



GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GGT 2030
GROWING GAUTENG TOGETHER

Setswana/English

Lenaneotokafatso la Dipalo tša Mophato R Grade R Mathematics Improvement Programme



**Thutano 11 • Workshop 11
Kaedi ya Mofathosi • Facilitator's Guide**

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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Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R ke itshimololelo ya **Lefapha la Thuto la Gauteng (Gauteng Department of Education)** mmogo le badirisani ba bona ba botlhokwa, **Gauteng Education Development Trust**.

Tlhabolole le tthagiso ya didiriswa tsa katiso le phaposiborutelo ya Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R e kgonthitswe ke tshegetso ya **United States Agency for International Development** le **Zenex Foundation** ka matlole.

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Schools Development Unit (SDU) kwa **University of Cape Town (UCT)** ke badirisani ba setegeniki ba dipalo go Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R. SDU ke yuniti e e ka tlase ga School of Education sa UCT e e totileng tokafatso ya boporofesenele jwa barutabana mo Dipalong, Bonetetshing, Kitsokwalo/Puo le Dikgonotshelo go simolola ka Mophato R go fitlha ka Mophato 12. SDU e neelana ka thuto ka boithutedi jwa borutabana le dithutokhutshwe tse di dumeletsweng tsa UCT, tiro ya kwa sekolong, tthagiso ya dibukana le dipatlisiso go tshegetsa go ruta le go ithuta mo makaelong otlhe a Aforikaborwa.

DITEBOGO

Ditebogo di lebiswa segolobogolo go:

- Batlhankedi ba Lefapha la Thuto la Gauteng mo Lephatheng la Kharikhulamo, Bokaedi jwa Thuto ya Barutabana le Thuto e e Kgethegileng ka ntlha ya seabe sa bona go dirisa dibukana tseno tsa rona.
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- Setlhophla se se kwalang *R-Maths*: Badiri ba SDU le bagakolodi.



Porojeke ya Lenaneotokafatso la Dipalo tsa Mophato R le tserwe go tswa mo *R-Maths*, e phasaladitswe lwantlha ka 2017 ke Schools Development Unit, ya University of Cape Town. Tetlokhopi ya *R-Maths* e tshwerwe ke University of Cape Town.

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Overview

Purpose

This is the eleventh 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 consolidate the understanding of the Maths content taught in Grade R and to continue assisting teachers to implement the Maths Programme in their classrooms. Participants will have the opportunity to reflect on their implementation of the Maths Programme and discuss their planning, teaching and assessment. They will also consider learner progress, and individual developmental and learning needs. Participants will reflect on appropriate assessment strategies for capturing learner progress. The workshop explores the content for Term 4 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 deepen understanding of Grade R Mathematics content
- ◆ To reflect on classroom implementation of the Maths Programme
- ◆ To identify challenges and find solutions to implementing the Maths Programme
- ◆ To reflect on informal forms of assessment in Grade R
- ◆ To plan the Maths Programme content to be taught in Term 4 Weeks 4–6

Workshop content

- ◆ Opening and reflection (1 hour)
 - ◆ Session 1: Review of the Maths Content Areas (1 hour)
- TEA
- ◆ Session 2: Maths Content Area presentations (1 hour)
 - ◆ Session 3: Maths Content Area presentations (continued) (1 hour)
- LUNCH
- ◆ Session 4: Planning for teaching (1½ hours)
 - ◆ Closing activities (30 minutes)

Thadiso

Maitlhomomo

Eno ke thutano ya bolesomengwe ya dithutano di le lesomepedi tsa Lenaneotokafatso la Dipalo tsa Mophato R, le e leng karolo ya Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R la Lefapha la Thuto la Gauteng (GDE).

Maitlhomomo a thutano eno ke go tsolotanya go tshaloganya diteng tse di rutiwang mo Mophatong wa R tsa Dipalo le go tswelela go thusa barutabana go diragatsa Lenaneo la Dipalo mo diphaposiborutelong tsa bona. Batsayakarolo ba tlaa nna le tšhono ya go sedisisa dikelothoko tsa bona. Ba tlaa tlhotlhomisa ka moo melawana ya kaelo ya go ruta dipalo tsa Mophato R e tlaa tshwaelang mo thulaganyetsong, go ruteng le mo tlhatlhobong. Gape e tlaa ela tlhoko tswelelopele ya morutwana, mmogo le ditlhokego tsa kgolo le go ithuta tsa morutwana ka nosi. Thutano e lekeletsa diteng tsa Kgweditharo 4 Dibeke 4–6 le tiragatso ya tsona mo phaposiborutelong.

Metswedi ya Dikaroloteng tsa Dipalo tsa Mophato wa R di tserwe go tswa mo *Polelong ya Pholisi ya Kharikhulamo le Tlhatlhobo (PPKT): Dipalo tsa Mophato wa R (Lokwalo lwa Bofelo)*, 2011, Lefapha la Thutotheo, Aforika Borwa.

Dipoelothuto

- ◆ Go tiisa go tshaloganya diteng tsa Dipalo tsa Mophato R
- ◆ Go sedisisa tiragatso ya Lenaneo la Dipalo mo phaposiborutelong
- ◆ Go tlhalosa dikgwetho le go batlana le ditharabololo tsa go diragatsa Lenaneo la Dipalo
- ◆ Go sedisisa mefuta ya tlhatlhobo e e sa tlhomamang mo Mophatong wa R
- ◆ Go rulaganya diteng tsa Lenaneo la Dipalo tse di tshwanetseng go rutiwa mo Kgweditharong ya 4 Dibeke 4–6

Diteng tsa thutano

- ◆ Pulo le tshedisiso (Ura e le 1)
- ◆ Karolo 1: Go lebelela Dikaroloteng tsa Dipalo (Ura e le 1)

TEE

- ◆ Karolo 2: Ditlhagiso tsa Karoloteng ya Dipalo (Ura e le 1)
- ◆ Karolo 3: Ditlhagiso tsa Karoloteng ya Dipalo (tsweletso) (Ura e le 1)

DIJOTSHEGARE

- ◆ Karolo 4: Go ithulaganyetsa go ruta (Diura di le 1½)
- ◆ Ditirwana tsa tswalelo (Metsotso e le 30)

Preparation

- ◆ PPT welcome and outcomes
- ◆ Familiarise yourself with all the PowerPoints and videos
- ◆ Read: *Activity Guide: Term 4*, pages 70–119
- ◆ Bring the post box
- ◆ Remind participants to bring their:
 - Concept Guide*
 - Activity Guides* (for Terms 1–4)
 - Poster Book*
- ◆ Prepare the topic sheets from Appendix B

