MATHEMATICS

Grade 2

TERM 1 2019

Lesson Plans

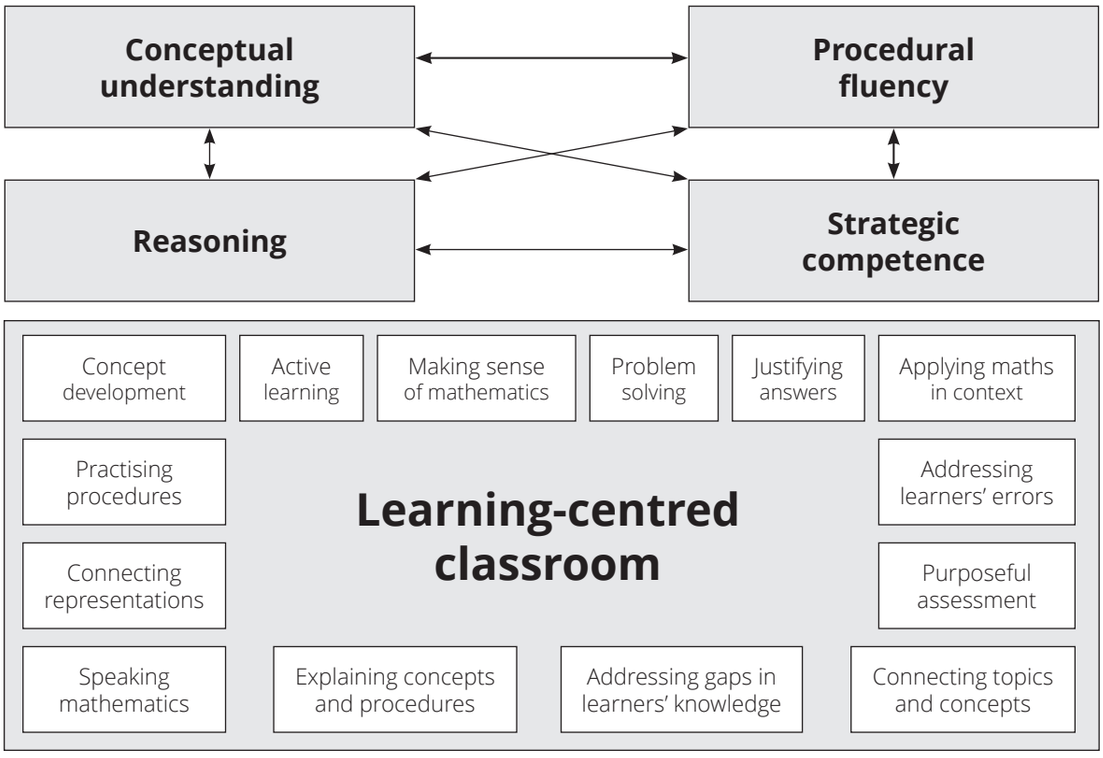
Acknowledgement:

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. 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.

Glossary of important terms used in the TMU lesson plans

The following terminologies are used in the TMU lesson plan. Some of them also appear in CAPS.

Calculation

ADDITION WITH CARRYING

The type of addition which occurs when we bridge ten, in single digit (or 2-digit and 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

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 for teachers. What is happens when we 'borrow' is that 1 ten is 'exchanged' into 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 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 the position it is in. 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 managed by the base-ten number system.

MAKE-A-TEN METHOD

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

COLUMN METHOD

A calculation technique used in addition and subtraction that helps 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 doing tallies and counting).

NUMBER BONDS

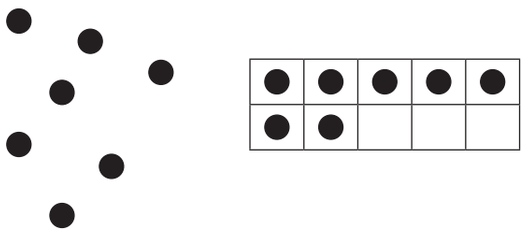
A calculation technique that consists of building up (composition) and breaking down (decomposition). For instance, 4 can be broken down into 1 and 3, 2 and 2 and 3 and 1. These are the number bonds of 4. The number bonds of 10 are the most important since they are used in all calculation strategies.

EXPANDED NOTATION

Representation of a number by writing it out using place value. 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 only used as number bonds. Flard card can help learners to acquire knowledge of expanded notation.

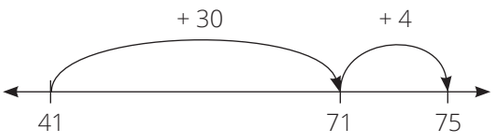
SUBITISING

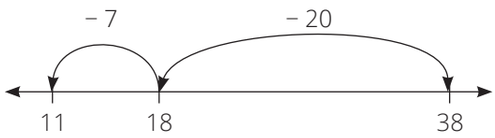
Subitising is 'an instant cognition of the number of objects'. This is one of the most important skills that learners should acquire in the Foundation Phase. A ten frame is a useful tool to help learners to subitise objects. In the example below, it is easier to recognise the number of dots by putting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

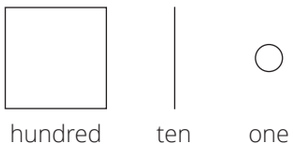
CPA APPROACH

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 ' + ', '–', '×', '÷'.

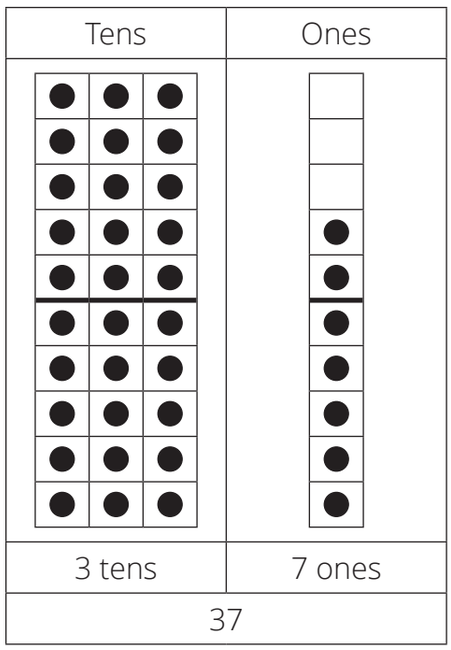
SIMPLIFIED PICTORIALS

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



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). On the right is the sample of a number 37 shown in the place value table.



ARRAY DIAGRAM (GR 2, 3)

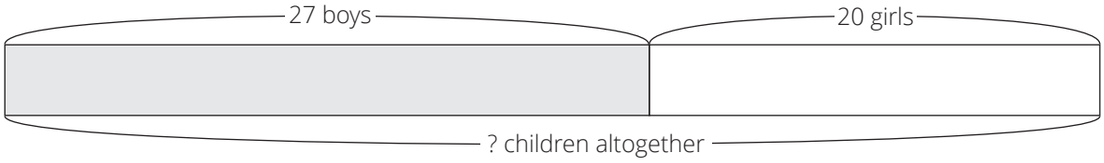
The following is the array diagram of 2 × 4. The order of multiplication is important and it is consistent with CAPS.

MULTIPLICATION TABLE (GR 2, 3)

Multiplication tables show the multiples of numbers – the answers to the multiplication of several 1 × 1 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 bar diagram showing addition (combine).



Resources

MANIPULATIVES

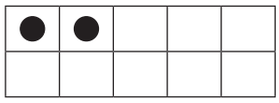
These are concrete apparatus such as counters, printed tens, printed hundreds, box and ball shapes, etc. that can be manipulated by learners.

COUNTERS

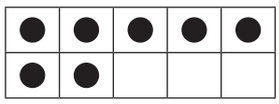
These are any (loose) concrete objects that learners can manipulate when counting. In the TMU bottle tops are recommended since they are freely available but other counters can also be used such as interlocking cubes (e.g. Unifix cubes). Teachers are expected to use concrete counters such as bottle tops on a big ten frame to help learners 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 give visual clues about the numbers shown on it. This is the number 2 represented on a double decker ten frame:

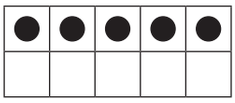


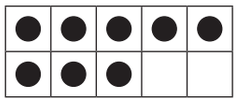
This is the number 7 represented on a double decker ten frame (visual of 5 plus 2):



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)

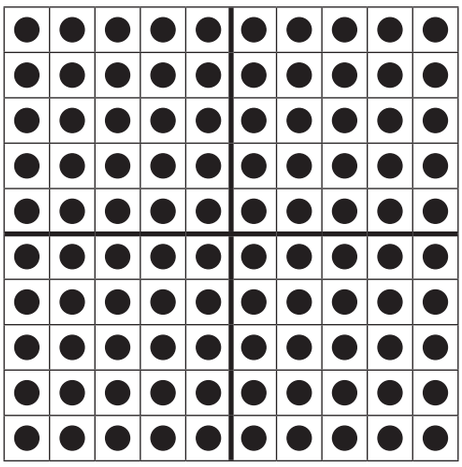
A ten frame which is straight. The thicker line in the middle shows the 5. This line is important because it helps learners to recognise the numbers 6 to 10 by using the building up skill of 5 and … (numbers 1 to 5). A straight ten frame is helpful to deal with numbers bigger than 10.

PRINTED TEN

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

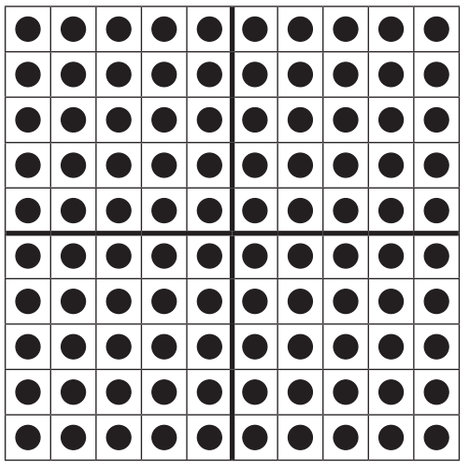
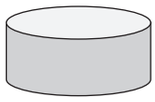
PRINTED HUNDRED (GR 3)

Printed version of a group of 100 ones. You should call them 'hundred(s)' in the 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.

100	10	1
hundred	ten	one
		

About the Lesson Plans and Resources

The lesson plans and resources in this book are part of the Grade 2 Term 1 Teacher Toolkit for the pilot implementation of the mathematics framework.

The other documents in the toolkit are:

- a Lesson and Assessment Planner and Tracker
- a bilingual Learner Mathematics Activity Book
- a set of teacher printable resources
- 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 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.

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 them to SA SAMS.

The programme of assessment suggested in the lesson plans complies with the CAPS as amended by Circular S1 of 2017 and provincial responses to this. Written, oral and practical assessments are provided. Rubrics and checklists with criteria for the oral and practical assessments are also included.

5 MANAGING YOUR TEACHING USING THE LESSON PLAN

A set of orientation 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 1 of Grade 2 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. If your school's timetable has different period lengths, you will have to adjust the amount of work done in each lesson to accommodate this. However, 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 one of these lessons. Should you miss a school day for any reason, rather skip a consolidation lesson nearby 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 content 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.

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 be aware of any difficulties 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.

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 Teaching and Learning (LoLT), try and 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 what resources you need in advance for each lesson so that you are ready to teach each 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 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 use their fingers to count on.

- Observe which learners struggle with mental activities, and make sure 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 and 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 moving on. 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, allow 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 book 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 if and 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 the lesson every day by focussing the learners on the content covered and concepts they should have learned.

Week 1 Revision Lesson Activities

The lesson activities given below are for you to use on the first few days of school when the learners are still settling down and you are not quite ready to start the formal CAPS lesson plans that follow. These revision lesson activities will help you to keep learners occupied in a meaningful way at the beginning of the term and to make observation notes on their mathematical knowledge development. The observation notes that you make will inform your intervention strategies. It will also help you get to know the learners.

Activities are provided relating to eight CAPS topics. You do not need to use all of these activities.

- Choose the ones that you think would be best for your learners to work on in order to revise/recap on work done in the previous year.
- You can do them in the order of your choice.
- For some of the activities you will need to work with your learners interactively. Others learners can do independently or in groups.

Keep a notebook where you write your observations on learners' knowledge.

CAPS baseline framework

Criteria: Can the learner	Yes	No
Count objects up to 50 using groups of tens and units		
Read number symbols 1 to 100		
Compare a collection of objects up to 20		
Build and break numbers up to 20 into tens and units		
Solve word problems in context involving addition and subtraction up to 20 and use symbols + , – and =		
Add money to the total of 20c or R20		
Count in twos, fives and tens up to 100		
Identify odd and even numbers		
Solve problems using repeated addition up to 20 and use symbols + , – and =		
Solve practical problems involving equal sharing and grouping with whole numbers up to 20		
Identify, describe and name 3-D objects (balls and boxes)		
Sequence events		
Apply language of position		
Name the months of the year and place birthdays on a calendar		
Use measurement vocabulary		
Collect, sort, make a drawing of sorted object and answer questions on data		

Topic 1: Number concept

CONCEPTS AND SKILLS FOR TODAY

- Count out **50** objects reliably, saying the names in sequence.
- Complete number sequences of counting in ones back from 100.
- Read number symbol 1 to 100.
- Write number names 1 to 10.

WARM-UP ACTIVITY

Give the learners the opportunity to familiarise themselves with the Mathematics teaching and learning resources in your classroom by letting them play with some of them for about 10 minutes in their groups. These may include:

- Printed full ten frames and bottle tops.
- Space and shape manipulatives such as shapes, blocks, cubes, etc.

Prepare some printed full ten frames (see *Printable Resources*) for your learners to use when they count. The ten frames will help them to structure their counting activities rather than count big numbers of unit bottle tops in ones. While they work with the ten frames they should use them to structure the unit counting of other objects. This will help consolidate the concept of place value (grouping in tens).

ACTIVITIES

Give learners the following activities using bottle tops and ten frames that you give to them and always ask learners to give you oral explanations of what they did.

Activity	Can the learners	Observation
1 Give each group of learners a pile of bottle tops (about 30 to 50 in each pile) to count. They should each count several different sets of bottle tops. Note if learners count in ones or tens.	• Count objects up to **50** using groups of tens and units? • Read and write the number symbols 0 to 10?	
2 Ask 11 learners to come to the front of the class. Give them a number as they come up, from 0 to 10. They each write their number on the board, from 0 to 10. The numbers should be written in order.		
3 Write some random numbers between 10 and 100 on the board. (e.g. 23, 45, 66, 70, 81, 95, etc.). Ask learners to read the number symbols. Ask as many different learners as possible.	• Read the number symbols 10 to 100?	
4 Ask learners to suggest other numbers between 0 and 100 for you to write on the board. Call on a different learner to suggest a number and another one to read the number each time.		

Topic 2: Building up and breaking down numbers

CONCEPTS AND SKILLS FOR TODAY

- Use numbers in context.
- Compare collections of objects up to 20.
- Building and breaking numbers up to 20.
- Decompose numbers 11 to 20 into tens and units.

WARM-UP ACTIVITY

Allow learners to compare numbers and practice the vocabulary of comparison (greater than/smaller than; more than/less than; equal to/the same as):

- Ask five learners to stand up on one side of the class and 8 learners to stand up on the other side of the class. Ask questions such as:
- *Are there more learners standing on the left had side of the class than on the right-hand side?*
- *How many learners are standing on the left-hand side?* (8)
- *How many learners are standing on the right-hand side?* (5)
- *Is 8 more or less than 5?* (more than)
- Etc. Try to actively involve all of the learners in the lesson in this way – ask various groups of learners to stand up and others to make comparisons between the groups that are standing.

Explain to learners that yesterday they worked with numbers, and today they are going to look at numbers in their daily life. Discuss ways of describing themselves, family and friends that involve numbers (**My sister is younger than I am. My father is older than my mother. My friend has 10 fingers**. **My friend has 2 legs**. **I have 10 toes**. etc.). You could also talk about ways of describing friends that do not involve numbers (e.g. my friend is kind, pretty, etc.). Talk about the difference between these descriptions (numeric/non-numeric).

ACTIVITIES

Give learners the following activities using bottle tops and ten frames that you give to them and always ask learners to give you oral explanations of what they did.

Activity	Can the learners	Observation
1 Ask the learners to make displays of the numbers 12, 13, 15, 18 and 19 using bottle tops. Note if learners count in ones or if they notice groups of ten and units and then count on from there: e.g. 10 … 11, 12.	• Count objects to 20?	
2 Ask the learners to make two displays of bottle tops on their desks. Then point to the smaller number. Ask: **Can you show me a group of bottle tops less than/more than 15?** Ask other similar comparison questions.	• Compare a collection of objects up to 20?	

Activity	Can the learners	Observation
3 Transfer the bottle tops into ten frames, one at a time. Ask what numbers are represented, 10 + 2 = 12. Ask the learners how they would write 12 using tens and units.	• Use ten frames to show numbers up to 20 as tens and units?	

Topic 3: Addition and subtraction

CONCEPTS AND SKILLS FOR TODAY

- Know the days of the week.
- Add and subtract numbers up to 20.
- Use symbols + , – and = .
- Recognise South African coins and notes (10c, 20 c, 50c, R5, R10 and R20).
- Identify coins and notes that will add up to a given total (up to R20).

WARM-UP ACTIVITY

Write the days of the week on the board. Have a class discussion where you talk about activities the learners do on different days of the week. Ask questions such as:

- *What day is it today? What did you do this morning? What will you do this afternoon?*
- *What day is the first day of the school week? (Monday) What did you do on Monday?*
- *What day is the last day of the school week? (Friday) What did you do on Friday?*
- *Etc.*

Ask learners to make a story sums that involve numbers of fruit and vegetables. e.g.

- **Mom bought a bag with 6 apples. Dad bought a bag with 7 apples. How many apples do we have?**
- **Mom bought a bag with 13 apples and we ate 6. How many apples are left?**

Speak to the class about the ways we use mathematics in everyday life. Let the learners give you a few examples of where they use mathematics every day.

ACTIVITIES

Give learners the following activities using cut outs of SA coins and notes that you give to them and always ask learners to give you oral explanations of what they did.

ACTIVITY 2

6 + 5 = ☐	8 + 9 = ☐	11 + 3 = ☐	12 – 5 = ☐
8 + 7 = ☐	3 + 8 = ☐	9 – 5 = ☐	16 – 9 = ☐
6 + 4 = ☐	8 + 4 = ☐	8 – 4 = ☐	6 – 4 = ☐

Activity	Can the learners	Observation
1 Ask learners to make up and solve story sums involving sums of single digit numbers.	• Solve word problems in context involving addition and subtraction up to 20.	
2 Write the questions for **Activity 2** on the board (above). Discuss learners' answers, asking them how they did the calculations, e.g. counting on, building and breaking, using bottle tops, fingers, number lines etc. Encourage learners to give the answers from memory if they know their bonds.	• Add and subtract numbers up to 20. • Use symbols + , – and =	
3 Bring examples of South African currency notes and coins (or make print copies of them for learners). Ask learners to identify them. Discuss things that you can buy using money.	• Recognise South African coins and notes.	
4 Write some sums of money on the board with totals less than 20 (rands or cents). Ask learners to calculate the answers. Learners can make up more questions involving money if there is time.	• Add money to the total of 20c or R20.	

Topic 4: Repeated addition and patterns

CONCEPTS AND SKILLS FOR TODAY

- Know the months of the year.
- Counting in twos, fives and tens up to 100.
- Identify odd and even numbers.
- Extend geometric and number patterns.

WARM-UP ACTIVITY

Discuss ways of counting with learners. You can count in 1s, 2s, 5s or 10s. Ask learners to count on (using different starting points and to different ending points). Discuss the usefulness of counting in groups – it develops skills of mental arithmetic and it helps learners find progressive terms (terms that come one after the other) in a pattern.

ACTIVITIES

Give learners the following activities using bottle tops that you give to them and always ask learners to give you oral explanations of what they did.

ACTIVITY 2

1 What numbers are missing?

a 5, 10, 15, __, __, 30, __, __, __, 50.

b 100, 90, 80, __, __, __, __, __, __, 10.
c 60 , 58 , __ , __ , __ , 50 , __ , __ , 44.

2 Extend the patterns:
a 10, 20, 30, __, __.
b 35, 40, 45, __, __.
c 100, 90, 80, __, __.
d 70, 72, 74, __, __.

Activity	Can the learners	Observation
1 Write ten random numbers on the board – half of them even numbers and half of them odd numbers. Ask the learners to show you which numbers are even and which numbers are odd. Ask **How do you know when a number is even/odd?**	• Identify odd and even numbers?	
2 Write the questions for this activity on the board. (See above.) Discuss their answers. Ask **How do you work out how to extend a pattern?**	• Extend number patterns?	
3 Ask the learners to make geometric patterns using bottle tops (or other shapes and drawings). Ask them to explain the rules for their patterns.	• Extend geometric patterns?	

Topic 5: Grouping, sharing and 2-D shapes

CONCEPTS AND SKILLS FOR TODAY

- Count in twos, fives and tens up to 100.
- Sort and name 2-D shapes (triangles, squares, rectangles, circles).
- Solve practical problems involving repeated addition, equal sharing and grouping with whole numbers.
- Use + and = in number sentences.

WARM-UP ACTIVITY

Find some old cardboard, and make your own packs with shapes. (Each pack should have **8** triangles, **16** squares, **10** rectangles and **4** circles.) Put the learners into groups, and give each group a pack of shapes. (If you are not able to prepare the pack with so many shapes, make sure each group gets at least two of each shape and use bottle tops for the sharing activity.) Before starting the activity, talk to the learners about how to behave when they work in groups. Share the basic rules of group work with your learners.

- Ask learners to sort and then name the shapes. (triangles, squares, rectangles, circles)
- Ask learners to share the shapes/bottle tops in different ways, such as:
- **Share 8 triangles between two friends.** (Each person will get 4 triangles)
- **Share 8 triangles among four friends**. (Each person will get 2 triangles)
- **Share 4 circles among 4 friends**. (Each person will get 1 circle)
- **Share 10 rectangles between 2 friends**. (Each person will get 5 rectangles)

- Make up more sharing questions for the groups.
- Discuss the solutions that the groups find – allow different individual learners to stand up and describe their sharing activity.

ACTIVITIES

Give learners the following activities using the shape cut outs that you give to them and always ask learners to give you oral explanations of what they did.

Activity	Can the learners	Observation
1 Ask the learners take their 8 triangles and share them out between two friends (as if for a toy shop). Ask: **How many packets of 2 can you make?** Make up other questions that lead to equal sharing. Discuss the questions and the solutions.	• Solve practical problems involving equal sharing with whole numbers up to 20?	
2 Ask the learners to take their 16 squares and put them into packets of twos (as if for a toy shop). Ask: **How many packets of 2s can you make?** Make up other questions that lead to grouping. Discuss the questions and the solutions.	• Solve practical problems involving grouping with whole numbers up to 20?	
3 Ask learners to make and solve story sums that lead to repeated addition. E.g. **I have 4 packets with 2 apples each. How many apples do I have? (2 + 2 + 2 + 2 =)**	• Solve problems using repeated addition up to 20? • Use symbols + and = ?	

Topic 6: Balls, boxes and position

CONCEPTS AND SKILLS FOR TODAY

- Sequence events.
- Identify, describe and name 3-D objects (balls and boxes).
- Apply language of position.

WARM-UP ACTIVITY

Have a discussion with your learners to find out how they would sequence some events. For example:

- Ask them what they do in the morning before they leave for school. Allow different individual learners to respond. Ask them to name at least 4 different things that they do. Discuss the order in which they do those things.
- Ask them what they do on a Sunday morning. Again ask them to name at least four different things. Discuss the order in which they do those things.
- Etc.

You need to bring some balls and boxes to the class today for this activity. You will allow the learners some time to run around and play with the balls. They could kick or throw them to each other, into and around the boxes. Explain to the learners that there are rules that must be followed when they go outside to play games. Explain the rules and make sure that the learners understand what is expected of them.

ACTIVITIES

Give learners the following activities using the balls and boxes that you give to them and always ask learners to give you oral explanations of what they did.

Activity	Can the learners	Observation
1 Give out the shapes to different learners in the class. Ask learners hold up a ball or a box.	• Identify balls and boxes?	
2 Ask the learners to describe boxes and balls using words such as slide, roll, curved and straight edges. They should hold the balls and boxes in their hands while they describe the characteristic of the shapes to the class.	• Describe balls and boxes in terms of slide/ roll, curved/ straight edges?	
3 Ask the learners to use the balls and boxes and place them in different positions. Encourage them to be creative and vary the positions. Circulate and show them the different positions – behind/in front of/on top of/next to. Make sure the learners tell you/their friends the positions their shapes are in so that they practice using maths language.	• Apply language of position in terms of behind/ in front of/on top of/next to/?	

Topic 7: Measurement

CONCEPTS AND SKILLS FOR TODAY

- Use measurement vocabulary of length, mass and capacity.
- Length: *shorter*, *longer*, *higher*, *lower*, *shorter* and *taller*
- Mass: *heavier* and *lighter*
- Capacity: *full*, *empty*, *half*, *same* and *less*

WARM-UP ACTIVITY

Prepare a collection of some objects for this lesson that you can use to talk about length, mass and capacity. (For example, a large empty bottle and a small empty bottle; a large full bottle and a small full bottle; some books of different thickness and size; etc.)

Place a few different objects on the tables of each group of learners. Ask the learners to show you objects that fit the different criteria that you name. For example:

- *Show me a full bottle.*
- *Show me an empty bottle.*
- *Show me two books – one should be heavier than and one lighter than the other.*

- *Please can two learners in your group stand up – one shorter than and one taller than the other.*
- Etc.

ACTIVITIES

Give learners the following activities using the worksheet from the teachers' resources. Use the worksheet to guide a class discussion. Learners do not have to record their answers. They can point to the correct shapes and explain their answers verbally.

Activity	Can the learners	Observation
1 Look at the pictures in question 1 in the printed worksheet. Ask learners to use the words *shorter*, *longer*, *higher*, *lower*, *shorter* and *taller* to describe the pictures.	• Use vocabulary related to length?	
2 Look at the pictures in question 2 in the printed worksheet. Ask learners to use the words *heavier* and *lighter* to describe the pictures.	• Use vocabulary related to mass?	
3 Look at the pictures in question 3 in the printed worksheet. Ask learners to use the words *full*, *empty*, *half*, *same* and *less* to describe the pictures.	• Use vocabulary related to capacity?	

Topic 8: Data handling

CONCEPTS AND SKILLS FOR TODAY

- Place birthdays on a calendar.
- Collect and sort objects.
- Make a drawing of sorted objects.
- Answer questions on sorted objects.

WARM-UP ACTIVITY

Refer to your class calendar (or draw a rough calendar for one month on the board – laid out as it would be in a calendar). Ask which learners have their birthdays in the month you have chosen. Ask each one who does to come to the front and put an X on the date of their birthday.

Draw a chart on the board to show the 12 months of the year. The chart should have 12 columns, one for each month.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Which month has the least birthdays? Which month has the most birthdays? etc.

- Ask all the learners who have a birthday in January to raise their hands.

- Count the number of learners who have a birthday in January and write the number above January on the chart. **Do the same for each month of the year and complete the table**.
- Point to the class wall calendar to show the position of the birthday dates of some of the learners.
- Discuss the birthday data that you have recorded on the board by asking questions. For example:
- 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.)
- *How many more birthdays are there in (November) compared to (June)?* (use the data on the board)
- *How many less birthdays are there in (February) than in (May)?* (use the data on the board)
- *In which month are there the most birthdays? In which month are there the least birthdays? How many birthdays are there in March/etc. ?*)

ACTIVITIES

Give learners the following activities using the worksheet from the teachers' resources and always ask learners to give you oral explanations of what they did.

Activity	Can the learners	Observation
1 Ask the learners to look at the drawing of balls and boxes on the printable. Ask them how they think they could sort the balls shown in the picture. Discuss the different suggestions they give.	• Collect and sort objects where the sorting criteria are given?	
2 Ask the learners to sort the objects and to draw them. Discuss the ways the learners chose to sort the objects.	• Make a drawing of sorted objects?	
3 When the learners have finished their drawings ask questions such as: **Are there more/less small boxes? Are there more/less big balls?** Etc.	• Answer questions about data?	

Week 1

Unit 1 Introduction

This unit focuses on developing an understanding of numbers and place value up to 100 using ten frames. The learners compare, order and sequence numbers up to 100. It is important for learners to have a sound understanding of place value. Place value is the foundation for teaching the operations in mathematics. Learners need to be actively engaged in exploring the value of numbers.

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

- **Conceptual understanding**: In this unit the concept of 100 and place value will be developed.
- **Procedural fluency**: Learners will develop procedural fluency through repeated opportunities to actively work with place value in different ways.
- **Strategies**: Learners will discover that digits have different values depending on their place in the number and they will learn how to work with these values.
- **Reasoning**: Learners are given opportunities to reason mathematically by giving explanations of the values of numbers using the language of place value.

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

- **Concept development**: Learners need opportunities to construct their own understanding of concepts (such as place value) through thinking and reasoning. For example, when the teacher asks '**How many tens and ones are there in 24?**' learners need to reason and create a connection between the number 24 in terms of tens and ones (place value – 2 tens and 4 ones).
- **Making sense of mathematics**: In this unit, learners are making sense of mathematics as they deepen their knowledge of our decimal number system. This knowledge relates to real-life situations. Being able to compare numbers is part of what we do every day, which helps learners to see Mathematics as an important part of life, rather than just a school subject.
- **Addressing gaps in learners' knowledge**: This unit provides many good opportunities to address gaps in learners' knowledge the work in this unit makes a number of connections back to number concepts covered in Grade 1. The teacher is therefore able to revise and build on previous knowledge.

Lesson 1: Numbers to 20

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 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: Recognise, identify, compare, read and write number symbols and names 0 to 20.
Lesson Vocabulary: Number names, number symbols, whole numbers, forwards, backwards, greatest, smallest, smaller than and greater than
Resources: 20 bottle tops per pair of learners, 2 ten frames per learner (see *Printable Resources*), number symbol and number name cards (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

What are next two numbers after...?

		Answer			Answer
1	7, 8, 9...	10, 11	**6**	0, 5....	10, 15
2	11, 12, 13...	14, 15	**7**	11, 10....	9, 8
3	20, 19, 18...	17, 16	**8**	10, 12...	14, 16
4	8, 7, 6...	5, 4	**9**	5, 10....	15, 20
5	2, 4, 6...	8, 10	**10**	14, 16...	18, 20

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

Today we are giving learners an opportunity to recognise, identify, read and write numbers from 0 to 20. This is a revision activity but it allows learners who have not fully grasped these ideas to grapple with them again. They will also be given opportunities to order and compare numbers from 0 to 20. Lastly the learners will be asked to solve addition and subtraction questions up to 20 using the ten frame and bottle tops. The ten frame is a concrete aid to teach about the base ten system. The learners use the ten frames to count to ten and recognise a group of 10 as a whole unit. This is done to teach learners about place value. Place value in our number system gives us the value of the digits in a number – the value of a digit depends on its position in the number. For example, 28 is 20 + 8 or 2 groups of ten and 8 ones.

Today we are learning about numbers 0 to 20.

Activity 1: Learners work in pairs

- Give each pair of learners 20 bottle tops.
- Ask the learners to count how many bottle tops they each have? (20)
- Count in ones with the learners. Ask the learners questions such as **what number comes after 2(3) and what number comes before 7 (6)**
- Revise with the learners that instead of counting in 1s we could also count the bottle tops in 2s.
- Ask the learners to put the bottle tops into pairs (2s) and count in 2s forwards from 0 to 20.
- Count backwards in 2s with the learners. (*You may wish to revise the terms backwards and forwards.)*
- Lastly, ask the learners to put the bottle tops into groups of 5.
- Ask them how many groups of 5 they have. (4)
- Count with the learners in 5s, pointing at the groups. Practice counting forwards and backwards in 5 to 20 with the learners.

Activity 2: Learners work in pairs

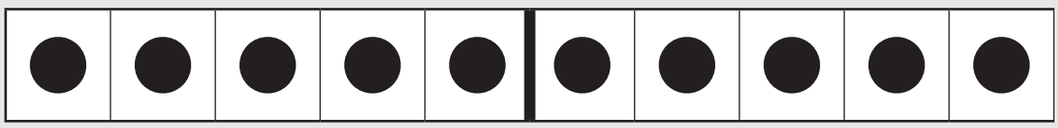
- Ask learners to make a group of **five** bottle tops.
- Then ask one learner to make a group of *more than* **five** bottle tops
- Discuss what learners have done – allow them to speak about it using mathematical language**. (I laid out 6 bottle tops. I have one more than 5 bottle tops.)**
- Ask another learner to make a group of *less than* **five** bottle tops.
- Discuss what learners have done – allow them to speak about it using mathematical language. **(I laid out 3 bottle tops. I have 2 less than 5 bottle tops.)**
- Write the number symbols and the number name on the board as learners make the groups and talk about what they have done.
- Repeat the activity using numbers between 10 and 20. Lay out 15 bottle tops, then more than and then less than 15.
- Discuss what learners have done – allow them to speak about it using mathematical language. **(I laid out 18 bottle tops. I have 3 more than 15 bottle tops. I laid out 11 bottle tops. I have 4 less than 15 bottle tops.)**
- Write the number symbols on the board as learners make the groups and talk about what they have done.

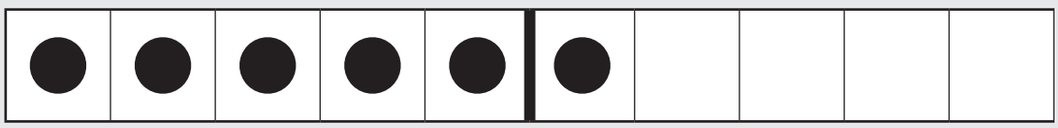
Activity 3: Whole class activity

- Give each learner 2 ten frames.
- Let them cut out their own ten frames. While they are cutting out the ten frames encourage them to count the blocks on the frame and think about what they could do with a ten frame.

- Discuss what you can do with a ten frame with the learners: The ten frame is a concrete aid to use while you learn about the base- ten system. You will use bottle tops when you work with the ten frame. The bottle tops are ones and ten ones make a ten.
- The thick line shows the middle of the ten frame – it divides the ten frame into 2 halves – there are 5 places on either side of the middle line.
- Write number symbols 0 to 20 and number names one to twenty on the board (or use number symbol and number name cards).
- Ask learners to show the number 1 with bottle tops in ten frames. The learners will place one bottle top on the ten frame.

- Ask the learners to find the number name for 1 on the board.
- Do the same with numbers 2 to 20.
- You need 2 ten frames to show numbers that are bigger than 10. For example to show 16 you must put 16 bottle tops on the ten frames):





- Ask the learners to show any number between 0 and 20 on their ten frames. Ask these numbers randomly.
- Ask the learners to identify which number is smaller and which is greater?
- For example, **which of these numbers is smaller than 16 – 6 / 12 / 20 / 1 / 15?**
- Probe learners' answers when they make a mistake.
- Ask questions such as, **why do you think it is smaller than…?**
- **Is the number made of tens and ones? How many tens and how many ones?**
- **Think again about your answer … which is the smaller number…?**
- **Which of these numbers is greater than 16 – 12 / 2 / 19 / 13 / 9?**
- Probe learners' answers when they make a mistake.
- Ask questions such as, **why do you think it is greater than…?**

- **Is the number made of tens and ones? How many tens and how many ones?**
- **Think again about your answer … which is the bigger number…?**
- Do this activity using different pairs of numbers.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: Learners should use their ten frames and bottle tops when they work through this activity.

