



GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GGT 2030
GROWING GAUTENG TOGETHER

Sepedi/English

Lenaneo la go Kaonafatša Thuto ya Dipalo Mphatong wa R Grade R Mathematics Improvement Programme



**Thutofatlhošo ya 1 • Workshop 1
Pukutlhahlo ya Monolofatši • Facilitator's Guide**

The development and production of the training and classroom resources for the Grade R Mathematics and Language Improvement Project were made possible by generous project funding from the **United States Agency for International Development** and the **Zenex Foundation**.

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.

ACKNOWLEDGEMENTS

Special thanks to:

- The Gauteng Department of Education Curriculum, Teacher Education and Special Education Directorate officials for their contribution to the adaptation of our materials.
- The Western Cape Education Department (WCED) officials and teachers for their contribution to the successful implementation of the Grade R Mathematics Programme (R-Maths) in the Western Cape between 2016 and 2019.
- The R-Maths writing team: SDU staff and consultants.



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Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R ke morero wa Kgoro ya Thuto ya Gauteng (**Gauteng Department of Education**) le badirišanimmogo ba bohlokwa e lego **Gauteng Education Development Trust**.

Tšweletšo le kgatišo ya tlhahlo le dithušathuto tša phapoši tša Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R e kgontšhitšwe ke thušo ka mašelang go tšwa go **United States Agency for International Development** le **Zenex Foundation**.

Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R le laolwa ke **JET Education Services** gammogo le **Schools Development Unit** ya **UCT** le **Wordworks** bjalo ka badirišani ba sethekniki.

Schools Development Unit (SDU) kua **University of Cape Town (UCT)** ke badirišani ba sethekniki ba dipalo go Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R. SDU ke uniti ya UCT ya School of Education yeo e hlokometšego tlhahlo le kgodišo ya dithuto tša Dipalo, Saense, Bokgoni bja go ngwala le go bala/Polelo le Mabokgoni a Bophelo go tloga go Mphato wa R go fihla go wa 12. SDU e aba dithuto tša tlhahlo ya barutiši le mangwalo a UCT a dithuto tše kopana tša tlaletšo, tlhahlo ya mošomo yeo e ka dirwago sekolong, bongwadi bja dipuku le go dira dinyakišišo tšeo di thekgago go ithuta le go ruta mabakeng a go fapana dikolong tša Afrika Borwa.

DITEBOGO

Di lebišwa go:

- Bašomi ba Kgoro ya Thuto ya Gauteng Lefapha la Lenanethuto, Tlhahlo ya Barutiši le bašomedi ba Lefapha la Thuto ya go Ikgetha, ka maele a bona phetagatšong ya setšweletšwa se sa rena.
- Bašomi ba Western Cape Education Department (WCED) le barutiši ka maele a bona tšweletšong le tsentšhotirišong ya Grade R Mathematics Programme (*R-Maths*) profenseng ya Kapa Bodikela magareng ga mengwaga ya 2016 le 2019.
- Sehlopha sa bangwadi ba *R-Maths*: Bašomi le baeletši ba SDU.



Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R le theilwe go tšwa lenaneong la *R-Maths*, leo le gatišitšwego la mathomo ka 2017 ke Schools Development Unit, University of Cape Town. Tokelo ya ngwalollo (copyright) *R-Maths* e laolwa ke University of Cape Town.

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Contents

Overview

Purpose	page 6
Learning outcomes	page 6
Workshop content	page 6
House rules	page 8
Preparation	page 8
Materials	page 8

Workshop content

Session 1: Orientation to the Maths Programme	page 10
Session 2: Numbers, Operations and Relationships	page 38
Session 3: Implementing the five-group teaching model	page 54
Appendix A: The Guiding Principles of Teaching Maths in Grade R	page 66
Appendix B: Term 1 Weekly Content Summary (Weeks 1–2)	page 70
Appendix C: Number 1 frieze cards	page 72
Workshop 1 Evaluation Form	page 76

Diteng

Kakaretšo

Morero	letlakala la 7
Dineo tša thuto	letlakala la 7
Diteng tša thutofatlhošo	letlakala la 7
Melawana ya tshepedišo	letlakala la 9
Peakanyo	letlakala la 9
Didirišwa	letlakala la 9

Diteng tša thutofatlhošo

Thuto ya 1: Tlwaetšo ya Lenaneo la Dipalo.....	letlakala la 11
Thuto ya 2: Dinomoro, Tirišo le Tswalano	letlakala la 39
Thuto ya 3: Phethagatšo ya motlele wa go ruta wa sehlopha sa ba bahlano	letlakala la 55
Mamatletšo ya A: Ditheo tša go Ruta Dipalo Mphatong wa R	letlakala la 67
Mamatletšo ya B: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 1-2)	letlakala la 70
Mamatletšo ya C: Dikarata tša tšhate ya tlotlontšu le dinomoro ya Nomoro 1.....	letlakala la 73
Foromo ya Tekolo ya Thutofatlhošo ya 1	letlakala la 77

Overview

Purpose

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

Participants will receive information on the components and guiding principles of teaching mathematics in Grade R. They will reflect on and discuss these within the context of their own planning and teaching. Participants will also review the Curriculum and Assessment Policy Statement (CAPS) Grade R Mathematics Content Areas. They will plan the daily programme Mathematics focus time for the first two weeks of Term 1. Throughout the workshop they will reflect on the guiding principles that inform teaching and learning.

