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GROWING GAUTENG TOGETHER

Sesotho/English

Lenaneo le Ntlafaditsweng la Mmetse la Kereiti ya R Grade R Mathematics Improvement Programme



Wekshopo ya 8 • Workshop 8
Buka ya Mosebetsi ya Monkakarolo • Participant's Workbook

The Grade R Mathematics and Language Improvement Project is an initiative of the **Gauteng Department of Education** and its key partner, the **Gauteng Education Development Trust**.

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The Grade R Mathematics and Language Improvement Project is managed by **JET Education Services** with **UCT's Schools Development Unit** and **Wordworks** as technical partners.

The **Schools Development Unit (SDU)** at the **University of Cape Town (UCT)** is the mathematics technical partner to the Grade R Mathematics and Language Improvement Project. The SDU is a unit within UCT's School of Education that focuses on teachers' professional development in Mathematics, Science, Literacy/Language and Life Skills from Grade R to Grade 12. The SDU offers teacher qualifications and approved UCT short courses, school-based work, materials development and research to support teaching and learning in all South African contexts.

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Projeke ya Mmetse wa Kereiti ya R le Ntlatfatso ya Puo ke bohato ba pele ba **Lefapha la Thuto la Gauteng (Gauteng Department of Education)** le molekane wa lona wa sehlooho, **Gauteng Education Development Trust**.

Ntshetsopele le tlhahiso ya mehlodi ya thupelo le ya phaposi ya borutelo bakeng sa Projeke ya Mmetse wa Kereiti ya R le Ntlatfatso ya Puo di ile tsa tswelletswa ke tshehetso ka ditjhelete ya diprojeke e fanweng ke **United States Agency for International Development** le **Zenex Foundation**.

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DITEBOHO

Diteboho tse kgethehileng ho:

- Baofisiri ba Botsamaisi ba Kharikhulamo, Botsamaisi ba Thuto ya Matitjhere le Botsamaisi ba Thuto e Kgethehileng ba Lefapha la Thuto la Gauteng, bakeng sa nyehelo ya bona ntlatfatsoeng ya disebediswa tsa rona tsa thuto.
- Baofisiri le matitjhere a Western Cape Education Department (WCED) ka nyehelo ya bona bakeng sa ho kenngwa tshebetsong ka kotleho ha Grade R Mathematics Programme (*R-Maths*) mane Western Cape pakeng tsa 2016 le 2019.
- Sehlopha se ngolang sa *R-Maths*. Basebetsi le baeletsi ba SDU.



Lenaneo le Ntlatfaditsweng la Mmetse la Kereite ya R le ntlatfaditswe ho tloha ho *R-Maths*, e ileng ya phatlalatswa lekgetlo la pele ka 2017 ke Schools Development Unit, University of Cape Town. Tokelo ya kgatiso ya *R-Maths* e tshwerwe ke University of Cape Town.

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Overview

Purpose

This is the eighth of twelve Grade R Mathematics Improvement Programme workshops, which form part of the Gauteng Department of Education (GDE) Grade R Mathematics and Language Improvement Project.

The purpose of this workshop is to continue assisting teachers to implement the Maths Programme in their classrooms. Participants will have the opportunity to reflect on their observations. They will explore how the guiding principles of teaching maths in Grade R should inform their planning, teaching and assessment. They will also consider learner progress, and individual developmental and learning needs. The workshop explores the content for Term 3 Weeks 4–6 and its classroom implementation.

References to the Grade R Mathematics Content Areas are taken from the *Curriculum and Assessment Policy Statement (CAPS): Grade R Mathematics (Final Draft)*, 2011, Department of Basic Education, South Africa.

Learning outcomes

- ◆ To reflect on the implementation of Term 3 Weeks 1–3
- ◆ To explore play-based strategies to support teaching maths in Grade R
- ◆ To deepen the understanding of the Maths Programme's topics
- ◆ To reflect on challenges and find solutions to implementing the Maths Programme
- ◆ To map out the Maths Programme content to be taught in Term 3 Weeks 4–6

Workshop content

- ◆ Opening and reflection (1 hour)
 - ◆ Session 1: Measurement (1 hour)
- TEA
- ◆ Session 2: Measurement (continued) (1 hour)
 - ◆ Session 3: Revisiting Grade R maths topics (1 hour)
- LUNCH
- ◆ Session 4: Planning for teaching (1½ hours)
 - ◆ Closing activities (30 minutes)

Tjhebokakaretso

Sepheo

Ena ke ya borobedi ya diwekshopo tse leshome le metso e mmedi tsa Lenaneo le Ntlafaditsweng la Mmetse la Kereiti ya R (Lenaneo la Mmetse), tse etsang karolo ya Lefapha la Thuto la Gauteng (GDE) Projeke ya Mmetse wa Kereiti ya R le Ntlafatso ya Puo.