1 Write the following as numbers:
   a five (5)
   b ten (10)
   c sixteen (16)
   d twenty (20)
2 Write the number name for 17. (seventeen)
3 Which number is smaller? 18 or 13? (13)
4 Which number is greater? 11 or 17? (17)
5 Write the numbers from smallest to biggest: 15, 12, 14, 11, 13. (11, 12, 13, 14, 15)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Write eighteen as a number symbol. (18)
2 Write 14 as a number name. (fourteen)
3 Which number is smaller? 20 or 12? (12)
4 Write the numbers from biggest to smallest: 15, 12, 14, 11, 13. (15, 14, 13, 12, 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 explored numbers up to 20 using our ten frames and bottle tops by comparing the sizes of numbers.

Lesson 2: Numbers up to 99

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 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 2.2 Number patterns
Lesson Objective: Decompose two-digit numbers into multiples of tens and ones and state the value of each digit.
Lesson Vocabulary: **:** Number, more, less, estimate, before, after, digit, ones, between, place value,
Resources: 100 board per learner (see *Printable Resources*), 1 hundred and 10 printed tens for the teacher and the learners (see *Printable Resources*), 20 bottle tops per learner, place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Fill in the missing ten or one

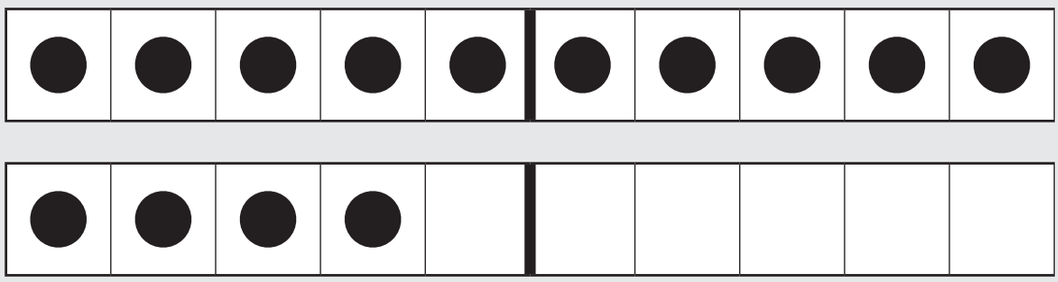
		Answer			Answer
1	15 = 10 + __	5	**6**	14 = 10 + __	4
2	12 = __ + 2	10	**7**	12 = __ + 2	10
3	10 = 10 + __	0	**8**	14 = 10 + __	4
4	14 = __ + 4	10	**9**	18 = 10 + __	8
5	15 = __ + 5	10	**10**	16 = __ + 6	10

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In these activities learners will explore 2-digit numbers up to 99. They will be counting forwards and backwards in 5s and 10s to 99. Learners will continue working with their ten frames. This will help them to become familiar with the base ten system of grouping in tens to move from one place to the next. The idea that 10 ones makes 1 ten will be reinforced. Today we are learning about numbers to 99 and we will be counting in 5s and 10s.

Activity 1: Learners work in pairs

- Remind the learners that you showed them how to use ten frames in lesson 1. Today you will demonstrate with ten frames because you are going to do other base ten kit activities as well.
- Paste your own large 2 ten frames on the board so that all the learners can see them.
- Write the number 14 on the chalkboard. Ask: **How can we make 14 using our bottle tops and ten frames?** *(Work though setting up this display with the whole class.)*



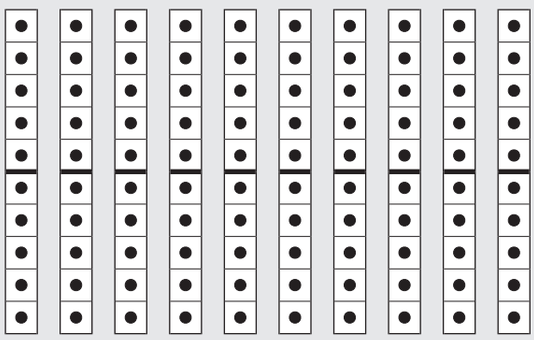
- Lead the discussion by saying **let's count out 14 bottle tops.**
- **Now that we have 14 bottle tops let's put them on our ten frames. Let the learners help you to do this.**
- Ask them: **How many groups of ten did we make?** (one)
- **Did you have any left over?** (Yes 4) **We call these four ones.**
- Ask: **How many more do I need to add to the 4 ones to get 10?**
- Place the bottle tops on the ten frames.
- Revise by saying **14 is 1 ten and 4 ones.**
- Repeat this activity with the following numbers: 17, 19, 13 and 12. Call on different learners to assist in the demonstration so that they participate in the activity.

Activity 2: Learners work in pairs

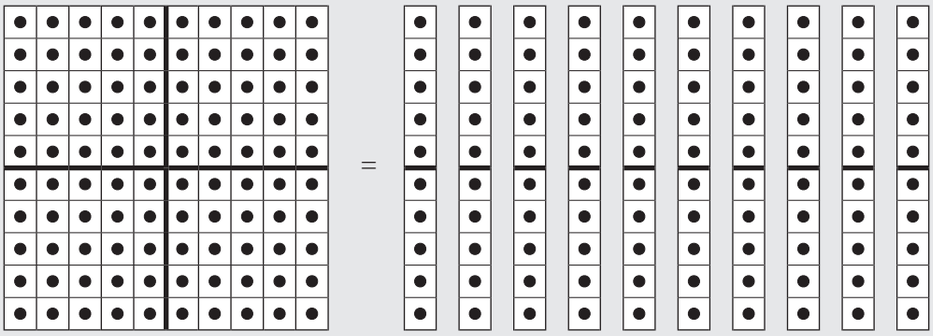
- Give each pair a 100 board and 20 bottle tops.
- Ask each pair to put a bottle top on 5, 10, 15, 20. Ask the learners what are they counting in?
  (They are counting in 5s)
- Ask each pair to put a bottle top on 10, 20, 30 40, 50. Ask the learners what are they counting in?
  (They are counting in 10s)
- Ask the learners if they notice anything? (10 and 20 are in both the 5s and 10s)

Activity 3: Whole class activity

- Put 10 ten frames next to the hundred board and alongside each other on the board as shown below. Learners can match their tens onto the columns/rows in the 100 board you have given them.



- As you put (perhaps using prestik) each ten frame on the board, let learners count in 10s.
- Show the learners that 10 tens is the same as 100, by matching the 10 tens onto the printed hundred.



- Learners must understand the relationship between ones, tens and hundreds. The bottle tops, tens and units in the base ten kit will help them to do this. (Show learners again if necessary that one bottle top is a one, ten bottle tops makes 1 ten, 10 tens makes 1 hundred.)
- Write the numbers 25, 15, 50 and 65 on the board.
- Ask a learner to come to the board to show you 25 using the printed 10 frames. Discuss with the learners that 25 is 2 tens and 5 ones. Use the printed tens to count the tens.
- Repeat this exercise using 15, 50 and 65. Include different learners each time.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: Learners should use their base ten kits while they do this classwork.

1 Counting on a number board.

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**

2 Write these numbers using tens and ones.
- **a** 12 (1 ten and 2 ones)
- **b** 27 (2 tens and 7 ones)
- **c** 82 (8 tens and 2 ones)
- **d** 79 (7 tens and 9 ones)

3 What is 10 more than 11? (21)

4 What is 10 less than 17? (7)

5 Fill in the missing number: 17 = 10 + _(7)_

6 Complete the table by writing numbers as tens and ones. The first row is complete.

18	=	10	+	8
56	=		+	
21	=		+	
48	=		+	
99	=		+	

4 HOMEWORK ACTIVITY (5 MINUTES)

1 What is: 5 more than 20? (25)

2 What is: 5 less than 30? (25)

3 Complete the table by writing numbers as tens and ones. The first row is complete.

43	=	40	+	3
27	=		+	
74	=		+	
68	=		+	
39	=		+	

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we found out that a 100 is equal to 10 tens. I showed this to you on the board when I put 10 ten frames next to each other to make 100. We also counted backwards and forwards in 5s and 10s to 100.

Lesson 3: Numbers up to 99

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 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 2.2 Number patterns
Lesson Objective: Identify the place value of two-digit numbers to 99 and find number patterns.
Lesson Vocabulary: Tens, ones, digits, biggest, smallest, more, less, after, add, subtract, equal to, place value, pattern
Resources: 100 board per learner (see *Printable Resources*), 20 bottle tops per learner, 10 printed tens, 1 ten frame and some bottle tops for the teacher (see *Printable Resources*), place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Fill in the missing ten or one

		Answer			Answer
1	11 = 10 + __	1	**6**	14 = 10 + __	4
2	13 = __ + 3	10	**7**	19 = __ + 9	10
3	12 = 10 + __	2	**8**	15 = 10 + __	5
4	18 = __ + 8	10	**9**	17 = 10 + __	78
5	16 = __ + 6	10	**10**	10 = __ + 0	10

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In the activities today learners will continue to explore 2-digit numbers up to 99. They will be introduced to the place value table. Learners will find number patterns using their 100 boards. This will include counting forwards and backwards in 5s and 10s.

Today we are learning about number patterns to 100 and we will be exploring tens and ones in numbers using a place value table.

Activity 1: Whole class activity

- Give each learner a 100 board.
- Ask the learners to cover the numbers 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 with bottle tops.
- Count from 0 to 100 in 10s forwards and backwards with the learners. The learners should point at the numbers as they count.
- Ask them what **pattern do you see?** (They are all under each other on the number board)

- Write 10 and 50 on the board.
- **Ask the learners which number is bigger** (50) and **why**. (10 is one group of 10 and 50 is 5 groups of 10)
- Ask the learners to put bottle tops on 5, 10, 15, 20, 25, 30, 35, 40, 45 and 50.
- Count from 0 to 50 in 5s forwards and backwards with the learners. The learners should point at the numbers as they count.
- Ask them **what pattern do you see?** (All the numbers are 5 spaces apart or they end in 5 or 0)
- Write 15 and 35 on the board.
- **Ask the learners which number is bigger** (35) and **why**? (35 is bigger because it has 3 groups of 10 and 5 ones but 15 has one ten and 5 ones)

Activity 2: Whole class activity

- In this activity we will introduce the learners to the place value table (shown below)

Tens	Ones
__ tens	__ ones
___	

- Draw the place value table on the board.
- You will need 5 ten frames and 7 ones/bottle tops.
- Write the number 17 on the board. Ask: **How can I show 17 using the base ten kit?**
- The learners should answer 1 ten and 7 ones.
- Using the ten frames let a learner show the class how this is done.
- They can paste/stick the correct cuts outs from base ten kit onto the place value table. (One printed ten and 7 bottle tops on an empty ten frame can be used to show the number 17 as shown below.)

Tens	Ones
	
1 ten	7 ones
17	

- Discuss with the learners that **17 is one ten and 7 ones.**
- Repeat these steps with the numbers 31, 25 and 42 and other 2-digit numbers (up to 99) if there is time.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: Learners should use their base ten kits while they do this classwork.

1 Fill in the missing number:
- **a** 13 = 10 + _(3)_
- **b** 21 = 20 + _(1)
- **c** 34 = 30 + _(4)_
- **d** 26 = 20 + _(6)_

2 Circle the bigger number:
- **a** 16 or (22)
- **b** 20 or (32)
- **c** (42) or 24
- **d** (50) or 35
- **e** 18 or (38)

3 Circle the smallest number:
- **a** (6) or 9
- **b** (24) or 25
- **c** 32 or (22)
- **d** (18) or 27
- **e** 55 or (35)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 What is 10 more than 3? (13)

2 What is: 10 more than 20? (30)

3 Complete the following:
- **a** 14 = 10 + (4)
- **b** 32 = 30 + (2)
- **c** 24 = 20 + (4)
- **d** 16 = 10 + (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 counted in 5 and 10s to 100 and looked for patterns. We started to use the place value table to show tens and ones. For example, 17 is 10 and 7.

Lesson 4: Expanded notation

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.3 Number symbols and number names 1.5 Place value
Lesson Objective: Expanded notation of numbers up to 99; Read and write numbers up to 30.
Lesson Vocabulary: Building up, breaking down, tens, ones, number names, biggest, smallest
Resources: 100 board (see *Printable Resources*), ten frames (see *Printable Resources*) and bottle tops, place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is 10 more the following numbers:	**Answer**		What is **10 less** of the following numbers?	**Answer**
1	2	12	**6**	10	0
2	40	50	**7**	20	10
3	30	40	**8**	30	20
4	50	60	**9**	40	30
5	20	30	**10**	17	7

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

The activities in today's lesson consolidate the language of place value. The focus in this lesson is on breaking down and building up numbers to 99. Learners will also read and explore number names and symbols up to 30.

Today we are learning the number names to 30 and building up and breaking down numbers to 99.

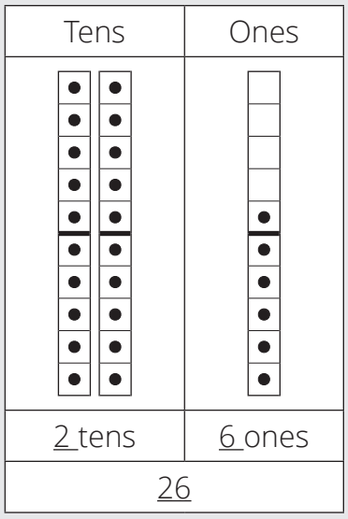
Activity 1: Whole class activity

- Give each learner a 100 board.
- Write the number symbols and number names 11 to 30 on the board (or use the number symbol and number name cards).
- Write the numbers 11 to 30 in the air.
- Ask: **Point to the number 11 on the 100 board**. 11 is 1 ten and 1 one.
- Ask: **Point to the number 26 on the 100 board**. Explain that the number 26 is made of 20 and 6.
- Ask the learners to find the number name for 26 on the board.

- Do the same with numbers 12, 18, 23 and 29.
- Each time explain the importance of knowing the place value breakdown of the number into tens and ones.
- For example – 23 is made of 2 ten and 3 ones. Ask learners to tell you how the numbers are made up.

Activity 2: Whole class activity

- Draw a place value table on the board and show 26 on it using the base ten kit. (You will need 2 printed full ten frames and 6 bottle tops.)
- Write the number 26 on the board. Ask: **How can I show 26 by tens and ones**?
- The learners should answer 2 tens and 6 ones.
- Using the tens let a learner show the class how this is done.
- They can paste/stick tens onto the place value table.
- Discuss the following questions with the learners: Looking at the number 26

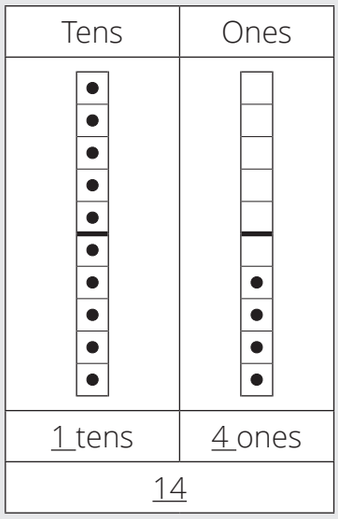


a W**hy are there 2 tens shown**? (There are 2 tens in 26.)
b D**oes the 6 mean 6 or 60?** (It means 6, or 6 ones)
c D**oes the 2 mean 2 or 20?** (It means 2 tens, or 20)

- Write the following numbers on the board: 16, 28 and 41 on the board and repeat the activity questions as you did for the number 26 above.
- Select 3 different learners to let them present these numbers using the base ten kits as shown above.
- Discuss the value of each digit with the learners.
- Compare the 3 given numbers in terms of which is the biggest, smallest and the reasons for this. (41 is the biggest, then 28, 26, 14. 14 is the smallest. 41 has 4 tens, 14 has 1 ten. Etc.)

Activity 3: Whole class activity

- Draw a place value table on the board. Use the base ten kit to show 14. Write a number sentence to express how to break down 14 into tens and units.
  (14 = 10 + 4)

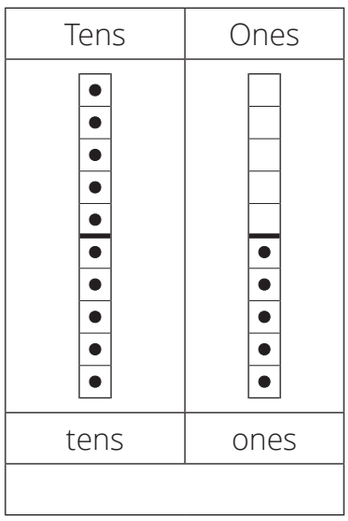


- Explain to the learners the relationship between the place value table and the number sentence. The place value table is a pictorial representation. The number sentence is abstract. It is important that learners recognise the relationship between these.
- Repeat this activity using the numbers 18 (10 + 8 = 18) and 16 (10 + 6 = 16)

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: Learners should use their base ten kits while they do this classwork.

1 Show the number 15 on the place value table below:



2 7 ten + 3 ones = _____ (73)

3 6 ten + 8 ones = _____ (68)

4 82 = 80 + _____ (2)

5 55 = _____ + _____ (50) + (5)
6 90 + _____ = 93 (3)
7 _____ + 6 = 66 (60)
8 _____ + 9 = 59 (50)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 7 tens + 5 ones = _____ (75)
2 5 tens + 0 ones = _____ (50)
3 67 = _____ (6) tens + _____ (7) ones
4 89 = _____ (8) tens + _____ (9) 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 continued to break numbers down into tens and ones. We also started to add numbers using tens and ones.

Lesson 5: Consolidation: Numbers to 99

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
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 2.2 Number patterns
Lesson Objective: Consolidate work covered this week relating to number concept in the range 0-99.
Lesson Vocabulary: Building up, breaking down, tens, ones, number names, biggest, smallest, place value.
Resources: n/a
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the work which has been covered is the basics of place value. You have explored the value of tens and ones using the ten frame and 100 board as a concrete aid with the learners.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

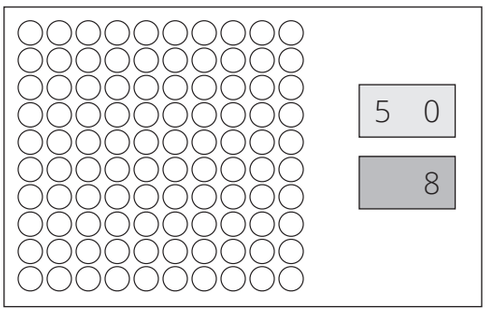
Learners often struggle to understand that 10 ones make a ten. It is important that the learner works with the bottle tops and ten frame to clear up this misconception. Let the learner place 10 bottle tops on a ten frame one by one until he/she has ten. Once the learner has grasped this concept you can begin breaking down numbers into tens and ones. For example: 26 is 2 tens and 6 ones.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

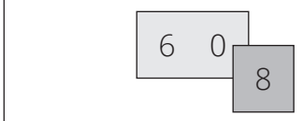
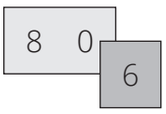
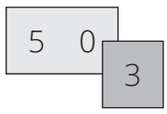
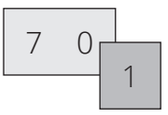
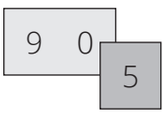
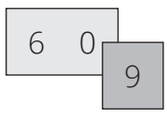
4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

Today we are going over what we learned this week. We are learning more about numbers up to 99.

1 Colour 58 circles.
How many tens? _____
How many ones? _____



2 Write the answer. The first one has been done for you.

 60 + 8 = 68	 _	 _
 _	 _	 _

3 Complete the following:

a 14 = _____ + _____ (10 + 4)
b 23 = _____ + _____ (20 + 3)
c 32 = _____ + _____ (30 + 2)
d 50 = _____ + _____ (50 + 0)
e 99 = _____ + _____ (90 + 9)

5 REFLECTION AND SUMMARY OF LESSON

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

Today we practised breaking down and building up numbers using tens and ones.

Week 2

Lesson 6: The concept of 100

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 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 2.2 Number patterns
Lesson Objective: To read and write numbers that make up 100.
Lesson Vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than and smallest, order, compare, 100.
Resources: 100 board per learner (see *Printable Resources*), 10 bottle tops per learner
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Which number comes after...?	**Answer**		Which number comes before?	**Answer**
1	15	16	**6**	25	24
2	28	29	**7**	22	21
3	79	80	**8**	18	17
4	71	72	**9**	31	30
5	43	44	**10**	50	49

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson learners will explore the number 100. They will use the 100 board and number lines as concrete aids. The learners will count in 5s and 10s to 100 using the number lines. Attention will be paid to the number intervals shown on the number lines.

Today we are learning about the number 100.

Activity 1: Whole class activity

- This activity revises expanded notation from the previous lesson.
- Draw the following on the chalkboard.

15	
(10)	(5)

26	

47	

62	

- Ask: **How do you break 15 down into tens and ones?** (15 is one ten and 5 ones or 10 + 5.)
- Record this in the boxes below the15 (drawn on the board).
- Complete the other 3 boxes on the board, asking different learners to come up to the board and discussing the solutions as they are done. (26 is 2 tens and 6 ones, 47 is 4 tens and 7 ones, 62 is 6 tens and 2 ones)

Activity 2: Learners work in pairs

- Give each pair a 100 board and 10 bottle tops.
- Revise counting forwards and backwards in 10s and 5s with 100 with the learners.
- Using the bottle tops, ask the learners to put them on the numbers 91 to 100 one by one.
- When the learners get to 99 ask them **how many tens and ones in 99 ?**(9 tens and 9 ones)
- Ask them **what number will come next?**
- Discuss a 100 as ten groups of 10.

Activity 3: Whole class activity

- Draw a number line in intervals of 10 to 100 on the board.
- Ask the learners **what can you tell me about this number line**?
- Discuss with them the intervals of ten.
- Count forwards and backwards to 100 in 10s with the learners.
- Using the number line ask learners questions such as: **What is 10 more than 40? What is 10 less than 90?**
- Repeat using a variety of numbers.
- Draw the number line below on the board in 5s from 0–100.

- Ask the learners **what can you tell me about this number line**?
- Discuss with them the intervals of five.
- Count forwards and backwards to 100 in 5s with the learners.
- Using the number line, ask learners questions such as: **What is 5 more than 55? What is 5 less than 95?**
- Repeat using a variety of numbers.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 What is …?

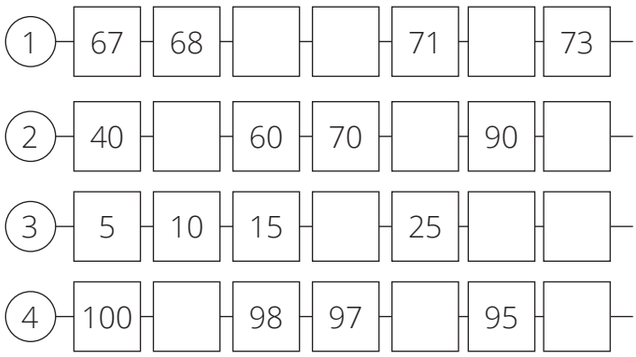
a The number that is 10 more than 40 _____ (50)

b The number that is 10 less than 90 _____ (100)

c The number that is 10 more than 70 _____ (80)

d The number that is 10 less than 10 _____ (0)

2 Complete the following patterns:



(Answers:
1. 69, 70, 72;
2. 50, 80, 100
3. 20, 30, 35
4. 99, 96, 94)

3 Complete:

a 10 + 40 = ___ (50)

b 50 + 30 = ___ (80)

c 20 + 70 = ___(90)

d 100 – 60 = ___(40)

e 30 – 10 = ___(20)

4 HOMEWORK ACTIVITY (5 MINUTES)

Complete:

a 30 + 70 = ___ (100)

b 60 + 40 = ___ (100)

c 10 + 80 = ___ (90)

d 90 – 50 = ___ (40)

e 100 – 20 = ___ (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 learnt about 100. We also added and subtracted in 10s using our 100 boards and number lines to help us.

Lesson 7: Comparing and sequencing numbers

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.3 Number symbols and number names 1.4 Describe, compare and order numbers 1.5 Place value
Lesson Objective: Sequence and compare numbers up to 100.
Lesson Vocabulary: Forwards, backwards, more than, less than, greater than, smaller than, biggest, smallest, order, compare, bigger, smaller, equal
Resources: Number symbol and name cards 21 to 50 (see *Printable Resources*), ten frames (see *Printable Resources*), place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Which number is between...and...?

		Answer			Answer
1	7 and 9	8	**6**	34 and 36	35
2	12 and 14	13	**7**	39 and 41	40
3	18 and 20	19	**8**	26 and 24	25
4	25 and 27	26	**9**	31 and 29	30
5	19 and 21	20	**10**	43 and 45	44

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In the first activity of this lesson learners will read and order numbers between 21 and 50. In other activities learners will explore the number 100 using a number line and the place value table. Attention will be paid to the number intervals shown on the number lines.

Today we are learning the number names to 50 and also exploring numbers to 100.

Activity 1: Whole class activity

- Stick the number symbol and name cards for numbers 21 to 50 in a random order on the board.
- Place the cards in the correct order while the learners read the number names.
- Ask the learners to look at numbers 21 to 50.
- Ask the learners if they notice anything special about these numbers.
- *What do they notice?* (Possible answers may involve odd numbers/even numbers/tens and units.)

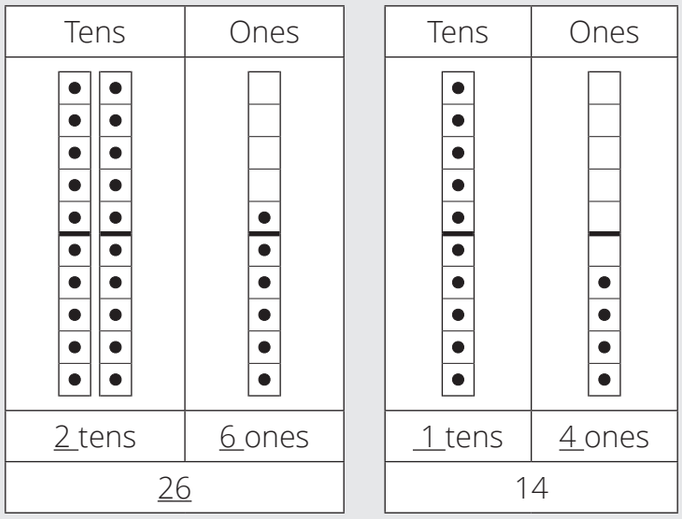
Activity 2: Whole class activity

- Draw a 90 to 100 number line on the board.

- Call on different learners to come to the board and fill in these numbers: 99, 91, 93, 97, 92, 94, 96, 95, 98.
- When the number line labelling is complete, discuss the following questions with the learners:
- **Which number is one less than 94?** (93)
- **One more than 94?** (95)
- **Two less than 94?** (92)
- **Two more than 94?** (96)
- Ask many such questions using different numbers in the range 90-100.

Activity 3: Whole class activity

- Draw 2 place value tables on the boards.
- Paste the number names 26 and 14 on the board above the place value tables.
- Ask a learner to **show 26 in the first table using base ten kits**.
- Ask another learner to **show 14 in the second table using base ten kits**.



- Ask the learners the following questions: **Which number is bigger?** (26)
- **How many more tens in 26 than in 14?** (2 tens in 26 and 1 ten in 14, 1 more ten in 26)
- **How many ones in 14?**(4)
- **How many more ones do I need to make 14 up to 20?**(6)
- Discuss other pairs of numbers in a similar way.
- Compare 57 and 32 (57 is bigger. 57 has 5 tens and 32 has 3 tens)
- Compare 66 and 86 (86 is bigger. 86 has 8 tens and 66 has 6 tens)
- Compare 56 and 26 (26 is smaller. 26 has 2 tens and 56 has 5 tens)

- Compare 73 and 37 (37 is smaller. 37 has 3 tens and 73 has 7 tens)
- Etc.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: Learners can use their base ten kits when they do this activity if they would like to.

1 Arrange these numbers from the smallest to the biggest: 30, 25, 29, 21. (21, 25, 29, 30)

2 Give two numbers that are bigger than 25. (Answers may vary. E.g. 30, 65)

3 Give two numbers that are smaller than 25. (Answers may vary. E.g. 24, 12)

4 Complete the pattern: 90, __, 92, 93, __, __, 96, __, 98, 99, __. (91, 94, 95, 97, 100)

5 Circle the numbers that are smaller than 30 and bigger than 24.

20	21	22	23	24	25	26	27	28	29	30

(25, 26.27.28.29)

6 Circle the numbers that are smaller than 40 and bigger than 36.

30	31	32	33	34	35	36	37	38	39	40

(37, 38, 39)

7 Write the number name for 32. (thirty two)

8 Write the number name for 48. (forty eight)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Write the number name for 45. (forty five)

2 Complete the following: 30 + ___ = 38. (8)

3 Arrange these numbers from the biggest to the smallest: 93, 97, 95, 96, 94. (97, 96, 95, 94, 93)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we learnt that 100 comes after 99 when we are counting in 1s. We also worked with numbers between 0 and 99 to compare them to find the bigger/smaller number of a pair of numbers and to say how much bigger/smaller they are.

Lesson 8: 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 1.2 Count forwards and backwards 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 assessment* (see rubric below).

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:

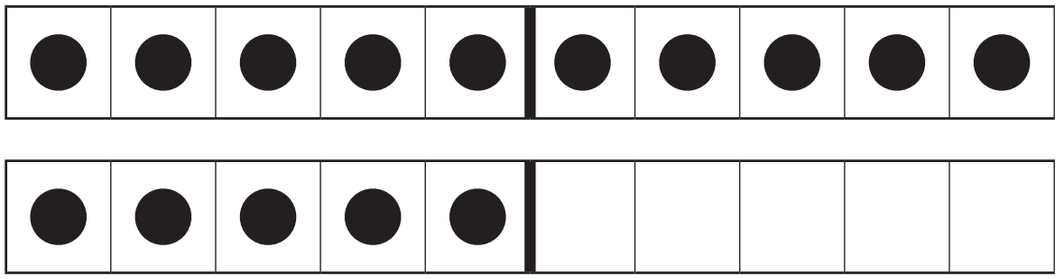
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board.
- speak about misconceptions that may have arisen in learners' responses.

Learners may have struggled when working with tens and ones. Revise these using bottle tops, ten frames and a 100 board. Furthermore, learners may have struggled with the terms smallest and biggest. Revise these on the board starting with the 0 to 10 number range. Once they have grasped these terms increase the number range.

3 ASSESSMENT (17 MARKS)

WRITTEN

1 Show the number 15 by filling in dots on the ten frames. (2)



2 Write the number name for 100. _____ (1)

3 Write the number name for 41 _____ (1)

4 Circle the biggest number and make a cross over the smallest number. (2)

(11 is the smallest, 98 is the biggest)

26	44	11	98	77	69	83

5 Arrange these numbers from biggest to smallest: 91, 100, 97, 90 (1)
(90, 91, 97, 100)

6 Arrange these numbers from smallest to biggest: 81, 66, 72, 80 (1)
(66, 72, 80, 81)

7 Write down three numbers that are bigger than 91, but smaller than 99. (3)
(any **three** of 92, 93, 94, 95, 96, 97, 98)

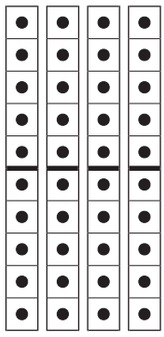
8 Complete the following: (3)

a 10 + 6 = _____ (16)

b 20 + 8 = _____ (28)

c 32 = 30 + _____ (2)

9 Complete the place value table. (3)

Tens	Ones
	
(5) tens	(4) ones
(54)	

ORAL

Number, operations and relationships: Counting **Activity: Observe learners' ability to count in the number range 0 to 100.**	**Mark: 7**

Mark	Criteria – rubric
1	Can count to 20 but only with constant assistance
2	Can count to 50 but only with constant assistance
3	Can count to 100 but only with constant assistance
4	Counts verbally in the number range 0 to 100 but needs support
5	Counts verbally in the number range 0 to 100 independently but has difficulty when bridging ten
6	Counts verbally in the number range but makes some careless errors (can bridge ten)
7	Counts verbally independently and confidently up to 100 with no errors

Lesson 9: Comparing and ordering numbers

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.3 Number symbols and number names 1.4 Describe, compare and order numbers 1.5 Place value
Lesson Objective: Order and compare whole numbers to 100.
Lesson Vocabulary: Forwards, backwards, more than, less than, greater than, greatest, less than and equal to, smaller than and smallest, order, compare.
Resources: A copy of a book (e.g. an old DBE workbook).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

- **a** Give each learner a book. For example an old DBE workbook and ask them to turn to page 41.
- **b** Repeat this exercise using pages 56, 77, 81 and 98.
- **d** Watch how the learners page through the books to get to page 40/41 etc. Do they count from 1 or do they skip a whole lot and slow down when they are near to the page number that they are looking for?
- **e** Discuss how to page to a given page number (e.g. page 41) in the quickest way.

2 Lesson content – concept development (45 minutes)

In this lesson you will begin by reading and writing numbers from 51 to 100. In the second activity, learners will work with numbers in the extended range (up to 100). Try to bring in more mathematical vocabulary – that of comparison between numbers (*biggest*, *smallest*, *between*, *more than* and *less than*). Allow all learners to use this vocabulary in discussion and in response to your questions. Remember to give the learners a voice – they should answer your questions using full sentences so that you can check that they are using the vocabulary correctly.

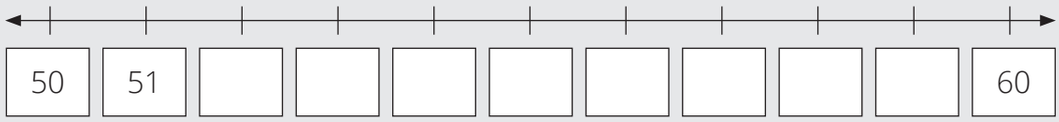
Today we are comparing and ordering number up to 100.

Activity 1: Whole class activity

- Write the following numbers on the board 63, 81, 57, 78, 95, 54, 72, 78, 90, 66, 89.
- Ask the learners to put the number in order from smallest to biggest with you.
- Discuss how to decide on the order. (look at the tens and units in the numbers.)
- Ask the learners for the names of each of the numbers and write them next to each one for example:
  63 – sixty three.

Activity 2: Whole class activity

- Draw a 50 to 60 number line on the board.



- Call on different learners to come to the board and fill in these numbers: 59, 53, 57, 52, 54, 56, 55, 58.
- Ask the learners the following questions:
- **Which number is one less than 54?** (53)
- **One more than 54?** (55)
- **Two less than 54?** (52)
- **Two more than 54?** (56)
- Ask many such questions using different numbers in the range 50-60.

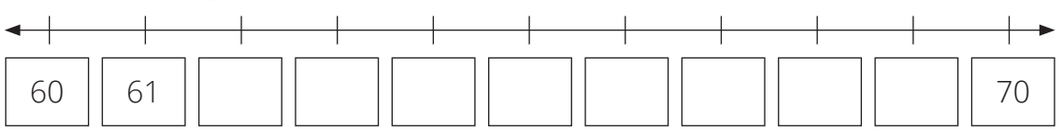
Activity 3: Learners work in groups

- Give each learner a copy of a 100 board.
- Ask the learners to count in tens from 10 to 100. They can refer to their boards if they want to.
- Ask the learners to show you the following numbers on the number board**: 44, 68, 70, 61, 86, 53, 99, 65 and 99.**
- **Then ask them the following questions:**
- **Which number is one less than 64?** (63)
- **Which number is one more than 64?** (65)
- **Which number is equal to 64?** (64)
- Allow learners to ask each other comparative questions, in the number range 0 to 100.
- **Which number is one ten less than 64?** (54)
- **Which number is one ten more than 64?** (74)
- **Which number is equal to 64?** (64)
- Etc.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Write the number names for 65, 82, 49 and 98. (sixty-five, eighty-two, forty-nine, ninety-eight)

2 Fill in the missing numbers on the number line.



(61, 62, 63, 64, 65, 66, 67, 68, 69)

a Circle all the numbers on the number line that are greater than 68. (69, 70).

b Cross out all the numbers smaller than 65. (64, 63, 62, 61, 60).

