GPLMS

GRADE 3

Mathematics

Lesson Plans and Assessments

Term 2

These materials were developed through funding provided by the **FirstRand Empowerment Foundation**.

MATHEMATICS FOUNDATION PHASE
GRADE 3TERM 2 LESSON PLANS

Contents

GPLMS FP MATHS MANAGEMENT NOTES

1. GPLMS FP Mathematics Lesson plans 2014

The GPLMS FP mathematics lessons have been reworked based on comments from teachers, district officials and other members of the mathematics education community. The lesson plans are based entirely on the 2013 lesson plan set but the sequence of the lesson plans has been changed (lessons are clustered per topic) and the CAPS alignment has been checked and refined.

2. CORE METHODOLOGY

In front of this lesson plan set are notes on CORE METHODOLOGY. This tells you how to use each of the components of the lesson plans and how they fit together to create a well scaffolded maths lesson each day. There is an overview of the structure of the lesson plans, setting out the sequence in which content and activities are presented in each lesson. It also provides guidelines for the timing and use of the lesson plans. You need to read this as you prepare until you are fully familiar with the general lesson plan structure, pace and content.

3. MATHEMATICS PACK CONTENT:

Each pack comprises the following:

1. **Lesson Plan Overview:** This provides details on a daily basis of the lesson number, lesson topic links to the DBE Workbooks for particular lessons when these apply and resources needed for the lesson.

2. **Resources for this term:** A stock list of the mathematical resources required in the lesson plan set for the duration of the term. Refer to this list to make sure you have the necessary resources for the term. The list is followed by the printable resources which are needed for this term.

3. **Assessment schedules and mark record sheets:** These provide the content, planning and recording sheets for the continuous assessment activities that should be done in the course of the term.

4. **Written assessment tasks and memos:** The written assessment tasks and memos are provided directly after the assessment schedules and mark record sheets.

5. **Lesson plans:** The term pack contains forty mathematics lesson plans that have been developed for the term. The lessons are sequenced according to topic and weighted according to CAPS requirements. The learners' classwork and homework activities that are provided in the GPLMS mathematics Learner Book are included each day, with solutions for easy reference.

   Note: There are also plans for general revision/orientation in the first week of school that you should work through with your learners before starting with the lesson plans. This provides an opportunity for you to reflect learners' mathematical understanding. We suggest that you write observation notes based on your observations of the learners while you work through these activities.

6. **Mental Maths Challenge cards:** A pack of one card per week (solutions are provided) that includes mental maths questions related to the weekly mental maths activities.

7. **Enrichment Activity cards:** A pack of four cards per week (solutions are provided) for learners who complete the day's classwork activities ahead of the class.

4. CURRICULUM ALIGNMENT

Each lesson has been carefully designed to align with the CAPS requirements. The lesson plans also integrate activities contained in the DBE 2014 Mathematics Workbooks.

GPLMS FP MATHS MANAGEMENT NOTES

5. SEQUENCE ADHERENCE

The content in each lesson has been carefully sequenced, it is therefore important that lessons are not skipped. Should you miss a mathematics lesson for any reason, you should continue the next day from where you last left off. Do not miss a lesson. You may need to speed up the pace of delivery to catch up the lesson schedule – 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 routine activities like mental maths or homework reflection to save time until you are back on track with the dated delivery of the plans.

6. LESSON PREPARATION: KEY STEPS

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**. This entails a number of key steps that range from ensuring that you have a good understanding of the term focus through to checking the detailed preparation of resources needed for every lesson.

1. **Term focus:** Start by looking at the CAPS document and ***orientating*** yourself to the CAPS content focus for the term**.** It is important that you are clear about the content focus as this will frame everything you do in your mathematics lessons during the term.

2. **Prepare resources:** The resources needed for each lesson are listed in each lesson plan. 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. counters, number boards, paper cut-outs, examples of shapes, etc.).
   - **Your lessons will not succeed if you have not prepared properly for them.**
   - 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 (see printable)/number boards using pieces of card board and a marker pen.
   - Collect empty cool drink cans, cereal boxes, washing powder boxes, plastic bottles etc. for the *shop activity* 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, use Google to search for and print out pictures that you may need to use as illustrations in your lessons.

3. **Written classwork and homework activities:** When preparing your lessons, ***check the class work and homework activity requirements***. In some instances you will need to write information or draw some diagrams on the board for the learners to copy and do as part of their classwork activities. Also make sure that you mark the homework activities – use peer and individual marking and check homework yourself as often as you can.

4. **Lesson topic:** Think carefully about what it is that you will teach your learners in this lesson. ***Prepare a short introduction*** to the topic so that you can explain it in simple terms to your learners.

5. **Lesson vocabulary lists:** You will notice that the lesson vocabulary words have been listed in the teacher's notes for each lesson plan. They are also provided in the GPLMS lesson vocabulary glossary (with full explanations and diagrams) which has been prepared in multilingual format in all 10 languages used in GPLMS schools. ***Go through the lesson vocabulary each day as you prepare for the lesson***. These words 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 practice using them with your learners during the lesson.

GPLMS FP MATHS MANAGEMENT NOTES

6. **Mental maths:** This start-up activity should not take more than 10-15 min. Counting should take about 5 min and the mental maths questions about 10 min. The purpose of this activity is to focus the learners on numeracy and to drill basic numeric concepts so that they can be easily recalled in other higher level work. ***Each day you need to prepare the full set of questions before the lesson starts.*** (Orally, write them on the board, make flashcards or make a chart.) This is a mental activity for the learners. Once a week learners should do mental maths in written form so that there is some record of your daily mental maths activities. You can use the **Mental Maths Challenge Cards** for this purpose. Learners should not use concrete material to work out the answers in mental maths. If learners need to, let them use their fingers as a concrete aid during mental maths, but make a note of who they are and then spend time with them during remediation to help them with the basic skills. Mental maths skills improve hugely from Grade 1 to Grade 3. In Grade 1 learners might only manage 5 questions, especially when they have to write the answers, but by Grade 3 learners should manage 10 questions with written answers easily.

7. **Concept development:** This is the heart of the lesson – you will use this time to explain new mathematics content and skills to your learners. ***Make sure you have prepared for the teaching of the concepts before you teach.*** Also make sure that you have prepared all of the resources needed for the lesson so that you have them and you know how to use them effectively. This preparation needs to be done in advance so that you do not waste time during the lesson. Follow the activities in the lesson plan. ***Prepare yourself*** to assist learners with any questions they might have during the lesson.

8. **Lesson pace:** Once you have introduced the new concept, work through ***Activity 1*** of the lesson. Allow sufficient time for the learners to complete the activity - it is important that each learner works through the first activity. Then immediately move on to the next activity, provide a reasonable time for the learners to complete Activity 2, but do not wait for the last learner to finish before moving on. It is important to manage the pace of the lesson carefully otherwise you will not manage to cover all the lesson content.

9. **Classwork activity:** This is an opportunity for learners to consolidate new concepts by doing classwork activities that provide them with the time to practice their maths and problem solving skills. It is important that you ***prepare yourself for the classwork activity*** – you need to assist learners as they do the classwork. Plan the timing of the lesson so that learners can go over the classwork together and do corrections in the lesson.

10. **Remediation activities:** Each day you should ***be prepared to identify learners*** that need some additional practice to consolidate their learning. Remediation activities have been built into each lesson to be used as needed. While the rest of the class are busy working through the classwork activities, you should spend some time with those that need extra support and help them to work through the remediation activities.

11. **Enrichment activities:** If learners successfully complete the daily classwork activities ahead of the rest of the class ***be prepared*** to give them the enrichment activities.

12. **Homework:** ***Prepare*** to allocate a few minutes at the end of each lesson to discuss the homework for the day – make sure that learners understand what it is that they have to do. Read over the word problems with the class if there is time to help them to cope with the problems when they go home to do the work.

13. **Lesson reflection**: Briefly jot down "*what worked well*" and "*what did not work so well*" in your lesson observation books so that you have a record for the next time you implement the same lesson/content again. The reflection can be ***used as a guide your preparation*** for general teaching, remediation and enrichment activities**.**

CORE METHODOLOGY

Each day, the lesson plans give all of the following information. In the plans, each section of the plan simply has a heading to indicate the start of a new section. You need to ***read this outline*** *to find out about the* ***core methodology*** *of the lesson plans and how they all work together to set the pace, sequence and content and resource requirements of the lessons.*

Topic	Each lesson has a topic with specific detail about the day's lesson.
Curriculum knowledge	The CAPS topics list gives all of the content related to the day's lesson. The curriculum references can be located in the expansion of content in the CAPS document for this term.
Lesson Vocabulary	A list of all mathematical terms used in the lesson is given here. They are also provided in the GPLMS lesson vocabulary glossary (with full explanations and diagrams) which has been prepared in multilingual format in all 10 languages used in GPLMS schools. ***Go through the lesson vocabulary each day as you prepare for the lesson***. These words 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 practice using them with your learners during the lesson.
Prior Knowledge	The prior knowledge section gives information about content that learners should have learned in earlier grades that will be built on in this lesson. • You need to read through this section when you do your lesson preparation. • There is no time allocation to this part of the plan because it does not form part of the day's lesson. • Although this information does not form part of the day's lesson it may help you to assist learners who struggle to understand the content of the lesson because you can use it to help you diagnose learners' needs in relation to content they do not yet know that may be preventing them from understanding today's lesson. • Remediation may be needed on prior knowledge that you notice is not properly in place.
Assessment	An indication of the assessment activity for the day is given here. • On-going formal assessment should be done virtually every day in your class. This means you will record a mark for a few learners for a certain criterion from the curriculum each day. • Decide how many learners to assess each day so that you assess your whole class in the time allocated to each assessment activity. • Rubrics to be used to guide you in giving ratings for formal assessments are given in the assessment schedule. Each day you need to use the appropriate rubric for the assessment activity of that day. • A mark record sheet that you can use to record your term marks is given in the assessment schedule. Each of the assessment tasks for the term has been broken up into several smaller assessment activities.

CORE METHODOLOGY	
Remediation	Optional as required. You need to decide, based on your observation of the learners while you are teaching the lesson content, whether to use this content and with which learners. It will be done with a smaller group of learners/individual learners while the rest of the class is working through the classwork activity.
Enrichment	Optional as required. Ideally you should photocopy the enrichment cards, paste them, onto card board and laminate them so that they can be used as a resource, not only this year but in the future as well. Activities that you can use for enrichment opportunities for learners who have completed the lesson activities are provided in a set of enrichment activity cards at the end of the lesson plan set. Learners should work on these cards independently or with their peers who have also completed the classwork. You may need to explain some of the activities to the learners who use them. You should tell them to ask you questions it they have any. All learners who show an interest in the enrichment activities should be encouraged to work through the cards.
Mental Maths – 15 minutes	This is the first activity of the lesson. We recommend that you take at most 15 minutes to do the mental maths activity. There are two parts to the mental maths activity, a counting activity and some mental maths questions. Mental maths is not a concrete activity (as the title suggests). If there are learners who need concrete aids to complete the mental maths 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 with them to assist them to reach the required level of competence by offering remediation activities using concrete aids. • The memo for the ten mental maths questions is given in the answer column in the lesson plans. There is a mental maths challenge cards set at the end of the lesson plans set, which you can use for the weekly recorded mental maths activity. We recommend that learners only do written mental maths once a week and orally on all other days. (It would be far better to do all ten questions per day but if you find that your children struggle to finish these in 10 minutes, do a minimum of 5 questions.)
Homework / Corrections – 15 minutes	This is the second activity of the lesson. We recommend that you take 15 minutes to remediate and correct the previous day's homework. Read out answers to all of the homework questions. Learners/peers mark the work. Choose one or two activities that you realise were problematic to work through in full with the whole class. In this part of the lesson you may reflect on the previous day's work. Allow learners the opportunity to write corrections as needed.

CORE METHODOLOGY	
Lesson Content – Concept Development – 30 minutes	This is the third activity of the lesson. We recommend that you should actively teach your class for 30 minutes – going through examples interactively with your learners. • Resources needed for the lesson are listed so that you know what resources to prepare. • Concepts covered in the lesson are given in a list that links to the CAPS topics. • Activities on the content that you will teach with worked examples and suggested explanations are given that you should go through with your class. • When you prepare to teach this lesson you need to make sure that you understand all of the mathematics that you will teach and that you can explain it fully and well to your class.
Classwork Activity – 25 minutes	This is the fourth activity of the lesson. We recommend that you allocate 25 minutes to the classwork activity. Here you find a set of activities that you will allow your learners to work through to consolidate what they have learned in the body of the lesson. You could to go over one or two of the classwork activities orally with the whole class before allowing the class to complete the activities on their own. • Learners do most of the activities in their maths books (an exercise book for learner maths writing activities). Some activities are done in the DBE workbook. • You should allow the learners opportunities to do these activities alone, in pairs and in groups so that they experience working alone as well as with their peers. • Wrap up the lesson each day by giving the learners the answers to the classwork and allow time for corrections to be written if and when necessary. There is a Classwork activity pack at the end of the lesson plans set. The pack presents the classwork activities for every day, with several days per page, so that learners can cut out the classwork activity and paste it into their homework books. Learners will have to write their working as they do the classwork activities on a daily basis. This will help promote learner's writing.
Homework Activity – 5 minutes	This is the fifth and final activity of the lesson. We have allocated 5 minutes to give you time to tell the learners about the homework each day. Here you find a set of activities on the day's content that you can set for your class to do for homework, to consolidate the maths that you have taught them today. Homework also promotes learner writing and development of their mathematical knowledge. There is a homework pack at the end of the lesson plans set, similar to the classwork pack.
Reflection	Each day there is a reminder to you that you should note your thoughts about the day's lesson. You will use these notes as you plan and prepare for your teaching.

LESSON PLAN AND RESOURCE OVERVIEW						
Pg	**Lesson**	**Date**	**Lesson name**	**DBE workbook 2014**	**Resources required**	**Date completed**
			WEEK 1			
	Lesson 1		Place value: Numbers 100-300		Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable), number cards (160-177 and 240-257) (see printables).	
	Lesson 2		Place value: Numbers 301 - 400	Worksheet 41b (p 97)	Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable), number cards (370-387) (see printable).	
	Lesson 3		Place value: Numbers 401 - 500	Worksheet 35a (pgs 80 & 81)	Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable), number cards (420-437) (see printable).	
	Lesson 4		Ordinal Numbers 200-300		201-300 Number board (see printable), counters.	
	Lesson 5		Ordinal Numbers 200 - 500		Number board (401-500) (see printables), counters.	
			WEEK 2			
	Lesson 6		Problem solving Strategies: Building up and breaking down	Worksheet 35b (pgs82)	Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable).	
	Lesson 7		Problem solving Strategies: Building up and breaking down	Worksheet 38a (p 91)	Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable).	
	Lesson 8		Problem solving Strategies: Adding three digits to three digits: Breaking down the second number	Worksheet 38b (p 92)	Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable).	
	Lesson 9		Problem solving Strategies: Number lines		Number lines 100-200 and 200-300 (see printable).	
	Lesson 10		Problem solving Strategies: Number lines		n/a	

LESSON PLAN AND RESOURCE OVERVIEW						
Pg	**Lesson**	**Date**	**Lesson name**	**DBE workbook 2014**	**Resources required**	**Date completed**
WEEK 3						
	Lesson 11		Working with tens – rounding off	Worksheet 34 (pgs78 and 79)	Counters.	
	Lesson 12		Fives: Number patterns	Worksheet 53a (p 120)	Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).	
	Lesson 13		Fives: Multiplication and Division	Worksheet 53b (p 121)	Counters, multiplication table grid (see printables).	
	Lesson 14		Twos: Number patterns	Worksheet 51a (p 116)	Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).	
	Lesson 15		Twos: Multiplication and Division	Worksheet 51b (p 117)	Counters, multiplication table grid (see printables).	
WEEK 4						
	Lesson 16		Threes: Number patterns	Worksheet 27 (pgs 62 & 63)	Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).	
	Lesson 17		Threes: Multiplication and Division	Worksheet 55a (p 124)	Counters, multiplication table grid (see printables).	
	Lesson 18		Fours: Number patterns	Worksheet 28 (pgs 6 4& 65)	Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).	
	Lesson 19		Fours: Multiplication and Division	Worksheet 55 (p 125)	Counters, multiplication table grid (see printables).	
	Lesson 20		Geometric patterns	-	Shape cut-outs (see printables).	

LESSON PLAN AND RESOURCE OVERVIEW						
Pg	**Lesson**	**Date**	**Lesson name**	**DBE workbook 2014**	**Resources required**	**Date completed**
			WEEK 5			
	Lesson 21		Sharing leading to fractions	Worksheet 57a (p 128)	Unifix blocks, counters, scrap paper.	
	Lesson 22		Fractions	Worksheet 57b (p 129) Worksheet 59 (p 132)	Counters, Cuisenaire rods (if you have them).	
	Lesson 23		Money: Value of money	Worksheet 53b (p 121)	Money cut-outs (coins and notes) (see printables).	
	Lesson 24		Money: buying and selling problems	Worksheet 56b (p 127)	Money cut-outs (coins and notes) (see printables).	
	Lesson 25		3-D objects	Worksheet 11 (pgs 24 &25)	An assortment of 3-D shapes collected from home (e.g. boxes, cones, cylinders, etc.).	
			WEEK 6			
	Lesson 26		3-D objects	Worksheet 12 (pgs 22 &23)	An assortment of 3-D shapes collected from home (e.g. boxes, cones, cylinders, etc.).	
	Lesson 27		3-D objects (constructions)		An assortment of 3-D shapes collected from home (e.g. boxes, cones, cylinders, etc.).	
	Lesson 28		Directions		Objects which you can use as markers. (e.g. beacons)	
	Lesson 29		Position and views		Objects (e.g. caps, cups and cans).	
	Lesson 30		Symmetry	Worksheet 48a (p 110)	Symmetrical shapes (see printables), scrap paper (cut into triangles, squares, hearts, for learners per group).	

LESSON PLAN AND RESOURCE OVERVIEW						
Pg	**Lesson**	**Date**	**Lesson name**	**DBE workbook 2014**	**Resources required**	**Date completed**
				WEEK 7		
	Lesson 31		Symmetry	Worksheet 48b (p 111)	Symmetrical shapes (see printables), shape cut-outs made from scrap paper (rectangle, square).	
	Lesson 32		Length	Worksheet 13a (p 28)	Shape cut-outs (see printable), objects to measure (e.g. desk, book, chair set, etc.).	
	Lesson 33		Length	Worksheet 13b (p 27)	Metre stick, string cut into length of one metre.	
	Lesson 34		Data	Worksheet 36 (pgs 84 & 85)	Pictures of T-shirts cut from old magazines/advert flyers (6 green, 10 yellow, 8 blue, 12 pink).	
	Lesson 35		Time	Worksheet 12 (p 26)	Clocks (analogue and digital), pictures of clocks (cut out from magazines/etc.).	
				WEEK 8		
	Lesson 36		Time and calendars	Worksheet 54a no 1 (p 122)	2014 calendars (per learner) (see printable).	
	Lesson 37		Mass	Worksheet 15 (p.32)	Balancing scale (make one using a hanger and two packets if you need to), objects to measure mass (e.g. book, cup, ruler, match box, watch, etc.).	
	Lesson 38		Mass	Worksheet 44 (pgs 102 & 103)	Bathroom scale, kitchen scale, objects that can be used to determine mass (e.g. brick, 2 l water bottles, etc.).	
	Lesson 39		50s – Patterns and problems	Worksheet 56 (p 126)	Money cut outs (coins) (see printables).	
	Lesson 40		100s – Patterns and problems	Worksheet 29 (pgs 66 & 67))	Money cut outs (coins) (see printables).	

RESOURCE LIST TERM 2

This is a list of the mathematical resources that you will need in this term. You need to make sure that you have them for the lessons for which they are recommended. If you do not have them speak to your coach about it so that GPLMS can do an audit of the resources not present in your school.

1. Number cards (160-177) (Lesson 1)
2. Number cards (240-277) (Lesson 1)
3. Number cards (370-387) (Lesson 2)
4. Number cards (420-437) (Lesson 3)
5. Number board (201-300) (Lesson 4)
6. Number board (401-500) (Lesson 5)
7. Number lines (Lesson 12, 14, 16, 18)
8. Multiplication table grid (Lesson 13, 15, 17, 19)
9. Shape cut-outs (Lesson 20, 32)
10. Money cut- outs (coins) (Lesson 23, 24, 30, 40)
11. Money cut- outs (notes) (Lesson 23, 24)
12. Money cut- outs (notes) (Lesson 23, 24)
13. Symmetrical shapes (Lesson 30, 31)
14. 2014 Calendar (Lesson 36)

Resources for each day of teaching

There are also other resources such as informal resources (such as old magazines, pieces of string, scrap paper, etc.) that you may need in certain lessons. You should have a careful look at the list of resources needed for each lesson which is given in the lesson plans each day to see which resources are needed for that day. Prepare yourself so that you have the necessary resources for the lessons on a daily basis.

Number cards 160-177 (Lesson 1)

160	161	162
163	164	165
166	167	168
169	170	171
172	173	174
175	176	177

Number cards 260-277 (Lesson 1)

260	261	262
263	264	265
266	267	268
269	270	271
272	273	274
275	276	277

Number cards 370-387 (Lesson 2)

370	371	372
373	374	375
376	377	378
379	380	381
382	383	384
385	386	387

Number cards 420-437 (Lesson 3)

420	421	422
423	424	425
426	427	428
429	430	431
432	433	434
435	436	437

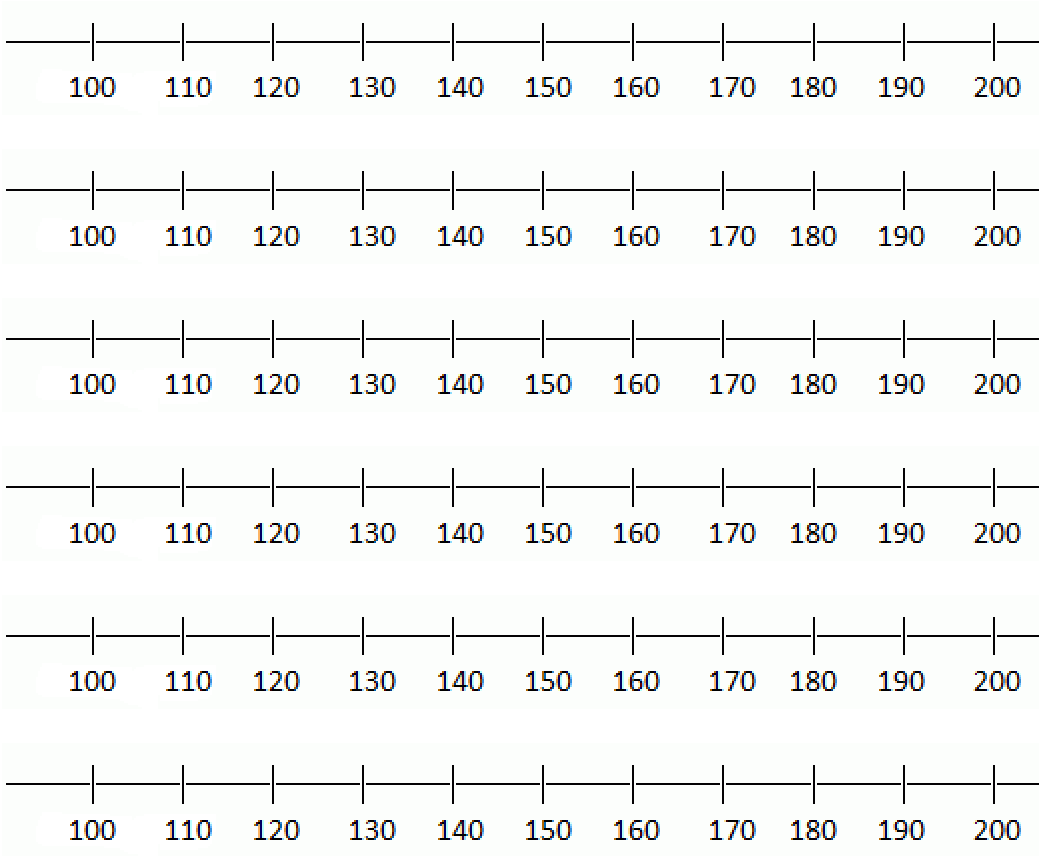
Number board (201-300) (Lesson 4)

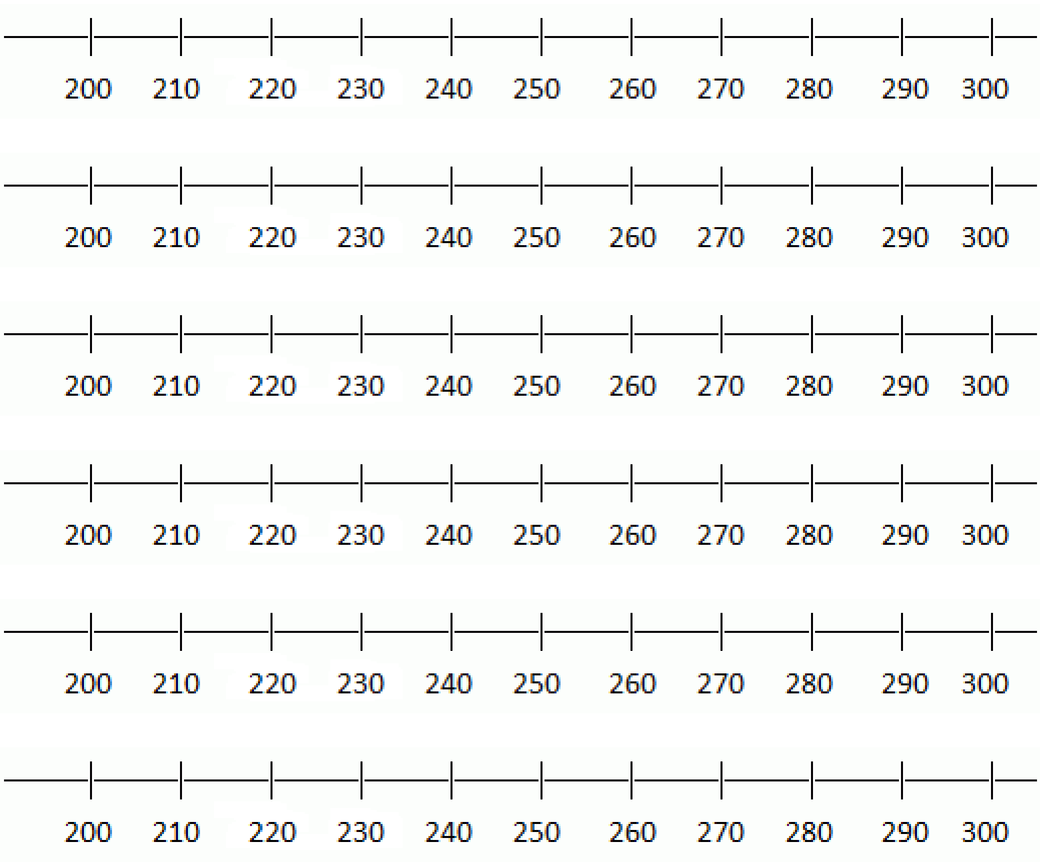
201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300

Number board (401-500) (Lesson 5)

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500

Number lines (Lessons 9 & 10)





Number lines (lesson 12, 14, 16, 18)

Lesson 12

Lesson 14

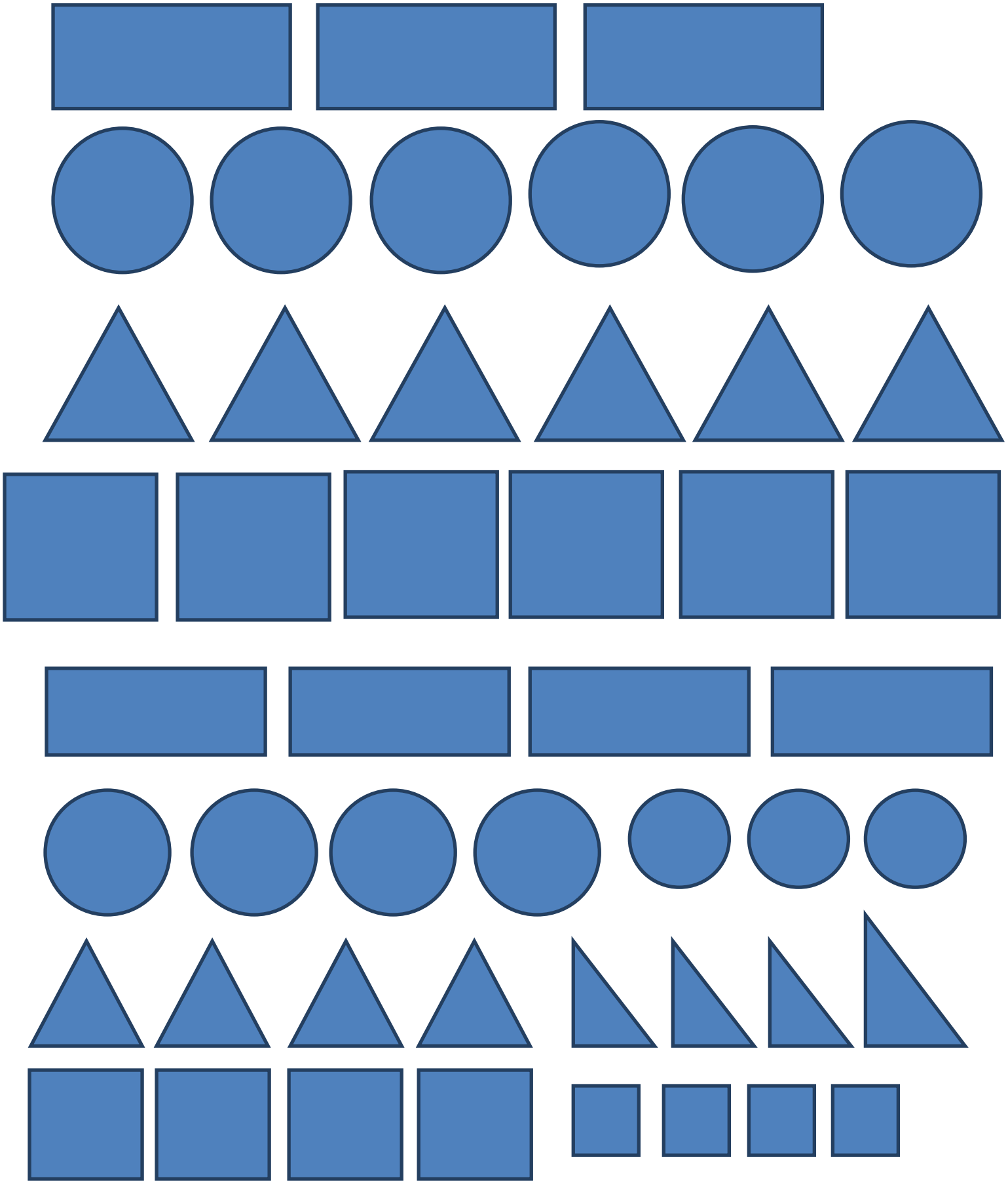
Lesson 16

Lesson 18

Multiplication table grid (Lessons 13, 15, 17, 19)