Sepheo sa wekshopo ena ke ho thusa matitjhere ho kenya tshebetsong Lenaneo la Mmetse ka diphaposing tsa bona tsa borutelo. Bankakarolo ba tla fumana monyetla wa ho ikgopotsa ka ditemoho tsa bona. Ba tla sibolla kamoo dintlhatheo tse tataisang ho ruta mmetse wa Kereiti ya R di lokelang ho tataisa moralo, ho ruta le tekanyetso ya bona ka teng. Hape ba tla lemoha kगतelopele ya baithuti, le ditlhoko tsa ho ithuta le tsa ntshetsopele tsa moithuti ka mong. Wekshopo ena e sibolla dikahare tsa Kotara ya 3 Dibeke tsa 4–6 le ho kenngwa tshebetsong ha tsona diphaposing tsa borutelo.

Dintlha tse buang ka Dikarolo tsa Dikahare tsa Mmetse wa Kereiti ya R di nkilwe ho *Setatemente sa Leano la Kharikhulamo le Tekanyetso (SLKT): Mmetse wa Kereiti ya R (Moralo wa Moshwelella)*, 2011, Lefapha la Thuto ya Motheo, Afrika Borwa.

Diphetho tsa ho ithuta

- ◆ Ho shebisisa ho kenya tshebetsong ha Kotara ya 3 Dibeke tsa 1–3
- ◆ Ho sibolla mawa a theilweng papading bakeng sa ho tshehetsa ho ruta mmetse Kereiting ya R
- ◆ Ho tebisa kutlwisiso ya dihlooho tsa Lenaneo la Mmetse
- ◆ Ho sekaseka diphephetso le ho fumana ditharollo bakeng sa ho kenya tshebetsong Lenaneo la Mmetse
- ◆ Ho ngola ka ho hlaka dikahare tsa Lenaneo la Mmetse tse lokelang ho rutwa Kotareng ya 3 Dibekeng tsa 4–6

Dikahare tsa wekshopo

- ◆ Pulo le boikgopotso (Hora e 1)
- ◆ Karolo ya 1: Mometho (Hora e 1)

TEYE

- ◆ Karolo ya 2: Mometho (o tswela pele) (Hora e 1)
- ◆ Karolo ya 3: Ho lekola hape dihlooho tsa mmetse wa Kereiti ya R (Hora e 1)

DIJO TSA MOTSHEARE

- ◆ Karolo ya 4: Ho etsa moralo bakeng sa ho ruta (Dihora tse 1½)
- ◆ Diketsahalo tsa ho kwala (Metsotso e 30)

Opening and reflection

1 hour

Here is the *Take back to school* task from Workshop 7.



Take back to school task (Workshop 7)

1. Use the Term 3 Weekly Planning Template in Appendix A to plan and implement Term 3 Weeks 1–3 of the Maths Programme.
2. Document how you used the '**Check that learners are able to**' observation list (in the eye box) during each of the teacher-guided activities.
3. Write an evaluation of what worked well, what did not work so well and what you could do differently to improve teaching and learning.
4. Bring your evaluation to the next workshop.



Activity 1

1. In your group, share your successes and challenges with implementing the Maths Programme in Term 3 Weeks 1–3.

2. Discuss your use of the '**Check that learners are able to**' observation list (in the eye box) during each of the teacher-guided activities.

3. Share strategies for improving teaching and learning for the challenges you identified.

4. Write the main points of your discussion on flipchart paper. Report back on your discussion to the large group.

Mosebetsi wa kgutlela le yona sekolong ke ona ho tswa ho Wekshopo ya 7.



Mosebetsi wa kgutlela le yona sekolong (Wekshopo ya 7)

1. Sebedisa Thempleiti ya Moralo wa Beke le beke wa Kotara ya 3 e ho Sehlomathiso A bakeng sa ho rera le ho kenya tshebetsong Kotara ya 3 Dibeke tsa 1–3 tsa Lenaneo la Mmetse.
2. Ngola fatshe kamoo o sebedisitseng lenane la temoho la **'Lekola hore baithuti ba kgona ho'** (lebokosong la leihlo) nakong ya ketsahalo ka nngwe e tataiswang ke titjhere.
3. Ngola tlhahlobo ya tse sebeditseng hantle, tse sa sebetsang hantle hakaalo le tseo o ka beng o di entse ka tsela e fapaneng bakeng sa ho ntlafatsa ho ruta le ho ithuta.
4. Tloo le tlhahlobo ya hao ho wekshopo e latelang.



Ketsahalo ya 1

1. Sehlotshwaneng sa lona, abelanang ka dikatleho le diphephetso tsa lona ha le kenya tshebetsong Lenaneo la Mmetse ho Kotara ya 3 Dibeke tsa 1–3.

2. Buisanang ka tshebediso ya lona ya lenane la tekolo (lebokosong la mahlo) la **'Lekola hore baithuti ba kgona ho'** nakong ya e nngwe le e nngwe ya diketsahalo tse tataiswang ke tijhere.