**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 become familiar with the Maths Programme and how it supports and extends the content of CAPS Grade R Mathematics
- ◆ To explore the components of the Maths Programme
- ◆ To understand the teaching principles presented in the Maths Programme
- ◆ To plan a Term 1 week based on the five-group teaching model
- ◆ To engage with the Maths Programme content of Term 1 Weeks 1–2 (Numbers, Operations and Relationships)

Workshop content

- ◆ Session 1: Orientation to the Maths Programme (2 hours)
TEA
- ◆ Session 2: Numbers, Operations and Relationships (2 hours)
LUNCH
- ◆ Session 3: Implementing the five-group teaching model (2 hours)

Kakaretšo

Morero

Ye ke thutofatlhošo ya mathomo ya tše lesomepedi tša Lenaneo la go Kaonafatša Thuto ya Dipalo Mphatong wa R (Lenaneo la Dipalo), ye e lego karolo ya Kgoro ya Thuto Profenseng ya Gauteng (GDE) Lenaneokaonafatšo la Thuto ya Dipalo le ya Leleme Mphatong wa R.

Batšeakarolo ba tlo amogela tshedimošo ka ga dikarolo le ditheo tša go ruta dipalo Mphatong wa R. Ba tlo naganiša ka tšona le go di ahlaahla go ya ka kamano ya peakanyo ya bona le ka fao ba rutago ka gona. Batšeakarolo gape ba tlo sekaseka Dikarolo tša Diteng tša Setatamente sa Pholisi sa Lenaneothuto le Kelo (SEPHOLEKE) tša Grade R Maths. Mo dibekeng tše pedi tša mathomo tša Kotara ya 1 ba tla beakanya lenaneo la tšatši ka tšatši la nako ya nepišo ya Dipalo. Mo nakong ka moka ya thutofatlhošo ba tla naganišiša ka ga ditheo tša go ruta le go ithuta.

**Dikarolo tša Diteng tša Thuto ya Dipalo Mphatong wa R di tšwa go Setatamente sa Pholisi sa Lenaneothuto le Kelo (SEPHOLEKE): Thuto ya Dipalo Mphatong wa R (Kakanywa ya Mafelelo), 2011, Kgoro ya Thuto ya Motheo, Afrika Borwa*

Dineo tša thuto

- ◆ Go tseba Lenaneo la Dipalo le ka fao le thekgago le go katološa diteng tša SEPHOLEKE Thuto ya Dipalo Mphatong wa R
- ◆ Go hlohlomiša dikarolo tša Lenaneo la Dipalo
- ◆ Go kwešiša ditheo tša go ruta tša ka gare ga Lenaneo la Dipalo
- ◆ Go beakanya beke ya Kotara ya 1 ye e theilwego godimo ga motlele wa go ruta wa sehlopha sa ba bahlano
- ◆ Go swaragana le diteng tša Lenaneo la Dipalo la Kotara ya 1 Dibeke tša 1–2 (Dinomoro, Tirišo le Tswalano)

Diteng tša thutofatlhošo

- ◆ Thuto ya 1: Tlwaetšo ya Lenaneo la Dipalo (Diiri tše 2)
TEYE
- ◆ Thuto ya 2: Dinomoro, Tirišo le Tswalano (Diiri tše 2)
MATENA
- ◆ Thuto ya 3: Phethagatšo ya motlele wa go ruta wa sehlopha sa ba bahlano (Diiri tše 2)

House rules

- ◆ Be punctual.
- ◆ Turn off your cellphone during sessions.
- ◆ Give everyone a chance to participate.
- ◆ Listen to each other's ideas.

Preparation

- ◆ PPT presentations
- ◆ Read:
Concept Guide, pages 114–117
Activity Guide: Term 1, pages 18–21
Appendix B: Term 1 Weekly Content Summary
- ◆ Set out a Maths Programme *Resource Kit*, kokis and paper on each group's table.
- ◆ Prepare the number frieze story and gather materials.
- ◆ Make a house template on a large sheet of flipchart paper – draw a house shape divided into four parts.
- ◆ Colour in the Number 1 frieze cards in Appendix C. Glue them onto cardboard.