×	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Shape cut-outs (Lesson 20, 32)



Money cut-outs – coins (Lesson 23, 24, 39, 40)

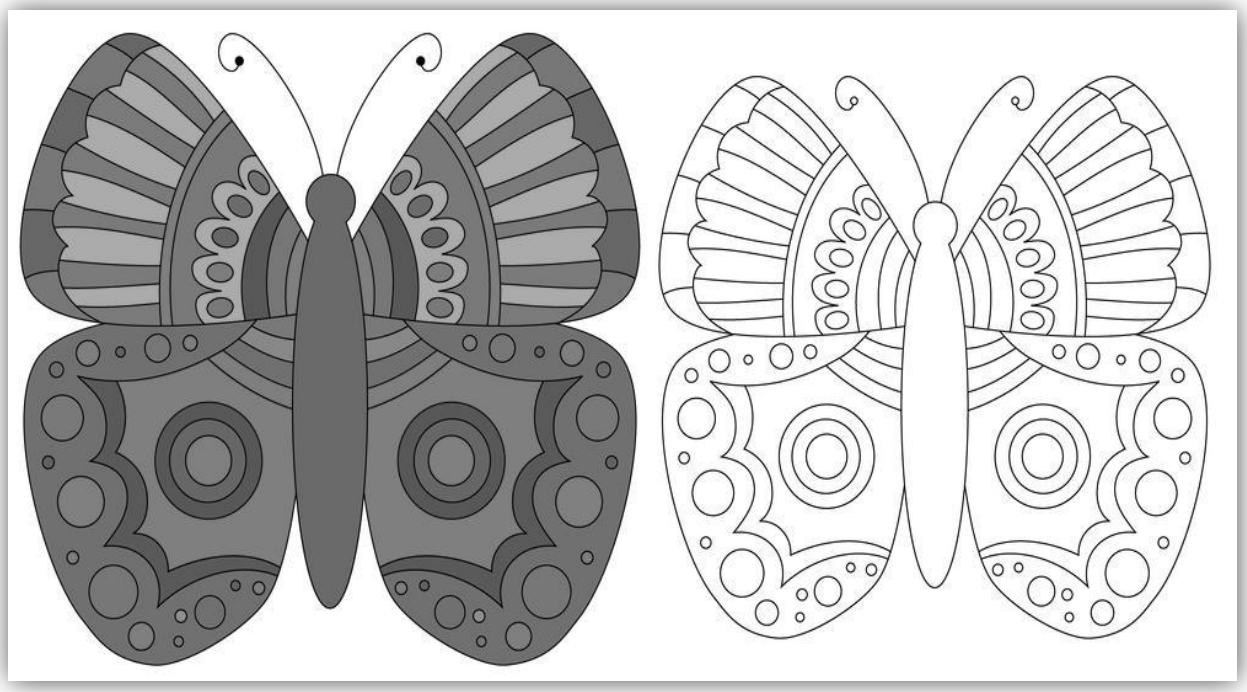
Money cut-outs – notes (Lesson 23, 24)

Money cut-outs – notes (Lesson 23, 24)

Symmetrical shapes (Lessons 30, 31)

Lesson 30:

Lesson 31:



2014 Calendar (Lesson 36)

2014

January

S	M	T	W	T	F	S
			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	

February

S	M	T	W	T	F	S
						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	

March

S	M	T	W	T	F	S
						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					

April

S	M	T	W	T	F	S
		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			

May

S	M	T	W	T	F	S
				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

June

S	M	T	W	T	F	S
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					

July

S	M	T	W	T	F	S
		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		

August

S	M	T	W	T	F	S
					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						

September

S	M	T	W	T	F	S
	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				

October

S	M	T	W	T	F	S
			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	

November

S	M	T	W	T	F	S
						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						

December

S	M	T	W	T	F	S
	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			

ASSESSMENT – Term Plan

The term plan gives an overview of how the assessment programme fits into the weekly lesson plans

Week	Activities	Assessment	Comment
7Apr – 17Apr	Revision Lessons	Informal assessment based on revision lesson plans	The revision lesson plans give you an opportunity to revise and to assess the knowledge and skills of your learners. Make notes of your observations in your observation book so that you can refer to them when you teach these concepts in the term.
14Apr – 18Apr	Revision Lessons	Informal assessment based on revision lesson plans	
21Apr – 25Apr	Lesson plans week 1	Activity 1 Practical assessment task 1	• Go through the **prior knowledge** information given each day so that you can remediate learner errors and misconceptions. • Teach daily according to the plans, **preparing well** the day before you teach. • Use the appropriate **resources** each day to give your learners the opportunity for concrete experience related to the concepts being taught. • Take note of the **continuous formal assessment** requirements of the lesson and record the marks of the learners progressively through the term. • Ensure that learners complete the set **classwork** and **homework** activities every day. • **Go over classwork and homework** on a daily basis using individual and peer marking which you check at regular intervals yourself. Give the learners the chance to ask questions and correct their errors.
28 Apr – 2May	Lesson plans week 2	Activity 2 Oral assessment task 1	
5May – 9May	Lesson plans week 3	Activity 3 Oral assessment task 1	
12May – 16May	Lesson plans week 4	Activity 4 Practical assessment task 1 Activity 5 Written assessment task 1 **Assessment Task 1 completed**	
19May – 23May	Lesson plans week 5	Activity 1 Practical assessment task 2	
26 May – 30 May	Lesson plans week 6	Activity 2 Written assessment task 2	
2Jun – 6Jun	Lesson plans week 7	Activity 3 Oral assessment task 2 Activity 4 Written assessment task 2	
9Jun – 13Jun	Lesson plans week 8	Activity 5 Practical assessment task 2 **Assessment Task 2 completed**	
16Jun – 20Jun	Revision and consolidation	No formal assessment this week	• When you have finished teaching all of the planned GPLMS lessons, use the 10 days of revision and consolidation to recap key maths ideas that your learners need to consolidate from the term.
23Jun – 27Jun	Revision and consolidation	No formal assessment this week	

ASSESSMENT TASK 1

Note that you will not be able to assess your learners in one day, so you should assess a group of learners each day until they have all been observed for the oral and practical activities

Activity 1 – Week 1: 21 April to 25 April: Practical

Number, operations and relationships: Place value

Concrete representation of numbers up to 300 - recognition of hundreds, tens and units

Level		Observation Criterion
1	**0 – 29%**	Unable to recognise or represent place value in numbers up to 300
2	**30 – 39%**	Can sort flard cards into hundreds, tens and ones but cannot say number name correctly using place value
3	**40 – 49%**	Able to read number names but cannot break them down according to place value and make a concrete display
4	**50 – 59%**	Able to recognise and represent place value in concrete displays but confuses hundreds, tens and units
5	**60 – 69%**	Able to recognise and represent place value in concrete displays using flard cards but not an abacus
6	**70 -79%**	Able to recognise and represent place value in concrete displays using flard cards and an abacus
7	**80 – 100%**	Able to recognise and represent place value in concrete displays of numbers beyond 300

Activity 2 – Week 2: 28 April to 2 May: Oral

Number, operations and relationships: Addition

Adding using a number line and other strategies

Level		Criterion
1	**0 – 29%**	Unable to add correctly
2	**30 – 39%**	Able to add but not using a number line.
3	**40 – 49%**	Able to add by using a number line with assistance.
4	**50 – 59%**	Able to add by using a number line and other strategies with much assistance.
5	**60 – 69%**	Able to add by using a number line and other strategies with a little assistance.
6	**70 -79%**	Able to add by using a number line and other strategies with no assistance.
7	**80 – 100%**	Able to add beyond the number range using a number line and other strategies with no assistance.

Activity 3 – Week 3: 5 May to 9 May: Oral

Number, operations and relationships: Counting

- Count in 2s to 100.
- Count in 5s to 100.
- Count in 10s to 100.

Level		Criterion
1	**0 – 29%**	Cannot count in 2s, 5s and 10s in correct counting order
2	**30 – 39%**	Needs constant assistance to count in 2s, 5s and 10s in correct counting order
3	**40 – 49%**	Counts in 2s but cannot count in 5s and 10s in correct counting order up to 100
4	**50 – 59%**	Counts in 2s and 5s but cannot count in 10s in correct counting order up to 100
5	**60 – 69%**	Counts in 2s, 5s and 10s in correct counting order up to 100 but makes 1 error
6	**70 -79%**	Consistently counts in 2s, 5s and 10s in correct counting order up to 100, with no errors
7	**80 – 100%**	Consistently counts in 2s, 5s and 10s in correct counting order up to 100, with no errors and goes beyond the number range

Activity 4 – Week 4: : 12 May to 16 May: Practical

Patterns and algebra – Geometric patterns

Describe and extend geometric patterns

Level		Criterion
1	**0 – 29%**	Describe a pattern in terms of colour
2	**30 – 39%**	Describe a pattern in terms of positions of shapes
3	**40 – 49%**	Describe a pattern in terms of sizes of shapes
4	**50 – 59%**	Extend patterns with one shape/object where the **colours** of the shape/object changes in a regular way.
5	**60 – 69%**	Extend patterns with one shape/object where the **position** of the shape/object changes in a regular way.
6	**70 -79%**	Extend patterns with a single kind of shape that **decreases in size**.
7	**80 – 100%**	Extend patterns with a single kind of shape that **increases in size**.

Activity 5 – Week 4: 12 May to 16 May: WRITTEN TASK

Number operations and relationships

Number names and values, place value, number patterns, number lines, money, word problems

Questions	**Assign levels according to the following totals**		
Question 1: 2 marks Question 2: 1 mark Question 3: 3 marks Question 4: 2 marks Question 5: 3 mark Question 6: 4 marks Question 7: 5 marks Question 8: 2 marks Question 9: 1 mark Question 10: 2 marks **Total marks: 25**	Marks	Percentage	Level
	0-7	0-29	1
	8-9	30-39	2
	10-12	40-49	3
	13-14	50-59	4
	15-17	60-69	5
	18-19	70-79	6
	20-25	80-100	7

ASSESSMENT TASK 2

Note that you will not be able to assess your learners in one day, so you should assess a group of learners each day until they have all been observed for the oral and practical activities

Activity 1 – Week 5: 19 May to 23 May: Practical

Number, operations and relationships - Fractions

- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 75 with answers that include unitary and non-unitary fractions e.g. half, quarter, three quarters, two fifths.

Level		**Observation Criterion**
1	**0 – 29%**	Unable to solve and explain solutions to practical problems that involve equal sharing and grouping.
2	**30 – 39%**	Able to solve and explain solutions to practical problems that involve equal sharing and grouping with unit fractions only and with assistance.
3	**40 – 49%**	Able to solve and explain solutions to practical problems that involve equal sharing and grouping with unit and non-unit fractions with assistance.
4	**50 – 59%**	Able to solve and explain solutions to practical problems that involve equal sharing and grouping with unit fractions only and with little assistance.
5	**60 – 69%**	Able to solve and explain solutions to practical problems that involve equal sharing and grouping with unit and non-unit fractions with little assistance.
6	**70 -79%**	Able to solve and explain solutions to practical problems that involve equal sharing and grouping with unit and non-unit fractions with no assistance.
7	**80 – 100%**	Able to solve and explain solutions to practical problems that involve equal sharing and grouping with unit and non-unit fractions beyond the expected range.

Activity 2 – Week 6: 26 May to 30 May: Written

Number operations and relationships, fractions, number patterns, capacity, time, data

Addition and subtraction, geometric patterns, 3-D shapes

Questions	Assign levels according to the following totals		
Question 1: 1 mark Question 2: 1 mark Question 3: 1 mark Question 4: 2 marks Question 5: 1 mark Question 6: 2 marks Question 7: 2 marks Question 8: 4 marks Question 9: 3 marks Question 10: 3 marks **Total marks: 20**	Marks	Percentage	Level
	0-5	0-29	1
	6-7	30-39	2
	8-9	40-49	3
	10-11	50-59	4
	12-13	60-69	5
	14-15	70-79	6
	16-20	80-100	7

Activity 3 – Week 7: 2 June to 6 June: Oral

Measurement: Time

- Tell 12 – hour time in: Hours, half hours, quarters and minutes on analogue clocks and digital clocks and instruments that show time e.g. cell phones
- Use clocks to calculate length of time in hours or half hours.

Level		Criterion
1	**0 – 29%**	Unable to tell the time using an analogue or digital clock.
2	**30 – 39%**	Able to tell the time shown on an analogue and digital clock with lots of assistance.
3	**40 – 49%**	Able to tell and show the time shown on an analogue and digital clock with lots of assistance.
4	**50 – 59%**	Able to tell the time shown on an analogue and digital clock but cannot use clocks to calculate length of time.
5	**60 – 69%**	Able to tell the time shown on an analogue and digital clocks and can use clocks to calculate length of time with lots of assistance.
6	**70 -79%**	Able to tell the time shown on an analogue and digital clocks and can use clocks to calculate length of time with little assistance.
7	**80 – 100%**	Able to tell the time shown on an analogue and digital clocks and can use clocks to calculate length of time with no assistance.

Activity 4 – Week 7: 2 June to 6 June: WRITTEN TASK

Number operations and relationships, fractions, number patterns, capacity, time, data

Addition and subtraction, geometric patterns, 3-D shapes, time, number lines.

Questions	**Assign levels according to the following totals**		
Question 1: 3 marks Question 2: 3 marks Question 3: 3 marks Question 4: 2 marks Question 5: 1 mark Question 6: 1 mark Question 7: 1 mark Question 8: 1 mark Question 9: 3 marks Question 10: 1 marks Question 11: 1 mark Question 12: 4 marks Question 13: 2 marks Question 14: 1 mark Question 15: 1 mark Question 16: 2 marks **Total marks: 30**	Marks	Percentage	Level
	0-9	0-29	1
	9-11	30-39	2
	12-14	40-49	3
	15-17	50-59	4
	18-20	60-69	5
	21-23	70-79	6
	22-30	80-100	7

Activity 5 – Week 8: 9 June to 13 June: Practical

Measurement - Mass

- Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks, etc.
- Use language to talk about the comparison e.g. light, heavy, lighter, heavier.

Level		**Criterion**
1	**0 – 29%**	Use vocabulary to describe mass - light and heavy.
2	**30 – 39%**	Use vocabulary to describe mass - light and heavy, lighter and heavier.
3	**40 – 49%**	Use vocabulary to describe mass -light and heavy, lighter and heavier and measure own mass using a scale.
4	**50 – 59%**	Use vocabulary and estimate the mass of objects which have their mass stated in kilograms.
5	**60 – 69%**	Use vocabulary, estimate and measure the mass of objects which have their mass stated in kilograms.
6	**70 -79%**	Use vocabulary and order the mass of objects which have their mass stated in kilograms.
7	**80 – 100%**	Use vocabulary, order and compare the mass of objects which have their mass stated in kilograms.

WRITTEN ASSESSMENT TESTS AND MEMOS

The written tests and their memos are given in the following section.

You need to plan the dates on which the tests will be written – we suggest that you do them in week 4 and week 7 of the term.

The lesson period will be used for the writing of the test on these days and you will need to plan how to make up for the sequenced lesson missed on those days, following the general GPLMS guidelines for a missed lesson:

- ***Lesson sequence:*** *The content in each lesson has been carefully sequenced, it is therefore important that lessons are not skipped. Should you miss a mathematics lesson for any reason, you should continue the next day from where you last left off. Do not miss a lesson. You may need to speed up the pace of delivery to catch up the lesson schedule – 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 routine activities like mental maths or homework reflection to save time until you are back on track with the dated delivery of the plans.*

Mathematics Assessment Task 1 Grade 3

Surname:	Boy | Girl
Name:	
Date of birth:	
School:	
Province:	
EMIS no:	

Total Marks: 25

1. Write a number sentence and the answer for: 100 and 1and 80.

(2)

2. Write 231 in words.

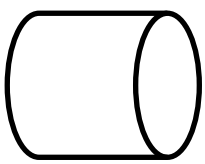
(1)

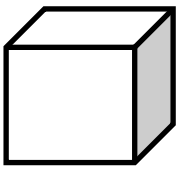
3. Colour any three numbers that are smaller than 276 in red.

(3)

222	277	269	276	297	300	212	247	279	218

4. Circle the object that can slide and the draw a cross over the object that can roll and slide. (2)





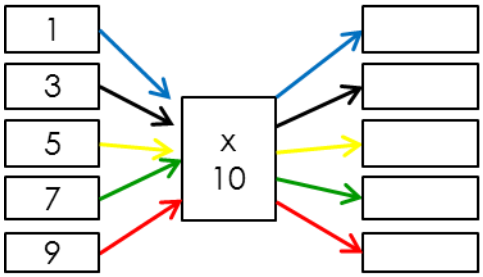
5. Draw the shapes that make up this pyramid: (3)

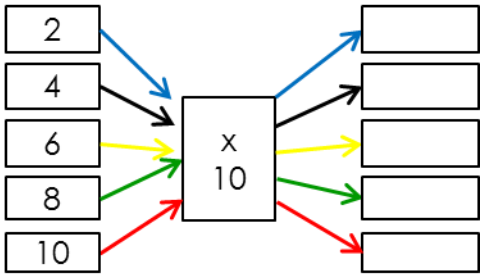
6. Complete the table by adding and subtracting:

(4)

532	+10		-10		+100		-100	

7. Complete the spider diagrams. (5)





8. You have only 3 roses, but you would like to give your mom 10 times more. How many roses do you want to give her? Write a number sentence and he answer.

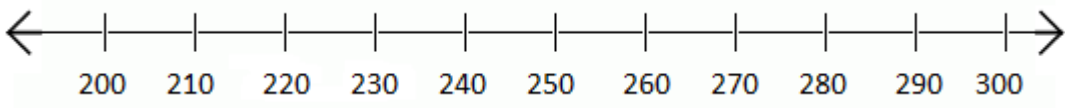
(2)

9. 195 + 16 = _____

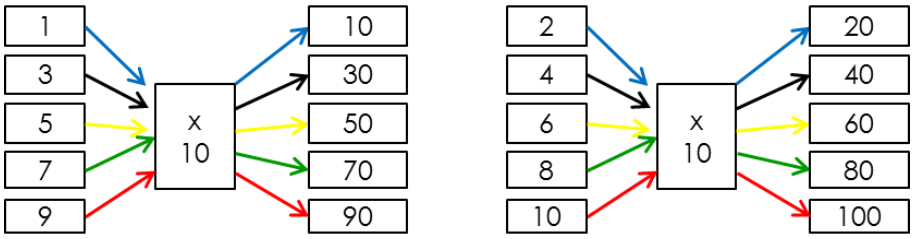
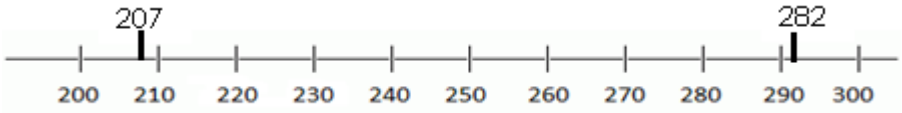
(1)

10. Show where you would find the numbers 207 and 282 on the number line below:

(2)



Grade 3 Written Assessment 1 Memo

Question	Marks
1. 100 + 80 + 1 = 181 1 mark number sentence; 1 mark correct answer.	(2)
2. two hundred and thirty-one 1 mark correct wording	(1)
1 mark per correct shaded block (max 3) blocks: **222** | 277 | **269** | 276 | 297 | 300 | **212** | **247** | 279 | **218**	(3)
4. 1 mark for correct indication given per shape. 	(2)
5.1 mark triangles (2 marks if there are 4 triangles); 1 mark square 	(3)
6.1 mark for each correct answer. 532 | +10 | 542 | -10 | 532 | +100 | 632 | -100 | 532	(4)
7.Half a mark per correct entry in the blocks. 	(5)
8. 10 x 3 = 30/3 x 10 = 30 1 mark for the number sentence and 1 for the correct answer.	(2)
9. 195 + 16 = 211 Any correct working is accepted. If only the answer is given also ok.	(1)
10.Learners must indicate the position of the two numbers. 	(2)

Mathematics Assessment Task 2 Grade 3

Surname:	Girl / Boy
Name:	
Date of birth:	
School:	
Province:	
EMIS no:	

Total marks: 20

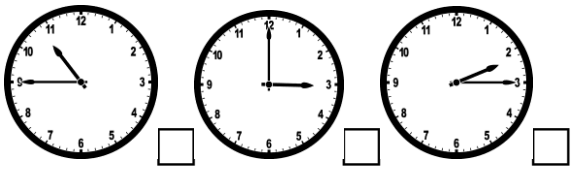
1. Calculate the sum of 5 units, 3 tens and 1 hundred.

_____ (1)

2. Write a number sentence for double 50 plus double 4 plus 1.

_____ (1)

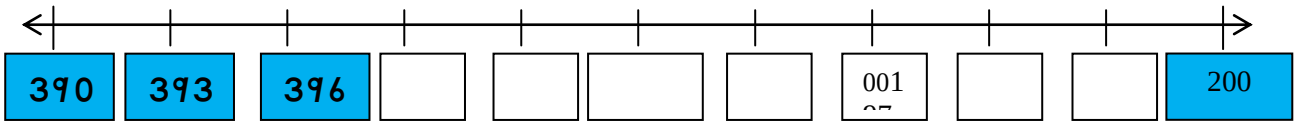
3. Tick the clock that shows quarter past two. (1)



4. Complete the table: (2)

319 + 2 =	321	+ 2 =		- 2 =		+ 2 =		- 2 =	

5. Complete the labels on the number line:(1)



6. Draw 20 circles. Cross out one quarter of the circles.(2)

7. This is how many roses I have. I want to give my mom 10 times more. How many roses will I give her then?

Number sentence: _____

I will give her _____ roses. (2)

8. Add the following and write the answer in the block. What will my change be if I pay with R20.

(4)

9. You have R5. Tick 3 sweets that you can buy. (1)

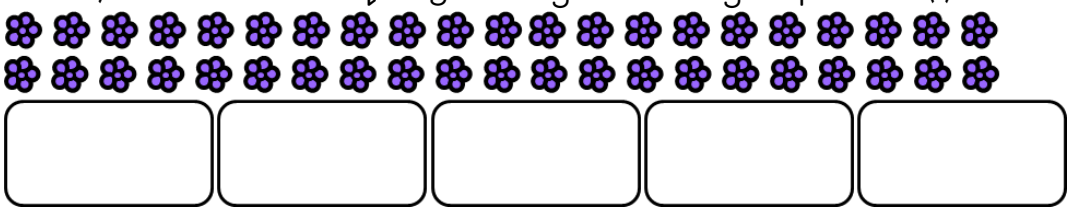
Choc chuckle R2,70	Gums R1,80	Sour worms R1,40	Peach treats R1,60	Magic mints R2,20	Toffees R1,20

a) Write a number sentence to show how much you will spend. Calculate._____ (1)

b) Write a number sentence to show how much change you will get. Calculate. _____ (1)

10. Count the flowers.

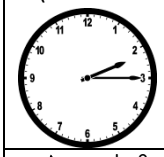
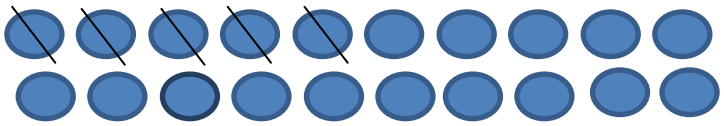
a) Share them equally among the five groups. (1)



b) How many flowers are there in each group? _____ (1)

c) How many flowers are left over? _____ (1)

Grade 3 Assessment Task 2 MEMO

Question	Marks
1. (1 mark for the correct answer) 100 + 30 + 5 = 135	(1)
2. (1 mark for the correct answer) 50 + 50 + 4 + 4 + 1 (total not needed but don't mark it wrong if they give it) 2 x 50 + 2 x 4 + 1 (alternative sentence – also correct)	(1)
3.(1 mark for ticking the correct clock face.) 	(1)
4. (1 mark for the first two correct numbers in the sequence, 1 mark for the second pair) 323 321 323 321	(2)
5.(1 mark for the correct answer) 399 402 405 408 411 414 417	(1)
6. (Any 5 of the 20 sweets may be crossed out) 	(2)
7.(1 mark for the number sentence and 1 mark for the correct answer) 10 x 5 = 50 I will give her 50 roses.	(2)
8. (1 mark for each correct answer) Block 1: R11, 10 My change is R8,90 Block 2: R7, 60 My change is R12,40	(4)
9. (1 mark for each correct answer) Sweets ticked (1) a) Learner's own number sentence and calculation b) Learner's own number sentence and calculation	(3)
10.(1 mark for each correct answer) Shared flowers (drawing) (1) a) 8 in a group b) 2 left over	(3)

Mathematics Assessment Task 3 Grade 3

Surname:	Boy | Girl
Name:	
Date of birth:	
School:	
Province:	
EMIS no:	

Total Marks: 30

1. Draw and extend a pattern in which the sizes of the shapes increase.

(3)

2. Calculate 52 – 37 = _____

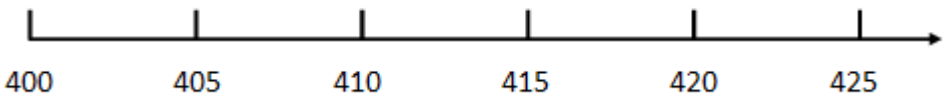
(3)

3. What are the next three terms in this number pattern?

367, 365, 363, _____, _____, _____,

(3)

4. Use the number line below to show how many 5s there are from 405 to 420



(2)

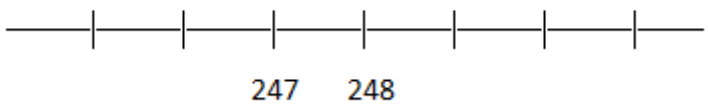
5. Draw the hands on this analogue clock to show half past 3 in the afternoon (1)

6. Draw the hands on this analogue clock to show 8 o'clock in the evening. (1)

7. 75 suckers are shared amongst 2 classes. How many suckers will each class get? (1)

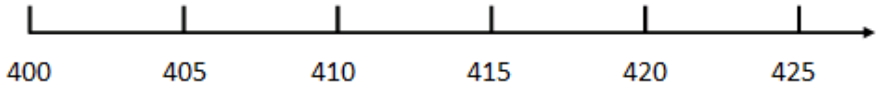
8. Complete the number line below:

(1)



9. Show where you will put the following numbers on the number line: 402, 417, 424

(3)



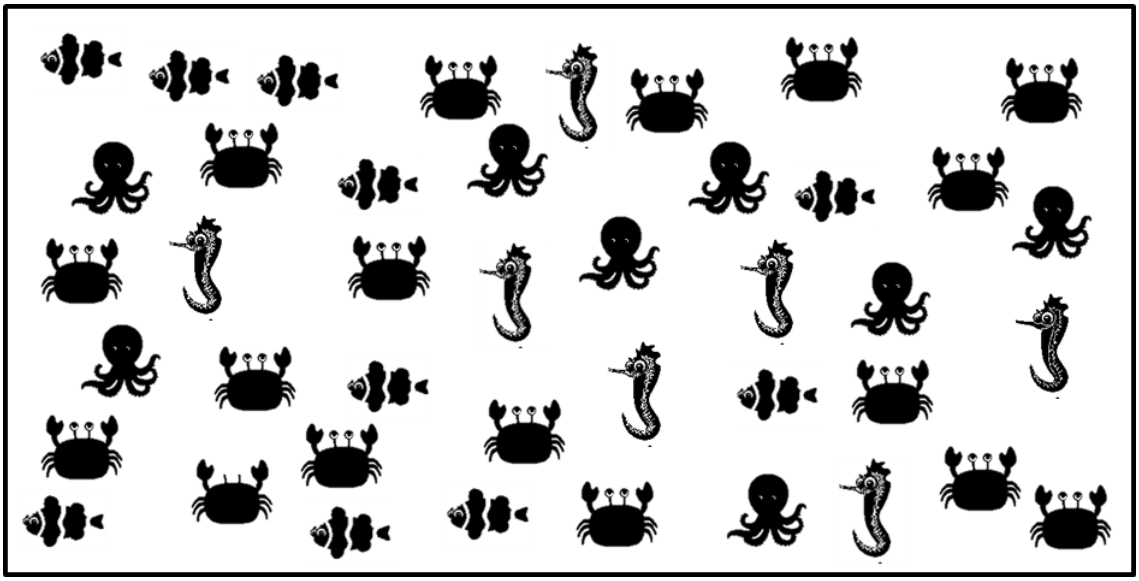
10. 6 x 6 = _____

(1)

11. 8 groups of 50 is _____?