Materials

- ◆ Flipchart paper, kokis
- ◆ Prestik
- ◆ *A Resource Kit* for each group (Groups will be working with all the apparatus in the *Resource Kit*.)
- ◆ Scissors and glue for each group

Ipaakanyo

- ◆ PPT kamogelo le dipoelo
- ◆ Itlwaetse ditlhagiso tsa Powerpoint le divideo
- ◆ Buisa: *Kaedi ya Mogopolo*, ditsebe 70–119
- ◆ Tlaya ka lebokosoposo
- ◆ Gopotsa batsayakarolo go tla ka ditlabakelo tse di latelang tsa bona:
Kaedi ya Mogopolo
Dikaedi tsa Ditirwana (tsa Dikgweditharo 1–4)
Buka ya Diphousetara
- ◆ Rulaganya matlhare a ditlhogo go tswa mo Mametlelelong ya B

Didiriswa

- ◆ Pampiri ya tšhatephetogi, dikhokhi
- ◆ Sekgomaretsi
- ◆ *Kgetsana ya Didiriswa* ya setlhopha se sengwe le se sengwe (Ditlhopha di tlaa bo di dira ka didiriswa tsotlhe tse di mo *Kgetsaneng ya Didiriswa.*)
- ◆ Dikere le semamaretsi sa setlhopha se sengwe le se sengwe

Opening and reflection

1 hour

When we think about and discuss what worked and how we dealt with any challenges that arose during our teaching, it allows us to recognise our strengths and weaknesses. Reflection on our practice as teachers helps us gain new insights into ourselves and our teaching. Reflective practice allows us to learn from our experiences and encourages us to work with our colleagues to share ideas that improve our teaching.

Facilitator's notes

- ◆ PPT: Familiarise yourself with the slide pack for the workshop.
- ◆ Discuss the post box comments and feedback from the previous workshop. Remind participants to 'post' any new comments and feedback during the workshop.
- ◆ Lead a discussion on the importance of reflective practice as part of our teaching.

The process of self-reflection is a cycle that needs to be repeated.

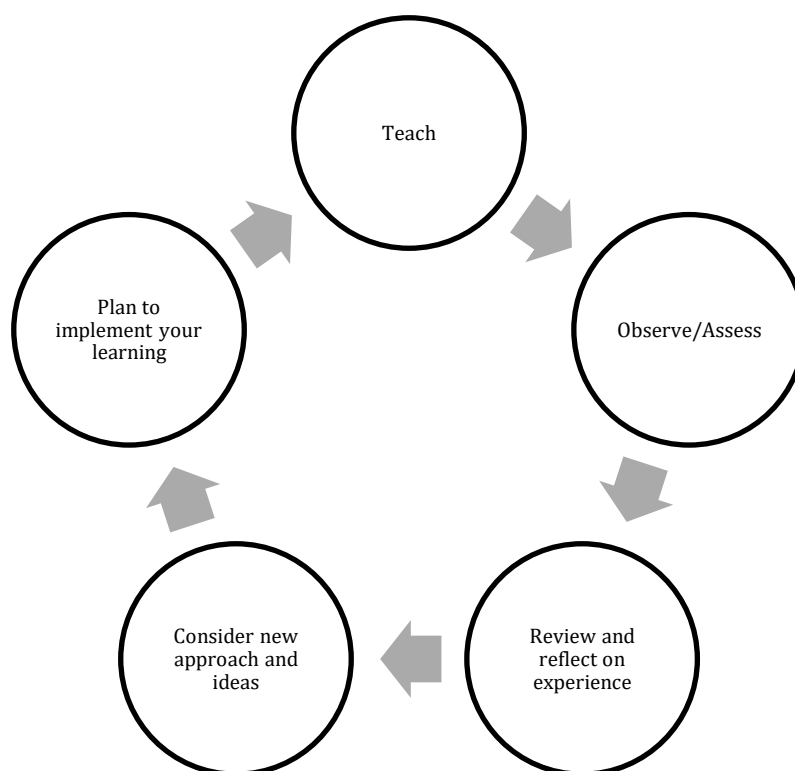


Figure 1: Stages of the reflection cycle

The process of self-reflection contains the following stages:

- ◆ Teach.
- ◆ Observe/assess.

Pulo le tshedisiso

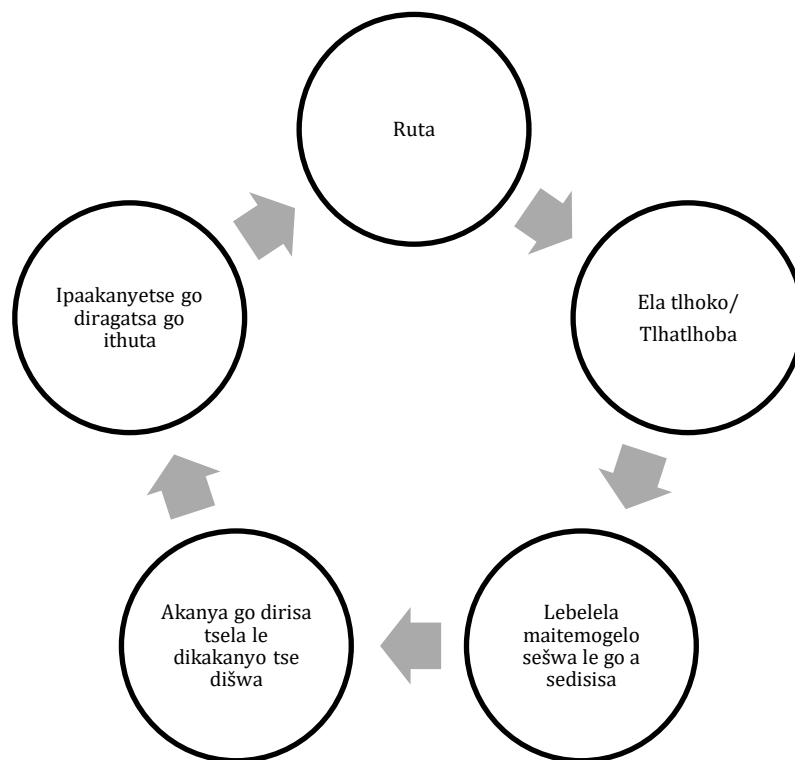
Ura e le 1

Fa re akanya le go buisana ka ga se se atlegileng le gore re dirile jang ka dikgwetlho tse di neng tsa runya ka nako ya fa re ruta, seno se ne sa re letla go lemoga dithata le makoa a rona. Tshedisiso mo tironng ya rona jaaka barutabana e re thusa go nna le tshedimoso e ntšhwa mo go rona le mo go ruteng ga rona. Tiro ya go eta o sedisisa e re letla go ithuta go tswa mo maikarabelong a rona le go re rotloetsa go dira le badiramongo go arogana dikakanyo tse di tokafatsang go ruta ga rona.