3 Complete the following:
   a 20 + _____ = 29 (9)
   b 40 + 4 = _____ (44)
4 Fill in the missing numbers: 0, 10, __, __, __, 50, __, __, __, __, 100.
(20,30.40.60,70,80,90)
5 Write down the numbers 68 and 70. What is:
   a. the number that comes between them? (69)
   b. the number that is 2 less than 68? (66)
   c. the number that is 1 less than 70? (69).

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Complete the pattern: 68, 69, __, 71, __, __. (70, 72, 73)
2 50 + 6 = _____ (56)
3 70 + 3 = _____ (73)
4 What is two more than 71? (73)
5 What is two less than 71(69)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we used a number line to count and we used our 100 boards to find and discuss numbers up to 100.

Lesson 10: Consolidation: Numbers to 100

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
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: Revision of numbers up to 100.
Lesson Vocabulary: forwards, backwards, less, more, biggest, smallest, pattern
Resources: 100 board (see *Printable Resources*), ten frames (see *Printable Resources*), bottle tops
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week we have explored numbers up to 100 and place value. We have ordered and compared numbers using a variety of activities. Furthermore, we have practised counting in 5s and 10s forwards and backwards up to 100.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may have experienced difficulties with place value and/or counting in 5s/10s. If a learner is struggling with place value revisit the concept of ten frames and bottle tops. For example, ask the learner to show you 25 using the ten frames and bottle tops. While watching how the learner approaches this task you will observe their understanding of place value. Be sure to work with the learner to correct any misconceptions around place value. If learners are struggling with counting in 5s/10s use the 100 board and bottle tops. Let the learners place bottle tops on multiples of 5/10. Discuss the patterns with the learners. Practise counting forwards/backwards with the learners aloud.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about place value and counting in 5s and 10s up to 100.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

1 Fill in the missing multiples of 10:

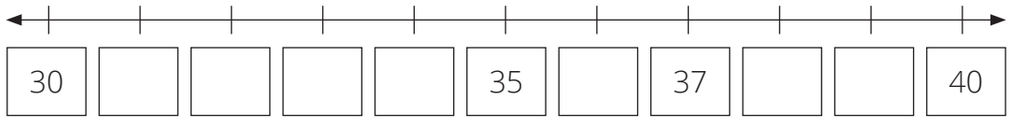
a 10 , 20, 30, _(40)_, _(50)__, 60, _(70)_, _(80)_, _(90)_, 100

b 100, 90, 80, _(70)_, _(60)_,_(50)_, _(40)_, _(30)_, _(20)_, 10.

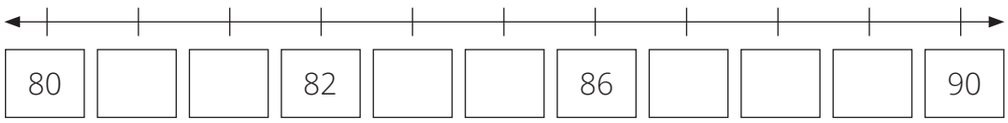
c (100)_ , _(90)_ , _(80)_ , _(70)_ , _(60)_ , 50 , _(40)_ , _(30)_ , 20 , _(10)_.

2 Complete the number lines.

a



b



3 Complete the place value table:

Tens	Ones
	
(1)tens	(7) ones
(17)	

4 20 + __ (7) = 27

5 (40) + 4 = 44

6 60 + 6 = __ (66)

7 50 + (9) = 59

8 (80) + 2 = 82

9 (30) + 3 = 33

5 REFLECTION AND SUMMARY OF LESSON

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

Today we have revised place value and practised counting in 5 and 10s up to 100.

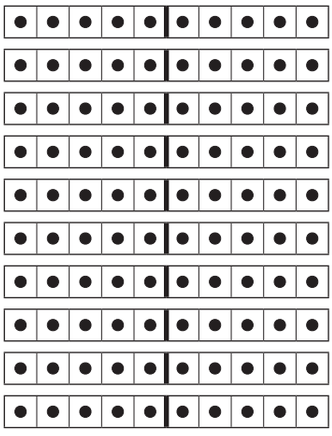
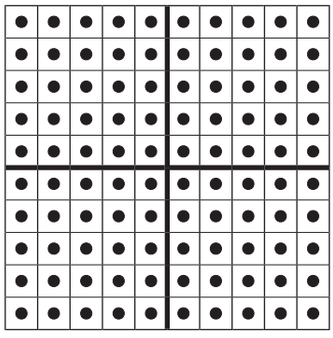
Week 3

Lesson 11: Number sequences up to 100

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 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: Counting forwards and backwards in 5s and 10s up to 100.
Lesson Vocabulary: forwards, backwards, less, more, biggest, smallest, between, multiple, sort, number line, fives, tens, pattern, interval
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*), 1 printed hundred (teacher).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Use the mental maths time to revise the use of the printed tens and hundreds.

- Paste 10 printed tens on the board.
- (ten of these  and  (one hundred)
- Revise with the learners the structure of printed tens and hundreds. **Ten tens makes 1 hundred.**
- **Allow the learners time to match the ten printed tens onto the 1 hundred square.**
- Ask the learners to count with you forwards and backwards from 10, 20…..100 as you point to the separate tens and also the columns/rows in the printed hundred.
- Ask a learner to come to the board to show you 50 – either using the printed hundred or the printed tens.
- Now ask the learners **what is 10 less than 50?** (40)
- **What is 10 more than 50?** (60)
- Repeat these questions with 30, 80 and 60.

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

The focus in this lesson is counting in 5s and 10s up to 100. We will also be exploring 5 more/less than a given number.

Today we are learning to count forwards and backwards in 5s and 10s. We will be counting up to 100.

Activity 1: Whole class activity

- Show the learners **ten** fingers, and ask them how many fingers there are. (10)
- Close your hands, and ask: **How many fingers do I have?** (10) **How many of them can you see?** (0).
- Ask **two** learners to come to the front of the class. Ask both learners to lift up both hands.
- Ask, **How many fingers are there?** (20)
- Ask a third learner to come to the front of the class. Ask all three learners to lift up their hands. Ask, **How many fingers are there now?** (30)
- Repeat the exercise with a fourth learner lifting their hands in the air. Ask, **how many fingers are there now?** (40)
- Ask the learners to count all the fingers again, counting in 10s. (10, 20, 30, 40)

Activity 2: Whole class activity

- Draw a fives number line from 50 to 100 on the board.

- Ask the learners to count in tens from 50 to 100, pointing at each multiple of 10 on the number line.
- As they count, circle the multiples of ten on the number line. (50, 60, 70, 80, 90, 100)
- Discuss why you have circled these numbers.
- Discuss the fives that have been labelled on this number line but that there are also other numbers that fall in between the labelled numbers.
- Ask **What other numbers lie between 55 and 60?** (Learners may answer 56, 57, 58, 59)
- Ask the same question but for other number intervals.
- Point to 55 and ask the learners **what is 5 more than 55?** (60) **What is 5 less than 55?** (50)
- Use the number line to assist you showing the learners 5 more and 5 less each time.
- Repeat 5 more/less with 70, 85 and 95.

Activity 3: Whole class activity

- Write the multiples of 10 between 0 and 100 on the board in a random order.
- Ask the learners to write the numbers from 10 to 40 on the board from the smallest to the biggest number. (10, 20, 30, 40)

- Now ask the class to write them in order from the biggest to the smallest number (40, 30, 20, 10).
- Ask the learners to write the numbers from 50 to 100 in order from the smallest to the biggest number on the board. (50, 60, 70, 80, 90, 100)
- Discuss how they sorted the numbers (they have written them going up in multiples of 10)
- Ask them to use the same numbers and order them from the biggest to the smallest number. (100, 90, 80, 70, 60, 50).
- Explain to them that this is called counting back in 10s – from 100 to 50.
- Discuss how they sorted the numbers (they have written them going down in multiples of 10)

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 If 2 children stand in front of the class, how many fingers will you see? (20)

2 If 3 children stand in front of the class, how many fingers will you see? (30)

3 Continue the pattern patterns of 10:

- **a** 10, 20, 30, _(40)_, _(50)_.
- **b** 30, 40, 50, _(60)_, _(70)_.
- **c** 100, 90, 80, _(70)_, _(60)_.
- **d** 70, 60, 50, _(40)_, _(30)_.

4 Complete the table:

5 more than:	5 less than:
a 10 is __(15)	**e** 5 is__ (0)
b 35 is __(40)	**f** 15 is __ (10)
c 50 is __(55)	**g** 30 is __(25)
d 85 is __ (90)	**h** 100 is ___(95)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Complete the pattern of 10: 10, 20, 30, _(40)_, _(50)_, _(60)_, _(70)_, _(80)_, _(90)_, 100.

2 Fill in the missing numbers: 5, 10, _(15)_, _(20)_, _(25)_, 30, _(35)_, 40.

3 Continue the pattern:

- **a** 60, 50, _(40)_, _(30)_, _(20)_.
- **b** 90, 80, _(70)_, _(60)_, _(50)_, 40, _(30)_, _(20)_.
- **c** 50, 45, _(40)_, 35 , _(30)_, _(25)_, 20.

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 learnt to count in 5s and 10s to 100. We have revised what more and less mean.

Lesson 12: Number sequences up to 100

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.2 Count forwards and backwards 1.4 Describe, compare and order numbers 2.2 Number patterns
Lesson Objective: Counting forwards and backwards to 100.
Lesson Vocabulary: forwards, backwards, less, more, biggest, smallest, pattern, multiples, first, second, third, fourth, twelfth
Resources: 100 board (see *Printable Resources*), a board game for each pair of learners (see *Printable Resources*), bottle tops and dice.
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

What is the next number?

		Answer			Answer
1	5, 10, ...	15	**6**	10, 20, ...	30
2	70, 60, ...	50	**7**	65, 70, ...	75
3	34, 35, ...	36	**8**	80, 75, ...	70
4	99, 98, ...	97	**9**	28, 29, ...	30
5	25, 30, ...	35	**10**	82, 81, ...	80

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In these activities learners continue to explore and compare numbers to 100 counting in 2s. Learners also work with the number 7 in terms of 7 less and 7 more.

Today we are comparing numbers up to 100.

Activity 1: Whole class activity

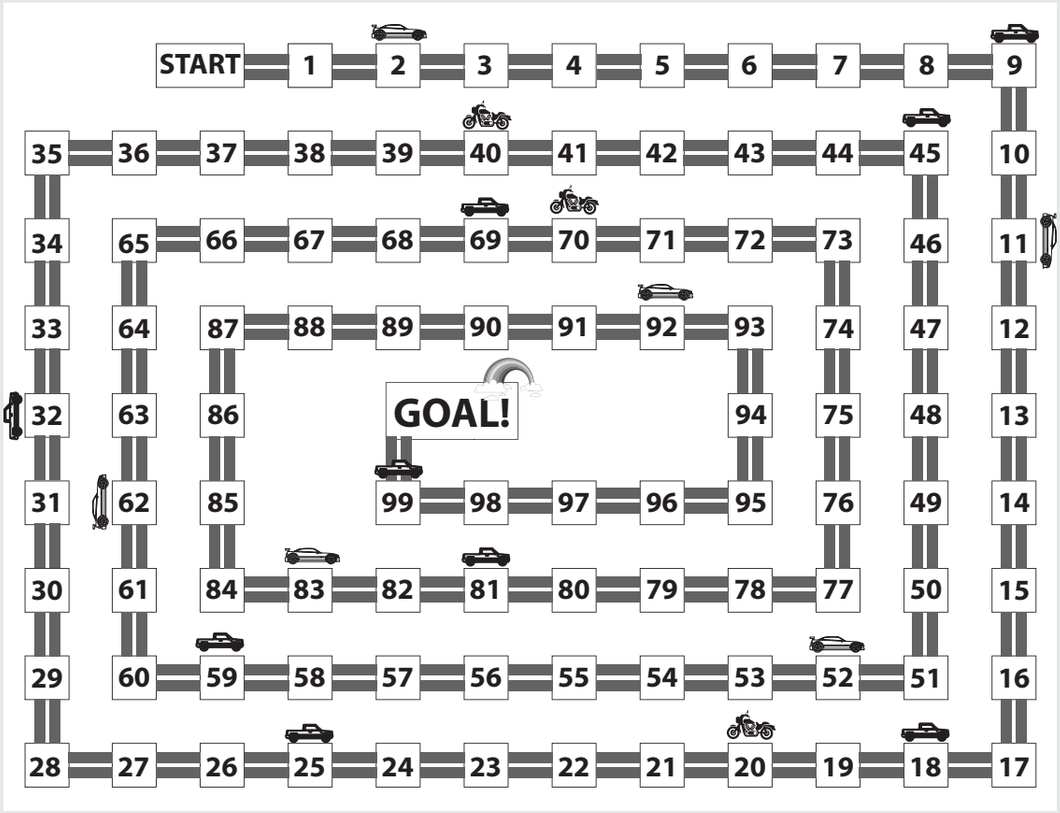
- Ask 12 learners to stand in front of the class.
- Ask the class how many legs the first learner has. (2)
- Ask the learners the following questions and remind them to count in twos:
- How many legs do the first and the second learners have altogether? (4)
- How many legs do the first, second and third learners have altogether? (6)
- How many legs do the first, second, third and fourth learners have altogether? (8)
- Repeat until you have reached the twelfth learner.
- Ask all the learners to count all the legs again. (2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24)
- Discuss the counting pattern you have just shown – the pattern of 2s – counting goes up in multiples of 2.

Activity 2: Whole class activity

- Write the following numbers on the board: 20, 54, 66,7,37 and 45.
- Arrange them in order from smallest to biggest. (7, 20, 37, 45, 54 and 66)
- Give the learners a 100 board.
- Using the numbers above, (7, 20, 37, 45, 54 and 66) add 7 more to each of the numbers. (14, 27,44,52,61 and 73). Let learners use the 100 board as an aid.
- Using the numbers above. (7, 20, 37, 45, 54 and 66) go to 7 less than each of the numbers. (0, 13, 30, 38, 47 and 59) Let learners use the 100 board as an aid.

Activity 3: Learners work in pairs

- In pairs let the learners play the snake and ladder game below. While they play the game you can circulate and speak to them about the moves they are making using mathematical language.



3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Write these numbers from the greatest to the smallest: 53, 59, 54, 56. (59, 56, 54, 53)
2 Give two numbers that are greater than 56, but not bigger than 60. (any two of 57, 58, 59, 60)
3 Give two numbers that are smaller than 54, but not smaller than 51. (any two of 51, 52, 53)
4 Write the number name for the number that is greater than 54, but smaller than 56. (fifty-five)
5 What is the value of the 3 in 73? (3)
6 What is the value of the 7 in 75? (70)
7 Complete the following:
   a 7 less than 80 is ___ (73)
   b 7 more than 57 is ___ (64)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Complete the pattern: 68, 69, __, 71, __, __. (70, 72, 73)
2 What is 7 less than 75? (68)
3 What is two more than 71? (73)
4 Thabo has 60 marbles. He finds 7 more. How many does he now have altogether? (67)

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 counted in 2s, compared numbers and added and subtracted 7 from various numbers

Lesson 13: Building up and breaking down numbers

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.2 Count forwards and backwards 1.4 Describe, compare and order numbers 2.2 Number patterns
Lesson Objective: Learners count forwards and backwards in fives and tens from any number – they use this to investigate ways of building up and breaking down numbers.
Lesson Vocabulary: forwards, backwards, less than, more than, between, multiples, pattern, tens, fives, number line, counting
Resources: 100 board (see *Printable Resources*)
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is 2 less than:	**Answer**		What is 2 less than:	**Answer**
1	4	2	**6**	14	12
2	2	0	**7**	22	20
3	10	8	**8**	16	14
4	12	10	**9**	24	22
5	20	18	**10**	18	16

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson learners consolidate their understanding of counting forwards and backwards in fives and tens using numbers to 100 as well as finding numbers that are 10 more or 10 less than a given number.

Today we are learning to count in fives and tens up to 100.

Activity 1: Whole class activity

- Draw a fives number line from 0 to 50 on the board.

- Ask the learners to count in fives from 5 to 50.
- As they count, circle the multiples of five on the number line. (5, 10, 15, 20, 25, 30, 35, 40, 45, 50)
- Discuss why you have circled these numbers. (We are counting in 5s.)
- Make sure that learners understand and can identify numbers that are *between* given numbers, e.g. 2 is between 0 and 5, 34 is between 30 and 35, and so on.

Activity 2: Learners work in pairs

- Give each pair a 100 board.
- Revise with the learners counting in 10s to 100 using the board as an aid.
- Ask each pair to show each other the number 40 on the number board. (4 groups of 10)
- Ask: **What is 10 more than 40?** They should show each other the answer using the number board. (50)
- Ask: **What is 10 less than 40?** They should show you the answer using the number board. (30)
- Repeat 10 more and 10 less using 30, 50 and 90.
- If learners can answer without using the number board this is good. Encourage them to draw on their number knowledge and not be bound to point on the number board.

Activity 3: Whole class activity

Copy the following number line onto the board

- Ask learners to count in tens from 0 to 100, pointing at each multiple of 10 on the number line.
- Ask: **What do you notice that is the same on the 100 board and the number line?** (The learners should notice the patterns of 10 are on both.)
- Write the following questions on the board:
  10 + 10 =
  60 + 10 =
  30 + 10 =
- Ask the learners to solve these questions using the number line. Show the learners how to add 10 and 10 by moving forwards along the number line. Repeat with 60 + 10 = and 30 + 10 =
- Use the number line to show the learners how we get to the answer.
- Write the following questions on the board:
  50 – 10 =
  30 – 10 =
  10 – 10 =
- Using the number line point to 50. Show the learners how we subtract 10 from 50 by moving backwards along the number line. Repeat with 30 – 10 = and 10 – 10 =

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Circle the following numbers on the number line 10, 30, 40, 70, 90.

2 Solve the following:

a 30 + 10 = __ (40)

b 50 + 10 = __ (60)

c 90 + 10 = __ (100)

d 90 – 10 = __ (80)

e 60 – 10 = __ (50)

f 40 – 10 = __ (30)

3 Complete the following:

a 90 + (10) = 100

b 50 + (50) = 100

c 40 + (60) = 100

d 30 + (70) = 100

e 20 + (80) = 100

4 HOMEWORK ACTIVITY (5 MINUTES)

Complete the following:

a 60 + 10 = (70)

b 40 + 10 = (50)

c 70 – 10 = (60)

d 30 – 10 = (20)

e 20 + (80) = 100

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 counted and compared numbers in 5s and 10s up to 100. We have also made the number 100 using multiples of 10.

Lesson 14: 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 1.2 Count forwards and backwards 1.4 Describe, compare and order numbers 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 assessment* (see checklist below).

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:

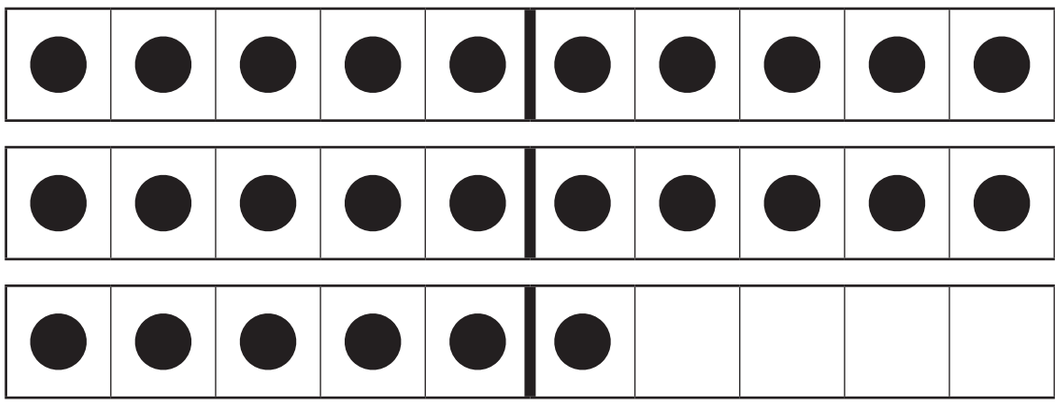
- use this opportunity to reflect on different methods used by learners (allow some learners to write their solutions on the board.
- speak about misconceptions that may have arisen in learners' responses.

Learners may be experiencing difficulty with place value. If this is evident revisit tens and ones making use of the ten frame and ones. Let the learner work with the ten frame and bottle tops and show you a variety of numbers.

3 ASSESSMENT (23 MARKS)

WRITTEN

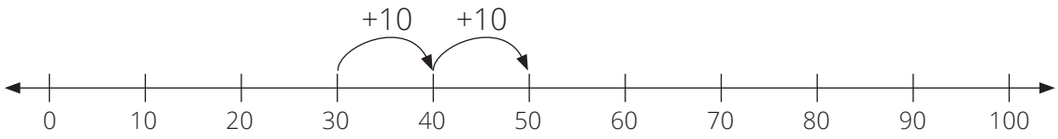
1 Show the number 26 by drawing the dots on the ten frames. (2)



2 Circle the biggest number, and make a cross over the smallest number. (2)

48	21	19	38	14	12	44

3 Show 30 + 20 using the number line below: (1)



4 Fill in the missing numbers: 30, 40, _(50)_, _(60)_, _(70)_, 80, _(90)_, 100. (4)

5 Write these numbers from the greatest to the smallest: 93, 99, 94, and 96 (99, 96, 94, 93) (1)

6 Give two numbers that are greater than 97, but not bigger than 100. (98, 99) (1)

7 Give two numbers that are smaller than 74, but not smaller than 71. (71, 72, 73) (1)

8 What is the value of the 6 in 56? (6) (1)

9 What is the value of the 8 in 85? (80) (1)

10 Complete the table: (6)

7 less than	7 more than
10___ (3)	20__ (27)
20___(13)	90 __(97)
30 ___(23)	40__ (47)

ORAL

CAPS: Patterns and algebra **Activity: Observe learners' ability to copy, extend and describe simple number sequences to 10.**	**Mark: 7**

Mark	Criteria – Checklist: (1 mark for each criterion achieved)
1	Able to count forwards in 5s up to 50
1	Able to count forwards in 10s up to 100
1	Able to copy number sequences of 5s and 10s up to 100
1	Able to extend/complete number sequences of 5s given a starting point going forwards.
1	Able to extend/complete number sequences of 10s given a starting point going forwards.
1	Able to extend/complete simple number sequences of 5s backwards given a starting point.
1	Able to extend/complete simple number sequences of 10s backwards given a starting point.

Lesson 15: Consolidation: Numbers up to 100

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
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: To revise place value with numbers up to 100.
Lesson Vocabulary: forwards, backwards, less than, more than, biggest, smallest
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week we have continued to read, order and compare numbers up to 100. We have counted in twos, fives and tens up to 100. Furthermore, we have spent time practising more/less using a variety of numbers but focussing in particular on the number 7 and 10.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may have experienced difficulties with counting in 2s, 5s, 3s, 4s and 10s from multiples of each number. For example: 4 more/less than 40. This shows you as the teacher that the learner does not have a sound understanding of numbers and place value. In order to help the learner/s revisit the how to show the value of numbers using ten frames. You may want to revisit some of the activities done this week.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about counting in 2s, 5s, 7s and 10s to 100.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

1 Complete:
- **a** 40 + __ = 100 (60)
- **b** 30 + __ = 100 (70)
- **c** __ + 50 = 100 (50)

2 Complete:
- **a** Which number is two less than 14? __ (12)
- **b** Which number is two more than 26? __ (28)
- **c** Which number is five more than 70? __ (75)
- **d** Which number is ten more than 90? __ (100)
- **e** Which number is five less than 55? __ (50)
- **f** Which number is ten less than 100? __ (90)

3 3 more than 30 is (33).
4 Fill in the missing numbers: 30, 40, _ (50) _, _ (60) _, _ (70) _, 80, _ (90) _, 100.
5 Complete:
   a 6 groups of 10 is ___ (60)
   b 36 has _ (3)__groups of 10 and_(6)__ones
   c 48 has __ (4)_groups of 10 and __(8)__ones
6 Complete the pattern: 40, 50, __, 70, __, __. (60, 80, 90)
7 What is 3 less than 30? __ (27)
8 What is 5 more than 75? __ (80)
9 7 groups of 10 is ___. (70)

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 revised counting in 2s, 5s, 7s and 10s up to 100.

Week 4

Lesson 16: Addition and subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.13 Addition and Subtraction
Lesson Objective: Solve addition and subtraction problems using a place value table.
Lesson Vocabulary: More, less, building up, breaking down, addition, subtraction., tens, ones, place value,
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What number comes just before:	**Answer**		What number comes just before:	**Answer**
1	2	1	**6**	1	0
2	4	3	**7**	14	13
3	10	9	**8**	18	17
4	5	4	**9**	13	12
5	20	19	**10**	100	99

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the first of two lessons in which learners are taught about simple addition and subtraction of tens and ones.

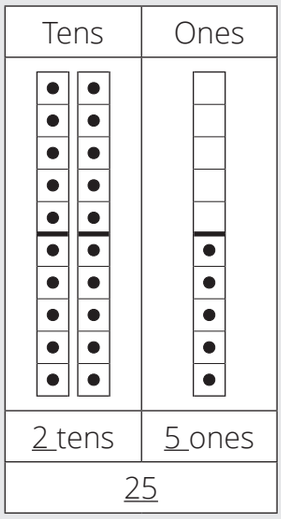
Today we are learning to add and subtract two numbers using our base ten kits. The printed ten is a ten and bottle tops are ones.

Activity 1: Whole class activity

- Write the following on the board and ask the learners to complete the sums:
- 3 tens + 6 ones =
- 44: ___ tens + ___ ones = ___
- 62: ___ tens + ___ ones = ___

Activity 2: Whole class activity

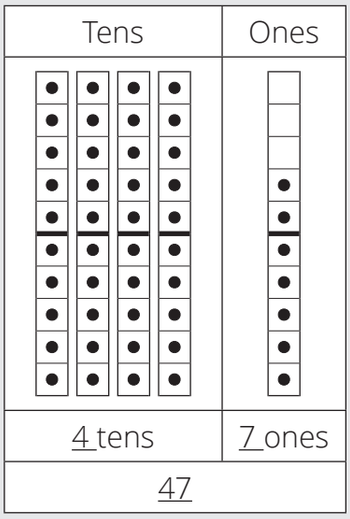
- Draw a place value table on the board.
- Using the base ten kit, show 25 on the place value board.



- Write 20 + 5 = on the board. Use the place value table to illustrate how we can work with these numbers.
- Ask: **How many tens do we have?** (2) **and how many ones?** (5) **How much do we have altogether?** (25)
- It is important not to count in ones. When counting in the tens column count one, two, 2 tens is 20. Move onto the ones and count 1, 2, 3, 4 and 5. 20 and 5 is 25.
- Move the printed tens when you count the tens and move the bottle tops when you count the bottle tops.
- Write 25 – 20 = on the board.
- Use the same place value table to illustrate this.
- Ask: **How many tens do we have?** (2) **and how many ones?** (5) **What do we want to take away?** (20) **So how many tens do we need to take away? (2) How much is left over?** (5)
- It is important not to count in ones. When counting in the tens column to take away the two tens, count take away one, two, 2 tens is 20. I take away 20 (2 tens). I am left with 5 ones.
- Move the printed tens when you count the tens and move the bottle tops when you count the bottle tops.
- Repeat these steps this using the following numbers:
  - 20 + 8 = 28, 28 – 20 = 8
  - 30 + 3 = 33, 33 – 30 = 3
  - 40 + 2 = 42, 42 – 2 = 40
- Remember to count in tens when you take away tens and count in ones when you take away ones.

Activity 3: Whole class activity

- Read the following word problem to the learners;
- **Thabo has 40 marbles. He wins another 7. How many marbles does he have altogether?**
- Use the base ten kit to work out the answer.
- Ask the learners **how do we make 40?** (4 tens – we need 4 printed tens).
- This is the amount **of marbles which Thabo has. He wins 7. How many do we add?** (7 ones. We can add 7 bottle tops to the 4 tens.)
- **How many marbles does he have altogether?** (40 + 7 = 47)
- Using the printed tens and bottle tops in the place value table we can show this sum in the following way:
- Draw the place value table on the board.
- Put the tens and units onto the board to show how many marbles Thabo has: he has 40 + 7 marbles:



- Ask: **How many marbles does Thabo have altogether?** (47)
- Write the sum on the board under the place value table: 40 + 7 = 47

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: For this activity, learners need to use their base ten kits to work with tens and units. They record the numeric values in the place value table when they have completed the work with the base ten kit. The solutions shown below show the display of the number using the base ten kit.

1 What is …?

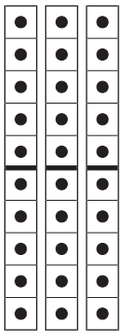
a 5 tens + 1 one = __ (51)

b 4 tens + 2 ones = __ (42)

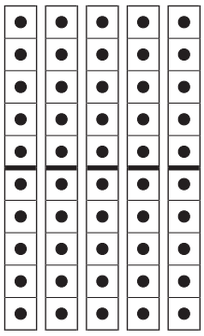
c 6 tens + 8 ones = __ (68)

2 Calculate using your base ten kit. Record the answers in the place value tables.

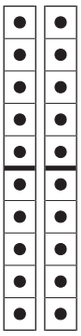
a 30 + 4 = __ (34)

Tens	Ones
	
(3) tens	(4) ones
(34)	

b 50 + 8 = __ (58)

Tens	Ones
	
(5) tens	(8) ones
(58)	

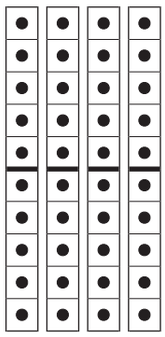
c 26 – 6 = ___ (20)

Tens	Ones
	
(2) tens	(0) ones
(20)	

4 HOMEWORK ACTIVITY (5 MINUTES)

1 5 tens + 7 ones = ____. (57)

2 What sum is shown in the place value table? Write it into the table at the bottom.

Tens	Ones
	
(4) tens	(3) ones
(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 solved addition and subtraction questions using tens and ones.

Lesson 17: Addition and subtraction with number lines

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.13 Addition and Subtraction
Lesson Objective: Solve addition and subtraction problems using a number line
Lesson Vocabulary: More, less, number line, addition, subtraction, tens, ones, place value, total value, digit, between, add, subtract
Resources: Ten frames (see *Printable Resources*)
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is 5 more than:	**Answer**		What is 5 less than:	**Answer**
1	45	50	**6**	5	0
2	60	65	**7**	10	5
3	50	55	**8**	20	15
4	30	35	**9**	45	40
5	25	30	**10**	25	20

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the second of two lessons in which learners are taught about simple addition and subtraction of tens and ones. When we work with tens we can count them as tens. We use printed tens to count tens and bottle tops to count ones.

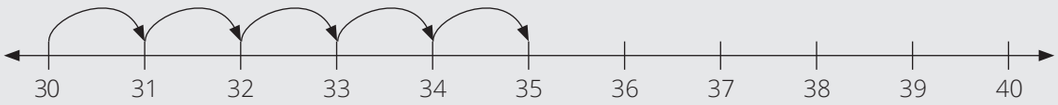
Today we are learning to add 2-digit numbers using number lines.

Activity 1: Whole class activity

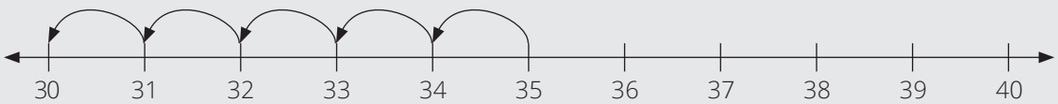
- Write the following numbers on the board: 70, 71,72,73,74 and 75.
- Discuss the place value and total value of the digits in the numbers between 70 and 75. These repetitive questions allow learners to consolidate their understanding of place value. Allow learners to ask the questions as well if possible. This will really help them consolidate their knowledge. Guide them if necessary.
- Ask the learners the following questions about the numbers 70, 71, 72, 73, 74, and 75:
  - **How many tens in 71?** (seven)
  - **How many 1s in 71?** (1)
  - **How many tens in 75?** (seven)
  - **How many 1s in 75?** (5)
- Ask similar questions for the numbers 70, 72, 73 and 74.

Activity 2: Whole class activity

- Draw the number line on the board.



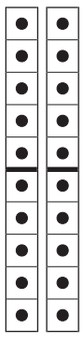
- Write the following sum on the board: 30 + 5 = 35.
- Ask: **Where do we start on the number line?** (30) **How many ones do I add to 30?** (5)
- Use the number line to illustrate 30 + 5 = 35.
- Move onto illustrating that 35 – 5 = 30.



- Ask the learners **where do we start on the number line?** (35) **How many ones do I subtract from 35?** (5)
- Use the number line to illustrate 35 – 5 = 30.
- It is important that you show the learners the movement along the number line.
- Repeat using: 40 + 7 = 47 and 47 – 7 = 40.

Activity 3: Whole class activity

- Read the following word problem to the learners;
- **Sue has 25 sweets. She eats 5 of them. How many sweets does she have left?**
- Use the base ten kit to lay out the number 25.
- Draw a place value table on the board.
- Ask: **How do we make 25 with the base ten kit?** (2 printed tens and 5 bottle tops).
- Place the printed tens and bottle tops in the place value table on the board.

Tens	Ones
	
2 tens	5 ones
25	

- This is the amount of sweets **which Sue has. She eats 5. How many sweets does she have left?**
- **Use the bottle tops to t**ake away the 5 ones. Ask: **How many are left?(20)**

- Write 25 – 5 = 20 under the place value table.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Complete the following:

a 30 + 9 = __ (39)

b 5 tens + 3 ones = __ (53)

c Write the answer in words: 7 tens + 6 ones = _____ (seventy six)

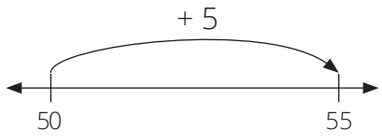
d 6 tens + 5 ones = ___ (65)

e 47: ___ tens + ___ ones = ___ (4 tens + 7 ones)

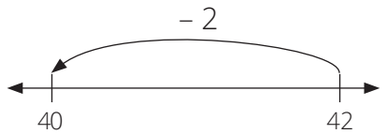
f 72: ___ tens + ___ ones = ___ (7 tens + 2 ones)

2 Using a number line show the following:

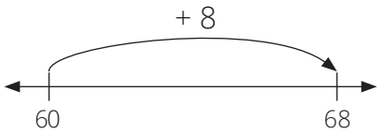
a 50 + 5 = __ (55)



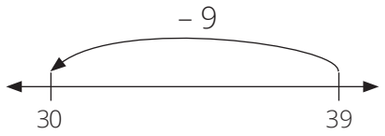
b 42 – 2 = __ (40)



c 60 + 8 = __ (68)



d 39 – 9 = __ (30)

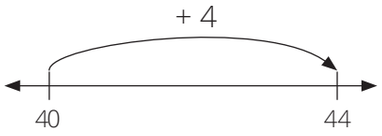


4 HOMEWORK ACTIVITY (5 MINUTES)

1 Write the answer in words: 6 tens + 3 ones = _____. (Sixty-three)

2 5 tens + 7 ones = ___. (57)

3 Show 40 + 4 = _____ using a number line: (44)



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 solved addition and subtraction questions using number lines.