(1)

12. Use the information below to complete the pictograph.
Draw circles to represent the pictures.



(4)

Clown fish	Sea horse	Octopus	Crabs
			

13. Answer the following questions by looking at the information in the pictograph.

i) Which picture are there the most of? _____ (1)

ii) Which picture are there fewer of than Octopus? _____(1)

14. There are 60 people in the room. Two fifths of them are adults. How many adults are in the room?

(1)

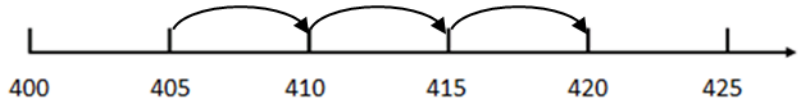
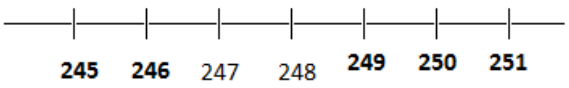
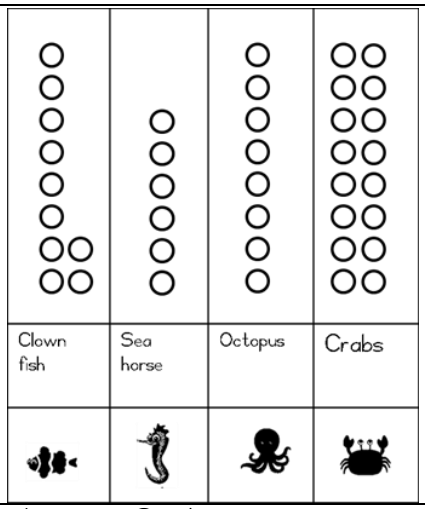
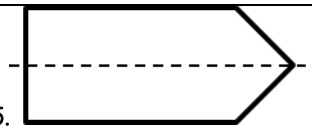
15. Draw the line of symmetry into the shape below:

(1)

16. Make your own pattern using circles and squares

(2)

Grade 3 Written Assessment 3Memo

Question	Marks
1. Learners answers will vary. 1 mark – pattern of shapes 1 mark – sizes of shapes increase 1 mark – at least one repetition of the pattern	(3)
2. 52 – 37 = 15 (accept alternative methods)	(3)
361, 259, 257	(3)
4. 1 mark – shows three hops; 1 mark direction arrows shown  	(2)
5.  6. 	(1) (1) 1 mark each if both the long and the short hand are shown correctly
7. 75 ÷ 2 = 37 remainder 1. They each get 37 and there is1 sucker left over	(1)
8. All of the correct numbers must be marked on the number line.  	(1)
9. Must indicate position on line  	(3)
10. 6 x 6 = 36	(1)
11. 8 groups of 50 is **400**	(1)
12.  	(4) 1 mark for each column correctly completed - clown fish 10 - sea horse 6 - octopus 8 - crabs 16
13. i. Crabs ii. Sea horses	(1) (1)
14. 24 adults	(1)
15. 	(1)
16. 1 mark correct shapes; 1 correct pattern (answers will vary)	(2)

Term 2: Grade 3Suggested Mark Record Sheet

Learner Name	Surname	Assessment Task 1					Task Level	Assessment Task 2					Task Level	Term Level
		Activities						Activities						
		1	2	3	4	5		1	2	3	4	5		
		Practical (week 1)	Oral (week 2)	Oral (week 3)	Practical (week 4)	Written (week 4)		Practical (week 5)	Written(week 6)	Oral (week 7)	Written (week 7)	Practical (week 8)		

Week 1

Lesson 1: Place value Numbers 100-300

Teacher's notes

CAPS Topics:1.1 Count objects 1.2 Count forwards and backwards 1.5 Place value 1.16 Mental Mathematics

Lesson vocabulary: Place values, digits, decompose, multiples, hundreds, tens, ones, estimate, check

Prior knowledge

Learners should be have been taught how to:

- Recognise place value of numbers to 99.
- Identify and state the value of each digit in a three digit number

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 1s from any number between 0 and 300.

Mental maths activity - 10 minutes

	What number is 10 less than:	**Answer**		What number is 10 more than:	**Answer**
1.	116	106	6.	200	210
2.	200	190	7.	54	64
3.	179	169	8.	98	108
4.	89	79	9.	89	99
5.	15	5	10.	166	176

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable), number cards (160-177 and 260-277) (see printables).

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

- Recognise the place value of numbers to 300 and know what each digit represents.
- Decompose 3 digit numbers up to 300 into multiples of hundreds, tens and ones.
- Identify and state the value of each digit.

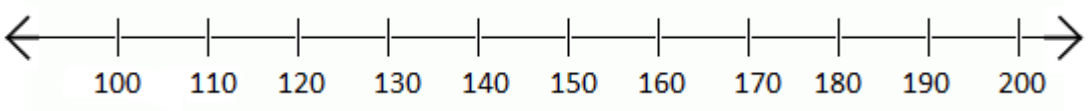
Remediation: Counting: Give learners base 10 blocks to use to count up to 100 in tens: 10, 20, 30, 40, 50, 60, 70, 80, 90.Count up to 200 using base 10 blocks: 100, 200.Learners use base 10 blocks to show you 172. Ask them to show the number that is: one smaller than 172 (171) and 17 (169). Ask them to show the number that is: one bigger than172 (173) and 179 (180).

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion – numbers 100-200

- Give each group of learners a set of base ten blocks and flard cards.
- Write 164 on the board. Ask learners to:
  - *Read the number.*
  - *Write the number on their slates.*
  - *Show the number with base 10 blocks.*
  - *Show the number with flard cards.*
- Repeat with other numbers, e.g. 168, 163 and 165.

Activity 2: Draw a 100 - 200 number line on the board, numbered in 10s.



- Ask the learners to show you on the number line which side of 164 will be more and which side less.
- *Which number comes before 164?*(163)
- *Which number comes after 164?*(165)
- Repeat with the numbers 168, 163 and 165.

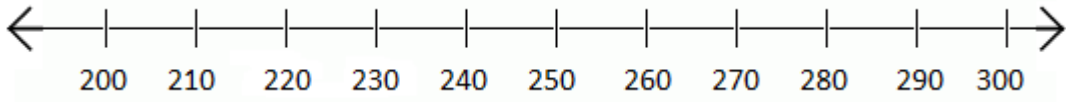
Activity 3: Whole class discussion – numbers 200-300

Write 266 on the board. Ask learners to:

- *Read the number.*
- *Write the number on their slates.*
- *Show the number with base 10 blocks.*
- *Show the number with flard cards.*

- Repeat the sequence of questions for other numbers in the range, e.g. 294, 201, 283, 219.

Activity 4: Draw a 200 - 300 number line on the board, numbered in 10s.



- Ask learners to come up to the board and help you to place the following numbers on the number line: 294, 201, 264, 283, 219

Activity 5: Learners work in groups

- Give each group of learners 5 of the number cards (well mixed) (from the set 160-177 and 260-277)
- Learners must sort their number cards and place them in the correct order on their desks.
- Discuss the sorting – check for errors and assist learners to understand how to use place value to help them sort (sort in order looking at hundreds, tens and units and comparing them).

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 1: Place value - Numbers 100-300

Classwork

1. Write a number sentence and the answer for: 100 blocks and 20 blocks and 9 blocks. (129)
2. Write a number sentence and the answer for: 100 and 80 and 1. (181)
3. How many tens are in 260? (6)
4. How many hundreds are in 99? (0)
5. How many ones are there in 45? (5)
6. Draw a number line starting at 290 and ending at 300.
    a. Draw a square around 295.
    b. Circle all the numbers smaller than 295.
    c. Underline all the numbers bigger than 295.
7. Write 128 in words. (one hundred and twenty eight)
8. Write 105 in words. (one hundred and five)
9. Write 233 in words. (two hundred and thirty three)
10. Write 204 in words. (two hundred and four)

Homework

1. Write a number sentence and answer for: 100 blocks and 60 blocks and 2 blocks.
2. Write a number sentence and answer for: 90 and 100 and 2.
3. Draw a number line starting at 180 and ending at 190.
    a. Draw a square around 186.
    b. Circle all the numbers smaller than 186.
    c. Underline all the numbers bigger than 186.
4. Write 176 in words. (one hundred and seventy six)
5. Write 226 in words. (two hundred and twenty six)

Lesson 2: Place Value Numbers 301 – 400

Teacher's notes

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 1.16 Mental Mathematics

Lesson vocabulary: Describe, compare, whole numbers, smaller than, greater than, more than, fewer than, equal to, smallest, greatest, ordinal numbers, place, position, number symbols and names.

Prior knowledge

Learners should be have been taught how to:

- Describe and compare whole numbers up to 50 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Identify, recognise, write and read number symbols 0 to 150 and number names 0 to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 100s between 0 and 500. E.g. 100, 200, 300, 400, 500

Mental maths activity - 10 minutes

	Give me the number/s between:	**Answer**		Give me the number/s between:	**Answer**
1.	457 and 460	458 and 459	6.	51 and 54?	52 and 53
2.	300 and 298?	299	7.	500 and 497?	498 and 499
3.	51 and 54?	52 and 53	8.	487 and 490	488 and 489
4.	207 and 204?	206 and 205	9.	124 and 126?	125
5.	45 and 48?	46 and 47	10.	101 and 98?	100 and 99

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable), number cards (370-387) (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 41b (Page 97)

Concepts:

- Describe and compare and order whole numbers up to 400 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Identify, recognise, write and read number symbols 0 to 400 and number names 0 to 250.
- Order whole numbers up to 400 from smallest to biggest.

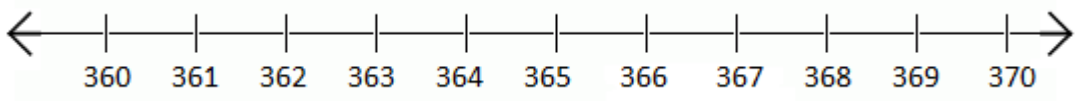
Remediation: Counting: Give learners base 10 blocks to use to count up to 100 in tens: 10, 20, 30, 40, 50, 60, 70, 80, 90.Count up to 400 using the base 10 blocks: 100, 200, 300, 400.Learners also use the base 10 blocks to show you 372. Ask them to show you the number that is: One smaller than 372 (371) one bigger than372 (373).

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion – numbers 300-400

- Give each group of learners a set of base ten blocks and flard cards.
- Write 337 on the board. Ask learners to:
  - *Read the number.*
  - *Write the number on their slates.*
  - *Show the number with base 10 blocks.*
  - *Show the number with flard cards.*
- Repeat with other numbers, e.g. 368, 313 and 365.

Activity 2: Draw a 360 - 370 number line on the board.



Ask the learners the following questions:

- *Which number is 2 numbers before 369?* (367)
- *Which number comes three numbers after 367?* (370)
- *Which even numbers are between 361 and 368?* (362, 364, 366).

Activity 3: Learners work in groups.

- Give each group of learners 5 of the number cards (well mixed) (from the set 370-387)
- Learners must sort their number cards and place them in the correct order on their desks.
- Discuss the sorting – check for errors and assist learners to understand how to use place value to help them sort (sort in order looking at hundreds, tens and units and comparing them).

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 2: Place value - Numbers 301-400

Classwork

1. Write a number sentence and the answer for 300 blocks and 20 blocks and 9 blocks. (300 + 20 + 9 = 329)
2. Write a number sentence and the answer for 300 and 80 and 1. (300 + 80 + 1 = 381)
3. Draw and complete a number line. Start at 390 and end at 400.
    a. Underline all the numbers smaller than 395. 390, (391, 392, 393, 394)
    b. Circle all the numbers bigger than 395. (396, 397, 398, 399, 400)
4. Write 233 in words. (two hundred and thirty-three)
5. Write 244 in words. (two hundred and forty-four)

Homework

1. Write a number sentence and answer for 300 blocks and 60 blocks and 2 blocks. (300 + 60 + 2 = 362)
2. Write a number sentence and answer for 90 and 300 and 2. (300 + 90 + 2 = 392)
3. Draw and complete a number line. Start at 380 and end at 390.
    a. Underline all the numbers bigger than 386. (387, 388, 389, 390).
    b. Circle all the numbers smaller than 384. (383, 382, 381, 380)
4. Write 226 in words. (two hundred and twenty-six)

Lesson 3: Place value Numbers 401 - 500

Teacher's notes

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 1.16 Mental Mathematics

Lesson vocabulary: Describe, compare, whole numbers, smaller than, greater than, more than, fewer than, equal to, smallest, greatest, ordinal numbers, place, position, number symbols, number names.

Prior knowledge

Learners should be have been taught how to:

- Describe and compare whole numbers up to 50 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Identify, recognise, write and read number symbols 0 to 150 and number names 0 to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any number between 0 and 500. E.g. 105, 110, 115

Mental maths activity - 10 minutes

	Arrange these numbers from the biggest to the smallest.	**Answer**		Arrange these numbers from the biggest to the smallest.	**Answer**
1.	78, 105, 98, 305, 2	305, 105, 98, 78, 2	6.	154, 210, 87, 95	210, 154, 95, 87
2.	89, 54, 102, 305	305, 102, 89, 54	7.	45, 78, 102, 421	421, 102, 78, 45
3.	368, 500, 487, 120	500, 487, 368, 120	8.	87, 35, 201, 50, 62	201, 87, 62, 50, 35
4.	78, 54, 105, 307	307, 105, 78, 54	9.	78, 105, 48, 352	352, 105, 78, 48

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable), number cards (420-437) (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 35a (pgs 80 and 81)

Concepts:

- Describe and compare and order whole numbers up to 500 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Identify, recognise, write and read number symbols 0 to 100 and number names 0 to 250.
- Order whole numbers up to 500 from smallest to biggest and biggest to smallest.

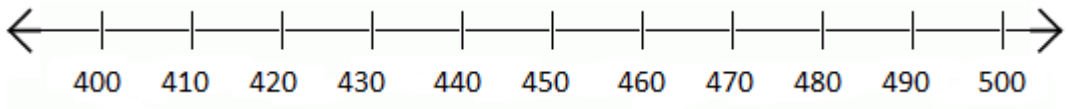
Remediation: Counting: Give learners base 10 blocks to use to count up to 100 in tens: 10, 20, 30, 40, 50, 60, 70, 80, 90.Count up to 500 using the base 10 blocks: 100, 200, 300, 400, 500.Learners also use the base 10 blocks to show you 472. Tell them to show you the number that is: one smaller than 472 (471) one bigger than472 (473).

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion – numbers 400-500

- Give each group of learners a set of base ten blocks and flard cards.
- Write 406 on the board. Ask learners to:
  - *Read the number.*
  - *Write the number on their slates.*
  - *Show the number with base 10 blocks.*
  - *Show the number with flard cards.*
- Repeat with other numbers, e.g. 468, 483 and 422.

Activity 2: Draw a 400 -500 number line on the board, numbered in 10s.



Ask learners to come up to the board and help you to place the following numbers on the number line
494, 483, 464, 403, 422

Activity 3: Learners work in groups.

- Give each group of learners 5 of the number cards (well mixed) (from the set 420-437)
- Learners must sort their number cards and place them in the correct order on their desks.
- Discuss the sorting – check for errors and assist learners to understand how to use place value to help them sort (sort in order looking at hundreds, tens and units and comparing them).

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 3: Place value - Numbers 401-500

Classwork

1. Write a number sentence and the answer for 400 blocks and 20 blocks and 9 blocks. (400 + 20 + 9 = 429)
2. Write a number sentence and the answer for 400 and 80 and 1. (400 + 80 + 1 = 481)
3. Draw and complete a number line. Start at 490 and end at 500.
    a. Circle all the numbers smaller than 495. (491, 492, 493, 494)
    b. Underline all the numbers bigger than 495. (496, 497, 498, 499)
4. Write 238 in words. (two hundred and thirty-eight)
5. Write 212 in words. (two hundred and twelve)

Homework

1. Write a number sentence and answer for 400 blocks and 60 blocks and 2 blocks. (400 + 60 + 2 = 462)
2. Write a number sentence and answer for 90 and 400 and 2. (400 + 90 + 2 = 492)
3. Draw and complete a number line. Start at 480 and end at 490.
    a. Circle all the numbers bigger than 486. (487, 488, 489)
    b. Underline all the numbers smaller than 484. (483, 482, 481)
4. Write 207 in words. (two hundred and seven)

Lesson 4: Ordinal Numbers 200 – 300

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.3Number symbols and number names 1.4 Describe, compare and order numbers 1.16 Mental Mathematics

Lesson vocabulary: Estimate, check, describe, compare, whole numbers, smaller than, greater than, more than, fewer than, equal to, smallest, greatest, ordinal numbers (first, second, etc.), place, position, number symbols and names.

Prior knowledge

Learners should be have been taught how to:

- Describe and compare whole numbers up to 50 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Identify, recognise, write and read number symbols 0 to 150 and number names 0 to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 10s from any number between 0 and 400. E.g. 389, 379, 369, …

Mental maths activity - 10 minutes

	Arrange from smallest to biggest	**Answer**		Arrange from smallest to biggest	**Answer**
1.	201, 300, 298, 187	300, 298, 201, 187	6.	78, 98, 125, 65	125, 98, 78, 65
2.	211, 300, 165, 122	300, 211, 165, 122	7.	154, 145, 123, 132	154, 145, 132, 123
3.	124, 201, 152, 98	201, 152, 124, 98	8.	12, 54, 89, 0, 45	89, 54, 45, 12, 0
4.	78, 15, 98, 87, 221	221, 98, 87, 78, 15	9.	3, 4, 9, 201, 2	201, 9, 4, 3, 2
5.	14, 56, 102, 300	300, 102, 56, 14	10.	154, 145, 114, 169	169, 154, 145, 114

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: 201-300 Number board (see printable), counters.

DBE workbook activities relevant to this lesson:

N/a

Concepts:

- Describe and compare whole numbers up to 500 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Use ordinal numbers to show order, place and position (up to 31st)

Remediation: Get learners to stand in a line. Revise ordinal numbers. Ask *Who is first, 5th, 3rd, etc.* Show them how to count from the front. Work sequentially on half the number board i.e. from 200-250. Pointing at 200 ask *If we start here, which number is this*? (first), and the next number, (second), and then (third) … (twentieth)'. Then work sequentially with the tens pointing at the 10th, 20th, 30th, numbers first in sequence and then randomly.

Enrichment: See Enrichment Activity Cards

Activity 1: Individual work.
Give each learner a 200–300 number board. Ask them to place counters on following numbers:

- 212, 220, 202, 201, 221
- The numbers that are between 215 and 220 (216, 217, 218, 219)
- The numbers that are between 299 and 296 (298,297)
- The numbers that are between 234 and 239 (235, 236, 237, 238)

Activity 2:
Still using the 200-300 number board, ask the learners the following questions.

- Remember to each time ask them how they came to their answer.
  - *What is the first number?*(201)
  - *What is the second number?*(202)
  - *What is the tenth number?*(210)
- Write the ordinal numbers on the board (using the abbreviations) as you ask the following questions:
    - *What is the 10^{th}number?*(210)
    - *What is the 20^{th}number?*(220)
    - *What is the 30^{th}number?*(230)
    - *What is the 15^{th}number?*(215)
    - Ask randomly for numbers in other positions (up to the 31^{st}).

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 4: Ordinal numbers 200-300

Classwork

1. Name any five numbers that are smaller than 276. (answers will vary)
2. Name any five numbers that are bigger than 276. (answers will vary)
3. Write these numbers from the smallest to the biggest: 215, 255, 205, 251, 250 (205, 215, 250, 251, 255)
4. Write these numbers from the biggest to the smallest: 299, 209, 219, 290, 201 (299, 290, 219, 209201),)
5. Write 237 in words. (two hundred and thirty-seven)
6. What is the fifth number after 245?(250)
7. What is the 20th number after 250? (270)
8. What is the 25thnumber after 210? (235)

Homework

1. Write down a number that is bigger than 224, but smaller than 229. (225/226/227/228)
2. Write these numbers from the biggest to the smallest: 223, 203, 213, 233 (233, 223, 213, 203)
3. Write the same numbers from the smallest to the biggest. (203, 213, 223, 233)
4. Write 215 in words. (two hundred and fifteen)
5. What is the 16thnumber after 200? (216)
6. What is the 14thnumber after 230? (244)

Lesson 5: Ordinal Numbers 400 - 500

Teacher's notes

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 1.16 Mental Mathematics

Lesson vocabulary: Describe, compare, whole numbers, smaller than, greater than, more than, fewer than, equal to, smallest, greatest, ordinal numbers, place, position, number symbols, number names

Prior knowledge

Learners should be have been taught how to:

- Describe and compare whole numbers up to 50 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Identify, recognise, write and read number symbols 0 to 150 and number names 0 to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 10s from any given multiple between 0 and 500. E.g. 458, 468, 478, …

Mental maths activity - 10 minutes

	Arrange these numbers from smallest to biggest.	**Answer**		Arrange these numbers from smallest to the biggest.	**Answer**
1.	458, 421, 312, 497	312, 421, 458, 497	6.	35, 10 , 98, 105	10, 35, 98, 105
2.	78, 54, 65, 102, 0	0, 54, 65, 78, 102	7.	98, 57, 123, 451	57, 98, 123, 451
3.	104, 56, 201, 354	56, 104, 201, 354	8.	89, 54, 105, 60	54, 60, 89, 105
4.	498, 365, 105, 32	32, 105, 365, 498	9.	78, 105, 64, 201	64, 78, 105, 201
5.	487, 500, 124, 305	124, 305, 487, 500	10.	89, 52, 500, 487	52, 89, 487, 500

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Number board (401-500) (see printables), counters.

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

- Describe and compare whole numbers up to 500 using smaller than, greater than, more than, fewer than and is equal to, as well as smallest to greatest and greatest to smallest.
- Use ordinal numbers to show order, place and position

Remediation: Ask the learners to place a counter on 483 on the number board and to read out the number. Remind them not to say *four eighty-three* but *four hundred and eighty-three*. Ask the learners to show you a number: That is bigger than 483 and one that is smaller than 483. Ask them to show you 483 with the base 10 blocks.

Enrichment: See Enrichment Activity Cards

Activity 1: Individual work.
Ask the learners to place counters on these numbers and write them from the

- smallest to the biggest: 401, 421, 410, 420, 402 (401, 402, 410, 420, 421)
- biggest to the smallest: 401, 421, 410, 420, 402 (421, 420, 412, 402, 401)

Activity 2:
Give each learner a 401–500 number board. Ask them to place counters on following numbers:

- 412, 420, 402, 401, 421
- The numbers that are in between 415 and 420 (416,417, 418, 419)
- The numbers that are in between 499 and 496 (498,497)
- The numbers that are in between 434 and 439 (435, 436, 437, 438)

Activity 3:
Still using the 401-500 number board, ask the learners to find the following numbers.

- Write the ordinal numbers on the board (using the abbreviations) as you ask the following questions:
- *What is the 10th number?* (410)
- *20th number*? (420)
- *30th number?* (430)
- *12th number*? (412)
- *23rdnumber*? (423)
- Each time ask them how they came to the answer.
- Ask randomly for numbers in other positions (up to the 31st).

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 5: Ordinal numbers 200-500

Classwork

1. Name any five numbers that have 6 tens. (answers will vary)
2. Name any five numbers that have 7 ones. (answers will vary)
3. Write these numbers from the smallest to the biggest: 415, 455, 405, 451, 450 (405, 415, 450, 451, 455)
4. Write these numbers from the biggest to the smallest: 499, 409, 419, 490, 401 (499, 490, 419, 409, 401 ,)
5. Write 237 in words. (two hundred and thirty-seven)
6. What is the fifth number after 300?(305)
7. What is the 31st number after 340? (371)
8. What is the 13th number after 355? (368)

Homework

1. Write down a number that is bigger than 424, but smaller than 429. (425/426/427/428)
2. Write these numbers from the biggest to the smallest: 423,403, 413, 433 (433, 423, 413, 403)
3. Write the same numbers from the smallest to the biggest. (403, 413, 423, 433)
4. Write 245 in words. (two hundred and forty-five)
5. What is the 26th number after 300? (326)
6. What is the 23rdnumber after 350? (373)

Week 2

Lesson 6: Problem solving Strategies: Building up and breaking down

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.7, 1.13 Addition and subtraction 1.16 Mental Mathematics 1.6 Problem Solving Techniques

Lesson vocabulary: Addition, subtraction, add ten, add hundred, tens, units, increase, decrease

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, -, =, □

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any given number between 0 and 500. E.g. 103, 105, 107, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	5+4-3=	6	6.	8+2-4=	6
2.	4+5-2=	7	7.	7 + 3 -3=	7
3.	2+4-5=	1	8.	9+1-9=	1
4.	7+0-7=	0	9.	3+3-0=	6
5.	8+1-0=	9	10.	2+5-6=	1

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 35b (Page 82)

Concepts:

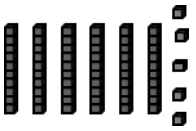
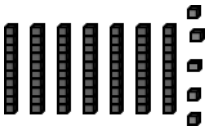
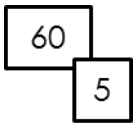
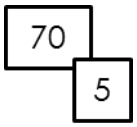
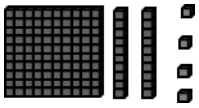
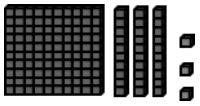
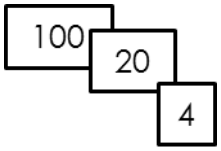
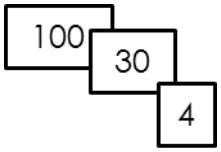
- Recall addition and subtraction facts to 10. (Mental mathematics)
- Use the following techniques when solving problem and explain solutions to problems:• building up and breaking down numbers

Remediation: Using 100-400 number boards children count in 10s beginning on the non-multiple e.g. 122, 132, 142, 152, … Now do the same with hundreds. 105, 205, 305, …

Enrichment: See Enrichment Activity Cards

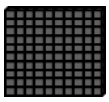
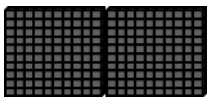
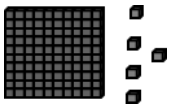
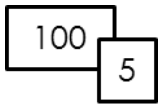
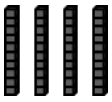
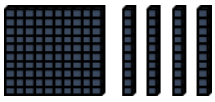
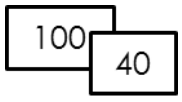
Activity 1: Adding 10

- Ask the learners to show you the first number with their base 10 blocks. Then ask them to add 10.
- Ask the learners: *What is 65 +10? What happened to the tens?*
- Learners do the same with their flard cards.
- Repeat this with 134 + 10 =
- Here is an illustration of the displays the learners should make when following your instructions:

Number	Show it with base 10 blocks	Add 10	Show it with flard cards	Add 10	Answer
65					**75**
124					**134**

Activity 2: Adding 100

- Ask the learners to show you the first number with their base 10 blocks. Then ask them to add 100.
- Ask the learners: *What is 100 +100? What happened to the tens?*
- Learners do the same with their flard cards.
- Repeat this with 5 + 100 = and 40 + 100 =

Number	Show it with base 10 blocks	Add 100	Show it with flard cards	Add 100	Answer
100					200
5					105
40					140

Activity 3: Write 126 on the board. Point to the number and ask the learners to:

- *Add ten to the number. What do you get?* (136)
- *What would happen if you subtracted 10 from 126?* (The two tens would decrease by ten).
- *What would you get?* (116)
- Now let's add hundred to the number (pointing at 126). W*hat do you get?* (226)
- *What do you notice when you add hundred to a number?* (the hundreds digit increases by one)
- Do the same with other numbers e.g. 275 and 439.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 6: Problem solving strategies – Building up and breaking down

Classwork

1. Copy this table and complete it in your maths book.

		Add 10	Subtract 10	Add 100	Subtract 100
a.	271	(281)	(261)	(371)	(171)
b.	542	(552)	(532)	(642)	(452)
c.	326	(336)	(316)	(426)	(226)
d.	188	(198)	(178)	(288)	(88)

Homework

1. 1 + 1 = (2)
2. 1 + 2 = (3)
3. 2 + 2 = (4)
4. 10 + 10 = (20)
5. 10 + 20 = (30)
6. 20 + 20 = (40)
7. 100 + 100 = (200)
8. 100 + 200 = (300)
9. 200 + 200 = (400)

Lesson 7: Problem solving Strategies: Building up and breaking down

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.7, 1.13 Addition and subtraction 1.16 Mental Mathematics , 1.6 Problem Solving Techniques

Lesson vocabulary: Addition, subtraction, appropriate symbols

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, -, =, ☐

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any given number between 0 and 500. E.g. 404, 409, 414, …

Mental maths activity - 10 minutes

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

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework

3. Lesson content – concept development – 30 minutes

Resources: base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 38a (Page 91)

Concepts:

- Use the following techniques when solving problem and explain solutions to problems: building up and breaking down numbers

Remediation: Use base 10 blocks and flard cards to work with one and two digit numbers doing addition, then move on to addition of two-digit and three-digit numbers.
e.g. 20+3= __, 20 + 12 = __ , 45+ 13 = __ , 42+ 51 = __

Enrichment: See Enrichment Activity Cards

Activity 1:

- Revise breaking up numbers in to hundreds, tens and units
  e.g. 324 =300 + 20 + 4
- Do the same with 218, 345 and 399.
- Explain that we have revised breaking numbers up into 100s 10s and units because we are now going to use this breaking up when we add.