Dintlha tsa mofatlhosi

- ◆ PPT: Itlwaetse sephuthelwana sa diselaete tsa thutano.
- ◆ Buisanang ka ga ditshwaelo tsa lebokosoposo le ditlamorago tse di tswang mo thutanong e e fetileng. Gopotsa batsayakarolo go 'posa' ditshwaelo dingwe le dingwe tse dišwa le ditlamorago ka nako ya thutano.
- ◆ Etelela puisano ka ga botlhokwa jwa go sedisisa jaaka karolo ya go ruta pele.

Tsamao ya go itshedisisa ke tsheko e e tlhokang go boelediwa.



Sethalo 1: Dikgato tsa tsheko ya tshedisiso

Tsamao ya go itshedisisa e na le dikgato tse di latelang:

- ◆ Ruta.
- ◆ Ela tlhoko/tlathhoba.

- ◆ Review and reflect on how effective our teaching was, whether the lesson went well, what challenges emerged and whether the learners benefitted.
- ◆ Use the above information to consider new ways of teaching that could improve the quality of teaching and learning.
- ◆ Plan and implement new ideas and/or strategies in the classroom.

The cycle repeats after each teaching experience.

Reflection in implementation

Facilitator's notes

- ◆ Remind participants of the *Take back to school task* from the end of Workshop 10.
- ◆ Refer participants to **Activity 1** and read through the instructions aloud.
- ◆ Give each group a sheet of flipchart paper.
- ◆ Groups will present a summary of their discussion of the reflection cycle.

The *Take back to school task* from Workshop 10, required you to:

- ◆ Plan and implement Term 4 Weeks 1–3 of the Maths Programme.
- ◆ Write comments in the book that you use to keep track of each learner's progress (learner observation book), and to use the '**Check that learners are able to**' observation list during each of the teacher-guided activities to guide your observations and comments.
- ◆ Make notes of what worked well, what did not work well and how you resolved any challenges during your implementation of Term 4 Weeks 1–3.
- ◆ Bring your learner observation book and the notes you made when reflecting on each day's teaching to Workshop 11.



Activity 1

1. In your small group, consider each of the stages in the reflection cycle and discuss the *Take back to school task* from Workshop 10.
 - ◆ How successful was your planning and teaching in Term 4 Weeks 1–3?
 - ◆ Identify challenges and the strategies you used to resolve them.

- ◆ Lebelela sešwa le go sedisisa gore go ruta ga rona go dira go le kana kang, gore a kamuso e tsamaile sentle, ke dikgwetlho dife tse di runtseng le gore a mme barutwana ba ungwetswe.
- ◆ Dirisa tshedimosetso e e fa godimo go akanya ditsela tse dišwa tsa go ruta tse di ka tokafatsang boleng jwa go ruta le go ithuta.
- ◆ Ipaakanyetse go diragatsa dikakanyo tse dintšhwa le/kgotsa malepa mo phaposiborutelong.

Tsheko e ipoeletsa morago ga thuto e nngwe le e nngwe.

Tshedisiso mo tiragatsong

Dintlha tsa mofatlhosi

- ◆ Gopotsa batsayakarolo ka ga *Tirwana e o e busetsang kwa sekolong* go tswa kwa bokhutlong jwa Thutano 10.
- ◆ Kopa batsayakarolo go lebelela **Tirwana 1** le go buisetsa ditaello kwa godimo.
- ◆ Neela setlhophha se sengwe le se sengwe lelhare la pampiri ya tšhatephetogi.
- ◆ Ditlhophha di tlaa tlhagisa khutshwafatso ya dipuisano tsa tsona tebang le tsheko ya tshedisiso.

Tirwana e o e busetsang kwa sekolong go tswa mo Thutanong ya 10, e tlhoka gore:

- ◆ Rulaganya le go diragatsa Kgweditharo 4 Dibeke 1–3 tsa Lenaneo la Dipalo.
- ◆ Kwala ditshwaelo mo bukeng e o e dirisang go ela tlhoko tswelelopele ya morutwana (buka ya ngwana ya kelotlhoko), mme o dirise lenanekelotlhoko la **‘Ela tlhoko gore barutwana ba kgona go’** ka nako ya ditirwana tse dingwe le tse dingwe tse di kaelwang ke morutabana go kaela dikelotlhoko le ditshwaelo tsa gago.
- ◆ Kwala dintlha tsa se se dirileng sentle thata, se se sa dirang sentle le gore lo rarabolotse jang dikgwetlho dingwe ka nako ya tiragatso ya Kgweditharo 4 Dibeke 1–3.
- ◆ Tlaya ka buka ya gago ya go ela barutwana tlhoko le dintlha tse o di kwadileng fa o ne o sedisisa ka ga thuto ya letsatsi le lengwe le le lengwe kwa Thutanong ya 11.



Tirwana 1

1. Mo setlhopheng sa gago se sennye, akanya go dirisa e nngwe le e nngwe ya dikgato mo tshekong ya tshedisiso mme lo buisanele *Tirwana e o e busetsang kwa sekolong* go tswa mo Thutanong ya 10.
 - ◆ Ithulaganyo le go ruta ga gago go atlegile go le go kae mo Kgweditharong ya 4 Dibeke 1–3?
 - ◆ Tlhaola dikgwetlho le malepa a o a dirisitseng go di rarabolola.

- ◆ Have you been able to observe each learner and record his/her progress? Give reasons and examples to support your answer.
-
-

2. Imagine that you have been asked by your Department Head to talk to the Grade R teachers at a cluster meeting.
 - ◆ Refer to the reflection cycle in Figure 1.
 - ◆ Draw the cycle on flipchart paper and add notes next to each stage of the cycle.
 - ◆ Your group will present the main points of your discussion to the whole group.

Facilitator's notes

- ◆ Wrap up the discussion and address any questions raised.



Video 1

Watch the video of a group of teachers reflecting on their teaching and listen to their opinions about reflective practice.

1. Do you agree with their ideas about reflective practice? Explain your answer.
-
-

2. Does reflective practice increase your understanding of your teaching? Explain your answer.
-
-

3. Does reflective practice increase your understanding of learning in your class? Explain your answer.
-
-

4. Does reflective practice increase your engagement with colleagues? Explain your answer.
-
-

Facilitator's notes

- ◆ Invite comments and responses to the video.