Materials

- ◆ Attendance register
- ◆ Flipchart paper, kokis
- ◆ Copies of the *Participant's Workbook*, *Concept Guide* and *Activity Guide: Term 1*
- ◆ *Resource Kits*
- ◆ Puzzle pieces
- ◆ Number frieze house template and frieze cards

Melawana ya tshepedišo

- ◆ O sware nako.
- ◆ O time selefoune ka nako ya thuto.
- ◆ Efa batho bohle sebaka sa go tšea karolo.
- ◆ Theeletša ge yo mongwe a abelana ka kgopolo.

Peakanyo

- ◆ Ditšweletšo tša PPT
- ◆ Bala:

Pukutlhahlo ya Mareo, matlakala a 114–117

Pukutlhahlo ya Mešongwana: Kotara ya 1, matlakala a 18–21

Mamatletšo ya B: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke

- ◆ Beakanya *Dithušathuto tša Phapoši* tša Lenaneo la Dipalo, dikoki le pampiri tafoleng ya sehlopha se sengwe le se sengwe.
- ◆ Beakanya kanegelo ya tšhate ya tlotlontšu le dinomoro gomme o kgoboketše didirišwa.
- ◆ Dira thempoleiti ya ntlo letlakaleng le legolo la pampiri ya tšhate ya go fetlega – thala sebopego sa ntlo sa go arolwa ka diripa tše nne.
- ◆ Khalara dikarata tša tšhate ya tlotlontšu le dinomoro tša Nomoro 1 tša Mamatletšo ya C. Di kgomaretše khapoteng.

Didirišwa

- ◆ Foromo ya go ngwadiša bao ba tlilego
- ◆ Pampiri ya tšhate ya go phetla, dikoki
- ◆ Dikhophi tša *Pukutšhomo ya Motšeakarolo*, *Pukutlhahlo ya Mareo* le *Pukutlhahlo ya Mešongwana: Kotara ya 1*
- ◆ *Dithušathuto tša Phapoši*
- ◆ Diripa tša marara
- ◆ Thempoleiti ya ntlo ya Tšhate ya tlotlontšu le dinomoro le dikarata tša tšhate ya tlotlontšu le dinomoro

Session 1: Orientation to the Maths Programme

2 hours

Facilitator's notes

- ◆ Participants should be seated in small groups of six to eight people. Observe COVID-19 protocols.
- ◆ Give each person a *Participant's Workbook* and the attendance register.
- ◆ Welcome the participants and introduce yourself.
- ◆ Discuss the house rules for working together during all workshops (see page 8).
- ◆ Give participants an opportunity to introduce themselves in their small groups and then to the whole group.
- ◆ Encourage them to share their training and teaching experiences.
- ◆ Invite participants to share their expectations of the workshop.

Registration

Welcome and house rules

(10 minutes)

Welcome to the first of twelve maths workshops for the Gauteng Department of Education (GDE) Grade R Mathematics and Language Improvement Project.

Let's start with an introduction to the presenters and agree on a set of house rules.

Sharing teaching experiences

(15 minutes)



Activity 2

1. Take some time to reflect on your experience of teaching Grade R, especially teaching maths in Grade R. Think about your training and how it prepared you for maths teaching. Also try to identify your strengths and weaknesses in maths.

2. Share some of your good experiences and bad experiences with a partner.
3. Choose one person from your group to capture the thoughts that everyone shared.

Thuto ya 1: Tlwaetšo ya Lenaneo la Dipalo Diiri tše 2

Dinoutse tša monolofatši

- ◆ Batšeakarolo ba dule ka dihlopha tše nnyane tša batho ba tshela go ya go ba seswai. Le latela ditumelelano tša COVID-19.
- ◆ Efa mongwe le mongwe *Pukutšhomo ya Motšeakarolo* le foromo ya go ngwadiša bao ba tlilego.
- ◆ Amogela batšeakarolo o itsebiše.
- ◆ Ahlaahlang melawana ya tshepedišo ya tšhomišano ka nako ya thutofatlošo (lebelela letlakala la 9).
- ◆ Efa batšeakarolo monyetla wa go itsebiša dihlophaneng tša bona le go sehlopha ka moka.
- ◆ Ba hlohloletše go abelana ka maitemogelo a bona a tlhahlo le go ruta.
- ◆ Mema batšeakarolo go abelana ka tše ba lebeletšego go di hwetša thutofatlošoong.

Boingwadišo

Kamogelo le melawana ya tshepedišo

(Metsotso ye 10)

Le amogetšwe thutofatlošong ya mathomo ya tše lesomepedi tša Lenaneokaonafatšo la Thuto ya Dipalo le ya Leleme Mphatong wa R ya Kgoro ya Thuto Profenseng ya Gauteng (GDE).

A re thome ka tsebišo ya banolofatši re be re kwane ka melawana ya tshepedišo.

