as a whole class. Give the learners time to think about where to place the numbers and then call learners up to the board to show the position of the numbers. Ask learners to explain their reasons for their answers.

Draw a large number line (from 60 to 100) on the board:

Show on the number line:

a   1 more than 89 (90)

b   1 less than 71 (70)

c   3 more than 65 (68)

d   2 less than 93 (91)

e   4 more than 78 (82)

f   5 less than 81 (76)

Answers:
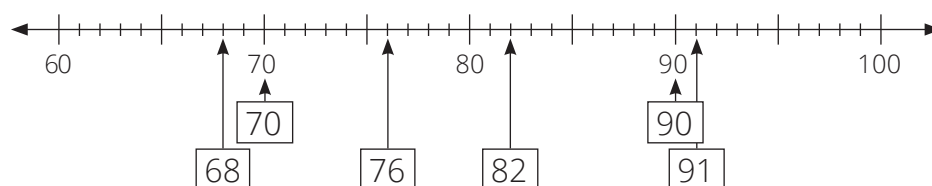
4   HOMEWORK ACTIVITY (5 MINUTES)

Show on the number line:

a   3 more than 62 (65)

b   2 less than 98 (96)

c   1 more than 88 (89)

d   3 less than 76 (73)

Answers:
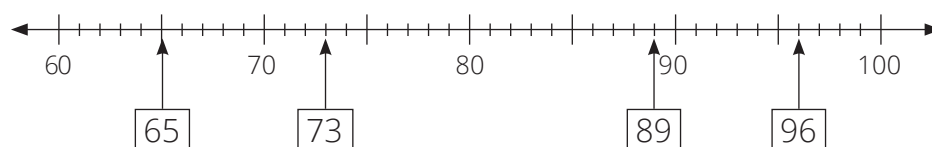
5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to sequence and compare numbers up to 99.

Lesson 9: Ordering and comparing numbers (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.4 Describe, compare and order numbers.
Lesson Objective: Compare and order numbers up to 99.
Lesson Vocabulary: Number names (up to 99), tens, ones, place value, before, after, between, smaller than, bigger than.
Resources: n/a.
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	How many tens and ones?	Answer		How many tens and ones?	Answer
1	16	1 ten and 6 ones	**6**	67	6 tens and 7 ones
2	75	7 tens and 5 ones	**7**	23	2 tens and 3 ones
3	48	4 tens and 8 ones	**8**	80	8 tens and 0 ones
4	30	3 tens and 0 ones	**9**	99	9 tens and 9 ones
5	54	5 tens and 4 ones	**10**	71	7 tens and 1 one

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will continue to focus on sequencing and comparing numbers as they did in Lesson 8. They will use their understanding of place value to help them to compare two-digit numbers. Learners will look at the number symbol in the tens place as they compare numbers and locate them on a number line and a 100 board.

Today we are learning to compare and order numbers up to 99.

Activity 1: Whole class activity

- Make sure that learners have their classwork books in front of them.
- Write three number symbols (from 1 – 99, e.g. 51, 48, 80) on the board.
- Allow time for all the learners to write all three numbers into their classwork books.
- Ask: **Which is the smallest number?**
- Let the learners circle the smallest number symbol in their classwork books (48).

- Ask a learner to explain their answer to the class. (First you compare tens place numbers. 4 is smaller than 5 and 8, so, 48 is the smallest.)
- Confirm that learners understand why the number is smaller than the other numbers by circling the smallest one on the board.
- Erase the numbers off the chalkboard and write three different numbers (from 1 – 99, e.g. 60, 39, 61) on the board.
- Allow time for all the learners to write all three numbers into their classwork books.
- Ask: **Which is the biggest number?**
- Let the learners circle the biggest number symbol in their classwork books (61).
- Ask a learner to explain their answer to the class. (First you compare tens place numbers. 3 is the smallest, but there are two 6s. You then compare the ones place number in the ones place for the two numbers that have 6 tens. 1 is bigger than 0. The biggest number is 61.)
- Confirm that the learners understand why the number is bigger than the other numbers by circling the biggest one on the board.
- Walk around and assist the learners who are struggling to identify the correct answers.
- Allow learners who are finding it difficult to judge which numbers are bigger and smaller to use a 100 board or place value table to help them to compare numbers.

Activity 2: Whole class activity

- Make sure learners have their classwork books in front of them.
- Write a number (from 51 – 99) on the chalkboard, as either the number symbol or as the number name.
- For example:
  - fifty-seven
- Learners should then write the number into their classwork books as the number symbol (57).
- Write a different number on the board, as a number symbol this time.
- Learners should then write the number into their classwork books as the number name.
- Write different numbers on the board, varying whether you write the numbers as symbols or number names.
- *NOTE: The teachers should write more number names than number symbols.*

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: This classwork is to be done as a whole class. Give the learners time to think about where to place the numbers and then call learners up to the board to show the position of the numbers. Ask learners to explain their reasons for their answers.

Draw a large number line (from 60 to 100) on the board:

Show on the number line:

a 2 more than 64 (66)
b 3 less than 76 (73)
c 5 less than 85 (80)
d 2 less than 92 (90)
e 3 more than 75 (78)
f 4 less than 96 (92)

Answers:
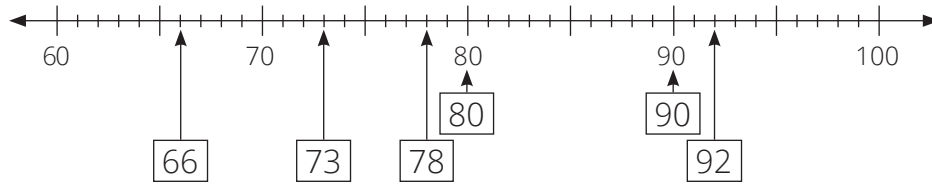
4 HOMEWORK ACTIVITY (5 MINUTES)
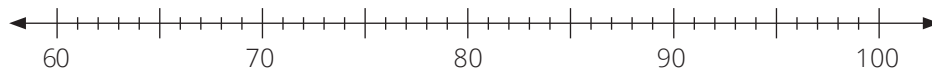
Show on the number line:

a 3 less than 68 (65)
b 2 more than 72 (74)
c 2 more than 97 (99)
d 3 less than 84 (81)

Answers:
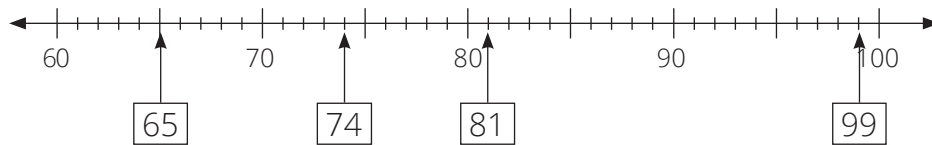
5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to compare and order numbers up to 99.

Lesson 10: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.1 Count objects; 1.3 Number symbols and number names; 1.4 Describe, compare and order numbers; 1.5 Place value; 2.2 Number patterns.
Resources: Printable assessment in teacher's resources.

Date:	Week	Day

1   SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

Take some time to do the *oral and practical assessment* (see rubric below).

This week you will need to take some time to do the *oral and practical assessment* (see rubric or checklist below). The oral and practical activities should be done individually/in groups over the course of the week.

2   DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on the different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in the learners' responses.
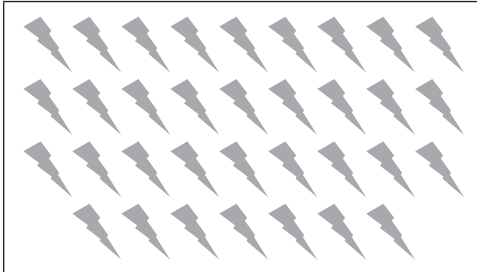
3   ASSESSMENT

WRITTEN ASSESSMENT (16)

1   How many tens and how many ones?

		Number of tens	Number of ones	Total number
a		(4)	(5)	(45)

b

	(3)	(4)	(34)

2 How many tens and how many ones?

a

51	
(5) tens	(1) ones

b

86	
(8) tens	(6) ones

3 Write the number.

a

(78)	
7 tens	8 ones

b

(93)	
9 tens	3 ones

4 Show on the number line:

```
◄──┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼──►
   50        60        70        80        90
```
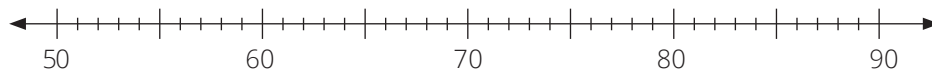
a 3 more than 52 (55)

b 2 less than 88 (86)

c 1 less than 61 (60)

d 2 more than 77 (79)

Answers:

```
◄──┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼┼──►
   50    ↑   60        70        80 ↑      90
                                    
       [55]  [60]                [79]  [86]
```
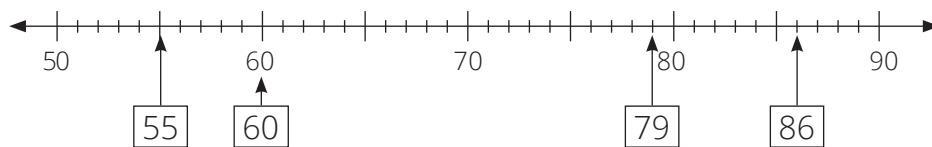
ORAL AND PRACTICAL

CAPS: Numbers, operations and relationships **Activity: Order and compare numbers in the range to 99**				Mark: 7
	Level 1	Level 2-3	Level 4-5	Level 6-7
Criterion	Able to order or compare numbers up to 10	Able to order or compare numbers up to 20	Able to order or compare numbers up to 50	Able to order or compare numbers up to 99

WEEK 2

Mark ✓/7	Criteria – Checklist: (1 mark for each criterion achieved)	Achieved – ✓	Not yet – ✗	Almost – ★
1	Able to compare and order numbers up to 10			
1	Able to compare numbers up to 20			
1	Able to order numbers up to 20			
1	Able to compare numbers up to 50			
1	Able order numbers up to 50			
1	Able to compare numbers up to 99			
1	Able order numbers up to 99			

Week 3

Lesson 11: One hundred

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.1 Count objects; 1.2 Count forwards and backwards; 1.3 Number symbols and number names; 1.4 Describe, compare and order numbers; 1.5 Place value.
Lesson Objective: Understand 100 by using the base ten system and by locating numbers on a number line and 100 board.
Lesson Vocabulary: Number names (up to 100), tens, ones, place value, smaller than, bigger than, smallest, biggest, number line.
Resources: Ten frames, bottle tops, printed tens (see *Printable Resources*), 1-100 number cards (see *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	How many tens and ones?	Answer		How many tens and ones?	Answer
1	53	5 tens and 3 ones	**6**	40	4 tens and 0 ones
2	97	9 tens and 7 ones	**7**	39	3 tens and 9 ones
3	61	6 tens and 1 one	**8**	72	7 tens and 2 ones
4	26	2 tens and 6 ones	**9**	94	9 tens and 4 ones
5	85	8 tens and 5 ones	**10**	18	1 ten and 8 ones

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will begin to develop their understanding of 100. Learners will use a variety of resources (number lines, ten frames and bottle tops, printed tens) to help develop their understanding. They have the opportunity to engage actively with the resources, developing their understanding through games and discussion. Encourage the learners to speak to their peers and to you, as verbalising their understanding will help them to consolidate their new learning.

Today we are learning to understand 100 by using the base ten system and by locating numbers on a number line.

Activity 1: Learners work in groups

- Make sure that each learner has a ten frame, some bottle tops, and 9 printed tens.
- Say: **Make 90 by using the printed tens**.
- Ask: **How many tens do you have?** (9 tens.)
- Give learners time to discuss in their groups.
- Confirm that 9 tens represent 90 with large printed tens on the chalkboard.
- Call a learner to the front of the class to write 90 on the chalkboard.
- Ask: **When I put 1 bottle top on the blank ten frame next to the 90 I made with the printed tens, what number will I have?** (91)
- Call a learner from another group to come to the front of the class and write 91 on the chalkboard.
- Repeat the steps above until learners have recognised numbers up to 99.
- *NOTE: All of the numbers written by learners should stay on chalkboard in order, separated by commas.*
- Ask: **When we add one more bottle top to 99, what do you notice about the ten frame and the bottle tops?** (The ten frame becomes full, so now the 10 bottle tops must move to the Tens place; there are 10 tens; we have 10 ten frames.)
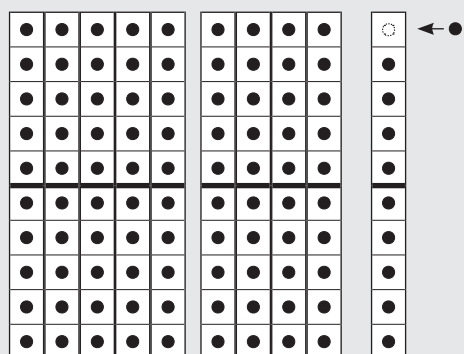
- Say: **This is 100**.
- Write 100 on the chalkboard to show learners the number symbol.
- Read '100' and let the learners copy you.
- Let the learners write the numbers 90 to 100 in their classwork books.

Activity 2: Whole class activity

- Draw a blank number line on the board using chalk dipped in a sugar water solution (dissolve 3 teaspoons of sugar in water to make the solution).
- *NOTE: The sugar water solution will ensure that the number line remains on the board unless wiped with a wet cloth. This will enable you to erase numbers written with normal chalk, leaving the number line to be used again.*
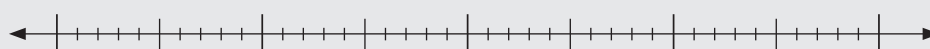
- Write some multiples of 5 underneath the calibrations.

60	65	70		85	95

- Say: **Discuss with the person sitting next to you, which numbers you think are missing.** (75, 80, 90, 100)
- Ask some learners to come to the front of the classroom to write the missing numbers onto the number line.
- Repeat the steps above using different numbers on the number line.
- For example:
  - 10, 15, 20, __, __, __, 40, __, __
  - 30, 40, __, __, __
  - __, 70, __, 90, __
  - 50, 55, __, __, __, 75, __, 85, __

Answers:

10   15   20   (25)   (30)   (35)   40   (45)   (50)

30   40   (50)   (60)   (70)

(60)   70   (80)   90   (100)

50   55   (60)   (65)   (70)   75   (80)   85   (90)
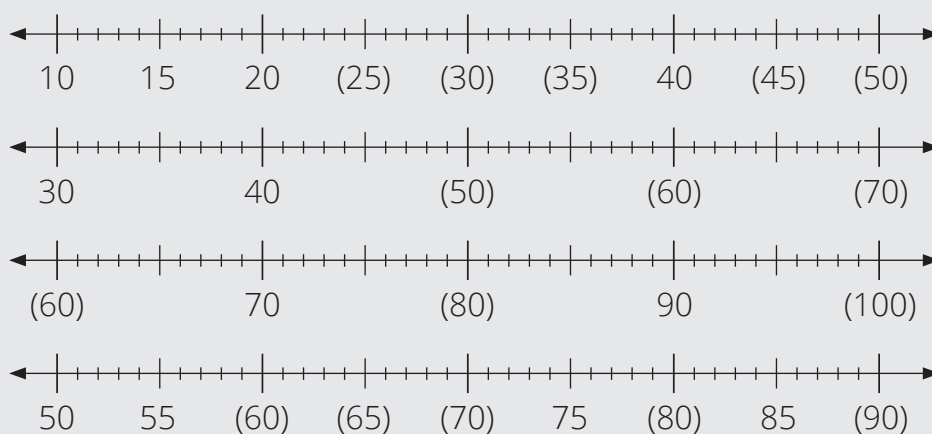
Activity 3: Learners work in pairs

NOTE: Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game. Today, learners will play these card games in pairs. Make sure that each pair has one set of 1-100 number cards that have been cut up into individual cards (see back of LAB). Allow the learners the opportunity to discuss their cards, and to verbalise their thinking. While the learners play the games, walk around and observe the activities, correcting and assisting where needed.

Rules of the games

1   Bigger than

  a   Learners work in pairs.

  b   Shuffle the cards well.

  c   Share the cards equally between the learners.

  d   Learners keep their cards face down on their desks.

  e   At the same time, each learner in the pair lifts the top card off their pile and places it face up on the desk in between the two piles of cards.

f Learners need to look at the 2 cards, and quickly call out the larger number.

g The learner that correctly calls out the larger number first gets to keep both cards.

h The learner with the most cards at the end wins the game.

2 Smaller than

a Learners work in pairs.

b Shuffle the cards well.

c Share the cards equally between the learners.

d Learners keep their cards face down on the desk.

e At the same time, each learner in the pair lifts the top card off their pile and places it face up on the desk in between the two piles of cards.

f Learners need to look at the 2 cards, and quickly call out the smaller number.

g The learner that correctly calls out the smaller number first gets to keep both cards.

h The learner with the most cards at the end wins the game.

3 Sequencing (smallest to biggest)

a Learners work in pairs.

b Shuffle the cards well.

c Share the cards equally between the learners.

d Learners keep their cards face down on the desk.

e At the same time, each learner in the pair lifts three cards off the top of their pile and places them face up on the desk in front of them.

f Learners will look at their own 3 cards, and quickly arrange them in order from smallest to biggest.

g The learner that correctly arranges the numbers first gets to keep all 6 cards.

h The learner with the most cards at the end wins the game.

4 Sequencing (biggest to smallest)

a Learners work in pairs.

b Shuffle the cards well.

c Share the cards equally between the learners.

d Learners keep their cards face down on the desk.

e At the same time, each learner in the pair will lift three cards off the top of their pile and place them face up on the desk in front of them.

> **f** Learners will each look at their own 3 cards, and quickly arrange them in order from biggest to smallest.
>
> **g** The learner that correctly arranges the numbers first gets to keep all 6 cards.
>
> **h** The learner with the most cards at the end wins the game.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Fill in the missing numbers.

a

1	2	3	4	5
		13	14	15
21	22	23	24	25
31	32		34	35
41	42		44	45

b

		9	10
17		19	20
	28	29	30
37	38		
47		49	

c

23	24	25	26
33	34	35	36
43			46
53	54	55	56
63	64	65	66
73	74		
83	84	85	86
93			96

d

11	12		14
21	22		24
31	32		34
41	42		44
51	52		54
61	62		64

e

29	30	31	32
39	40		42
49		51	
59			62
69			
79	80		

f

55	56		58
65		67	68
75	76	77	
	86	87	88
95		97	98

4 HOMEWORK ACTIVITY (5 MINUTES)

Fill in the missing numbers:

64		66			69	70
74			77			80

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to understand 100 by using the base ten system and by locating numbers on a number line.

Lesson 12: Ordering numbers up to 100 (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.1 Count objects; 1.2 Count forwards and backwards; 1.4 Describe, compare and order numbers; 2.2 Number patterns.
Lesson Objective: Sequence and compare numbers up to 100.
Lesson Vocabulary: More than, less than, before, after, in between.
Resources: Printed tens (see *Printable Resources*), 100 board, tens number cards (see *Printable Resources*), number cards (1 – 9).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 29 up to 43	29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43
2	2s from 44 up to 64	44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64
3	5s from 35 up to 35	35, 40, 45, 50, 55, 60, 65
	Count backwards in:	**Answer**
1	1s from 43 to 29	43, 42, 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29
2	2s from 64 to 44	64, 62, 60, 58, 56, 54, 52, 50, 48, 46, 44
3	5s from 65 to 35	65, 60, 55, 50, 45, 40, 35

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will continue to develop their understanding of numbers up to 100. As in Lesson 11, the learners will use a variety of resources, and will have the opportunity to discuss as they actively engage in activities. Learners will develop their ability to sequence numbers, as well as to compare numbers by using vocabulary such as 'more than', 'less than', 'before', 'after' and 'in between'.