3. Abelana ka mawa bakeng sa ho ntlafatsa ho ruta le ho ithuta bakeng sa diphephetso tseo o di hlwaileng.

4. Ngola dintlha tsa sehlooho tsa puisano ya lona pampiring ya fliptjhate. Tlalehang puisano ya lona sehlopheng se seholo.



Video 1

Watch the video of a teacher working with a small group of learners during the teacher-guided activity in Term 3 Week 3.

Observe how the teacher:

- ◆ has prepared the small group activity
- ◆ manages the transitions between the eight tasks
- ◆ uses questions to guide the learners
- ◆ records her observations of what has been learnt using the **'Check that learners are able to'** observation list.



Video ya 1

Shebellang video ya titjhere a sebeta le sehlotshwana sa baithuti nakong ya ketsahalo e tataiswang ke titjhere ho Kotara ya 3 Beke ya 3.

Lemoha kamoo titjhere:

- ◆ a hlophisitseng ketsahalo ya dihlotshwana ka teng
- ◆ a laolang diphetoho pakeng tsa mesebetsi e robedi
- ◆ a sebedisang dipotso ho tataisa baithuti
- ◆ a rekotang ditemoho tsa hae tsa se ithutilweng a sebedisa lenane la ditemoho la **'Lekola hore baithuti ba kgona ho'**.

Session 1: Measurement

1 hour

In Terms 1 and 2, time and length were the focus of Measurement. This session will revisit these topics and expand the discussion of Measurement to include mass, and capacity and volume.

Measurement is about finding out 'how much' there is of something. In Grade R, the focus of measurement is on:

- ◆ time
- ◆ length
- ◆ mass
- ◆ capacity and volume.

In the next activity, you will explore each of these measurement concepts.

Learners in Grade R measure informally, by direct comparison and by using non-standard units of measurement. Learners develop their estimation skills during informal measurement activities. They estimate how long or how heavy they think something is and then use a non-standard measuring instrument to find out how accurate their estimation was.



Activity 2

With your group, move to the measurement workstation you have been assigned to and answer the questions in your *Participant's Workbook*. Rotate to the next workstation when you receive the signal.

Length

Refer to page 210 of the *Concept Guide*. What vocabulary did you use during this activity?

Karolo ya 1: Mometho

Hora e 1

Ho dikotara tsa 1 le 2, nako le bolelele e ne e le tsepamiso ya Mometho. Karolo ena e tla lekola hape dihlooho tse na mme e atolose puisano ya Mometho ho kenyeletsa boima, mothamo le volumo.

Mometho o mabapi le ho fumana hore ho na le 'bokae' ba ntho e itseng. Kereiting ya R, tsepamiso ya mometho e ho:

- ◆ nako
- ◆ bolelele
- ◆ boima
- ◆ mothamo le volumo.

Ketsahalong e latelang, o tla sibolla lereo ka leng la a latelang a mometho.

Baithuti ba Kereiti ya R ba metha ka tsela e sa hlophiswang, ka ho bapisa ka kotloloho le ka ho sebedisa diyuniti tse sa hlophiswang tsa mometho. Baithuti ba ntshetsa pele bokgoni ba bona ba kakanyo nakong ya diketsahalo tsa ho metha ho sa hlophiswang. Ba akanya bolelele kapa boima ba ntho e itseng mme ebe ba sebedisa sesebediswa se sa hlophiswang sa ho metha ho fumana hore kakanyo ya bona e ne e nepahetse haka.



Ketsahalo ya 2

Mmoho le sehlotshwana sa hao, eyang seteisheneng sa tshebetso sa ho metha seo le se abetsweng mme le arabe dipotso ka hara *Buka ya Mosebetsi ya Monkakarolo*. Fetelang seteisheneng sa tshebetso se latelang ha le supiswa ho etsa jwalo.

Bolelele

Balang leqepheng la 211 la *Tataiso ya Mareo*. Le sebedisitse tlotlontswe efe nakong ya ketsahalo ena?

Find the answer to each of the following and identify the non-standard unit of measurement you used.

	Estimate (guess)	Non-standard unit of measurement	Length
1. Who has the longest shoe?			
2. Who is the shortest?			
3. How long is your <i>Participant's Workbook</i> ?			
4. Who has the longest arm?			
5. How wide is your table?			
6. How many hand spans is the height of the door?			

Capacity and volume

Refer to page 210 of the *Concept Guide*. What vocabulary did you use during this activity?

Find the answer to each of the following and identify the non-standard unit of measurement you used.

	Estimate (guess)	Non-standard unit of measurement	Capacity or volume
1. Which two containers of water will fill the jug?			
2. Which bottle holds the most cups of water?			
3. How many cups of water do you think it will take to fill the vase?			
4. How many cups of water will it take to half-fill the vase?			
5. Which container on the table has the least amount of water in it?			
6. Which two containers have the same amount of water?			