- ◆ A o kgonne go ela morutwana yo mongwe le yo mongwe tlhoko le go rekota tswelelopele ya gagwe? Neela mabaka le dikao go tshegetsa karabo ya gago.
-
-

2. Tsaya gore o kopilwe ke Tlhogo ya Lefapha go bua le barutabana ba Mophato R kwa kopanong ya segopa sa dikolo.
 - ◆ Lebelela tsheko ya tshedisiso mo Sethalong sa 1.
 - ◆ Thala tsheko mo pampiring ya tšhatephetogi mme o tsenye dintlha mo kगतong e nngwe le e nngwe ya tsheko.
 - ◆ Setlhopha sa gago se tlaa tlhagisetsa setlhopha sotlhe dintlhakgolo tsa puisano ya lona.

Dintlha tsa mofatlhosi

- ◆ Garelang puisano mme lo arabe dipotso tse di boditsweng.



Video 1

Lebelela video ya setlhopha sa barutabana ba sedisisa thuto ya bona mme o reetse dikakanyo tsa bona ka ga tirego ya tshedisiso.

1. A o dumelana le dikakanyo tsa bona tebang le tirego ya tshedisiso? Tlhalosa karabo ya gago.
-
-

2. A tirego ya tshedisiso e oketsa go tlhaloganya ga gago ga go ruta mo phaposiborutelong ya gago? Tlhalosa karabo ya gago.
-
-

3. A tirego ya tshedisiso e oketsa go tlhaloganya ga gago ga go ithuta mo phaposiborutelong ya gago? Tlhalosa karabo ya gago.
-
-

4. A tirego ya tshedisiso e oketsa go buisana ga gago le badirammmogo? Tlhalosa karabo ya gago.
-
-

Dintlha tsa mofatlhosi

- ◆ Ba kope go tshwaela le go tsibogela video.

Session 1: Review of the Maths Content Areas

1 hour

Facilitator's notes

- ◆ Divide the participants into 9 small groups. Allocate a space for each group to set up a table and wall display.
- ◆ Give each group flipchart paper, kokis, scissors and glue.
- ◆ Give one topic from Appendix B to each small group.
- ◆ Participants complete **Activity 2** in their small groups. Assist groups to ensure that content is accurate and that core concepts and skills are included in their presentation.
- ◆ Each group does a presentation to the whole group.
- ◆ After each presentation, draw the participants' attention to the main content focus. Address any issues that were raised or misconceptions that arose in the presentation.

In Sessions 1, 2 and 3 we will review our understanding and knowledge of the five CAPS Grade R Mathematics Content Areas and related topics. We will also discuss the teaching and approaches that form part of the Maths Programme we have been implementing.



Activity 2

1. Your group will prepare a presentation on a topic that the facilitator gives you.
 - ◆ You will have access to flipchart paper, kokis, scissors, glue and items from the *Resource Kit*. You will also be allocated a space in which to set up your presentation.
 - ◆ You need to refer to the *Concept Guide* and *Activity Guides* in your presentation.
2. Your presentation needs to include:
 - ◆ an overview of the content and how this is developed in Grade R
 - ◆ resources used to model concepts and represent ideas
 - ◆ appropriate learner activities for consolidating and applying new knowledge
 - ◆ areas of concern when teaching the topic
 - ◆ a table and wall display
 - ◆ examples of how learners would solve problems.
3. Your group will facilitate the discussion and answer questions from the whole group.

Karolo 1: Go lebelela Dikaroloteng tsa Dipalo

Ura e le 1

Dintlha tsa mofatlhosi

- ◆ Aroganya batsayakarolo ka ditlhophha tse 9 tse dinnye. Neela setlhophha se sengwe le se sengwe sebaka go baakanya tafole le lebota go dira dipontsho.
- ◆ Neela setlhophha se sengwe le se sengwe pampiri ya tšhatephetogi, dikhokhi, dikere le dimamaretsi.
- ◆ Neela setlhophha se sengwe le se sengwe se sennye setlhogo se le sengwe go tswa mo Mametlelelong ya B.
- ◆ A batsayakarolo ba dire Tirwana 2 mo ditlhopheng tsa bona tse dinnye. Thusa ditlhophha go netefatsa gore diteng di nepagetse le gore megopolo e e botlhokwa le dikgono di akareditswe mo ditlhalong tsa bona.
- ◆ A setlhophha se sengwe le se sengwe se direle setlhophha sotlhe tshagiso ya sona.
- ◆ Morago ga tshagiso e nngwe le e nngwe, ngokela batsayakarolo mo karoloteng e e totilweng thata. Tsibogela ditshwaelo dingwe le dingwe tse di dirilweng kgotsa o tshakise se se sa tshalogannngwang sentle go tswa mo tshagisong.

Mo dikarolong 1, 2 le 3 re tlaa leba go tshaloganya ga rona le kitso ya Dikaroloteng tse tlhano tsa Dipalo tsa Mophato R tsa PPKT gape. Gape re tlaa buisana ka ga mekgwa ya go ruta e e leng karolo ya Lenaneo le re le diragaditseng la Dipalo.



Tirwana 2

1. Setlhophha sa gago se tlaa baakanya tshagiso ka setlhogo se lo tlaa se neelwang ke mofatlhosi.
 - ◆ Lo tlaa neelwa pampiri ya tšhatephetogi, dikhokhi, dikere, semamaretsi le dilwana go tswa mo *Kgetsaneng ya Didiriswa*. Gape o tlaa neelwa sebaka sa go baakanya tshagiso ya gago.
 - ◆ O tlhoka go lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* mo tshagisong ya gago.
2. Tshagiso ya gago e tlhoka go akaretsa:
 - ◆ thadiso ya diteng le gore di godisistwe jang mo Mophatong wa R
 - ◆ didiriswa tse di dirisitsweng go etsisa megopolo le go tshagisa dikakanyo
 - ◆ ditirwana tsa barutwana tse di malebana le go tsolotanya le go dirisa kitso e ntšhwa
 - ◆ dikarolo tse di tshwenyang fa o ruta setlhogo
 - ◆ pontsho ya tafole le ya lebota
 - ◆ dikao tsa ka moo barutwana ba tlaa rarabololang mathata ka teng.
3. Setlhophha sa gago se tlaa tsamaisa karolo ya dipuisano le dipotso go tswa mo setlhopheng sotlhe.