Lesson 18: 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, 1.13 Addition and Subtraction
Resources: Printable assessment in teacher's resources, Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable 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 (15 MARKS)

Note: Learners need their base ten kits to do this assessment. The solutions shown here show the base ten kit representations of the answers. Learners are NOT expected to draw these. They must work with the kits and record the numeric answers in the place value tables only.

WRITTEN

1 What is …? (6)

a 7 tens + 1 one = __ (71)

b 5 tens + 4 ones = __ (54)

c 9 tens + 9 ones = __ (99)

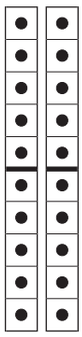
d 8 tens + 5 ones = ___ (85)

e 34 = ___ tens + ___ ones (3, 4)

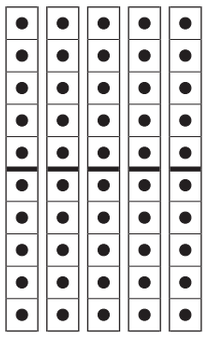
f 42 = ___ tens + ___ ones (4, 2)

2 Calculate using your base ten kit. Record the answers in the place value tables.
$(3 \times 3 = 9)$
(Learners only record the numbers in the place value table but check that they use their base ten kits if they need to when they work out the answers.)

a 20 + 4 = ___ (24)

Tens	Ones
	
2 tens	4 ones
24	

b 50 + 8 = ___ (58)

Tens	Ones
	
5 tens	8 ones
58	

c 16 – 6 = ____ (10)

Tens	Ones
	
1 ten	0 ones
10	

Unit 2 Introduction

Unit 2 introduces addition and subtraction of single-digit and 2-digit numbers as well as multiples of 10. Learners will solve addition and subtraction problems using a place value table and number lines. This builds on unit 1 where place value was taught. The lessons in this unit may seem quite repetitive but this is intentional in order to help children practise solving addition and subtraction problems. As you work through these lessons, remember to refer back to previous lessons in order help learners to make connections between concepts – they need to understand that they are working with tens and units in the base ten number system. Working with the base ten kits will help them to do this.

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 in this unit.
- **Procedural fluency**: Learners will find using a place value table and number lines will help them to solve addition and subtraction problems.
- **Strategies**: Learners will discover that addition and subtraction problems can be solved using a place value table and number lines.
- **Reasoning**: Learners are given opportunities to reason mathematically when they give explanations of the ways in which they solve addition and subtraction problems and when they verbalise their understanding of the relationship between tens and ones.

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

- **Practising procedures**: Learners practise procedures through the repetitive nature of the lessons in this unit. This helps them to create connections between numbers and operations.
- **Purposeful assessment**: In this unit, learners are purposefully assessed to ensure that they have a strong number sense. This number sense will be shown by using tens and ones to add and subtract – in other words use place value to when adding or subtracting.
- **Speaking Mathematics:** Learners are encouraged to use the vocabulary of numbers when they speak about what they are doing – they should use all the vocabulary related to adding and subtracting single digit and 2-digit numbers.

Lesson 19: Addition and subtraction of multiples of 10

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To add and subtract up to 100 using multiples of 10.
Lesson Vocabulary: add, subtract, take away, multiples of 10
Resources: 10 printed tens per learner (see *Printable Resources*), bottle tops, place value table (see *Printable Resources*), 100 board (see *Printable Resources*)
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is one more than:	**Answer**		What is one less than:	**Answer**
1	9	10	**6**	5	4
2	12	13	**7**	2	1
3	10	11	**8**	10	9
4	20	21	**9**	12	11
5	14	15	**10**	15	14

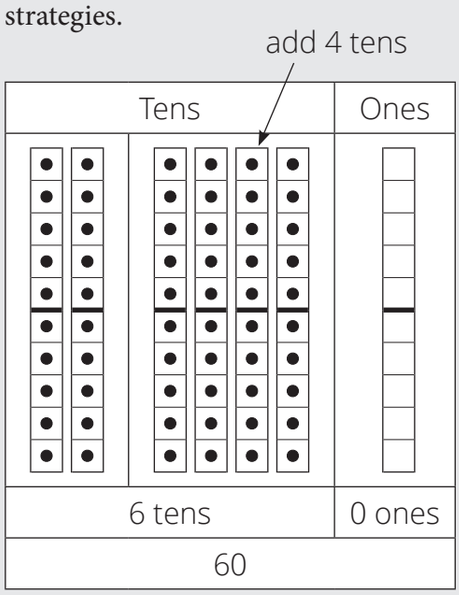
2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the first of three lessons on addition and subtraction. These lessons involve preparation for addition and subtraction without carrying or borrowing. This lesson involves addition and subtraction of multiples of 10. The learners have spent time in the previous unit counting in 10s. They should be comfortable with counting in tens. The two numbers that they add will be multiples of 10. Remind learners about multiples of 10 as you work through this lesson. At this stage, learners are expected to recognise the multiples of 10 as a group of 10 and subitise (instantly recognise the tens as 'tens' when they see concrete representations or drawings of tens. Encourage learners not to count the ones that make up a ten, but rather to subitise the tens (recognise that a printed 10 is a ten.

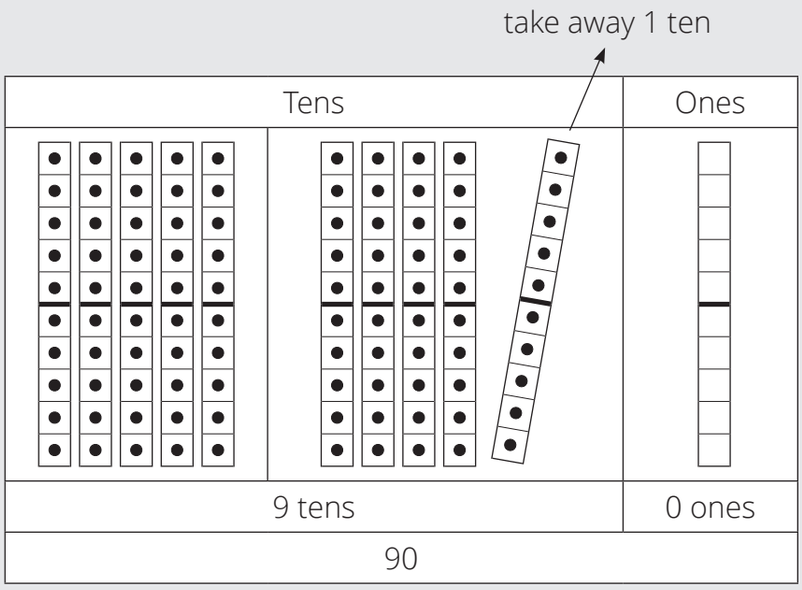
Today we are learning to add and subtract multiples of 10.

Activity 1: Whole class activity

- Write 20 + 40 = on the chalkboard.
- Let learners work on the question individually. (Walk around and check who is using which strategy.)
- Some learners may use a place value table with printed tens from their experience with a place value table by now, others may use a number line, then there are learners who will find the answer mentally. Choose some learners with different strategies to come to the board and present their strategies to the class.
- Let learners discuss the strategies presented and the answer comparing their own strategies.



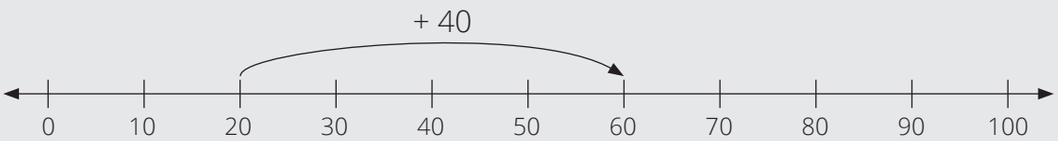
- Draw the place value table as shown above on the chalkboard for correction.
- Show the learners 20 as 2 tens and place these in the tens column of the place value table. Then explain to the learners that **we will be adding 40 as 4 tens to the tens place**. Place the 4 tens next to the 2 tens as shown in the diagram above.
- Let all the learners reproduce the same situation with their ten frames.
- Discuss with the learners that we are adding 20 and 40. When we add we want to find out how much we have altogether?
- Ask: **How many tens are there? What's the answer?** (2 tens plus 4 tens which is 6 tens, which is 60)
- Show the learners the connection between the number sentence and the place value table and the ten frames and bottle tops.
- Ask learners to calculate 70 + 30 = (100) for practice.
- Write 100 – 10 = _____ on the chalkboard.
- Refer to the place value table. Explain to the learners that we **will be subtracting 10 from 100 using our bottle tops.**



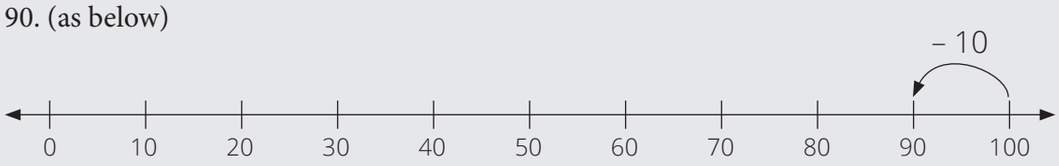
- Let learners work on the problem individually first. After having worked on addition using a place value table, more learners may start using this place value table strategy.
- Let some learners present their strategies on the chalkboard.
- As the whole class correction, ask: **How many tens make up 100?** Place 10 ten frames on the place value table as shown above. Count the tens as you place them on the place value table.
- Let all learners reproduce the same situation with their own base ten kits.
- Discuss with the learners: **We are subtracting 10 from 100**. Remove one ten and as you do say: **I am subtracting 10 from 100.**
- Ask the learners to count in 10s on their own displays. Ask: **How many 10s are left?** The answer is 9 tens which is 90.
- Show the learners the connection between the number sentence and the place value table, and the ten frames and bottle tops. 100 – 10 = 90
- Repeat these steps using the example 80 – 50 = (30).

Activity 2: Whole class activity

- Draw a number line on the board before the lesson (labelled in 10s).
- Count in 10s with the class, forwards and backwards using the tens number line on the board.
- Write 20 + 40 = on the board
- Discuss with the learners that to solve this addition number sentence we start at 20. Ask the learners **how many groups of 10 make 40?** (4). Starting at 20 draw 4 jumps of 10 so that you end at 60. (as below)



- Write 100 – 10 = on the board
- Discuss with the learners that to solve this subtraction number sentence **we will start at 100 and subtract one group of 10. S**tarting at 100 draw 1 jump of 10 so that you end at 90. (as below)



Activity 3: Whole class activity

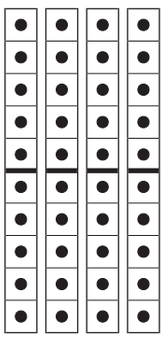
- Write on the board:
  30 + 10 = (40)
  20 – 10 = (10)
  40 + 10 = (50)
  70 – 10 = (60)
- Ask the learners to do these calculations using either a number line or a place value table.
- Let individual learners come up to the board and solve these.
- Encourage each learner to explain the steps. In this way you are able to check their understanding.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

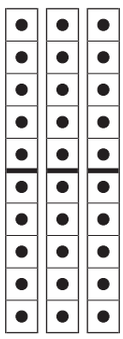
NOTE: Learners should use their own base ten kits while they work through this activity. The solutions show the base ten kits working as well as the numeric solutions in the place value table.

Calculate using your base ten kit. Record your answer in the place value table.

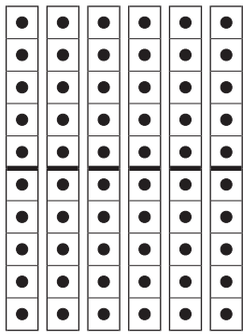
1 30 + 10 = ___ (40)

Tens	Ones
	
(4) tens	(0) ones
(40)	

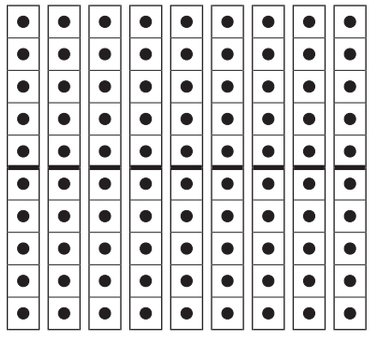
2 40 – 10 = ___ (30)

Tens	Ones
	
(3) tens	(0) ones
(30)	

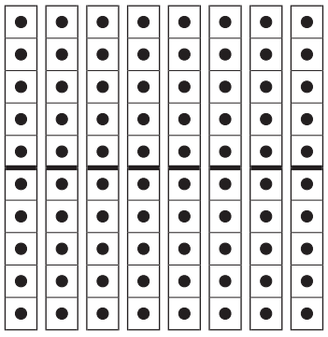
3 80 – 20 = __ (60)

Tens	Ones
	
(6) tens	(0) ones
(60)	

4 60 + 30 = ___ (90)

Tens	Ones
	
(9) tens	(0) ones
(90)	

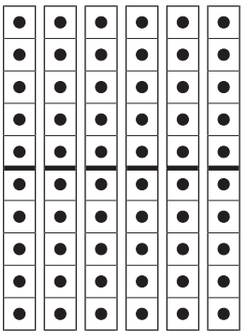
5 40 + 40 = ___ (80)

Tens	Ones
	
(8) tens	(0) ones
(80)	

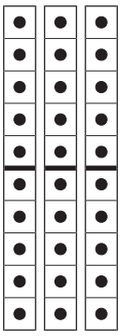
4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate. Record your answer in the place value table.

1 50 + 10 = ___ (60)

Tens	Ones
	
(6) tens	(0) ones
(60)	

2 40 – 20 = ___ (20)

Tens	Ones
	
(2) tens	(0) ones
(20)	

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 solved addition and subtraction sums up to 100 using multiples of 10.

Lesson 20: Consolidation: Addition and subtraction

Teacher's notes		
This lesson allows for consolidation of the previous days' lesson content		
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction		
Lesson Objective: To add and subtract up to 100 using multiples of 10		
Lesson Vocabulary: add, subtract, multiples of 10.		
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).		
Date:	Week	Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the focus has been on addition and subtraction. We began by revising place value. We moved onto using a number line and the place value table to solve addition and subtraction problems. In the previous lesson we began solving addition and subtraction problems using multiples of ten.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may have experienced difficulties with place value and/or multiples of 10. You can revisit these concepts by making use of the place value table and ten frames. Pay attention to the pattern of 10s and groups of 10. For example 70 is 7 groups of 10.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about addition and subtraction.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

NOTE: Learners should use their own base ten kits while they work through this activity. The solutions show the base ten kit displays as well as the numeric solutions.

1 Complete:

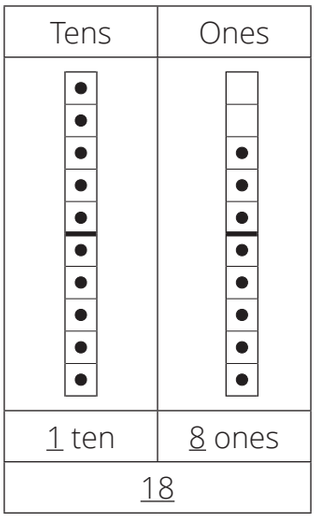
a tens + 7 ones = _____(47)

b 74: ___ tens + ___ ones = ___ (7, 4, 74)

c 55: ___ tens + ___ ones = ___ (5, 5, 55)

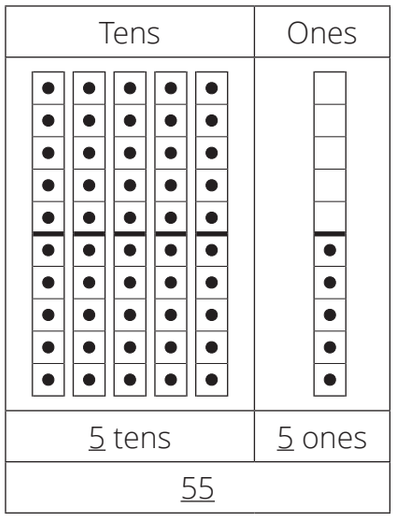
2 Use your base kits to show the numbers, then complete the place value tables.

a 18



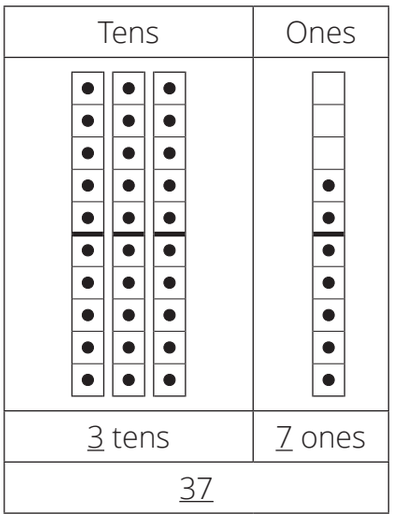
Tens	Ones
1 ten	8 ones
18	

b 55



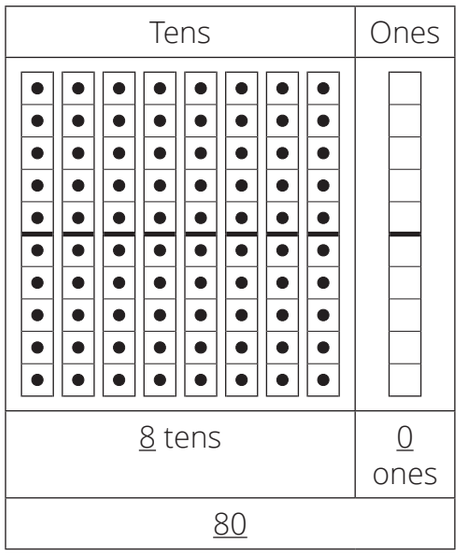
Tens	Ones
5 tens	5 ones
55	

c 37



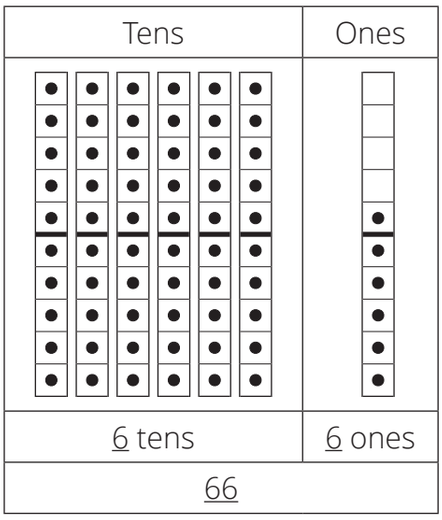
Tens	Ones
3 tens	7 ones
37	

d 80



Tens	Ones
8 tens	0 ones
80	

e 66



Tens	Ones
6 tens	6 ones
66	

3 Complete the following:
- **a** 20 + 10 = _____ (30)
- **b** 40 – 20 = ____ (20)
- **c** 70 – 30 = _____ (40)
- **d** 90 + 10 = _____ (100)
- **e** 70 – 60 = ____ (10)

4 What is 10 more than:
- **a** 20 ____ (30)
- **b** 10 ____ (20)
- **c** 40 ____ (50)
- **d** 50 ____ (60)
- **e** 70 _____ (80)

5 What is 10 less than:
- **a** 10 ____ (0)
- **b** 30 ____ (20)
- **c** 60 ____ (50)
- **d** 80 ____ (70)
- **e** 100 ____ (90)

5 REFLECTION AND SUMMARY OF LESSON

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

Today we revised place value and adding and subtracting 10 and multiples of 10.

Week 5

Lesson 21: Addition and subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Addition and subtraction of 2-digit numbers and one-digit numbers.
Lesson Vocabulary: Addition, subtraction, take away, digit, 2-digit, single-digit, place value, tens, ones,
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What number comes just after:	**Answer**		What number comes just after:	**Answer**
1	4	5	**6**	18	19
2	3	4	**7**	16	17
3	9	10	**8**	29	30
4	15	16	**9**	17	18
5	19	20	**10**	99	100

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

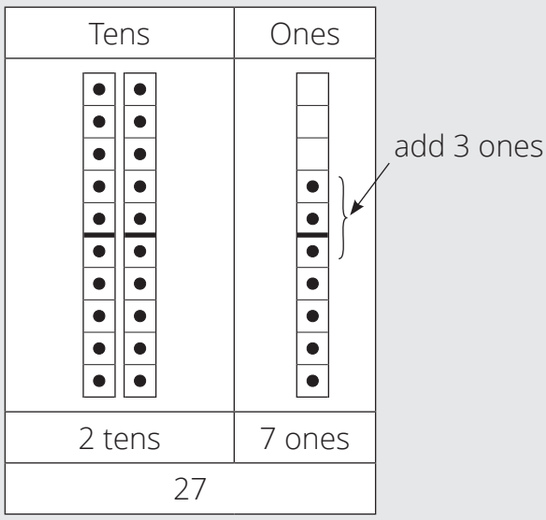
In the previous lesson learners were introduced to addition and subtraction of multiples of 10, for example 20 + 30 = and 90 – 10 = . In this lesson we move onto addition and subtraction of 2-digit numbers and single-digit numbers without carrying, for example 24 + 3 = . We continue to use the place value table and ten frame diagrams in order for learners to learn how to do operations and build their understanding of numbers using concrete aids (base ten kit) and drawings.

Today we are learning about addition and subtraction of 2-digit and 1-digit numbers.

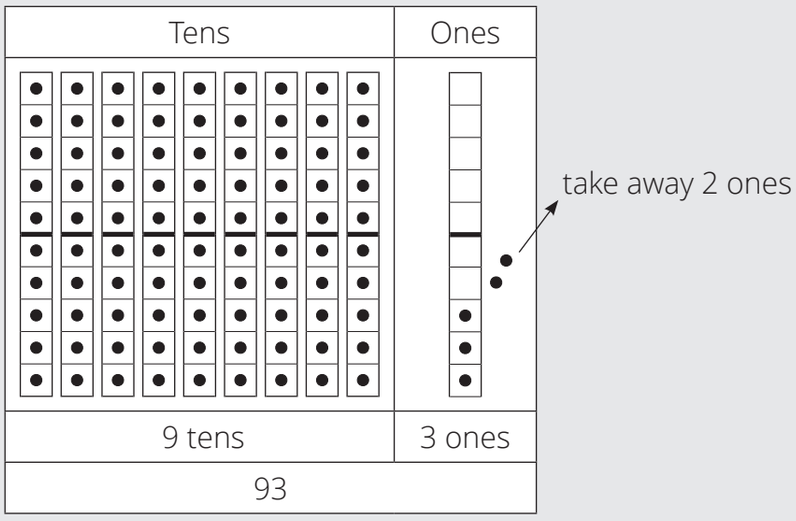
Activity 1: Whole class activity

- Write 24 + 3 = on the board.
- Give the learners a few minutes to work on the problem individually.
- Ask learners to discuss their strategies and answers with the person sitting next to them.
- Let some pairs present their work on the chalkboard.

- For corrections show how to work in a place value table as follows:
- Use base ten kits to show the calculation on the place value table.



- In the first put 2 tens and 4 ones (bottle tops) in the place value table. Add 3 ones by putting an extra 3 bottle tops in the ones place on the place value table.
- With the learners work out how many ones there are now. **There are 7 ones altogether.**
- The answer to 24 + 3 is 27, which is 2 tens and 7 ones.
- Look at the tens place – that did not change – no tens were added.
- This calculation is preparing the learners for the column method which will be introduced in the next unit.
- Write 95 – 2 = on the board.
- Use base ten kits to show the calculation on the place value table.

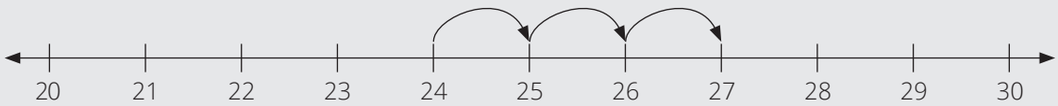


- In the first step, use tens and bottle tops to show the number 95 in the place value table – 9 tens and 5 ones.
- You need to subtract 2.
- Take away 2 ones (remove two bottle tops) as shown in the diagram above.
- With the learners find out how much is left over. There are 3 ones left over.

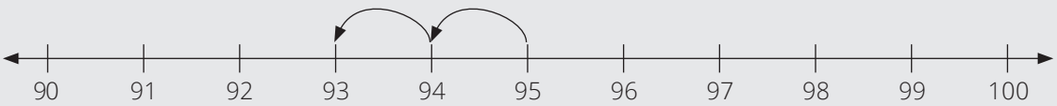
- So 95 – 2 = 93, the answer is 9 tens and 3 ones, which is 93.
- Look at the tens place – that did not change – no tens were subtracted.
- This calculation is preparing the learners for the column method which will be introduced in the next unit.

Activity 2: Whole class activity

- In this activity we solve 2-digit and single digit problems using a number line.
- We will use the same problems as activity 1.
- Draw a number line from 20 to 30 on the board as shown below.



- Write 24 + 3 = on the board.
- Discuss with the learners how to solve this, if you use a number line.
- Show the learners how we move forwards 3 spaces from 24 to 27 on the number line.
- So 24 + 3 = 27
- Write 95 – 2 = on the board
- Draw a number line from 90 to 100 on the board as shown below

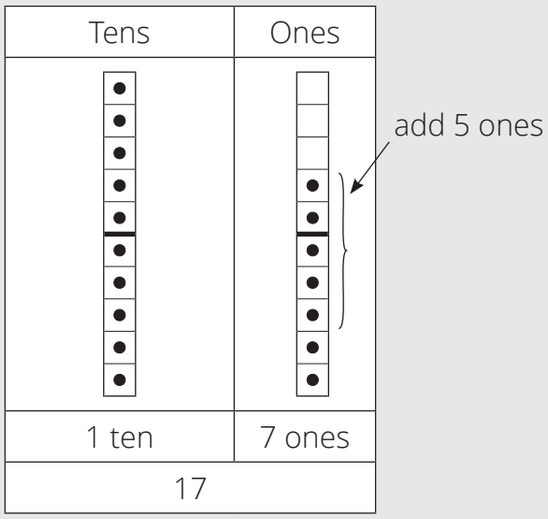


- Discuss with the learners how to solve this.
- Show the learners how we move backwards 2 spaces from 95 to 97 on the number line.
- So 95 – 2 = 93.

Activity 3: Whole class activity

- In this activity you will be solving a word problem with your learners.
- Word problems are a challenging topic for learners. However, if we teach them properly, learners will be better prepared and able to solve them.
- Read the following word problem to your learners**. Sarah has 10 sweets. Vusi gives her another 5 sweets. How many sweets does she have altogether?**
- The first step is to understand the question properly.
- When solving word problems there are four main steps:
  - Step 1: Understand the problem,
  - Step 2: Devise a plan,
  - Step 3: Carry out the plan,
  - Step 4: Look back and check what you have done.
- In step 1, we write the word problem on the board. Next, we read the problem. Then, we let the learners read the problem themselves in order to understand the problem.
- After that we underline the numbers. These are 10 and 5.

- Let learners discuss which operation they will use, addition or subtraction to solve this problem.
- Learners write a number sentence in their classwork books that expresses the solution to the problem.
- Check who wrote the correct number sentence and who did not.
- Write a number sentence as 10 + 5 = 15 on the chalkboard for confirmation of the correct solution.
- Let learners work on the problem using any strategies they want to use.
- You could also display the answer using a place value table. As correction, present the diagram below using base ten kits to show the problem in a diagrammatic form

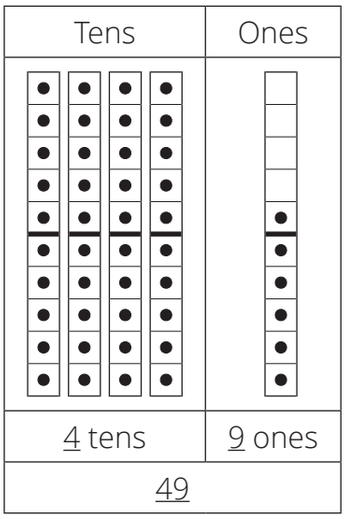


3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Learners should use their own base ten kits while they work through this activity. Note also that the solutions below in the lesson plans show the base ten kit solutions. Learners should use their base ten kits to find the solutions but they must record their numeric answers only using the place value tables.

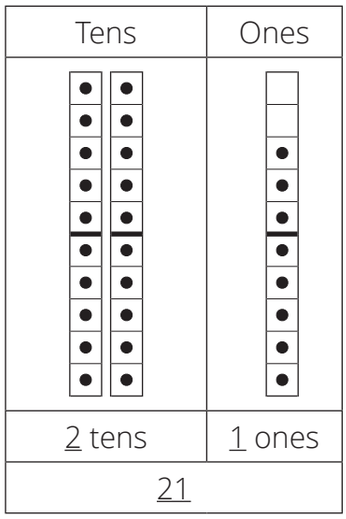
Calculate using your base ten kit. Record your answers in the place value tables.

a 43 + 6 = ___ (49)



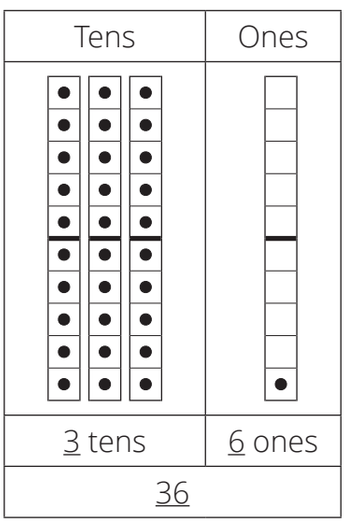
Tens	Ones
4 tens	9 ones
49	

b 28 – 7 = ___ (21)



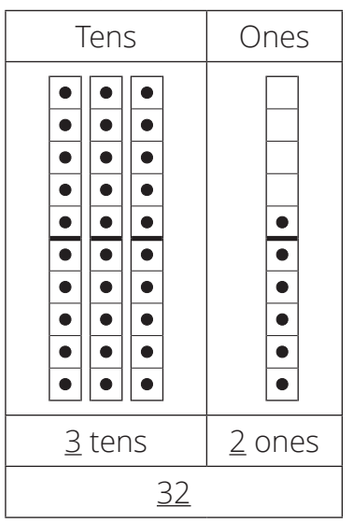
Tens	Ones
2 tens	1 ones
21	

c 31 + 5 = ___ (36)



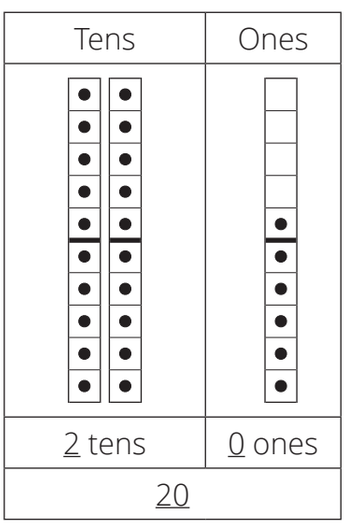
Tens	Ones
3 tens	6 ones
36	

d 36 – 4 = ___(32)



Tens	Ones
3 tens	2 ones
32	

e Sam has 26 marbles. He loses 6. How many marbles does he have left? (20)

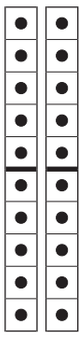


Tens	Ones
2 tens	0 ones
20	

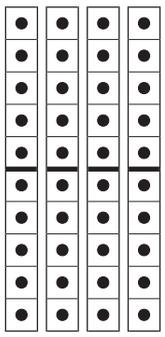
4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate using your base ten kit. Record your answers in the place value tables.

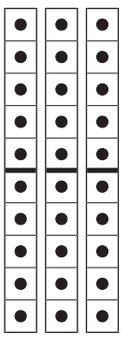
a 23 + 5 = ___ (28)

Tens	Ones
	
2 tens	8 ones
28	

b 47 – 7 = ___ (40)

Tens	Ones
	
4 tens	0 ones
40	

c Tom has 32 pencils. Gabi gives him another 4 pencils. How many pencils does he have altogether? (36)

Tens	Ones
	
3 tens	6 ones
36	

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 solved addition and subtraction problems. In the questions we added and subtracted one-digit numbers to/from two-digit numbers.

Lesson 22: Addition and subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To solve addition and subtraction problems with 2-digit numbers and multiples of 10.
Lesson Vocabulary: addition, subtraction, multiples, away, forwards, backwards, 2-digit, add, subtract, tens, ones, one-digit, place value,
Resources: 100 board (see *Printable Resources*), Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

21 MENTAL MATHS (10 MINUTES)

	What is 10 more than:	**Answer**		What is 10 less than:	**Answer**
1	5	15	**6**	50	40
2	3	13	**7**	30	20
3	7	17	**8**	20	10
4	0	10	**9**	19	9
5	30	40	**10**	70	60

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

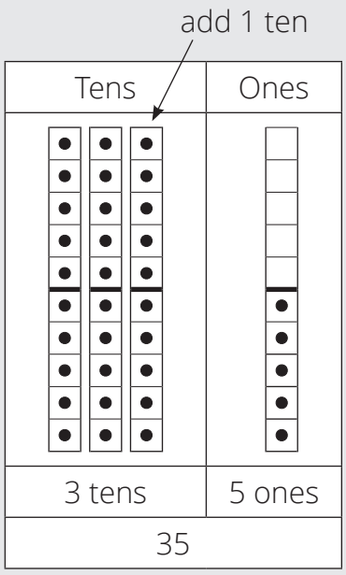
In the previous two lessons learners were introduced to the addition and subtraction of multiples of 10 and 2-digit numbers and one-digit numbers. In this lesson we move onto the addition and subtraction of 2-digit numbers and multiples of ten. For example, 25 + 10 = and 94 – 20 = . This lesson combines the concepts and strategies covered in the previous two lessons. We continue to use the place value table and ten frame diagrams.

Today we are learning about addition and subtraction using 2-digit numbers and multiples of 10.

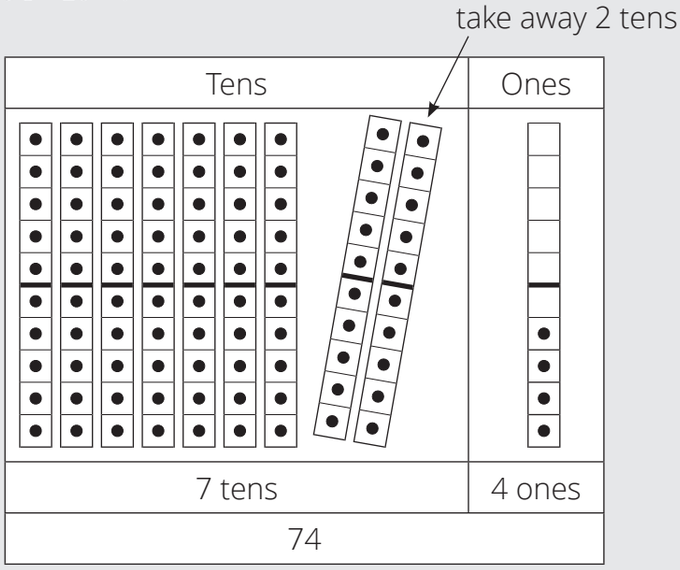
Activity 1: Whole class activity

- Write 25 + 10 = on the board
- Draw a place value table on the board and display the number 25 in it, using your base ten kit.
- Using the diagram interactively with the class, revise the steps to solve the question 25 + 10 = .
- Ask: **How would you solve this problem?**

- Show the learners 20 as 2 tens and place them in the tens place.
- Ask: **What are we going to add to 25**? (10)
- **Yes, we will add 10 which is 1 ten.** Place the 1 ten next to 20 as shown in the diagram below.
- Ask: **How many 10s are there altogether**(3 tens which is 30)
- Ask: **How many ones there are?** (5)
- **Add the tens and ones together. What is the answer**? (35)
- Let learners be aware that they do not change anything in the ones column.