Activity 2: Addition using breaking down/building up. Work on the board.

- While you work through each step of the working question the learners to make sure that they understand the method.
- First example: we are going to break down both of the numbers:
- (Use base 10 blocks or flard cards to demonstrate this as well if you would like to)
- 324 + 82
  = 300 + 20 + 4 + 80 + 2
  = 300 + (20 + 80) + (4 + 2)
  = 300 + 100 + 6
  = 406
  (Notice how we grouped the tens together and units together to help us to add)

- Second example:
- (Use base 10 blocks or flard cards to demonstrate this as well if you would like to)
  223 + 136
  = 200 + 20 +3 + 100 + 30 + 6
  = (200 + 100) + (20 + 30) + (3 + 6)
  = 300 + 50 + 9
  = 359
  (Notice how we grouped the hundreds together, tens together and units together to help us to add)

- Do the same with 164 + 233 = __ (397) and 209 + 222= __(431)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 7: Problem solving strategies – Building up and breaking down

Classwork

Solve the following:

1. 225 + 53 = _____ (278)
2. 264 + 132 = _____(396)
3. 164 + 85 = _____(249)
4. 175 + 116 = _____(291)

Homework

Solve the following:

1. 221 + 42 = _____(263)
2. 253 + 123 = _____(376)
3. 166 + 83 = _____(249)
4. 171 + 65 = _____(236)

Lesson 8: Problem solving Strategies: Adding3-digits numbers by breaking down the second number

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.7, 1.13 Addition and subtraction 1.16 Mental Mathematics, 1.6 Problem solving Techniques breaking down the second number

Lesson vocabulary: Addition, subtraction, counting on, grouping, hundreds, tens, units

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, -, =, ☐
- Practice number bonds to 30.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any given number between 0 and 500. E.g. 388, 390, 392

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	54+10=	64		254+100=	354
2.	77+10=	87		177+100=	277
3.	121+ 10 =	131		121+ 100 =	221
4.	128 + 10=	138		128 + 100=	228
5.	166+10=	176		166+100=	266

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Base 10 blocks (see Term 1 printable), flard cards (see Term 1 printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 38b (p 92)

Concepts:

- Use the following techniques when solving problem and explain solutions to problems Adding three digits to three digits: breaking down the second numbers

Remediation: Work with two digit numbers e.g. 25 + 13 = (25 + 10 + 3) = (35 + 3 = 38). Do repeated examples using different pairs of numbers to help the learners understand the strategy of breaking down numbers. This will also reinforce their understanding of place value.

Enrichment: See Enrichment Activity Cards

Activity 1: Add by breaking down the second number only

This strategy involves adding three digits to three digits: keeping the first number whole and breaking down the second number and then adding in stages.

(You can also show this with base 10 blocks and flard cards)

323 + 136 = ...

= 323 + (100 + 30 + 6)
= (323 + 100) + 30 +6 (first add the hundreds)
= (423 + 30) + 6 (then add the tens to what you have)
= 453 + 6 (now add the ones)
= 459

Note to teacher: The brackets around the numbers are used in the calculation strategy while the brackets around the strategy points are for you information.

- More examples.
- While you work through them, you should question the learners about why they are grouping numbers in the way they suggest.

141 + 345 = __ = 141 + (300+40+5) = (141+300)+40+5 = (441+40)+5 = 481+5 =486	324 + 125 = __ = 324 +(100+20+5) = (325+100) +20+5 = (425+20)+5 = 445+5 = 450	177 + 122 = __ = 177 + (100+20+2) = (177+100) + 20+2 = (277+20)+2 = 297+2 = 299

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 8: Problem solving Strategies: Adding 3-digits numbers by breaking down the second number

Classwork

Remember to keep the first number whole and break up the second number.

1. 205+ 222 = (427)
2. 374+ 108 = (482)
3. Portia had 241 stickers and her friends gave her 252 stickers for her birthday. How many stickers does she have? (493)
4. Write the number symbol for three hundred and fourteen. (314)
5. Write 418 in words. (four hundred and eighteen)

Homework

Remember to keep the first number whole and break up the second number.

1. 325+ 172 = (497)
2. 177+ 32 = (209)
3. 204+203= (407)
4. Write the number symbol for three hundred and eight. (308)
5. Write 209 in words. (two hundred and nine)

Lesson 9: Problem solving Strategies: Number lines

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.7 1.13 Addition and subtraction 1.16 Mental Mathematics , 1.6 Problem solving Techniques

Lesson vocabulary: Addition, subtraction, double

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, -, =, ☐
- Practice number bonds to 30.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 100s between 0 and 500. E.g. 100, 200, 300, 400, 500

Mental maths activity - 10 minutes

	Calculate the following:	Answer		Calculate the following:	Answer
1.	34+10=	44		34+100 =	134
2.	79 +10=	89		79 +100 =	179
3.	131+ 10 =	141		131+ 100 =	231
4.	146 + 10=	156		146 + 100 =	246
5.	122 +10=	132		122 +100 =	222

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Number lines 100-200 and 200-300 (see printable).

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

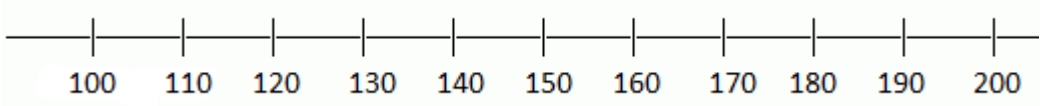
- Use the following techniques when solving problem and explain solutions to problems: number lines

Remediation: Work with number lines from 0-100 to add smaller number using the same method. Make sure that the learners know how to place numbers/find the position of numbers on a number line. They also need to know how to move forwards and backwards on a number line.

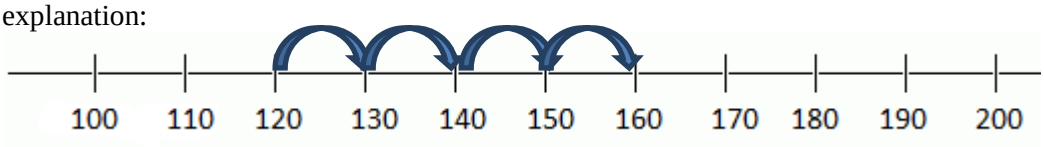
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Addition using a number line.

- We use number lines to represent numbers and we can also use them to show number sentences.
- Draw a 100 – 200 number line (marked in 10s) on the board.



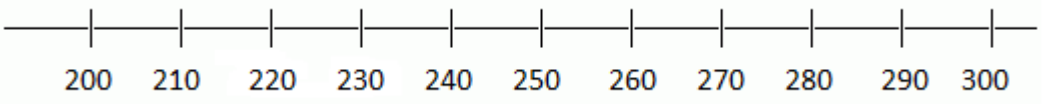
- Show the addition of 120 and 40 to your learners using the illustrations below to guide your explanation:



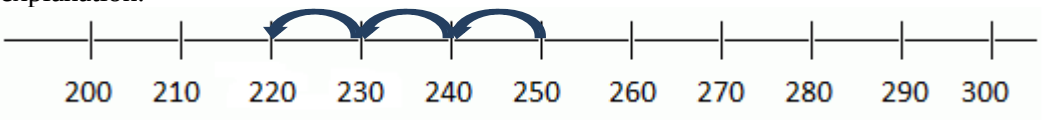
- Find 120 on the number line and put a dot there. Count 40 up from 120 (in 10s) and put a dot where you land. The answer to 120 + 40 is 160, as seen on the number line.
- Discuss the use of the number line to show addition – for example try 115 + 35 = __ .
- Point out that if the number line is labelled in 10s, we locate the 5s half way between each marker.

Activity 2: Whole class activity. Subtraction using a number line.

- Draw a 200 – 300 number line (marked in 10s) on the board.



- Show the subtraction of 30 from 250 to your learners using the illustrations below to guide your explanation:



- Find 250 on the number line. Put a dot there. Count down 30 (in 10s) from 250 using the number line. Put a dot where you land. The answer to 250 – 30 is 220, as can be seen on the number line.
- Discuss the use of the number line to show subtraction - for example try 245 – 35 = __ .
- Discuss again where to locate the 5s if the number line is labelled in 10s. (half way between each marker)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 9: Problem solving strategies – Number lines

Classwork

1. Use a 100-200 number line to calculate the following:
    a. 120 + 20 = (140)
    b. 125 + 35 = (160)
2. Use a 200-300 number line to calculate:
    a. 205 + 35 = (240)
    b. 230 + 60 = (290)
3. Use a 100-200 number line to calculate the following:
    a. 160 – 30 = (130)
    b. 175 – 35 = (140)
4. Use a 200-300 number line to calculate:
    a. 275 – 65 = (215)
    b. 240 – 20 = (240)

Homework

1. Use a 100-200 number line to calculate:
    a. 135 + 15 = (140)
    b. 145 – 20 = (125)
2. Use a 200-300 number line to calculate:
    a. 250 + 30 = (280)
    b. 265 – 40 = (225)

Lesson 10: Problem solving Strategies: Number lines

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.7 1.13 Addition and subtraction 1.16 Mental Mathematics , 1.6 Problem solving Techniques

Lesson vocabulary: Addition, subtraction, double

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving addition and subtraction with answers up to 99, using the appropriate symbols +, -, =, ☐
- Practice number bonds to 30.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 100s between 0 and 500. E.g. 100, 200, 300, 400, 500

Mental maths activity - 10 minutes

	Calculate the following:	Answer		Calculate the following:	Answer
1.	5 - __ = 3	2	6.	1 + __ = 7	6
2.	3 + __ = 10	7	7.	10 - __ = 5	5
3.	10 - __ = 10	0	8.	10 - __ = 3	7
4.	2 + __ = 10	8	9.	4 + __ = 10	6
5.	9 - __ = 3	6	10.	9 - __ = 5	4

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Number lines (see printables)

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

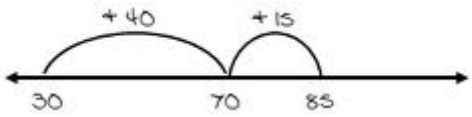
- Use the following techniques when solving problem and explain solutions to problems: number lines

Remediation: Work again with number lines from 0-100 to add smaller number using the same method.

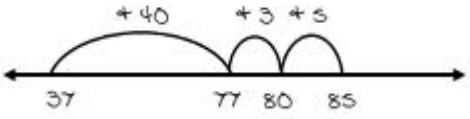
Enrichment: See Enrichment Activity Cards

Activity 1:
Revise with the learners (from yesterday):

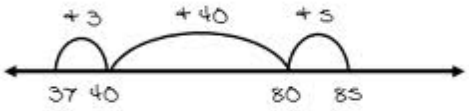
- We use number lines to represent numbers and we can also use them to show number sentences.
- Today we will use open number lines in different ways to represent calculations with numbers.
- Draw an open number line on the board and then show the addition of 37 and 48 to your learners using the illustrations below to guide your explanation:
- There are many different ways you could count on using the number line. Here are 4 ways:
- Method 1: 37 + 48 =
  Add the tens by counting on 40 from 30. Add the units by counting on 7 + 8 = 15 from there to get the total of 85.



- Method 2: 37 + 48 =
  Add 40 onto 37 first. Add 3 from the remaining 8 units to take you to 80.Add the last 5 units.

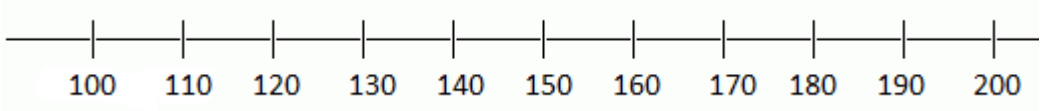


- Method 3: 37 + 48 =
  Add 3 to 37 to take you to 40. You still need to add 45.Add 40 to take you to 80.Add the final 5 units, to get the total of 85.

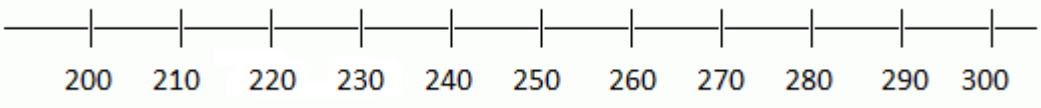


Activity 2: Choose other pairs of numbers to add using the number line:

- Show different ways that this can be done, following the examples done above – this time on a number line with gradations marked.
- 145 + 28.= (173) (Use a 100-200 number line)



- 203 + 67.= (270) (Use a 200-300 number line)



4. Classwork activity – 25 minutes (See next page)

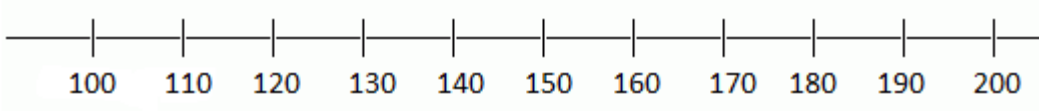
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

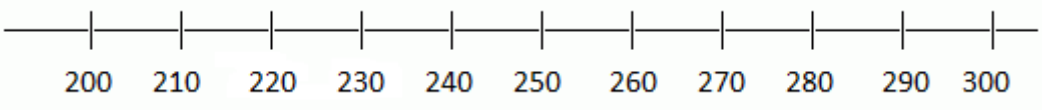
Term 2 Lesson 10: Problem solving strategies – Number lines

Classwork

1. Use a 100-200 number line to calculate: 124 + 25 = (149)

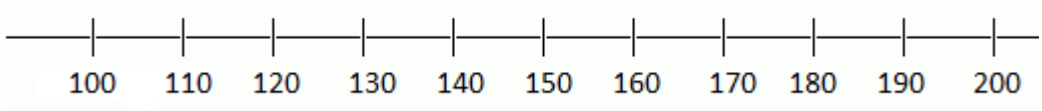


2. Use a 200-300 number line to calculate: 216 + 59 = (275)

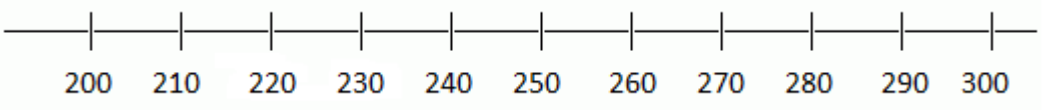


Homework

1. Use a 100-200 number line to calculate: 131 + 66 = (197)



2. Use a 200-300 number line to calculate: 269 + 19 = (288)



Week 3

Lesson 11: Working with tens – rounding off

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.8 1.14 Repeated addition leading to multiplication 1.16 Mental Mathematics

Lesson vocabulary: Multiplication, multiply, total, tens, rounding off, array, group

Prior knowledge
Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving repeated addition and multiplication with answers up to 50.

Assessment
Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Group to at least 500 everyday objects in groups of 10 to estimate and then to count.
- Count forwards and backwards in 10s between 100 and 500.

Mental maths activity - 10 minutes

	Calculate the following:	Answer		Calculate the following:	Answer
1.	10+3=	13	6.	10+0=	10
2.	10+2=	12	7.	10+1=	11
3.	10+6=	16	8.	10+4=	14
4.	10+10=	20	9.	10+7=	17
5.	10+5=	15	10.	10+9=	19

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters.

DBE workbook activities relevant to this lesson:

- DBE Worksheet 34(pages 78 and 79)

Concepts:

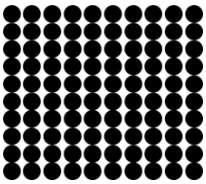
- Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75, using appropriate symbols x, =, □
- Working with tens (arrays, rounding off to the nearest ten, multiplication, repeated subtraction).

Remediation: Practical Problem solving activity: The teacher has to order books for 6 children. If each child needs 10 books, how many books must the teacher order? Pack it out with counters/draw the pictures. Count the books: (10, 20, 30…60)

Enrichment: See Enrichment Activity Cards

Activity 1: Revision of working with tens - Using arrays (ten rows of 10)

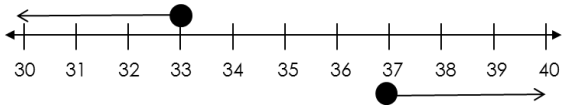
- Draw or pack the counters out on a desk. How many counters are in each row? (10)
- Let us count: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100. How can I write it as an addition number sentence? 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 + 10 = 100
- How can I write it as a multiplication number sentence? 10 x 10 = 100



- Remember you can use tens to solve word problems. E.g.
  How many cars are needed to transport 40 learners, if four learners can fit into a car? (10)
- Discuss the word problem – the numbers, the question and the method of solution: e.g. 4 learners per car and 40 learners altogether. How many cars do we need? 4 x 10 = 40. We need 10 cars. (other methods are possible - discuss)

Activity 2: Rounding off

- Rounding off is used in estimation – this term Grade 3s are introduced to rounding off.
- Once you know how to round off numbers, you can use this skill to estimate answers.
- Is 33 closer to 30 or 40? (30)
- Is 37 closer to 30 or 40? (40)
- Draw a number line on the board to illustrate the positions of the numbers.



- If we round off 33 to the nearest 10, we round it down to 30, since it is nearer to 30.
- We say *33 to the nearest 10 is 30*.
- If we round off 37 to the nearest 10, we round it up to 40, since it is nearer to 40.
- We say *37 to the nearest 10 is 40*.
- Learners need to understand that 35 is halfway between 30 and 40. We say that the nearest 10 to 45 is 40, because we round up when the number is halfway between two 10s.
- Do some more rounding examples with the class, discuss each time how to check whether to round up or down. *Round off to the nearest 10:*
  - 56 (60)
  - 72 (70)
  - 95 (100)
  - 101 (100)
  - 145 (150)
  - 138 (140)
  - 205 (210)
  - Etc.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 11: Working with tens – rounding off

Classwork

1. A vegetable garden has 10 rows of plants. Every row has the same number of plants. If there is a total of 30 plants, how many plants are in each row? (3)
2. Tony has 30 sweets. He eats 3 sweets every day. For how many days can he eat sweets? (10)
3. Round off to the nearest ten.
    a. 36 (40)
    b. 62 (60)
    c. 79 (80)
    d. 115 (120)
    e. 209 (210)

Homework

1. David sells bags with ten oranges in each bag. He has 40 oranges. How many bags can he fill? (4)
2. A school pool is 10 metres long. Luvuyo swims 6 laps. How far did he swim? (60 metres)
3. Round off to the nearest ten.
    a. 26 (30)
    b. 74 (70)
    c. 58 (60)
    d. 165 (170)
    e. 317 (320)

Lesson 12: Fives – Number patterns

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.6 Problem solving techniques 1.13 Addition and subtraction 1.16 Mental Mathematics

Lesson vocabulary: fives, multiples of five, number patterns, counting in fives

Prior knowledge

Learners should be have been taught how to:

- Copy, extend and describe simple number sequences to at least 200.
- Sequences should show counting forwards and backwards in 5s to at least 200.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any given number between 0 and 500. E.g. 402, 407, 412, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	14-__= 10	4	6.	__- 6 = 1	7
2.	__-1= 9	10	7.	15-__= 10	5
3.	16-__= 10	6	8.	__-2= 7	9
4.	__-5= 5	10	9.	11-__= 4	7
5.	10-__= 6	4	10.	13 - __ = 7	6

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 53a (p 120)

Concepts:

- Copy, extend and describe simple number sequences to at least 500.
- Sequences should show counting forwards and backwards in 5s to at least 500.

Remediation: Give the learners number lines and tell them to complete the intervals: 120 – 130, 260 – 270, 340 – 350 and 490 – 500. Tell them to show counting in 5s, by drawing hoops.

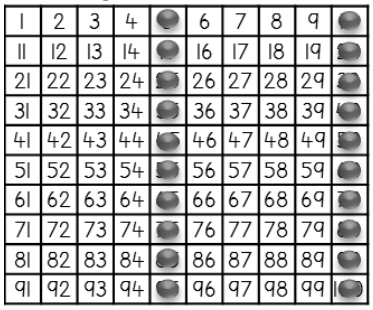
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion. Learners work in groups of 4.Give learners a 1 – 100 number board.

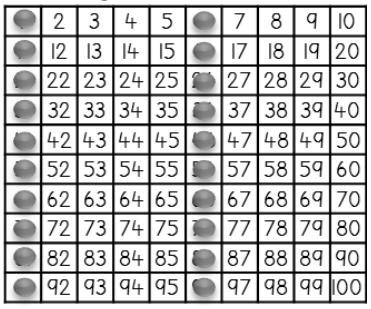
- Ask learners to count in 5s up to 100 and place counters on the multiples of 5 as they go along.
- Ask *What do you notice?* (A pattern of two vertical columns of counters, with numbers ending in 5 and 0).
- Now, take off the counters from the number board so that you can make another pattern.
- Ask the learners to place a counter on 1 and then count 5 blocks forwards and place the next counter on the grid. *What number will it land on?* (6) Continue with this pattern.
- *What do you notice?* (the same pattern [two columns of counters] with numbers ending in 1 and 6).
- Do the same starting with 2, 3 and 4.
- *Does the pattern remain the same if you count in 5s no matter where you start?*
- *Does it matter which number you start on?* (No, we still get two columns each time.)

(Here are illustrations of what the learners patterns with counters on the 1-100 board will look like.)

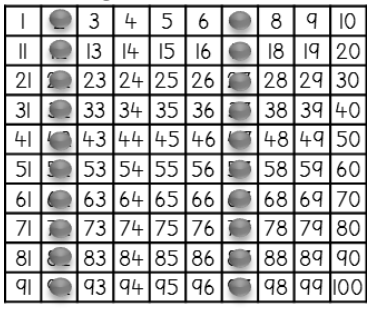
Counting in five from 5.



Counting in fives from 1.

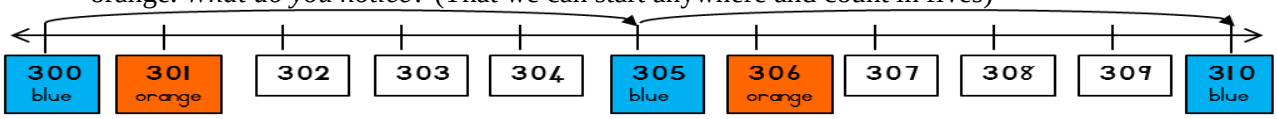


Counting in fives from 2



Activity 2: Give learners hand-out with blank number lines.

- Ask them to label in 1s from 300 – 320 on the first blank number line:
- Colour the first number300 blue. Count in 5s and colour all the numbers that you land on in blue as well.
- Colour the second numbers 301 orange. Count in 5s and colour all the numbers that you land on in orange. *What do you notice?* (That we can start anywhere and count in fives)



- Do the same with number lines labelled from 420-430 and 490-500.
- *What do you notice?* (That we can start anywhere and count in fives)
- ***Paste the sheet of number lines into your book.***
- *(Keep this sheet for lesson 14 where you will use more of the blank number lines).*

Activity 3: Learners work individually

- Write the following patterns on the board and then ask the learners to complete them with you.
- Extend:
  - 5, 10, 15, __, __, __ (20, 25, 30)
  - 220, 225, 230, __, __, __(235, 240, 245)
  - 331, 336, 341, __, __, __(346, 351, 356)
  - 407, 412, 417, __, __, __(422, 427, 432)
- Discuss how you work out what number comes next in order to extend the given sequence. (You look what is being added each time and then continue adding in the same way.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 12: Fives – Number patterns

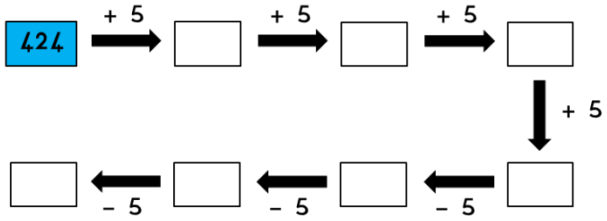
Classwork

1. Write the sequence of numbers made by adding 5, starting with 452.

451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480

(452, 457, 462, 467, 472, 477)

2. Complete the following:



(429, 434, 439, 444, 439, 434,429)

3. Extend:
   a. 125, 130, 135, ____, ____, ____. (140, 145, 150)
   b. 363, 368, 373, ____, ____, ____ . (378, 383, 388)

Homework

1. Extend:
   a. 5, 10, 15, 20, ____, ____, ____ . (25, 30, 35)
   b. 16, 21, 26, 31, ____, ____, ____ . (36, 41, 46)
   c. 105, 110, 115, ____, ____, ____. (120, 125, 130)
   d. 347, 352, 357, ____, ____, ____ . (362, 367, 372)

Lesson 13: Fives Multiplication and Division

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.14 Repeated addition leading to multiplication 1.15 Division 1.16 Mental Mathematics

Lesson vocabulary: Multiplication, multiply, total, divide, total, group, number sentence

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving repeated addition and multiplication with answers up to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any number between 0 and 500. E.g. 105, 110, 115,

Mental maths activity - 10 minutes

	Calculate the following:	Answer		Calculate the following:	Answer
1.	13 – 10 =	3	6.	14 – 10 =	4
2.	15 – 10 =	5	7.	17 – 10 =	7
3.	16 – 10 =	6	8.	12 – 10 =	2
4.	20 – 10 =	10	9.	10 – 10 =	0
5.	11 – 10 =	1	10.	18 – 10 =	8

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, multiplication table grid (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 53b(p 121)

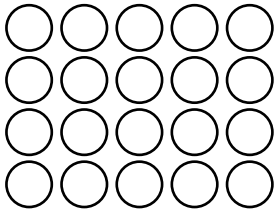
Concepts:

- Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75, using appropriate symbols x, =, □
- Multiply by 2, 4, 5, 10, and 3 to a total of 50.
- Divide numbers to 50 by 2, 4, 5, 10, 4

Remediation: Ask learners to make groups of 5 with their counters. This can be written using the following number sentences. Discuss what each of these sentences say.
5 + 5 + 5 + 5 + 5 + 5 = 30 (addition), 6 x 5 = 30 (multiplication), 30 ÷ 5 = 6 (division).
Make displays and discuss groupings for other numbers of counters, e.g. 12 counters, 16 counters, 32 counters.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Draw the array on the right on the board.



- Ask the learners.
- *How many counters are in each row?* (5)
- *Let us count all of the counters:* 5, 10, 15, 20, .
- *Let us write this using an addition number sentence:*
  5 + 5 + 5 + 5 = 20
- *A multiplication number sentence:*
  5 x 4 = 20 or 4 x 5 = 20
- *A division number sentence:*
  20 ÷ 5 = 4 or 20 ÷ 4 = 5.

Activity 2: Problem solving:

- My dad planted 5 fruit trees in a row. He planted 6 rows. How many fruit trees did he plant?
- *Let us write it as an addition number sentence*: 5 + 5 + 5 + 5 + 5 + 5 = ☐
- We can say there are 6 rows with 5 trees each. (Draw a picture if necessary.)
- Previously we said that 6 groups of 5 is the same as 6 x 5. So we can say 6 rows of 5 is the same as 6 x 5 = (30)
- Let us write it as a multiplication number sentence: 6 x 5 = ☐
- So he planted 30 trees. (5 + 5 + 5 + 5 + 5 + 5 = 30 OR 6 x 5 = 30)
- Make up other word problems that involve multiplication by five (depending on how much time you have).

Activity 3: Learners work in pairs. Use this activity for consolidation of the 5x tables.

- Give each group of learners a copy of the multiplication table grid.
- Reciting tables can be done. Learners do not have to know the tables off by heart in Grade 3 but they can start to spend time learning some of the multiples. It is very good for learners to know their tables well as they can use them when they do other calculations.
- Let learners show the following on the multiplication board one 5 is five, two 5s are 10 etc.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

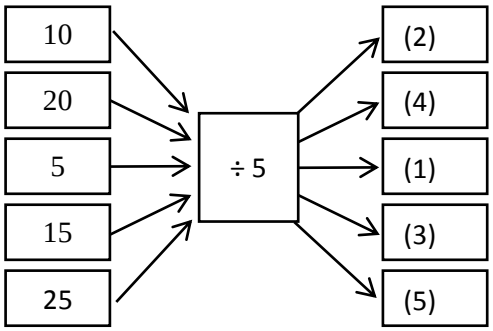
6. Reflection on lesson

Term 2 Lesson 13: Fives – Multiplication and division

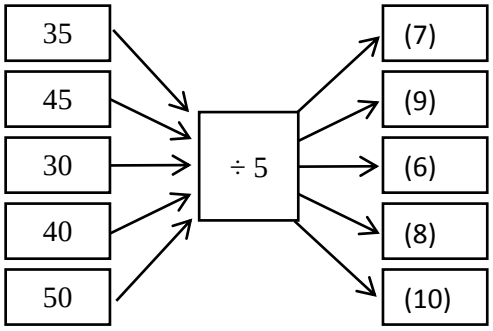
Classwork

1. Complete the following spider diagrams.

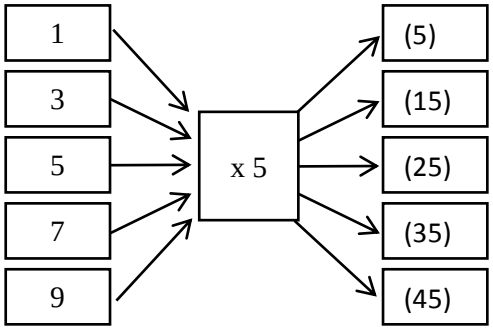
a.