Batlang karabo ya e nngwe le e nngwe ya tse latelang mme le hlwaye yuniti e sa hlophiswang ya mometho eo le e sebedisitseng.

	Akanya (noha)	Yuniti e sa hlophiswang mometho	Bolelele
1. Ke mang ya nang le seeta se setelele ka ho fetisisa?			
2. Ke mang ya mokgutshwane ho fetisisa?			
3. <i>Buka ya Mosebetsi ya Monkakarolo</i> ya hao e telele hakae?			
4. Ke mang ya nang le sephaka se setelele ka ho fetisisa?			
5. Tafole ya hao e sephara hakae?			
6. Bophahamo ba lemati bo lekana le matsoho a makae a otlolotsweng?			

Mothamo le volumo

Shebang leqepheng la 211 la *Tataiso ya Mareo*. Ke tlotlontswe efe eo le e sebedisitseng nakong ya ketsahalo eo?

Batlang karabo ya e nngwe le e nngwe ya tse latelang mme le hlwaye yuniti e sa hlophiswang ya mometho eo le e sebedisitseng.

	Akanya (noha)	Yuniti e sa hlophiswang ya mometho	Mothamo kapa volumo
1. Ke ditshelo dife tse pedi tsa metsi tse tlang ho tlatsa jeke ena?			
2. Ke botlolo efe e tshelang dikopi tse ngata ka ho fetisisa tsa metsi?			
3. O nahana hore ke dikopi tse kae tsa metsi tse ka tlatsang vase eo?			
4. Ke dikopi tse kae tsa metsi tse ka tshelang halofo ya vase?			
5. Ke setshelo sefe se tafoleng se nang le metsi a manyane ka ho fetisisa?			
6. Ke ditshelo dife tse pedi tse nang le metsi a lekanang?			

Mass

Refer to page 210 of the *Concept Guide*. What vocabulary did you use during this activity?

Find the answer to each of the following and identify the non-standard unit of measurement you used.

	Estimate (guess)	Non-standard unit of measurement	Mass
1. Whose handbag in your group is the heaviest?			
2. Which book in your group is the lightest?			
3. Who is the heaviest in your group? Who is the lightest?			
4. Which fruit is the heaviest?			
5. Which bottle weighs the most?			

Time

Refer to page 210 of the *Concept Guide*. What vocabulary did you use during this activity?

Find the answer to each of the following and identify the non-standard unit of measurement you used.

	Estimate (guess)	Non-standard unit of measurement	Time
1. Who arrived the earliest this morning?			
2. Who arrived the latest?			
3. How long does it take to walk from your chair to the car?			
4. Who walked the fastest from their chair to the car?			
5. Would it take longer to eat lunch or drive to school?			

Boima

Shebang leqepheng la 211 la *Tataiso ya Mareo*. Ke tlotlontswe efe eo le e sebedisitseng nakong ya ketsahalo ena?

Batlang karabo ya e nngwe le e nngwe ya tse latelang mme le hlwaye yuniti e sa hlophiswang ya mometho eo le e sebedisitseng.

	Akanya (noha)	Yuniti e sa hlophiswang ya mometho	Boima
1. Ke mokotlana wa mang sehlotshwaneng sa lona o leng boima ka ho fetisisa?			
2. Ke buka ya mang sehlotshwaneng sa lona e bobebe ka ho fetisisa?			
3. Ke mang ya leng boima ka ho fetisisa sehlotshwaneng sa lona? Ke mang ya bobebe ka ho fetisisa?			
4. Ke tholwana efe e boima ka ho fetisisa?			
5. Ke botlolo efe e boima ka ho fetisisa?			

Nako

Shebang leqepheng la 211 la *Tataiso ya Mareo*. Ke tlotlontswe efe eo le e sebedisitseng nakong ya ketsahalo ena?

Batlang karabo ya e nngwe le e nngwe ya tse latelang mme le hlwaye yuniti e sa hlophiswang ya mometho eo le e sebedisitseng.

	Akanya (noha)	Yuniti e sa hlophiswang ya mometho	Nako
1. Ke mang ya fihlileng hoseng ho feta ba bang kajeno?			
2. Ke mang ya fihlileng moraorao?			
3. Ho nka nako e kae ho tsamaya ho tloha setulong sa hao ho ya koloing?			
4. Ke mang ya tsamaileng ka potlako ho fetisisa ho tloha setulong sa hae ho ya koloing?			
5. Na ho nka nako e telele ho ja dijo tsa motsheare kapa ho kganna ho ya sekolong?			

Session 2: Measurement (continued)

1 hour



Activity 3

Consider the measurement activities that you have just experienced in Activity 2. How is your classroom set up to provide similar learning experiences?