- Write 94 – 20 = on the board
- Draw a place value table on the board and display the number 94 in it, using your base ten it.
- Using the diagram interactively with the class, revise the steps to solve the question 94 – 20 = .

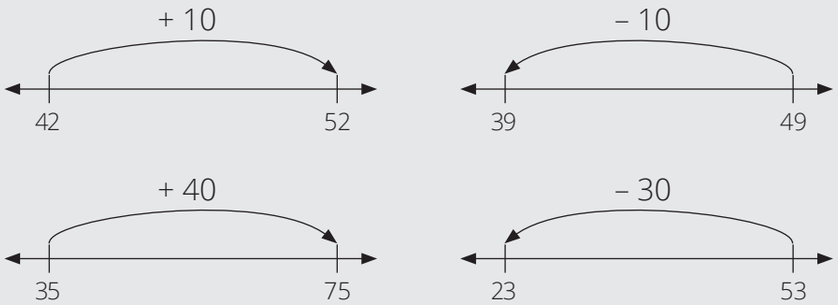


- Ask: **How many tens and how many ones make up 94?** (9 tens and 4 ones)

- Place 9 ten frames and 4 ones on the place value table as shown above. As you place the printed tens on the place value table count in 10s until 9 tens (90) and in ones until 4 ones (4) has been put in the place value table.
- Ask: **What are we going to subtract from 94**? (20)
- **Yes, we will subtract 20 which is 2 tens.**
- Remove 2 tens from the tens place. As you remove them say **I am subtracting 20 from 90.**
- Ask: **How many 10s and ones are left? There are 7 tens and 4 ones left, which is 74**.
- Look at the ones place – that did not change – no ones were subtracted.

Activity 2: Learners work in pairs

- Give each pair of learners a 100 board
- Write the following question on the board: 11 + 10 =
- Ask: **Where do we find 11 on the number board?** Let the learners show you 11. N**ow we need to add 10 to 11. D**iscuss with the learners what the answer could be. Show the learners that to add 10 we can jump vertically to 21.
- Repeat these steps with the following examples using the 100 board:
- For example:
  - 42 + 10 = 52
  - 49 – 10 = 39
  - 35 + 40 = 75
  - 53 – 30 = 23
- Revisit these calculations using number lines.
- Draw the number lines on the board. Ask the learners to explain the number lines.
- Ask: **What do you observe on the number lines?** (Only the numbers of tens have changed. There is no change in the ones. The numbers in ones stay as they are, etc.)
- You may select different learners to explain each example.

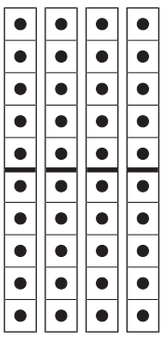


3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

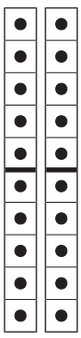
NOTE: Learners should use their own base ten kits while they work through this activity. Note also that the solutions below in the lesson plans show the base ten kit solutions. Learners should use their base ten kits to find the solutions but they must record their numeric answers only using the place value tables

Calculate using your base ten kit. Record your answers in the place value tables.

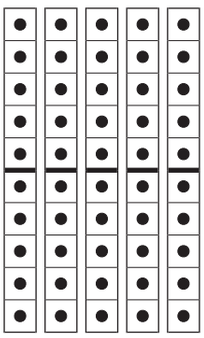
a 33 + 10 = ___ (43)

Tens	Ones
	
(4) tens	(3) ones
(43)	

b 48 – 20 = ___ (28)

Tens	Ones
	
(2) tens	(8) ones
(28)	

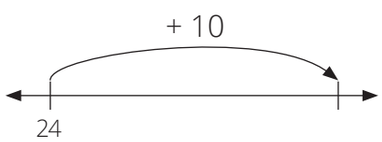
c 21 + 30 = ___ (51)

Tens	Ones
	
(5) tens	(1) ones
(51)	

d 16 – 10 = ___ (6)

Tens	Ones
	
(0) tens	(6) ones
(6)	

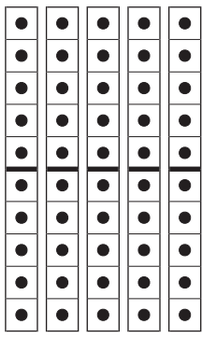
e Use the number line below to solve this word problem.
Thabo has 24 mini cars. His brother gives him another 10. How many mini cars does he have altogether? (34)



4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate using your base ten kit. Record your answers in the place value tables.

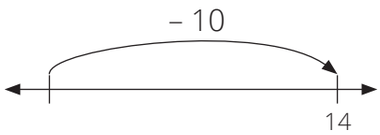
a 44 + 10 = ___ (54)

Tens	Ones
	
(5) tens	(4) ones
(54)	

b 27 – 10 = __ (17)

Tens	Ones
	
(1) tens	(7) ones
(17)	

c Use the number line below to solve this word problem.
Jabu has 14 sweets. He gives Lulu 10 sweets. How many sweets does he have left? (4)



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 solved addition and subtraction problems involving multiples of 10 and 2-digit numbers. We used number lines, place value tables and base ten kits to solve these problems.

Lesson 23: 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, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction		
Resources: Printable assessment in teacher's resources, Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable 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 *practical assessment* (see rubric below).

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.

Certain learners may be experiencing difficulty with place value. Revisit this concept using the previous lessons.

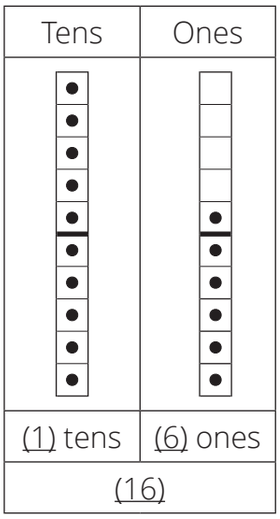
3 ASSESSMENT (35 MARKS)

Note: Learners need their base ten kits to do this assessment. The solutions shown here show the base ten kit representations of the answers. Learners are NOT expected to draw these. They must work with the kits and record the numeric answers in the place value tables only.

WRITTEN

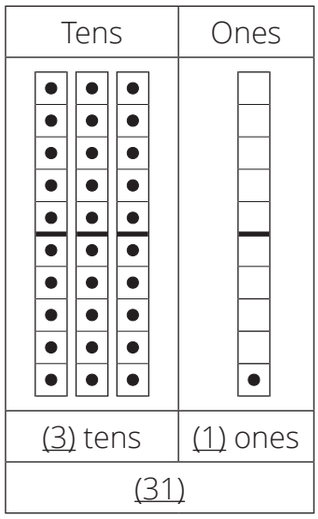
1 Complete the place value tables. ($5 \times 3 = 15$)
(Learners only record the numbers in the place value table but check that they use their base ten kits if they need to when they work out how to fill in the table.)

a 16 (3 marks)



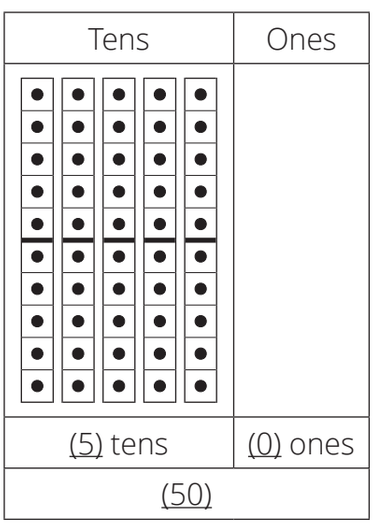
Tens	Ones
(1) tens	(6) ones
(16)	

b 31 (3 marks)



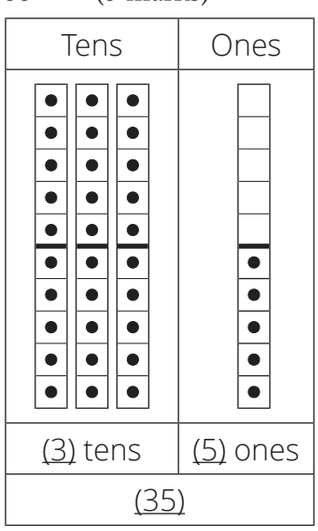
Tens	Ones
(3) tens	(1) ones
(31)	

c 50 (3 marks)



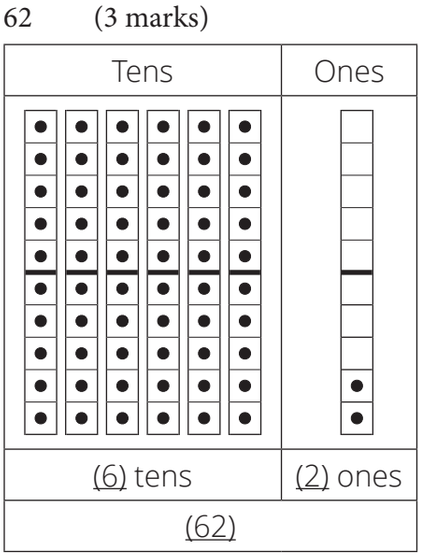
Tens	Ones
(5) tens	(0) ones
(50)	

d) 35 (3 marks)



Tens	Ones
(3) tens	(5) ones
(35)	

e) 62 (3 marks)



Tens	Ones
(6) tens	(2) ones
(62)	

WEEK 5

2 Complete the following: (5 × 1 = 5)

a 30 + 10 = _____ (40)

b 50 – 20 = _____ (30)

c 40 – 30 = _____ (10)

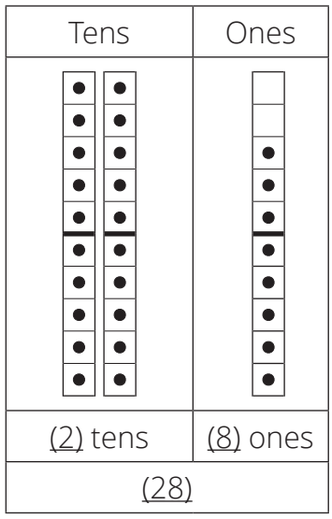
d 80 + 10 = _____ (90)

e 100 – 60 = _____ (40)

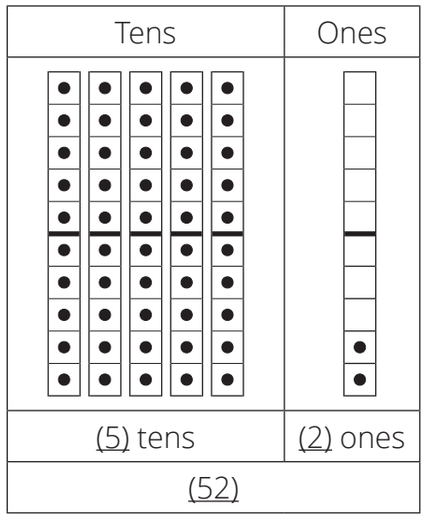
3 Calculate using your base ten kit. Record the answers in the place value tables. (5 × 3 = 15)

(Learners only record the numbers in the place value table but check that they use their base ten kits if they need to when they work out the answers.)

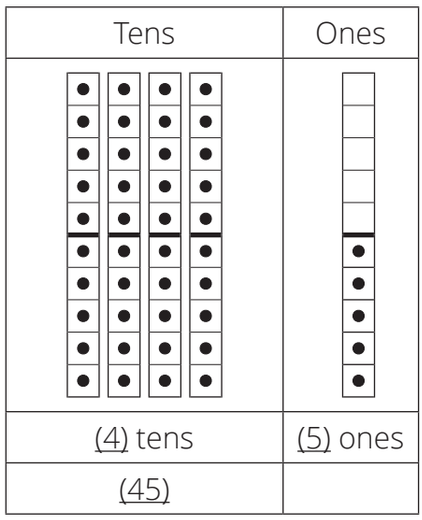
a 24 + 4 = (28) (3 marks)



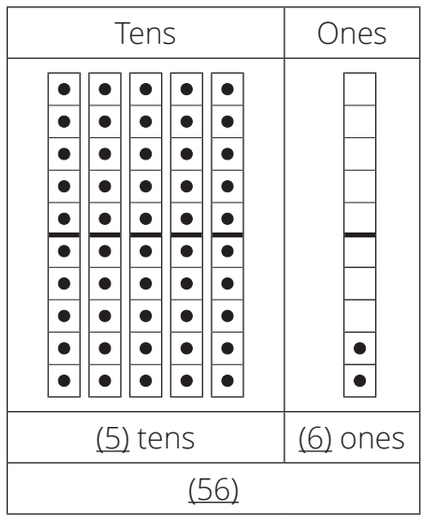
b 56 – 4 = (52) (3 marks)



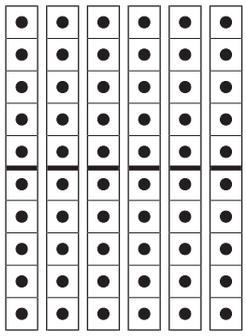
c 35 + 10 = (45) (3 marks)



d 76 – 20 = (56) (3 marks)



e 30 + 30 = (60) (3 marks)

Tens	Ones
	
(6) tens	(0) ones
(60)	

PRACTICAL

Number, operations and relationships: Place value **Activity: Observe learners' ability to recognise and represent place value in numbers up to 100.**	**Mark: 7**

Mark	Criteria – rubric
1	Unable to work with ten frames to represent place value in numbers up to 100
2	Can put bottle tops onto ten frames but cannot exchange 10 ones for 1 ten
3	Can put bottle tops onto ten frames and exchange 10 ones for 1 ten – can work in the number range 0 – 20
4	Can put bottle tops onto ten frames and exchange 10 ones for 1 ten and move beyond – can work in the number range 0 – 30
5	Can put bottle tops onto ten frames and exchange 10 ones for 1 ten and move beyond – can work in the number range 0 – 100
6	Able to recognise place value of numbers up to 100 given in concrete displays of numbers
7	Able to recognise place value of numbers beyond 100

Unit 3 Introduction

Unit 3 focuses on developing an understanding of solving 2-digit addition and subtraction problems using the column method. This is an important unit as it lays the foundation for learners' understanding of problem solving. The learners also add and subtract using the place value table and number lines. Towards the end of the unit learners are introduced to bar diagrams as a representation of the numbers involved in problem solving. The lessons in this unit may seem quite repetitive but this is intentional in order to help children to develop a sense of familiarity with addition and subtraction.

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.
- **Procedural fluency**: Learners will be exposed to repeated examples which they have to solve which will enable them to build their procedural fluency for the solution of addition and subtraction problems. Learners need to learn to work efficiently with numbers when performing the operations, Efficiency and fluency is built though doing a lot of repeated examples.
- **Strategies**: Learners will discover that there are number of different strategies that can be used to solve addition and subtraction problems.
- **Reasoning**: Learners are given opportunities to reason mathematically when they give explanations of the ways in which they solve addition and subtraction problems and when they verbalise their understanding of the relationship between tens and ones.

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

- **Connecting topics and concepts**: In this unit, learners are applying what they have learnt in Units 1 and 2. An understanding of numbers and their value is an integral part of addition and subtraction. The teacher should help the learners make connections between these concepts.
- **Explaining concepts and procedures**: Learners verbalise the concepts they are learning, and explain the procedures they will use to solve addition and subtraction problems. This verbalisation helps them consolidate their knowledge and understanding.
- **Connecting representations**: In this unit, learners use pictorial representations, drawings and number symbols when they do and record their work. The lessons are designed to help them make connections between these representations.

Lesson 24: Addition and subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To check learners' readiness for addition/subtraction for 2-digits by 2-digits.
Lesson Vocabulary: addition, subtraction, digit, multiples, tens, ones.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Calculate:	**Answer**		Calculate:	**Answer**
1	__ – 4 = 2	6	**6**	__ + 3 = 7	4
2	__ – 3 = 6	9	**7**	__ + 2 = 7	5
3	__ – 4 = 5	9	**8**	__ + 7 = 9	2
4	__ – 2 = 6	8	**9**	__ + 3 = 10	7
5	__ – 7 = 0	7	**10**	__ + 0 = 8	8

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In the first activity of this lesson learners will revise the strategies used for addition and subtraction that were covered in the previous unit. In another activity in this lesson learners will solve problems that involve adding/subtracting single digit numbers and multiples of 10. You will also revise the concept of place value and revisit expanded notation when working through these activities. In this lesson learners will use their ten frames and bottle tops again (base ten kit) – you should recap the use of the base ten kit if necessary. The first two activities must be done quickly – they are revision and lead into the next activity.

Today we are revising addition and subtraction – working with tens and ones

Activity 1: Whole class activity

REVISE EXCHANGING 10 ONES FOR 1 TEN.

- Write the following questions on the board:
  a 9 + 4 **b** 8 + 6 **c** 7 + 5 **d** 5 + 9
  e 12 – 4 **f** 13 – 6 **g** 15 – 6 **h** 17 – 9
- Let learners their 2 ten frames and bottle tops to practice:
  - addition with carrying (a to d) and
  - subtraction without borrowing (e to h)

- Work though the examples with the class, showing the exchange of ones (revise using bottle tops as ones).

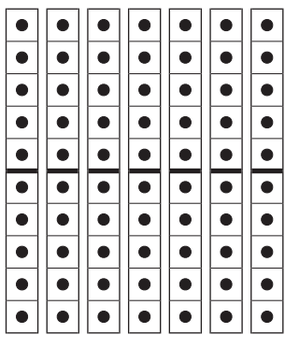
Activity 2: Whole class activity

REVISE BREAKING DOWN A NUMBER INTO TENS AND ONES.

- Write the following questions on the board:
- Break down the numbers into sums of tens and ones: (Show them using a place value table and base ten kit if necessary – revise using printed tens as tens.)
  - 25 = __ + __ (20 + 5)
  - 63 = __ + __ (60 + 3)
  - 79 = __ + __(70 + 9)
  - 55 = __ = __(50 + 5)
  - 38 = __ + __(30 + 8)
- Call some learners up to the board to write up the solutions.

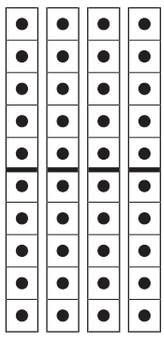
Activity 3: Whole class activity

- Write the following number sentence on the board: 40 + 30 = __ (70)
- Discuss with the learners: **We are going to add 40 and 30.**
- Ask: **How do we do this**?
- Draw a place value table on the board to work with while you explain the calculation.
- Ask one leaner to come and put 40 onto the place value table using a base ten kit. **What will you put onto the table? (**he/she must places 4 tens onto the place value table)
- Ask: **How can we add 30 to the 40**? (we add 3 tens to the 40 or 4 tens)
- Let another learner place 3 printed tens into the tens column/place in the place value table.
- The display on the board will now look like this:

Tens	Ones
	
(7) tens	(0) ones
(70)	

- Count the number of tens together with the learners. **How many tens are there?** (7 tens)

- **How else can we say this?** We can say **40 + 30 equals 70.**
- Write the following number sentence on the board: 60 – 20 = __ (40)
- Discuss with the learners: **We are going to subtract 20 from 60.**
- Ask: **How do we do this**?
- Draw a place value table on the board to work with while you explain the calculation.
- Ask one leaner to come and put 60 onto the table using a base ten kit. **What will you put onto the table? (**he/she must places 6 tens onto the place value table)
- Ask: **How can we subtract 20 from 60**? (we take away 2 tens)
- Ask a learner to come and show the subtraction of 20. (A learners comes and takes away 2 tens.)
- The display on the board will now look like this:

Tens	Ones
	
(4) tens	(0) ones
(40)	

- Count the number of tens together with the learners. **How many tens are there?** (4 tens)
- **How else can we say this?** We can say **60 – 20 = 40.**

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: Learners should work with their base ten kits when they do this activity in class. They must use the printed tens and ones (bottle tops) (**only if necessary**), to reinforce working with numbers broken down into tens and ones.

1 Complete the following:

a 3 tens + 3 ones = _____ (33)

b 6 tens + 8 ones = _____ (68)

c 82 = 80 + _____ (2)

d 55 = _____ (50) + _____ (5)

e 90 + _____ (3) = 93

f _____ (60) + 6 = 66

g (50) _____ + 9 = 59

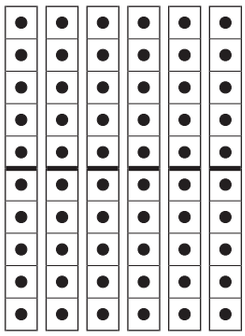
2 Complete using tens and ones:

a 14 = ___ + ____ (10 + 4)

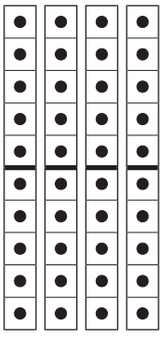
b 23 = _____ + _____ (20 + 3)
c 32 = ____ + _____ (30 + 2)
d 50 = _____ + _____ (50 + 0)
e 99 = _____ + ____ (90 + 9)

3 Calculate using your base ten kit. Record your answers in the place value tables.

a 40 + 20 = _____ (60)

Tens	Ones
	
(6) tens	(0) ones
(60)	

b 80 – 40 = _____ (40)

Tens	Ones
	
(4) tens	(0) ones
(40)	

4 HOMEWORK ACTIVITY (5 MINUTES)

Complete using tens and ones:

1 24 = _____ + _____ (20 + 4)
2 45 = _____ + _____ (40 + 5)
3 80 + _____ (3) = 83
4 _____ (60) + 6 = 66
5 _____ (50) + 9 = 59

6 Busi has 7 suckers. She buys another 5 suckers. How many does she have altogether? (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 solved addition and subtraction problems involving multiples of 10 and single-digit numbers. We also revised working with tens and ones – exchanging 10 ones for 1 ten. We also practised breaking down numbers into tens and ones – for example, 34 is 3 tens and 4 ones.

Lesson 25: Consolidation: Addition and Subtraction

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Revision of addition and subtraction strategies
Lesson Vocabulary: addition, subtraction, digit, multiples, tens, ones.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the lessons have focused on addition and subtraction. We began the week by adding multiples of 10, moved onto adding two and one/ two digit numbers. We revised the place value table as a pictorial representation of addition. We also introduced the column method of addition.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may be struggling with the column method. We will be revising this method in coming lessons. It is important that the learners are secure in their understanding of place value. If you notice that certain learners have not grasped place value, please revisit activities from previous lessons.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Activity 3: Whole class activity

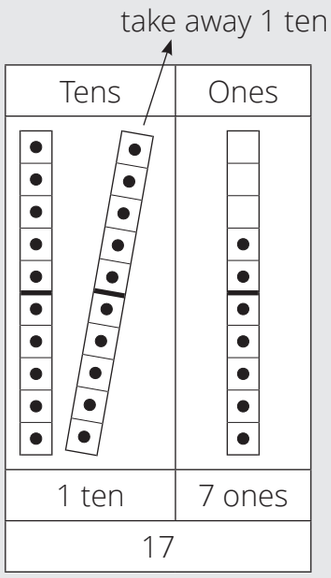
Today we are going over what we learned this week. We are learning more about addition and subtraction using the place value table.

First we will work through another word problem together.

- In this activity you will be revising solving a word problem with your learners. In activity 3 from the previous day we solved a word problem as a class. Today we will revisit the steps to solving a word problem.
- Read the following word problem to your learners. **Gugu has 27 pencils. She loses 10 pencils. How many pencils does she have left?**
- The first step is to understand the question properly.
- Remember, when solving word problems there are four main steps, namely:
  - Step 1: Understand the problem.
  - Step 2: Devise a plan.
  - Step 3: Carry out the plan.

- Step 4: Look back and check if your answer is correct.

- In the step 1, we write the word problem on the board. Next, we read the problem. Then, we let the learners read the problem themselves in order to understand the problem.
- After that we underline the numbers.
- **What are the numbers in today's problem?** They are 27 and 10.
- Use base ten kits set up the numbers in a place value table. Call on learners to help you set up the table.
- **What must we do to find the solution to the problem?** We have to subtract because Gugu loses her pencils. **We must subtract 10 from 27.**



- **Gugu has 27 pencils** (show 27 – 2 tens and 7 ones). **She loses 10 pencils. (**Take away 10 – 1 ten**). How many pencils does she have left?** (17 pencils.)
- **Let's find how many pencils she has left?** (Find the tens and ones) T**he answer is 17 pencils, 1 ten and 7 ones.**

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

NOTE: Learners should use their own base ten kits while they work through this activity. Solutions of base ten kit displays are shown below.

1 Complete:

a 5 tens + 6 ones = _____ (56)

b 64: ___ tens + ___ ones = ___ (6,4,64)

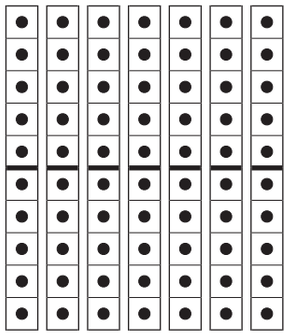
c 35: ___ tens + ___ ones = ___ (3,5,35)

d 7 tens and 8 ones = ___ (78)

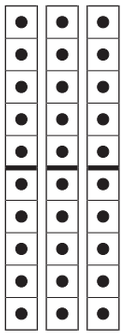
e 90:___tens + ___ ones = _____ (9, 0, 90)

2 Calculate using your base ten kit. Record your answers in the place value tables.

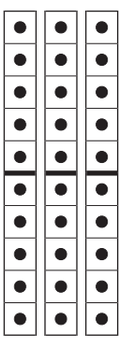
a 40 + 30 = _____ (70)

Tens	Ones
	
(7) tens	(0) ones
(70)	

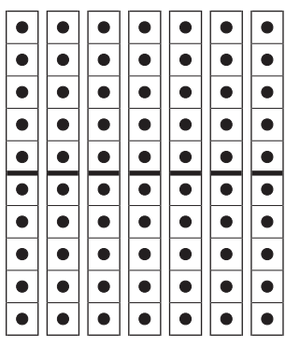
b 70 – 40 = _____ (30)

Tens	Ones
	
(3) tens	(0) ones
(30)	

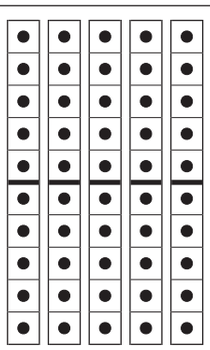
c 36 + 3 = _____ (39)

Tens	Ones
	
(3) tens	(9) ones
(39)	

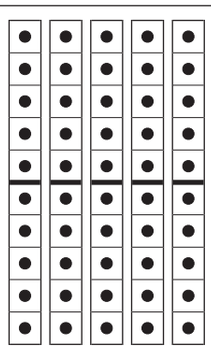
d 77 – 6 = _____ (71)

Tens	Ones
	
(7) tens	(1) ones
(71)	

e 34 + 20 = _____ (54)

Tens	Ones
	
(5) tens	(4) ones
(54)	

f 75 – 20 = _____ (55)

Tens	Ones
	
(5) tens	(5) ones
(55)	

3 Complete using tens and ones:

a 45 = ___ + _____ (40 + 5)

b 83 = _____ + _____ (80 + 3)

c 52 = _____ + _____ (50 + 2)

d 80 = _____ + _____ (80 + 0)

e 69 = _____ + _____ (60 + 9)

5 REFLECTION AND SUMMARY OF LESSON

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

Today we revised place value (tens and ones) and addition and subtraction using place value tables.

Week 6

Lesson 26: Column addition

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Adding 2-digit numbers using the column method.
Lesson Vocabulary: tens, ones, add, column, add, altogether, total
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Calculate:	**Answer**		Calculate:	**Answer**
1	__ + 4 = 11	7	**6**	__ – 6 = 5	11
2	__ + 7 = 12	5	**7**	__ – 9 = 6	15
3	__ + 4 = 13	9	**8**	__ – 7 = 136	20
4	6 + __ = 14	8	**9**	__ – 9 = 4	13
5	__ + 9 = 14	5	**10**	__ – 7 = 7	14

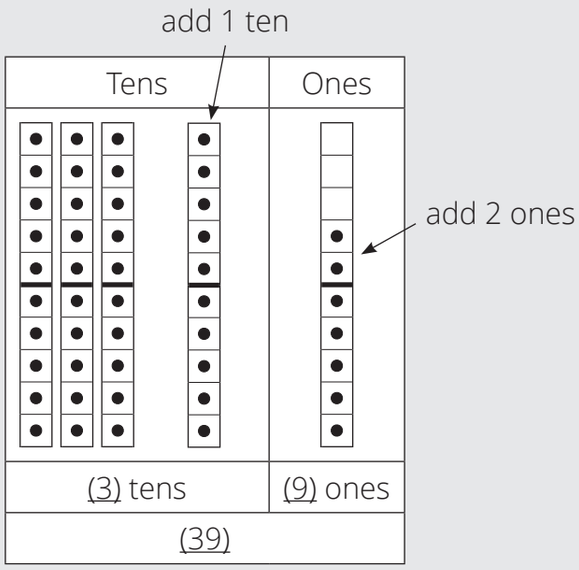
2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In the next three lessons learners will be introduced to the column method of addition. In this lesson we will show the learners the link between the place value table and the column method. We are moving away from pictorial representations. We are moving into the abstract representation of numbers. We will solve problems that involve adding 2-digit numbers. Learners need to make the move from concrete to abstract – but this does not happen suddenly or on one move. They may need to go backwards and forwards between representations in the CPA method many times until they have fully achieved abstraction. That is why in your lessons you will continue to provide concrete and pictorial representations – but as soon as a learner shows he/she can work abstractly, you should not hold them back, allow them to do so. When they need the support of concrete/pictorial, offer it to them again.

Today we are learning to add using the column method. We also add by writing numbers out in tens and ones (using expanded notation or breaking down the numbers).

Activity 1: Whole class activity

- Write the following number sentence on the board 35 + 12 =
- Draw a place value table on the board.
- Ask: **How many tens and ones in 35?** (3 tens and 5 ones) **a**nd **How many in 12?** (1 ten and 2 ones)



- Ask: **How can we solve this addition problem using the place value tables?**
- Let learners use the base ten kits to work with the numbers, then let the learners share their ideas.
- You will need to guide them in this discussion. Ensure that they make use of the terms tens, ones, add and altogether, total.
- Explain how you add the tens and ones together using the diagram above to do so. The answer is 47.

WEEK 6

Activity 2: Whole class activity

- Write 35 + 12 = _____ on the board and then write it in columns as shown below.
- Explain to the learners that we will now be solving this question using the column method.
- As you do the working, you should talk through the steps with the class. Use the base ten kits to show concretely what is being added in the columns (bottle tops for the ones and printed tens for the tens).

	T	O	
	3	5	
+	1	2	
		7	O: 5 + 2 = 7
	4	0	T: 30 + 10 = 40
	4	7	

- You must discuss each step. Ensure that you use the correct language while you discuss it: speak about the number in terms of tens and ones, and remind the class that you are adding.
- **The first step is to line up the numbers vertically in columns – of tens and ones.**
- **Start by adding up the ones column: 5 + 2 = 7.** (use bottle tops to show this addition)
- **Next add up the tens column: 30 + 10 = 40.** (use printed tens to show this addition)
- **Now add the tens and ones together: 40 + 7 = 47.** (count the total number of tens and units you have found after adding.)
- Ask if there are any questions – explain again what you have done if necessary – speaking about adding first the ones and then the tens.
- Now write 52 + 16 = _____ on the board and then write it in columns as shown below.
- Repeat the above steps with the learners, writing the number in columns of tens and units and adding first the units and then the tens, then finding the final answer.

Activity 3: Whole class activity

- Write the following number sentence on the board: 35 + 12 =
- Write: 35 + 12 = 30 + 5 + 10 + 2
  = 30 + 10 + 5 + 2
  = 40 + 7
  = 47
- Explain to the learners: **We write the tens next to each other and add them together (30 + 10 = 40) and the ones (5 + 2 = 7)**
- **Then we add the tens and ones together. The answer is 47.**
- Discuss with the learners that this is a similar process to the column method – breaking the number into tens and ones and adding the ones and the tens.
- Write the following on the board: 52 + 16 =
- Write the sum for this horizontally in the same way that you just did 35 + 12 in Activity 3.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

NOTE: Learners should use their own base ten kits while they work through this activity.
Calculate the following using base ten kits. Record your solutions using tens and ones columns.

a 74 + 23 = (97)

	T	O	
	7	4	
+	2	3	
		7	O: 4 + 3 = 7
	9	0	T: 70 + 20 = 90
	9	7	

b 35 + 54 = (89)

	T	O	
	3	5	
+	5	4	
		9	O: 5 + 4 = 9
	8	0	T: 30 + 50 = 80
	8	9	

c 46 + 32 = (78)

	T	O	
	4	6	
+	3	2	
		8	O: 6 + 2 = 8
	7	0	T: 40 + 30 = 70
	7	8	

d 11 + 28 = (39)

	T	O	
	1	1	
+	2	8	
		9	O: 1 + 8 = 9
	3	0	T: 10 + 20 = 30
	3	9	

e 27 + 41 = (68)

	T	O	
	2	7	
+	4	1	
		8	O: 7 + 1 = 8
	6	0	T: 20 + 40 = 60
	6	8	

4 HOMEWORK ACTIVITY (5 MINUTES)

Note: In this homework exercise the method of calculation is not specified. Allow learners to use the strategy of their choice but make sure they work correctly with the numbers they operate on.

Calculate the following:

a 61 + 25 = (86)

	T	O	
	6	1	
+	2	5	
		(6)	O: (1 + 5 = 6)
	(8	0)	T: (60 + 20 = 80)
	(8	6)	

b 43 + 12 = (55)

	T	O	
	4	3	
+	1	2	
		(5)	O: (3 + 2 = 5)
	(5	0)	T: (40 + 10 = 50)
	(5	5)	

c 34 + 15 = (49)

	T	O	
	3	4	
+	1	5	
		(9)	O: (4 + 5 = 9)
	(4	0)	T: (30 + 10 = 40)
	(4	9)	

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 solved addition problems. Firstly, we used the place value table and then moved onto learning the column method. We will be practising this method for the next few lessons.

Lesson 27: Column addition

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To practice adding 2-digit numbers using the column method.
Lesson Vocabulary: tens, ones, add, column.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Add	**Answer**		Add	**Answer**
1	2 + 4	6	**6**	3 + 8	11
2	4 + 2	6	**7**	12 + 3	15
3	3 + 5	8	**8**	3 + 12	15
4	5 + 3	8	**9**	14 + 5	19
5	8 + 3	11	**10**	5 + 14	19

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the second lesson of three lessons on the column method (and using expanded notation) for addition. This lesson continues to look at the addition of 2-digit numbers. The learners will spend most of the lesson familiarising themselves with the column method but they will also have time to use expanded notation to check their calculations. We will also introduce the commutative property. The commutative property is that when we add two numbers together, it doesn't matter the order the numbers are in, the answers will be the same. For example, 7 + 5 = 12 and 5 + 7 = 12.

Today we are going to continue practising addition using the column method.

Activity 1: Whole class activity

- In the mental maths, we added the same numbers in different order. **What did you find?** (The answers are the same)
- Write 24 + 41 = _____ on the board.
- Explain to the learners that we will now be looking at this same question using the column method.
- Draw the diagram below and talk through the steps.