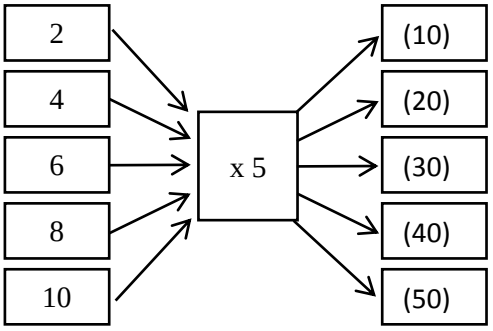
b.



c.

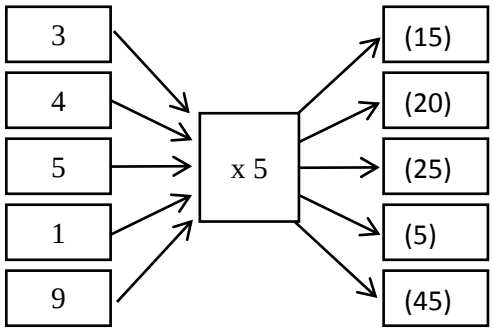


d.



Homework

Complete the following spider diagram.



Lesson 14: Twos – Number patterns

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.8 1.14 Repeated addition leading to multiplication 1.16 Mental Mathematics

Lesson vocabulary: Twos, multiples of twos, counting in twos

Prior knowledge

Learners should be have been taught how to:

- Copy, extend and describe simple number sequences to at least 200.
- Sequences should show counting forwards and backwards in 2s to at least 200.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any given multiple between 0 and 500. E.g. 400, 402, 406, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	.....- 2= 10	12	6.	.....- 2= 17	19
2.	.....- 2= 18	20	7.	.....- 2= 11	13
3.	.....- 2=13	15	8.	.....- 2= 14	16
4.	.....- 2=16	18	9.	.....- 2= 8	10
5.	.....- 2=15	17	10.	.....- 2=12	14

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 51a (p 116)

Concepts:

- Copy, extend and describe simple number sequences to at least 500.
- Sequences should show counting forwards and backwards in 2s to at least 500.

Remediation: Give the learners number lines and tell them to complete the intervals: 120 – 130, 260 – 270, 340 – 350 and 490 – 500. Ask them to show counting in 2s, by using hoops.
What will happen if I start on 121, 261, 341 and 491counting in 2s? (We will count on a different set of numbers/ on odd numbers).

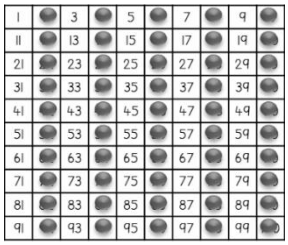
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion.

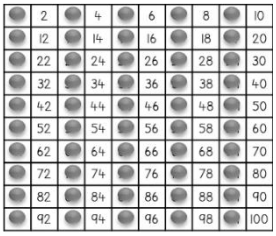
- Learners work in groups of 4.Give learners a 1 – 100 number board.
- Ask learners to count in 2s up to 100 and place counters on the multiples of 2 as they go along.
- *What do you notice?*(A pattern of vertical columns, one apart from each other, with counters on every second column. All the even numbers are covered).
- Ask them to remove the counters from the number board, so that you can count starting from a different number.
- Ask the learners to place a counter on 1 and then count 2 blocks forwards from there and place the next counter on every second number.
- *What do you notice?*(A pattern of vertical columns, one apart from each other, starting with the first column. All the odd numbers have counters on them).

(Here are illustrations of what the learners patterns with counters on the 1-100 board will look like.)

Count in twos from 2.



Count in twos from 1



Activity 2: Give learners hand-outs with blank number lines.

Ask learners to refer again to the hand-out with blank number lines (some were used in Lesson 12).

- Ask them to label in 1s from 480 – 500 on the next blank number line.
- Ask them to colour in the first number, 480 blue. Count in 2s and colour these numbers blue as well.
- Now start again, using another colour. Colour 481in orange. Count in 2s and colour these numbers orange.
- *What do you notice?* (They follow the same sequence of numbers as the patterns on the numberboards. We can also count in 2s on a number line.)
- *Do the same counting in 2s, using the next two number lines for different number intervals.* Use the intervals 210 – 230 and 350 – 370.

Activity 3: Learners work individually

- Write the following patterns on the board and then ask the learners to complete them with you.
- Extend:
  - 2, 4, 6, __, __, __ (8, 10, 12)
  - 220, 222, 234, __, __, __(226, 228, 230)
  - 331, 333, 335, __, __, __(337, 339, 341)
  - 407, 409, 411, __, __, __(413, 415, 417)
- Discuss how you work out what number comes next in order to extend the given sequence. (You look what is being added each time and then continue adding in the same way.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 14: Twos – Number patterns

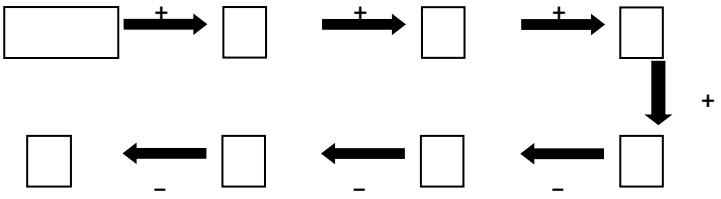
Classwork

1. Write the sequence of numbers made by adding 2, starting with 401.

401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	440
431	432	433	434	435	436	437	438	439	450

(401, 403, 405, 407, 409,
411, 413, 415, 417, 419,
421, 423, 425, 427, 429,
431, 433, 435, 437, 439)

2. Complete the following by adding or subtracting two.



(321, 323, 325, 327, 325,
321, 319)

3. Extend:
   a. 122, 124, 126, ____, ____, ____. (128, 130, 132)
   b. 353, 355, 357, ____, ____, ____ . (359, 361, 363)

Homework

1. Extend:
   a. 6, 8, 10, ____, ____, ____ . (12, 14, 16)
   b. 16, 18, 20, ____, ____, ____ . (22, 24, 25)
   c. 105, 107, 109, ____, ____, ____. (111, 113, 115)
   d. 448, 450, 452, ____, ____, ____ . (454. 456, 458)

Lesson 15: Twos – Multiplication and division

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.14 Repeated addition leading to multiplication 1.16 Mental Mathematics

Lesson vocabulary: Twos, multiples of two, counting in twos, addition number sentence, multiplication number sentence, repeated addition

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving repeated addition and multiplication with answers up to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

Count forwards and backwards in 2s from any number between 0 and 500. E.g. 102, 104, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	---- + 12=20	8	6.	---- + 10=20	10
2.	---- + 1= 20	19	7.	---- + 17=20	3
3.	---- + 12=20	8	8.	---- + 13=20	7
4.	---- + 3= 20	17	9.	---- + 16=20	4
5.	---- + 20=20	0	10.	---- + 8 =20	12

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, multiplication table grid (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 51b (p 117)

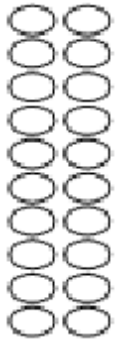
Concepts:

- Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75, using appropriate symbols x, =, □
- Multiply by 2, 4, 5, 10, and 3 to a total of 50.

Remediation: Ask learners to make 6 groups of 2 with their counters. Then write this as an addition Number sentence: (2 + 2 + 2 + 2 + 2 + 2 = 12) and as a multiplication number sentence: (6 x 2 = 12). Do this for other numbers of counters, grouped in 2s.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Draw the array on the right on the board.

• Learners can pack the counters out on a desk. • *How many counters are in each row?* (2) • Let us count all of the counters in 2s: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20. • *Let us write an addition number sentence:* 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 = 20 • *A multiplication number sentence?* 2 x 10 = 20 or 10 x 2 = 20 • The inverse of multiplication is division. • *What would a division number sentence look like?* (20 ÷ 2 = 10).	

Activity 2: Problem solving

- A vegetable garden has 4 rows of plants. Each row has 2 plants. How many plants are there in the garden?
- *Let us write it as an addition number sentence:* (2 + 2 + 2 + 2 = ☐)
- We can count: 2, 4, 6, 8 …plants
- We can say there are 4 rows with 2 plants in each row. Draw a picture if necessary.
- Previously we said that 4 groups of 2 is the same as 4 x 2. So we can say 4 rows of 2 is the same as 4 x 2 =
- *Let us write it as a multiplication number sentence:* 4 x 2 = ☐
- So he planted 8 plants. (2 + 2 + 2 + 2 = 8 or 4 x 2 = 8)
- Make up other word problems that involve multiplication by two (depending on how much time you have).

Activity 3:Learners work in pairs. Use this activity for consolidation of the 2x tables.

- Chanting of the tables can be done. Learners do not have to know the tables off by heart in Grade 3 but they can start to spend time learning some of the multiples.
- The focus is on the language, which allows a mental image for grouping. (E.g. one 2 is two, two 2s are 4 etc.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

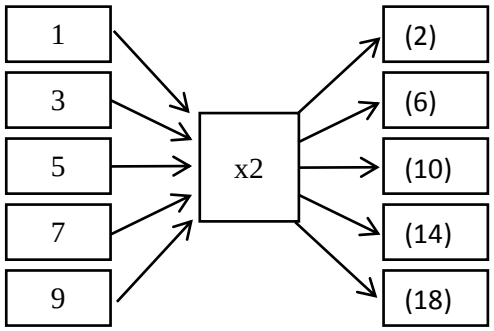
6. Reflection on lesson

Term 2 Lesson 15: Twos – multiplication and division

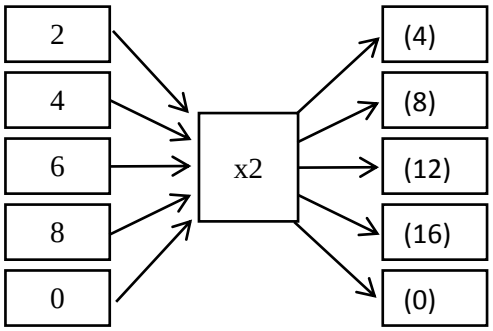
Classwork

1. Complete the spider diagrams.

a.



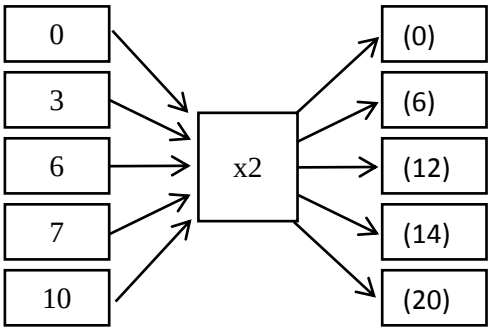
b.



2. The Grade R teacher has to order tyres for 12 bicycles. If each bicycle needs two tyres, how many tyres must the Grade R teacher order? (12 x 2 = 24)
3. If two learners fit into a car how many cars are needed to transport 24 learners? (24 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 - 2 = 0, 12 cars.)

Homework

Complete the spider diagram:



Week 4

Lesson 16: Threes – Number patterns

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.6 Problem solving techniques 1.13 Addition and subtraction 1.16 Mental Mathematics

Lesson vocabulary: Threes, multiples of three, number pattern

Prior knowledge
Learners should be have been taught how to:

- Copy, extend and describe simple number sequences to at least 200.
- Sequences should show counting forwards and backwards in 3s to at least 200.

Assessment
Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 3s from any given number between 0 and 500. E.g. 303, 306, 309,

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	10+__=12	2	6.	20 +__=20	0
2.	19+__= 20	1	7.	17+__= 20	3
3.	11+__= 14	3	8.	5+__= 12	7
4.	15+__= 17	2	9.	3+__= 15	12
5.	10+__= 20	10	10.	13+__= 16	3

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 27 (pgs 62 & 63)

Concepts:

- Copy, extend and describe simple number sequences to at least 500.
- Sequences should show counting forwards and backwards in 3s to at least 500.

Remediation: Give learners sets of about 30 counters and allow them to group the counters into groups of 3. Ask the learners to count in threes all of the counters that they have grouped. Give the learners number lines and tell them to complete the intervals: 120 – 130, 260 – 270, 340 – 350 and 490 – 500. Ask them to show counting in 3s, by using hoops.

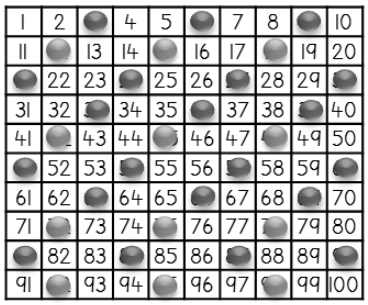
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion.
Learners work in groups of 4.Give learners a 1 – 100 number board.

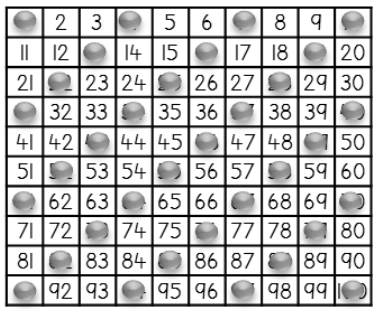
- Ask learners to count in 3s up to 100 and place counters on the multiples of 3 as they go along.
- *What pattern do you notice?*(Diagonals of counters run across the number board.)
- Ask them to remove the counters from the number board, so that you can count starting from a different number.
- Ask the learners to place a counter on 1 and then count 3 blocks forwards and place the next counter on the grid. *What number will it land on?* (4) Continue with this pattern.
- *What do you notice?*(The same pattern (diagonals of counters) with numbers ending in 1 and 6).
- Do the same activity starting on 2.
- *What is the difference in the patterns on the number boards when you count in 2s and when you count in 3s?*(When we count in twos the numbers are on a straight (vertical) line but when we count in threes the numbers are on the diagonals.)

(Here are illustrations of what the learners patterns with counters on the 1-100 board will look like.)

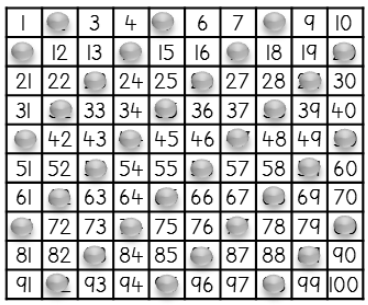
Start from 3 and count in threes



Start from 1 and count in threes



Start from 2 and count in threes



Activity 2: Give learners hand-out with blank number lines.
Ask learners to refer again to the hand-out with blank number lines (some were used in Lesson 12 and 14).

- Ask them to label in 1s from 360 – 380 on the next blank number line.
- Colour the first number 360 blue. Count in 3s and colour these numbers blue as well.
- Colour the second numbers 361 orange. Count in 3s and colour these numbers orange. What do you notice? (They follow the same sequence of numbers as the patterns on the number boards. We can count in 3s on a number line.)
- Do the same with number lines from 300 to 320.

Activity 3: Learners work individually

- Write the following patterns on the board and then ask the learners to complete them with you.
- Extend:
  - 3, 6, 9, __, __, __ (12, 15, 18)
  - 220, 223, 226, __, __, __(229, 232, 235)
  - 333, 336, 339, __, __, __(342, 345, 348)
  - 408, 411, 414, __, __, __(417, 420, 423)
- Discuss how you work out what number comes next in order to extend the given sequence. (You look what is being added each time and then continue adding in the same way.)

4. Classwork activity – 25 minutes (See next page)

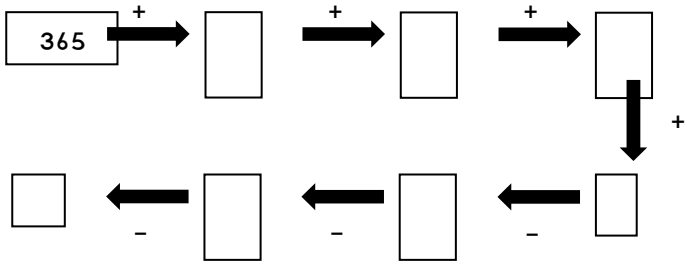
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 16: Threes – Number patterns

Classwork

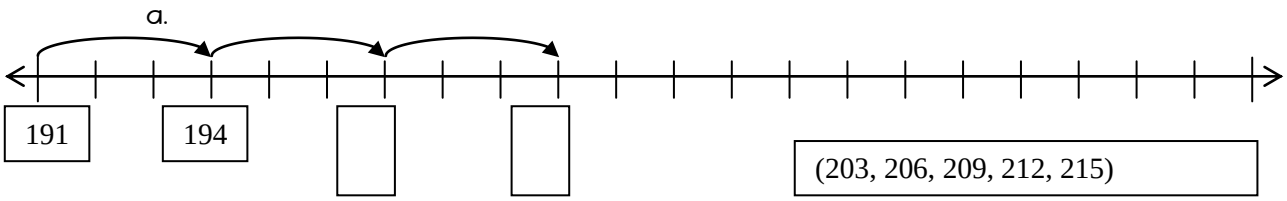
1. Write the sequence of numbers made by adding or subtracting 3, starting with 365.



(368, 371, 374, 377,374, 371, 368)

2. Copy these number lines. Count in threes and write down the remaining numbers.

a.



(203, 206, 209, 212, 215)

3. Extend:
   a. 423, 426, 429, ____, ____, ____. (432, 435, 438)
   b. 211, 214, 217, ____, ____, ____. (220, 223, 226)

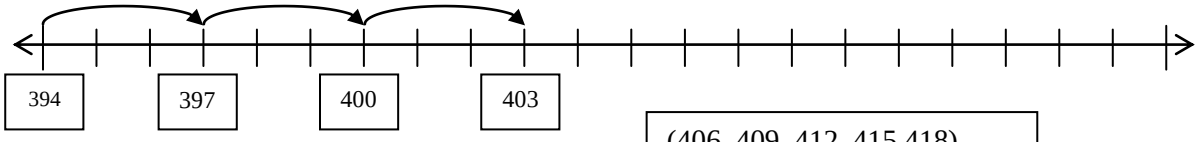
Homework

1. Complete the following:

454 (+3) ____ (+3) ____ (+3) ____ (+3) ____ (-3) ____ (-3) ____ (-3) ____.

(457, 460, 463, 466, 463, 460, 457)

2.



(406, 409, 412, 415,418)

3. Extend: 312, 315, 318, ____, ____, ____. (321, 324, 327)

Lesson 17: Threes – Multiplication and division

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.5 Division 1.8, 1.14 Repeated addition leading to multiplication 1.16 Mental Mathematics

Key words: Threes, multiples of threes, addition number sentence, multiplication number sentence

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving repeated addition and multiplication and sharing with answers up to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 3s from any number between 0 and 500. E.g. 103, 106, 109, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	12+3 =	15	6.	.... – 1 =10	11
2.	19 – 6 =	13	7.	20+.....=20	0
3.	15+....= 20	5	8.	10 – ....= 7	3
4.	18 – ...=10	8	9.	....+1 = 12	11
5.	.....+2= 20	18	10.	.... – 5 = 0	5

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, multiplication table grid (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 55a (Page 124).

Concepts:

- Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75, using appropriate symbols x, =, □
- Multiply by2, 4, 5, 10, and 3 to a total of 50.

Remediation: Ask learners to make six groups of 3 with their counters. Write an addition number sentence: (3 + 3 + 3 + 3 + 3 + 3 = 18.) Write a multiplication number sentence: (6 x 3 = 18).

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Draw the array on the right on the board.

- Learners pack out counters to make the array on the right.
- *How many counters are there in each row?* (3)
- *How many rows are there?* (10)
- *Let us count how many counters there are altogether in 3s:*
  3, 6, 9, 12, 15, 18, 21, 24, 27, 30 (30)
- *Write this as an addition number sentence:*
  (3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 = 30).
- *Write this using multiplication number sentences:*
  (3 x 10 = 30 / 10 x 3 = 30)
- *Write a division number sentence that fits with this array:* (30 ÷ 3 = 10).

Activity 2: Problem solving:

- A vegetable garden has 4 rows of plants. Each row has 3 plants. How many plants are there in the garden?
- Let us write it as an addition number sentence: (3 + 3 + 3 + 3 = ☐)
- We can count in threes by counting the plants in all of the rows(3, 6, 9, 12) plants
- We can say there are 4 rows with 3 plants in each row. Draw a picture if necessary.
- Previously we said that 4 groups of 3 is the same as 4 x 3. So we can say 4 rows of 3 is the same as 4 x 3 = 12
- Let us write it as a multiplication number sentence: 4 x 3 = ☐
- So there are 12 plants in the garden. (3 + 3 + 3 + 3 = 12 or 4 x 3 = 12)
- Make up other word problems that involve multiplication by 3 (depending on how much time you have).

Activity 3: Learners work in pairs. Use this activity for consolidation of the 3x tables.

- Chanting of the tables can be done. Learners do not have to know the tables off by heart in Grade 3 but they can start to spend time learning some of the multiples.
- The focus is on the language, which allows a mental image for grouping. (E.g. one 3 is three, two 3s are six etc.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

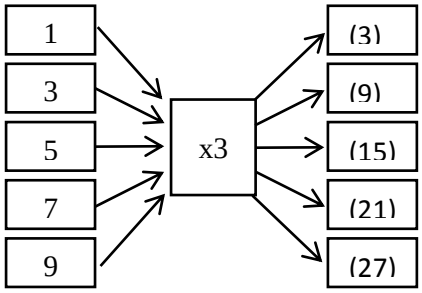
6. Reflection on lesson

Term 2 Lesson 17: Threes – Multiplication and division

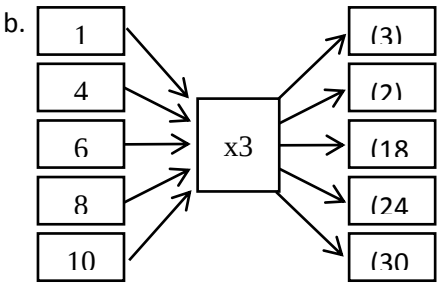
Classwork

1. Complete the spider diagrams.

a.



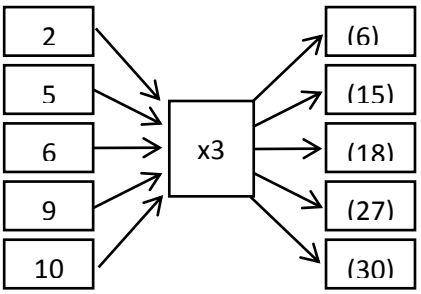
b.



2. The nursery school teacher has to order tyres for 9 tricycles. If each tricycle needs three tyres, how many tyres must the nursery school teacher order? (9 x 3 = 27)
3. Marlene has 30 sweets. This is twice as many as Jacob has. How many sweets does Jacob have? (30 ÷ 2 = 15)

Homework

Complete the spider diagram.



Lesson 18: Fours – Number patterns

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.6 Problem solving techniques 1.13 Addition and subtraction 1.16 Mental Mathematics

Lesson vocabulary: Fours, multiples of four, number patterns

Prior knowledge

Learners should be have been taught how to:

- Copy, extend and describe simple number sequences to at least 200.
- Sequences should show counting forwards and backwards in 4s to at least 200.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 3s from any given number between 0 and 500. E.g. 401, 405, 409, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	14-__= 9	5	6.	13+__= 14	1
2.	16+__= 18	2	7.	9-__= 7	2
3.	12-__= 5	7	8.	14+__= 6	8
4.	11+__= 15	4	9.	15-__= 8	7
5.	10-__= 6	4	10.	7+__= 14	7

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, number boards 1-100 (see Term 1 printable), number line blanks (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 28 (pgs 6 4& 65)

Concepts:

- Copy, extend and describe simple number sequences to at least 500.
- Sequences should show counting forwards and backwards in 4s to at least 500.

Remediation: Give the learners number lines and ask them to complete the intervals: 120 – 130, 260 – 270, 340 – 350 and 490 – 500. Ask them to show counting in 4s, by using hoops. *What will happen if I start on 121, 261, 341, and 491counting in 4s?*

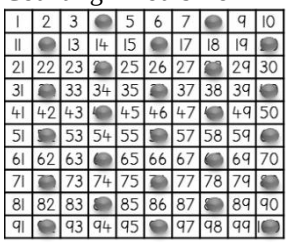
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion.
Learners work in groups of 4.Give learners a 1 – 100 number board.

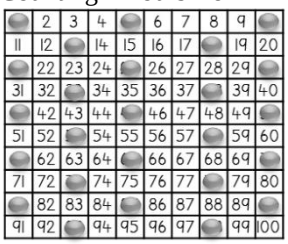
- Ask them to place counters on the 4s. Let them count forwards and backwards in 4s up to 100.
- Ask them to remove the counters from the number board, so that you can count starting from a different number.
- Ask the learners to place a counter on 1 and then count from 1 in 4s up to 100. Let them count forwards and backwards in 3s from 1. Do the same activity starting on 2 and 3. *Does the pattern on the board stay the same when you count in 2s?*

(Here are illustrations of what the learners patterns with counters on the 1-100 board will look like.)

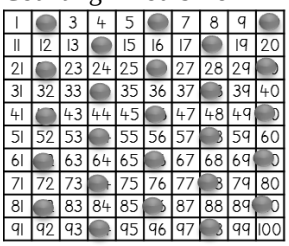
Counting in fours from 4



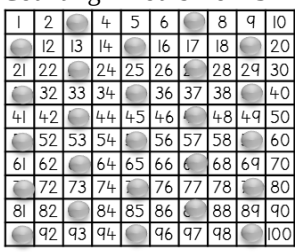
Counting in fours from 1



Counting in fours from 2



Counting in fours from 3



Activity 2: Learners work in pairs. Give learners hand-out with blank number lines.
Ask learners to refer again to the hand-out with blank number lines (some were used in Lesson 12, 14 and 16).

- Colour the first number, 120, blue. Count in 4s and colour these numbers blue as well.
- Colour the second number, 121,orange. Count in 4s and colour these numbers orange. What do you notice? (They follow the same sequence of numbers as the patterns on the number boards. We can count in 3s on a number line.)
- Do the same with number lines from 410to 430.

Activity 3: Learners work individually

- Write the following patterns on the board and then ask the learners to complete them with you.
- Extend:
  - 4, 8, 12, __, __, __ (16, 20 24)
  - 320, 324, 328, __, __, __(332, 336, 340)
  - 331, 335, 339, __, __, __(343, 347, 351)
  - 402, 406, 410, __, __, __(414, 418, 422)
- Discuss how you work out what number comes next in order to extend the given sequence. (You look what is being added each time and then continue adding in the same way.)

Note: This classroom activity includes patterns of twos, threes, fours, fives and tens.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 18: Fours – Number patterns

Classwork

1. What is the next number in this pattern?
    a. 314, 318, 322, …(326 – pattern of 4s)
    b. 151, 156, 161, …(166 – pattern of 5s)
    c. 133, 136, 139, …(142 – pattern of 3s)
    d. 228, 230, 232, …(234 – pattern of 2s)
    e. 373, 383, 393, … (403 – pattern of 10s)
    f. 243, 241, 239, … (237 – pattern of 2s)
    g. 161, 156, 151, … (146 – pattern of 5s)
    h. 218, 208, 198, … (188 – pattern of 10s)
    i. 152, 148, 144, … (140 – pattern of 4s)
    j. 325, 322, 319, … (316 – pattern of 3s)
2. What is the difference between the patterns in the column on the left and the patterns in the column on the right on the right?

144	253
148	249
152	245
156	241
160	237

(We are counting forwards by 4 on the left and backwards by 4 on the right.)

Homework

1. Draw and complete a number line. Fill in the numbers then use hoops to show counting in multiples of 4: 394, 398, 402, 406, _____, _____, _____, _____ (410, 414, 418, 422)
2. Complete the following: 454 (+4) _____ (+4) _____ (+4) _____ (+4) _____(-4) _____ (-4) _____(-4) _____ . (458, 462, 466, 470, 466, 462, 458)

Lesson 19: Fours – Multiplication and division

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.5 Division 1.14 Repeated addition leading to multiplication 1.16 Mental Mathematics

Lesson vocabulary: Fours, multiples of four, addition number sentence, multiplication number sentence

Prior knowledge

Learners should be have been taught how to:

- Solve word problems in context and explain own solution to problems involving repeated addition and multiplication with answers up to 50.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 4s from any number between 0 and 500. E.g. 104, 108, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	Half of 12	6	6.	Double 9	18
2.	Double 12	24	7.	3+3+3=	9
3.	Half of 6	3	8.	3+3+3+3+3=	12
4.	Double 6	12	9.	Three more than fifteen	18
5.	Half of 9	4 ½	10.	Three less than twelve	9

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, multiplication table grid (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 55 (Page 125)

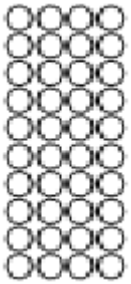
Concepts:

- Solve number problems in context and explain own solution to problems involving multiplication with answers up to 75, using appropriate symbols x, =, □
- Multiply 2, 4, 5, 10, and 3 to a total of 50.