In Grade R, Measurement focuses on estimating, weighing, comparing and ordering objects according to how heavy or light they are.

Learners may find it difficult to understand that a small object can be heavier than a larger object. They need many opportunities to explore small heavy objects, small light objects, big heavy objects and big light objects.



Video 2

Watch the video of comparing the mass of one object against another.

Discuss these questions.

- ◆ What do you see happening?
- ◆ What concepts are being taught and learnt?
- ◆ What skills are being practised?
- ◆ What are the learners doing and saying?
- ◆ How is the teacher mediating learning?

Karolo ya 2: Mometho (o tswela pele)

Hora e 1



Ketsahalo ya 3

Sekasekang diketsahalo tsa mometho tseo le kopaneng le tsona ho Ketsahalo ya 2. Phaposi ya hao ya borutelo e hlophisitswe jwang ho fana ka boiphihlelo bo kang bona ba ho ithuta?

Kereiting ya R, Mometho o tsepame ho ho akanya, ho metha boima, ho bapisa le ho hlahlamanya dintho ho ya kamoo di leng boima kapa bobebe ka teng.

Baithuti ba ka fumana ba thatafallwa ke ho utlwisisa hore ntho e nyane e ka nna ya eba boima ho feta ntho e kgolo. Ba hloka menyetla e mengata ya ho sibolla dintho tse nyane tse boima, dintho tse nyane tse bobebe, dintho tse kgolo tse boima le dintho tse kgolo tse bobebe.



Video ya 2

Shebellang video ya ho bapisa boima ba ntho e nngwe le ba e nngwe.

Buisanang ka dipotso tsena.

- ◆ Le bona ho etsahala eng?
- ◆ Ke mareo afe a rutwang le ho ithutwa?
- ◆ Ke bokgoni bofe bo sebediswang?
- ◆ Ke sefe seo baithuti ba se etsang le ho se bua?
- ◆ Titjhere o kena jwang dipakeng ho thusa ho ithuta?

Session 3: Revisiting Grade R maths topics

1 hour

As you know, the Maths Programme is designed to introduce new knowledge and build on this progressively across the weeks and terms. During this session, we will revisit Content Areas and topics that we have dealt with in previous workshops and we will discuss how these topics have been presented in the Maths Programme.



Activity 4

The facilitator will give a topic to each group to discuss.

You are required to prepare a presentation on your understanding of the topic and how the Maths Programme deals with the development of the concepts and skills related to it. Read the relevant information associated with your topic in the *Concept Guide* (pages 138–219).

You will receive ONE of the following topics:

1. How are shapes introduced and consolidated in the Maths Programme? Refer to Term 3, Week 4, Days 1, 2 and 3 to support your discussion.
2. Position and direction are difficult concepts for young children to grasp. How does the Maths Programme present these topics in Terms 1, 2 and 3? Refer to Term 3, Week 4, Days 4 and 5 to support your discussion.
3. Term 3, Week 4, Day 5 deals with the topic of symmetry. Explain your understanding of this topic. Share your experiences of teaching symmetry and how your learners have demonstrated their understanding of it.
4. Dot cards are used throughout the Maths Programme. Discuss the value of using this resource and if/how it contributes to building number concept. Refer to Term 3, Weeks 4 and 6 to support your discussion.
5. Discuss the routine that is used to introduce a new number in the Maths Programme. Explain how this routine builds on and consolidates the development of number concept. Refer to Term 3, Week 6 to support your discussion.

Karolo ya 3: Ho lekola hape dihlooho tsa mmetse wa Kereiti ya R

Hora e 1

Jwalokaha o tseba, Lenaneo la Mmetse le etseditswe ho tsebisa tsebo e ntjha le ho ahella ho yona jwalo ha dibeke le dikotara di ntse di tsamaya. Nakong ya karolo ena, re tla etela hape Dikarolo tsa Dikahare le dihlooho tseo re ileng ra sebetsana le tsona diwekshopong tse fetileng mme re tla buisana ka kamoo dihlooho tsena di hlahisitsweng ka teng ho Lenaneo la Mmetse.



Ketsahalo ya 4

Motsamaisi o tla fa sehlotshwana ka seng sehlooho seo ba lokelang ho buisana ka sona.

Le lokela hore le lokise nehelano ka kutlwisiso ya lona ya sehlooho seo le kamoo Lenaneo la Mmetse le sebetsanang le ntshetsopele ya mareo le bokgoni tse tsamaelanang le yona. Balang tlhahisoleseding e loketseng e tsamaelanang le sehlooho sa lona ho *Tataiso ya Mareo* (maqephe a 138–219).