	T	O	
	2	4	
+	4	1	
		5	O: 4 + 1 = 5
	6	0	T: 20 + 40 = 60
	6	5	

- You must discuss each step. Ensure that you use the correct language- ones, tens, add.
- **The first step is to line up the numbers vertically in tens and ones.**
- **Add in the ones column: 4 + 1 = 5.** (use bottle tops to show this addition)
- **Add in the tens column: 20 + 40 = 60.** (use printed tens to show this addition)
- **Now add the tens and ones together: 60 + 5 = 65.** (count the total number of tens and units you have found after adding.)
- Don't erase this as you will need it for the next activity**.**

Activity 2: Whole class activity

- Write 41 + 24 = _____ on the board.
- Let the learners solve it individually in their classwork books using the column method.
- Ask the learners to look at the answer from 41 + 24 =
- Ask: **Do you notice anything?** You may need to ask other questions such as **look at the numbers which we used in the previous activity? What do you notice about the numbers in both calculations?**
- Check if the answers are the same in activity 1 and 2. Do the calculation together again as a class.

	T	O	
	4	1	
+	2	4	
		5	O: 1 + 4 = 5
	6	0	T: 40 + 20 = 60
	6	5	

- We have shown that 41 + 24 = 24 + 41

Activity 3: Whole class activity

- In this activity we will revise expanded notation – where we break down numbers into tens and ones in order to add.
- Write on the board the following numbers: 55 + 24 =
- With the learners, solve the problem using expanded notation.
- 55 + 24 = 50 + 5 + 20 + 4
  = 50 + 20 + 5 + 4
  = 70 + 9
  = 79

- Repeat with 24 + 55 = _____ (79)
- We have shown that 24 + 55 = 55 + 24

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Solve the following using the column method:

a 12 + 17 = __ (29)

	T	O	
	1	2	
+	1	7	
		9	O: 2 + 7 = 9
	2	0	T: 10 + 10 = 20
	2	9	

b 40 + 10 = ___ (50)

	T	O	
	4	0	
+	1	0	
		0	O: 0 + 0 = 0
	5	0	T: 40 + 10 = 50
	5	0	

c 53 + 6 = _____ (59)

	T	O	
	5	3	
+		6	
		9	O: 3 + 6 = 9
	5	0	T: 50 + 0 = 50
	5	9	

d 14 + 32 = ___ (46)

	T	O	
	1	4	
+	3	2	
		6	O: 4 + 2 = 6
	4	0	T: 10 + 30 = 40
	4	6	

e 11 + 78 = _____ (89)

	T	O	
	1	1	
+	7	8	
		9	O: 1 + 8 = 9
	8	0	T: 10 + 70 = 80
	8	9	

4 HOMEWORK ACTIVITY (5 MINUTES)

Solve the following using the column method:

a 51 + 23 = ___ (74)

	T	O	
	5	1	
+	2	3	
		4	O: 1 + 3 = 4
	7	0	T: 50 + 20 = 70
	7	4	

b 35 + 24 = ___ (59)

	T	O	
	3	5	
+	2	4	
		9	O: 5 + 4 = 9
	5	0	T: 30 + 20 = 50
	5	9	

c 27 + 41 = ___ (68)

	T	O	
	2	7	
+	4	1	
		8	O: 7 + 1 = 8
	6	0	T: 20 + 40 = 60
	6	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 solved addition problems using the column method. We also found out that it doesn't matter what order the numbers are in, when we add we get the same answer.

Lesson 28: Addition using a number line

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Solve 2-digit addition problems using a number line.
Lesson Vocabulary: tens, ones, add, column, number line
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Which is the smallest number?

		Answer			Answer
1	4, 3	3	**6**	1, 3	1
2	10, 12	10	**7**	9, 7	7
3	13, 15	13	**8**	19, 17,	17
4	22, 24	22	**9**	14, 15	14
5	5, 7	5	**10**	21, 19	19

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the third of the three lessons on addition and subtraction using different methods. This lesson continues to look at the addition of 2-digit numbers using the column method and introduces the use of a number line to do the same calculations. This lesson allows learners the chance to compare using the two methods – number line method compared to column method. This comparison should allow the learners an opportunity to realise the value of the column method as well as the value of using number lines. You will use the base ten kits as you demonstrate and write up the working since the kits help learners to realise what is happening when you count tens as 'units' i.e. counting in tens. (1 ten plus 1 ten = 2 tens. We do not count this in ones, we count in tens.)

Today we are solving addition problems using number line and column methods.

Activity 1: Whole class activity

- Write 43 + 14 = _____ on the board.
- Ask the learners if they remember the method that they learnt yesterday.
- Revise the steps with the learners solving 43 + 14 = _____

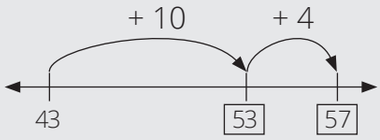
- The first step is to line up the numbers vertically in tens and ones. Write the working on the board while you work through the example:

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

- Add up the ones column: 3 + 4 = 7 (use bottle tops to show this addition)
- Add up the tens column: 40 + 10 = 50 (use printed tens to show this addition)
- Now add the tens and ones together: 50 + 7 = 57 (count the total number of tens and units you have found after adding.)

Activity 2: Whole class activity

- In this activity we will be solving the same question 43 + 14 = _____ using a number line.
- Draw a number line, which starts at 43. Discuss the choice of the starting point with the class. (Because I want to add onto 43, I will start jumping from there on the number line. I could have started on other numbers – discuss.)
- Ask: **How many tens and one in 14?** (1 ten and 4 ones)
- Explain to the learners that we will move along the number line to show 10 first, then 4.
- Draw a single jump of 10 to land on 53. Write in 53.
- Draw a smaller jump of 4 to land at 57.



- Ask: **What is different between the two methods? Which method/way of adding they found easier**. It is important to ask them **why?** (Allow free discussion and engage with meaningful debate on what is different and useful about the two methods.)

Activity 3: Whole class activity

- If time allows, solve the following question with your learners 53 + 16 = _____ using both the column method and the number line.
- Activity 1 and 2 can guide you through the steps for each method.
- Remember to compare the two methods with the learners.

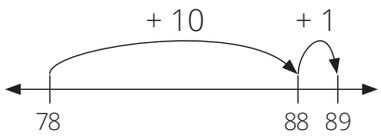
3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: learners should still use their base ten kits when they do these calculations if necessary.

Calculate the following using the column method and a number line:

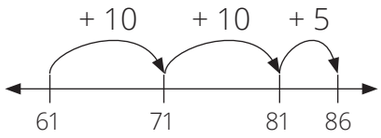
a 78 + 11 = ___ (89)

	T	O	
	7	8	
+	1	1	
		9	O: 8 + 1 = 9
	8	0	T: 70 + 10 = 80
	8	9	



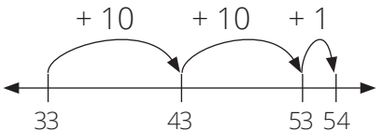
b 61 + 25 = ___ (86)

	T	O	
	6	1	
+	2	5	
		6	O: 1 + 5 = 6
	8	0	T: 60 + 20 = 80
	8	6	



c 33 + 21 = ___ (54)

	T	O	
	3	3	
+	2	1	
		4	O: 3 + 1 = 4
	5	0	T: 30 + 20 = 50
	5	4	

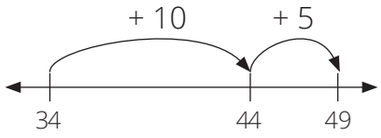


4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate the following using the column method and a number line:

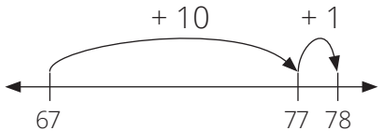
a 34 + 15 = ___ (49)

	T	O	
	3	4	
+	1	5	
		9	O: 4 + 5 = 9
	4	0	T: 30 + 10 = 40
	4	9	



b 67 + 11 = ___ (78)

	T	O	
	6	7	
+	1	1	
		8	O: 7 + 1 = 8
	7	0	T: 60 + 10 = 70
	7	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 solved addition problems. We solved them using both the place value table and number lines. We also compared the methods and discussed which we found easier and why.

Lesson 29: 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, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction		
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 (25 MARKS)

Note: Learners need their base ten kits to do this assessment. The solutions shown here show the base ten kit representations of the answers. Learners are NOT expected to draw these. They must work with the kits and record the numeric answers in the place value tables only.

1 Complete the following: (8)

a 6 ten + 3 ones = _____ (63)

b 3 ten + 9 ones = _____ (39)

c 42 = 40 + _____ (2)

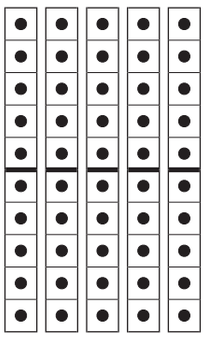
d 50 + _____ (43) = 93

e _____ (60) + 6 = 66

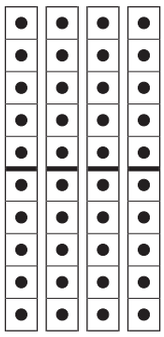
f 72 = _____ + 2 (70)

g 80 = _____ tens + _____ ones (8, 0)

2 Add using your base ten kit: 30 + 20 = ___ (50). (3)
(Learners only record the answer in the place value table. Check that they use their base ten kits if they need to when they work out the answer.)

Tens	Ones
	
(5) tens	(0) ones
(50)	

3 Subtract using your base ten kit: 70 – 30 = _____ (40) (3)
(Learners only record the answer in the place value table. Check that they use their base ten kits if they need to when they work out the answer.)

Tens	Ones
	
(4) tens	(0) ones
(40)	

4 Calculate. Show working using columns.

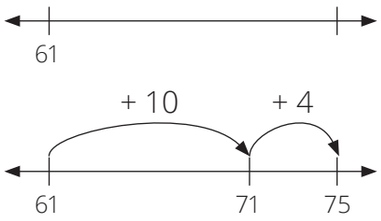
a 45 + 23 = _____ (3)

	T	O	
	4	5	
+	2	3	
		8	O: 5 + 3 = 8
	6	0	T: 40 + 20 = 60
	6	8	

b 22 + 57 = _____ (3)

	T	O	
	2	2	
+	5	7	
		9	O: 2 + 7 = 9
	7	0	T: 20 + 50 = 70
	7	9	

5 Calculate using the number line below: 61 + 14 = _____ . (2)



Lesson 30: Consolidation: Addition and subtraction

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Revision of addition and subtraction using the column method.
Lesson Vocabulary: tens, ones, add, subtract, column.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the lessons have focused on addition and subtraction. We began the week by adding 2-digit numbers using expanded notation and the place value table. We moved onto introducing the column method of addition. We compared the column method with using a number line to add 2-digit numbers. In the previous lesson we introduced learners to the column method using subtraction.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may be struggling with the column method particularly with subtraction. We will be revising this method in coming lessons. It is important that the learners are secure in their understanding of addition using the column method. If you notice that certain learners have not grasped this method please revisit the steps with the learners allowing them to progress at their own pace.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about addition and subtraction using the column method.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

Calculate using the column method:

a 64 + 12 = ___ (76)

	T	O	
	6	4	
+	1	2	
		6	O: 4 + 2 = 6
	7	0	T: 60 + 10 = 70
	7	6	

b 55 + 14 = ___ (69)

	T	O	
	5	5	
+	1	4	
		9	O: 5 + 4 = 9
	6	0	T: 50 + 10 = 60
	6	9	

c 61 + 13 = ___ (74)

	T	O	
	6	1	
+	1	3	
		4	O: 1 + 3 = 4
	7	0	T: 60 + 10 = 70
	7	4	

d 54 – 12 = ___ (42)

	T	O	
	5	4	
–	1	2	
		2	O: 4 – 2 = 2
	4	0	T: 50 – 10 = 40
	4	2	

e 67 – 16 = ___ (51)

	T	O	
	6	7	
–	1	6	
		1	O: 7 – 6 = 1
	5	0	T: 60 – 10 = 50
	5	1	

5 REFLECTION AND SUMMARY OF LESSON

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

Today we revised addition and subtraction using the column method.

Week 7

Lesson 31: Column subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Subtracting 2-digit numbers using the column method.
Lesson Vocabulary: tens, ones, subtract, column.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Subtract the following numbers:	**Answer**			**Answer**
1	9 – 2 =	7	**6**	12 – 1 =	11
2	6 – 4 =	2	**7**	15 – 3 =	12
3	7 – 3 =	4	**8**	17 – 5 =	12
4	8 – 6 =	2	**9**	19 – 3 =	16
5	10 – 2 =	8	**10**	20 – 5 =	15

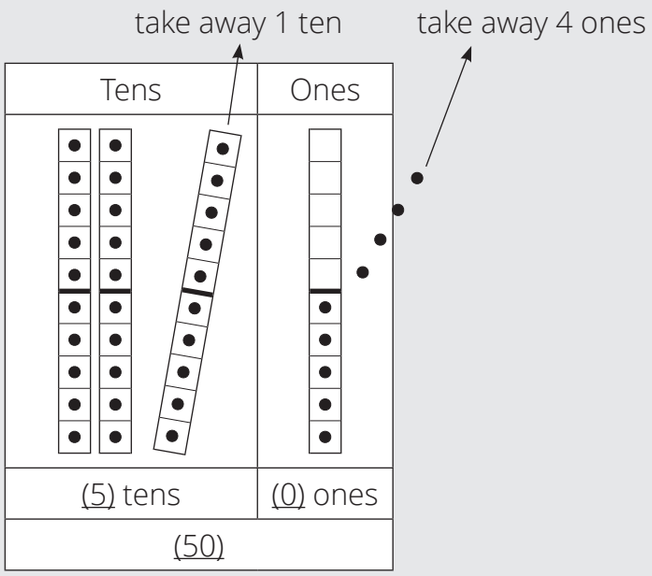
2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In the next three lessons learners will be introduced to the column method of subtraction. In this lesson we will show the learners the link between the place value table and the column method using subtraction. We are moving away from pictorial representations. We are moving into the abstract representation of numbers. We will solve problems that involve subtracting 2-digit numbers.

Today we are learning to subtract using the column method.

Activity 1: Whole class activity

- Write the following number sentence on the board 39 – 14 = _____
- Ask: **How many tens and ones in 39?** (3 tens and 9 ones). Put the tens and ones into the place value table to prepare to subtract.
- Ask: **How many tens and ones in 14? (1 ten and 4 ones).** This is what we must take away from 39.



- Ask: **How can we solve this subtraction problem using the place value table?**
- Let the learners share their ideas.
- You will need to guide them in this discussion. Ensure that they make use of the terms tens, one, subtract.
- Use the diagram above to help you explain how you subtract the tens and ones.
- In the tens place I take away 1 ten from 3 tens. I am left with 2 tens.
- In the ones place I take away 4 ones from 9 ones. I am left with 5 ones.
- The answer is 25.

Activity 3: Whole class activity

- Write 39 – 14 = ____ on the board.
- Explain to the learners that we will now be solving this question using the column method.
- Let learners think and discuss how they can write the subtraction in columns.
- Let some learners present their ideas on the board. If nobody can show the correct column method, draw the diagram below and talk through the steps.

	T	O	
	3	9	
–	1	4	
		5	O: 9 – 4 = 5
	2	0	T: 30 – 10 = 20
	2	5	

- You must discuss each step. Ensure that you use the correct language- ones, tens, subtract.
- Even if learners presented the correct column method, you have to repeat the steps to go over them with the whole class.
- **The first step is to line up the numbers vertically in tens and ones.**

- **Subtract the ones column: 9 – 4 = 5** (use bottle tops to show this subtraction)
- **Subtract the tens column: 30 – 10 = 20** (use printed tens to show this subtraction)
- **Now add the tens and ones together: 20 + 5 = 25** (how many ones and how many printed tens do you have left?)
- Write the following on the board: 28 – 16 =
- Repeat the above steps with the learners for this second example.

Activity 3: Whole class activity

- Write the following number sentence on the board: 39 – 14 = ___
- Write: 39 – 14 = 30 + 9 – 10 – 4
  = 30 – 10 + 9 – 4
  = 20 + 5
  = 25
- Explain to the learners that we write the tens next to each other and then subtract them from each other (30 – 10 = 20) and the ones (9 – 4 = 5)
- Then we add the tens and ones together. The answer is 25.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Calculate the following using the column method:

a 35 – 12 = __ (23)

	T	O	
	3	5	
–	1	2	
		3	O: 5 – 2 = 3
	2	0	T: 30 – 10 = 20
	2	3	

b 88 – 16 = __ (72)

	T	O	
	8	8	
–	1	6	
		2	O: 8 – 6 = 2
	7	0	T: 80 – 10 = 70
	7	2	

c 69 – 28 = ___ (41)

	T	O	
	6	9	
–	2	8	
		1	O: 9 – 8 = 1
	4	0	T: 60 – 20 = 40
	4	1	

d 76 – 33 = __ (43)

	T	O	
	7	6	
–	3	3	
		3	O: 6 – 3 = 3
	4	0	T: 70 – 30 = 40
	4	3	

e 98 – 72 = __ (26)

	T	O	
	9	8	
–	7	2	
		6	O: 8 – 2 = 6
	2	0	T: 90 – 70 = 20
	2	6	

4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate the following using the column method:

a 77 – 65 = __ (12)

	T	O	
	7	7	
–	6	5	
		2	O: 7 – 5 = 2
	1	0	T: 70 – 60 = 10
	1	2	

b 86 – 51 = ___ (35)

	T	O	
	8	6	
–	5	1	
		5	O: 6 – 1 = 5
	3	0	T: 80 – 50 = 30
	3	5	

c 67 – 13 = ___ (54)

	T	O	
	6	7	
–	1	3	
		4	O: 7 – 3 = 4
	5	0	T: 60 – 10 = 50
	5	4	

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 solved subtraction problems. Firstly we used the place value table and then moved onto learning the column method. We will be practising this method for the next few lessons.

Lesson 32: Column subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To practice subtracting 2-digit numbers using the column method.
Lesson Vocabulary: tens, ones, subtract, column.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Solve the addition and subtraction	**Answer**			**Answer**
1	5 – 2 =	3	**6**	3 + 7 =	10
2	2 + 3 =	5	**7**	13 – 4 =	9
3	7 – 3 =	4	**8**	4 + 9 =	13
4	3 + 4 =	7	**9**	14 – 6 =	8
5	10 – 3 =	7	**10**	6 + 8 =	14

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the second lesson of three lessons about subtraction. This lesson continues to look at the subtraction of 2-digit numbers using the column method. The learners will spend most of the lesson familiarising themselves with the method. We will also introduce using addition as the inverse operation of subtraction. The inverse relationship between addition and subtraction can be used to check calculations and solve missing number problems. For example, 10 – 4 = 6 and 6 + 4 = 10.

Today we are going to continue practising subtraction using the column method and using addition to check the answer.

Activity 2: Whole class activity

Ask: **In mental maths, what's the relationship between the addition and the subtraction?** (Answers will vary. The same numbers can be used in an addition and a subtraction question but in a different order.)

- In this activity, we will check if the relationship is applicable to bigger numbers.
- Write 79 – 61 = ____ on the board.

- Let learners solve the question using the column method. Let the learners use base ten kits if necessary.
- Draw the diagram below and talk through the steps to explain the working with tens and ones as you work in the tens and ones columns.

	T	O	
	7	9	
–	6	1	
		8	O: 9 – 1 = 8
	1	0	T: 70 – 60 = 10
	1	8	

- You must discuss each step. Ensure that you use the correct language- ones, tens, subtract.
- **The first step is to line up the numbers vertically in tens and ones.**
- **Subtract the ones column: 9 – 1 = 8** (use bottle tops to show this subtraction)
- **Subtract the tens column: 70 – 60 = 10** (use printed tens to show this subtraction)
- **Now add the tens and ones together: 10 + 8 = 18.** (how many ones and how many printed tens do you have left?)
- Don't erase this as you will need it for the next activity**.**

Activity 2: Whole class activity

- In this activity we will be introducing addition as the inverse operation of subtraction.
- Write 61 + 18 = ___ on the board.
- Explain to the learners that we will now solve this question using the column method.
- Draw the diagram below and talk through the steps.

	T	O	
	6	1	
+	1	8	
		9	O: 1 + 8 = 9
	7	0	T: 60 + 10 = 70
	7	9	

- You must discuss each step. Ensure that you use the correct language – ones, tens, add.
- **The first step is to line up the numbers vertically in tens and ones.**
- **Add up the ones column: 1 + 8 = 9** (use bottle tops to show this addition)
- **Add up the tens column: 60 + 10 = 70** (use printed tens to show this addition)
- **Now add the tens and ones together: 70 + 9 = 79.** (how many printed tens and bottle tops do you now have altogether?)
- Ask the learners to look at the answer for 79 – 61 =
- Ask: **Do you notice anything?**
- We can see that: 79 – 61 = 18 **and** 61 + 18 = 79

- You may need to ask other questions. Frist, look at the numbers which we used in the two calculations. **Ask: What do you notice about the numbers in the two calculations?** (they are the same but in a different order.)

Activity 3: Whole class activity

- In this activity we will revise expanded notation with subtraction.
- Write on the board the following numbers: 49-28 =
- With the learners solve the problem using expanded notation.
- 49 – 28 = 40 + 9 – 20 + 8
  = 40 – 20 + 9 – 8
  = 20 + 1
  = 21
- Repeat with 28 + 21 = (49)
- Ask: **Do you notice anything?**
- We can see that: 28 + 21 = 49 **and** 49 – 28 = 21
- You may need to ask other questions. Frist, look at the numbers which we used in the two calculations. **Ask: What do you notice about the numbers in the two calculations?** (they are the same but in a different order.)

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Calculate the following using the column method:

a 34 – 10 = __ (24)

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

b 28 – 18 = ___ (10)

	T	O	
	2	8	
–	1	8	
		0	O: 8 – 8 = 0
	1	0	T: 20 – 10 = 10
	1	0	

c 50 – 40 = ____ (10)

	T	O	
	5	0	
–	4	0	
		0	O: 0 – 0 = 0
	1	0	T: 50 – 40 = 10
	1	0	

d 45 – 42 = __(3)

	T	O	
	4	5	
–	4	2	
		3	O: 5 – 2 = 3
	0	0	T: 40 – 40 = 0
	0	3	

e 69 – 7 = __(62)

	T	O	
	6	9	
–		7	
		2	O: 9 – 7 = 2
	6	0	T: 60 – 0 = 60
	6	2	

4 HOMEWORK ACTIVITY (5 MINUTES)

Calculate the following using the column method:

a 53 – 23 = __ (30)

	T	O	
	5	3	
–	2	3	
		0	O: 3 – 3 = 0
	3	0	T: 50 – 20 = 30
	3	0	

b 35 – 20 = __ (15)

	T	O	
	3	5	
–	2	0	
		5	O: 5 – 0 = 5
	1	0	T: 30 – 20 = 10
	1	5	

c 47 – 31 = ___ (16)

	T	O	
	4	7	
–	3	1	
		6	O: 7 – 1 = 6
	1	0	T: 40 – 30 = 10
	1	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 solved subtraction problems using the column method. We also found out that we can check our answer using addition. For example: 12-3 = 9 and 9 + 3 = 12.

Lesson 33: Subtraction using a number line

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: : 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: Solve 2-digit subtraction problems using a number line.
Lesson Vocabulary: tens, ones, subtract, column, number line
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Which numbers are between ...and...?

		Answer			Answer
1	21 and 18	20, 19	**6**	13 and 17	14, 15, 16
2	23 and 20	22, 21	**7**	15 and 19	16, 17, 18
3	19 and 22	20, 21	**8**	18 and 16	17
4	2 and 6	3, 4, 5	**9**	15 and 12	14, 13
5	8 and 11	9, 10	**10**	10 and 6	9, 8, 7

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This is the third lesson of three lessons on subtraction. This lesson continues to look at the subtraction of 2-digit numbers using both the column method and a number line. In the previous lessons the learners used the column method for subtraction. In this lesson they will explore subtraction on the number line compared to the column method. This comparison should allow the learners an opportunity to think about the differences between the two methods and realise the efficiency of the column method.

Today we are solving subtraction problems using both a number line and the column method.

Activity 1: Whole class activity

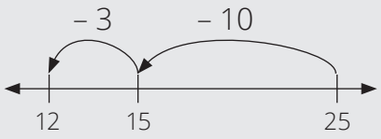
- Write 25 – 13 = ___ on the board.
- Ask the learners if they remember the method that they learnt yesterday. (The column method.)
- Revise the steps with the learners solving 25 – 13 =
- The first step is to line up the numbers vertically in tens and ones.

	T	O	
	2	5	
–	1	3	
		2	O: 5 – 3 = 2
	1	0	T: 20 – 10 = 10
	1	2	

- Subtract in the ones column: 5 – 3 = 2 (show using bottle tops if necessary)
- Subtract in the tens column: 20 – 10 = 10 (show using printed tens if necessary)
- Now add the tens and ones together: 10 + 2 = 12

Activity 2: Whole class activity

- In this activity we will be solving the same question 25 – 13 = _____ using a number line.
- Draw a number line on the board – label 25 on the right hand side of the number line.
- Ask: **Why do we label 25 on the right hand side of the number line?** (we want to subtract from 25.)
- Ask: **How many tens and ones in 13?** (1 ten and 3 ones)
- Explain to the learners that we will move along the number line to show subtracting 10 first, then 3, from 25.
- Draw a single jump of 10 to land on 15. Label 15 on the number line..
- Draw a smaller jump of 3 to land at 12. Label this on the number line. The sketch on the board will now look like this:



- Ask: **What is difference between the column method and the number line? Which method/way of subtraction did they find easier? Why?** (Answers will vary. Listen respectfully to learners answers and discuss the differences between the methods. Encourage learners to look for the method they find easiest and best to do the calculations.)

Activity 3: Whole class activity

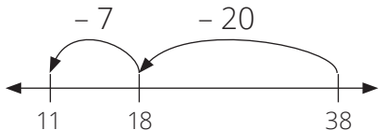
- If time allows solve the following question with your learners 88 – 16 = _____ (72) using both the column method and number line.
- Activity 1 and 2 can guide you through the steps for each method.
- Remember to compare the two methods with the learners.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Complete the following using the column method and a number line:

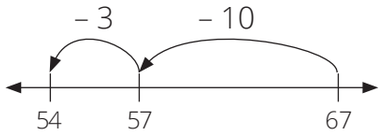
a 38 – 27 = __ (11)

	T	O	
	3	8	
–	2	7	
		1	O: 8 – 7 = 1
	1	0	T: 30 – 20 = 10
	1	1	



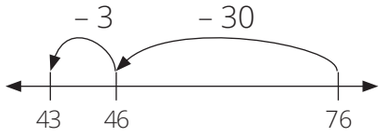
b 67 – 13 = __ (54)

	T	O	
	6	7	
–	1	3	
		4	O: 7 – 3 = 4
	5	0	T: 60 – 10 = 50
	5	4	



c 76 – 33 = __ (43)

	T	O	
	7	6	
–	3	3	
		3	O: 6 – 3 = 3
	4	0	T: 70 – 30 = 40
	4	3	

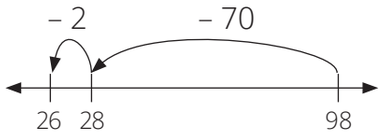


4 HOMEWORK ACTIVITY (5 MINUTES)

Complete the following using the column method and a number line:

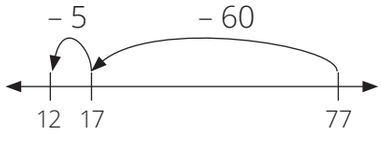
a 98 – 72 = ___ (26)

	T	O	
	9	8	
–	7	2	
		6	O: 8 – 2 = 6
	2	0	T: 90 – 70 = 20
	2	6	



b 77 – 65 = __ (12)

	T	O	
	7	7	
–	6	5	
		2	O: 7 – 5 = 2
	1	0	T: 70 – 60 = 10
	1	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 solved subtraction problems. We solved them using both the place value table and number lines. We also compared the methods and discussed which we found easier and why.

Lesson 34: Addition using bar diagrams

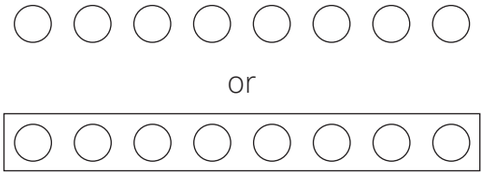
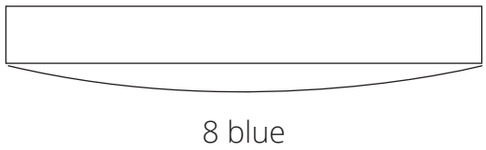
Teacher's notes		
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum		
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction		
Lesson Objective: To solve addition problems using bar diagrams.		
Lesson Vocabulary: add, bar diagram		
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).		
Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	What is the answer:	**Answer**		What is the answer:	**Answer**
1	6 + 5	11	**6**	12 + 5	17
2	5 + 8	13	**7**	14 + 2	16
3	9 + 6	15	**8**	5 + 12	17
4	8 + 9	17	**9**	2 + 11	13
5	5 + 7	12	**10**	7 + 13	20

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In the next three lessons we focus on bar diagrams. Bar diagrams are used to represent information. Look at the following diagram:

Concrete	
Pictorial	
Abstract	

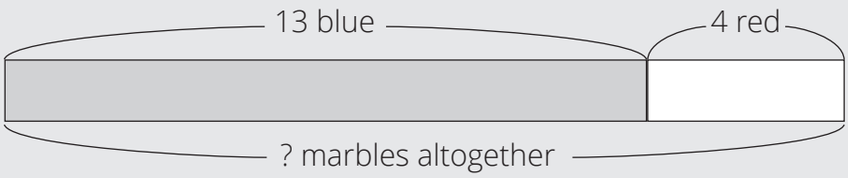
We began this term working with bottle tops and printed tens in order to understand numbers and place value. We then moved onto using pictures to represent numbers. We used place value tables and number lines. In these three lessons we move onto an abstract level. This means that we use bar diagrams to show some information.

If we look at the diagram above, the bar represents 8 blue balls, for example. However, the bar could also represent any other number. In this first lesson we will use the bar diagram to solve addition word problems. The steps to solve word problems were introduced in lesson 21. We will be revising these steps. The bar diagrams will be used to represent the relationships between the numbers given in the story. We will solve problems that involve **change, combine** and **compare**. These will be explained during the lesson. In term 1, only the teachers will draw bar diagrams. Learners will interpret them and write number sentences.

Today we are solving addition problems using bar diagrams.

Activity 1: Whole class activity

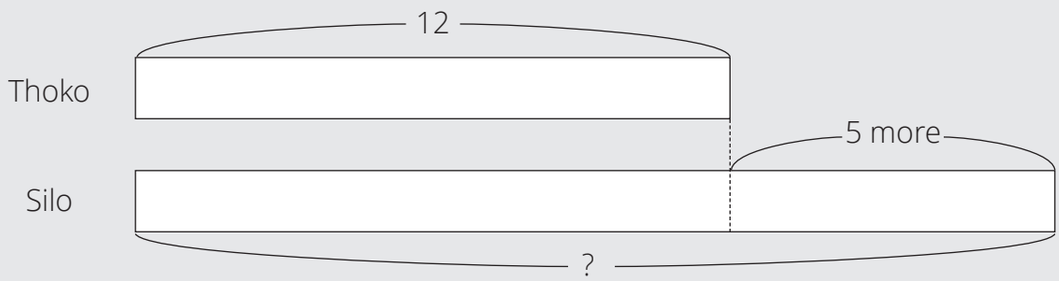
- Write the following word problem on the board**.** This is an example of a 'combine' question.
- **Thoko has 13 blue marbles and 4 red marbles. How many marbles does Thoko have altogether?**
- The first step is to understand the question properly.
- In the step 1, we write the word problem on the board. Next, we read the problem. Then, we let the learners read the problem themselves to deepen their understanding.
- After that we underline the numbers. These are 13 and 4.
- First, use bottle tops to show 13 and 4. Let the learners count out the bottle tops and add them together on their own.
- Then, draw circles to represent the situation.
- Finally, draw the following diagram on the board:



- Let learners copy the diagram into their classwork books, then write the number sentence on the board: 13 + 4 = __
- Repeat the problem with the bottle tops with the learners. Show them that the bottle tops are represented by the bar diagrams on the board.
- Discuss the answer with the learners. (17 marbles). **Thoko has 13 blue marbles and 4 red marbles. How many marbles does Thoko have altogether? 13 + 4 = 17.** H**e has 17 marbles altogether**.
- This is an example of an addition problem using combine.
- Learners record the full number sentence into their classwork books.
- Do not erase this diagram from the board.

Activity 2: Whole class activity

- This second activity uses addition of compare.
- Write the following word problem on the board**.**
- **Thoko has 12 sweets. Silo has 5 more sweets than Thoko. How many sweets does Silo have?**
- The first step is to understand the question properly.
- In the step 1, we write the word problem on the board. Next, we read the problem. Then, we let the learners read the problem themselves in case they have any questions about what it means.
- After that we underline the numbers. These are 12 and 5.
- First, use bottle tops to show 12 and 5. Let the learners count out the bottle tops and add them together on their own.
- Next, draw circles to represent the situation.
- Finally, draw the following diagram on the board:

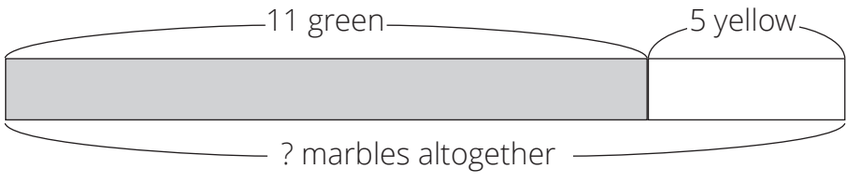


- Let learners copy the diagram into their classwork books, then write the number sentence on the board: 12 + 5 = __
- Repeat the problem with the bottle tops with the learners. Show them that the bottle tops are represented by the bar diagrams on the board.
- Discuss the answer with the learners. (17 marbles). **Thoko has 12 sweets. Silo has 5 more sweets then Thoko. How many sweets does Silo have? 12 + 5 = 17. Silo has 17 sweets.**
- Learners record the full number sentence into their classwork books.
- This is an example of an addition problem of compare.
- Do not erase this diagram from the board.
- Look at the difference between the combine and the compare diagrams. Both lead to addition. But the amounts are shown in different ways.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

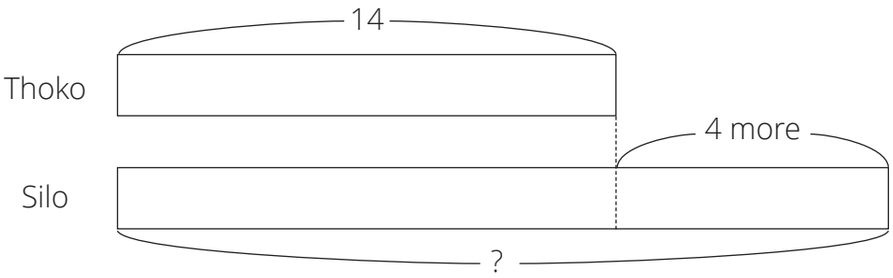
(This classwork should be done as a class so that yourself and the learners can discuss and solve the problems together.) Write the question and draw a bar diagram. Let learners find the number sentence and solve it.

1 (combine) Thoko has 11 green marbles and 5 yellow marbles. How many marbles does Thoko have altogether?



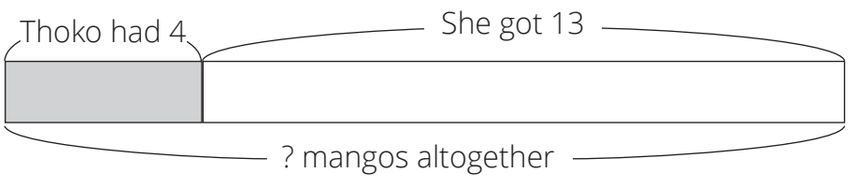
(11 + 5 = 16, Thoko has 16 marbles.)