Remediation: Ask learners to make 6 groups of 4 with their counters. Then write this as an addition Number sentence (4 + 4 + 4 + 4 + 4 + 4 = 24) and a multiplication number sentence (:6 x 4 = 24.)

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Draw the array on the right on the board.



- Learners pack the counters to make this array on their desks.
- *How many counters are in each row?*' (4)
- Let us count: (4, 8, 12, 16, 20, 24, 28, 32, 36, 40).
- *Let us write an addition number sentence?*
  (4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 40).
- *What is a shorter way to write this?* (As a multiplication number sentence)
- *What will a multiplication number sentence look like?*
  (4 x 10 = 40 or 10 x 4 = 40)
- The inverse of multiplication is division. *What would a division number sentence look like?* (40 ÷ 4 = 10).

Activity 2: Problem solving.

- A vegetable garden has 5 rows of plants. Each row has 4 plants. How many plants are there in the garden?
- Let us write it as an addition number sentence: 4 + 4 + 4 + 4 +4 = □
- We can count: 4, 8, 12, 16, 20 plants
- We can say there are 5 rows with 4 plants each. (Draw a picture if necessary.)
- Previously we said that 5 groups of 4 is the same as 5 x 4. So we can say 5 rows of 4 is the same as 5 x 4 = (20). Let us write it as a multiplication number sentence: 5 x 4 = □
- So there are 20 plants in the garden. (4 + 4 + 4 + 4 +4 = 20 or 5 x 4 = 20)
- Make up other word problems that involve multiplication by 4 (depending on how much time you have).

Activity 3: Learners work in pairs. Use this activity for consolidation of the 4x tables.

- Chanting of the tables can be done. Learners do not have to know the tables off by heart in Grade 3 but they can start to spend time learning some of the multiples.
- The focus is on the language, which allows a mental image for grouping.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

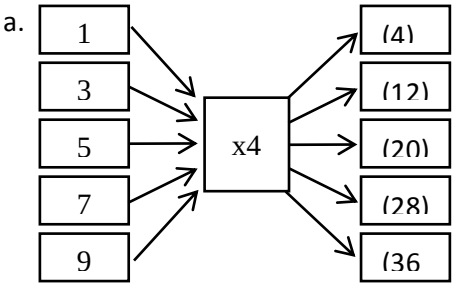
6. Reflection on lesson

Term 2 Lesson 19: Fours – Multiplication and division

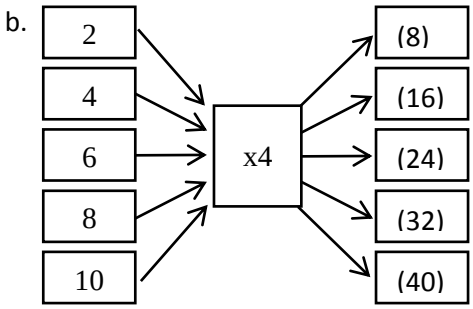
Classwork

1. Complete the spider diagrams.

a.



b.



2. The taxi owner has to order tyres for 7 taxis. If each taxi needs four tyres, how many tyres must the taxi owner order? (7 x 4 = 28)
3. How many cars are needed to transport 24 learners, if four learners fit into a car? (6 cars)

Homework

1. Tony has 40 sweets. He eats four sweets every day. For how many days can eat sweets? (40 divided by 4 = 10)

Lesson 20: Geometric patterns

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 2.1 Geometric patterns

Lesson vocabulary: Geometric patterns, physical objects, predictable, increasing patterns.

Prior knowledge

Learners should be have been taught how to:

- Identify, describe in words and copy geometric patterns in nature, from modern everyday life and from our cultural heritage.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any given number between 0 and 500. E.g. 301, 306, 311, …

Mental maths activity - 10 minutes

	Answer the following:	**Answer**		Answer the following:	**Answer**
1.	What are 2 more than 444?	446	6.	What are 1 less than 154?	153
2.	What are 5 less than 65?	60	7.	What are 5 more than 487?	492
3.	What are 6 more than 98?	104	8.	What are 3 less than 458?	455
4.	What are 10 less than 154?	144	9.	What are 1 more than 78?	79
5.	What are 3 more than 111?	114	10.	What are 2 less than 186?	184

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Shape cut-outs (see printables).

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

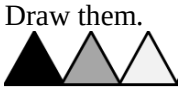
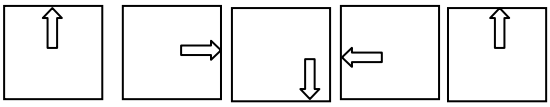
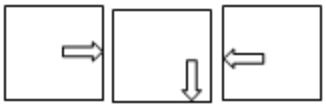
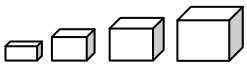
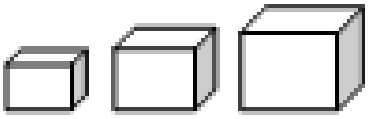
- Copy, extend and describe in words, and create own simple patterns made with physical objects and drawings of lines, shapes or objects.
- The range of patterns are simple patterns in which shapes or groups of shapes are repeated in exactly the same way and patterns where the number or size of shapes in each stage changes in a predictable way, i.e. regular increasing patterns.

Use geometric pattern cards and strips like the ones below. Show learners one card/pattern at a time. Ask learners to describe the pattern, extend the pattern and draw their own patterns.

Remediation: Use shape cut-outs to make patterns. Show the first steps of the pattern. Tell the learners to copy this pattern using their cards. Then learners should extend the pattern. Learners now copy it using their shape cut-outs. Do this with several different patterns of shapes.

Enrichment: See Enrichment Activity Cards

Activity 1: Draw the patterns on the board in preparation for this lesson.

Type of pattern and example	Questions or Instructions to learners
Patterns with one shape/object, but the colours of the shape/object change in a regular way. 	Describe the pattern. (They are all triangles- black, grey, white, black, grey, white....) What will the next three shapes look like? (black, grey, white triangles) Draw them.  Make your own pattern with a different shape and your own colours.
Patterns where the position of the shape/object changes Example 1:  Example 2: 	Describe the pattern. Example 1 – (Triangles in pairs where the one is the symmetrical image of the other.) The next three shapes will look like this:  Example 2 – (A square with an arrow inside. The arrow points top, right, down, left, top) What will the next three shapes look like? Draw them.  Make your own pattern with a different shape and your own colours.
Patterns with a single kind of shape, that increases or decreases in size. 	Describe the pattern. (The pattern is made of cube blocks that get bigger and bigger.) What will the next three shapes look like? Draw them.  Make your own pattern with a different shape and your own colours.

Activity 2: Learners work in groups. Use the shape cut-outs.

- Learners should each make a pattern using some of the cut our shapes on their desks.
- Groups discuss each of the patterns together – explain how the pattern grows.
- Some group members can present their pattern to the whole class. (Depending on how much time is available.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 20: Geometric patterns

Classwork

1. Draw a geometric pattern and describe your pattern:
    a. Use triangles. (Answers will vary e.g. ◺◿◺◿)
    b. Use squares. (Answers will vary e.g. □□□□)
    c. Use circles. (Answers will vary using circles of different sizes).
2. Draw a geometric pattern using triangles, squares and circles. Describe your pattern. (Answers will vary.)

Homework

1. Draw a geometric pattern and describe your pattern:
    a. Use rectangles. (Answers will vary.)
    b. Use triangles and circles. (Answers will vary.)
2. Cut and paste pictures of shapes that make a pattern. Describe the pattern.

Week 5

Lesson 21: Sharing leading to fractions

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.10 Sharing leading to division 1.16 Mental Mathematics

Lesson vocabulary: Equal sharing, grouping, fraction

Prior knowledge
Learners should be have been taught how to:
- Use and name fractions in familiar contexts including halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form and write fractions as 1 half, 2 thirds.

Assessment
Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 100s between 0 and 1 000. E.g. 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	3 + 17 =	20	6.	0 + 20 =	20
2.	5 + 12 =	17	7.	4 + 10 =	14
3.	6 + 11 =	17	8.	7 + 11 =	18
4.	1 + 19 =	20	9.	9 + 10 =	19
5.	2 + 12 =	14	10.	10 + 1 =	11

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Unifix blocks, counters, scrap paper.

DBE workbook activities relevant to this lesson:

- DBE Worksheet 57a (Page 128).

Concepts:

- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 75 with answers that include unitary and non-unitary fractions e.g. half, quarter, three quarters, two fifths.

Remediation: Do the same with: 5 chocolates shared equally amongst 4 children (one and one quarter each) and 6 chocolates shared equally amongst 5 children (one and one fifth each). (Do this using drawings and unifix each time.)

Enrichment: See Enrichment Activity Cards

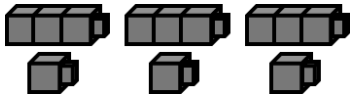
Activity 1: Learners work in pairs.
Do these activities practically using scrap paper:

- Ask the learners how we can share two chocolate bars equally between 4 friends.
- Give each pair of learners two pieces of scrap paper to represent the chocolates.
- Draw shapes on the board to represent the chocolates.
- What fraction of the chocolate bars did each learner get? (one half)

Activity 2: Learners work in groups.

- Give each group of learners some unifix blocks.
- Ask them to make 4 chocolates bars using the unifix cubes. (Each chocolate should be made using 3 blocks.)

- Ask the learners to share the chocolates amongst three children.
- What fraction of the chocolate will each child get? (one and one third)



- Discuss the answer – are there different ways of breaking up the chocolates to share it out? (Yes – you could break up all of the chocolates and share the pieces; each child will get four small pieces which is equal to one and one third as well.)

Activity 3: Learners work in groups.

- Give each group of learners some counters.
- In their groups, learners should find:
    - Two fifths of 15 counters. (one fifth is 3 counters and so two fifths is 6 counters.)
    - Three quarters of 8 counters. (one quarter is 2 and so three quarters is 6 counters.)
    - 3 fifths of 35 counters. (one fifth is 7 counters and so 3 fifths is 21 counters.)
- Discuss the methods learners used to find the fraction parts.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 21: Sharing leading to fractions

Classwork

Draw pictures to showyour answers.

1. Show one quarter of 20. (5)
2. Show three quarters of 20. (15)
3. Find one quarter of 20 sweets. (5)
4. Grandmother gives Kiki R12. Kiki wants to save a third of the money. How much money should she save? (R4)
5. Share 8 chocolate bars amongst 3 friends so that they all get the same amount of chocolate and there is nothing left over. (2 and two thirds)
6. I have 20 balloons at my party. Three quarters of them popped. How many balloons do I have left over? (5)

Homework

Draw pictures to show your answers.

1. Show one fifth of 25. (5)
2. Show two fifths of 25. (10)
3. Six sweets will make up what fraction of 24 sweets? (one quarter)
4. Share 50 Smarties equally between 10 children. What fraction will each child get? (one fifth)

Lesson 22: Fractions

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.10 Sharing leading to division 1.16 Mental Mathematics

Lesson vocabulary: Equal sharing, grouping, fractions

Prior knowledge

Learners should be have been taught how to:

- Use and name fractions in familiar contexts including halves, quarters, thirds and fifths.
- Recognise fractions in diagrammatic form and write fractions as 1 half, 2 thirds.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 50s between 0 and 500. E.g. 50, 100, 150, 200, 250, 300, 350, 400, 450, 500

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	12 – 5 =	7	6.	13 – 8 =	5
2.	14 – 6 =	8	7.	16 – 7 =	9
3.	15 – 8 =	7	8.	18 – 10 =	8
4.	11 – 3 =	8	9.	19 – 9 =	10
5.	10 – 5 =	5	10.	10 – 0 =	10

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Counters, Cuisenaire rods (if you have them).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 57b (Page129)
- DBE Worksheet 59 (Page 132)

Concepts:

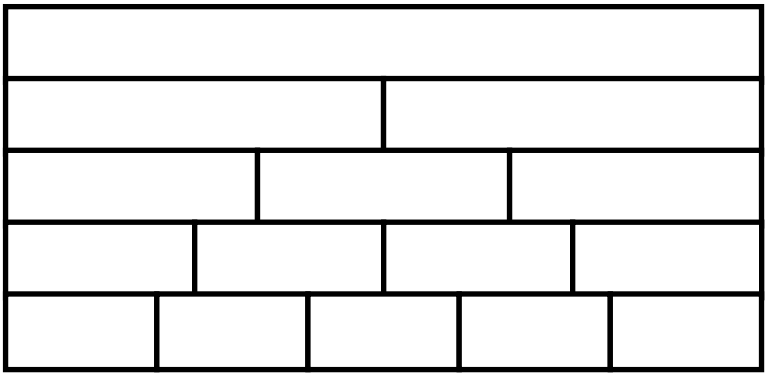
- Solve and explain solutions to practical problems that involve equal sharing and grouping up to 75 with answers that include unitary and non-unitary fractions e.g. half, quarter, three quarters, two fifths.

Remediation: Give the learners fraction strips or Cuisenaire rods. Ask them to put down the large strips. (This is a whole). Ask the learners to place two equal strips below the whole that are the same length. (1 whole is the same as two halves) Do the same with: 3 strips – one whole is the same as three thirds. 4 strips – one whole is the same as four quarters. 5 strips – one whole is the same as five fifths. Use groups of counters to find fraction parts as well. (E.g. one quarter of four counters = 1 counter; one quarter of 12 counters = 3 counters etc. *How do I find quarters? I take my whole and divide it up into four parts of equal size.*)

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Draw this fraction wall on the board (showing halves, thirds, quarters and fifths).

- *(If you have Cuisenaire rods, lay out a mat of rods to show this fraction wall, using the blocks.)*
- Write the word names of the fraction parts into the fraction wall with the help of your learners.



- *How many halves/thirds/quarters/fifths equal a whole?*(discuss each one separately- 2,3,4,5)
- *How many quarters in one half? (2)*
- *Which is bigger – one half or two fifths?* (one half)
- *Which is bigger – one half or two thirds?* (two thirds)
- *Which is bigger – two thirds or three quarters?*(three quarters)
- Ask the learners to compare other pairs of fractions – they make up a sentence such as: *One half is equal to two quarters...*

Activity 2: Learners work in groups of four

Give each group 30 counters. Ask them to find the following fraction parts using the counters:

- *What is one fifth of 30?* (6)
- *What is two fifths of 30?* (12)
- *What is one quarter of 28?* (7)
- *What is three quarters of 28?* (21)
- *What is one third of 30?* (10)
- *What is two thirds of 30?* (20)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 22: Fractions

Classwork

1. How many quarters in one half? (two)
2. Which is bigger – two thirds or one half? (two thirds)
3. Which is bigger – one half or three fifths? (three fifths)
4. What is one quarter of 40? (10)
5. What is three quarters of 40? (30)
6. What is one third of 75? (25)
7. What is two thirds of 75? (50)

Homework

1. How many quarters in one? (four)
2. Which is bigger – one third or one half? (one half)
3. What is one quarter of 20? (5)
4. What is two thirds of 30? (20)

Lesson 23: Money - Value of money

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.11 Money 1.16 Mental Mathematics

Lesson vocabulary: Money, coins, bank notes, Rands, cents, totals, value, change

Prior knowledge

Learners should be have been taught how to:

- Recognise and identify the South African coins 5c, 10c, 20c, 50c, R1, R2, R5 and bank notes R10, R20 and R50.
- Solve money problems involving totals and change in cents up to 90c and rand to R99.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any given number between 0 and 500. E.g. 402, 407, 412, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	12 - __ = 4	8	6.	14 - __ = 6	8
2.	15 - __ = 10	5	7.	11 - __ = 10	1
3.	18 - __ = 9	9	8.	16 - __ = 13	3
4.	13 - __ = 6	7	9.	19 - __ = 12	7
5.	10 - __ = 6	4	10.	20 - __ = 11	9

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Money cut-outs (coins and notes) (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 53b (p121)

Concepts:

- Recognise and identify the South African coins and bank notes.
- Solve money problems involving totals and change in rands or cents.

Remediation: Set up a simple shop in the class with items priced at amounts within the children's number range e.g. R5,50, R2,20, R3.,55. Learners take turns to be the shopkeeper. Each time a sale is made both the shopkeeper and the customer need to calculate the total and the change. .

Enrichment: See Enrichment Activity Cards

Activity 1: Learners work in groups of 4.

- Ask learners to think about all the ways in which they can make up R300 using only bank notes and to write them down? *How do you know whether you have all the solutions?*
- If learners struggle to do this activity abstractly allow them to use cut-out notes.

Activity 2: Learners work in pairs

- Ask the learners to write 675c as Rands and cents.
- Let learners write it in expanded notation.
- 600c + 70c + 5c
  600c is equal to R6.
  So we can write 675cas R6 and 75c or R6,75.

Activity 3: Problem solving

Tell children that you want them to solve this problem: Travis has a 50c coin and four 20c coins, Toffees cost R1,20. How much change will he get if he pays with all his money?

- Learners select Travis's cut-out coins 50c, 20c, 20c, 20c, 20c.
- *How much do we get when we add the coins together?*
- Write a number sentence, 50c + 20c + 20c + 20c + 20c
- Add 50 c and all the 20c coins, 50c + 80c
- This will give us 130c.
- *How can I write 130c in Rands?* (R1,30)
- We know now that Travis has R1,30. The toffees cost R1,20.
- *How much change will Travis get?* (He will get 10c change.)
- *What are the different ways in which he could get his change?*(Discuss the different ways.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 23: Money – value of money

Classwork

1. R2,20 + R4 = _____ (R6,20)
2. R3,50 + R2, 50 = _____ (R6)
3. Write 525c as rands and cents. (R5,25)
4. Draw notes to show in how many different ways you can make up R400 using only bank notes. (Answers will vary eg . R200 + R100 + R50 + R20 + R20 + R10)
5. Mandla pays R2,50 to take a taxi to school. What does it cost him to get to and from school each day? (R2,50 x 2/R2,50 + R2,50 = R5,00)
6. One pair of shoes costs R250. How much will two pairs of shoes cost? (R500)

Homework

1. R5,75 + R3,20 = _____ (R8,95)
2. R3,25 + R2,75 = _____ (R6)
3. Mandla pays R2,50 to take a taxi to school. The train costs R6 for a return ticket. Which is cheaper, the train or the taxi?(The taxi costs R5 for a return ticket while a train costs R6 for a return ticket. Therefore the taxi is cheaper.)

Lesson 24: Money - Buying and selling problems

Teacher`s notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.11 Money 1.16 Mental Mathematics

Lesson vocabulary: Money, coins, bank notes, Rands, cents, totals, value, change

Prior knowledge

Learners should be have been taught how to:

- Recognise and identify the South African coins 5c, 10c, 20c, 50c, R1, R2, R5 and bank notes R10, R20 and R50.
- Solve money problems involving totals and change in cents up to 90c and rand to R99.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any number between 0 and 500. E.g. 102, 104, 106

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	15 - __ = 10	5	6.	6+__= 13	7
2.	9+__= 14	5	7.	17-__= 8	9
3.	19-__= 12	7	8.	5+__= 18	13
4.	2+__= 14	12	9.	15-__= 9	6
5.	14-__= 6	8	10.	6 + __= 15	9

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Money cut-outs (coins and notes) (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 56b (p127).

Concepts:

- Recognise and identify the South African coins and bank notes.
- Solve money problems involving totals and change in rands or cents.

Remediation: Set up a simple shop in the class with items priced at amounts within the children's number range. e.g. R5,50, R2, 20, R3,55, Learners take turns to be the shopkeeper. Each time a sale is made both the shopkeeper and the customer need to calculate the total and the change.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Write the costs of the sweets on the board before the lesson.

- Pedro's granny gave him R5. Which 3 sweets can he buy? The sweets cost:
  - Choc chuckle R2,70;
  - gums R1,80;
  - sour worms R2,60;
  - magic mints R2,20;
  - toffee R1,20.
- *What is the question? (*Which 3 sweets can he buy?)
- *How much does he have?* (R5)
- *Which are the other important numbers?* (R2,70, R1,80, R1,40, R2,20, R1,20)

Choc chuckle R1,70	Gums R1,80	Sour worms R2,60	Magic mints R2,20	Toffee R1,20

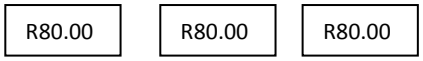
- Let learners colour/circle a possible combination e.g. Sour worms, magic nuts and toffee
- Let them write a number sentence to work out the total cost:
  R2,60 + R2,20 + R1,20
  = R2 + R2 + R1 + 60c + 20c + 20c
  = R5 + 100c (R1)
  = R6,00 Too much!
- Try other combinations using the method described above until the total is R5 or less,
  (Choc chuckle + Gums+ Toffee: R1,70+R1,80+R1,20=R4,70)

Activity 2: Learners work in groups.

Problem: Damon bought 3 books for R80 each. How much change will he get for R300?

- *What is the question?* (How much change will he get from R300?)

Draw it.



Number sentence: R80,00 + R80,00 + R80,00 = R240,00

Calculate: R300– R240= R60, (My change will be R60,00)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 24: Money – Buying and selling problems

Classwork

1. There are 5 chocolates in a packet. One packet of chocolates costs R1,00. Mr King needs 50 chocolates.
    a. How many packets should he buy? (10)
    b. What will he pay? (R10,00)
2. I have R20,00. I need to buy 5 balls. Which balls can I buy?
    Soccer balls – R5,85 each,
    cricket balls - R3,80 each,
    netball balls – R6,20 each,
    rugby balls R5,99 each,
    tennis balls – R2,75 each.
    (Answers will vary – one possibility is 2 cricket balls, 1 rugby ball and 2 tennis balls).
3. Three buses drive on a toll road and are charged R40 each. How much do they pay in total? (It is expected that learners will use repeated addition problems where the rand value is so large. R40 + R40 + R40 = R120)

Homework

1. Peter bought 3 pairs of shoes for R90 each. How much change will he get for R300? (R30)
2. Three buses drive on a toll road and are charged R35 each. How much do they pay in total? (R105).

Lesson 25: 3-D objects

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 3.2 3-D objects

Lesson vocabulary: Estimate, check, 2-D shapes , 3-D objects, ball shapes, spheres, box shapes, prisms, cylinders, pyramids, cones, curved surfaces, roll, slide, side, surface,

Prior knowledge

Learners should be have been taught how to:

- Recognise and name 3-D objects in the classroom and pictures – ball shapes (spheres), box shapes (prisms), cylinders.
- Describe, sort and compare 3-D objects in terms of: size, objects that roll and objects that slide.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 10s from any number between 0 and 500. e.g. 210, 220, 230, …

Mental maths activity - 10 minutes

	Answer the following:	Answer		Answer the following:	Answer
1.	What is 1 more than 354?	355	6.	What is 3 less than 285?	282
2.	What is 1 less than 398?	397	7.	What are 4 more than 54?	58
3.	What are 2 more than 102?	104	8.	What is 4 less than 78?	74
4.	What are 2 less than 305?	303	9.	What are 10 more than 158?	168
5.	What are 3 more than 389?	392	10.	What is 10 less than 48?	38

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: An assortment of 3-D shapes collected from home (e.g. boxes, cones, cylinders, etc.).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 11 (pgs 24 &25)

Concepts:

- Recognise and name 3-D objects in the classroom and pictures – ball shapes (spheres), box shapes (prisms), cylinders, pyramids, cones.
- Describe, sort and compare 3-D objects in terms of: 2-D shapes that make up the faces of 3-D objects and flat or curved surfaces.

Remediation: Give learners building blocks. Ask them to build anything of their choice. Ask them to name the objects they used and which of these objects can roll and which can slide?

Enrichment: See Enrichment Activity Cards

Activity 1:
Take the children outside.

- Ask one child to demonstrate rolling on the ground. Give others a turn to roll.
- Ask one child to demonstrate sliding. Give others a turn to slide.
- Do this many times until the concepts of '*roll*' and '*slide*' are established.

Activity 2:
Return to the class

- **Note:** Help children to become familiar with the shape terminology by asking questions and allowing children to use the words they have learnt.
- Give each group of learners a variety of 3-D shapes. Ask them to sort the shapes into those that can roll (e.g. sphere, cone) and those that can slide (e.g. prism, pyramid)
- *Which shapes can slide?* (sphere, cone)
- *What can you tell me about them?* (They have flat surfaces/ faces/ sides)
- *Which shapes can roll?* (prism, pyramid)
- *What can you tell me about them?* (They have round surfaces /faces/ sides)
- *Are there any shapes that can roll and slide?* Allow learners to experiment (cylinder and cone)
- *Why do they roll and slide?* (because they have flat and curved surfaces).
- Ask learners to show which surfaces are flat and which surfaces are curved.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 25: 3-D objects

Classwork

1. Look in the magazines, pamphlets and newspapers for pictures of two objects that look like each of the following shapes
    a. balls.
    b. boxes.
    c. cylinders.
2. Paste them in your maths book and write down why you have chosen that picture.
3. Name the shapes that you have that can roll.
4. Name the shapes that you have that can slide.
5. Draw a cylinder balancing on a box.

Homework

1. Draw a picture using only box-shaped objects.
2. Draw a picture using box-shaped and cylinder-shaped objects.
3. Draw a picture using ball-shaped and cylinder-shaped objects.

Week 6

Lesson 26: 3-D objects

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics3.2 3-D objects

Lesson vocabulary: 2-D shapes, 3-D objects, ball shapes, spheres, box shapes, prisms, cylinders, pyramids, cones, curved surfaces.

Prior knowledge
Learners should be have been taught how to:

- Recognise and name 3-D objects in the classroom and pictures – ball shapes (spheres), box shapes (prisms), cylinders.
- Describe, sort and compare 3-D objects in terms of: size, objects that roll and objects that slide.

Assessment
Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any number between 0 and 500. E.g. 102, 104, 106,

Mental maths activity - 10 minutes

	Answer the following:	**Answer**		Answer the following:	**Answer**
1.	What is 1 more than 450?	451	6.	What are 1 less than 400?	399
2.	What is 3 more than 500?	503	7.	What are 2 less than 65?	63
3.	What are 4 more than 322?	326	8.	What are 6 less than 78?	72
4.	What are 5 more than 487?	492	9.	What are 3 less than 491?	488
5.	What are 10 more than 78?	88	10.	What are 10 less than 450?	440

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: An assortment of 3-D shapes collected from home (e.g. boxes, cones, cylinders, etc.).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 12 (pgs 22 &23)

Concepts:

- Recognise and name 3-D objects in the classroom and pictures – ball shapes (spheres), box shapes (prisms), cylinders, pyramids, cones.
- Describe, sort and compare 3-D objects in terms of: 2-D shapes that make up the faces of 3-D objects and flat or curved surfaces.

Remediation: Get learners to sort a variety of examples of each 2-D shape (different kind of triangles, rectangles etc.) and explain why they sorted them the way they did.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity. Shape characteristics.

- Give learners a variety of 3-D shapes e.g. cylinders (closed on both ends), pyramids, cubes, rectangular prisms, cones.
- Discuss the properties (characteristics) of the shapes with the learners.
- Demonstrate and ask learners to hold up the cylinder. Ask the following questions:
  - *How many sides does the shape have?*
  - *Tell me about the shape of each side.* (Square, circle, flat, curved, etc.)
  - Do this with each shape.

Activity 2: Whole class activity. Comparison of shapes.

- Hold up a cylinder and a cone and ask:
  - *What can you tell me about them?* (Both have flat and curved surfaces)
  - *What is the same?* (Both have flat and curved surfaces)
  - *What is different?*(The cylinder has two flat surfaces but the cone has one flat surface. The cone has one pointy end. Both ends of the cylinder are flat.)
- Do the same with other shapes, comparing them according to their characteristics:
  - Cone and the pyramid
  - Cone and sphere
  - Prism and pyramid
  - Sphere and prism (cube)

Activity 3: Learners work in groups.

- The learners should sort shapes into those that can roll and those that can slide.
- Name each of the shapes.
- Explain why they can roll.
- Explain why they can slide.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 26: 3-D objects

Classwork

Complete this table in your maths books:

Shape	Draw all the sides
	
	
	
	
	

Homework

1. Draw a picture using only shapes that can roll. (Answers will vary.)
2. Draw a picture using only shapes that can slide. (Answers will vary.)
3. Draw a picture using shapes that can roll and slide. Name the different shapes that you have used. (Answers will vary e.g.  Made of 2 circles, 1 rectangle)
4. Draw a picture of an object in your house that can slide. (Answers will vary.)

Lesson 27: 3-D objects (constructions)

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics3.2 3-D objects

Lesson vocabulary: 2-D shapes, 3-D objects, ball shapes, spheres, box shapes, prisms, cylinders, pyramids, cones, curved surfaces.