Le tla fumana SE LE SENG sa dihlooho tse latelang:

1. Dibopeho di tsebiswa le ho kgobokanngwa jwang ho Lenaneo la Mmetse? Shebang ho Kotara ya 3, Beke ya 4, Matsatsi a 1, 2 le 3 ho tshehetsa puisano ya lona.
2. Boemo le tshupiso ke mareo a thata bakeng sa bana ba banyenyane ho ka a utlwisisa. Lenaneo la Mmetse le hlahisa jwang dihlooho tsena ho Dikotara tsa 1, 2, le 3? Shebang ho Kotara ya 3, Beke ya 4, Matsatsi a 4 le 5 ho tshehetsa puisano ya lona.
3. Kotara ya 3, Beke ya 4, Letsatsi la 5 le sebetsana le sehlooho sa molahare. Hlalosa kutlwisiso ya lona ya sehlooho sena. Abelanang ka boitsebelo ba lona ba ho ruta molahare le kamoo baithuti ba lona ba bontshitseng kutlwisiso ya ona ka teng.
4. Dikarete tsa matheba di sebediswa ho Lenaneo la Mmetse lohle. Buisanang ka molemo wa ho sebedisa sesebediswa sena le hore se nyehela jwang ho aheng kgopolo ya nomoro. Shebang Kotara ya 3, Dibeke tsa 4 le 6 ho tshehetsa puisano ya lona.
5. Buisanang ka mokgwatlwaelo o sebediswang ho tsebisa nomoro e ntjha ho Lenaneo la Mmetse. Hlalolang kamoo mokgwatlwaelo ona o ahellang le ho kgobokanya ntshetsopele ya kgopolo ya nomoro ka teng. Shebang ho Kotara ya 3, Beke ya 6 ho tshehetsa puisano ya lona.

6. Explain how word problems are used to teach addition, subtraction, grouping (multiplication) and equal sharing (division). Discuss the importance of the use of language and the structure of the word problem. Also included a motivation for the use of fingers and concrete apparatus during problem-solving activities. Refer to Week 6, Day 5 and the teacher-guided activities to provide examples.
7. How does the Maths Programme facilitate learning how to sequence/order the counting numbers (oral counting)? Consider each of the resources below to support your discussion:
- ◆ songs and rhymes
 - ◆ number washing line
 - ◆ jumping tracks
 - ◆ number symbol cards.
- How do these activities link to the concept of ordinal numbers? Refer to Term 3, Week 6 for examples to support your discussion.
8. A real understanding of counting is achieved when learners are able to count each object in a collection and know that the last count represents the total number of the collection. This is a difficult concept for learners to grasp. How does the Maths Programme provide opportunities for learners to develop the concept of cardinality?

6. Hlalolang kamoo dipalo tsa mantswa di sebediswang ka teng ho ruta ho kopanya, ho tlosa, ho bea ka dihlopha (ho atisa) le ho aba ka ho lekana (ho arola). Buisanang ka bohlokwa ba ho sebedisa puo le sebopeho sa palo ya mantswa. Hape kenyeletsang kgothaletso bakeng sa tshebediso ya menwana le dintho tse tshwarehang nakong ya diketsahalo tsa ho rarolla bothata. Shebang ho Beke ya 6, Letsatsi la 5 le diketsahalo tse tataiswang ke titjhere ho fana ka mehlala.

7. Lenaneo la Mmetse le tsamaisa jwang ho ithuta ho hlahlamanya/bea ka tatelano dinomoro tsa ho bala (ho bala ka molomo)? Nahanang ka sesebediswa ka seng ho tse ka tlase mona bakeng sa ho tshehetsa puisano ya lona:
 - ◆ dipina le diraeme
 - ◆ mola wa ho aneha dinomoro
 - ◆ ho tlola diporo
 - ◆ dikarete tsa matshwao a dinomoro.
 Diketsahalo tsena di amana jwang le kgopolo ya dinomoro tsa boemo? Shebang ho Kotara ya 3, Beke ya 6 bakeng sa mehlala ho tshehetsa puisano ya lona.

8. Kutlwisiso ya nnete ya ho bala e fihlellwa ha baithuti ba kgona ho bala ntho ka nngwe pokellong le ho tseba hore palo ya ho qetela e emetse lenane lohle la pokello eo. Ena ke kgopolo e thata hore baithuti ba ka e utlwisisa. Lenaneo la Mmetse le fana jwang ka menyetla ho baithuti hore ba utlwisise kgopolo ya hore dintho di kae ka palo?

Session 4: Planning for teaching

1½ hours

It is important to plan and prepare thoroughly for each week. This will allow you to feel confident about what you are doing and help you to focus on teaching and working with the learners. As you have already experienced in Terms 1 and 2, the Maths Programme is carefully structured, and the maths content is presented in a progressive developmental sequence. It has been designed to ensure that all the Grade R Mathematics content and skills are covered and learners are well prepared for Grade 1. Teachers need to be cautious about selecting activities from different weeks and leaving other activities out.