Session 2: Maths Content Area presentations

1 hour

Facilitator's notes

- ◆ Each group makes its presentation to the whole group.
- ◆ After each group's presentation, draw participants' attention to the main content focus. Address any issues that were raised or misconceptions that arose in the presentation.

Each group will have 15 minutes to present their topic and respond to questions from the whole group.

Karolo 2: Ditlhagiso tsa Karoloteng ya Dipalo

Ura e le 1

Dintlha tsa mofatlhosi

- ◆ A setlhopha se sengwe le se sengwe se direle setlhopha sotlhe tlhagiso ya sona.
- ◆ Morago ga tlhagiso ya setlhopha se sengwe le se sengwe, ngokela batsayakarolo go karoloteng ya botlhokwa. Tsibogela ditshwaelo dingwe le dingwe tse di dirilweng kgotsa o thakise se se sa tlhalogannngwang sentle go tswa mo tlhagisong.

Setlhopha se sengwe le se sengwe se tlaa nna le metsotso e le 15 go tlhagisa ditlhogo tsa bona le go tsibogela dipotso go tswa mo setlhopheng sotlhe.

Session 3: Maths Content Area presentations (continued)

1 hour

Facilitator's notes

- ◆ Each group makes its presentation to the whole group.
- ◆ After each group's presentation, draw participants' attention to the main content focus. Address any issues that were raised or misconceptions that arose in the presentation.

Each group will have 15 minutes to present their topic and respond to questions from the whole group.

Karolo 3: Ditlhagiso tsa Karoloteng ya Dipalo (tsweletso)

Ura e le 1

Dintlha tsa mofatlhosi

- ◆ A sethlopha se sengwe le se sengwe se direle sethlopha sotlhe tlhagiso ya sona.
- ◆ Morago ga tlhagiso ya sethlopha se sengwe le se sengwe, ngokela batsayakarolo go karoloteng ya botlhokwa. Tsibogela ditshwaelo dingwe le dingwe tse di dirilweng kgotsa o tlhakise se se sa tlhalogannwang sentle go tswa mo tlhagisong.

Sethlopha se sengwe le se sengwe se tlaa nna le metsotso e le 15 go tlhagisa ditlhogo tsa bona le go tsibogela dipotso go tswa mo sethlopheng sotlhe.

Session 4: Planning for teaching

1½ hours

This workshop session prepares participants for implementing Term 4 Weeks 4–6 and provides an opportunity for small groups to plan ahead. It is important to:

- ◆ address differences in learners’ levels of progress
- ◆ support those learners who need additional assistance
- ◆ provide enrichment activities for more advanced learners.

The goal is to ensure that all learners are competent in the Grade R Mathematics content and are well prepared for Grade 1.

Facilitator’s notes

- ◆ Move between the small groups as participants discuss the planning and preparation for teaching Term 4 Weeks 4–6 in **Activity 3**. Assist by making suggestions on overcoming challenges.
- ◆ Each small group plans the three weeks and completes the templates in Appendix A.
- ◆ Lead a whole-group discussion on differentiation and how to manage learners at different levels of competence. Write these ideas on flipchart paper.



Activity 3

1. In your group, complete the planning templates for Term 4 Weeks 4–6 (Appendix A).
2. Discuss how you will plan for and manage learners who have different levels of competence.

Karolo 4: Go ithulaganyetsa go ruta

Diura di le 1½

Thutano eno e baakanyetsa batsayakarolo go diragatsa Kgweditharo 4 Dibeke 4–6 le go neela ditlhophha tse dinnye tšhono ya go ipaakanyetsa kwa pele. Go botlhokwa go:

- ◆ lepalepana le dipharologano mo maemong a tswelelopele ya barutwana
- ◆ tshegetsa barutwana ba ba tlhokang thuso ya tlaleletso
- ◆ tlamela barutwana ba ba tswelletseng pele ka ditirwana tsa go ba natlafatsa.

Maikaelelo ke go netefatsa gore barutwana botlhe ba itse diteng tsa Dipalo tsa Mophato R sentle le gore ba ipaakanyeditse Mophato 1 sentle.

Dintlha tsa mofatlhosi

- ◆ Tsamaya tsamaya magareng ga ditlhophha tse dinnye fa batsayakarolo ba ntse ba buisana ka ga go ithulaganya le go baakanyetsa go ruta Kgweditharo 4 Dibeke 4–6 mo **Tirwaneng ya 3**. Ba thuse ka go dira ditshikhinyo tsa go fenywa dikgwetlho.
- ◆ Setlhophha se sengwe le se sengwe se sennye se rulaganyetsa dibeke tse tharo mme se tlatsa thempoleiti mo Mametlelelong ya A.
- ◆ Etelela puisano ya setlhophha sotlhe tebang le phapologantsho le gore barutwana ba laolwa jang mo maemong a a farologaneng a bokgoni. Kwala dikakanyo tseno mo pampiring ya tšhatephetogi.



Tirwana 3

1. Mo setlhophheng sa gago, tlatsa dithemopleiti tsa go ithulaganyetsa Kgweditharo 4 Dibeke 4–6 (Mametlelelo A).
2. Buisanang gore lo ya go rulaganyetsa le go laola jang barutwana ba ba leng mo maemong a a farologaneng a bokgoni.

Closing activities

30 minutes

Facilitator's notes

Workshop reflection:

- ◆ Ask participants to stand in two circles, one inside the other. Participants in the outer circle should stand facing inwards and participants in the inner circle should stand facing outwards.
- ◆ Participants take a few minutes to reflect on and discuss the workshop with the person opposite them. Invite them to mention highlights and also any questions they may have that have not yet been answered.
- ◆ Ask the inner circle to move one person to the right and to repeat the discussion. Repeat this a few times.
- ◆ Ask participants to volunteer something relevant that another participant mentioned to them.
- ◆ Encourage participants to add any comments and feedback not shared during the discussion to the post box.

Facilitator's notes

- ◆ **Take back to school task:** Read through this task. Ask if there is anything that is not clear and that requires more explanation.
- ◆ **Evaluation:** Hand out copies of the Workshop Evaluation Form and have participants complete the form.
- ◆ **Next workshop:** Give dates for the next workshop and close the workshop.



Take back to school task

1. Invite other Grade R teachers at your school (or from another school) to join you in planning Term 4 Weeks 4–6 of the Maths Programme.
2. Implement these three weeks and use the reflection cycle (Figure 1) to review your experience. Write your reflections in a journal and bring it to the next workshop.

Evaluation

Complete the Evaluation Form.