Prior knowledge

Learners should be have been taught how to:

- Recognise and name 3-D objects in the classroom and pictures – ball shapes (spheres), box shapes (prisms), cylinders.
- Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, building blocks, recycling, construction kits, and other 3-D geometric objects.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any number between 0 and 500. E.g. 102, 104, 106,

Mental maths activity - 10 minutes

	Answer the following:	**Answer**		Answer the following:	**Answer**
1.	What is 1 more than 350?	351	6.	What are 1 less than 500?	499
2.	What is 3 more than 400?	403	7.	What are 2 less than 465?	463
3.	What are 4 more than 352?	356	8.	What are 6 less than 278?	272
4.	What are 5 more than 387?	392	9.	What are 3 less than 391?	388
5.	What are 10 more than 178?	188	10.	What are 10 less than 456?	446

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: An assortment of 3-D shapes collected from home (e.g. boxes, cones, cylinders, etc.), glue / presstick / clay

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

- Recognise and name 3-D objects in the classroom and pictures – ball shapes (spheres), box shapes (prisms), cylinders, pyramids, cones.
- Observe and build given 3-D objects using concrete materials such as cut-out 2-D shapes, clay, toothpicks, straws, other 3-D geometric objects.

Remediation: Allow learners more time to work with the 3-D shapes and discuss their names and properties with you.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class discussion.
Give learners a variety of 2-D and 3-D shapes e.g. squares, circles, rectangles, triangles and cylinders (closed on both ends), pyramids, cubes, rectangular prisms.

- Hold up some of the shapes to discuss their features – with a view to using them for constructions
  - *How many sides does the shape have?*
  - *Which sides would fit with which shapes if I had to join two shapes?*
  - Discuss until you think the class is ready to build their own shapes.

Activity 2: Learners work individually.

- Learners use the shapes that you gave them and glue/prestick to join them together to make a creative object.
- Each group should produce one object.
- The group needs to be able to explain:
  - The shapes that they used.
  - How they joined the shapes.
  - Etc.
- Let each group present their shape to the class and discuss something about their shape with the class.

4. Classwork activity – 25 minutes (See next page)

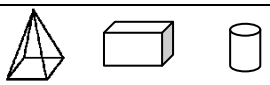
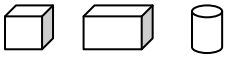
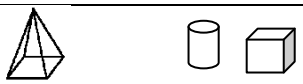
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 27: 3-D objects - Construction

Classwork

Copy and complete the table: The first one is done for you.

Shape	Draw three shapes that can balance on the shape?
	
	(None)
	
	
	(None)
	(None)

Homework

1. Can a cylinder balance on top of a prism? When? (Yes, when the flat side of the cylinder is placed on the prism.)
2. Can a cube balance on top of a prism? When? (Yes, when the cube is placed on a rectangular prism or on the triangular face of a triangular prism.)
3. Can anything balance on top of a sphere? (No.)
4. Can a sphere balance on top of anything? When? (Yes, when it placed on a flat surface.)

Lesson 28: Directions

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 3.1 Position, orientation and views.

Lesson vocabulary: Directions, turn, left, right, forwards, backwards

Prior knowledge

Learners should be have been taught how to:

- Follow directions to move around the classroom and to place one object in relation to another.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any given multiple between 0 and 200. e.g.83, 88, 93, 98, 103..., …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	205 + 3 =	208	6.	1 +494 =	495
2.	432 + 2 =	434	7.	5 + 391 =	396
3.	410 + 0 =	410	8.	5 + 305 =	310
4.	476 + 1 =	477	9.	9 + 221 =	210
5.	308 + 1 =	309	10.	7 + 238 =	245

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Objects which you can use as markers. (e.g. beacons)

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

- Follow directions and give directions to move around the classroom and school.

Remediation: Give the learners some directions: • *Stand next to the beacon*. • *Walk two steps forwards.* • *Turn right* •*Walk three steps forwards* •*Turn right* • *Walk two steps forward* •*Turn right.*
Once the concepts of '*steps forward'* and '*turn right'* are established, introduce: '*turn left'*.
Only when this is understood, introduce the combination of '*turn right'* and '*turn left'* together.

Enrichment: See Enrichment Activity Cards

Activity 1: Learners work in groups of 4.
Take the learners outside and give them basic instructions. Divide the learners into groups and give each group some beacons. After each instruction the groups will place a beacon.

- Walk 5 steps forward and place a beacon.
- Turn right and walk 3 steps. Place a beacon.
- Turn left and walk 4 steps. Place a beacon.
- Turn right and walk 3 steps. Place a beacon.
- Turn right and walk 10 steps. Place a beacon.

Activity 2: Learners work in groups of 4.

- Ask the groups to go back on their route, using the beacons to guide them.
- Learners give the instructions to each other to follow the route backwards.
- *What changes when you reverse the route?* (Left becomes right, etc.)

4. Classwork activity – 25 minutes (See next page)

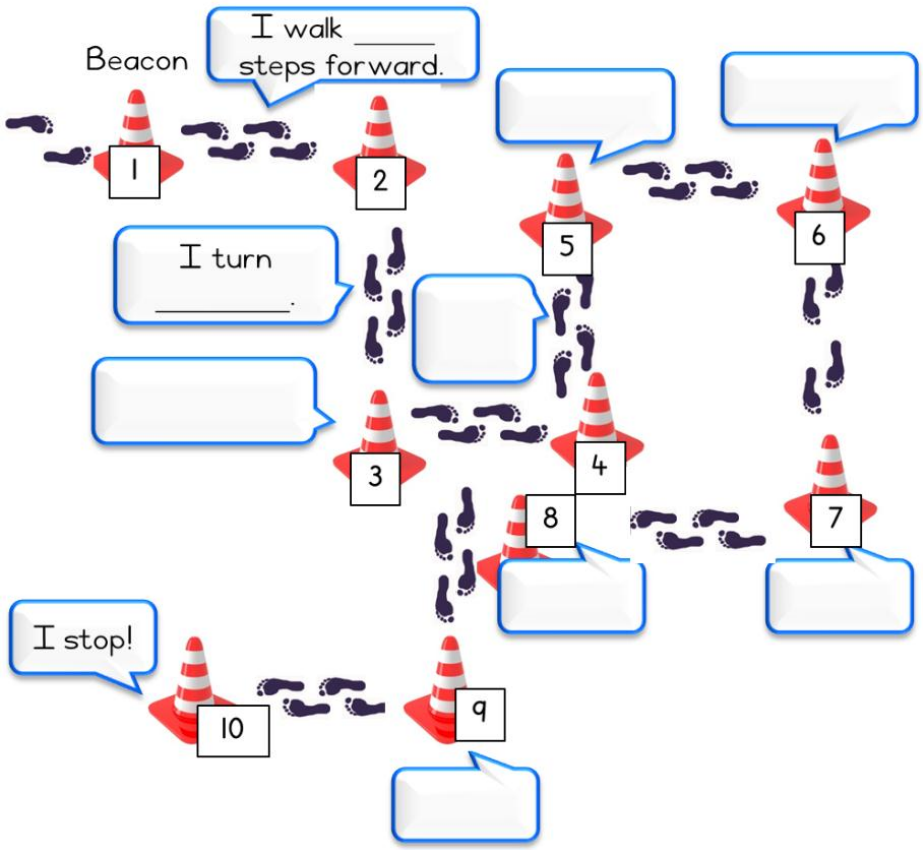
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 28: Directions

Classwork

Look at the map of the path that you have walked



In your maths book complete the table showing the path that you walked. The first steps have been done for you.

Steps from Beacon 1 to Beacon 2	In each case the sentence will begin with 'I walked four steps forward and then I turned .....' (the direction is indicated in the column on the right)	right
Steps from Beacon 2 to Beacon 3		left
Steps from Beacon 3 to Beacon 4		left
Steps from Beacon 4 to Beacon 5		right
Steps from Beacon 5 to Beacon 6		right
Steps from Beacon 6 to Beacon 7		right
Steps from Beacon 7 to Beacon 8		left
Steps from Beacon 8 to Beacon 9		right
Steps from Beacon 9 to Beacon 10		stopped.

Homework

(Answers will vary.)

Draw a path from one place to another. Explain the path using steps and directions.

Lesson 29: Position and views

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 3.1 Position, orientation and views.

Lesson vocabulary: Top view, front view, side view, position, view

Prior knowledge

Learners should be have been taught how to:

- Describe the position of one objects in relation to another e.g. on top of, in front of, behind, left, right, up, down, next to.
- Follow directions to move around the classroom and to place one object in relation to another.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 2s from any given multiple between 0 and 500. E.g. 499, 497, 495

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	Double 10	20		What is half of 20	10
2.	Double 12	24		What is half of 18	9
3.	Double 5	10		What is half of 80	40
4.	Double 20	40		What is half of 50	25
5.	Double 100	200		What is half of 400	200

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Objects (e.g. caps, cups and cans).

DBE workbook activities relevant to this lesson:

- N/a

Concepts:

- Identify and name different views of the same object.

Remediation: Give the learners a variety of objects and tell them to show you the: front view, side view and top view. Give learners three to four blocks to build an object. Ask them to show you the front view, side view and top view.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity.
Show the learners a cap.

- Show the cap in different positions and ask them which side is the front, back and sides of the cap.
- *Which view did we not look at?* (The top view) Show learners the top view.

Activity 2: Learners work in groups.
Learners place their bags on their tables

- Ask them to show you the front view. (the view they can see from where they are standing)
- Ask them to show you the top view. (the view they can see if they looked over the top)
- *What about the side view....how many side views are there?* (usually four sides for a rectangular prism shaped bag)
- *Is it the same as the front view? Why?*

Activity 3: Learners work in pairs facing each other.

- Place one bag and one book on their tables between them.
- Each learner takes turns to describe what they see. (The views should be the opposite for each person in the pair e.g. If the book is on the right of the bag for one child it will be on the left of the bag for the other.)

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

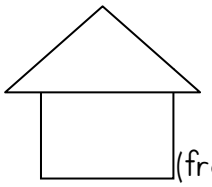
6. Reflection on lesson

Term 2 Lesson 29: Position and views

Classwork

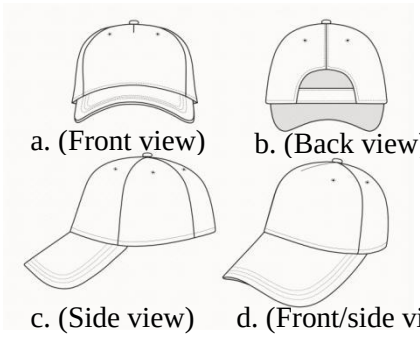
1. Look at the picture and make a drawing of the different views in your maths book.
    a. Top view
    b. Front view
    c. Side view

(top)



(front)

2. What view of the object do you see? Write front, back, side or top view for each picture.



a. (Front view)

b. (Back view)

c. (Side view)

d. (Front/side view)

e. (Side/front view)

f. (Top view)

Homework

Draw the top and side views of a coffee mug.

(side)

(top view)

Lesson 30: Symmetry

Teacher`s notes

CAPS Topics: 1.2 Count forwards and backwards 1.16 Mental Mathematics 3.4 Symmetry

Lesson vocabulary: Symmetry, reflection,

Prior knowledge

Learners should be have been taught how to:

- Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 3s from any number between 0 and 500. E.g. 103, 106, 109...

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	10. – ..... =10	0	6.	11 – ..... =10	1
2.	15 – ..... =10	5	7.	12 – ..... =10	2
3.	19 – ..... =10	9	8.	13 – ..... =10	3
4.	16 – ..... =10	6	9.	17 – ..... =10	7
5.	18 – ..... =10	8	10	14 – ..... =10	4

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Symmetrical shapes (see printables), scrap paper (cut into triangles, squares, hearts, for learners per group).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 48a (Page 110)

Concepts:

- Determine line of symmetry through paper folding and reflection.

Remediation: Give the learners the symmetrical shape patterns to cut out. Ask them to match the symmetrical sides of the shapes. Ask learners to show you the line of symmetry in the shape.

Enrichment: See Enrichment Activity Cards

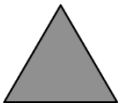
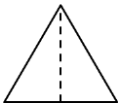
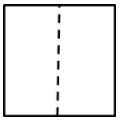
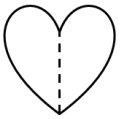
Activity 1: Whole class discussion

- Give each group of learners the symmetrical shapes hand-out.

- Ask learners to look at the pattern squares for lesson 30 on the hand-out. They should discuss in their groups what they notice about the patterns.
- Have a general class discussion about the shapes in the hand-out. Discuss things such as:
    - Repeated shapes
    - Types of shapes
    - Symmetry
    - Lines of symmetry
    - Patterns with one/many lines of symmetry
    - Etc.

Activity 2: Learners work in pairs – use shape cut-outs prepared by you for this lesson.

- Give the learners shapes cut from scrap paper.
- Learners fold the shapes to find lines of symmetry.
- Draw a line on the folds that are lines of symmetry.
- Learners paste the folded shapes with lines of symmetry drawn into their books.
- Discuss the ways the fold lines (lines of symmetry) divide the single shape into two other shapes – *What are they and how do they make up the original shape?*

Shape	**Fold the shape**	**What two shapes do you think will it form?**	**Illustration.**
Triangle 		• 2 triangles	
Square 		• 2 rectangles	
Heart 		• 2 half hearts	

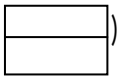
4. Classwork activity – 25 minutes (See next page)

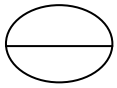
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 30: Symmetry

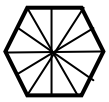
Classwork

1. Draw the other half of the shape and show the line of symmetry.
   a. .  ()

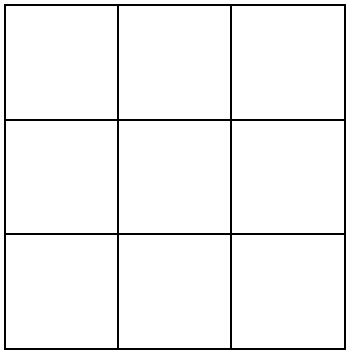
   b. .  ()

   c.  ()

2. Draw the line of symmetry.
   a. . 

   b. . 

3. Make a symmetrical design in a grid like this in your maths book.



(Answers will vary.)

Homework

1. Draw a person and show the lines of symmetry on the drawing.
2. Draw a square with one line of symmetry.
3. Draw a triangle with one line of symmetry.

Week 7

Lesson 31: Symmetry

Teacher's notes

CAPS Topics: 1.2 Count forwards and backwards 1.16 Mental Mathematics 3.4 Symmetry

Lesson vocabulary: Symmetry, line of symmetry, colour

Prior knowledge
Learners should be have been taught how to:

- Recognise and draw line of symmetry in 2-D geometrical and non-geometrical shapes.

Assessment
Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 3s from any given multiple between 0 and 500. E.g. 401, 404, 407, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	__ + 7 = 17	10	6.	__ + 0 = 10	10
2.	10 + __ = 12	2	7.	10 + __ = 18	8
3.	__ + 9 = 17	8	8.	__ + 12 = 14	2
4.	__ + 5 = 15	10	9.	8 + __ = 16	8
5.	10 + ___ = 14	4	10.	__ + 10 = 15	5

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Symmetrical shapes (see printables), shape cut-outs made from scrap paper (rectangle, square).

DBE workbook activities relevant to this lesson:

- DBE Workbook 2 Worksheet 48b (Page 111).

Concepts:

- Determine line of symmetry through paper folding and reflection.

Remediation: Show learners how to use a mirror to test for a line of symmetry. (The image in the mirror should be the other half of the image otherwise the line is not a line of symmetry).

Enrichment: See Enrichment Activity Cards

Activity 1: Learners work in pairs

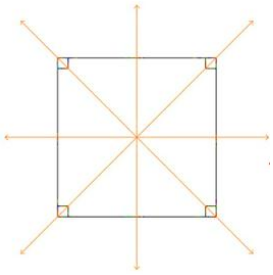
- Ask the learners to explain to their partners in their own words what the line of symmetry is.

Activity 2: Whole class activity. Give each group a copy of the symmetrical butterfly printable.

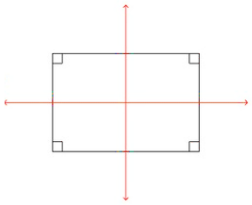
- Give the learners copies of the pictures on the following page or make basic drawings on the board.
- Ask the learners to show you where the line of symmetry will be. (Learners should not think that the line of symmetry is always from the top to the bottom (vertical).

Activity 3: Learners work in groups of four.

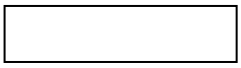
- Give each group cut-outs of the shapes that you prepared for the lesson.
- Learners should experiment with folding their shapes in as many ways as they can find and count all the possible lines of symmetry for each shape.
- Allow time for them to find all of the lines of symmetry and draw them onto their shapes.
- Discuss the findings:
    - Square has four lines of symmetry:



    - Rectangle has two lines of symmetry:



- Learners paste their folded shapes with lines of symmetry drawn into their books.

Shapes	Drawings of shapes and lines of symmetry
	
	

4. Classwork activity – 25 minutes (See next page)

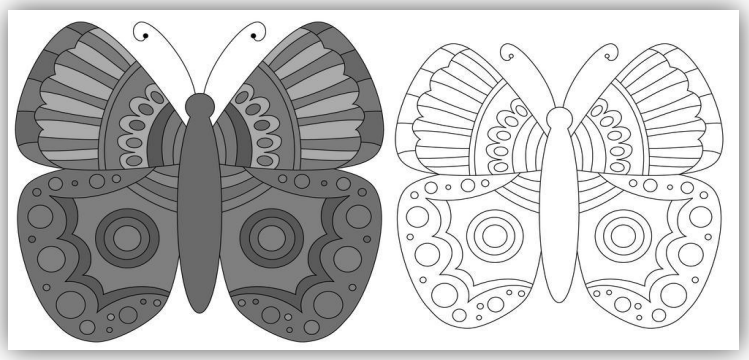
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 31: Symmetry

Classwork

1. The first butterfly is coloured symmetrically. Do the same with the second butterfly, but use different colours.



2. Draw two of your own bugs and also show the lines of symmetry on them.
3. Draw a necklace (a circle) made out of different coloured beads. Show the symmetry.

Homework

1. Draw a square with 4 lines of symmetry. ( )
2. Draw a rectangle with 2 lines of symmetry. ( )
3. Draw a square mat with a symmetrical pattern on it. (Answers will vary.)

Lesson 32: Length

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 4.2 Length

Lesson vocabulary: Hand span, paces, foot lengths, finger width, measure, length, height, width

Prior knowledge

Learners should be have been taught how to:

- Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any given number between 0 and 500. E.g. 401, 403, 405...

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	15+.....= 20	5	6.	18+.....= 20	2
2.	20+.....= 20	0	7.	11+.....= 20	9
3.	17+.....= 20	3	8.	19+.....= 20	1
4.	16+.....= 20	4	9.	10+.....= 20	10
5.	12+.....= 20	8	10.	14+.....= 20	6

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Shape cut-outs (see printable), objects to measure (e.g. desk, book, chair set, etc.).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 13a (p 28)

Concepts:

- Describe the length of objects by counting and stating how many informal units long they are and use language to talk about the comparison e.g. longer, shorter, taller, wider.

Remediation: Work with learners individually physically helping them to understand what is meant by no gaps between objects.

Enrichment: See Enrichment Activity Cards

Activity 1: Individual work

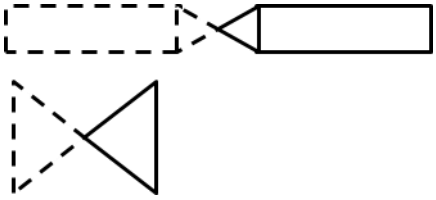
Ask the learners that it is important to use the same object so that we have the same size or length when we measure, and that there should be no gaps between these objects.

- Ask the learners what they think people used to use for measuring length before there were rulers (hand spans, foot lengths or paces).
- Ask if anyone knows how we use our hand spans to measure. Show the learners how to place one object (hand span) next to the other, and then move the first one to the other side of the second one. Emphasise where we start and how to avoid gaps.
- Ask learners to measure the length of their desk using hand spans.
- Ask: *What should we do if there is a bit left over at the end?* (We estimate to get ¼ or ½ or 3/4 hand spans which we add to the total.)
- Now ask learners to: *Measure the length of the classroom using foot lengths.*

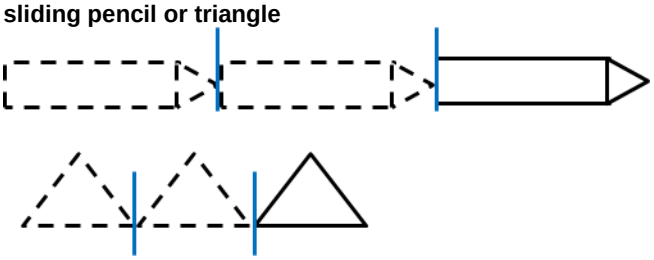
Activity 2: Use the shape cut-outs as non-standard units of measure.

- Learners measure the length and width of their maths book.
- Learners work in pairs using one object e.g. a pencil or a triangular building block as a non-standard measuring unit.
- Learners measure by flipping the unit over or sliding it along and marking each end point.
- Ask the learners for their measurements and to say whether they flipped or slid their pencils/ triangular building blocks.

Pencil or triangle flipped over



sliding pencil or triangle



4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 32: Length

Classwork

(Answers will vary.)

1. Use hand spans to measure the height of your desk.
2. Use hand spans to measure the width of your desk.
3. Use a pencil to measure the height of the classroom door.
4. Use a pencil to measure the width of the classroom door.
5. Use finger widths to measure the length of your maths book.
6. Use finger widths to measure the width of your maths book.
7. Use hand spans to measure the length of your maths book.
8. Use hand spans to measure the width of your maths book.
9. Why do you get different measurements for the length and width of your maths book when you measure these using your finger width and then your hand span? (The width of my finger is not the same as the width of my hand span.)

Homework

(Answers will vary.)

1. Use hand spans to measure the length of your bed.
2. Use hand spans to measure the width of your bed.
3. Use a pencil to measure the height of your bed.
4. Use a pencil to measure the width of your bed.
5. Why do you get different measurements for the length and width of your bed when you measure them using hand spans and then a pencil? (The hand span is not the same as the width of my pencil.)

Lesson 33: Length

Teacher's notes

CAPS Topics: 1.2 Count forwards and backwards 1.16 Mental Mathematics 4.2 Length

Lesson vocabulary: Length, standard unit, comparison. longer, shorter, taller, wider, width, metre, record

Prior knowledge

Learners should be have been taught how to:

- Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 50s between 0 and 750. E.g. 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	9+2=	11	6.	12 – 9=	3
2.	15 – 7=	8	7.	8+3=	11
3.	8+7=	15	8.	19 – 10=	9
4.	16 – 9=	7	9.	3+9=	12
5.	5+9=	14	10.	18 – 12=	6

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Metre stick, string cut into length of one metre.

DBE workbook activities relevant to this lesson:

- DBE Worksheet 13b (p 27)

Concepts:

- Estimate, measure, compare, order and record length using metres (either metre sticks or metre lengths of string) as the standard unit of length. (Formal measuring)

Remediation: Learners estimate, and measure the items in the table below. Remember that they should measure and record after each estimation in order to improve their skills.

	I estimate	I measure	How close was I?
Width of classroom			
Width of the window			
Length of teacher's table			

Enrichment: See Enrichment Activity Cards

Activity 1:Learners in groups of four

- Give each group of learners a one metre length of string.
- Tell learners that the string is one metre long. Place it on the floor.
- Ask the learners: *Who can take a step as long as a metre?*
- Ask: *Can anyone take a step longer than a metre?*

Activity 2:

In groups, ask learners to measure objects using their strings. Each group must find and make a list of:

- Five things that are shorter than a metre in length.
- Five things that are longer than a metre in length.
- Five things that are exactly a metre long.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 33: Length

Classwork

(Answers will vary.)

You will need a string or a metre stick when you do questions 1 to 3. Estimate first then measure to see if these objects are longer or shorter than a metre.

	Measure	I estimate		Measure
		longer than a metre	shorter than a metre	Was I right?
1	Your height			
2	The width of the chalkboard			
3	The length of your desk			
4	Width of the doorway			
5	The height of your desk			

Homework

(Answers will vary.)

1. Draw a picture of something in your room/house that is longer than one metre.
2. Draw a picture of something in your room/house that is shorter than one metre.

Lesson 34: Data

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 5.4 Collect and organise data 5.5 Represent data 5.6 Analyse and interpret data

Lesson vocabulary: Data, organise, tables, bar graph, axis/axes, label, graph title

Prior knowledge

Learners should be have been taught how to:

- Analyse data from representations provided.
- Draw at least one pictograph with one-to-one correspondence.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 50s between 0 and 1 000. E.g. 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 850, 900, 1 000

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	7+__= 12	5	6.	4+__= 14	10
2.	1+__= 20	19	7.	9+__= 18	9
3.	9+__= 15	6	8.	6+__= 14	8
4.	2+__= 16	14	9.	8+__= 16	8
5.	3+__= 13	10	10.	0+__= 10	10

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Pictures of T-shirts cut from old magazines/advert flyers (6 green, 10 yellow, 8 blue, 12 pink)

DBE workbook activities relevant to this lesson:

- DBE Worksheet 36(Pages 84 & 85)

Concepts:

- Collect data about the class or school to answer questions posed by the teacher.
- Organise data supplied by teacher or book in lists, tallies and tables.
- Represent data in a pictograph or bar graph and analyse data from representations.

Remediation: Give the learners a container with colour counters. First tell them to sort it according to the colours. Tell them to draw a pictograph by giving them a template and key. Ask them how many counters are there of each colour: blue, green, yellow and red.

Enrichment: See Enrichment Activity Cards

Activity 1: Group work: Sort data

- Place cut-outs of the following items randomly on the board: 6 green t-shirts, 10 yellow t-shirts, 8 blue t-shirts and 12 pink t-shirts.
- Get some children to draw washing baskets on the board in the same colours as the t-shirts.
- Ask learners to sort and place the t-shirts into the matching coloured basket.
- Count how many t-shirt there are of each colour and write the number on the washing basket.

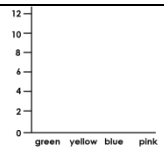
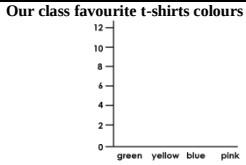
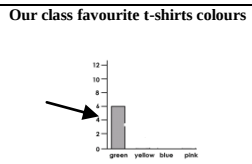
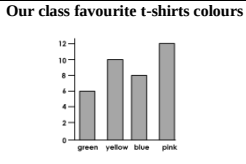
Activity 2: Individually :Transfer data into a table format

- Learners draw tables in their maths books. Show them how to transfer the data from the baskets to the tables.

Colour of the t-shirts	Number of t-shirts
green	6
yellow	10
blue	8
pink	12

Activity 3::Represent the data in a bar graph

Take the learners through each of the following steps:

1.	*Draw the axes of the graph*	
2.	*Label the axes. Point out that the spaces between the numbers should be the same. The spaces between the colours should also be the same.*	
3	Remind learners that a story has a title. *So what do you think the title of a bar graph should be?* (Our class favourite t-shirt colour) *Where will you write the title of the graph? Above or below the graph*	
4	Represent data on the bar graph by drawing the bars. The height of the bars needs to match the number of t-shirts. We have 6 green t-shirts, so how will we represent this on the bar graph? (Look at the numbers on the axis with the numbers and match this)	
5	Do the same for all the other t-shirts.	
6.	Learners analyse the data by answering questions such as a) *What is the most popular colour for t-shirts in our class?*(pink) b) *Which colour do the fewest children like?* (green) c*) Do more learners like yellow or blue?(*yellow) d) *By how many more?* (two) e) *How many children are there in our class?* (36) f) *Is there anything else that you can tell me about the graph?* (e.g. Nobody likes black t-shirts)	

4. Classwork activity – 25 minutes (See next page)

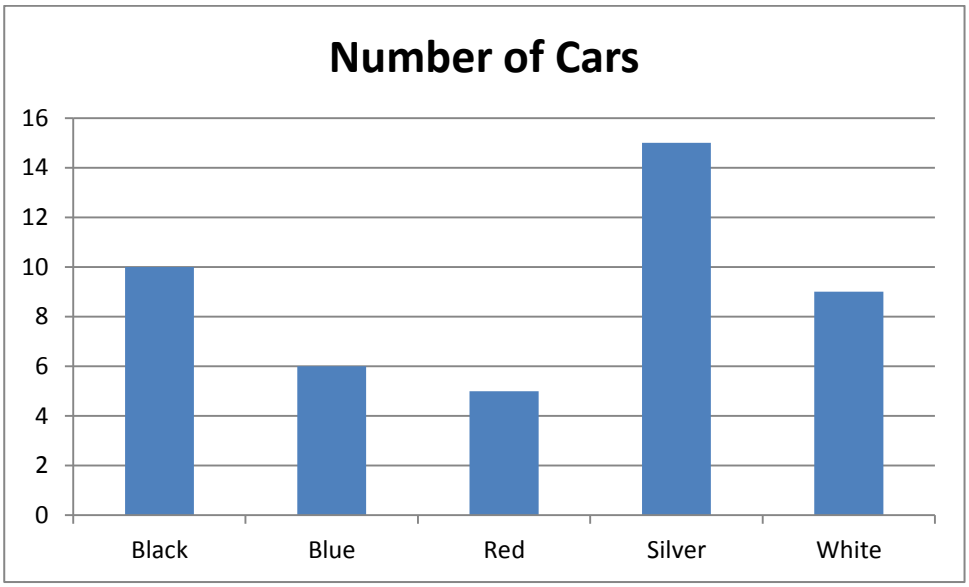
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 34: Data

Classwork

Use this bar graph to answer the questions that follow.