Today we are learning to sequence and compare numbers up to 100.

Activity 1: Whole class activity

- Hold up a **printed ten** to show the class, and then put it back down again.
- Ask: **How many dots were there on the ten frame?** (Some say 10; some say, I don't know because you didn't hold it up long enough for me to count the dots.)

- Ask: **How did you know that there were 10 dots on the ten frame?** (All the spaces on the ten frame were filled so I knew there had to be 10 dots.)
- Ask: **Did you have to count the dots?** (No – the fact that there were no empty spaces told me that there were 10 dots because I know that a 10 frame has 10 spaces.)
- Show the learners 10 full printed ten frames one by one as the learners count in 10s to 100.
- Let the learners count forwards and backwards from **any number** in 10s on their 100 boards by using their finger to point out each number.
- For example: 2, 12, 22, 32, 42, 52, 62, 72, 82, 92
- *NOTE: Each learner must be given an opportunity to say number(s) individually. It is not a good idea always to count numbers as the whole class, because then you can't identify the learners who are struggling to recognise the number symbols on the 100 board and those who can't pronounce the number names correctly.*
- The focus is on recognition of the number symbols and on the pronunciation of the number names. It is not necessary to count quickly.

Activity 2: Learners work in groups

- Make sure that each learner has a set of number cards (10 – 100 and 1-9).
- Encourage the groups of learners to sequence the tens number cards from 10 – 100, and their ones number cards from 1 – 9, and to lay these out on their desks.
- Draw the following on the board:

—[66]—[67]—[68]—[ ]—[ ]—[71]—[72]—

- Ask: **What number comes after 68? Hold up the correct number cards to show the answer.**
- *NOTE: Rather than having learners put up their hands to suggest the answer verbally, encourage the learners to discuss the correct number in their groups, and to then find the number cards with which to show the number. For example, 60 and 9 can be held up together. This is a good way for you to see which learners understand, rather than just hearing the answer from one learner.*
- Call one learner to write the correct number into the space next to the number 68.
- Ask: **What number comes before 71? Hold up the correct number cards to show the answer.**
- Walk around and help the learners to find the missing numbers, allowing them to use their 100 board or a number line to help them if needed.
- Repeat with the following examples:

—[94]—[95]—[96]—[97]—[98]—[99]—[100]—

—[40]—[50]—[60]—[70]—[80]—[90]—[100]—
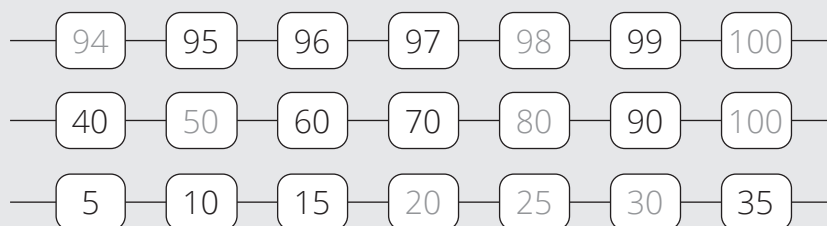
—[5]—[10]—[15]—[20]—[25]—[30]—[35]—

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Fill in the missing numbers:

24	25	26	27	28
100	99	98	97	96
10	15	20	25	30
40	30	20	10	0
55	65	75	85	95
78	76	74	72	70
63	64	65	66	67
90	89	88	87	86

4   HOMEWORK ACTIVITY (5 MINUTES)

Fill in the missing numbers:

40	50	60	70	80	90	100
5	10	15	20	25	30	35

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to sequence and compare numbers up to 100.

Lesson 13: Ordering numbers up to 100 (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.2 Count forwards and backwards; 1.4 Describe, compare and order numbers; 2.2 Number patterns.
Lesson Objective: Sequence and compare numbers up to 100.
Lesson Vocabulary: More than, less than, before, after, in between, difference.
Resources: Tens number cards (see *Printable Resources*), number cards (1 – 9), game board (see *Printable Resources*), coloured counters.

Date:	Week	Day

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 87 up to 100	87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
2	2s from 80 up to 100	82, 84, 86, 88, 90, 92, 94, 96, 98, 100
3	5s from 70 up to 100	75, 80, 85, 90, 95, 100
	Count backwards in:	**Answer**
1	1s from 100 to 87	100, 99, 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88, 87
2	2s from 100 to 82	100, 98, 96, 94, 92, 90, 88, 86, 84, 82
3	5s from 100 to 75	100, 95, 90, 85, 80, 75

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners continue to develop their understanding of numbers up to 100. As in Lesson 12, the learners will use a variety of resources and will have the opportunity to discuss as they actively engage in activities. Learners will develop their ability to sequence numbers, as well as to compare numbers by using vocabulary such as 'more than', 'less than', 'before', 'after', 'in between'.

Today we are learning to sequence and compare numbers up to 100.

Activity 1: Whole class activity

- Ensure that all learners have their number cards laid out on their desks for easy identification of the cards.

- Draw a blank number line on the board using chalk dipped in a sugar water solution so that it can be reused as before.

- Call a learner to the front of the class to circle the number 37.
- Call a different learner to the front of the class to circle the number 34.
- Ask: **How many more than 34 is 37?**
- Encourage the learners to discuss the number of spaces between 34 and 37 in their pairs, and to then hold up a number card to show the answer.
- For example, learners might hold up the 3 card.
- Walk around and assess learners as they discuss and find their number card.
- Do the correction with the whole class.
- Encourage the learners to use the number line or the 100 board if they can't find the correct answers.
- Repeat the process using the following examples (see LAB):
    a   46 is ☐ more than 42

    b   50 is ☐ more than 48

    c   54 is ☐ less than 58

- Write the following numbers on the blank number line on the board.

- Call a learner to the front of the class to circle the number 25.
- Say: **Find the number that is 2 less than 25.**
- Encourage the learners to discuss possible answers in their pairs, and then to hold up number cards to show the answer.
- For example, learners will hold up the 20 and 3 cards.
- Walk around and assess learners as they discuss and find their number cards.
- Do the correction with the whole class.
- Encourage the learners to use the number line or the 100 board if they can't find the correct answers.
- Repeat the process using the following examples (see LAB):
    d   ☐ is 5 less than 27

WEEK 3

e ☐ is 3 less than 64

```
◄———┼———┼———┼———┼———┼———┼———┼———┼———┼———►
   60    61    62    63    64    65    66    67    68
```

f ☐ is 5 more than 72

```
◄——┼——┼——┼——┼——┼——┼——┼——┼——┼——┼——┼——┼——┼——►
  66   67   68   69   70   71   72   73   74   75   76   77   78
```
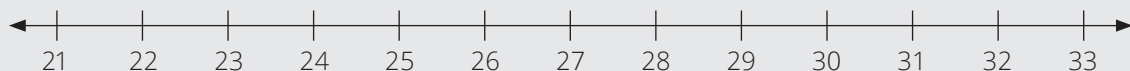
Activity 2: Whole class activity

- Learners will continue using their number cards as in Activity 1.
- Draw a blank number line on the board using chalk dipped in a sugar water solution so that it can be reused as before.

```
◄——┼——┼——┼——┼——┼——┼——┼——┼——┼——►
  62   63   64   65   66   67   68   69   70
```

- Call a learner to the front of the class to circle the number 70.
- Call a different learner to the front of the class to circle the number 64.
- Ask: **How many less than 70 is 64?**
- Encourage the learners to discuss the number of spaces between 70 and 64 in their pairs, and to then hold up a number card to show the answer.
- For example, learners will hold up the ☐6☐ card.
- Walk around and assess the learners as they discuss and find their number cards.
- Do the correction with the whole class by writing 6 on the board.
- Encourage the learners to use the number line or the 100 board if they can't find the correct answers.
- Repeat the process using the following examples (see LAB):

  1 29 is ☐ more than 23

```
◄——┼——┼——┼——┼——┼——┼——┼——►
  23    24    25    26    27    28    29
```

  2 77 is ☐ more than 72

```
◄——┼——┼——┼——┼——┼——┼——┼——┼——┼——►
  70    71    72    73    74    75    76    77    78
```

  3 44 is ☐ less than 51

```
◄——┼——┼——┼——┼——┼——┼——┼——┼——┼——┼——┼——►
  43   44   45   46   47   48   49   50   51   52   53
```

- Write the following numbers on the blank number line on the board.

```
◄——┼——┼——┼——┼——┼——┼——┼——┼——┼——►
  24    25    26    27    28    29    30    31    32
```

- Call a learner to the front of the class to circle the number 28.
- Say: **Find the number that is 3 more than 28.**

- Encourage the learners to discuss possible answers in their pairs, and to then hold up number cards to show the answer.
- For example, learners will hold up the $\boxed{30}$ and $\boxed{1}$ cards.
- Walk around and assess the learners as they discuss and find their number cards.
- Do the correction with the whole class.
- Encourage the learners to use the number line or the 100 board if they can't find the correct answers.
- Repeat the process using the following examples:

4   □ is 5 less than 48


```
42    43    44    45    46    47    48
```

5   □ is 7 less than 41


```
33    34    35    36    37    38    39    40    41    42    43
```

6   □ is 6 more than 42


```
35  36  37  38  39  40  41  42  43  44  45  46  47  48  49
```

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Today, learners will play a game. Place the learners into groups of 4. Make sure that each group has 1 die to use, as well as 4 counters. Each learner should have a different colour counter to represent themselves. These counters can be cut from paper. Give each group of 4 one printed game board (see *Printable Resources*). Allow learners time to play the game using the rules below. Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game.

Rules of the game

Take turns to throw a die and move forward a number of places equal to the number shown.

If you stop at a vehicle, follow the rules:

BIKE: Move forward 10.

CAR: Throw the die one more time and move **forward a number of places equal to** the number shown.

TRUCK: Throw the die one more time and move **backwards a number of places equal to** the number shown.

Play the board game. Your teacher will explain the rules.

4   HOMEWORK ACTIVITY (5 MINUTES)

Circle the correct number on the number line:

☐ is 6 more than 61 (67)

60	61	62	63	64	65	66	67	68

What is the difference?

43 is ☐ less than 50 (7)

41	42	43	44	45	46	47	48	49	50	51

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to sequence and compare numbers up to 100.

Lesson 14: Building up and breaking down 100

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.2 Count forwards and backwards; 1.4 Describe, compare and order numbers; 2.2 Number patterns.
Lesson Objective: Compare numbers up to 100, and build up and break down 100.
Lesson Vocabulary: More than, less than, before, after, in between, add, and, makes.
Resources: Printed tens (see *Printable Resources*), tens number cards (see *Printable Resources*), number cards (1–9), game board (see *Printable Resources*), coloured counters.

Date:	Week	Day

WEEK 3

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 56 up to 71	56, 57,58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71
2	2s from 44 up to 62	44, 46, 48, 50, 52, 54, 56, 58, 60, 62
3	5s from 30 up to 60	30, 35, 40, 45, 50, 55, 60
4	10s from 10 up to 100	10, 20, 30, 40, 50, 60, 70, 80, 90, 100
	Count backwards in:	Answer
1	1s from 68 to 54	68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54
2	2s from 66 to 48	66, 64, 62, 60, 58, 56, 54, 52, 50, 48
3	5s from 55 to 25	55, 50, 45, 40, 35, 30, 25
4	10s from 100 to 10	100, 90, 80, 70, 60, 50, 40, 30, 20, 10

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners continue to develop their understanding of numbers up to 100. As in Lessons 12 and 13, learners will use a variety of resources, and will have the opportunity to discuss as they actively engage in activities. Learners will develop their ability to sequence numbers, as well as to compare numbers by using vocabulary such as 'more than', 'less than', 'before', 'after', 'in between'. In this lesson, the learners will further their understanding by breaking down and building up 100 by using multiples of 10.

Today we are learning to compare numbers up to 100, and to build up and break down 100.

Activity 1: Whole class activity

- Ensure that all learners have their number cards laid out on their desks for easy identification of cards.
- Draw a blank number line on the board using chalk dipped in a sugar water solution, so that it can be reused, as before.

62	63	64	64	65	66	67	68	70

- Call a learner to the front of the class to circle the number 62.
- Call a different learner to the front of the class to circle the number 70.
- Ask: **How much more than 62 is 70?**
- Encourage the learners to discuss the number of spaces between 62 and 70 in their pairs, and to then hold up a number card to show the answer.
- For example, learners may hold up the $\boxed{8}$ card.
- Walk around and assess the learners as they discuss and find their number cards.
- Do the correction with the whole class.
- Encourage the learners to use the number line or the 100 board if they can't find the correct answers.
- Repeat the process using the following examples (see LAB):

  1   40 is ☐ more than 30

30	31	32	33	34	35	36	37	38	39	40

  2   71 is ☐ less than 78

70	71	72	73	74	75	76	77	78

  3   42 is ☐ less than 51

41	42	43	44	45	46	47	48	49	50	51

- Write the following numbers on the blank number line on the board.

24	25	26	27	28	29	30	31	32

- Call a learner to the front of the class to circle the number 28.
- Say: **Find the number that is 3 more than 28.**
- Encourage the learners to discuss possible answers in their pairs, and to then hold up number cards to show the answer.
- For example, learners may hold up the $\boxed{30}$ and $\boxed{1}$ cards.
- Walk around and assess the learners as they discuss and find their number cards.
- Do the correction with the whole class.
- Encourage the learners to use the number line or the 100 board if they can't find the correct answers.
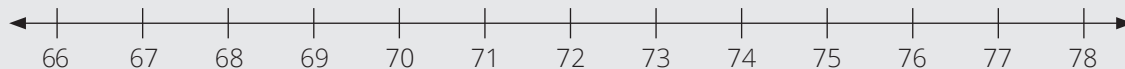- Repeat the process using the following examples (see LAB):

4 ☐ is 8 more than 68
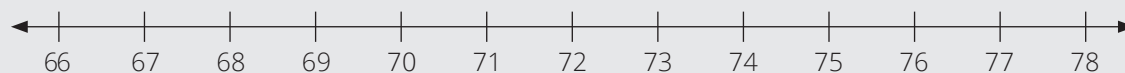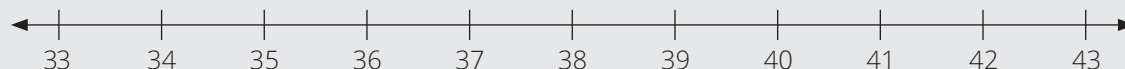
```
◄──┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼──►
   66   67   68   69   70   71   72   73   74   75   76   77   78
```

5 ☐ is 9 less than 43

```
◄──┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼──►
   33   34   35   36   37   38   39   40   41   42   43
```

6 ☐ is 10 less than 48

```
◄──┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────┼──►
   35  36  37  38  39  40  41  42  43  44  45  46  47  48  49
```

Activity 2: Learners work in pairs

- Make sure that each pair of learners has two sets of tens number cards.
- The two packs of cards must be shuffled and then each card must be laid out face down on the desk between the pair of learners.
- One learner should select 2 cards, turning them over so that they are face up on the desk.
- The learner will see if the 2 cards can be added together to make 100.
- If the cards add together to make 100, then the learner keeps the cards.
- If the cards do not add together to make 100, then the cards must be turned back over and laid face down in the same place.
- The learners should take turns to turn over cards to try and make 100.
- The learner with the most cards at the end of the game wins.

Activity 3: Whole class activity

- Place a large 100 board on the chalkboard, with some numbers covered as below.
- Ask learners to find the 100 board in the LAB for today's lesson.

1	2	♥	4	🪐	6	7	8	9	🪐
11	12	13	14	15	⭐	17	18	19	20
21	22	♥	24	25	26	27	🌀	29	30
31	32	33	34	🌀	36	37	⭐	39	40
41	⭐	♥	44	45	46	47	48	49	50
51	52	53	54	55	🌀	57	58	59	60
61	62	♥	64	65	66	67	68	69	⭐
71	72	73	74	🪐	76	77	78	79	🪐
81	82	♥	84	85	86	⭐	88	89	90
🌀	92	93	94	95	96	97	98	99	100

- Ask: **What numbers can you see in the top row?** (Allow the learners to read the numbers to the class, skipping out the numbers covered by pictures.)
- Give the learners time to write the numbers in the first row on their blank 100 boards.
- Repeat this process with each row of the 100 board, leaving out the numbers covered by the pictures each time.
- Make sure that all the learners have completed their own 100 boards in the LAB.
- Ask: **What can you tell me about the numbers covered by the hearts (♥)?** (They are all in the third column; there is a heart in every second row; all the numbers will end in a 3; the numbers covered by hearts are 3, 23, 43, 63 and 83.)
- Say: **Write these numbers in the correct places on your 100 board.**
- Ask: **What can you tell me about the numbers covered by the planets (🪐)?** (There are 2 planets in a row; 2 rows have planets; the planets cover numbers that we say when we count in 5s; the covered numbers are 5, 10, 75 and 80.)
- Say: **Write these numbers in the correct places on your 100 board.**
- Ask: **Which spiral (🌀) covers the number that is 2 less than 30?** (Third row; 28.)
- Say: **Write the missing number in the correct place on your 100 board.**
- Ask: **Which spiral (🌀) covers the number that is 4 more than 31?** (Fourth row; 35.)
- Say: **Write the missing number in the correct place on your 100 board.**
- Ask: **Which spiral (🌀) covers the number that is 5 more than 51?** (Sixth row; 56.)
- Say: **Write the missing number in the correct place on your 100 board.**
- Ask: **Which spiral (🌀) covers the number that is 9 less than 100?** (Tenth row; 91.)
- Say: **Write the missing number in the correct place on your 100 board.**
- Say: **Discuss the numbers covered by the stars (⭐) with the person sitting next to you.**

- Say: **Write the numbers covered by the stars (⭐) in the correct places on your 100 board.**

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Today, learners will play a game. Place the learners into groups of 4. Make sure that each group has 1 die to use, as well as 4 counters. Each learner should have a different colour counter to represent themselves. These counters can be cut from paper. Give each group of 4 one printed game board (see *Printable Resources*). Allow learners time to play the game using the rules below. Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game.

Rules of the game

Take turns to throw a die and move forward a number of places equal to the number shown.

If you stop at a vehicle, follow the rules:

BIKE: Move forward 10.

CAR: Throw the die one more time and move **forward a number of places equal to** the number shown.

TRUCK: Throw the die one more time and move **backwards a number of places equal to** the number shown.

Play the board game. Your teacher will explain the rules.

4   HOMEWORK ACTIVITY (5 MINUTES)

Circle the correct number on the number line:

a   ☐ is 10 less than 77 (67)
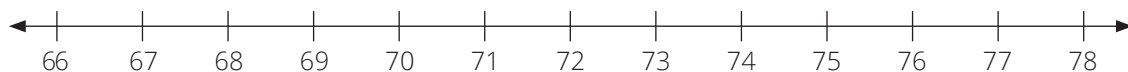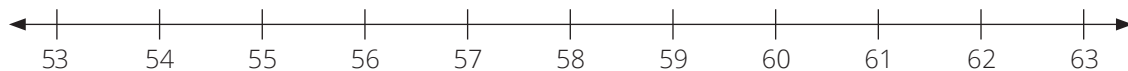
| 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 |

b   62 is ☐ more than 54 (8)

| 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 |

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to compare numbers up to 100 and to build up and break down 100.