Dintlha tsa mofatlhosi

Tshedisiso ya thutano:

- ◆ Kopa batsayakarolo go ema mo didikong tse pedi, e nngwe mo teng ga e nngwe. A batsayakarolo ba ba mo sedikong se se kwa ntle ba eme ba lebeletse ka mo gare mme ba ba mo sedikong se se mo teng ba eme ba lebeletse kwa ntle.
- ◆ A batsayakarolo ba dirise metsotso e le mmalwa go sedisisa le go buisanela thutano le ba ba lebaganeng nae. Ba kope go umaka dintlha tsa ponlatso le dipotso dingwe le dingwe fela tse ba ka tswang ba na le tsona mme di sa arabiwa.
- ◆ Kopa ba ba mo sedikong se se mo teng go sutisetsa motho a le mongwe kwa mojang le go boeletsa puisano. Boeletsa seno makgetlho a le mmalwanyana.
- ◆ Kopa batsayakarolo go ithaopela sengwe se se maleba se mongwe o se ba umaketseng.
- ◆ Rotloetsa batsayakarolo go tsenya ditshwaelo dingwe le dingwe tse di sa aroganngwang ka nako ya puisano mo lebokosongposo.

Dintlha tsa tswalelo

- ◆ **Tirwana e o e busetsang kwa sekolong:** Buisa tirwana eno. Botsa gore a go na le sengwe se se sa tlhakang mme se tlhoka go tlhalosiwa gape.
- ◆ **Tlhatlhobo:** Ntsha dikhophi tsa Foromo ya Tlhatlhobo ya Thutano mme o kope batsayakarolo go e tlatsa.
- ◆ **Thutano e e latelang:** Neela matlha a thutano e e latelang mme o khutlise thutano.



Tirwana e o e busetsang kwa sekolong

1. Laletsa barutabana ba bangwe ba Mophato R kwa sekolong sa gago (kgotsa go tswa kwa sekolong se sengwe) go nna le lona mo go ithulaganyetseng Kgweditharo 4 Dibeke 4–6 tsa Lenaneo la Dipalo.
2. Diragatsa dibeke tse tharo tseno mme o dirise tsheko ya tshedisiso (Sethalo 1) go lebelela maitemogelo a gago gape. Kwala ditshedisiso tsa gago mo jenaleng mme o tle ka yona mo thutanong e e latelang.

Tlhatlhobo

Tlatsa Foromo ya Tlhatlhobo.

APPENDIX A: TERM 4 WEEKLY PLANNING TEMPLATE

Term 4: 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				

MAMETLELO A: KGWEDITHARO 4 THEMPOLEITE YA THULAGANYO YA BEKE LE BEKE

Kgweditharo 4: Thulaganyo ya ditirwana: Beke ____

KAROLOTENG:				
SETLHOGO:				
TLHAGISA KITSO E NTŠHWA:				
IKATISE:				
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana	Ditirwana tsa seteišenetiro (ditirwana tsa setlhopha se sennye tse di ikemetseng)	
Letsatsi 1			Tirwana 1	
Letsatsi 2			Tirwana 2	
Letsatsi 3			Tirwana 3	
Letsatsi 4			Tirwana 4	
Letsatsi 5				

Term 4: 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				

Kgweditharo 4: Thulaganyo ya ditirwana: Beke ____

KAROLOTENG:				
SETLHOGO:				
TLHAGISA KITSO E NTŠHWA:				
IKATISE:				
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana	Ditirwana tsa seteišenetiro (ditirwana tsa setlhopha se sennye tse di ikemetseng)	
Letsatsi 1			Tirwana 1	
Letsatsi 2			Tirwana 2	
Letsatsi 3			Tirwana 3	
Letsatsi 4			Tirwana 4	
Letsatsi 5				

Term 4: 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				

Kgweditharo 4: Thulaganyo ya ditirwana: Beke ____

KAROLOTENG:				
SETLHOGO:				
TLHAGISA KITSO E NTŠHWA:				
IKATISE:				
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana	Ditirwana tsa seteišenetiro (ditirwana tsa setlhopha se sennye tse di ikemetseng)	
Letsatsi 1			Tirwana 1	
Letsatsi 2			Tirwana 2	
Letsatsi 3			Tirwana 3	
Letsatsi 4			Tirwana 4	
Letsatsi 5				

APPENDIX B: ACTIVITY 2 TOPICS

Topic 1: Number concept development and counting (Numbers, Operations and Relationships)

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ What is number concept?
- ◆ How do children acquire number concept?
What does counting involve? Refer to:
 - the difference between sequencing number names and counting objects
 - matching one-to-one
 - comparing groups in terms of 'more than', 'less than', 'fewer than' and 'the same number as'
 - cardinal and ordinal numbers from 1–10
 - introducing the concept of the empty set with the number word 'zero' and number symbol '0'.
- ◆ What is the value of representing number in multiple ways? Provide and explain concrete examples.
- ◆ Discuss estimation in relation to the development of number concept.

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

Topic 2: Calculations (Numbers, Operations and Relationships)

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

MAMETLELELO B: TIRWANA 2 DITLHOGO

Setlhogo 1: Kgodiso ya megopolopalo le go bala (Dinomore, Ditiro le Dikamano)

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tšhatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Mogopolopalo ke eng?
- ◆ Bana ba nna jang le mogopolo palo?
Go bala go akaretsang? Lebelela:
 - pharologano magareng ga go latedisanya mainapalo le go bala dilo
 - go nyalanya nngwe ka nngwe
 - go bapisa ditlhophaga go ya ka 'go feta', 'mmalwanyana mo go' le 'palo e e tshwanang le'
 - dipalokhadinale le dipalokemotatelano go tswa go 1-10
 - go tlhagisa mogopolo wa sete ya lolea ka lefokopalo 'lefela' le letshwaopalo '0'.
- ◆ Boleng jwa go tlhagisa nomore ka ditsela tse dintsinzana ke bofe? Neelana ka dikao tse di tshwaregang mme o di tlhalose.
- ◆ Buisanang ka ga tekanyetso ka go e amanya le kagego ya mogopolopalo.

Lebelela *Kaedi ya Mogopolo le Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Setlhogo 2: Dipalelo (Dinomore, Ditiro le Dikamano)

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tšhatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Points to consider in your presentation:

- ◆ Breaking down numbers and building up numbers.
- ◆ Representing partitioned groups of objects.
- ◆ Introducing the concept of addition as combining two collections.
- ◆ Introducing the concept of subtraction as taking away from a collection.
- ◆ Comparing two collections of objects by matching one-to-one to find the difference.
- ◆ Using the number washing line and a jumping track to solve addition problems – ‘adding on’ or ‘counting on’.
- ◆ Using the number washing line and a jumping track to solve subtraction problems – ‘counting back’.
- ◆ Introducing the concept of equal sharing and grouping.
- ◆ Promoting rapid recall and number facts.