2 (compare) Thoko has 14 apples. Silo has 4 more apples then Thoko. How many apples does Silo have?



(14 + 4 = 18, Silo has 18 apples.)

3 (change) Thoko had 4 mangos and her mother gave her 13 mangos. How many mangos does Thoko have now?



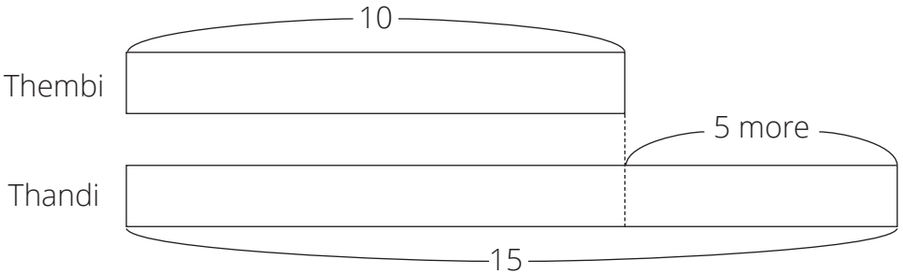
(4 + 13 = 17, Thoko has 17 mangos.)

4 HOMEWORK ACTIVITY (5 MINUTES)

Note: Learners solve this problem on their own at home. Teachers can draw bar diagram and go over the solution to the word problem in the next lesson.

Solve the following addition problem:

Thembi has 10 dolls. Thandi has 5 more dolls then Thembi. How many dolls does Thandi have?



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 solved word problems. We solved addition word problems of change, compare and combine.

Lesson 35: Consolidation: Subtraction

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To revise subtraction using the column method and number lines.
Lesson Vocabulary: tens, ones, subtract, column, number line
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the lessons have focused on subtraction and an introduction to bar diagrams. We began the week with an assessment. Then we introduced subtraction using expanded notation, the column method and a number line. We compared these methods and discussed the advantages and disadvantages of each. In the previous lesson we introduced learners to addition using bar diagrams.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may be struggling with the various methods of solving subtraction problems. You can revisit these methods using lessons 32 and 33. It is important that the learners are secure in their understanding of these methods. You may notice that certain learners are still experiencing difficulties with these methods because of not having a secure knowledge of place value. In this case revisit lessons from unit 1 which deals with place value. Learners may still be unsure around using bar diagrams. We will be spending more time on these in the following week.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about subtraction and the various methods of solving subtraction problems.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

1 Complete the following:

$65 - 32 = (60 + (\underline{5})) - (30 + (\underline{2}))$

$= (60 - \underline{30}) + (5 - \underline{2})$

$= 30 + 3$

$= \_\_\_$

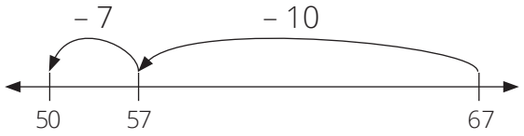
2 Calculate 65 – 44 = __ using the column method.

	T	O	
	6	5	
–	4	4	
		1	O: 5 – 4 = 1
	2	0	T: 60 – 40 = 20
	2	1	

3 Calculate 89 – 60 = ___ using the column method.

	T	O	
	8	9	
–	6	0	
		9	O: 9 – 0 = 9
	2	0	T: 80 – 60 = 20
	2	9	

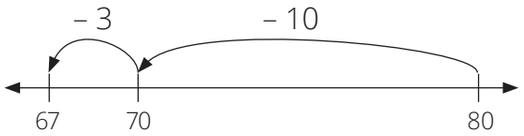
4 Show 67 – 17 = ___ using the number line.



5 Calculate 55 – 42 = __ using the column method.

	T	O	
	5	5	
–	4	2	
		3	O: 5 – 2 = 3
	1	0	T: 50 – 40 = 10
	1	3	

6 Show 80 – 13 = ___ using the number line.



5 REFLECTION AND SUMMARY OF LESSON

Call the whole class to attention and summarise the key concepts of the lesson: Today we revised subtraction using expanded notation, the column method and a number line.

Week 8

Lesson 36: Subtraction using bar diagrams

Teacher's notes		
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum		
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction		
Lesson Objective: To solve subtraction problems using bar diagrams.		
Lesson Vocabulary: subtract, bar diagram		
Resources: Bottle tops		
Date:	Week	Day

1 MENTAL MATHS (10 MINUTES)

	What is the answer:	**Answer**		What is the answer:	**Answer**
1	12 – 6 =	6	**6**	10 – 4	6
2	14 – 5 =	9	**7**	12 – 5	7
3	17 – 9 =	8	**8**	14 – 9	5
4	15 – 8 =	7	**9**	15 – 6	9
5	11 – 3 =	8	**10**	17 – 8	9

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

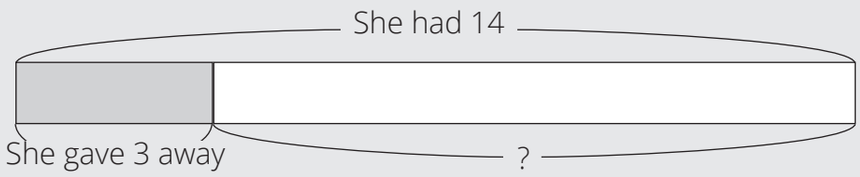
This is the second lesson that involves using a bar diagram to solve word problems. In this lesson we will use the bar diagram to solve subtraction word problems. The steps to solve word problems were used in lessons 21 and 34. We will be revising these steps. The bar diagrams will be used to represent information. We will solve problems that involve change, combine and compare. These will be explained during the lesson.

Today we are solving subtraction problems using bar diagrams.

Activity 1: Whole class activity

- Write the following word problem on the board**.**
- **Thoko had 14 beans in total and gave 3 of them to her sister. How many beans does Thoko have now?**
- The first step is to understand the question properly.
- In the step 1, we write the word problem on the board. Next, we read the problem. Then, we let the learners read the problem themselves to see if they have any difficulties with the meaning.

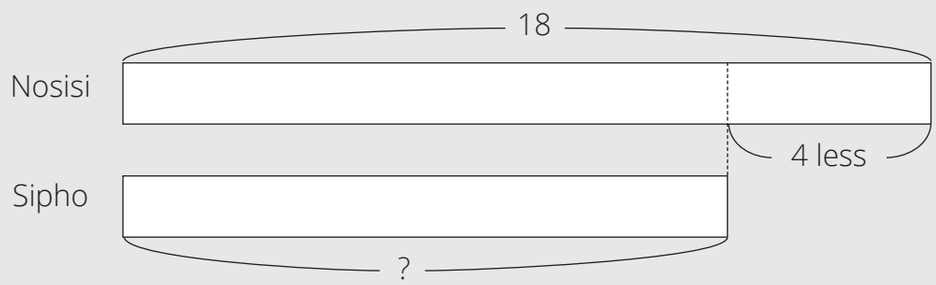
- After that we underline the numbers. These are 14 and 3.
- First, use bottle tops to show 14 and 3. Let the learners count out the bottle tops and subtract 3 from 14 on their own.
- Next, let leaners draw circles by copying the bottle tops.
- Finally, you draw the following diagram on the board



- Let learners copy the bar diagram into their classwork books, then write the number sentence on the board: 14 – 3 = ___
- Repeat the problem using the bottle tops with the learners. Show them that the bottle tops are represented by the bar diagrams on the board.
- Discuss the answer with the learners. (11 beans). **Thoko had 14 beans in total and gave 3 of them to her sister. How many beans does Thoko have now? 14 – 3 = 9. Thoko has 9 beans.**
- Learners record the full number sentence into their classwork books.
- This is an example of an addition problem of change.
- Do not erase this diagram from the board.

Activity 2: Whole class activity

- This second activity uses subtraction with the compare method.
- Write the following word problem on the board**.**
- **Nosisi has 18 sweets and Sipho has 4 less than her. How many sweets does Sipho have?**
- The first step is to understand the question properly.
- In step 1, we write the word problem on the board. Next, we read the problem. Then, we let the learners read the problem themselves in order to understand the problem.
- After that we underline the numbers. These are 18 and 4.
- First, use bottle tops to show 18. Let the learners count out the bottle tops and take away 4 from 18 with you.
- Next, let leaners draw circles by copying the bottle tops.
- Finally, draw the following diagram on the board:

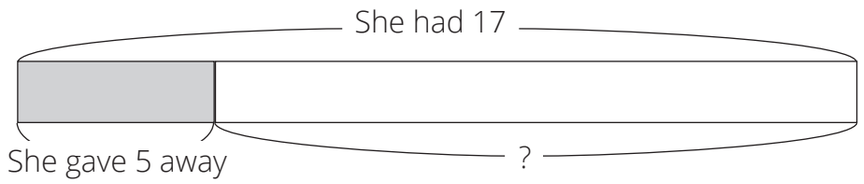


- Let learners copy the bar diagram into their classwork books, then write the number sentence on the board: 18 – 4 = __
- Repeat the problem with the bottle tops with the learners. Show them that the bottle tops are represented by the bar diagrams on the board.
- Discuss the answer with the learners. (14 sweets)**. Nosisi has 18 sweets and Sipho has 4 less than her. How many sweets does Sipho have? 18-4 = 14. Sipho has 14 sweets.**
- Learners record the full number sentence into their classwork books.
- This is an example of a subtraction problem using compare.
- Do not erase this diagram from the board.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

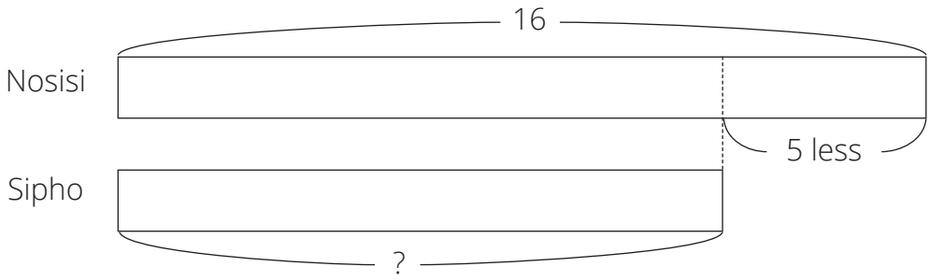
(This classwork should be done as a class so that you and the learners can discuss and solve the problems together.) Write the question and draw a bar diagram. Let learners find the number sentence and solve it.

1 (change) Thoko had 17 beans in total and gave 5 of them to her sister. How many beans does Thoko have now?



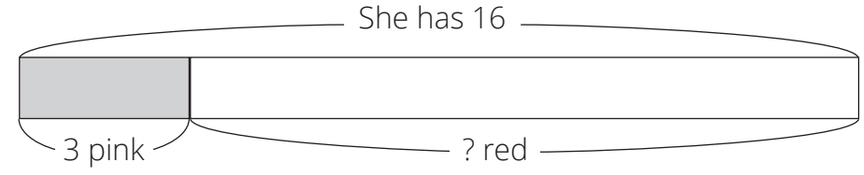
(2 – 5 = 12, Thoko has 12 beans.)

2 (compare) Nosisi has 16 carrots and Sipho has 5 less than her. How many carrots does Sipho have?



(16 – 5 = 11, Sipho has 11 carrots.)

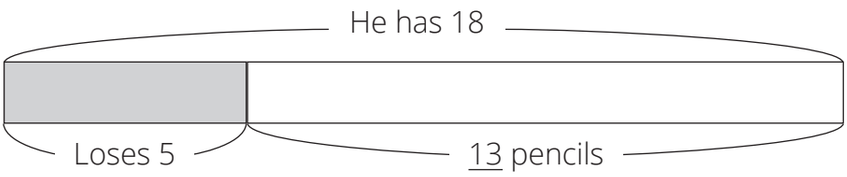
3 (combine) Nomonde has 16 marbles in total. Three of them are pink and the rest is red. How many red marbles does she have?



(16 – 3 = 13, 13 red marbles.)

4 HOMEWORK ACTIVITY (5 MINUTES)

Note: Learners solve this problem on their own at home. Teachers can draw bar diagram and go over the solution to the word problem in the next lesson.
Solve this word problem:



John has 18 pencils. He loses 5. How many pencils does he have?

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 solved word problems. We solved subtraction word problems using change, compare and combine.

Lesson 37: More bar diagrams

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To solve addition and subtraction problems using bar diagrams.
Lesson Vocabulary: add, subtract, bar diagram
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Calculate:	**Answer**		Calculate:	**Answer**
1	34 – 3 =	31	**6**	25 + 2 =	27
2	46 – 2 =	44	**7**	62 + 6 =	68
3	59 – 1 =	58	**8**	38 + 1 =	39
4	64 – 2 =	62	**9**	26 + 4 =	30
5	28 – 7 =	21	**10**	32 + 0 =	32

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

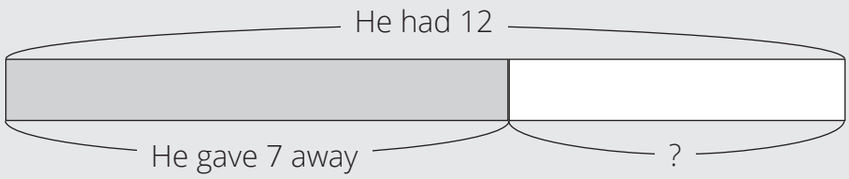
This is the third lesson that involves using a bar diagram to solve a word problem. In this lesson we will use the bar diagram to solve both addition and subtraction word problems. The steps to solve word problems were used in lessons 34 and 36 (and some other lessons). The bar diagrams are be used to represent the information given in the problem. In this lesson you work with problems that again involve change, combine and compare.

Today we are solving addition and subtraction problems using bar diagrams

Activity 1: Whole class activity

- Write the following word problem on the board**.**
- **Joe had 12 potatoes in total and gave 7 of them to his brother. How many does Joe have now?**
- The first step is to understand the question properly.
- Let the learners read the problem themselves in order to understand the problem.
- After that underline the numbers. These are 12 and 7.
- First, use bottle tops to show 12 and 7. Let the learners count out the bottle tops and subtract 7 from 12 on their own.
- Next, let leaners draw circles by copying the bottle tops.

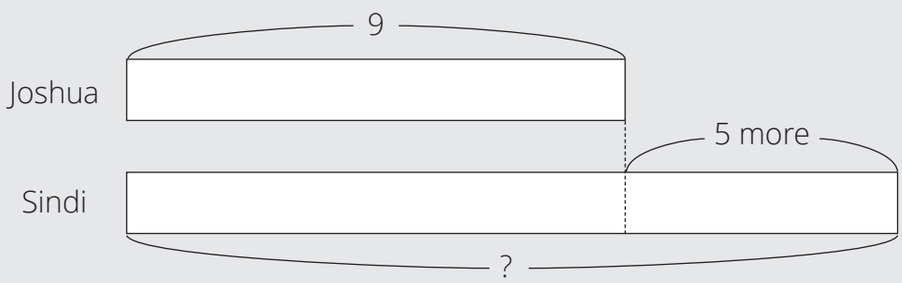
- Finally, draw the following diagram on the board



- Let learners copy the bar diagram and ask the learners what the number sentence would be. Write the number sentence on the board:12 – 7 = __
- Repeat the problem with the bottle tops with the learners. Show them that the bottle tops are represented by the bar diagrams on the board.
- Discuss the answer with the learners. (5 potatoes).
- Learners record the full number sentence into their classwork books.
- This is an example of a subtraction problem of change.

Activity 2: Whole class activity

- This second activity uses the addition of *compare* method.
- Write the following word problem on the board**.**
- **Joshua has 9 oranges. Sindi has 5 more than Joshua. How many oranges does Sindi have?**
- The first step is to understand the question properly.
- Let the learners read the problem themselves in order to understand the problem.
- After that we underline the numbers. These are 9 and 5.
- Let the learners discuss which operation they will use, addition or subtraction for this story.(Step 2: Devise a plan)
- For this story it is addition. We will be comparing the 2 numbers. (Step 3: Carry out the plan)
- Use bottle tops to show 9 and 5. Let the learners count out the bottle tops and add them together with you.
- Draw the following diagram on the board:



- Ask the learners what the number sentence would be.
- Write the number sentence on the board: 9 + 5 = __
- Repeat the problem with the bottle tops with the learners. Show them that the bottle tops are represented by the bar diagrams on the board.

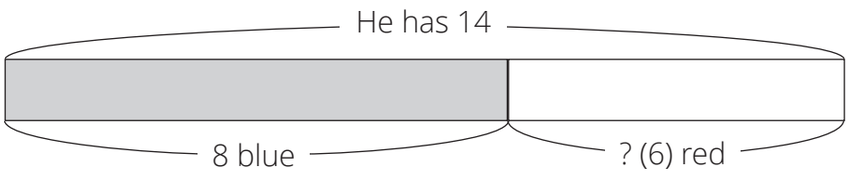
- Discuss the answer with the learners. (14 oranges).
- Learners record the full number sentence into their classwork books.
- This is an example of an addition problem of compare.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

(This classwork should be done as a class so that yourself and the learners can discuss and solve the problems together.) Write the question and draw a bar diagram. Let learners find the number sentence and solve it.

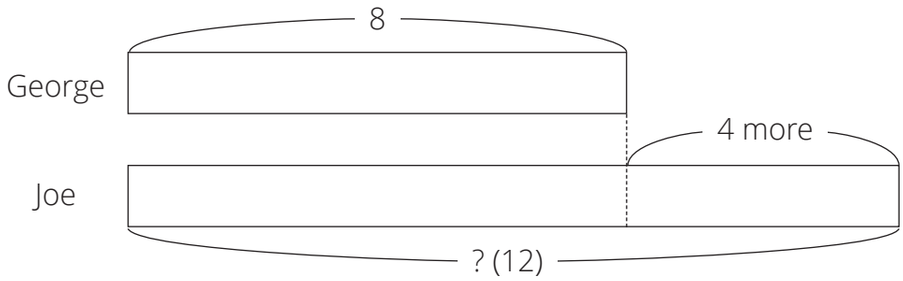
Solve the following word problems using bar diagrams.

1 Moosa has 14 pens in total. Eight of them are blue and the rest are red. How many red pens does he have? (combine)



14 – 8 = 6, 6 red pens.

2 George has 8 bananas. Joe had 4 more. How many more bananas does Joe have? (compare)



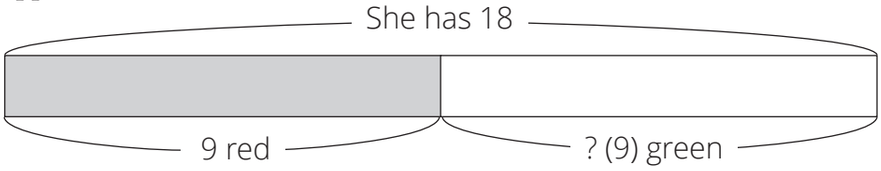
8 + 4 = 12, 12 bananas.

4 HOMEWORK ACTIVITY (5 MINUTES)

Note: Learners solve this problem on their own at home. Teachers can draw bar diagram and go over the solution to the word problem in the next lesson.

Solve the following word problem.

Anna has 18 apples in total. Nine of them are red and the rest are green. How many green apples does she have?



18 – 9 = 9, 9 green apples.

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 solved word problems. We solved both addition and subtraction word problems.

Lesson 38: Addition and subtraction

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To consolidate strategies for solving addition and subtraction problems.
Lesson Vocabulary: tens, ones, add, subtract, column, number line, bar diagram.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Calculate:	**Answer**		Calculate:	**Answer**
1	9 – 2 =	7	**6**	4 – 4 =	0
2	7 – 4 =	3	**7**	10 – 5 =	5
3	8 – 3 =	5	**8**	9 – 4 =	5
4	6 – 1 =	5	**9**	7 – 3 =	4
5	3 – 1 =	2	**10**	10 – 10 =	0

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson the learners will revise and practice strategies for solving addition and subtraction problems. They will also revise the column method and number lines.

Today we are revising and practising strategies for solving addition and subtraction problems.

Activity 1: Whole class activity

- In the first activity we will revise addition and subtraction using the column method.
- Write 86 + 12 = ___ on the board.
- Explain to the learners that we will now be solving this question using the column method.
- Draw the diagram below and talk the learners through the steps.

	T	O	
	8	6	
+	1	2	
		8	O: 6 + 2 = 8
	9	0	T: 80 + 10 = 90
	9	8	

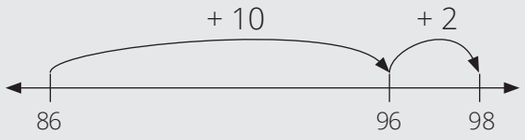
- You must discuss each step. Ensure that you use the correct language- ones, tens, add.
- **The first step is to line up the numbers vertically in tens and ones.**
- **Add up the ones column: 6 + 2 = 8**
- **Add up the tens column: 80 + 10 = 90**
- **Now add the tens and ones together: 90 + 8 = 98.**
- Write 67 – 13 = __ on the board.
- Revise the steps with the learners solving 67 – 13 = __
- **The first step is to line up the numbers vertically in tens and ones**.

	T	O	
	6	7	
–	1	3	
		4	O: 7 – 3 = 4
	5	0	T: 60 – 10 = 50
	5	4	

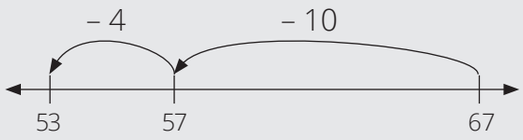
- **Subtract the ones column: 7 – 3 = 4**
- **Subtract the tens column: 60 – 10 = 50**
- **Now add the tens and ones together: 50 + 4 = 54**

Activity 2: Whole class activity

- In this activity we will revise using a number line to solve addition and subtraction problems**.**
- Write 86 + 12 = on the board.
- Draw a number line with the start being 86.
- Ask: **How many tens and one in 12?** (1 ten and 2 ones)
- Explain to the learners that we will move along the number line to show 10 + 2.
- Draw a single jump of 10 to land on 96. Write in 96.
- Draw a smaller jump of 2 to land at 98.

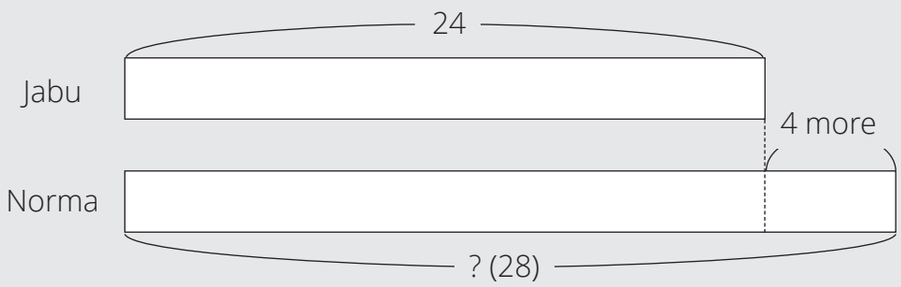


- In this activity we will be solving the same question 67 – 14 = using a number line.
- Ask the learners **how many tens and ones in 14?** (1 ten and 4 ones)
- Explain to the learners that we will move along the number line to show subtracting 10 and 4 from 67.
- Start at 67. Draw a single jump of 10 to land on 57. Write in 57.
- Draw a smaller jump of 4 to land at 53.



Activity 3: Whole class activity

- The third activity involves solving an addition problem using a bar diagram.
- **Jabu has 24 marbles. Noma has 4 more marbles. How many marbles does Noma have?** (compare)
- Let learners discuss which operation they will use, addition or subtraction for this story.
- For this story it is addition. We will be comparing the 2 numbers.
- Draw the following diagram on the board:



- Ask the learners what the number sentence would be.
- Write the number sentence on the board: 24 + 4 = .__
- Discuss the answer with the learners. (28 marbles).

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

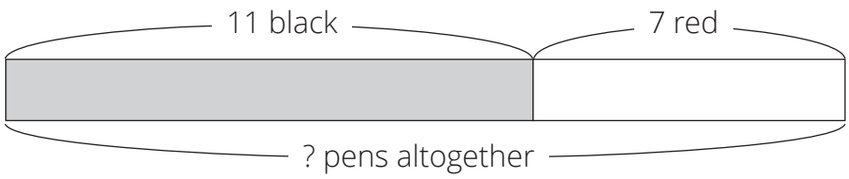
1 Calculate: 34 + 25 = _____

	T	O	
	3	4	
+	2	5	
		9	O: 5 + 4 = 9
	5	0	T: 30 + 20 = 50
	5	9	

2 Calculate: 48 – 35 = ____

	T	O	
	4	8	
–	3	5	
		3	O: 8 – 5 = 3
	1	0	T: 40 – 30 = 10
	1	3	

3 Thoko has 11 black pens and 7 red pens. How many pens does Thoko have altogether? (combine)

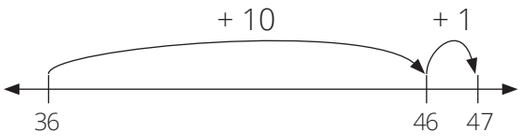


11 + 7 = 18, 18 pens.

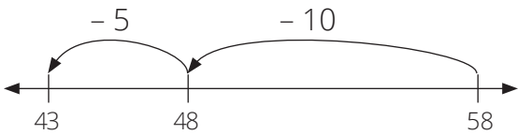
4 HOMEWORK ACTIVITY (5 MINUTES)

Solve using a number line:

1 36 + 11 = ___ (47)



2 58 – 15 = ___ (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 revised and practised solving addition and subtraction problems using a variety of strategies.

Lesson 39: Assessment

Teacher's notes
This lesson should be used for assessment of the content covered in this unit to date.
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Resources: Printable assessment in teacher's resources, Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable 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 (15 MARKS)

WRITTEN

1 Calculate using the column method:

a 70 + 26 = ___ (3)

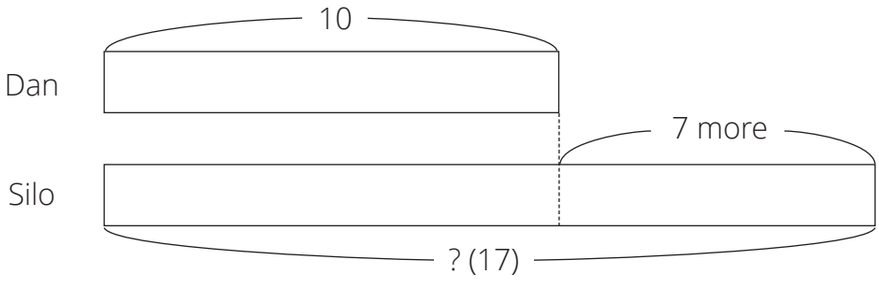
	T	O	
	7	0	
+	2	6	
		(6)	O: (0 + 6 = 6)
	(9	0)	T: (70 + 20 = 90)
	(9	6)	

b 86 – 32 = ___ (3)

	T	O	
	8	6	
–	3	2	
		(4)	O: (6 – 2 = 4)
	(5	0)	T: (80 – 30 = 50)
	(5	4)	

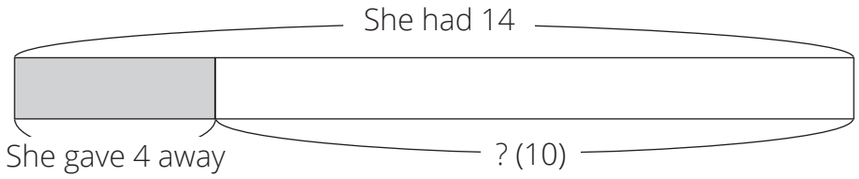
3 Solve the following word problems, use the bar diagrams to help you. (3 × 3 = 9)

a Dan has 10 pencils. Silo has 7 more pencils than Dan. How many pencils does Silo have? (compare)



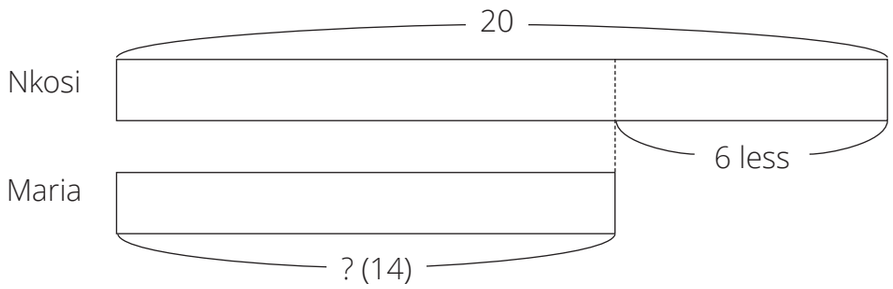
10 + 7 = 17, 17 pencils.

b Tina had 14 stickers in total and gave 4 of them to her sister. How many stickers does Tina have now? (change)



14 – 4 = 10, 10 stickers.

c Nkosi has 20 sweets and Maria has 6 less than her. How many sweets does Maria have? (compare) 3 marks



20 – 6 = 14, 14 sweets.

Lesson 40: Consolidation: Bar diagrams

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
CAPS topics: 1.6 Problem solving techniques ,1.7, 1.12 Techniques – methods or strategies, 1.13 Addition and Subtraction
Lesson Objective: To practise using bar diagrams for word problems.
Lesson Vocabulary: tens, ones, add, subtract, column, number line, bar diagram.
Resources: Printed tens (see *Printable Resources*), bottle tops and place value table per learner (see *Printable Resources*).
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the lessons have focused on addition and subtraction using the bar diagrams. We have used bar diagrams to represent objects. Instead of using bottle tops and printed tens, we have used bar diagrams to represent objects. The problems we have solved involved thinking about problems that involve change, compare and combine.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

Learners may be struggling with the bar diagrams. Revisit lessons 34 and 36. You can assist the learners by using bottle tops to solve word problems initially. Once the learners are confident in solving word problems using bottle tops you can draw the bottle tops. However, you should move the learners onto using a bar to represent numbers. The learners should continue to practise solving word problems using bar diagrams. This will assist them to become confident in problem solving. Learners should also write number sentences when they interpret the bar diagrams drawn by the teacher.

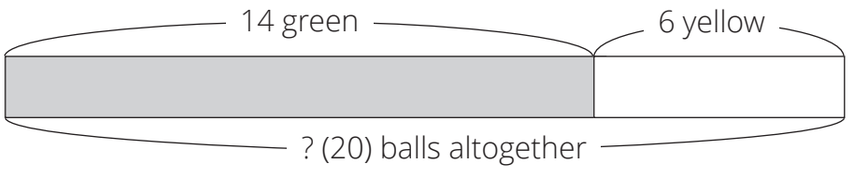
3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about word problems using bar diagrams.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

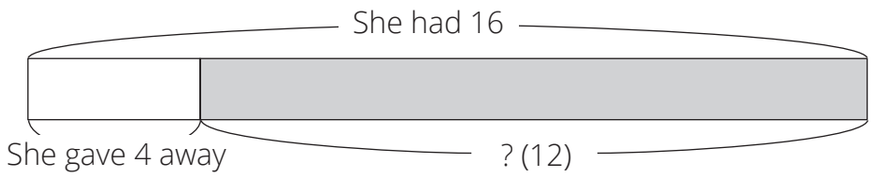
(This classwork should be done as a class so that yourself and the learners can discuss and solve the problems together.) Write the question and draw a bar diagram. Let learners find the number sentences and solve the problems.

1 Tim has 14 green balls and 6 yellow balls. How many balls does Tim have altogether? (combine)



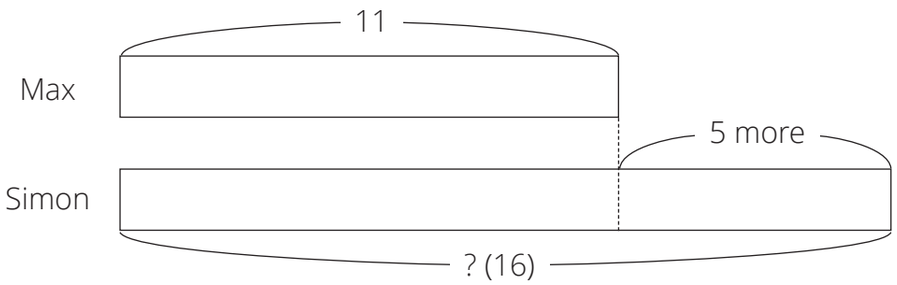
14 + 6 = 20, 20 balls.

2 Cindy had 16 sweets in total and gave 4 of them to her friend. How many sweets does Cindy have now? (change)



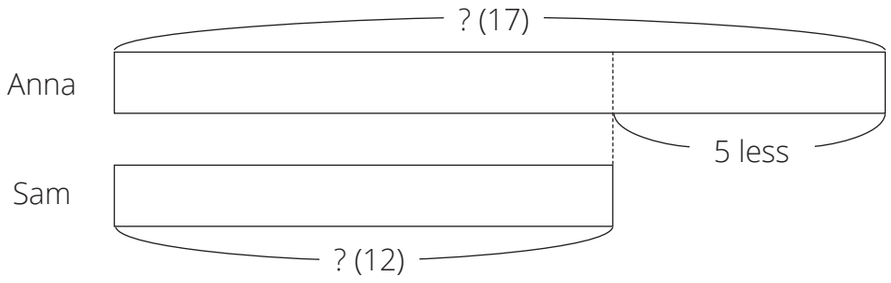
16 – 4 = 12, 12 sweets.

3 Max has 11 marbles. Simon has 5 more marbles than Max. How many marbles does Simon have? (compare)



11 + 5 = 16, 16 marbles.

4 Anna has 17 biscuits and Sam has 5 less than her. How many biscuits does Sam have? (compare)



17 – 5 = 12, 12 biscuits.

5 REFLECTION AND SUMMARY OF LESSON

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

Today we revised using bar diagrams to solve addition and subtraction word problems.

Week 9

Unit 4 Introduction

In this unit, learners will learn about length. Length is part of measurement. Measurement is part of our daily lives. We measure quantities of food ingredients (mass), time, objects (various aspects, e.g. mass) and space (e.g. volume). Children learn maths and measurement skills before they learn the words that represent what they are doing. Before introducing the standard unit of length, which is metre in Grade 2, we need the learners to understand the basic concept of measurement using non-standard units. A non-standard unit is an object that is not normally used for measurement. For example, using hands or feet to measure the length of the classroom. We begin with non-standard units as they are meaningful to the learner and are readily available. Once the learners have grasped the concept of length (how long something is), we introduce the standard unit of length, which is a metre. We allow learners time to explore and identify the importance of using standard units. We use standard units as we need to have a measurement system that means the same to everyone who uses it. Imagine the problems that would occur if we didn't have standard units of measurement.

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

- **Conceptual understanding**: This unit addresses the key concept of length.
- **Procedural fluency**: Learners will develop procedural fluency in the ability to measure length through a variety of tasks on length involving standard and non- standard units.
- **Strategies**: Learners will discover that it is essential for them to use a standard unit of measurement to compare length.
- **Reasoning**: Learners will be able to justify why there is a need for standard units of measurement, as well as differentiate between standard and non-standard units of measurement.

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

- **Problem solving**: Through working with non-standard and standard units of measurement, learners are able to solve problems related to length.
- **Justifying answers**: Learners justify their answers by using non-standard and standard units of measurement.
- **Addressing learners' errors**: The teacher can address learners' errors in this unit, as the unit might expose learners' misconceptions in relation the measurement of length. Errors in activities may reflect a confusion between standard and non-standard units of measurement or they might relate to confusion about what is to be measured. Teachers should ask learners probing questions in order to find the source of their errors in order to address them most effectively.