Activity 5

1. In your group, complete the planning templates for Term 3 Weeks 4–6 (Appendix A).
2. Your group will present an overview of your planning discussion to the other groups. Note the main points of your discussion on flipchart paper. Include answers to the following questions:
 - ◆ How could you work with a colleague to prepare for each week?
 - ◆ How is the week structured?
 - ◆ How do the topics build on previous lessons?
 - ◆ Do the whole class activities successfully open the way for discussion and exploration of new knowledge?
 - ◆ How does the teacher-guided activity provide opportunities for the teacher to assess and support the learners?
 - ◆ Do the independent small group activities allow for adequate practice of new knowledge and skills?

Karolo ya 4: Ho etsa moralo bakeng sa ho ruta

Dihora tse 1½

Ho bohlokwa ho rera le ho lokisetsa beke ka nngwe ka ho phethahala. Sena se tla o dumella ho ikutlwa o ena le boitshepo ka seo o se etsang mme se o thuse ho tsepama ho ho ruta le ho sebetsa le baithuti. Kaha o se o ithutile ho Kotara ya 1 le 2, Lenaneo la Mmetse le bopilwe ka hloko, mme dikahare tsa mmetse di hlahisitswe ka tatelano ya ntshetsopele e tswelang. Le radilwe ho netefatsa hore dikahare tsohle le bokgoni tsa Mmetse wa Kereiti ya R di kenyeleditswe mme baithuti ba itokiseditse hantle bakeng sa Kereiti ya 1. Matitjhere a hloka ho ela hloko mabapi le ho kgetha diketsahalo dibekeng tse fapaneng mme ba siye diketsahalo tse ding.



Ketsahalo ya 5

1. Sehlotshwaneng sa lona, tlatsang dithempleiti tsa moralo bakeng sa Kotara ya 3 Dibeke tsa 4–6 (Sehlomathiso A).
2. Sehlotshwana sa lona se tla nehelana ka tjebokakaretso ya puisano ya lona ya ho rera ho dihlotshwana tse ding. Ngolang dintlha tsa sehloho tsa puisano ya lona pampiring ya fliptjhate. Kenyeletsang dikarabo tsa dipotso tse latelang:
 - ◆ O ka sebetsa jwang le mosebetsimmoho ho itokisetsa beke ka nngwe?
 - ◆ Beke eo e hlophisitswe jwang?
 - ◆ Dihloho di ahella jwang ho dithuto tse fetileng?
 - ◆ Na diketsahalo tsa tlelase yohle di bula ka katleho tsela bakeng sa dipuisano le tshibollo ya tsebo e ntjha?
 - ◆ Ketsahalo e tataiswang ke titjhere e fana jwang ka menyetla bakeng sa titjhere ho lekola le ho tshehetsa baithuti?
 - ◆ Na diketsahalo tsa dihlotshwana tse ikemetseng di dumella boikwetliso bo lekaneng ba tsebo e ntjha le bokgoni?

Closing activities

30 minutes



Activity 6

Workshop reflection: Take a few minutes to reflect on the day. Page through your *Participant's Workbook* to remind yourself of what was covered. Write down your thoughts.

Share your reflections with the large group.



Take back to school task

1. Use *Activity Guide: Term 3* to plan and implement Term 3 Weeks 4–6 of the Maths Programme.
2. Write comments in the book that you use to keep track of each learner's progress (learner observation book). Use the '**Check that learners are able to**' observation list (eye box) during each of the teacher-guided activities to guide your observations and comments.
3. Make notes of what worked well, what did not work well and how you resolved any challenges during your implementation of Term 3 Weeks 4–6.
4. Bring your learner observation book and the notes you made when reflecting on each day's teaching to the next workshop.

Evaluation

Complete the Evaluation Form.



Ketsahalo ya 6

Boikgopotso ba wekshopo: Nka metsotso e mmalwa ho ikgopotsa ka letsatsi leo. Phetla *Buka ya Mosebetsi ya Monkakarolo* ya hao ho ikgopotsa ka tse rutilweng. Ngola mehopolo ya hao fatshe.

Abelanang ka boikgopotso ba lona mmoho le sehlopha se seholo.



Mosebetsi wa kgutlela le yona sekolong

1. Sebedisa *Tataiso ya Diketsahalo: Kotara ya 3* bakeng sa ho rera le ho kenya tshebetsong Kotara ya 3 Dibeke tsa 4–6 tsa Lenaneo la Mmetse.
2. Ngola ditshwaelo ka hara buka eo o e sebedisang ho latela kgatelopele ya moithuti ka mong (buka ya temoho ya moithuti). Sebedisa lenane la ditemoho (lebokoso la leihlo) la '**Lekola hore baithuti ba kgona ho**' nakong ya ketsahalo ka nngwe ya tse tataiswang ke titjhere bakeng sa ho tataisa ditemoho le ditshwaelo tsa hao.
3. Etsa dinoutso tsa dintho tse sebeditseng hantle, tse sa sebetsang hantle le kamoo o ileng wa rarolla diphephetso tse itseng nakong ya ho kenya tshebetsong ha Kotara ya 3 Dibeke tsa 4 –6.
4. Tloo le buka ya hao ya ditemoho tsa moithuti le dinoutso tseo o di entseng ha o ntse o ikgopotsa ho ruta ha letsatsi ka leng ho wekshopo e latelang.