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

Topic 3: Patterns, Functions and Algebra

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and ‘examples’ of learners’ work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ Introducing the idea of a repeated pattern.
- ◆ Identifying the pattern unit.
- ◆ Explaining the meaning of ‘variable’ and what is appropriate in Grade R.
- ◆ Making linear patterns with one variable.
- ◆ Discuss the process of introducing pattern in Grade R. Provide concrete and pictorial examples to support your discussion.

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Go tthatlhamolola dinomore le go aga dinomore.
- ◆ O ka tshwantsha jang dilo tse di arogantsweng ka ditlhopha.
- ◆ Go tlhagisa mogopolo wa go tlhakanya jaaka go kopanya dilo tse pedi tse di kokoantsweng.
- ◆ Go tlhagisa mogopolo wa go ntsha jaaka go ntsha mo go tse di kokoantsweng.
- ◆ Go bapisa dilo tse pedi tse di kokoantsweng ka go nyalanya nngwe ka nngwe go bona pharologano.
- ◆ Go dirisa mogala wa dinomore le mola wa go tlola go rarabolola dipalo tsa go tlhakanya – ‘go oketsa’ kgotsa ‘go balela kwa pele’.
- ◆ Go dirisa mogala wa dinomore le mola wa go tlola go rarabolola dipalo tsa go ntsha – ‘go balela kwa morago’.
- ◆ Go tlhagisa mogopolo wa go arogana ka go lekana le go kokoanya.
- ◆ Go rotloetsa kgakologelo ya ka bonako le dintlha tsa dipalo.

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Setlhogo 3: Dipaterone, Ditiro le Alejibora

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tšhatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le ‘dikao’ tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Go tlhagisa kakanyo ya paterone e e boeleditsweng.
- ◆ Go tlhaola dielemente jaaka di ikemetse ka tsosi mo pateroneng.
- ◆ Go tlhalosa bokao jwa ‘lefetogi’ le se se lekanyetswang mo Mophatong wa R.
- ◆ Go dira dipaterone tsa mela ka lefetogi le le lengwe.
- ◆ Buisanang ka ga tsamao ya go tlhagisa paterone mo Mophatong wa R. Neela dikao tse di bonalang le tsa ditshwantsho go tshegetsisa puisano ya lona.

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Topic 4: Space and Shape (Geometry)

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ Discovering the general properties of 2-D shapes and 3-D objects.
- ◆ Collecting shapes and objects that have these shapes on their faces.
- ◆ Sorting shapes and objects and describing the 'rule' (criterion) for sorting.
- ◆ Introducing symmetry.
- ◆ Making symmetrical shapes with one or two lines of symmetry through drawing, folding and cutting.

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

Topic 5: Measurement

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ Using vocabulary associated with time.
- ◆ Ordering (sequencing) events and activities according to the time at which they take place.
- ◆ Comparing objects according to their size.
- ◆ Identifying the attribute to be measured.

Setlhogo 4: Boalo le Popego (Jeometeri)

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tšhatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Go utolola diponagalokakaretso tsa dipopego tsa 2-D le dilo tsa 3-D.
- ◆ Go kokoanya dipopego le dilo tse di nang le dipopego tseno mo difatleng tsa tsona.
- ◆ Go tlaola dipopego le dilo le go tthalosa 'molao' (mokgwa) wa go tlaola.
- ◆ Go tlhagisa tekano.
- ◆ Go dira dipopego tsa tekano ka mola o le mongwe kgotsa e mebedi ka go thala, go mena le go sega.

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Setlhogo 5: Tekanyo

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tšhatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Go dirisa tlotlofoko e e amanang le nako.
- ◆ Ditiro le ditirwana tsa go tlaola (go latedisanya) go latela nako e di diragalang ka yona.
- ◆ Go bapisa dilo go ya ka bogolo jwa tsona.
- ◆ Go tlaola ponagalo e e tshwanetseng go lekannngwa.

- ◆ Using maths vocabulary to compare height, length and width.
- ◆ Using maths vocabulary to compare the mass of different objects.
- ◆ Using maths vocabulary to compare capacity and volume.
- ◆ Explain what non-standard measurement is and how it relates to each of the following Measurement topics:
 - time
 - length
 - mass
 - capacity/volume.

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

Topic 6: Data Handling

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ Direct representation of situations using learners, objects and pictures.
- ◆ How does the idea of one-to-one matching relate to representing information/data in pictures or pictographs?
- ◆ What is the purpose of the pictures in the bottom row of the pictograph?
- ◆ What is the advantage of arranging the pictures in columns?
- ◆ Why do the pictures need to be the same size?
- ◆ Why do the pictures have to be evenly spaced?
- ◆ Discuss interpreting the information on a pictograph.

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

- ◆ Go dirisa tlotlofoko ya dipalo go bapisa bogodimo, boleele le bophara.
- ◆ Go dirisa tlotlofoko go bapisa boima jwa dilo tse di farologaneng.
- ◆ Go dirisa tlotlofoko go bapisa mothamo le volumo.
- ◆ Tlhalosa se tekanyo e e sa tlhomamang e leng sona le gore e amana jang le ditlhogo tse dingwe le tse dingwe tse di latelang tsa Tekanyo:
 - nako
 - boleele
 - boima
 - mothamo/volumo.

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Setlhogo 6: Go Ranola Tshedimose

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tshatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Tlhagiso ya maemo ka tlhamalalo ka go dirisa barutwana, dilo le ditshwantsho.
- ◆ Kakanyo ya go nyalanya ka nngwe ka nngwe e amana jang le go tlhagisa tshedimose/dinewa mo ditshwantshong kgotsa dikerafotshwantshong?
- ◆ Maitlomo a ditshwantsho tse di mo moleng o o fa tlase wa kerafotshwantsho ke afe?
- ◆ Mosola wa go rulaganya ditshwantsho ka dikholomo ke ofe?
- ◆ Goreng ditshwantsho di tshwanetse go nna tse di lekanang ka bogolo?
- ◆ Goreng ditshwantsho di tshwanetse tsa bo di lekana ka sekgala?
- ◆ Buisanang ka ga go ranola tshedimose mo kerafotshwantshong.