Lesson 15: Addition and subtraction of 10s

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free).
Lesson Objective: Add and subtract tens and ones by using the place value table.
Lesson Vocabulary: More than, less than, before, after, in between, add, and, makes, tens, ones.
Resources: Printed tens (see *Printable Resources*), bottle tops, ten frames, place value table (see *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	How can these numbers be expanded?	Answer		How can these numbers be expanded?	Answer
1	47	40 + 7	**6**	91	90 + 1
2	83	80 + 3	**7**	36	30 + 6
3	29	20 + 9	**8**	65	60 + 5
4	52	50 + 2	**9**	80	80 + 0
5	77	70 + 7	**10**	16	10 + 6

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson learners will practise identifying the number of tens and ones in two-digit numbers. It is important that learners are able to recognise that (for example) in the number 36 there are 3 tens and 6 ones. Learners need to be able to build the number by writing 30 + 6 = 36. *It is common for learners to think that they should write 36 as 306, because of misconceptions about recording numbers using the base ten system. This is not correct!* Learners will need plenty of practice and opportunities to verbalise what they are doing in order to reinforce their understanding and correct use of the base ten system.

Today we are learning to add and subtract tens and ones by using the place value table.

Activity 1: Whole class activity

• Draw a table on the chalkboard.

34	
□ tens	□ ones
□ + □ = □	

- Give the learners time to set up 34 on their place value table in the LAB using printed tens and bottle tops on a blank ten frame.
- Ask: **How many tens and ones are there in 34?** (3 tens and 4 ones.)
- Call a learner to the front of the class to write the numbers in the table.
- Ask: **What number is 3 tens?** (30)
- Call a learner to the front of the class to write 30 in the table.
- Ask: **How do we write the number sentence for 30 and 4 make 34?** (30 + 4 = 34)
- Call a learner to the front of the class to write the numbers in the table.

34	
3 tens	**4** ones
30 + 4 = 34	

- Repeat the steps above with the following numbers:
  - 75
  - 93
- *NOTE: It is important to allow time to discuss the learners' responses, and to do corrections with the whole class.*

Activity 2: Learners work in groups

- Write 35 – 5 = □ on the chalkboard.
- Give the learners time to set up 35 in their place value tables using printed tens and bottle tops on a blank ten frame.
- Allow the learners time to discuss in their groups, and to then write the problem and the answer in their classwork books.
- Ask: **How could you find the answer to this subtraction problem?**
- Groups of learners may respond:
  - We could set up 3 tens and 5 bottle tops in the place value table for 35. We would then take away 5 from the ones. We see that there are only 3 tens left in the table.
  - We break down 35 into 30 + 5. When we take away 5, we have 30 left.
  - We count 35 tallies and take away 5 from them one by one. We have 30 left.
  - We draw a number line and jump backwards 5 places from 35. We land at 30.
- Confirm with the whole class that the answer is 30 showing 35 with large printed tens and 5 bottle tops in the large place value table on the board and taking away 5 bottle tops.
- Write 30 on the chalkboard to complete the number sentence.
- Discuss how the groups of learners solved the problem.
- Ask: **Which way of solving the problem was quicker?** (b)
- Ask: **Which way uses tens and ones?** (Learners can discuss in groups then discuss with the whole class.)

WEEK 3

Activity 3: Learners work in groups

- Write 35 – 30 = □.
- Ask: **How do we subtract 30 from 35 without counting?**
- Encourage each learner to set up 35 in their place value table and to take away 30 (all 3 tens) from the Tens place.
- Confirm that there are 5 ones left on the place value table showing 35 with large printed tens and 5 bottle tops in the large place value table on the board and taking away 3 tens, and write the answer 5 on the chalkboard.
- Call a learner to the front of the class to write 35 = 30 + 5 on the chalkboard, and to then take away 30 to see what remains.
- Ask: **Are there any other ways to find the answer for 35 – 30 = □ ?**
- Allow groups of learners time to share and discuss their ideas.
  - We take a 100 board. We start at 35 and go straight up 3 rows. We reach 5.
  - We take a 100 board. We can take away 30 from 35 and count the remaining numbers to see how many are left.
- *NOTE: Encourage the learners to not use counting as a method to solve this problem. However, if there are learners who are more comfortable with using the counting tallies method, it must be accepted. It is important to discuss the simplest way to find the answer with the whole class, so that learners can be exposed to other methods besides counting.*
- Some learners may realize that when they take away 1 ten from 35 three times iteratively, they get the sequence 35, 25, 15, 5 as they have seen on their 100 boards.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Allow time for the learners to work on the problems in the LAB. Walk around and observe the learners as they work through the problems. After the learners have completed the problems, do the corrections with the whole class on the chalkboard. Encourage the learners to see the link between addition and subtraction in question 2.

1   Write the missing numbers in the table:

a

56	
□ tens (5)	□ ones (6)
□ **+** □ **=** □ (50 + 6 = 56)	

b

45	
□ tens (4)	□ ones (5)
□ **+** □ **=** □ (40 + 5 = 45)	

c

94	
□ tens (9)	□ ones (4)
□ **+** □ **=** □ (90 + 4 = 94)	

d

39	
□ tens (3)	□ ones (9)
□ **+** □ **=** □ (30 + 9 = 39)	

2   Calculate the missing numbers:

a   80 + 5 = □ (85)

b   85 – 5 = □ (80)

c   20 + 9 = □ (29)

d   29 – 20 = □   (9)

e   97 – 7 = □ (97)

f   97 – 90 = □ (7)

g   □ = 30 + 2 (32)

h   32 = 30 + □ (2)

4 HOMEWORK ACTIVITY (5 MINUTES)

Write the missing numbers in the table:

a

17	
☐ tens (1)	☐ ones (7)
☐ **+** ☐ **=** ☐ (10 + 7 = 17)	

b

51	
☐ tens (5)	☐ ones (1)
☐ **+** ☐ **=** ☐ (50 + 1 = 51)	

c

92	
☐ tens (9)	☐ ones (2)
☐ **+** ☐ **=** ☐ (90 + 2 = 92)	

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to add and subtract tens and ones by using the place value table.

Week 4

Lesson 16: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.4 Describe, compare and order numbers; 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free); 2.2 Number patterns.
Resources: Printable assessment in teacher's resources.
Date: Week   Day

1   SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

2   DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in learners' responses.

3   ASSESSMENT

WRITTEN ASSESSMENT (26)

NOTE: Corrections for the test can be done using printed tens and bottle tops with the whole class.

1   Write the missing numbers in the table: (6×3)

a

21	
☐ tens (2)	☐ ones (1)
☐ + ☐ = ☐ (20 + 1 = 21)	

b

58	
☐ tens (5)	☐ ones (8)
☐ + ☐ = ☐ (50 + 8 = 58)	

c

99	
☐ tens (9)	☐ ones (9)
☐ + ☐ = ☐ (90 + 9 = 99)	

d

43	
☐ tens (4)	☐ ones (3)
☐ + ☐ = ☐ (40 + 3 = 43)	

e

65	
☐ tens (6)	☐ ones (5)
☐ + ☐ = ☐ (60 + 5 = 65)	

f

74	
☐ tens (7)	☐ ones (4)
☐ + ☐ = ☐ (70 + 4 = 74)	

2 Calculate the missing numbers:

    a $97 = \square + 7$ (90)

    b $97 - \square = 7$ (90)

    c $68 = 60 + \square$ (8)

    d $68 - 8 = \square$ (60)

    e $\square = 40 + 5$ (45)

    f $45 - 40 = \square$ (5)

    g $83 = \square + 3$ (80)

    h $\square = 80 + 3$ (83)

WEEK 4

Unit 3 Introduction

This unit focuses on calculations with numbers up to 100. Learners will develop their knowledge and understanding from Unit 2, now beginning to calculate with larger numbers. Learners will apply their knowledge of ordering and comparing numbers to the solution of calculations with numbers up to 100. Learners will use place value tables and number lines, verbalising their understanding of the processes.

In this unit you will be able to focus on the four framework dimensions in the following way:

- **Conceptual understanding**: Learners will develop their understanding of addition and subtraction with numbers up to 100, applying what they have learned previously to the new number range (e.g. Lesson 17 Activity 1).
- **Procedural fluency**: Learners will practise the use of place value tables and number lines in the solving of problems so that they can develop their procedural fluency (e.g. Lesson 17 Activity 1).
- **Strategies**: Learners will begin to develop their ability to solve problems using place value tables and number lines (e.g. Lesson 17 Activity 1).
- **Reasoning**: Learners will verbalise their solutions of problems, demonstrating their understanding of concepts and strategies (e.g. Lesson 17 Activity 1).

Building a **learning centred classroom** in this unit will involve (among other things) attention to:

- **Purposeful assessment**: Assessment of this unit will provide clarity in terms of learners' understanding of large numbers and calculations involving these numbers.
- **Practising procedures**: Learners will practice calculating with numbers up to 100 in a variety of ways so that they can become more confident and efficient.

Unit 3 overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Tue	17	Add and subtract multiples of ten.	Printed tens (see *Printable Resources*), place value table (see *Printable Resources*), ten frames and bottle tops.	
Wed	18	Add and subtract single digit numbers from 2-digit numbers.	Printed tens (see *Printable Resources*), place value table (see *Printable Resources*), ten frames and bottle tops.	
Thur	19	Add and subtract multiples of ten from 2-digit numbers.	Printed tens (see *Printable Resources*), place value table (see *Printable Resources*), ten frames and bottle tops.	
Fri	20	Assessment	Assessment activity in teacher's resources.	

Assessment for learning

Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

Lesson 17: Addition and subtraction (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free)
Lesson Objective: Add and subtract multiples of ten.
Lesson Vocabulary: Add, and, more, subtract, less, take away.
Resources: Printed tens (see *Printable Resources*), place value table (see *Printable Resources*), ten frames and bottle tops.
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	10 – 4 = __	6	**6**	6 – 2 = __	4
2	3 + 6 = __	9	**7**	10 – 2 = __	8
3	7 – 2 = __	5	**8**	9 + 1 = __	10
4	1 + 6 = __	7	**9**	5 + 4 = __	9
5	5 + 5 = __	10	**10**	6 – 3 = __	3

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will add and subtract multiples of 10. Learners will use place value tables and number lines to assist them, but they will also learn to work mentally as well. It is essential that learners have the opportunity to discuss what they are doing, and that they practise a number of different addition and subtraction problems. When learners add or subtract tens, it is recommended that they begin to recognise that in (for example) the problem 20 + 60, there are 2 tens + 6 tens, to make an answer of 80 as 8 tens. This helps learners to realise that when they know how many tens there are, they can simplify their calculations. Do not force learners to use resources if they are able to solve calculations mentally. However, if learners are solving calculations mentally, then you need to ensure that they do verbalise their method so that you can be sure that they are not just guessing the answer.

Today we are learning to add and subtract multiples of ten.

Activity 1: Whole class activity

- Make sure that each pair of learners has some printed tens, ten frames, bottle tops, a place value table and number lines (see LAB).
- Write the number sentence 10 + 40 = □ on the board.

- Encourage the learners to discuss in their pairs how they could solve the number sentence using either their number line or their place value table.
- Allow the learners to set up their place value tables to show the number sentence $10 + 40 = \square$.
- Call a learner to the front of the class to share their answer by reproducing their place value table (the answer is 50 because there are 1 ten + 4 tens).

Tens	Ones
$10 + 40 =$ **50**	

- Allow another learner to come to the front of the class to demonstrate how they solved the problem using a number line.

- Do the corrections with the whole class, explaining that there are now 5 tens in the tens place. The answer is 50.
- Ask: **How do you think you could solve this problem without using a place value table or a number line?** (We could solve it in our heads.)
- Practise the following number sentences (see LAB):
  - $70 + 30 = \square$
  - $80 - 50 = \square$
  - $100 - 90 = \square$

Activity 2: Learners work in groups

- Learners continue working with printed tens, ten frames, bottle tops, place value table and number lines (see LAB).
- Write the number sentence $40 - 30 = \square$ on the board.
- Allow the learners to discuss in their groups and then set up their place value tables to show the number sentence $40 - 30 = \square$.
- Call a learner to the front of the class to share their answer by reproducing their place value table (the answer is 10 because there are 4 – 3 tens).

WEEK 4

Tens	Ones
take away	

$$40 - 30 = \textbf{10}$$

- Allow a learner from another group to come to the front of the class to demonstrate how they solved the problem using a number line, if any did so.

- Do the correction with the whole class, explaining that there were 4 tens in the Tens place and then 3 tens were taken away from them. The answer is 10.
- Ask: **How do you think you could solve this problem without using a place value table or a number line?** (We could solve it in our heads.)
- Practise the following number sentences (see LAB):
  - $100 - 50 = \square$
  - $80 - 20 = \square$
  - $100 - 90 = \square$

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Calculate:

a $50 + 20 = \square$ (70)
b $20 + 30 = \square$ (50)
c $40 + 30 = \square$ (70)
d $10 + 90 = \square$ (100)
e $50 - 10 = \square$ (40)
f $80 - 30 = \square$ (50)
g $60 - 40 = \square$ (20)
h $100 - 10 = \square$ (90)

4   HOMEWORK ACTIVITY (5 MINUTES)

Calculate:

a   70 + 30 = ☐ (100)

b   30 + 50 = ☐ (80)

c   40 + 20 = ☐ (60)

d   80 + 10 = ☐ (90)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to add and subtract multiples of ten.

Lesson 18: Addition and subtraction (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free).
Lesson Objective: Add and subtract single digit numbers from 2-digit numbers.
Lesson Vocabulary: Add, and, more, subtract, less, take away.
Resources: Printed tens (see *Printable Resources*), place value table (see *Printable Resources*), ten frames and bottle tops.
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	10 + 40 = __	50	**6**	60 + 10 = __	70
2	90 – 60 = __	30	**7**	80 – 40 = __	40
3	70 + 30 = __	100	**8**	100 – 40 = __	60
4	80 – 60 = __	20	**9**	50 + 30 = __	80
5	50 + 40 = __	90	**10**	10 + 90 = __	100

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)
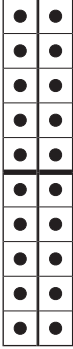
This lesson develops learners' ability to add and subtract single digits from 2-digit numbers. As with Lesson 17, learners must be given opportunities to verbalise their understanding and to solve a variety of problems. Encourage the learners to use their experiences with the place value table and number lines to help them become more confident in solving problems mentally. Do not force learners to use resources if they are able to solve calculations mentally. However, if learners are solving calculations mentally, then you need to ensure that they do verbalise their method so that you can be sure that they are not just guessing the answer. This lesson would provide learners with an experience of the column method of calculation.

Today we are learning to add and subtract single digits from 2-digit numbers.

Activity 1: Learners work in pairs

- Make sure that each pair of learners has some printed tens, ten frames, bottle tops and 2 place value tables.
- Write the number sentence 24 + 3 = ☐ on the board.
- Encourage the learners to discuss in their pairs how they could solve the number sentence using either their number line or their place value tables.

- Allow time for the pairs of learners to set up 24 in the upper place value table and 3 in the lower place value table.
- Let a pair come to the front of the class and display their place value tables to confirm that all the tens and ones are in the correct places.

Tens	Ones
24	

Tens	Ones
3	

- Let all the pairs move 3 bottle tops from the lower place value table to the upper place value table in order to find the answer (27).
- Walk around and check if all pairs are moving bottle tops from the Ones place of the lower table to the Ones place of the upper table, and not to the Tens place instead.
- Allow another learner to come to the front of the class to demonstrate how they solved the problem using a number line.

- Ask: **How do we add 24 and 3?**
- Learners may respond:
    a We use the place value table to add tens in the Tens places and ones in the Ones places.

> **b** In 24 + 3 there is no ten in the lower table, so we only add 4 and 3 in the Ones places.
>
> **c** We jumped 3 places on the number line from 24, to get us to 27.
>
> - Allow time for the learners to write down the number sentence with the answer in their classwork books.
> - Practise using the following number sentence in the same way:
>   - 41 + 5 = ☐

Activity 2: Whole class activity

- Make sure that each learner has a place value table in front of them.
- Write the number sentence 95 – 2 = ☐ on the board.
- Allow time for learners to set up 95 in their place value tables.
- Let a learner come to the front of the class and display their place value tables to confirm that all the tens and ones are in the correct places.

95

- Let all the learners take away 2 from 5 and find the answer (93).

93

- Walk around and check if all the pairs move the bottle tops from the ones place.
- Allow another learner to come to the front of the class to demonstrate how they solved the problem using a number line.

- Ask: **How do we subtract 2 from 95?**
- Learners may respond:
  - **a** We calculate numbers in the same places of the place value table. There are 9 tens in the tens place and 5 bottle tops in the ones place. We must take away 2 from the 5 in the ones place.
  - **b** We keep 9 tens in the tens place and take away 2 from the 5 ones in the ones place, because both 2 and 5 are ones.
  - **c** We jumped back 2 places on the number line from 95, to get us to 93.
- Allow time for the learners to write down the number sentence with the answer in their classwork books.
- Practise using the following number sentence in the same way:
  - 27 − 4 = □

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Calculate:
- **a** 52 + 4 = □ (56)
- **b** 65 + 3 = □ (68)
- **c** 47 + 2 = □ (49)
- **d** 78 + 1 = □ (79)
- **e** 33 + 5 = □ (38)
- **f** 64 − 3 = □ (61)
- **g** 97 − 6 = □ (91)
- **h** 53 − 1 = □ (52)
- **i** 46 − 2 = □ (44)
- **j** 78 − 5 = □ (73)

4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate:
- **a** 67 + 2 = □ (69)
- **b** 44 + 5 = □ (49)
- **c** 78 − 2 = □ (76)
- **d** 55 − 3 = □ (52)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to add and subtract single digits from 2-digit numbers.

Lesson 19: Addition and subtraction (3)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free).
Lesson Objective: Add and subtract multiples of ten from 2-digit numbers.
Lesson Vocabulary: Add, and, more, subtract, less, take away.
Resources: Printed tens (see *Printable Resources*), place value table (see *Printable Resources*), ten frames and bottle tops.
Date: Week   Day

1 MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	10 + 9 = __	19	**6**	62 – 2 = __	60
2	63 – 3 = __	60	**7**	40 + 9 = __	49
3	77 – 7 = __	70	**8**	81 – 1 = __	80
4	50 + 6 = __	56	**9**	27 – 7 = __	20
5	90 + 4 = __	94	**10**	30 + 5 = __	35

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson develops learners' ability to add and subtract multiples of ten from 2-digit numbers. As with Lesson 17 and Lesson 18, learners must be given opportunities to verbalise their understanding, and to solve a variety of problems.

Today we are learning to add and subtract multiples of ten from 2-digit numbers.

Activity 1: Learners work in pairs

- Make sure that each pair of learners has two place value tables and that they refer to the number lines (see LAB).
- Ask the learners to put the two place value tables one above the other.
- Write the number sentence 24 + 30 = ☐ on the board.
- Encourage the learners to discuss in their pairs how they could solve the number sentence using either their number line or their place value tables.
- Allow time for the pairs of learners to set up 24 in the upper place value table and 30 in the lower place value table.
- Let a pair come to the front of the class and display their place value tables to confirm that all the tens and ones are in the correct places.

Tens	Ones
24	

- Let all the pairs move 3 full printed ten frames from the lower place value table to the upper place value table in order to find the answer (54).