1. How many cars of each colour were counted? (black = 10, blue = 6, red = 5, silver = 15, white = 9)
2. What was the most popular colour?(silver)
3. What was the least popular colour?(red)
4. How many more black cars were there than white cars?(one)
5. How many fewer blue cars were there than silver cars?(nine)

Homework

Draw a bar graph to represent the following data:

Favourite sports	
Soccer	10
Swimming	3
Athletics	8
Cricket	2

Remember to name the graph and to label the axes.

Lesson 35: Time

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backwards 1.16 Mental Mathematics 4.1 Time

Lesson vocabulary: Time, 12-hour time, hours, half hours, quarters, minutes, analogue, digital, calendars, am, pm, analogue clock, digital clock.

Prior knowledge

Learners should be have been taught how to:

- Tell 12 – hour time in: Hours, half hours, quarters and minutes on analogue clocks.
- Calculate length of time and passing of time.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 5s from any number between 0 and 500. E.g. 101, 106, …

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	__ + 4 =14	10	6.	__ + 3 = 13	10
2.	5 + __ = 15	10	7.	__ + 7 = 13	6
3.	10 + __ = 16	6	8.	__ + 8 = 18	10
4.	9 + __ = 12	3	9.	__ + 10 = 17	7
5.	1 + __ = 12	11	10.	9 + __ = 14	5

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Clocks (analogue and digital), pictures of clocks (cut out from magazines/etc.).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 12 (p 26)

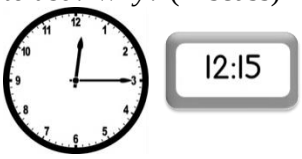
Concepts:

- Tell 12 – hour time in: Hours, half hours, quarters and minutes on analogue clocks and digital clocks and instruments that show time e.g. cell phones
- Use clocks to calculate length of time in hours or half hours.

Remediation: Draw/give learners the following clocks: count the minutes: 5, 10, 15 …60. (Hour) Count the minutes: 5, 10, 15, 20, 25, 30 (Half an hour) Count the minutes: 5, 10, 15 (Quarter of an hour) Count the minutes: 5, 10, 15 …45 (Three quarters of an hour)

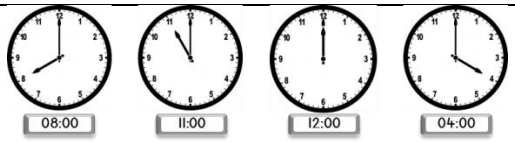
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity.
Draw the clocks on the board or make use of real life ones. Ask learners to look at the clocks and describe the difference. *Which clock do you prefer to use? Why?* (Discuss)



Activity 2: Revise the following with the learners.

- Draw/give learners the following clocks to read the times.
- Discuss the different categories – full hours, half hours and quarter hours. Call up different learners to read the times and to explain how they do this.

Hours: 08:00, 11:00, 12:00, 04:00. • *Where are the long hand and the short hand when you read hours?*	
Half hours: 07:30, 10:30, 02:30, 06:30 • *Where are the long hand and the short hand when you read half an hours?*	
Quarter past: 04:15, 09:15, 12:15, 10:15. • *What does quarter past mean?* • Link this with counting in fives. • *Let us count: 5, 10, 15.*	
Quarter to: 01:45, 02:45, 09:45, 10:45. • *What does quarter to mean?* • *Let us count: 5, 10, 15, 20, 25, 30, 35,…*	

Activity 3: Ask the learners to solve these problems in pairs.

- Learners should draw analogue clocks to show the two times and then calculate the answer.
- It is 8 o'clock. At half past 9 it will be break time. How long is it before break time?
- It is 1 o'clock. At quarter to 3 will be the end of school time. How long is it before the end of the school day?

4. Classwork activity – 25 minutes (See next page)

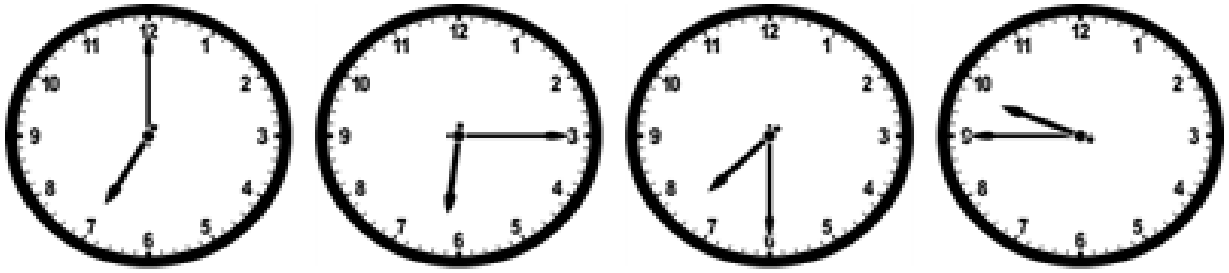
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 35: Time

Classwork

1. What is the time?



a. (7 o' cl;ock) b. (quarter past six) c. (half past seven) d. (quarter to 10)

2. Write the time as on a digital clock.
    a. Quarter past two (2:15)
    b. Quarter to nine (2:45)
    c. Half past nine (9:30)
    d. Seven o' clock (7:00)
3. I left my home at seven this morning and arrived back from school at three o' clock. For how many hours did I leave my home? (8 hours)

Homework

(Learners must draw clock faces – check that the short and long arms are in the correct place for each one.)

1. Draw a clock showing:
    a. quarter to three
    b. half past six
    c. quarter past 7
2. Draw a digital clock showing:
    a. quarter past 11
    b. 9 o'clock
    c. quarter to 5
3. We had a picnic from ten o'clock to half past three the afternoon on Sunday. How many hours was the picnic? (5½ hours)

Week 8

Lesson 36: Time and calendars

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backward 1.16 Mental Mathematics 4.1 Time

Lesson vocabulary: Time, calendars, religious festivals, public holidays, historical events, weeks, months.

Prior knowledge
Learners should be have been taught how to:

- Calculate length of time and passing of time using clocks.

Assessment
Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Ask the learners to start at 387, count on in twos to 401.

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	12 + __ = 17	5	6.	9 + __ = 18	9
2.	15 + __ = 19	4	7.	8 + __ = 15	7
3.	13 + __ = 16	3	8.	6 + __ = 15	9
4.	10 + __ = 15	5	9.	12 + __ = 14	2
5.	11 + __ = 18	7	10.	16 + __ = 20	4

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: 2014 calendars (per learner) (see printable).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 54a (Page 122)

Concepts:

- Read dates on calendars.
- Place birthdays, religious festivals, public holidays, historical events, school events on a calendar
- Use calendars to calculate and describe lengths of time in days or weeks or months.

Remediation: Give the learners a 1-month calendar. Tell them to show you: the month of the calendar, the year of the calendar, and the days of the week. Ask them: *How many days are in this month? Is there anybody that has his or her birthday in this month? When and on what day will it fall? How many days is it from today? How many days ago was it?* Work with the learners to help them understand how to give answers both as a number of days and a number of weeks and days.

Enrichment: See Enrichment Activity Cards

Activity 1: Individual activity.

- Give the learners a copy of this year's calendar and ask them to paste it in their maths books.
- Let them name and write the following on the calendar:
    - Their own birthday.
    - A friend's birthday.
    - School events (maths test days, school sports day.

Activity 2: Work in pairs

- Learner will use their calendars to calculate and describe lengths of time in days or weeks or months.
- Write these questions on the board and read them to the class.
- Each time the learners should give the answers both as a number of days and a number of weeks and days.
    - *How long is it between your birthday and your partner's birthday?*
    - *How long is it between the first maths test and the second maths test this term?*
    - *How long is it between the first day of school and the school sports day?*
    - *How long is it between the school sports day and the last day of term?*
    - Other questions about school events that your class entered on the calendar.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 36: Time - calendars

Classwork

1. Colour the South African public and religious holidays on a calendar.

South African public holidays calendar	
New Year's Day	Sunday 1 January
Public Holiday	Monday 2 January
Human Rights Day	Wednesday 21 March
Good Friday	Friday 6 April
Family Day	Monday 9 April
Freedom Day	Friday 27 April
Workers' Day	Tuesday 1 May
Youth Day	Saturday 16 June
Women's Day	Thursday 9 August
Public Holiday	Friday 10 August
Heritage Day	Monday 24 September
Day of Reconciliation	Sunday 16 December
Christmas Day	Tuesday 25 December
Day of Goodwill	Wednesday 26 December

2. Colour the block of your favourite month in yellow. (answers will vary)
3. How long is it between New Year's Day and Freedom day? (Answer both as a number of days and a number of weeks and days.)
4. How long is it between Youth day and Heritage day? (Answer both as a number of days and a number of weeks and days.)

Homework

1. Colour your family members' birthdays on the calendar you used for your classwork.
2. How many months of the year have no public/religious holidays or birthdays? Name them. (This answer will differ from learner to learner.)
3. How long is it between your birthday and another person in your family's birthday? (Answer both as a number of days and a number of weeks and days.)

Lesson 37: Mass

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backward 1.16 Mental Mathematics 4.3 Mass

Lesson vocabulary: Mass, kilograms, grams, light, heavy, lighter, heavier, measure, compare, balancing scale, record, order, compare

Prior knowledge

Learners should be have been taught how to:

- Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks, etc.
- Use language to talk about the comparison e.g. light, heavy, lighter, heavier.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 100s between 0 and 1 000. E.g. 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	14 – 7 =	7	6.	11 – 5 =	6
2.	7+ 6=	13	7.	10 + 9 =	19
3.	15 – 10 =	5	8.	12 – 8 =	4
4.	20 - 11 =	9	9.	13 + 6 =	19
5.	9+7=	16	10.	17 – 7 =	10

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Balancing scale (make one using a hanger and two packets if you need to), objects to measure mass (e.g. Book, cup, ruler, match box, watch, etc.)

DBE workbook activities relevant to this lesson:

- N/a

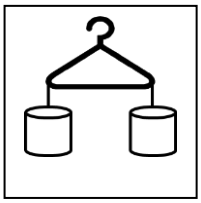
Concepts:

- Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks, etc.
- Use language to talk about the comparison e.g. light, heavy, lighter, heavier.

Remediation: Let learners practice measuring more objects using their balancing scales. *Estimation improves with practice.*

Enrichment: See Enrichment Activity Cards

Activity 1: Small Group Activity.



Use a balancing scale, a large number (20) of building blocks of the same mass, and a variety of objects such as a book, cup, ruler, match box, watch, for this practical activity. If you don't have a commercial scale, use a hanger.

Learners need to be taught that in order to compare masses of different objects, the same unit needs to be used. For example, if a ruler has a mass of 20 blocks and a pair of scissors has a mass of 20 marbles, you cannot say whether they have the same mass or not, or which one is heavier. Tell the learners that the blocks which are all the same size and mass will be used to measure.

1. Allow each child to hold a block and sense the mass of the object.
2. Now ask them to estimate the number of blocks that will balance the mass of the book.
3. Record in the appropriate column.
4. Place the book into one of the containers in the scale.
5. Add a sufficient number of blocks into the second container of the scale until both sides balance. Record.
6. Work out the difference.
7. Do the same with all the other objects in the same sequence, that is:

i) Estimate ⟶ record
ii) Measure ⟶ record
iii) Calculate the difference with each item. ⟶ record

	Mass in blocks		
	I estimate	**I measure**	**Difference**
book			
cup			
ruler			
match box			
watch			
?			

- Discuss the findings as a whole class.
- Discuss the importance of good estimates.

4. Classwork activity – 25 minutes (See next page)

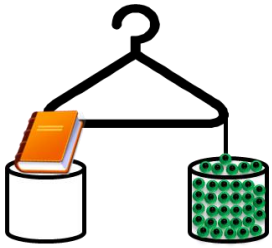
5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 37: Mass

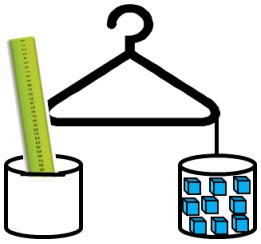
Classwork

1. What is the mass of the book?



(The book has a mass f 40 marbles.)

2. What is the mass of the ruler?



(The ruler has a mass of 9 unifix blocks.)

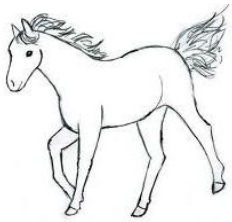
3. Can we compare the answers we got to 1 and 2 above? (No)
4. Why not? (In order to compare masses of different objects, the same unit needs to be used.)
5. Order from lightest to heaviest:

a. feather

b. stone

c. truck

d. horse



(feather, stone, horse, truck)

Homework

1. Draw a picture of a feather and a bird.
2. Which is lighter? The feather or the bird? (the feather)
3. Draw a picture of a horse and a man.
4. Which is heavier? The horse or the man?(the horse)

Lesson 38: Mass

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backward 1.16 Mental Mathematics 4.3 Mass

Lesson vocabulary: Mass, kilograms, , light, heavy, lighter, heavier, measure, compare, balancing scale, record, order, compare, calibrated, estimate, record, analogue scale

Prior knowledge

Learners should be have been taught how to:

- Estimate, measure, compare, order and record mass using a balancing scale and non-standard measures e.g. blocks, bricks, etc.
- Use language to talk about the comparison e.g. light, heavy, lighter, heavier.
- Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour.
- Measure own mass in kilograms using a bathroom scale.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 50s between 0 and 1 000.

Mental maths activity - 10 minutes

	Calculate the following:	**Answer**		Calculate the following:	**Answer**
1.	14+ 10=	24	6.	127-10=	117
2.	227-10=	217	7.	308+100=	408
3.	183+100=	283	8.	421-10=	411
4.	262-100=	162	9.	157+10=	167
5.	500+10=	510	10.	382-100=	482

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Bathroom scale, kitchen scale, objects that can be used to determine mass (e.g. brick, 2 l water bottles, etc.).

DBE workbook activities relevant to this lesson:

- DBE Workbook 2 Worksheet 44 (Pages 102 and 103)

Concepts:

- Estimate, measure, compare, order and record mass using of school, bag, books etc. using an analogue scale and Measure own mass in kilograms using a bathroom scale.
- Use language to talk about the comparison e.g. light, heavy, lighter, heavier.
- Compare, order and record the mass of commercially packaged objects which have their mass stated in kilograms, e.g. 2 kilograms of rice and 1 kilogram of flour.

Remediation: Practice more measuring activities. Point out that when they measure mass in kilograms they should try to round off the reading to the closest whole number. Go through the calibrations once again and help them with reading the mass of objects.

Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity.

- Show the learners an analogue scale.
- *Ask the learners what we use scales for?* (We use a scale to measure the mass of an object.)

- Show them where the zero on the scale is.
- Once you put an object on the scale e.g. a school bag, the needle moves to a number which is the mass of the object.
- This number shows you the mass of the object in kilograms. Write the word *kilograms* on the board say it aloud and ask learners to repeat *kilograms* after you. Show them how we write the abbreviation *kg*.
- Give learners a few objects to measure their mass. You can also make use of a kitchen scale.
- Children could also find out their own mass using the scale - but remember that "*weight*" may be sensitive issue for some learners – handle this matter sensitively.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 38: Mass

Classwork

1. Hold up an object that has a mass of 1 kg to get a sense of its mass.
2. Copy the table. Estimate and then measure the mass of the following objects using a bathroom scale and complete the table. Remember to complete one row at a time.

	Mass in kilograms		
	I estimate	I measure	Difference
School bag			
10 books			
Cushion			
3 bricks			
2 litre bottle of water			
Other			

(Answers will vary.)

3. Calculate the difference between your estimation and your measurement.
4. Record your answers in the table.

Homework

Find objects at home that have the following mass: Copy and complete the table.

Mass in kilograms	Item
1 kg	
1 kg	
2 kg	
5 kg	
10 kg	

(Answers will vary. Discuss)

Lesson 39: 50s – Patterns and problems

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backward 1.4 Describe, compare and order numbers 1.6 Problem solving techniques 1.16 Mental Mathematics

Lesson vocabulary: Whole numbers, smaller than, greater than, equal to, smallest, greatest, counting in fifties

Prior knowledge

Learners should be have been taught how to:

- Use techniques like number lines to solve problems.
- Extend number patterns.
- Sequences should show counting forwards and backwards in 5s, 10s to at least 200.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 4s from any number between 0 and 500. E.g. 104, 108, 112, …

Mental maths activity - 10 minutes

	If I count in 50s, give me the number before:	**Answer**		If I count in 50s, give me the number before:	**Answer**
1.	400	350	6.	250	200
2.	50	0	7.	100	50
3.	150	100	8.	450	400
4.	250	200	9.	500	450
5.	550	500	10.	200	150

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Money cut outs (coins) (see printables).

DBE workbook activities relevant to this lesson:

- DBE Workbook 2 Worksheet 56 (p126).

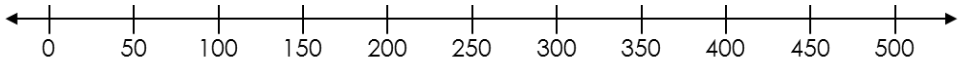
Concepts:

- Use techniques like number lines to solve problems.
- Extend number patterns.
- Sequences should show counting forwards and backwards in 50s, 100s to at least 1000.

Remediation: Give the learners 0-500 (graded in 50's) number line. Tell them to count forwards and backwards in 50s.Ask questions like: If I count in 50s, which number will: come after 100, come before 100,come after 400, come before 400,come after 150,come before 450.
Let them calculate this problem. I have seven 50c coins. *How much money do I have?* Learners use the cut-out coins to solve this.

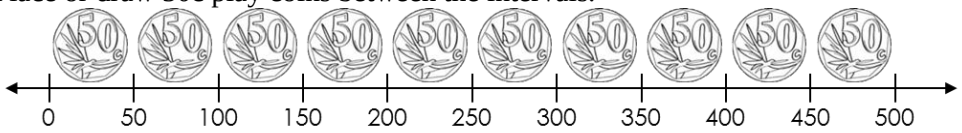
Enrichment: See Enrichment Activity Cards

Activity 1: Whole class activity
Draw this number line on the board:



- *Let us count forwards in 50s - 50, 150, 200, 250, 300, 350, 400, 450, 500"* Point to the numbers as the class is counting.
- *Let us count backwards in 50s - 500, 450, 400, 350, 300, 250, 200, 150, 50.* Point to the numbers as the class is counting.
- *What numbers do we get between 50 and 150?*

Activity 2:
Place or draw 50c play coins between the intervals.



- *Show me where 150c or R.50 will be on the line.*
- *Show me where is 450c or R4.50 will be on the line.*
- What is the total of: four 50c coins (R2), seven 50c coins (R3. 50), nine 50c coins (R4. 50)? Give your answers in Rands and cents.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

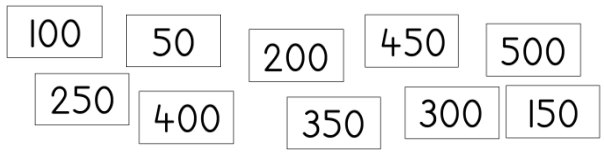
Term 2 Lesson 39: 50s – Patterns and problems

Classwork

1. Draw and complete the 50s pattern:
   0, 50, 100, _____ , _____ , _____ , _____, _____ , _____ ,_____ , 500
   (150, 200, 250, 300, 350, 400, 450)

2. Write the next numbers: 200, 250, _____ , _____, _____ (300, 350, 400)

3. Write these numbers from the biggest to the smallest:



   (500, 450, 400, 350, 300, 250, 200, 150, 100, 50)

4. I have nine 50c coins in my purse.
   a. How many cents do I have in total? (450c)
   b. How many rands do I have in total? (R4, 50)

Homework

1. Draw and label a 50s number line from 0 to 500.
2. Write the next three numbers: 400, 450, _____ , _____ , _____ (500, 550, 600)
3. When counting in 50s which number comes before 300? (250). After 300? (350)
4. When counting in 50s which number comes before 900? (850). After 900? (950)

Lesson 40: 100s – Patterns and problems

Teacher's notes

CAPS Topics: 1.1 Count objects 1.2 Count forwards and backward 1.4Describe, compare and order numbers 1.6 Problem solving techniques 1.16 Mental Mathematics

Lesson vocabulary: Whole numbers, smaller than, greater than, equal to, smallest, greatest, counting in hundreds

Prior knowledge

Learners should be have been taught how to:

- Use techniques like number lines to solve problems.
- Extend number patterns.
- Sequences should show counting forwards and backwards in 5s, 10s to at least 200.

Assessment

Refer to the assessment schedule for today's assessment activity.

1. Mental maths

Counting - 5 minutes

- Count forwards and backwards in 3s from any given number between 0 and 500. E.g. 401, 405, 409, …

Mental maths activity - 10 minutes

	If I count in 100s, give me the number before:	**Answer**		If I count in 100s, give me the number before:	**Answer**
1.	400	300	6.	250	150
2.	500	400	7.	100	0
3.	150	50	8.	450	350
4.	250	150	9.	800	700
5.	550	450	10.	200	100

2. Homework/Corrections – 15 minutes

Reflection/remediation based on previous day's work/homework.

3. Lesson content – concept development – 30 minutes

Resources: Money cut outs (coins) (see printables).

DBE workbook activities relevant to this lesson:

- DBE Worksheet 29 (pgs 66 & 67))

Concepts:

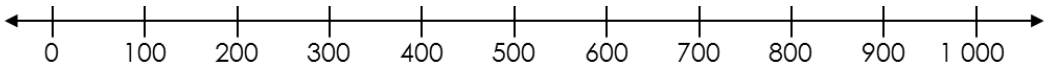
- Use techniques like number lines to solve problems.
- Extend number patterns.
- Sequences should show counting forwards and backwards in 50s, 100s to at least 1000.

Remediation: Give the learners 0-1000 (graded in 100s) number line. Ask them to count forwards and backwards in 100s.Ask questions like: If I count in 100s, which number will: come after 100, come before 200, come after 400, come before 400,come after 700,come before 1000.

Enrichment: See Enrichment Activity Cards

Activity 1:

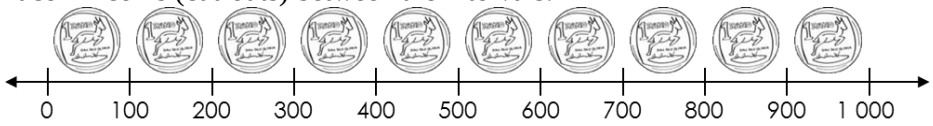
- Do this as a whole class activity with each child having their own apparatus (a number line marked in 100s (100 – 1000) number line. Ask the learners to count in 100s.



- forwards: 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000
- backwards: 900 800, 700, 600, 500, 400, 300, 200, 100
- *What numbers will be between 800 and 900? (801, 802....899),*
- *What numbers will be between 200 and 300 (201, 202, 203....299)?*

Activity 2:

Place R1 coins (cut-outs) between the intervals:



- *Show me where 300c or R3 will be on the line.*
- *Show me where 700c or R7will be on the line.*
- What is the total of: four R1 coins (R4), seven R1coins (R7), ten R1coins (R10)? Give your answers in Rands.

4. Classwork activity – 25 minutes (See next page)

5. Homework activity – 5 minutes (See next page)

6. Reflection on lesson

Term 2 Lesson 40: 100s – Patterns and problems

Classwork

1. Draw and complete the 100s number line:
   0, 100, _____ , _____ , _____ , _____, _____ , _____ ,_____ , _____ 1000 (200, 300, 400, 500, 600, 700, 800, 900)
2. Write the next numbers: 200, 300, _____ , _____, _____ (400, 500, 600)
3. Write these numbers from the biggest to the smallest: 500, 300, 100, 800,0, 600, 900, 1000, 200, 400, 700. (1000, 900, 800, 700, 600, 500, 400, 300, 200, 100, 0)
4. Write these numbers from the smallest to the biggest): 500, 300, 100, 800, 600, 900, 1000, 200, 400, 700. (100, 200, 300, 400, 500, 600, 700, 800, 900, 1000)
5. I have nine R1 coins in my purse.
   a. How many cents do I have in total? (900) .
   b. How many rands do I have in total? (R9.00)

Homework

1. Draw and label a 100s number line from 0 to 500.
2. Write the next three numbers: 400, 500, _____ , _____ , _____ (600, 700, 800)
3. When counting in 100s which number comes before 300? (200). After 300? (400)
4. When counting in 100s which number comes before 900? (800). After 900? (1000)

MENTAL MATHS CHALLENGE CARDS

Each term there will be a set of eight mental maths challenge cards. If you make them into cards and collect them over the course of 2014 you will have a set of one card per teaching week for a year.

Use of the mental maths challenge cards

Once a week learners should do mental maths in written form so that there is some record of your daily mental maths activities. You can use the **Mental Maths Challenge Cards** for this purpose.

Learners should not use concrete material to work out the answers in mental maths. If learners need to, let them use their fingers as a concrete aid during mental maths, but make a note of who they are and then spend time with them during remediation to help them with the basic number and operation skills. Mental maths skills improve hugely from Grade 1 to Grade 3. In Grade 1 learners might only manage 5 questions, especially when they have to write the answers, but by Grade 3 learners should manage 10 questions with written answers easily.

All cards have ten questions per card. Answer cards are also provided.

Maths Challenge Card 1

1) 233 + 4 =
2) 243 + 4 =
3) 273 + 4 =
4) 293 + 4 =
5) 353 + 4 =
6) 373 + 4 =
7) 303 + 4 =
8) 413 + 4 =
9) 483 + 4 =
10) 463 + 4 =

Maths Challenge Card 2

1) □ – 70 = 30
2) 100 – 50 = □
3) 20 + □ = 100
4) □ + 40 = 100
5) 100 – □ = 40
6) 90 – □ = 70
7) □ + 30 =100
8) □ + 80 = 90
9) 60 = 20 + □
10) 30 = □ - 40

Maths Challenge Card 3

1) 20 + 20 =
2) 200 + 200 =
3) 50 + 50 =
4) 25 + 25 =
5) 25 + 26 =
6) 25 + 24 =
7) 100 ÷ 2 =
8) 50 + 49 =
9) 50 + 51 =
10) 100 - 49 =

Maths Challenge Card 4

1) 54 + 9 =
2) 47 + 9 =
3) 27 + 9 =
4) 44 + 9 =
5) 28 + 9 =
6) 57 + 9 =
7) 75 + 9 =
8) 22 + 9 =
9) 88 + 9 =
10) 14 + 9 =

Maths Challenge Card 1 : Answers
What is 4 more than?
Number range 0-500

1) 237
2) 247
3) 277
4) 297
5) 357
6) 377
7) 307
8) 417
9) 487
10) 467

Maths Challenge Card 2 : Answers
Addition and subtraction of multiples of 10 to 100

1) 100
2) 50
3) 80
4) 60
5) 60
6) 20
7) 70
8) 10
9) 40
10) 70

Maths Challenge Card 3 : Answers
Doubling and halving

1) 40
2) 400
3) 100
4) 50
5) 51
6) 49
7) 50
8) 99
9) 101
10) 51

Maths Challenge Card 4 : Answers
Add 10 minus 1(breaking down 101)

1) 63
2) 56
3) 36
4) 53
5) 37
6) 66
7) 84
8) 31
9) 97
10) 23

Maths Challenge Card 5

1) 54 – 9 =
2) 47 – 9 =
3) 27 – 9 =
4) 44 – 9 =
5) 28 – 9 =
6) 57 – 9 =
7) 75 – 9 =
8) 22 – 9 =
9) 88 – 9 =
10) 14 – 9 =

Maths Challenge Card 6

1) 100 – 10 = □
2) 100 – 10 + 1 = □
3) 100 – 10 - 1 = □
4) 100 – 20 = □
5) 100 – 20 - 1 = □
6) 100 – 20 + 1 = □
7) 100 – 30 = □
8) 100 –30 - 1 = □
9) 100 – 30 + 1 = □
10) 100 – 40 - 1 = □

Maths Challenge Card 7

1) 100 -10 = □
2) 100 -11 = □
3) 100 -9 = □
4) 100 -20 = □
5) 100 -21 = □
6) 100 -19 = □
7) 100 -30 = □
8) 100 -31 = □
9) 100 -29 = □
10) 100 -40 = □

Maths Challenge Card 8

1) 97 + 5 = □
2) 97 - 5 = □
3) 102 - □ = 97
4) □ - 92 = 5
5) 178 - 4 = □
6) 178 + 4 = □
7) □ - 178 = 4
8) □ + 3 = 181
9) 181 – 3 =
10) □ + 178 = 181

Maths Challenge Card 5 : Answers
Subtract 10 and add 1 (breaking down 10)

1) 45
2) 38
3) 18
4) 35
5) 19
6) 48
7) 66
8) 13
9) 79
10) 5

Maths Challenge Card 6 : Answers
Subtract multiples of 10 and add or subtract 1

1) 90
2) 91
3) 89
4) 80
5) 79
6) 81
7) 70
8) 69
9) 71
10) 59

Maths Challenge Card 7 : Answers
Subtract multiples of 10 (then add or subtract 1)

1) 90
2) 89
3) 91
4) 80
5) 79
6) 81
7) 70
8) 69
9) 71
10) 60

Maths Challenge Card 8 : Answers
Use the relationship between Addition and Subtraction

1) 102
2) 92
3) 5
4) 97
5) 174
6) 182
7) 182
8) 178
9) 178
10) 3