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Topic 7: Classroom management

Prepare a presentation that includes:

- ◆ a mapping of this topic on flipchart paper
- ◆ this topic in relation to Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ How do you create a stimulating learning environment? Refer to:
 - the classroom walls
 - the classroom floor space
 - the carpet area
 - the maths area.
- ◆ How do you manage and arrange resources (concrete apparatus) in the classroom?
- ◆ Describe how teaching in whole class and small groups is implemented.
- ◆ Outline the different types of planning that are required for successful teaching and learning.
- ◆ How are different levels of learner competence managed?

Refer to the *Concept Guide* and *Activity Guides* to support your discussion.

Topic 8: Assessment

Prepare a presentation that includes:

- ◆ a mapping of this topic on flipchart paper
- ◆ this topic in relation to Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ What forms of assessment are implemented in Grade R?
- ◆ Describe how these are used for tracking learner progress and for reporting purposes.

Setlhogo 7: Taolo ya phaposiborutelo

Baakanya tlhagiso e e akaretsang tse di latelang:

- ◆ thalathalo ya setlhogo seno mo pampiring ya tšhatephetogi
 - ◆ setlhogo seno ka kamano le Mophato R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo sethopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ O tlhola jang maemo a a tlotlheletsang go ithuta? Lebelela:
 - mabota a phaposiborutelo
 - sebaka sa bodilo jwa phaposiborutelo
 - lefelo la khapete
 - lefelo la dipalo.
- ◆ O laola jang didiriswa le go di rulaganya (didiriswa tse di tshwaregang) mo phaposiborutelong?
- ◆ Tlhalosa gore go ruta go diragadiwa jang mo phaposiborutelong yotlhe le mo ditlhopheng tse dinnye.
- ◆ Thadisa mefuta e e farologaneng ya go ipaakanya e e tlhokegang go atlegisa go ruta le go ithuta.
- ◆ Maemo a a farologaneng a bokgoni jwa barutwana a laolwa jang?

Lebelela Kaedi ya *Mogopolo* le *Dikaedi tsa Ditirwana* go tshegetsisa puisano ya lona.

Setlhogo 8: Tlhatlhobo

Baakanya tlhagiso e e akaretsang:

- ◆ thalathalo ya setlhogo seno mo pampiring ya tšhatephetogi
 - ◆ setlhogo seno ka kamano le Mophato R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsisa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo sethopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Go diragadiwa mefuta efe ya tlhatlhobo mo Mophatong wa R?
- ◆ Tlhalosa gore e dirisiwang jang mo maitlhomong a go batlisisa tswelelopele ya barutwana le go bega.

- ◆ Provide examples and illustrations to support your presentation.
- ◆ Describe in detail one learner's solution to a word problem and describe how you would use a rubric to assess this learner.
- ◆ Clarify the use of checklists.
- ◆ How do the various forms of assessment, guide our reporting to parents?

Refer to the *Concept Guide* and *Activity Guides* to support your discussion.

Topic 9: Problem solving

Prepare a presentation that includes:

- ◆ a mapping of the main concepts/skills on flipchart paper
- ◆ how this topic is taught in Grade R
- ◆ a display with concrete objects, pictures and 'examples' of learners' work to support your discussion
- ◆ important points to note about this topic.

You will need to facilitate a discussion and answer questions from the whole group.

Points to consider in your presentation:

- ◆ What does problem solving involve in Grade R?
- ◆ What are the language considerations involved in framing word problems?
- ◆ Why is problem solving included in Grade R?
- ◆ What skills do learners need to develop to become successful problem solvers?
- ◆ Give examples of different kinds of word problems that could be presented in Grade R.
- ◆ What strategies or techniques do Grade R learners use when solving word problems?
- ◆ What is the teacher's role?

Refer to the *Concept Guide* and *Activity Guides* for examples of activities, and discuss how these were implemented in the classroom.

- ◆ Neela dikao le ditshwantsho go tshegetsa tlhagiso ya gago.
- ◆ Tlhalosa tharabololo ya morutwana a le mongwe ka tsenelelo ya dipalofoko mme o tlhalose gore o ne o ka dirisa jang ruburiki go tlhatlhoba morutwana.
- ◆ Tlhalosa gape tiriso ya mananenetefatso.
- ◆ Mefuta e e farologaneng ya tlhatlhoba e kaela jang pegelo ya rona go batsadi?

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tshegetsa puisano ya lona.

Setlhogo 9: Tharabololo ya dipalo

Baakanya tlhagiso e e akaretsang:

- ◆ sethalo sa megopolomegolo/dikgono mo pampiring ya tshatephetogi
 - ◆ ka moo setlhogo seno se rutiwang ka teng mo Mophatong wa R
 - ◆ tshupetso ka dilo tse di tshwaregang, ditshwantsho le 'dikao' tsa tiro ya barutwana go tshegetsa puisano ya lona
 - ◆ dintlha tsa botlhokwa tse di tshwanetseng go elwa tlhoko ka ga setlhogo seno.
- O tlaa tlhoka go tsamaisa puisano le go araba dipotso go tswa mo setlhopheng sotlhe.

Dintlha tse o tshwanetseng go di ela tlhoko mo tlhagisong ya gago:

- ◆ Tharabololo ya dipalo e akaretsa eng mo Mophatong wa R?
- ◆ Ke dikelotlhoko dife tsa puo tse di akarediawang go bopa dipalofoko?
- ◆ Goreng Tharabololo ya dipalo e akareditswe mo Mophatong wa R?
- ◆ Ke dikgono dife tse barutwana ba tlhokang go di godisa go nna bararabolodi ba ba atlegileng ba dipalo?
- ◆ Neela dikao tse di farologaneng tsa dipalofoko tse di ka tlhagisiwang mo Mophatong wa R.
- ◆ Ke malepa kgotsa dithekeniki dife tse di dirisiwang ke barutwana ba Mophato R fa ba rarabolola dipalofoko?
- ◆ Seabe sa morutabana ke sefe?

Lebelela *Kaedi ya Mogopolo* le *Dikaedi tsa Ditirwana* go tlhola dikao tsa ditirwana, mme lo buisane gore di diragaditswe jang mo phaposiborutelong.

Workshop 11 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 Tlhatlhubo ya Thutano 11

1. A thutano e kgonne go fitlhelela ditsholofelo tsa gago?

2. Ke eng se o se ithutileng mo thutanong eno se se go thusitseng go gaisa?

3. A go na le sengwe se o sa se ratang kgotsa se se neng se go thatafalela?

4. O ya go diragatsa jang se o se ithutileng mo phaposiborutelong ya gago ya Mophato wa R?

5. A go na le se o se tshikhinyang go ka thusa go tokafatsa dithutano tse di latelang?