Tens	Ones
30	

- Walk around and check if all the pairs are moving bottle tops from the tens place of the lower table to the tens place of the upper table.
- Let a pair present what they have done in their place value table on the chalkboard.
- Allow another learner to come to the front of the class to demonstrate how they solved the problem using a number line.
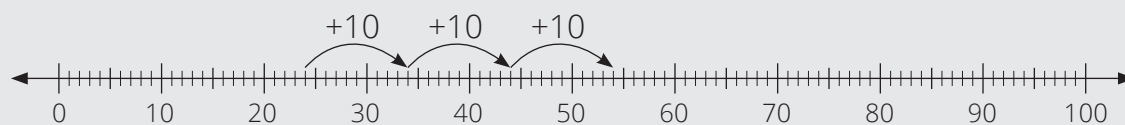
- Ask: **How do we add 24 and 30?**
- Learners may respond:
    - We use the place value table to add tens in the tens places and ones in the ones places.
    - In 24 + 30 there are no ones in the lower table, so we only add 2 tens and 3 tens in the tens places.
    - We counted in 10s from 24 to 54 on the number line.
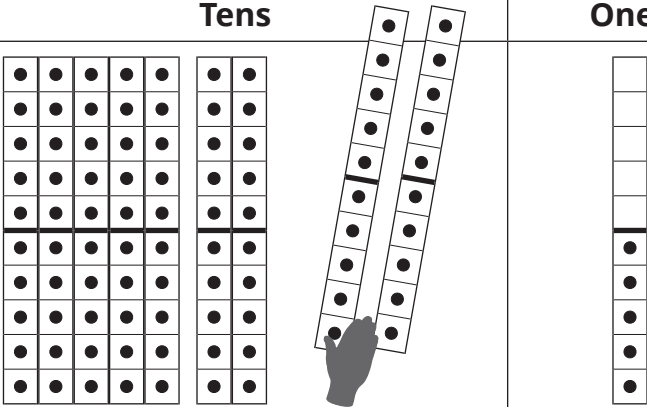
- Allow time for the learners to write down the number sentence with the answer in their classwork books.
- Practise using the following number sentence in the same way:
  - 41 + 50 = □
  - 37 + 40 = □

Activity 2: Whole class activity

- Make sure that each pair has a place value table. Refer to the number line in the LAB for this activity.
- Write the number sentence 95 − 20 = □ on the board.
- Allow time for the learners to set up 95 in their place value tables.
- Let a learner come to the front of the class and display their place value tables to confirm that all the tens and ones are in the correct places.

95

- Let all the learners take away 2 tens from the 9 tens in the Tens place and find the answer (75).

95 − 20 = 75

- Walk around and check if all the pairs move the full printed ten frames from the tens place.

- Allow another learner to come to the front of the class to demonstrate how they solved the problem using a number line.
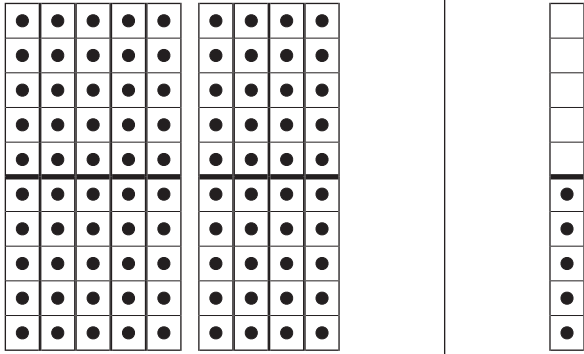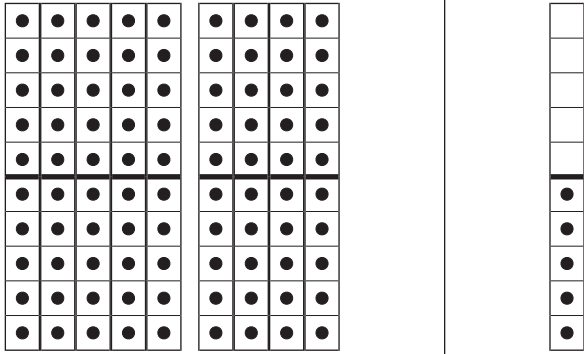
$$-10 \qquad -10$$

- Ask: **How do we subtract 20 from 95?**
- Learners may respond:
  - We calculate numbers in the same places of the place value table. There are 9 tens in the tens place and 5 bottle tops in the ones place. We must take away 2 tens from the 9 tens in the tens place.
  - We take away 2 tens from the 9 tens in the Tens place, and leave the 5 bottle tops in the Ones place.
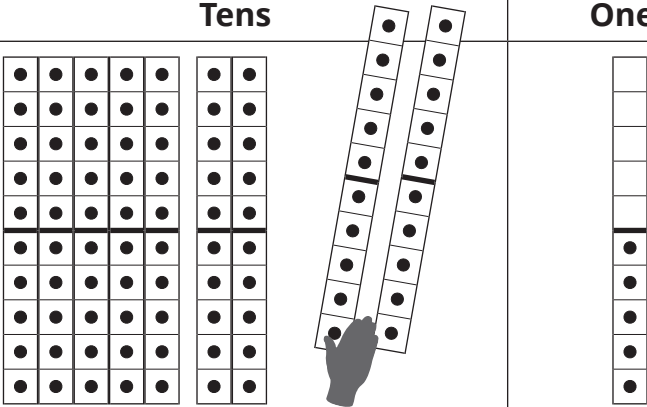 - We counted back in 10s on the number line from 95, to get us to 75.
- Allow time for the learners to write down the number sentence with the answer in their classwork books.
- Practise using the following number sentence in the same way:
  - $77 - 40 = \square$
  - $82 - 30 = \square$

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Calculate:

a $47 + 10 = \square$ (57)
b $63 + 30 = \square$ (93)
c $29 + 40 = \square$ (69)
d $76 + 20 = \square$ (96)
e $58 + 30 = \square$ (88)
f $61 - 30 = \square$ (31)
g $84 - 60 = \square$ (24)
h $97 - 40 = \square$ (57)
i $39 - 20 = \square$ (19)
j $72 - 50 = \square$ (22)

4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate:

a $52 + 20 = \square$ (72)
b $25 + 40 = \square$ (65)
c $86 - 30 = \square$ (56)
d $63 - 20 = \square$ (43)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to add and subtract multiples of ten from 2-digit numbers.

Lesson 20: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free).
Resources: Printable assessment in teacher's resources.
Date: Week Day

1 SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

2 DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in learners' responses.

3 ASSESSMENT

WRITTEN ASSESSMENT (20)

NOTE: If learners need to use resources (such as a place value table or a number line) to solve these problems, then allow them to do so. Learners can draw their own number lines if needed, and it is important to remember that this drawing does not need to be accurate in terms of measurements and calibrations. This use of resources will form part of your assessment of a learner's ability. There are also 20 problems included in this assessment. If learners are unable to complete all the problems in the allocated time then this will also form part of your assessment.

Calculate:

a $43 + 6 = \square$ (49)

b $24 + 5 = \square$ (29)

c $52 + 2 = \square$ (54)

d $99 - 7 = \square$ (92)

e $84 - 3 = \square$ (81)

f $75 - 2 = \square$ (73)

g $20 + 50 = \square$ (70)

h $70 + 20 = \square$ (90)

i $40 + 40 = \square$ (80)

j $50 - 40 = \square$ (10)

k $80 - 60 = \square$ (20)

l $90 - 30 = \square$ (60)

m $26 + 10 = \square$ (36)

n $39 + 40 = \square$ (79)

o $86 - 40 = \square$ (46)

p $67 - 30 = \square$ (37)

q $93 - 50 = \square$ (43)

r $59 - 9 = \square$ (50)

s $64 - 4 = \square$ (60)

t $45 - 40 = \square$ (5)

Week 5

Unit 4 Introduction

This unit focuses on addition and subtraction. Learners will develop their ability to determine whether they need to use addition or subtraction to solve word problems. They will need to verbalise their understanding of this, and justify their reasons for their solution methods. This is an important skill as they develop their ability to work out how to solve problems. Learners will also be introduced to money in this unit, and will be given opportunities to apply their knowledge of addition and subtraction to problems involving rands and cents. In addition, learners will practice doubling numbers as they learn how to solve problems more quickly by using the doubling strategy.

In this unit you will be able to focus on the four framework dimensions in the following way:

- **Conceptual understanding**: Learners will develop their understanding of word problems and the operations required to solve these problems (e.g. Lesson 21 Activity 1).
- **Procedural fluency**: Learners will practice solving problems, using clear steps and procedures (e.g. Lesson 21 Activity 1).
- **Strategies**: Learners will develop their ability to solve problems using their understanding of addition and subtraction, and their ability to determine which operation is required to solve the problems (e.g. Lesson 21 Activity 1).
- **Reasoning**: Learners will verbalise their solutions to problems, demonstrating their understanding of addition and subtraction (e.g. Lesson 21 Activity 1).

Building a **learning centred classroom** in this unit will involve (among other things) attention to:

- **Justifying answers**: Learners need to justify their reasons for selecting addition or subtraction as the operation necessary to solve particular problems.
- **Problem solving**: Learners will use addition and subtraction to solve word problems.

Unit 4 Overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Mon	21	Solve change and compare type addition (with carrying) and subtraction (with borrowing) problems in context.	Bottle tops, ten frames.	
Tue	22	Solve combine and compare type addition (with carrying) and subtraction (with borrowing) problems in context.	Bottle tops, ten frames.	
Wed	23	Recognise and identify the South African currency coins and bank notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20.	Money coin and note cut-outs (see *Printable Resources*).	
Thur	24	Use doubling as a technique when solving problems.	Bottle tops, pictures/drawings (hand, bicycles, tricycles, beetles, calendar week – find your own), money coin and note cut-outs (see *Printable Resources*).	
Fri	25	Solve money problems involving totals and change to R20 and in cents up to 20c.	Money coin and note cut-outs (see *Printable Resources*).	
Mon	26	Solve money problems involving totals and change to R20 and in cents up to 20c.	Money coin and not cut-outs (see *Printable Resources*).	
Tue	27	Assessment	Assessment activity in teacher's resources.	

Assessment for learning
Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

Lesson 21: Addition and subtraction word problems (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free).
Lesson Objective: Solve change and compare type addition (with carrying) and subtraction (with borrowing) problems in context.
Lesson Vocabulary: Make-a-ten, subtract, take away, less, subtract, take away, less.
Resources: Bottle tops, ten frames.

Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	7 + 9 = __	16	**6**	13 – 9 = __	4
2	4 + 7 = __	11	**7**	15 – 7 = __	8
3	6 + 5 = __	11	**8**	16 – 9 = __	7
4	8 + 8 = __	16	**9**	18 – 9 = __	9
5	5 + 9 = __	14	**10**	14 – 8 = __	6

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will further develop their understanding of addition with carrying and subtraction with borrowing, using word problems to create context. It is important to allow learners to discuss their solution methods so that they can share ideas. Learners are expected to do addition with carrying and subtraction with borrowing mentally (without using ten frames with bottle tops). However, they can use ten frames and bottle tops to check their answers and do corrections if necessary.

Today we are learning to solve addition and subtraction problems in context.

Activity 1: Whole class activity

- Place two large ten frames on the board.
- Write the following word problem on the board *(addition change)*.
 **There are 6 children on the playground.**
  8 children joined them and they all started playing together.
  How many children are there now?
- Read the problem.
- Ask: **What is the story about?** (Children)
- Ask: **What numbers do you see in the story?** (6 and 8.)

- Underline these numbers.
- Ask: **What is the question?** (How many children are there?)
- Underline the question with a wavy line.
- When the learners understand the story, let them read the word problem, repeating after you sentence by sentence.
- Let the learners read the problem until they read it fluently.
- Let the whole class discuss which operation best expresses the problem.
- Ask: **Are we adding or subtracting to solve the problem?** (Adding.) **Why?** (We can add 6 and 8, because the number of children increased after 8 more children arrived. We are finding out the total number of children.)
- Confirm that this is an addition problem because we are finding the total number of children.
- Let the learners write the number sentence with its answer in their classwork books. (6 + 8 = 14)
- Ask a learner to come up to the board, and to place bottle tops on the large ten frames to show their solution to the problem.
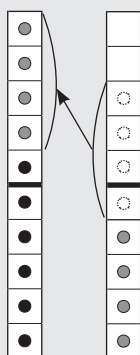
- Write the number sentence on the board for correction. (6 + 8 = 14)
- Ask: **What is the answer to the word problem?** (There are 14 children.)
- *NOTE: Learners must write the answer with the unit, i.e. 14 **children**.*

Activity 2: Learners work in groups

- Place two large ten frames on the board.
- Write the following word problem on the board *(subtraction change)*.
  There were 12 eggs.
  5 of them were used to bake biscuits.
  How many eggs are there now?
- Read the problem.
- Ask: **What is the story about?** (Eggs)
- Ask: **What numbers do you see in the story?** (12 and 5)
- Underline these numbers.
- Ask: **What is the question?** (How many eggs are there now?)
- Underline the question with a wavy line.

- When learners understand the story, let them read the word problem, repeating after you sentence by sentence.
- Let the groups of learners read the problem until they read it fluently.
- Ask: **How can you solve this problem?** (We can take away 5 from 12, because 5 eggs were used to bake cookies.)
- Ask: **Are we adding or subtracting to solve the problem?**
  - Subtracting.
  - We had 12 eggs to start with, and then 5 of them were used.
  - The number of eggs after baking must be less than 12.

5 and 2 is 7

- Let the learners write the number sentence with its answer in their classwork books. (12 − 5 = 7)
- Ask a learner to come up to the board, and to place bottle tops on the large ten frames to show their solution to the problem.
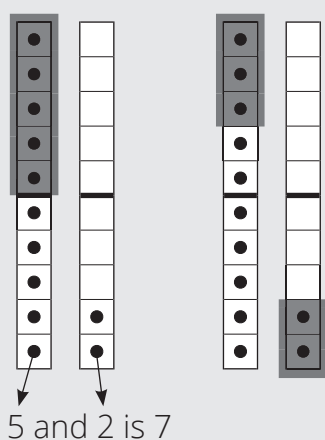- Write the number sentence on the board for correction. (12 − 5 = 7)
- Ask: **What is the answer to the word problem?** (There are 7 eggs left.)
- *NOTE: Learners must write the answer with the unit, i.e. 7 **eggs**.*

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Today's classwork time is used to work through another problem with the whole class.

- Place two large ten frames on the board.
- Write the following word problem on the board *(addition compare)*.
  There are 7 boys on the bus.
  There are 8 more girls than boys.
  How many girls are there?
- Read the problem.
- Ask: **What is the story about?** (Girls and boys)
- Ask: **What numbers do you see in the story?** (7 and 8.)
- Underline these numbers.
- Ask: **What is the question?** (How many girls are there?)
- Underline the question with a wavy line.

- When learners understand the story, let them read the word problem, repeating after you sentence by sentence.
- Let the learners read the problem until they read it fluently.
- Ask: **How can you solve this problem?** (We can add 8 to 7, because there are more girls than boys. The number of girls must be bigger than the number of boys, which is 7.)
- Confirm with the whole class that we are adding.
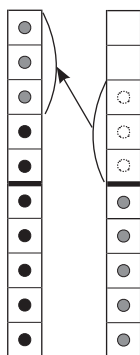- Let the learners work out the answer and then write the number sentence with its answer in their classwork books (7 + 8 = 15).
- Ask a learner to come up to the board, and to place bottle tops on the large ten frames to show their solution to the problem.

- Write the number sentence on the board for correction. (7 + 8 = 15)
- Ask: **What is the answer to the word problem?** (There are 15 girls.)
- *NOTE: Learners must write the answer with the unit, i.e. 15 **girls**.*

4   HOMEWORK ACTIVITY (5 MINUTES)

NOTE: Learners can use their ten frames and bottle tops, but they are expected to do calculations mentally at this stage.

Add or subtract without using bottle tops.

a   8 + 6 = (14)
b   13 – 5 = (8)
c   7 + 4 = (11)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to solve change type addition (with carrying) and subtraction (with borrowing) problems in context.

Lesson 22: Addition and subtraction word problems (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.7 Addition and subtraction (in context); 1.13 Addition and subtraction (context free).
Lesson Objective: Solve combine and compare type addition (with carrying) and subtraction (with borrowing) problems in context.
Lesson Vocabulary: Make-a-ten, subtract, take away, less, subtract, take away, less.
Resources: Bottle tops, ten frames.
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	8 + 4 = __	12	**6**	13 – 5 = __	8
2	7 + 6 = __	13	**7**	15 – 8 = __	7
3	6 + 5 = __	11	**8**	14 – 9 = __	5
4	8 + 9 = __	17	**9**	16 – 7 = __	9
5	7 + 7 = __	14	**10**	11 – 4 = __	7

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, learners will further develop their understanding of addition with carrying and subtraction with borrowing, using word problems to create context. It is important to allow learners to discuss their solution methods so that they can share ideas. Learners are expected to do addition with carrying and subtraction with borrowing mentally (without using ten frames with bottle tops). However, they can use ten frames and bottle tops to check their answers and do corrections if necessary.

Today we are learning to solve addition and subtraction problems in context.

Activity 1: Whole class activity

- Make sure that each learner has two ten frames and some bottle tops.
- Place two large ten frames on the board.
- Write the following word problem on the board *(addition combine)*.
 **Thompho is in the seventh position from the front in a queue.**
  There are 4 children behind her.
  How many children are there in the queue?
- Read the problem.
- Ask: **What is the story about?** (Children.)

- Ask: **If Thompho is seventh in the queue, what does that tell us about the number of children up to (and including) Thompho?** (There are 7 children including Thompho.)
- Encourage the learners to represent Thompho's position from the front with their bottle tops.
- Let a learner present how she/he represented the story on the chalkboard.
- Ask: **So then, what numbers do you see in the story?** (7 and 4.)
- Underline these numbers.
- Ask: **What is the question?** (How many children are there altogether?)
- Underline the question with a wavy line.
- When learners understand the story, let them read the word problem, repeating after you sentence by sentence.
- Let the learners read the problem until they read it fluently.
- Ask: **How can you solve this problem?** (We can combine the number of children in front of from the top up to Thompho, and the number of children behind Thompho in the queue.)
- Ask: **Are we adding or subtracting to solve the problem?**
  - Adding.
  - We are finding out the total number of children in the queue.
- Let the learners write the number sentence in their classwork books. (7 + 4 = __)
- Write the number sentence on the board for correction.
- Give learners time to solve the problem using their ten frames and their bottle tops or mentally.
- Ask a learner to come up to the board, and to place bottle tops on the large ten frames to show their solution to the problem.
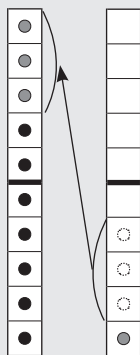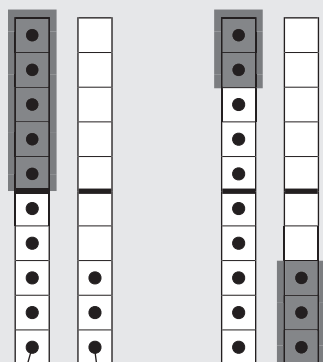

- Write the answer on the board after learners complete the number sentence in their classwork books.
  (7 + 4 = 11)
- Ask: **What is the answer to the word problem?** (There are 11 children altogether in the queue.)
- *NOTE: Learners must write the final answer with the unit, i.e. 11 **children**.*

Activity 2: Learners work in groups

- Make sure that each learner has two ten frames and some bottle tops.
- Place two large ten frames on the board.
- Write the following word problem on the board *(subtraction combine).*
  There are 13 people in a queue at the bus stop.
  I am in the fifth position from the back.
  How many people are there in front of me?
- Read the problem.
- Ask: **What is the story about?** (People.)
- Let the groups of learners represent the queue and point out my position with a finger as the fifth from the back in the queue.
- Let a learner present how she/he represented the story on the chalkboard.
- Ask: **What numbers do you see in the story?** (13 and 5.)Ask: **How did you know that you have to use the number 5?** (The problem says 'I am in the fifth position from the back', so I know that I must use the number 5; the word 'fifth' tells me that there are five people at the back of the queue and I need to find out how many people there in front of those 5)
- Underline these numbers.
- Ask: **What is the question?** (How many people are there in front of me in the queue?)
- Underline the question with a wavy line.
- When learners understand the story, let them read the word problem, following after you sentence by sentence.
- Let the groups of learners read the problem until they read it fluently.
- Ask: **Are we adding or subtracting to solve the problem?**
  - Subtracting.
  - The total number of people in queue is 13.
  - There are 5 people at the back of the queue.
  - I need to find the number of people in front of the 5 people at the back.
  - The number I need to find must be less than 13.
- Let the learners write the number sentence in their classwork books (13 – 5 = __).
- Write the number sentence on the board for correction.
- Give the groups of learners time to solve the problem using their ten frames and bottle tops or mentally.
- Ask: **What can you tell me about how you moved your bottle tops on your ten frames?**
  - Since we cannot take away 5 from the 3 ones, we break down 5 into 3 and 2.
  - We first take away 3 from the 3 ones.
  - We then take away the remaining 2 from the 10.
  - We get the answer 8.
- Let the learners write the number sentence with its answer in their classwork books (13 – 6 = 7).