Lesson 41: Length

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 4.2 Length
Lesson Objective: Estimate, measure, compare, order and record length using non-standardised measures, e.g. hand spans, paces, pencil length, bottle tops etc. as part of informal measuring.
Lesson Vocabulary: Length, width, measure, metres, compare, estimate, order, record, forwards, backwards, metres, non-standard unit, shortest, longest, rectangle, index finger
Resources: Paper, scissors, pencils, sticks, bottle tops.
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Which number is between...and...?

		Answer			Answer
1	21 and 23	22	**6**	84 and 86	85
2	34 and 36	35	**7**	90 and 92	91
3	44 and 46	45	**8**	66 and 68	67
4	55 and 57	56	**9**	31 and 29	30
5	59 and 61	60	**10**	100 and 98	99

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson recaps some of the terminology of length that was introduced in Grade 1 and it gives learners another opportunity to work with non-standard units in order to realise the value of using standard units to measure length. This is done by opening up a discussion about the problem of everyone using a different unit to measure length. (The standard unit is not yet introduced. This will be done later in the unit.)

Today we will be revising the concept of length – that is how long an object is.

Activity 1: Whole class activity

- Introduce your learners to today's topic – how to estimate, measure and compare objects by measuring their length using hands, pencils and bottle tops.

Activity 2: Whole class activity

- Ask your learners to do each of these activities:

- Trace their hand on a piece of paper and then cut out their drawing. Each learner must then compare their hand with their friend's hand. **Is it the same? How is it different?** (answers will vary – discuss – not all hands are the same size)
- Learners must measure the length of their desk with their hand cut-outs and then talk to a partner about how many hands long their desks were.
- Call up two learners. Ask each learner to take one step. Each learner should take one step and then measure the length of their steps using sticks – use a different stick for each step. Break the sticks to show the correct length of each of the two learners' steps. Compare the length of the sticks. **Are they the same? If not, why not?** (Discuss – we don't all take steps of the same length.)
- Call up two different learners to measure the length of the classroom using the two sticks you have made as step lengths. (Remember that there should be no gaps between the sticks when you measure.)
- Compare the lengths of the classroom that have been measured using the two different sticks. The class can help count the stick lengths while the learners who have been called up do the activity. The class can also check that the learners are not leaving any gaps when they mark off one stick at a time, back-to-back. (One learner will find that the classroom is, possibly, 16 sticks long while another may say 14 sticks long; this is because of the different stick lengths.)
- Ask: It is a problem if the measurements are different? (Discuss – it is! Get the learners thinking about the idea that a standard unit it a good idea.)

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Which line is shorter?
a ——— or **b** ——————————— (a)

2 Which line is longer?
a ——— or **b** ——————————— (b)

3 Draw a rectangle, and measure the sides using your index finger. (Learner answers will vary.)

4 Use a pencil to measure the width of the window frame in the classroom. (various)

5 Use your hand span to measure the length of your desk. (various)

6 Use your step (one foot in front of the other, with no spaces in between) to measure how many steps it takes to walk around the classroom. (various)

4 HOMEWORK ACTIVITY (5 MINUTES)

1 Draw a picture of you and your friend. (various)

2 Is your friend taller or shorter than you? (answers will vary)

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 revised length. We have measured how long some objects are in our classroom.

Lesson 42: Non-standard units of length

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 4.2 Length
Lesson Objective: Estimate, measure, compare, order and record length using non-standardised measurement units.
Lesson Vocabulary: Length, informal measurement, informal units, compare, order, record, value, longer, shorter, taller, wider
Resources: Collect empty matchboxes before the lesson, a broom. (Collect form home.)
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

Break down into smaller numbers, but with the same total value:

		Answer			Answer
1	10	5, 5	**6**	24	10, 10, 4
2	20	10, 10	**7**	28	10, 10, 8
3	35	10, 10, 10, 5	**8**	44	20, 20, 4
4	21	10,10,1	**9**	55	10,10,10,10,10,5
5	50	10, 10, 10, 10, 10	**10**	84	50,10,10,10,4

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

This lesson builds on the previous lesson. It recaps the problem of using different units to measure length and moves onto introducing the standard unit of a metre.

Today we will be learning how to estimate and measure using the non- standard units.

Activity 1: Learners work in groups

- Explain the concepts of width and height to the learners using a desk as a concrete aid.
- The *width* of the desk is the measurement across the shorter length across the desk.
- The *height* of the desk is the measurement from the ground up to the top of the desk.
- Give each group of learners some empty matchboxes.
- Ask the learners to measure the *height* of their desks with a matchbox.
- Ask the learners to measure the *width* of their desks with a matchbox.
- Discuss the measurements found by a few different groups.
- Ask, **Are the measurements the same/different? Why?** (The measurements should be roughly the same because learners are all using the same unit – a matchbox.)
- Ask, **Do you think we could use matchboxes all the time to measure lengths?** (No, because they are clumsy to work with and even if we all used the same matchboxes, not

all matchboxes are the same and if everyone used matchboxes to measure, there would be different measurements for the same length which is no good.)

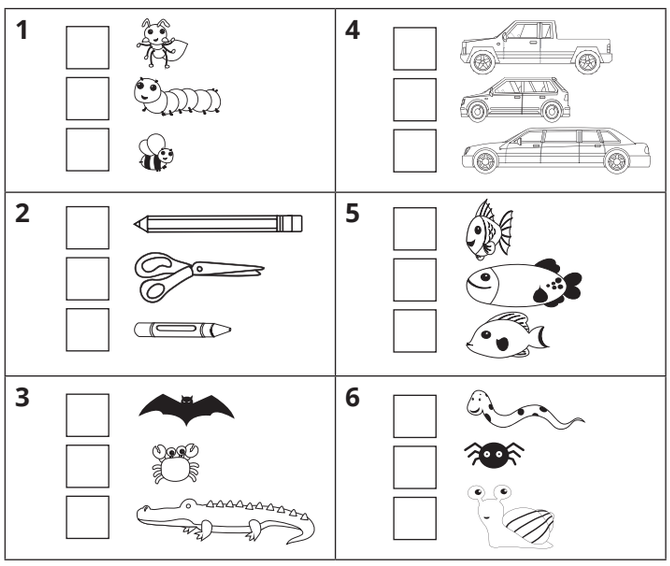
- Ask the learners **what they would rather use to measure the *width* of the classroom: a matchbox or a broom? Why?** (A matchbox is too small, it would not be a good unit to measure a thing as long as the width of the classroom. A broom would be better. But a broom is still not a standard unit and could lead to the same problems of inconsistency in measurement as the matchbox did for the shorter lengths.)
- Discuss the value of standard units such as the centimetre and metre.
- Discuss the differences between the centimetre and metre – the one is a smaller unit and the other is a bigger unit. They can be efficiently used to measure different lengths. For example – The centimetre would be used to measure the width of the desk and the metre would be used to measure the width of the classroom.

Activity 2: Learners work in pairs

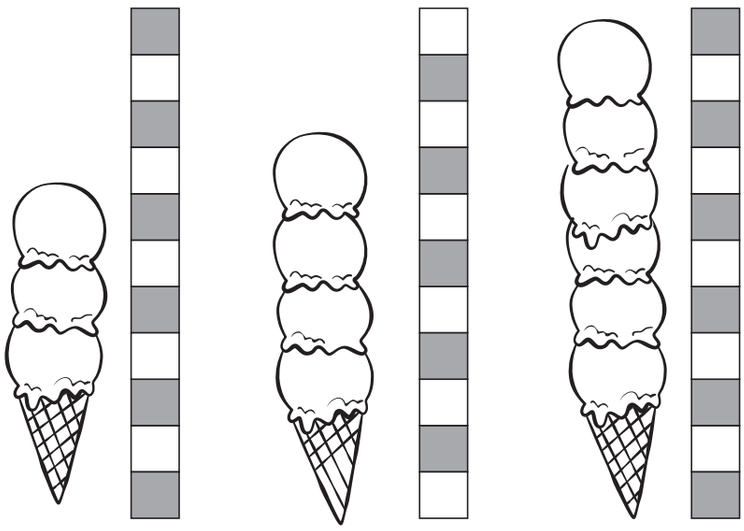
- Take your learners outside.
- Identify an area where the learners could practise measuring length using their feet. For example the length of a corridor or a field. Perhaps the distance between 2 trees.
- Ask your learners to get into pairs.
- Explain to the learners that they will measure the length of the field for example using their feet.
- Each pair should complete the task and compare their findings.
- Ask the learners if their measurements were the same.
- Discuss why they were not.
- Discuss the value of standard units such as the centimetre and metre

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Tick the box next to the longest shape.



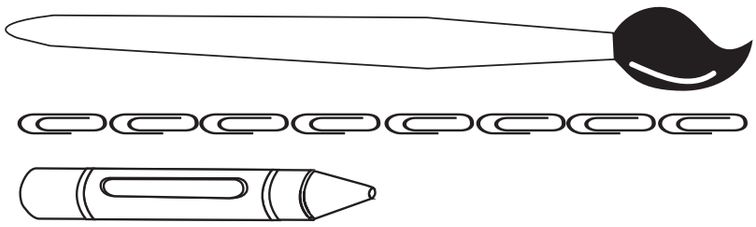
2 About how many blocks long is each ice cream cone?



(3, 6, 9 blocks)

4 HOMEWORK ACTIVITY (5 MINUTES)

Look at the drawing of a paintbrush, some paper clips and a crayon.



1 This paint brush is_____ paper clips long. (8)
2 This crayon is_____ paper clips long. (4)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we learnt to estimate and measure in non-standard units.

Lesson 43: Standard units of length

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 4.2 Length.
Lesson Objective: Estimate, measure, compare, order and record length using metres as the standard unit of length, using either metre sticks or metre-long lengths of string.
Lesson Vocabulary: Estimate, measure, compare, order, record, length, metres, standard units, long, short, longer, shorter, longest, shortest, tall, taller, wide, wider.
Resources: Enough for each child in the class: 1 m lengths of string (not wool since it will stretch), balls, scrap paper.
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Put the smallest number first:	**Answer**		Put the smallest number first:	**Answer**
1	63, 65, 61	61, 63, 65	**6**	70, 68, 66	66, 68, 70
2	30, 27, 33	27, 30, 33	**7**	30, 50, 40	30, 40, 50
3	20, 15, 10	10, 15, 20	**8**	4, 8, 12	4, 8, 12
4	12, 20, 16	12, 16, 20	**9**	42, 41, 40	40, 41, 42
5	70, 72, 71	70, 71, 72	**10**	16, 20, 18	16, 18, 20

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson learners work with the metre which is a standard unit for the measurement of length.

Today we are learning to measure using a metre which is a standard unit of measurement.

Activity 1: Whole class activity

- Take learners outside for this activity.
- Divide your class into pairs.
- Give each pair a 1 m piece of string and a ball.
- The pairs are now going to stand on the field/playground facing one another, 1 m apart.
- They have to measure the space between them with their string.
- Throw the ball to one another.
- After ten throws they have to increase the space between them to 2 m.
- Throw the ball to each other, ten times.
- Repeat this activity, until there is a 5 m gap between each pair.
- Discuss the activity. When did you find it easy/difficult to throw and catch the ball?

Activity 2: Learners work in groups

- Give each group a piece of paper and a 1 m piece of string.
- They are now going to estimate and then measure the lengths of objects/spaces/lengths outside their classroom.
- Explain to the learners what they have to measure, e.g. the length from one tree to another, the width of the netball field, the length of the corridor, the space between 2 things, etc.
- They write the names of what they will measure on their paper, first estimate the length and then go and measure it.
- Each group should start at a different place.
- As soon as all the groups are finished, they can compare their measurements.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1. The shortest distance to throw and catch a ball is 1 m, 2 m, 3 m, 4 m or 5 m? (1 m)
2. The longest distance to throw and catch a ball is 1 m, 2 m, 3 m, 4 m or 5 m? (5 m)
3. Choose some lengths to measure at school in the lesson.
4. List them in the table.
5. Write in your estimation, your measurement and then the difference between your estimation and measurement.

Item	Estimation	Measurement	Difference
(Answers will vary)			

4 HOMEWORK ACTIVITY (5 MINUTES)

1. Choose some lengths to measure at home.
2. List them in the table.
3. Write down your estimations in your table.
4. Write down your measurements and then the difference between your estimation and the measurements.

Item	Estimation	Measurement	Difference
(Answers will vary)			

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we learnt to estimate and measure in metres using a metre length of string..

Lesson 44: Measuring in metres

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 4.2 Length.
Lesson Objective: Estimate, measure, compare, order and record length using metres as the standard unit of length.
Lesson Vocabulary: Forwards, backwards, length, measure, measurement, metre stick, metre, compare, hand span, paces, standard measure, non-standard measure, estimate, order, height, width, unit.
Resources: Objects in the classroom, metre stick.
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is 10 more than:	**Answer**		What is 10 less than:	**Answer**
1	84	94	**6**	53	43
2	65	75	**7**	10	0
3	33	43	**8**	56	46
4	44	54	**9**	71	61
5	1	11	**10**	16	6

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson standard units are used. The first activity consolidates the concept of length using a non-standard unit of measurement. The second activity introduces the metre (m) as a standard unit of length. After these two whole class activities, learners work in groups to consolidate this learning. Learners should be able to read measurements given in metres and understand approximately what they represent.

Today we are learning to measure using non-standard and standard units of measurement.

Activity 1: Whole class activity

- Revise measuring the length of objects using hand spans.
- Ask the learners to measure the length of their desks, using their hands.
- Give each learner a chance to give their measurement.
- Ask the learners why all the measurements are not the same. (Because everyone in the class does not have hands that are the same size.)
- Explain to them that when we use hands or feet, etc. we call it a non-standard measure because the sizes of the measuring units differ. Discuss that you have found out this is not always a good thing because people get different measurements for the same thing.

Activity 2: Whole class activity

- Use a metre stick for this activity.
- Show the metre stick to the learners and explain to them that this stick is one metre long.
- When we use this stick to measure the lengths of objects we will get a standard measurement. It is a standard measure.
- Explain: **When we use a standard measuring instrument, we will all get the same answer for the measurement. This is what we need!**
- Use the metre stick to measure the lengths of different objects in the classroom, e.g. height of door, length of desk, etc.
- Some of the learners may be asked to come and help you.

Activity 3: Learners work in groups

- Choose an object in the class to measure, e.g. your table, the board or a book bag.
- First get three to four learners to measure the length/height/width of the table using hand spans.
- Write all the measurements on the board.
- Discuss the measurements.
- Ask: **Are they the same/different/why?**
- Now get three or four learners to measure length/height/width of the table, using the metre stick.
- Compare all the different readings.
- Ask: **Are they the same/different/why?**
- Ask: **Which measurement is the most accurate?** (The metre stick.)
- If time allows you can measure other lengths in the class in the same way (e.g. the length and width of the classroom), but this time use paces and the metre stick.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Write the following items under the correct heading in the table below: pencil, tree, cell phone, telephone pole, lunchbox, sharpener, flagpole, fridge, school fence.

Length less than 1 m	Length more than 1 m
(Lunchbox)	(Flagpole)
(Sharpener)	(Telephone pole)
(Cell phone)	(Tree)
(Pencil)	(Fridge)
	(School fence)

2 Nomsa's brother is 1m tall, Jabu's brother is 2 m tall. Whose brother is taller? (Jabu's brother)

3 How many metres in length do you think these objects are:

a A car? (about 2 metres)
b A playing field? (Answers may vary but must be reasonable. About 50 metres)

4 HOMEWORK ACTIVITY (5 MINUTES)

Look around at home. Write down 5 objects that are less than 1 m and 5 objects more than 1 m in length.

(Answers will vary.)

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we measured various objects using standard and non- standard measurements.

Lesson 45: Consolidation: Measuring length

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
CAPS topics: 4.2 Length.
Lesson Objective: Estimate, measure, compare, order and record length using metres as the standard unit of length.
Lesson Vocabulary: Forwards, backwards, length, measure, measurement, metre stick, metre, compare, hand span, paces, standard measure, non-standard measure, estimate, order, height, width, unit.
Resources: metre sticks (1 per group of 4 learners)
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

This week the learners have worked with length using non-standard and the standard units. The standard unit of length is a metre. Learners completed a number of practical activities and have estimated and measured the length of a variety of objects.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

The learners may have experienced difficulty with understanding the importance of using a standard unit of measurement. It is important that this is dealt with. You can use practical activities to show the importance of using standard units. You could revisit the activities from the previous lessons to show why we use the standard unit of a metre.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about length.

4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

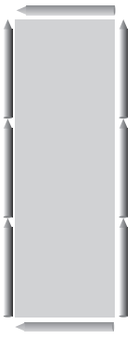
1 Use the diagrams to decide which sides are short and which sides are long.

a The long side is_____crayons.

b The short side is_____crayons.

c The long side is_____crayons.
d The short side is_____crayons.

e The long side is_____crayons.
f The short side is_____crayons.



g The long side is_____crayons.
h The short side is_____crayons.

i The long side is_____crayons.
j The short side is_____crayons.

2 Work in groups with a metre stick.
a Choose 4 objects in the classroom.
b Write the names of the items in the table.
c Measure the length/width/height of the object using the metre stick.

Item	Measurement in metres

5 REFLECTION AND SUMMARY OF LESSON

Today we revised length and how we measure how long an object is. Summarise the key concepts of the lesson.

Week 10

Lesson 46: Length

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 4.2 Length.
Lesson Objective: Estimate, measure, compare, order and record length using metres as the standard unit of length.
Lesson Vocabulary: Forwards, backwards, length, measure, measurement, metre stick, metre, compare, standard measure, non-standard measure, estimate, order, height, unit.
Resources: Metre stick, 3 pieces of scrap paper per group.
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	What is 5 more than:	**Answer**		What is 5 less than:	**Answer**
1	25?	30	**6**	30?	25
2	56?	61	**7**	46?	41
3	59?	64	**8**	78?	73
4	10?	15	**9**	99?	94
5	35?	40	**10**	100?	95

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

In this lesson standard units are used. The first activity consolidates the concept of length. The second activity involves using the metre (m) as a standard unit of length. Learners should be able to estimate, measure, compare and record length.

Today we are learning to estimate and measure lengths to compare lengths using metres.

Activity 1: Whole class activity

- Use a metre stick for this activity.
- Recap through discussion that this stick is one metre long and it is a standard measure.
- Explain: *When we use a standard measuring instrument, we will all get the same answer for the measurement. This is what we need!*
- Call 3 learners of different heights to the front of the class.
- Using the metre stick as a guide ask the learners to estimate the height of each learner. Record these estimations on the board.

- Use the metre stick to measure the different height of each learner.
- Discuss the relationship between estimation and accurate measurement. Ensure that you use the word estimate. Estimation is a key mathematical term and this activity that involved estimation allows the teacher to assess if the learner has an understanding of the concept.

Activity 2: Learners work in groups

- Explain to the learners that you will be reading them a story and that they will be completing an activity in groups.
- **Read the following story to the learners:**

> Every year our school holds a paper plane flying competition. Children in groups of 3 design their own paper plane and then fly them against each other. The group whose paper plane flies the furthest is the winner. Today you are going to design your own paper plane in groups of 3. You will use a single A4 piece of paper and you may not use tape or glue. You can only fold and rip the paper by hand. You are allowed to decorate the outside of the plane.

- Once all the planes have been made we will be holding the competition. I will mark our how far a metre is and everyone will fly their plane from the same starting point.
- Let the learners design and make their paper planes in groups.
- Once the learners are finished bring the learners together.
- Explain that one person from each group is going to fly their plane from the starting line.
- Allow each group to fly their plane. After each group ask the learners to estimate if the plane flew more/less than a metre. They should each mark the landing point of their planes.
- Once all the groups have flown their planes, measure 1 m from the starting line and mark it 1 m.
- Make use of the metre stick to show the learners how we measure using a standard unit.
- Now learners decide – was their estimation correct? Did their plane fly for more/less than 1 m? **Discuss.**
- The winning group is the paper plane that flew the furthest.

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

1 Sort these object into less/more than 1 m – write them into the table below in the correct column.

A pencil, a car, a mouse, teacher's desk, a carrot, a key and a ladder.

Length less than 1 m	Length more than 1 m
(a pencil)	(a car)
(a mouse)	(teacher's desk)
(a carrot)	(a ladder)
(a key)	

2 How many metres do you think these objects are in length?

a Chalkboard - _(2)_ m

b Height of a fridge- _(2)_ m

c Width of a street-_(5)_ m

3 Solve the following problem.

Mary walks 23 m to the classroom. Then she walks 15 m to her desk. How many metres did Mary walk? (38 m)

4 HOMEWORK ACTIVITY (5 MINUTES)

Look around your house. Estimate the length of these objects: (Answers will vary)

1 Your bed- ___ m

2 The height of the front door-__ m

3 The length of the sofa-___ m

5 REFLECTION AND SUMMARY OF LESSON (5 MINUTES)

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

Today we made paper planes and flew them. We measured whether they flew less or more than a metre. The winning plane was the one that flew the furthest.

Lesson 47: Assessment

Teacher's notes		
This lesson should be used for assessment of the content covered in this unit to date.		
CAPS topics: 4.2 Length.		
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 *practical assessment* (see checklist below).

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.

The learners may have experienced difficulty with estimation in terms of less/more than a metre. If this is the case use your metre stick. With the learners measure the height of the door using the metre stick. Show the learners the difference between less and more than a metre.

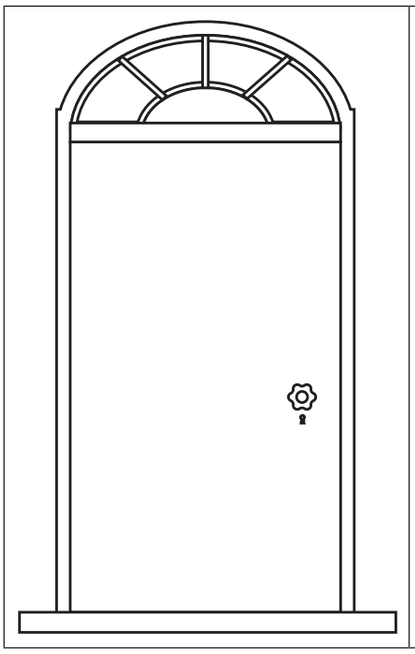
3 ASSESSMENT (9 MARKS)

WRITTEN

1 Circle the line that is shortest: (1)

2 Circle the stick that is the longest. (1)

3 Circle the correct answer. (1)



The height of this door is:

More than 1 metre

Less than 1 metre

4 The height of your classroom door is closest to: (1)
Circle the correct answer:

a 1 m

b m

c m

d m

5 Use the table below. Decide if these objects are less/more than 1m. Tick the correct column. (5)

Object	Length less than 1 m	Length more than 1 m
A ruler		
A bus		
A book		
A banana		
Soccer posts		

PRACTICAL

Measurement: Length **Activity: Observe learners' ability to work with length concepts, use length vocabulary and compare lengths.**	**Mark: 7**

Mark	**Criteria – Checklist: (1 mark for each criterion achieved)**
1	Able to identify length using the words 'short and shorter'
1	Able to identify length using the words 'long and longer'
1	Able to identify length using the words 'wide and wider'
1	Able to identify length using the words 'tall and taller'
1	Able to compare objects according to length – long, longer, longest
1	Able to compare objects according to height – short/tall, shorter/taller, shortest/tallest
1	Able to compare objects according to width – wide, wider and widest

Unit 5 Introduction

In this unit, learners will learn about ordinal numbers. It is important that these are related back to learners' everyday experiences, so that their learning can be based upon strong connections to their world. This unit links back to Units 1 to 4, where the concept of number was addressed. Learners will use this knowledge to develop an understanding of ordinal numbers.

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

- **Conceptual understanding**: This unit addresses the key concept of ordinal (position) numbers.
- **Procedural fluency**: Learners will develop procedural fluency through a variety of tasks on ordinal and cardinal number.
- **Strategies**: Learners will discover that it is essential for them to establish a starting point before working with ordinal numbers.
- **Reasoning**: Learners will have to justify why they have identified a particular ordinal number and they could also reason mathematically when they differentiate between ordinal and cardinal numbers.

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

- **Active learning**: Learners are actively involved in the lessons in this unit, as they are expected to physically represent ordinal numbers, rather than just observing the teacher.
- **Applying maths in context**: Learners are able to see how mathematics is relevant as they see connections between the knowledge of ordinal numbers in their lessons as well as in their everyday lives.

Lesson 48: Ordinal and cardinal numbers

Teacher's notes
This lesson is one of the fully planned lessons to be used to cover the Term 1 curriculum
CAPS topics: 1.4 Describe, order and compare numbers, 3.1 Position, orientation and views.
Lesson Objective: Use ordinal numbers to show order, place or position up to 31st.
Lesson Vocabulary: Forwards, backwards, describe, compare, whole numbers, smaller than, greater than, more than, number symbol, number name, ordinal number, order, place, position, first, last, second, third, … thirty first, 1st, 2nd, 3rd ,… 31st
Resources: 100 board (see *Printable Resources*), ordinal number cards (see *Printable Resources*).
Date: Week Day

1 MENTAL MATHS (10 MINUTES)

	Which is the biggest number :	**Answer**		Which is the biggest number :	**Answer**
1	69, 65, 63	69	**6**	70, 68, 66	70
2	30, 27, 33	33	**7**	30, 80, 40	80
3	40, 15,10	40	**8**	41, 82,66	82
4	12, 20, 16	20	**9**	49, 41, 40	49
5	70, 72, 71	72	**10**	68,79,69	79

2 LESSON CONTENT – CONCEPT DEVELOPMENT (45 MINUTES)

We use ordinal numbers to show order, place or position. Ordinal number concept is different to pure (cardinal) number concept. Ordinal numbers are used to indicate the position in an ordered set of objects. Cardinal numbers, on the other hand, are used to show the complete number of objects in a set. The last number you say when counting a group of objects is the cardinal number. You could consolidate this knowledge by using ordinal numbers whenever it is appropriate in other contexts. For example, talk about the order of learners coming in to class: you were the first in class today; you were the fifth, the last, etc. CAPS specifies that ordinal numbers from 1st to 31st should be familiar to learners. The reason for this number range is so that learners should be able to speak about the calendar days using ordinal numbers.

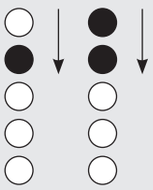
Today we are learning about cardinal and ordinal numbers. Cardinal numbers tell us 'how many' or 'how much'. We use ordinal numbers to show position, for example you came first in the race, who is second in line, etc..

Activity 1: Whole class activity

- Bring 10 learners to the front of the class. They must stand in a line.
- Give the following instructions:
- **The third person from the right, put your hands up.**
- **Three learners from the right, put your hands up.**
- See whether the learners have the same response for both instructions.
- Ask learners: **What is the difference between the two instructions I gave you?**
- Explain clearly that ordinal numbers show the position of something.
- **How do we know when we are talking about an ordinal number?** (The words are a little different – first, second, third, four<u>th</u>, etc.).
- **When I asked for three learners from the right to raise their hands, I was giving you the total number of people. The word <u>three</u> there tells you how many people in total.** (Cardinal number – one, two three, four)
- Give them lots of different questions by changing the number of people and position of the person.
- E.g. **The sixth person from the right, put your hands up.**
- **Six learners from the right, put your hands up.**
- **The fourth person from the left, put your hands up.**
- **Four learners from the left, put your hands up.**

Activity 2: Whole class activity

- Write the sentences below on the board, with 10 <u>uncoloured</u> circles next to them.
- Ask one of the learners to present the answer by colouring the blank circle/s on the board.
- Colour the fourth circle from the right. ○○○○○○○○○○ (○○○○○○●○○○)
- Colour four circles from the right. ○○○○○○○○○○ (○○○○○○●●●●)
- Shade circles in other positions to practice using the language of ordinal numbers.
- Repeat the same process with the statements and pictures below, where the focus of the counting starts from the top or the bottom.
- Ask: **Which circles are shaded?** (Discuss the answers with the class, noting that this time the starting point is from the top. We could do the same, starting from the bottom.)



In the first column, the second circle from the top is shaded.
In the second column, two circles from the top are shaded

In the first column, the fourth circle from the bottom is shaded.
In the second column, three circles from the bottom are NOT shaded

- Draw another vertical column of dots and discuss different dots according to their positions in a similar way.

Activity 3: Whole class activity

- Use a 100 board to answer the following questions:
- Learners answer the questions verbally and you record the answers (as symbols) on the board to reinforce the way in which ordinal numbers are written. E.g.
  - **What is the first number?** (1)
  - **What is the last number?** (100)
- Notice that in this activity when you count on the number board you sometimes start on the number and sometimes FROM the number, counting on. E.g.
  - **What is the seventh number on the grid, starting from 1?** (7)
  - **What is the 7th number after the number 1?** (8)
- Discuss other questions where you ask about numbers on the board, according to their position in different ways. E.g.
  - **What are the first 3 numbers from the left of the number 7?**(6, 5, 4)
  - **What is the seventeenth number on the board?** (17)
  - **What is the fifth number after 10?** (15)
  - **What is the fifteenth number after 10?** (25)
  - **8 is the ___ number?** (8^{th} / eighth)
  - **Etc.**

3 CLASSWORK ACTIVITY AND CORRECTION OF HOMEWORK (25 MINUTES)

Note: The 100 board in this activity is to be used for the whole class activities and the individual classwork.

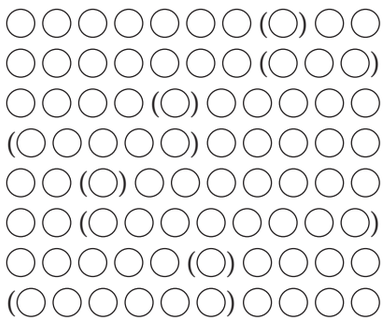
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

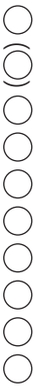
1 Refer to the hundred board to answer these questions:

- **a** Circle the second number to the right of the number 70. (72)
- **b** Draw a triangle on the sixth number to the right of 70. (76)
- **c** Put a cross through the third number to the left of 70. (67)

2 Colour the correct circle or circles:

- **a** The third circle from the right.
- **b** Three circles from the right.
- **c** The fifth circle from the left.
- **d** Five circles from the left.
- **e** The eighth circle from the right.
- **f** Eight circles from the right.
- **g** The sixth circle from the left.
- **h** Six circles from the left.
- **i** Four circles from the bottom.
- **j** The fourth circle from the bottom.
- **k** Two circles from the top.
- **l** The second circle from the top.

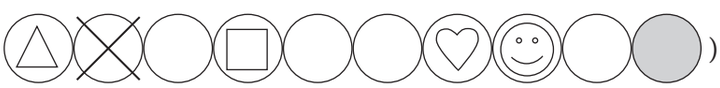


i	j	k	l
			

4 HOMEWORK ACTIVITY (5 MINUTES)

Draw 10 circles in your classwork book. Then:

- **a** Cross out the ninth circle from the right.
- **b** Draw a face in the third circle from the right.
- **c** Draw a triangle in the last circle from the right.
- **d** Colour in the first circle from the right.
- **e** Draw a heart in the fourth circle from the right.
- **f** Draw a square in the seventh circle from the right.

(Answer:  **)**

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 used ordinal numbers to show position. For example, the person who comes number 1 in a race is first.

Lesson 49: 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, order and compare numbers, 3.1 Position, orientation and views.		
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 (20 MARKS)

WRITTEN

1 Complete the following table. The first one has been done for you. (10)

Number	Ordinal Number	Numeric form
2	second	2nd
5	(fifth)	(5th)
10	(tenth)	(10th)
19	(nineteenth)	(19th)
31	(thirty first)	(31st)

2 Circle the 3rd A from the left and draw triangles around two As from the right. (2)

A A (A) A A A A A A A A A A

3 Colour the correct circle or circles. (8)

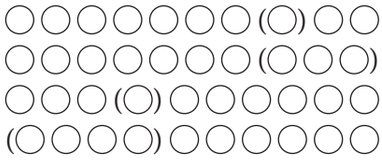
a The third circle from the right.

b Three circles from the right.

c The fourth circle from the left.

d Four circles from the left.

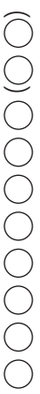
e Five circles from the bottom.



f The fifth circle from the bottom.

g Two circles from the top.

h The second circle from the top.

e	f	g	h
			

Lesson 50: Consolidation: Ordinal and cardinal numbers

Teacher's notes
This lesson allows for consolidation of the previous days' lesson content
CAPS topics: 1.4 Describe, order and compare numbers, 3.1 Position, orientation and views.
Lesson Objective: Revise ordinal numbers to show order, place or position up to 31st.
Lesson Vocabulary: Forwards, backwards, describe, compare, whole numbers, smaller than, greater than, more than, number symbol, number name, ordinal number, order, place, position, first, last, second, third, … thirty first, 1st, 2nd, 3rd ,… 31st
Resources: n/a
Date: Week Day

1 NOTES FOR THE TEACHER RELATING TO THIS WEEK'S WORK

The learners have completed the unit on length this week. They have also spent time on ordinal numbers to the 31st. We began with the learners experiencing ordinal numbers by standing in a line. Next we moved onto looking at ordinal numbers in the written form.

2 POSSIBLE MISCONCEPTIONS LINKED TO THE WEEK'S WORK

The learners may have experienced difficulties with the written form of ordinal numbers. In order to assist the learners let them put bottle tops in a row and count using their number name. Then move onto ordinal numbers using the bottle tops as an aid. For example: the bottle top after the ninth bottle top is the tenth bottle top. You can then move onto the learners writing ordinal numbers using symbols and words.

3 CLASSWORK/HOMEWORK – COMPLETE THIS WEEK'S CLASSWORK AS NEEDED

Today we are going over what we learned this week. We are learning more about ordinal numbers.

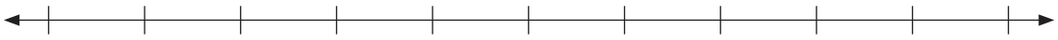
4 ADDITIONAL ACTIVITIES FOR CONSOLIDATION – SEE LEARNER RESOURCES

1 In the sentence: Dad took me to the zoo.
- **a** Which is the eighth letter from the left? _(m)_
- **b** Which is the eighth letter from the right? _(t)_
- **c** What is the second word from the right? (the)
- **d** What is the third word from the left? (me)
- **e** What is the first word? (Dad)

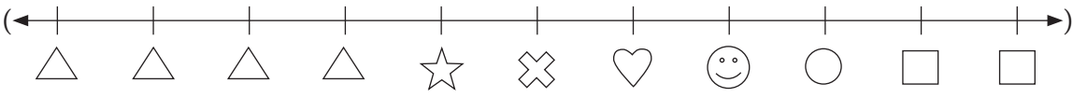
2 In the sentence: We saw lions and bucks.
- **a** Which is the thirteenth letter from the right? _(l)__
- **b** Which is the thirteenth letter from the left? _(d)__
- **c** What is the second word from the right? (and)

d What is the third word from the left? (lions)
e What is the last word? (bucks)

3 Draw the shapes on the line by following the instructions:



a Draw a star under the fifth line from the left.
b Draw a circle under the third line from the right.
c Put a heart under the line seventh from the left.
d Put a triangle under the first four lines from the left.
e Put a square under the first two lines from the right.
f Put a cross under the line sixth from the left.
g Put a smiley face under the line fourth from the right.



5 REFLECTION AND SUMMARY OF LESSON

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

Today we revised ordinal numbers. We looked at how ordinal numbers are given according to the position of the object/person.