Tlhahlobo

Tlatsa Foromo ya Tlhahlobo.

APPENDIX A: TERM 3 WEEKLY PLANNING TEMPLATE

Term 3: Activity Plan: Week ____

CONTENT AREA:				
TOPIC:				
INTRODUCE NEW KNOWLEDGE:				
PRACTISE:				
Whole class activities		Teacher-guided activity	Workstation activities (independent small group activities)	
Day 1			Activity 1	
Day 2			Activity 2	
Day 3			Activity 3	
Day 4			Activity 4	
Day 5				

SEHLOMATHISO A: KOTARA YA 3 THEMPLEITI YA MORALO WA BEKE LE BEKE

Kotara ya 3: Moralo wa Ketsahalo: Beke ya ____

KAROLO YA DIKAHARE:				
SEHLOOHO:				
TSEBISA TSEBO E NTJHA:				
HO ETSA:				
Diketsahalo tsa tlelase yohle		Ketsahalo e tataiswang ke titjhere	Diketsahalo tsa diteisheneng tsa tsebetso (diketsahalo tsa dihlotshwana tse ikemetseng)	
Letsatsi la 1			Ketsahalo ya 1	
Letsatsi la 2			Ketsahalo ya 2	
Letsatsi la 3			Ketsahalo ya 3	
Letsatsi la 4			Ketsahalo ya 4	
Letsatsi la 5				

Term 3: Activity Plan: Week ____

CONTENT AREA:				
TOPIC:				
INTRODUCE NEW KNOWLEDGE:				
PRACTISE:				
Whole class activities		Teacher-guided activity	Workstation activities (independent small group activities)	
Day 1			Activity 1	
Day 2			Activity 2	
Day 3			Activity 3	
Day 4			Activity 4	
Day 5				

Kotara ya 3: Moralo wa Ketsahalo: Beke ya ____

KAROLO YA DIKAHARE:				
SEHLOOHO:				
TSEBISA TSEBO E NTJHA:				
HO ETSA:				
Diketsahalo tsa tlelase yohle		Ketsahalo e tataiswang ke titjhere	Diketsahalo tsa diteisheneng tsa tshebetso (diketsahalo tsa dihlotswana tse ikemetseng)	
Letsatsi la 1			Ketsahalo ya 1	
Letsatsi la 2			Ketsahalo ya 2	
Letsatsi la 3			Ketsahalo ya 3	
Letsatsi la 4			Ketsahalo ya 4	
Letsatsi la 5				

Term 3: Activity Plan: Week ____

CONTENT AREA:				
TOPIC:				
INTRODUCE NEW KNOWLEDGE:				
PRACTISE:				
Whole class activities		Teacher-guided activity	Workstation activities (independent small group activities)	
Day 1			Activity 1	
Day 2			Activity 2	
Day 3			Activity 3	
Day 4			Activity 4	
Day 5				

Kotara ya 3: Moralo wa Ketsahalo: Beke ya ____

KAROLO YA DIKAHARE:				
SEHLOOHO:				
TSEBISA TSEBO E NTJHA:				
HO ETSA:				
Diketsahalo tsa tlelase yohle		Ketsahalo e tataiswang ke titjhere	Diketsahalo tsa diteisheneng tsa tshebetso (diketsahalo tsa dihlotswana tse ikemetseng)	
Letsatsi la 1			Ketsahalo ya 1	
Letsatsi la 2			Ketsahalo ya 2	
Letsatsi la 3			Ketsahalo ya 3	
Letsatsi la 4			Ketsahalo ya 4	
Letsatsi la 5				

Workshop 8 Evaluation Form

1. Did the workshop meet your expectations?

2. What did you learn in this workshop that helped you the most?

3. Was there anything that you did not like or had difficulty understanding?

4. How will you apply what you have learnt in your Grade R classroom?

5. Do you have any suggestions for improving further workshops?

Foromo ya Tlhahlobo ya Wekshopo ya 8

1. Na wekshopo ena e fihletse ditebello tsa hao?

2. O ithutile eng ho wekshopo ena se o thusitseng ka ho fetisisa?

3. Na ho na le seo o sa kang wa se rata kapa seo o ileng wa thatafallwa ke ho se utlwisisa?

4. O tla sebedisa jwang seo o ithutileng sona mona phaposeng ya hao ya borutelo ya Kereiti ya R?

5. Na o na le ditlhaliso tse itseng bakeng sa ho ntlafatsa diwekshopo tse ding tse tlang?