- Ask a learner to come up to the board and to place bottle tops on the large ten frames to show their solution to the problem.


5 and 3 is 8

- Write the answer on the board after learners complete the number sentence in their classwork books
  (13 − 5 = 8).
- Ask: **What is the answer to the word problem?** (There are 8 people in front of me in the queue.)
- *NOTE: Learners must write the final answer with the unit, i.e. 8 **people**.*

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Today's classwork time is used to work through another problem with the whole class.

- Place two large ten frames on the board.
- Write the following word problem on the board *(subtraction compare)*.
  **There are <u>6</u> girls
  and <u>13</u> boys in a playground.
  How many more boys than girls are there?**
- Read the problem.
- Ask: **What is the story about?** (Girls and boys.)
- Ask: **What numbers do you see in the story?** (6 and 13.)
- Underline these numbers.
- Ask: **What is the question?** (How many more boys are there than girls?)
- Underline the question with a wavy line.
- When learners understand the story, let them read the word problem, repeating after you sentence by sentence.
- Let the learners read the problem until they read it fluently.
- Ask: **How can you solve this problem?** (We can take away 6 from 13, because we are comparing the numbers of boys and girls and we will find the difference in numbers.)
- Ask: **Are we adding or subtracting to solve the problem?**
  - Subtracting.
  - We know the total number of boys and girls; we just need to find out the difference between them.

- Let the learners work out the answer and then write the number sentence with its answer in their classwork books (13 – 6 = 7).

4 and 3 is 7
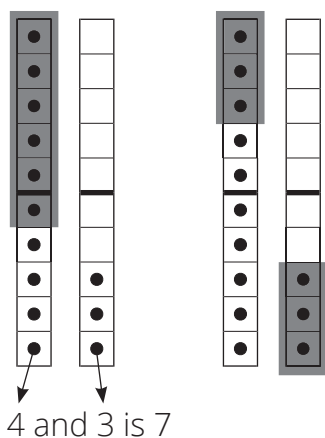
- Ask a learner to come up to the board and to place bottle tops on the large ten frames to show their solution to the problem.
- Write the number sentence on the board for correction. (13 – 6 = 7)
- Ask: **What is the answer to the word problem?** (There are 7 more boys than girls.)
- *NOTE: Learners must write the answer with the unit, i.e. 7 **boys**.*

4   HOMEWORK ACTIVITY (5 MINUTES)

NOTE: Learners can use their ten frames and bottle tops, but they are expected to do calculation mentally at this stage.

Add or subtract without using bottle tops.

a   14 – 7 = (7)
b   9 + 4 = (13)
c   16 – 9 = (7)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to solve combine type addition (with carrying) and subtraction (with borrowing) problems in context.

Lesson 23: South African money

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.11 Money.
Lesson Objective: Recognise and identify the South African currency coins and bank notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20.
Lesson Vocabulary: Money, currency, coins, cents, rands, how much, add, equals, between.
Resources: Money coin and note cut-outs (see *Printable Resources*).
Date: Week Day

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 56 up to 71	56, 57,58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71
2	2s from 44 up to 62	44, 46, 48, 50, 52, 54, 56, 58, 60, 62
3	5s from 30 up to 60	30, 35, 40, 45, 50, 55, 60
4	10s from 10 up to 100	10, 20, 30, 40, 50, 60, 70, 80, 90, 100
	Count backwards in:	**Answer**
1	1s from 68 to 54	68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54
2	2s from 66 to 48	66, 64, 62, 60, 58, 56, 54, 52, 50, 48
3	5s from 55 to 25	55, 50, 45, 40, 35, 30, 25
4	10s from 100 to 10	100, 90, 80, 70, 60, 50, 40, 30, 20, 10

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

You need to bring one of each of the following coins and notes to class for this lesson: 10c, 20c, 50c, R1, R2, R5, R10 and R20. This will give learners the opportunity to hold the real money when they talk about the way the coins or notes look in Activity 2. The cut out coins and notes will be useful in Activity 3. You need to prepare these for the lesson in advance. For learners who struggle to identify the coins or notes, ask them to show you each coin or note and discuss them again. You may need to do more revision with the money cut outs, helping learners to exchange (for example) two 10c coins for one 20c coin, two R1 coins for one R2 coin, etc.

Today we are learning to recognise and identify South African coins and bank notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20.

Activity 1: Whole class activity.

- Put up pictures of the following coins and notes on the board: 10c, 20c, 50c, R1, R2, R5, R10 and R20.
- Ask: **What is money?** (Something we use to exchange for things we need or want.)
- Ask: **Why is money important?** (To be able to buy the things we need or want.)
- Ask: **How do we use money every day?** (We go to the shop and spend it on things like food, clothing, toys, etc.)

Activity 2: Whole class activity

- Put each of the coins and notes you have brought to class for this lesson (10c, 20c, 50c, R1, R2, R5, R10 and R20) on your desk in the front of the class.
- Call on one learner at a time to come to the front of the class and pick up a coin or a note, to tell the class about that coin or note.
- Ask the first learner to hold up the 10c coin.
- Ask: **What can you tell me about this coin?** (Learners could describe the colour of the coin, the picture on the coin, or anything else they see on the coin. They could also talk about what they could buy with the coin.)
- Repeat with the other coins and notes.

Activity 3: Learners work in pairs.

- Use the coin and note cuts outs from the *Printable Resources*.
- Give each pair of learners the following paper copies of the coins and notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20. They need a few of each coin and note.
- Ask a learner to place a coin or note on their desk (for example 20c).
- Ask: **Which other coins can also make 20c?** (Two 10c coins – 10c and 10c is equal to 20c.)
- Allow the pairs to discuss the different ways of making up the amount of money.
- Allow the learners time to discuss all the coins and notes, and to think of a variety of ways to make the different amounts of money.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   Circle all the:

R1 coins   R2 coins   R5 coins

(Learners must indicate the correct coins. This is to check that they recognize the coins.)

2   Draw a line to match the amount of money to the picture.

a	R1	
b	10c	
c	R20	
d	R5	
e	R2	

3   Tick the coins in each block that will give you R10.

                              (two R5 coins)   (R5 coin, two R2 coins, R1 coin)
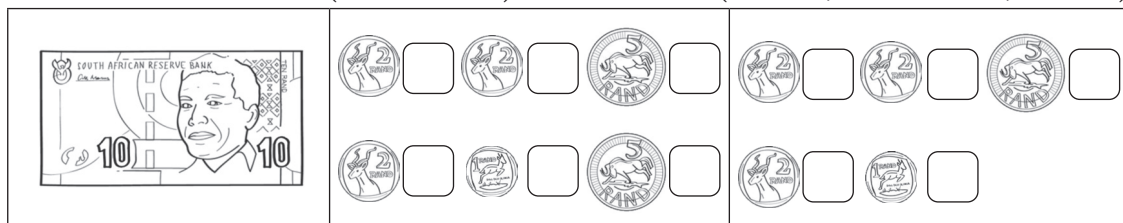
4   Tick the coins in each block that will give you R20.

                          (R10 note, two R 5 coins) (R10 note, R5 coin, two R2 coins, R1 coin)
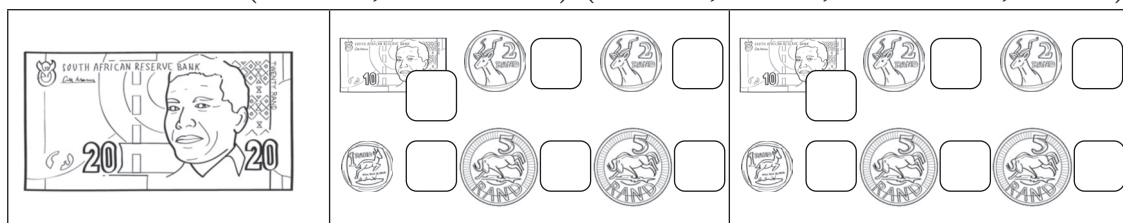
4   HOMEWORK ACTIVITY (5 MINUTES)

Draw a line to match the amount of money to the picture.

a	R10	
b	50c	
c	R5	
d	R1	
e	20c	

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to recognise and identify South African coins and bank notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20.

Lesson 24: Doubling

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.11 Money.
Lesson Objective: Use doubling as a technique when solving problems.
Lesson Vocabulary: Forwards, backwards, how many, double, the same, plus, more than, less than, doubling, addition, add.
Resources: Bottle tops, pictures/drawings (hand, bicycles, tricycles, beetles, calendar week – find your own), money coin and note cut-outs (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	11 + 11 = __	22	**6**	4 + 4 = __	8
2	7 + 7 = __	14	**7**	8 + 8 = __	16
3	2 + 2 = __	4	**8**	10 + 10 = __	20
4	9 + 9 = __	18	**9**	6 + 6 = __	12
5	5 + 5 = __	10	**10**	3 + 3 = __	6

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson develops learners' understanding of doubling, allowing them opportunities to work with practical resources. It is a good idea to use the coins and notes introduced in Lesson 23 to continue to develop learners' recognition of currency. Encourage the learners to manipulate the coins and notes so that they can see what they are doubling. As learners develop in confidence, they will become able to double numbers mentally without needing concrete resources. Note that for this lesson, you need to collect pictures to use in Activity 1 when you prepare. If you have not collected the pictures you need to draw simple pictures on the board instead.

Today we are learning to use doubling as a technique when solving problems.

Activity 1: Whole class activity

- Use your prepared pictures for this activity.
- Show the learners the pictures mentioned below or draw them onto the board and say the following:
  - **How many fingers do we have on one hand?** (5)
  - **How many fingers do we have on two hands?** (10)

- *We can say: Double 5 is 10.*
- Do the same with pictures of:
  - a bicycle (2 wheels – double 2)
  - a tricycle (3 wheels – double 3)
  - a car (4 wheels – double 4)
  - a beetle (6 legs – double 6)

Activity 2: Learners work in groups

- Use the coin and note cuts outs from the *Printable Resources*.
- Give each group of learners the following paper copies of the coins and notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20. They need a few of each coin and note.
- Say: **Hold up a R5 coin.**
- Ask: **If you double the number of R5 coins, how much money will you have?** (R10 because we will have two R5 coins.)
- Say: **Double R5 is R10.**
- Say: **Hold up two R1 coins.**
- Ask: **How much money do you have?** (R2.)
- Ask: **If you double the number of R1 coins that you have already, how much money will you have?** (R4 because we will have four R1 coins.)
- Say: **Two R1 coins give you R2. Double R2 is R4.**
- Do the same with different coins and notes.
- NOTE: At this stage it is a good idea to only use one type of note or coin at a time (for example only R1 coins or only 20c coins). Learners will create money amounts with a variety of coins in Activity 3.

Activity 3: Learners work in groups

- Use the coin and note cuts outs from the *Printable Resources*.
- Give each group of learners the following paper copies of the coins and notes: 10c, 20c, 50c, R1, R2, R5, R10 and R20. They need a few of each coin and note.
- Say: **Find the coins that will make R8.** (Learners may put out four R2 coins / a R5 coin, a R2 coin and a R1 coin / eight R1 coins.)
- Allow the learners time to share with the class the combinations of coins that they have used.
- Say: **Double R8.**
- Allow the learners time to lay out the coins if they need to.
- Ask a learner to tell the class how they doubled R8.
- Repeat with different amounts, such as:
  - R6
  - R12
  - R15

WEEK 5

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Write down the doubles. The first one is done for you.

a	2 is	double 1	1 + 1
b	8 is	(double 4)	(4 + 4)
c	4 is	(double 2)	(2 + 2)
d	10 is	(double 5)	(5 + 5)
e	6 is	(double 3)	(3 + 3)
f	12 is	(double 6)	(6 + 6)
g	14 is	(double 7)	(7 + 7)

2 Answer the following:
  a Double R6 is ☐ (R12)
  b Double R8 is ☐ (R16)
  c Double R14 is ☐ (R28)
  d Double R3 is ☐ (R6)
  e Double R11 is ☐ (R22)
  f Double R15 is ☐ (R30)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Answer the following:
  a Double R2 is ☐ (R4)
  b Double R10 is ☐ (R20)
  c Double R8 is ☐ (R16)
2 Double:
  a 12 is ☐ (double 6 or 6 + 6)
  b 8 is ☐ (double 4 or 4 + 4)
  c 4 is ☐ (double 2 or 2 + 2)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to use doubling as a technique when solving problems.

Lesson 25: Working with money

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.11 Money.
Lesson Objective: Solve money problems involving totals and change to R20 and in cents up to 50c.
Lesson Vocabulary: Money, currency, coins, cents, rands, how much, add, equals, between.
Resources: Money coin and note cut-outs (see *Printable Resources*).

Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	Double:	Answer		Double:	Answer
1	3	6	**6**	5	10
2	9	18	**7**	20	40
3	15	30	**8**	8	16
4	7	14	**9**	4	8
5	10	20	**10**	6	12

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson gives learners the opportunity to consolidate their knowledge of South African currency (notes and coins) as well as to work on problem solving involving operations, in the context of money problems. While the learners work on the word problems involving money, you should check that they all understand the operation calculations that they are doing and that they are becoming fluent in the procedures that they use to do these operations.

Today we are learning to solve money problems involving totals and change to R20 and in cents up to 50c.

Activity 1: Learners work in groups

- Give each groups of learners a 20c coin, four 10c coins, two R1 coins, two R2 coins and two R5 coins, a R20 note and a R10 note (use the money cut outs).
- Say: **Show me 20c from your pile of money**.
- Ask: **Is there only one correct answer?** (No – two 10c coins; OR one 20c coin.)
- Say: **Show me R10 from your pile of money**.
- Say: **Is there only one correct answer?** (No – R5 and R5; R5, R2, R2 and R1; R10 note.)
- Say: **Show me which coins and/or notes will make: R6, R8, R9, R12, R15, R20**.

- You should discuss all answers given by learners as there are a variety of possible correct answers.
- The learners might say: R2 + R2 + R1 + R1 = R6; R5 + R2 + R1 = R8; R5 + R2 + R2 = R9;
  R10 + R2 = R12; R10 + R2 + R2 + R1 = R15; R10 + R5 + R5 = R20.

## Activity 2: Learners work in groups

- Continue working with the money cut outs. Ask the groups of learners to put the following in front of them: 3 x 10c.
- Ask: **How much money do you have?** (30c.)
- Ask: **If you spent 10c on sweets, how much money would you have left?** (Walk around and observe how learners solve the problem. Encourage them to show you how much money they have left.) (20c.)
- Ask the learners to put the following in front of them: R10, R5, R2, R1, R1.
- Ask: **How much money do you have?** (R19.)
- Ask: **If you spent R15 on a book, how much money would you have left?** (Walk around and observe how learners solve the problem. Encourage them to show you how much money they have left.) (R4.)

Activity 3: Whole class activity

- Write up a few sums involving money amounts (addition) on the chalkboard.
- For example:
  Calculate the following:
  - 10c + 10c = ☐   (20c)
  - R5 + R5 = ☐   (R10)
- Encourage the learners to think about what they did in Lesson 24 (Doubling).
- Do a few more examples if the learners need more practise before going on to the classwork activity.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   Circle the coins that will make up R10. (Answers will vary.)
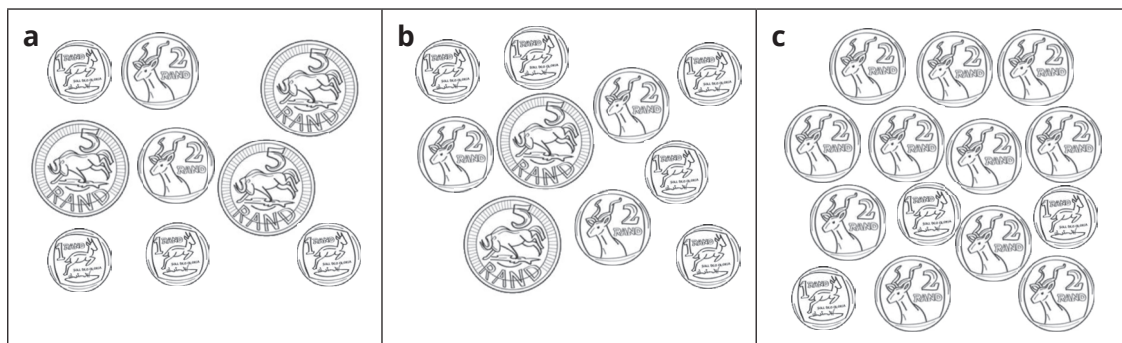
2 Calculate the following:
   a   10c + 10c + 10c = □   (30c)
   b   R5 + R10 = □   (R15)
   c   R10 + R10 = □   (R20)
   d   R5 + R5 + R1 + R2 = □ (R13)

3 Solve the following.
   a   I have a 20c coin. My friend has three 10c coins. Who has more money? (My friend has more money – 30c.)
   b   I have two R5 coins. My friend has a R1 and R5 coin. Who has less money? (My friend has less money – R6.)

4   HOMEWORK ACTIVITY (5 MINUTES)

Calculate:

a   10c + 10c = □   (20c)
b   10c + 20c = □   (30c)
c   R5 + R2 + R5 = □   (R12)
d   R2 + R10 + R2 + R2 = □ (R16)
e   R10 + R1 + R5 + R2 = □ (R18)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to solve money problems involving totals and change to R20 and in cents up to 50c.

WEEK 5

Week 6

Lesson 26: Money calculations

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.11 Money.
Lesson Objective: Solve money problems involving totals and change to R20 and in cents up to 50c.
Lesson Vocabulary: Money, currency, coins, cents, rands, how much, add, equals, between.
Resources: Money coin and not cut-outs (see *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	9 + 7 = __	16	**6**	17 – 8 = __	9
2	5 + 6 = __	11	**7**	14 – 6 = __	8
3	8 + 7 = __	15	**8**	12 – 9 = __	3
4	4 + 8 = __	12	**9**	15 – 9 = __	6
5	6 + 7 = __	13	**10**	16 – 8 = __	8

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

As with Lesson 25, this lesson gives learners the opportunity to consolidate their knowledge of South African currency (notes and coins) as well as to work on problem solving involving operations in the context of money problems. Encourage the learners to use the addition strategies that they have learned over the course of the year to help them solve problems, rather than simply counting.

Today we are learning to solve money problems involving totals and change to R20 and in cents up to 50c.

Activity 1: Learners work in groups

- Use the money cut outs. Give the groups of learners three 10c coins, two 20c coins, four R1 coins, two R2 coins, two R5 coins, a R10 note and a R20 note.
- Ask: **How much money is 10c + 10c?** (20c.)
- Allow the learners time to arrange their coins and to discuss how they will solve the problem.
- Repeat the steps above, asking the following questions:

- **How much money is?**
- **10c + 20c** *(30c.)*
- **10c + 10c + 10c + 10c** *(40c.)*
- **20c + 20c** *(40c.)*
- **R10 + R2 + R2 + R1** *(R15.)*
- **R5 + R5 + R2 + R1** *(R18.)*
- **R10 + R5 + R2** *(R17.)*
- **R5 + R5 + R2 + R2 + R1 + R1** *(R16.)*

Activity 2: Whole class activity

- Give the learners word problems, and let them hold up their money to show the answers.
- Ask:
  I go to the shop and I buy a ball for R4.
  I pay with R5.
  How much change will I get?
- Encourage the learners to verbalise their method of finding that R5 – R4 = R1.
- Ask:
  I go to the shop, and I buy sweets for R6.
  I pay with R10.
  How much change will I get?
- Encourage the learners to verbalise their method of finding that R10 – R6 = R4.
- Repeat with other examples.

Activity 3: Whole class activity

- Write up a few sums using money amounts (addition and subtraction).
- For example:
  Calculate:
  - 10c + 10c = ☐   (20c.)
  - 10c – 10c = ☐   (0c.)
  - R1 + R2 + R5 = ☐   (R8.)
  - R10 – R5 = ☐   (R5.)
- Do a few more examples if the learners need more practice before going on to the classwork activity.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   I have R15. I buy a bag of sweets for R11. Make a drawing to show how much money I have left. (The two R2 coins are left. R15 – R11 = R4.)

2   Calculate:
    a   20c – 10c = ☐ (10c.)
    b   20c – 20c = ☐ (0c.)
    c   R15 – R4 = ☐ (R11.)
    d   R14 – R7 = ☐ (R7.)

3   Calculate:
    a   R20 – R2 – R8 = ☐ (R10.)
    b   R5 – R4 = ☐   (R1.)
    c   30c – 10c = ☐ (20c.)
    d   R20 – R5 = ☐ (R15.)
    e   R15 – R5 – R5 – R2 = ☐ (R3.)

4   HOMEWORK ACTIVITY (5 MINUTES)

Calculate:
a   40c – 10c = ☐ (30c.)
b   R15 – R10 = ☐   (R5.)
c   R10 – R1 – R1 – R2 = ☐   (R6.)
d   20c – 10c – 10c = ☐   (0c.)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to solve money problems involving totals and change to R20 and in cents up to 50c.

Lesson 27: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.11 Money
Resources: Printable assessment in teacher's resources.
Date: Week   Day

1   SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

Take some time to do the *oral and practical assessment* (see rubric below).

This week you will need to take some time to do the *oral and practical assessment* (see rubric or checklist below). The oral and practical activities should be done individually/in groups over the course of the week.

2   DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in learners' responses.

3   ASSESSMENT

WRITTEN ASSESSMENT (15)

1   Solve the problems without using bottle tops:
    a   15 – 8 = (7)
    b   6 + 6 = (12)
    c   17 – 9 = (8)
2   Calculate doubles:
    a   Double R5 is ☐ (R10)
    b   Double R7 is ☐ (R14)
    c   Double R20 is ☐ (R40)
    d   Double R13 is ☐ (R26)
3   Calculate:
    a   10c + 20c + 10c = ☐   (40c)
    b   R2 + R1 + R2 + R5 = ☐   (R10)
    c   R10 + R5 = ☐ (R15)

WEEK 6

4 Solve:

a I have R18. I buy a book for R13. Make a drawing to show how much money I have left. (The R5 coin is left.)

b I have R20. I spend R3. Make a drawing to show how much money I have left. (The R10 note, and the R5 and R2 coins are left.)

ORAL AND PRACTICAL

CAPS: Numbers, operations and relationships: Money	Mark: 7
Activity: Assess the learners' ability to recognise and work with South African money in context.	

	Level 1	Level 2-3	Level 4-5	Level 6-7
Criterion	Recognise South African coins only when prompted.	Able to recognise SA cents coins (10c, 20c and 50c) and rands coins (R1, R2 and R5)	Able to recognise all SA coins and can exchange between cents coins.	Recognises all SA coins and able to make exchanges between any given coins

Mark ✓/7	Criteria – Checklist: (1 mark for each criterion achieved)	Achieved – ✓	Not yet – ✗	Almost – ★
1	Recognise South African coins only when prompted.			
1	Able to recognise SA cents coins (10c, 20c and 50c)			
1	Able to recognise SA rands coins (R1, R2 and R5)			
1	Able to exchange between cents coins of different values not over 50c			
1	Able to exchange between cents coins of different for values over 50c			
1	Able to exchange between rands coins and cents coins separately			
1	Able to make exchanges between any given coins			

Unit 5 Introduction

This unit focuses on data handling. In this unit, learners will collect, organise, represent and analyse data through the means of pictographs. It is important to allow learners the opportunity to learn about graphs through the use of pictographs, as data handling is quite an abstract concept and needs clear representation. Learners need to learn how to organise their data into a pictograph, and to interpret what the graph is communicating to them.

In this unit you will be able to focus on the four framework dimensions in the following way:

- **Conceptual understanding**: Learners will develop an understanding of graphs, recognising them as a form of communication (e.g. Lesson 28 Activity 2).
- **Procedural fluency**: Learners will practice organising and representing data with graphs so that they become more efficient in the reading and interpreting of the data (e.g. Lesson 28 Activity 1).
- **Strategies**: Learners will develop the data handling skills of collecting, organising, representing and analysing data through the use of pictographs (e.g. Lesson 29 Activity 1).
- **Reasoning**: Learners will verbalise their understanding of the data, as they begin to make sense of the graphs (e.g. Lesson 29 Activity 2).

Building a **learning centred classroom** in this unit will involve (among other things) attention to:

- **Connecting representations**: Learners begin to understand that information can be represented in a variety of different ways.
- **Active learning**: Learners are actively involved in the collecting, organising, representing and analysing of data in order for them to develop their own understanding.

WEEK 6

Unit 5 Overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Wed	28	Collect and organise data based on questions posed by the teacher; Represent data in a pictograph.	Weather calendar (see *Printable Resources*).	
Thur	29	Represent and analyse data in pictographs.	n/a	
Fri	30	Assessment	Assessment activity in teacher's resources.	

Assessment for learning

Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

Lesson 28: Data handling (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 5.4 Collect and organise data, 5.5 Represent data, 5.6 Analyse data.
Lesson Objective: Collect and organise data based on questions posed by the teacher; Represent data in a pictograph.
Lesson Vocabulary: Sort, collect, organise, describe, more, less, most, least, more common, least common, tally, data, pictograph.
Resources: Weather calendar (See *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	10 more than 35 is __	45	**6**	5 less than 85 is __	80
2	5 more than 70 is __	75	**7**	10 less than 40 is __	30
3	20 more than 20 is __	40	**8**	30 less than 60 is __	30
4	7 more than 20 is __	27	**9**	9 less than 59 is __	50
5	10 more than 89 is __	99	**10**	10 less than 63 is __	53

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson introduces data handling, and provides an opportunity for learners to collect data from a calendar. It is important that learners know what a tally mark is, and that we use four upright lines with a fifth line crossing through them (||||) to tally a count of 5. This way they are able to quickly determine the number by counting in 5s. As learners begin to analyse and interpret data, it is necessary to provide opportunities for learners to make sense of a graph by understanding what information the graph provides.

Today we are learning to collect, organise and represent data based on questions posed by the teacher.

WEEK 6

Activity 1: Learners work in groups

January						
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

- Refer to the LAB for the copy of the calendar showing weather conditions for January and a copy of the tally table.
- Say: **Count the number of sunny days** (12).
- Ask learners to count the sunny days and make a tally mark in the column next to the sun picture on the tally table grid table.
- Encourage the learners to count the total number of tally marks for the sunny days and to write it in the last column of the grid.
- Repeat the above steps for cloudy days (3), rainy days (11), partly cloudy days (4) and windy days (1).
- For each weather type, learners should mark up the tallies in the tally table and record the total number for each type after they have finished tallying.

types of weather	tally marks	total number of tally marks
	‖‖‖ ‖‖‖ ‖	12
	‖‖‖ ‖‖‖ ‖	11
	‖‖‖	3
	‖‖‖‖	4
	‖	1

Activity 2: Whole class activity

- Discuss the data from Activity 1:
- Ask: **How many sunny days were there last month?** (12)
- Ask: **How many windy days were there last month?** (1)
- Ask other similar questions.
- Ask: **Which type of weather did we have the most often in January?** (Sunny.)
- Ask: **Which type of weather did we have the least often in January?** (Windy.)
- Ask: **How many more sunny days than windy days did we have?** etc. (11 more sunny days.)

WEEK 6

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Help your learners as they draw this pictograph. Discuss the choice of key with the class. We choose a shape to represent each day. For example, they could choose to draw a small circle to represent each day, or a small square.

1   Use the data from the January calendar to draw the pictograph.

Types of weather

12	◻				
11	◻	◻			
10	◻	◻			
9	◻	◻			
8	◻	◻			
7	◻	◻			
6	◻	◻			
5	◻	◻			
4	◻	◻		◻	
3	◻	◻	◻	◻	
2	◻	◻	◻	◻	
1	◻	◻	◻	◻	◻
	☀	🌧	☁	⛅	🌬

Key: ◻ = one day

2   Complete:

a   There were __ sunny days in January. (12)

b   There were __ windy days in January. (1)

c   Most days in January were __ .(sunny)

d   How many more sunny days than rainy days were there? __ (1)

e   I enjoy __ days.

f   There were __ rainy days in January. (11)

g   There were __ cloudy days in January. (3)

h   Only one day in January was__ .(windy)

i   How many less windy days than rainy days were there? __ (10)

j   I do not enjoy __ days. (Answers will vary.)

4 HOMEWORK ACTIVITY (5 MINUTES)

Number of shapes

5	★			
4	★		△	
3	★		△	
2	★		△	◻
1	★	●	△	◻
	Star	Ball	Triangle	Square

1 How many squares are there? (2)
2 How many stars are there? (5)
3 How many more stars are there than squares? (3)
4 How many less circles are there than triangles? (3)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to collect, organise and represent data based on questions posed by the teacher.

Lesson 29: Data handling (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 5.4 Collect and organise data, 5.5 Represent data, 5.6 Analyse data.
Lesson Objective: Represent and analyse data in pictographs.
Lesson Vocabulary: Data, analyse, interpret, pictograph, less than, more than.
Resources: n/a

Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	What is?	Answer		What is?	Answer
1	10 more than 70 is __	80	**6**	5 less than 40 is __	35
2	5 more than 55 is __	60	**7**	10 less than 75 is __	65
3	50 more than 50 is __	100	**8**	40 less than 80 is __	40
4	7 more than 40 is __	47	**9**	6 less than 96 is __	90
5	10 more than 36 is __	46	**10**	10 less than 87 is __	77

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson further develops the concepts addressed in Lesson 37. Learners will continue working with pictographs as they analyse and interpret data. It is important to provide opportunities for learners to make sense of a graph by understanding what information the graph provides.

Today we are learning to represent and analyse data in pictographs.

Activity 1: Whole class activity

- Preparation: Draw the following pictograph on the board (you must also write the key on the board).
  Our Favourite Colours

	Blue	Pink	Orange	Red	Purple
6				☐	
5				☐	
4		☐		☐	
3	☐	☐		☐	
2	☐	☐	☐	☐	
1	☐	☐	☐	☐	☐
	Blue	**Pink**	**Orange**	**Red**	**Purple**

Key: ☐ = one object

- Discuss the choice of key with the class (here a shape (square) was chosen to represent each learner).
- Discuss the pictograph with the class.
- *NOTE: Make sure that learners understand that a graph communicates information in a clear way that is easy to read. A graph allows people to get information at a glance. A pictograph shows information by using pictures and summarises data that has been collected. This is a pictograph showing data about favourite colours.*
- Ask: **How do we know what the graph is about?** (We look at the title of the graph.)
- Ask: **How do we know what each picture in the pictograph shows us?** (We look at the key of the graph.)
- Ask: **What does the pictograph show?** (The favourite colours of some learners.)
- Ask: **Which group has the most objects?** (Red group.)
- Ask: **Which group has the least objects?** (Purple group.)
- Ask: **Which group has more than the orange group but less than the pink group?** (Blue group.)

Activity 2: Whole class activity

- Discuss the following questions with the class with reference to the pictograph:
- Ask: **How many learners like the colour blue?** (3)
- Ask: **How many learners like the colour pink?** (4)
- Ask: **What can you tell me about the colour orange?** (2 learners like orange; more learners like orange than purple; fewer learners like orange than pink/blue/red.)
- Ask: **What can you tell me about the colour red?** (6 learners like red; red is the favourite colour.)
- Ask: **What can you tell me about the colour purple?** (Only 1 learner likes purple; purple is the least favourite colour.)

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

We Like Apples

5			☐
4			☐
3	☐		☐
2	☐	☐	☐
1	☐	☐	☐
	Red apples	**Yellow apples**	**Green apples**

Key: ☐ = one learner.

Answer the questions using the pictograph:

a How many learners like green apples? (5)

b How many learners like red apples? (3)

c How many learners like yellow apples? (2)

d How many more learners like green apples than yellow apples? (3)

e How many more learners like red apples than yellow apples? (1)

f Which apple is the most popular? (Green apples.)

g Which apple is the least popular? (Yellow apples.)

4 HOMEWORK ACTIVITY (5 MINUTES)

	Apple	Banana	Orange	Strawberry

Answer the questions using the pictograph:

a   How many learners like bananas? (5)
b   How many less oranges are there than bananas? (4)
c   How many more apples are there than strawberries? (1)
d   Which is the favourite fruit? (Banana)
e   Which is the least favourite fruit? (Orange)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to represent and analyse data in pictographs.

WEEK 6

Lesson 30: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 5.4 Collect and organise data, 5.5 Represent data, 5.6 Analyse data.
Resources: Printable assessment in teacher's resources.
Date: Week   Day

1   SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

2   DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in learners' responses.

3   ASSESSMENT

WRITTEN ASSESSMENT (10)

Use this data to answer the question:

Favourite toys			
Doll: 3	Truck: 2	Teddy bear: 4	Ball: 5

1   Complete the pictograph.
(Learners must draw the icons in the pictograph using the given data values.)

Favourite toys

5				
4				
3				
2				
1				
	Doll	**Truck**	**Teddy bear**	**Ball**

Key: _____ = one learner (learners choose a symbol)

2 Answer the questions using the pictograph:
   a How many learners like dolls? (3)
   b How many learners like teddy bears? (4)
   c How many learners like balls? (5)
   a Which toy is the most popular? (Balls.)
   b Which toy is the least popular? (Trucks.)

Week 7

Unit 6 Introduction

This unit focuses on time. Learners will develop vocabulary associated with the passing of time and with the telling of time. It is essential that learners are given opportunities to discuss and to share their ideas. The new vocabulary needs to be emphasised, and learners should use the words themselves in context. They will be given opportunities to sequence and describe events using the appropriate terminology.

In this unit you will be able to focus on the four framework dimensions in the following way:
- **Conceptual understanding**: Learners will develop their understanding of time related vocabulary as they describe and sequence events (e.g. Lesson 31 Activity 1).
- **Procedural fluency**: Learners will practice sequencing and describing events in a variety of ways so that they can become more confident with the use of the new vocabulary (e.g. Lesson 31 Activity 1).
- **Strategies**: Learners will use their understanding of sequencing to develop their use of the new vocabulary (e.g. Lesson 31 Activity 1).
- **Reasoning**: Learners will use verbalise their understanding of situations, demonstrating their understanding of the new terminology (e.g. Lesson 31 Activity 2).

Building a **learning centred classroom** in this unit will involve (among other things) attention to:
- **Applying maths in context**: Learners will use new time-related vocabulary to sequence and describe real life events.
- **Speaking Mathematics:** Learners will verbalise their understanding as they work through the activities in this unit, helping them to consolidate their understanding of the new terminology.

Unit 6 Overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Mon	31	Order regular events from own lives; Compare lengths of time using language e.g. longer, shorter, faster, slower; Sequence events using language such as yesterday, today, tomorrow.	n/a	
Tue	32	Talk about the passing of time by sequencing days of the week and months of the year.	Birthday chart (make your own, e.g. 12 coloured balloons), day and month flash cards (see Printable Resources).	
Wed	33	Use language to talk about the passing of time by ordering regular events from their own lives.	Day and month flashcards (see Printable Resources).	
Thur	34	Name and sequence days of the week and months of the year.	Day and month flashcards (see Printable Resources).	
Fri	35	Assessment	Assessment activity in teacher's resources.	

Assessment for learning

Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

WEEK 7

Lesson 31: Time (1)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 4.1 Time.
Lesson Objective: Order regular events from own lives; Compare lengths of time using language e.g. *longer*, *shorter*, *faster*, *slower*; Sequence events using language such as *yesterday*, *today*, *tomorrow*.
Lesson Vocabulary: Time, longer than, shorter than, faster than, slower than, yesterday, today, tomorrow, short time, long time.
Resources: n/a.

Date:	Week	Day

1   MENTAL MATHS (10 MINUTES)

	What number is:	Answer		What number is:	Answer
1	Before 10?	9	**6**	In between 77 and 79?	78
2	After 31?	32	**7**	Before 50?	49
3	In between 20 and 22?	21	**8**	After 83?	82
4	After 64?	65	**9**	Before 14?	13
5	Before 100?	99	**10**	In between 52 and 54?	53

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson, you introduce some vocabulary that is used in the topic of time. It is important that you use all of the different words – time words are abstract. You should also allow the learners the opportunity to say the words themselves. The activities that follow are planned to give learners the opportunity to experience intervals of time and to think about differences in timing/time taken for certain things to be done.

Today we are learning to:
- Order regular events from own lives;
- Compare lengths of time using language e.g. *longer*, *shorter*, *faster*, *slower*;
- Sequence events using language such as *yesterday*, *today*, *tomorrow*.

Activity 1: Whole class activity.

- Encourage a class discussion where the learners are given opportunities to use the new terminology.
- Ask the following questions, allowing time for learners to share their responses with the learner/s sitting next to them:
  - **What did you do <u>yesterday</u> after school?**

- **What will you do today after school?**
- **What will you do tomorrow after school?**
- Discuss the time it takes to do these things.
- *NOTE: It is important to allow the learners to talk among themselves in order for them to use the new vocabulary themselves.*

Activity 2: Learners work in pairs.

- Take the learners outside to the school field.
- Have the learners stand in pairs next to each other and run a race.
- Ask the following questions, allowing time for learners to share their responses with their partner:
  - **Who ran faster?**
  - **Who ran slower?**
  - **Who took a longer time?**
  - **Who took a shorter time?**
- *NOTE: It is important to allow learners to talk among themselves in order for them to use the new vocabulary themselves.*

Activity 3: Whole class activity.

- Take the learners back into the class.
- Put up two pictures on the chalkboard (for example, a child eating and a child brushing his/her teeth.)
- Ask: **Does it take you longer to eat your breakfast or to brush your teeth?**
- Discuss other common activities with the class in relation to the time they take to get done.
- Encourage a class discussion where the learners are given opportunities to use the new terminology.
- *NOTE: It is important to allow learners to talk among themselves in order for them to use the new vocabulary themselves.*

Activity 4: Learners work in pairs. (Optional depending on time available).

- Ask learners to tell the person next to them about something they did **yesterday**, something they did **today**, and something they will do **tomorrow**.
- The learners should also talk to each other about how long these things take to get done.
- Encourage the learners to use the new terminology.

WEEK 7

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   Draw a picture to show which takes a longer/shorter time.

	Compare	A longer time	A shorter time
a	Walking to the shop *and* Driving to the shop	(Various drawings)	(Various drawings)
b	Making a cup of tea *and* Making dinner	(Various drawings)	(Various drawings)
c	Drawing one square *and* Drawing lots of squares	(Various drawings)	(Various drawings)

2   Draw a picture of something you take a long time to do.
(Various drawings)

3   Draw a picture of something you take a short time to do.
(Various drawings)

4   HOMEWORK ACTIVITY (5 MINUTES)

Draw something:

a   You did yesterday (Various drawings).

b   You did today (Various drawings).

c   You will do tomorrow (Various drawings).

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to order regular events from own lives and compare lengths of time using language e.g. *longer*, *shorter*, *faster*, *slower*. We also learned how to sequence events using language such as *yesterday*, *today*, *tomorrow*.

Lesson 32: Time (2)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 4.1 Time.
Lesson Objective: Talk about the passing of time by sequencing days of the week and months of the year.
Lesson Vocabulary: Time, days of the week, months of the year, birthday, yesterday, today, tomorrow, morning, afternoon, night, early, late, longer, shorter, faster, slower.
Resources: Birthday chart (make your own, e.g. 12 coloured balloons), day and month flash cards (see *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	What number is:	Answer		What number is:	Answer
1	Before 35?	34	**6**	In between 90 and 92?	91
2	After 63?	64	**7**	Before 80?	79
3	In between 45 and 47?	46	**8**	After 17?	18
4	After 59?	60	**9**	Before 74?	73
5	Before 58?	57	**10**	In between 28 and 30?	29

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson continues to develop the vocabulary associated with the topic of time. Use this lesson to give learners as many opportunities as possible to use this vocabulary in discussion to help them consolidate their knowledge of the 'time' words (see the lesson vocabulary list). The discussion in the three activities will focus on the months of the year and days of the week. Learners need to be encouraged to sequence these, as well as to identify and describe events that may occur at particular times.

Today we are learning to talk about the passing of time by sequencing days of the week and months of the year.

Activity 1: Whole class activity

- Place the birthday chart balloons on the board.
- Ask learners when their birthdays are.
- Write or stick learners' names on the balloons.
- Ask: **What do you notice about the birthdays in our class?** (We have lots of birthdays in April/There are no birthdays in January, etc.)

- Use the birthday chart to guide you and ask questions like:
  - **How many more birthdays are there in (November) compared to (June)?**
  - **How many less birthdays are there in (February) than in (May)?**
  - **Which month has the least birthdays?**
  - **Which month has the most birthdays?** etc.

Activity 2: Learners work in groups

- Ask the learners to discuss the days of the week in their groups.
- Ask the learners to identify an interesting event for each day (e.g. we talk about our news on a Monday; we go to singing on a Tuesday; we have assembly on a Wednesday etc.)
- Encourage a class discussion where the learners are given opportunities to use the new terminology as they report on the discussions they had in their groups.

Activity 3: Learners work in groups

- Ask the learners to discuss the months of the year in their groups.
- Ask the learners to identify an interesting event for each month (e.g. my mom's birthday is in January; Valentine's Day is in February etc.).
- Encourage a class discussion where the learners are given opportunities to use the new terminology as they report on the discussions they had in their groups.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Write the days of the week in order.

Wednesday   Friday   Saturday   Monday
             Sunday   Tuesday   Thursday

(Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday)

(Some learners may suggest starting the week on Sunday, which is also correct.)

2 Draw a picture of what you did on Sunday.
(Various drawings)

3 Write the months of the year in order.

March   December   July   January   May
       September   February   October   June
             August   April   November

(January, February, March, April, May, June, July, August, September, October, November, December)

4 Draw a picture of something that happens in one of the months.
(Various drawings)

4   HOMEWORK ACTIVITY (5 MINUTES)

Use the words below to help you fill in the missing words.

July   January   September   December

a   I start school in _____. (January)

b   It is cold in _____. (July)

c   Flowers start blooming in _____. (September)

d   It is very hot in _____. (December)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to talk about the passing of time by sequencing days of the week and months of the year.

Lesson 33: Time (3)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 4.1 Time.
Lesson Objective: Use language to talk about the passing of time by ordering regular events from their own lives.
Lesson Vocabulary: Time, before, after, next, yesterday, today, tomorrow, morning, afternoon, evening, months, days, faster, slower, this month, last month, next month, longer, shorter.
Resources: Day and month flashcards (see *Printable Resources*).
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	Double:	**Answer**		**Double:**	**Answer**
1	50	100	**6**	14	28
2	10	20	**7**	5	10
3	6	12	**8**	40	80
4	9	18	**9**	8	16
5	12	24	**10**	20	40

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

There is a lot of vocabulary related to the topic of time. Use this lesson to give learners as many opportunities as possible to use this vocabulary in discussion to help them consolidate their knowledge of the 'time' words (see the lesson vocabulary list). The discussion in Activity 1 is to raise awareness that things happen at different times of the day and to familiarise learners with words such as today, tomorrow, yesterday, morning, afternoon, evening, etc. Activity 2 is about the days of the week and Activity 3 is about the months of the year.

Today we are learning to use language to talk about the passing of time by ordering regular events from our own lives.

Activity 1: Whole class activity

- Encourage a class discussion where the learners are given opportunities to use the new terminology.
- Discuss with the learners:
  - Events which happened at school *yesterday*;
  - Events which are happening at school *today*; and

- Events which will happen at school *tomorrow*.
- Discuss:
    - What the learners did *this morning*;
    - What the learners may be going to do in the *afternoon*; and
    - What the learners might do in the *evening* at home.
- *NOTE: It is important to allow learners to talk among themselves in order for them to use the new vocabulary themselves.*

Activity 2: Whole class activity

- Encourage a class discussion where the learners are given opportunities to use the new terminology.
- Discuss the days of the week. Talk about the activities that learners do on the different days of the week.
- Ask the following questions, allowing time for learners to share their responses with the learner/s sitting next to them:
    - **What day of the week is it today?** (Today is   .)
    - **What day of the week was yesterday?** (Yesterday was   .)
    - **What day of the week will tomorrow be?** (Tomorrow will be   .)
    - **What day of the week comes after Monday?** (Tuesday.)
    - **What day of the week comes before Friday?** (Thursday.)
    - **What day of the week is between Friday and Sunday?** (Saturday.)
- Encourage the learners to read the names of the days of the week.

Activity 3: Whole class activity

- Encourage a class discussion where the learners are given opportunities to use the new terminology.
- Discuss the months of the year. Talk about the activities that learners do in the different months of the year.
- Ask the following questions, allowing time for learners to share their responses with the learner/s sitting next to them:
    - **What month of the year it is?** (e.g. August.)
    - **What month was before this month?** (July.)
    - **What month will it be after this month?** (September.)
    - **What month is your birthday in?** (Allow the learners to tell you their months of birth.)
- Encourage the learners to read the names of the months of the year.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

(Answers will vary.)

1   Draw a picture to show what you did before school.
2   Draw a picture of what you will do after school.
3   Write the names of each of the days of the week.
4   Draw a picture to show what you do on each day of the week.
5   Write the names of each of the months of the year.
6   In which month of the year were you born?
7   Draw a picture of a special event that happens in one of the months of the year.
       (Optional, depending on time.)

4   HOMEWORK ACTIVITY (5 MINUTES)

(Answers will vary.)

What do you do in the morning? Draw a picture of one of the things you do in
the morning.

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to use language to talk about the passing of time by ordering regular
events from their own lives.

Lesson 34: Time (4)

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 4.1 Time.
Lesson Objective: Name and sequence days of the week and months of the year.
Lesson Vocabulary: Forwards, backwards, time, sequence, before, after, next, days of the week, months of the year, month, add, subtract, half, double, between, today, yesterday, tomorrow.
Resources: Day and month flashcards (see *Printable Resources*).

Date:	Week	Day

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 60 up to 76	60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,
2	2s from 48 up to 64	48,50,52,54,56,58,60,62,64
3	5s from50 up to 90	50,55,60,65,70,75,80,85,90
4	10s from 10 up to 100	10, 20, 30, 40, 50, 60, 70, 80, 90, 100
	Count backwards in:	**Answer**
1	1s from 68 to 54	68, 67, 66, 65, 64, 63, 62, 61, 60, 59, 58, 57, 56, 55, 54
2	2s from 88 to 68	88, 86,84,82,80,78,76,74,72,70,68
3	5s from 100 to 70	100, 95, 90,85,80,75,70
4	10s from 100 to 10	100, 90, 80, 70, 60, 50, 40, 30, 20, 10

WEEK 7

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson allows you the opportunity to revise the names of the days of the week and the months of the year with the learners. You can use the context of this lesson to discuss events of the year (relating them to days of the week and months of the year).

Today we are learning to name and sequence the days of the week and months of the year.

Activity 1: Learners work in groups

- Ask the following questions, allowing time for the learners to share their responses with their groups:
  - **What day of the week is it today?** (Today is _____.)
  - **What day of the week was yesterday?** (Yesterday was _____.)
  - **What day of the week will tomorrow be?** (Tomorrow will be _____.)
  - **What day of the week comes after Monday?** (Tuesday.)
  - **What day of the week comes before Friday?** (Thursday.)
  - **What day of the week is between Friday and Sunday?** (Saturday.) etc.
- NOTE: It is important to allow learners to talk amongs themselves in order for them to use the new vocabulary themselves.
- Give each group cards with the names of the days of the week and ask them to place them in order. (They may do this starting with Monday or with Sunday.)

Activity 2: Learners work in groups

- Ask the following questions, allowing time for the learners to share their responses with their groups:
  - **What month of the year it is?** (e.g. It could be November.)
  - **What month was before this month?** (e.g. It could be October.)
  - **What month will it be after this month?** (e.g. It could be December.)
  - **What month is your birthday in?** (Allow the learners to tell you the months of their birth.)
- *NOTE: It is important to allow learners to talk among themselves in order for them to use the new vocabulary themselves.*
- Give each group cards with the names of the months of the year and ask them to place them in order from January to December.

Activity 3: Whole class activity

- Encourage a class discussion where the learners are given opportunities to use the new terminology.
- Discuss the days of the week and months of the year.
- Ask the learners to select a day from the days-of-the-week cards.
- Ask the learners to talk about something they typically do on that day of the week.
- Ask the learners to select a month from the months-of-the-year cards.
- Ask the learners to talk about something special/interesting about that month of the year.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   Write the missing words.

    a   I started big school in _____. (January)

    b   I will complete Grade 1 in _____. (December)

2   My favourite month of the year:

    a   Draw a picture of something you like that happens in one of the months.

    b   Write the name of the month above your picture.

    c   What will you do on Saturday? Draw a picture.

4   HOMEWORK ACTIVITY (5 MINUTES)

Write **true** or **false**:

    a   Monday comes after Tuesday. _____ (False)

    b   March comes before April. _____ (True)

    c   December is the first month of the year. _____ (False)

    d   Friday is in between Thursday and Saturday. _____ (True)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to name and sequence the days of the week and months of the year.

WEEK 7

Lesson 35: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 4.1 Time.
Resources: Printable assessment in teacher's resources.
Date: Week   Day

1   SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

This week you will need to take some time to do the oral and practical assessment (see rubric or checklist below). The oral and practical activities should be done individually/in groups over the course of the week.

2   DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in learners' responses.

3   ASSESSMENT

WRITTEN ASSESSMENT (14)

1   Draw a picture to show which takes a longer/shorter time.   (2x2=4)

Compare	A longer time	A shorter time
Making one sandwich *and* Making 20 sandwiches.	(Various drawings)	(Various drawings)

2   Fill in the missing months:
- **a**   (December) _____ is the last month of the year.
- **b**   Valentine's Day is in _____ (February).
- **c**   (May) _____ is between April and June.
- **d**   (September) _____ is the month after August.
- **e**   October is the month before _____ (November).

3   Write **true** or **false**:
- **a**   Tuesday comes after Monday. _____ (True)

    b   Sunday is the first day of the weekend. _____ (False)

    c   Friday is the last day of the school week. _____ (True)

    d   Wednesday is between Monday and Tuesday. _____ (False)

    e   Saturday comes before Sunday. _____ (True)

ORAL AND PRACTICAL

CAPS: Measurement: Time Activity: Assess the learners' ability to use the vocabulary of time and to calculate passing time.				Mark: 7
	Level 1	**Level 2-3**	**Level 4-5**	**Level 6-7**
Criterion	Use vocabulary to name the days of the week and months of the year	Able to place birthdays on a calendar and using vocabulary, sequence days of the week and months of the year	Able use the vocabulary of months, days and weeks and to talk about the passing of time by ordering regular events from their own lives	Able use the vocabulary of months, days and weeks and use language to talk about the comparisons (e.g. faster/slower) and to sequence events such as yesterday, today, tomorrow

Mark ✓/7	Criteria – Checklist: (1 mark for each criterion achieved)	Achieved – ✓	Not yet – ✗	Almost – ★
1	Use vocabulary to name the days of the week			
1	Use vocabulary to name the months of the year			
1	Able to place birthdays on a calendar			
1	Able to sequence days of the week and months of the year			
1	Able to talk about the passing of time by ordering regular events from their own lives			
1	Able to use language to describe when something happens (e.g. in the morning)			
1	Able to use language to talk about the comparisons (e.g. faster/slower) and to sequence events such as yesterday, today, tomorrow			

Week 8

Unit 7 Introduction

This unit focuses on grouping and sharing. In this unit, learners will begin to develop their understanding of the difference between grouping and sharing. They will learn that the key idea behind **grouping division** is the group size and that the question they ask themselves should be '*How many groups of this size can I make?*' In **sharing division** the key idea is the number of (for example) people among whom the items must be shared, and the question they ask themselves should be '*How many items will each person get?*' Learners will discover that it is necessary to understand the language (vocabulary) used in problems in order to be able to solve problems accurately.

In this unit, you will be able to focus on the four framework dimensions in the following way:

- **Conceptual understanding**: Learners will develop their understanding of grouping and sharing, as they learn to make sense of problems and to recognise what needs to be done to solve the problems (e.g. Lesson 37 Activity 1).
- **Procedural fluency**: Learners will practice solving grouping and sharing problems, with an understanding of the appropriate use of language so that they can develop their procedural fluency (e.g. Lesson 37 Activity 1).
- **Strategies**: Learners will begin to develop their ability to solve division problems by demonstrating their understanding of both grouping and sharing (e.g. Lesson 38 Activity 1).
- **Reasoning**: Learners will verbalise their solutions of problems, demonstrating their understanding of grouping and sharing (e.g. Lesson 38 Activity 1).

Building a **learning centred classroom** in this unit will involve (among other things) attention to:

- **Explaining concepts and procedures**: Learners will be provided with opportunities to talk about grouping and sharing problems as they develop their understanding of these problems.
- **Making sense of mathematics**: Learners will begin to realise that they need to understand the terminology used in a problem in order to be able to be able to solve the problem effectively.

Unit 7 Overview

Day	LP	Lesson Objective	Lesson Resources	Date Completed
Mon	36	Solve and explain solutions to practical problems involving equal grouping with whole numbers up to 20 and with answers that do not include remainders.	Bottle tops.	
Tue	37	Solve and explain solutions to practical problems involving equal sharing with whole numbers up to 20 and with answers that may include remainders.	Bottle tops.	
Wed	38	Use halving as a technique when solving problems.	Bottle tops, pictures of items that children can use to halve (tricycles, dogs, egg boxes) – collect for yourself.	
Thur	39	Assessment	Assessment activity in teacher's resources.	
Fri	40	Getting ready for Grade 2	Ten frames and bottle tops, addition and subtraction cards, board game.	

WEEK 8

Assessment for learning

Use the templates provided at the front of this guide to think deeply about at least one of the lessons in this unit.

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?

Lesson 36: Grouping

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.9 Grouping and sharing leading to division.
Lesson Objective: Solve and explain solutions to practical problems involving equal grouping with whole numbers up to 20 and with answers that do not include remainders.
Lesson Vocabulary: How many, groups of, lots of, equals, grouping, sharing.
Resources: Bottle tops.

Date:	Week	Day

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 87 up to 100	87,88,89,90,91,92,93,94,95,96,97,98,99,100
2	2s from 80 up to 100	80,82,84,86,88,90,92,94,96,98,100
3	5s from 60 up to 100	60,65,70,75,80,85,90,95,100
4	10s from 10 up to 100	10, 20, 30, 40, 50, 60, 70, 80, 90, 100
	Count backwards in:	**Answer**
1	1s from100 to 88	100,99,98,97,96,95,94,93,92,91,90,89,88
2	2s from 100 to 88	100,98,96,94,92,90,88
3	5s from 100 to 75	100,95,90,85,80,75
4	10s from 100 to 10	100, 90, 80, 70, 60, 50, 40, 30, 20, 10

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

The focus of this lesson is grouping. In grouping, objects are divided into groups of a given size and learners have to find out how many such groups can be made. The questions given should involve grouping where there is no remainder.

In grouping, the key idea is the group size and the question should be '*How many groups of this size can I make?*'

Today we are learning to solve and explain solutions to practical problems involving grouping with whole numbers up to 20 and with answers that do not leave a remainder.

Activity 1: Learners work in groups

- Give each group of learners at least 20 bottle tops.
- Ask the learners to put 10 bottle tops in front of them.
- Say: **Put the bottle tops into groups of 2**.
- Ask: **How many groups of 2 do you have?** (5 groups of 2.)
- Say: **So, 5 groups of 2 make 10**.
- Ask the learners to put 16 bottle tops in front of them.
- Say: **Put the bottle tops into groups of 4**.
- Ask: **How many groups of 4 do you have?** (4 groups of 4.)
- Say: **So, 4 groups of 4 make 16**.
- Repeat with other numbers:
    - 20 into groups of 10, into groups of 2, into groups of 4, into groups of 5.
    - 14 into groups of 2, into groups of 7.
    - 15 into groups of 3, into groups of 5.

Activity 2: Learners work in groups

- Continue working with the 20 bottle tops.
- Give the learners a word problem.
  Cleo has 20 biscuits that must be packed into boxes.
  5 biscuits go in each box.
  How many boxes will she need?
- Ask learners to use their bottle tops to solve the problem.
  (4 boxes.)
- Give learners a word problem.
  Tino has 12 marbles that he puts into groups.
  He puts 2 marbles in each group.
  How many groups does he have?
- Ask learners to use their bottle tops to solve the problem.
  (6 groups.)
- Repeat with other numbers.

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)
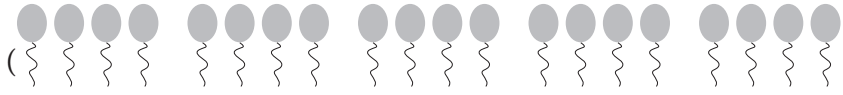
1   Solve the following:

a   ●●●●●●●●●
How many groups of 3 can you make from 9? □ (3)

b   ●●●●●●●●●●
How many groups of 5 can you make from 10? □ (2)

c ●●●●●●●●●●●●●●●

How many groups of 3 can you make from 15? □ (5)

d ●●●●●●●●●●●●●●

How many groups of 2 can you make from 14? □ (7)

2 Draw a picture to solve the problems:

a Thompho has 20 balloons. She puts 4 balloons in each bunch. How many bunches will she make?

(⚪⚪⚪⚪   ⚪⚪⚪⚪   ⚪⚪⚪⚪   ⚪⚪⚪⚪   ⚪⚪⚪⚪   5 bunches.)

b Ntombi has 9 books. She puts 3 books in a pile. How many piles will she make?

(📖📖📖   📖📖📖   📖📖📖 3 piles.)

4 HOMEWORK ACTIVITY (5 MINUTES)

Solve the following:

a ●●●●●●●●●●●●

How many groups of 2 can you make from 12? □ (6)

b ●●●●●●●●●●●●

How many groups of 4 can you make from 12? □ (3)

c ●●●●●●●●●●●●

How many groups of 12 can you make from 12? □ (1)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to solve and explain solutions to practical problems involving equal grouping with whole numbers up to 20 and with answers that do not include remainders.

Lesson 37: Sharing

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.9 Grouping and sharing leading to division.
Lesson Objective: Solve and explain solutions to practical problems involving equal sharing with whole numbers up to 20 and with answers that may include remainders.
Lesson Vocabulary: How many, lots of, groups of, equals, sharing, grouping, sharing.
Resources: Bottle tops.
Date: Week   Day

1   MENTAL MATHS (10 MINUTES)

	Count forwards in:	Answer
1	1s from 67 up to 80	67,68,69,70,71,72,73,74,75,76,77,78,79,80
2	2s from 60 up to 80	60,62,64,66,68,70,72,74,76,78,80
3	5s from 60 up to 90	60,65,70,75,80,85,90
4	10s from 10 up to 100	10, 20, 30, 40, 50, 60, 70, 80, 90, 100
	Count backwards in:	**Answer**
1	1s from 80 to 67	80,79,78,77,76,75,74,73,72,71,70,69,68,67
2	2s from 80 to 60	80,78,76,74,72,70,68,66,64,62,60
3	5s from 90 to 60	90,85,80,75,70,65,60
4	10s from 100 to 10	100, 90, 80, 70, 60, 50, 40, 30, 20, 10

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

The focus of this lesson is sharing. In sharing, objects are divided among a given number of groups (for example) and learners have to find out how many items each group will get.

In sharing the key idea is the number of groups, the items must be shared equally between each group and the question should be '*How many items will each group get?*'

Today we are learning to solve and explain solutions to practical problems involving equal sharing with whole numbers up to 20 and with answers that that do not leave a remainder.

Activity 1: Learners work in groups

- Give each group of learners at least 20 bottle tops to use in this lesson.
- Ask the learners to put 14 bottle tops in front of them.

- Say: **Share 14 bottle tops between 2 people**.
  (⊙⊙⊙⊙⊙⊙⊙ ⊙⊙⊙⊙⊙⊙⊙)
- Say: **Tell me about what you did with your bottle tops.** (We chose 2 people in our group, and then went one for you, one for you, until we didn't have any more bottle tops left.)
- Ask: **What do you notice about the 2 groups?** (They have the same number of bottle tops; there are 7 bottle tops in each group.)
- Ask: **Why can't one group have 5 bottle tops while the other group has 9 bottle tops?** (Because that wouldn't be fair, they must have the same amount.)
- Say: **So we know that 14 shared equally between 2 is 7.**
- Ask the learners to put 12 bottle tops in front of them.
- Say: **Share the bottle tops among 4 people**.
  (⊙⊙⊙ ⊙⊙⊙ ⊙⊙⊙ ⊙⊙⊙)
- Say: **Tell me about what you did with your bottle tops.** (We chose 4 people in our group, and then went one for you, one for you, one for you, one for you, until we didn't have any more bottle tops left.)
- Ask: **What do you notice about the 4 groups?** (They have the same number of bottle tops; there are 3 bottle tops in each group.)
- Ask: **Why can't the groups have different amounts in them?** (Because that wouldn't be fair, they must have the same amount.)
- Say: **So we know that 12 shared equally among 4 is 3.**

Activity 2: Learners work in groups

- Give learners a word problem.
  Mudiwa has 18 stickers
  that he shares among 3 friends.
  How many stickers will each friend get?
- Ask learners to use their bottle tops to solve the problem.
  (⊙⊙⊙⊙⊙⊙ ⊙⊙⊙⊙⊙⊙ ⊙⊙⊙⊙⊙⊙)
- Ask: **What did you do to solve the problem?** (We shared the bottle tops into 3 groups until we could not give everyone another counter.)
- Ask: **What do you notice about the bottle tops?** (There are 6 bottle tops in each group.)
- Ask: **What is the answer?** (Each friend gets 6 stickers.)
- Ask: **What did we do?** (We worked out how to share 18 stickers equally into 3 groups.)

3   CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1   Solve the following:

a   ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎ ✎

Share 16 pencils among 8 children. How many pencils will each child get? ☐
(2 pencils each.)

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b ✿ ✿ ✿ ✿ ✿ ✿

Share 6 flowers between 2 children. How many flowers will each child get? ☐

(3 flowers each.)

c 📖 📖 📖 📖 📖 📖 📖 📖 📖 📖 📖 📖

Share 12 books among 3 children. How many books will each child get? ☐

(4 books each.)

d ⊘ ⊘ ⊘ ⊘ ⊘ ⊘ ⊘ ⊘ ⊘ ⊘

Share 10 balls among 5 children. How many balls will each child get? ☐

(2 balls each.)

2 Draw a picture to solve the problems:

a Share 10 sweets among 5 friends. How many sweets will each friend get?

(🧍 🍬 🍬   🧍 🍬 🍬   🧍 🍬 🍬   🧍 🍬 🍬   🧍 🍬 🍬   2 sweets each.)

b Share 16 flowers between 2 people. How many flowers will each person get?

(🧍 ✿ ✿ ✿ ✿ ✿ ✿ ✿ ✿   🧍 ✿ ✿ ✿ ✿ ✿ ✿ ✿ ✿ 8 flowers each.)

c ⊘

Share 20 balls among 5 children. How many balls will each child get? ☐

(4 balls each.)

d ✿ ✿ ✿ ✿ ✿

Share 5 flowers among 5 children. How many flowers will each child get? ☐

(1 flower each.)

4   HOMEWORK ACTIVITY (5 MINUTES)

Solve the following:

a ✏ ✏ ✏ ✏ ✏ ✏ ✏ ✏

Share 8 pencils among 4 children. How many pencils will each child get? ☐

(🧍 ✏ ✏   🧍 ✏ ✏   🧍 ✏ ✏   🧍 ✏ ✏   2 pencils each.)

b ✏ ✏ ✏ ✏ ✏ ✏

Share 6 pencils between 2 people. How many pencils will each person get?

(🧍 ✏ ✏ ✏   🧍 ✏ ✏ ✏   3 pencils each.)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to solve and explain solutions to practical problems involving equal sharing with whole numbers up to 15 and with answers that may include remainders.

Lesson 38: Halving

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 4 curriculum.
CAPS topics: 1.12 Techniques (methods or strategies).
Lesson Objective: Use halving as a technique when solving problems.
Lesson Vocabulary: How many, the same, half, halving.
Resources: Bottle tops, pictures of items that children can use to halve (tricycles, dogs, egg boxes) – collect for yourself.

Date:	Week	Day

1   MENTAL MATHS (10 MINUTES)

	Double:	Answer		Double:	Answer
1	14	28	**6**	20	40
2	6	12	**7**	5	10
3	10	20	**8**	30	60
4	4	8	**9**	9	18
5	7	14	**10**	50	100

2   LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson develops learners' understanding of halving. Make sure that you have prepared a good selection of pictures in advance of this lesson so that the learners can actively engage in the lesson. Select pictures that have a variety of things to halve, such as legs on animals, fingers on hands, wheels on vehicles, legs on a potjie pot, etc. If you have not collected the pictures, you will need to draw simple pictures on the board instead. As the learners develop in confidence they will become able to halve numbers mentally without needing concrete resources.

Today we are learning to use halving as a technique when solving problems.

Activity 1: Whole class activity

- Use your prepared pictures for this activity.
- Call up two learners to stand in the front of the class.
- Ask: **How many ears are there?** (4 ears.)
- Say: **Halve the number of ears. How many ears are in each group?** (2 ears.)
- Say: **We say half of 4 is 2**.
- Ask one learner to hold up his/her two hands.
- Ask: **How many fingers are there?** (10 fingers.)

- Say: **Halve the number of fingers. How many fingers are in each group?** (5 fingers.)
- Say: **We say half of 10 is 5.**
- Show the learners a picture of two tricycles.
- Ask: **How many wheels are there?** (6 wheels.)
- Say: **Halve the number of wheels. How many wheels are in each group?** (3 wheels.)
- Say: **We say half of 6 is 3**.
- Show the learners a picture of two dogs.
- Ask: **How many legs are there?** (8 legs.)
- Say: **Halve the number of legs. How many legs are in each group?** (4 legs.)
- Say: **We say half of 8 is 4**.
- Repeat with other pictures.

Activity 2: Learners work in pairs

- Make sure that each pair of learners has 10 bottle tops on the desk in front of them.
- Say: **Take away half of the bottle tops**.
- Ask: **How did you know how many to take away?** (We had to split the 10 bottle tops into two equal sized groups. Each group has 5 bottle tops.)
- Say: **Half of 10 is 5**.
- Do the same with 12, 14, 16, 18 and 20 bottle tops.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Use the beetles to help you to calculate half:
   a Half of 12 is ___ (6)
   b Half of 16 is ___ (8)
   c Half of 20 is ___ (10)
   d Half of 14 is ___ (7)
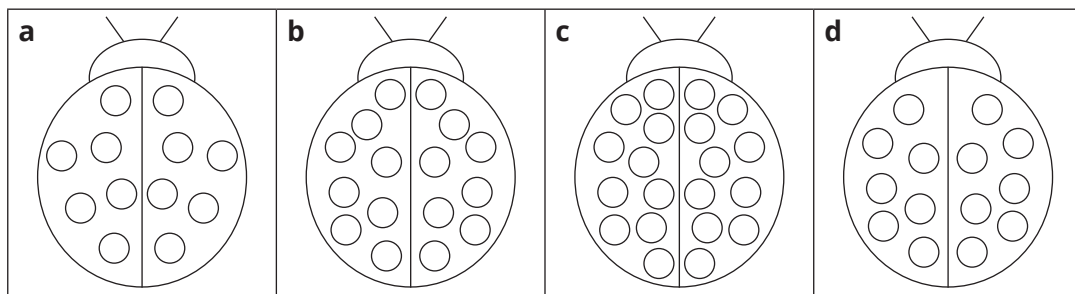
2 Use the blocks to help you to calculate half:

   a Half of 16 is ___ (8)
   b Half of 20 is ___ (10)
   c Half of 18 is ___ (9)
   d Half of 10 is ___ (5)

3   Complete the following:
    a   Half of 8 is ___   (4)
    b   Half of 12 is ___ (6)
    c   Half of 2 is ___   (1)
    d   Half of 4 is ___   (2)

4   HOMEWORK ACTIVITY (5 MINUTES)

1   Use the blocks to help you to calculate half:
    a   Half of 14 is ___ (7)
    b   Half of 12 is ___ (6)

2   Complete the following:
    a   Half of 10 is ___ (5)
    b   Half of 6 is ___   (3)

5   REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have learned to use halving as a technique when solving problems.

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Lesson 39: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.9 Grouping and sharing leading to division; 1.12 Techniques (methods or strategies).
Resources: Printable assessment in teacher's resources.

Date:	Week	Day

1 SETTLE THE CLASS AND ADMINISTER THE ASSESSMENT. (45 MINUTES)

The assessment for today is linked to the work covered in the unit to date.

You will find the printable version of the assessment in the teacher's resource pack.

2 DISCUSS ASSESSMENT ITEMS WITH THE CLASS (45 MINUTES)

Take in the learners' work when they are done.

There should be time for you to discuss a few of the items with the class:
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board).
- speak about misconceptions that may have arisen in learners' responses.

3 ASSESSMENT

WRITTEN ASSESSMENT (12)

1 Solve the following:

   a ●●●●●●●●●●

   How many groups of 2 can you make from 10? ☐ (5)

   b ●●●●●●●●●●●●●●●●

   How many groups of 4 can you make from 16? ☐ (4)

2 Share 12 counters – make a drawing of what you do:

   ○○○○○○○○○○○○

   a among three learners (○○○○) (○○○○) (○○○○)

   b among six learners   (○○) (○○) (○○) (○○) (○○) (○○)

3 Answer the following: (2×2)

   a ★★★★★★★★★★

   There are ☐ stars. Half of the stars is ☐ (10;5)

   b ✎ ✎ ✎ ✎ ✎ ✎

   There are ☐ pencils. Half of the pencils is ☐ (6;3)

4 Draw a picture to solve the problems: (2 × 2)

    a Mpho has 15 flowers. She puts 5 flowers in each bunch. How many bunches will she make?

       (✿ ✿ ✿ ✿ ✿   ✿ ✿ ✿ ✿ ✿   ✿ ✿ ✿ ✿ ✿   3 bunches)

    b There are 4 apples. Share the apples between Thabo and Ben. How many apples will they each get?

       (🍎 🍎) (🍎 🍎)   (2 apples each)

WEEK 8

Lesson 40: Getting ready for Grade 2

Teacher's notes
This lesson allows for consolidation of content covered during the year, in preparation for the next grade.
CAPS topics: Number and operations, measurement, data handling.
Lesson Objective: To revise key concepts taught in the year in order to prepare learners for Grade 2.
Lesson Vocabulary: Length, width, long, wide, more, less, addition, subtraction, add, subtract, number sentence, pictograph.
Resources: Ten frames and bottle tops, addition and subtraction cards, board game.
Date: Week   Day

1 NOTES FOR THE TEACHER RELATING TO TOPICS SELECTED FOR FINAL REVISION

The topics selected for this lesson cover some key concepts that have been dealt with over the course of the year. The Measurement and Data Handling activities will revise these concepts in preparation for Grade 2. The other topics covered in this lesson follow a progression of learning which is important to revise in order to consolidate learners' ability to solve addition and subtraction problems.

2 LESSON CONTENTS

Measurement – Learners measured items using non-standard units, and used appropriate vocabulary to describe the length of items.

Using ten frames – Learners have learned to show numbers on a ten frame so that they can begin to get a sense of tens and ones.

Addition and subtraction – Learners have learned to use ten frames to solve problems so that they do not need to rely on counting as a solution strategy.

Addition with carrying and subtraction with borrowing – Learners have practised solving problems involving addition with carrying and subtraction with borrowing. Initially learners used ten frames to solve problems, but learners were able to begin to work mentally as they become more confident and efficient.

Large numbers – Learners were introduced to the sequencing and comparison of numbers up to 100.

Addition and subtraction with 2-digit numbers – Learners began to solve addition and subtraction calculations with numbers up to 100.

Data handling – Learners developed the data handling skills of collecting, organising, representing and analysing of data through the use of pictographs.

3   CLASSWORK ACTIVITIES

- **Measurement** (Term 2 Unit 3)

  1   What is the length of this book?   **2**   What is the width of this book?
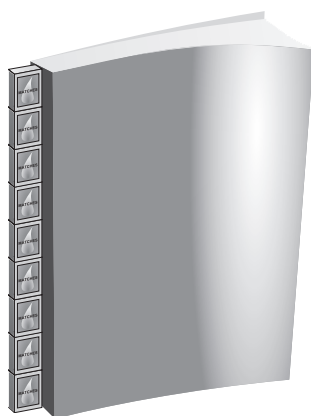
The book is _(9)_ match boxes long.
The book is _(4)_ match boxes wide.

- **Using ten frames** (Term 3 Unit 1)

  NOTE: Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game.

Build numbers. Rules of the game.
You need bottle tops and a ten frame.
1   Work with a partner.
2   The first learner calls out a number between 10 and 15.
3   The second learner uses the bottle tops to show the number on his/her ten frame as quickly as possible.
4   Then the second learner calls out a number between 10 and 15, and the first learner shows the number on his/her ten frame.
5   Repeat the above steps with other numbers, choosing numbers between 10 and 20.
6   Learners should try to build numbers more quickly each time.

WEEK 8

- **Addition and subtraction** (Term 3 Unit 2)

  Calculate using ten frames and bottle tops.

	Answer			Answer
a 15 + 3 = (18)			**b** 17 − 4 = (13)	

- **Addition with carrying and subtraction with borrowing** (Term 3 Units 2 and 3)

  NOTE: Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game.

Addition / Subtraction card game: Rules of the game

You need addition-with-carrying cards and subtraction-with-borrowing cards.

1 Learners play with addition / subtraction cards in pairs.

2 Give each pair of learners a set of addition / subtraction cards and a set of number cards (11 to 18) for addition and (2 to 9) for subtraction.

3 One learner takes one number card and places it number-side up on top of the pile between the two learners.

4 The learners shuffle all the addition / subtraction cards, with the number sentence side showing.

5 The learners must then each try to find as many number sentences that match the number card as quickly as possible.

6 The learners can check that they have selected the correct number sentences once they have found all the matching number sentence cards. Keep the cards that are correctly selected.

7 The winner of the round is the learner with the most cards.

8 Play another round of the game, changing the number card on top of the pile.

9 Make sure that all of the number sentence cards are shuffled and laid out between the learners again before beginning the second round.

- **Large numbers** (Term 4 Unit 2)

  NOTE: Read the rules of the game (in the box below) carefully so that you can explain to the learners how to play the game.

  > **Board game: Rules of the game**
  >
  > You need the board (See *Printable Resources*, lessons 13 and 14)
  >
  > Take turns to throw a die and move forward a number of places equal to the number shown.
  >
  > If you stop at a vehicle, follow the rules:
  >
  > **BIKE**: Move forward 10.
  >
  > **CAR**: Throw the die one more time and move **forward a number of places equal to** number shown.
  >
  > **TRUCK**: Throw the die one more time and move **backwards a number of places equal to** the number shown.

- **Adding and subtracting with 2 digit numbers** (Term 4 Unit 3)

  Solve the following problems:

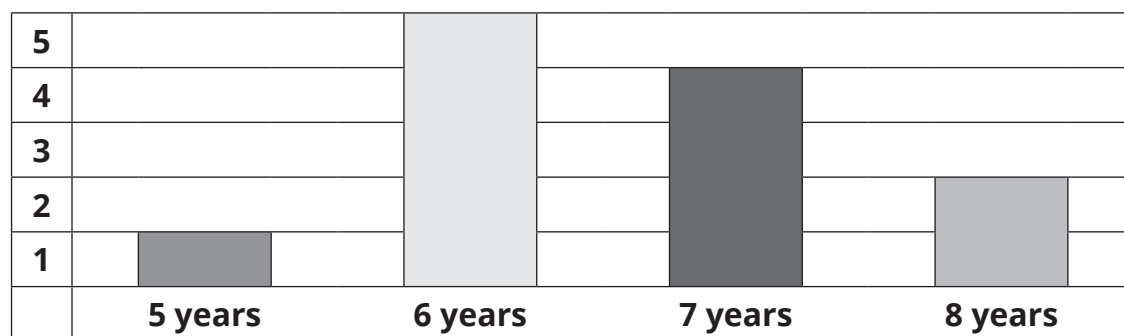 **a** $57 - 30 = \square$ (27)

  b $40 + 50 = \square$ (90)

  c $32 - 30 = \square$ (2)

  d $43 + 40 = \square$ (83)

  e $79 - 9 = \square$ (70)

- **Data handling** (Term 4 Unit 8)

  The ages of learners in a class

	5 years	6 years	7 years	8 years
5				
4				
3				
2				
1				

  a How many learners are 5 years old? (1)

  b How many learners are 8 years old? (2)

  c How many learners are 6 years old? (5)

  d How many learners are 7 years old? (4)

  e How many more 6 year olds are there than 5 year olds? (4)

  f How many less 8 year olds are there than 7 year olds? (2)

4   REFLECTION AND SUMMARY OF LESSON

Call the whole class to attention and summarise the key concepts of the lesson.

Today we have consolidated our understanding of the some of the key concepts and skills covered over the course of Grade 1.