Go abelana ka maitemogelo a go ruta

(Metsotso ye 15)



Mošongwana wa 2

1. Tšea nako o naganišise ka maitemogelo a gago a go ruta Mphato wa R, kudu a go ruta Dipalo Mphatong wa R. Nagana ka tlhahlo ya gago le ka fao e go beakanyeditšego go ruta dipalo. Gape o leke go hlatha bokgoni le bofokodi bja gago go dipalo.

2. Abelana le mogwera wa gago ka ga a mangwe a maitemogelo a gago a mabotse le maitemogelo a mabe.
3. Kgethang motho o tee sehlopheng sa lena gore a ngwale dikgopolo tše di abiwago ke bohle.

Why a Maths Programme for Grade R?

Facilitator's notes

- ◆ PPT: Summary of the information below.
- ◆ Discuss the importance of improving maths learning and teaching in the Foundation Phase. Introduce the GDE Grade R Mathematics Improvement Programme as an intervention to enhance the implementation of the CAPS curriculum for Grade R.

Many South African primary school learners underperform in Language and Mathematics. A high percentage of learners fail to achieve even the minimum expected standards in these core subjects. There has been slow progress in the improvement of educational outcomes and in narrowing the achievement gap between learners from different backgrounds. The reasons for this are complex, go beyond the classroom and are affected by children's development and well-being from birth.

One of the critical issues around preschool access and attendance, as well as infrastructure and school management in South Africa, has been the fundamental questions about what and how children are learning. In order for all children to have a better chance of fulfilling their potential in Mathematics, the focus must broaden to include maths development in Grade R and, crucially, to provide Grade R teachers and practitioners with the knowledge and skills needed to support young children's maths learning.

The GDE identified Early Childhood Development as its Strategic Goal 1 and one of its key goals is to improve Home Language and Mathematics learning in Grade R. Through the Grade R Mathematics and Language Improvement Programme, the GDE is striving to improve performance in Grade R and prepare learners for Grade 1.

We believe that the Maths Programme will make an important contribution to the implementation of CAPS and that it will enhance the existing learning opportunities for all learners in Grade R so that they develop to their full potential.

What is the Grade R Maths Programme?

Facilitator's notes

- ◆ PPT: Page 10 of the *Concept Guide*, summary of the information below.

The Maths Programme focuses on teaching and learning one maths concept or topic at a time. The main focus of each week is on one CAPS Content Area. New knowledge is introduced through:

Ka lebaka la eng Lenaneo la Dipalo Mphatong wa R?

Dinoutse tša monolofatši

- ◆ PPT: Kakaretšo ya tshedimošo ya ka tlase.
- ◆ Ahlaahlang ka ga bohlokwa bja go kaonafatša go ithuta le go ruta dipalo Kgatong ya Motheo. Tsebiša Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R la GDE bjalo ka tsenogare ya go kaonafatša phethagatšo ya kharikhulamo ya SEPHOLEKE Mphatong wa R.

Barutwana ba bantši ba dikolo tša praemari Afrika Borwa ga ba šome gabotse ka Leleme le Dipalo. Persente ya godimo ya barutwana e palelwa ke go fihlelela le ge e le maemo a tlase ao a lebeletšwego dithutong tše tša bohlokwa. Go bile le tšwelopele ya go nanya kaonafatšong ya dipelo tša thuto le phokotšong ya sekgoba sa phihlelelo magareng ga barutwana ba go tšwa mafelong a go fapana. Mabaka a go hlola se ke a bothata, bogolo bja ona bo fetela ka ntle ga phapoši gape a ama ke kgodišo le gophela gabotse ga ngwana go thoma ge a belegwa.

Se sengwe sa bohlokwa kudu mabapi le go fihlelela le go tsena dikolo tša digotlane, mmogo le meago le bolaodi bja dikolo Afrika Borwa, e bile dipotšišo ka ga seo bana ba ithutago sona le mokgwa wa go ithuta. Gore bana ka moka ba be le sebaka se sekaone sa go phethagatša bokgoni bja bona ka Dipalo, nepišo e swanetše go akaretša le tlabollo ya dipalo Mphatong wa R le, sa bohlokwa kudu, go fa barutiši le batlhahli ba Mphato wa R tsebo le mabokgoni ao a hlokegago go thekga bana ba bannyane go ithuteng dipalo.

GDE e hlathile Thutotlhabologo ya Digotlane bjalo ka Morero Tebanyo ya 1 ya kgoro gomme ye nngwe ya ditebanyokgolo tša yona ke go kaonafatša go ithuta Leleme la Gae le Dipalo Mphatong wa R. Ka Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R, GDE e leka go kaonafatša bokgoni Mphatong wa R le go lokišetša barutwana Mphato wa 1.

Re holofela gore Lenaneo la Dipalo le tlo kgatha tema ye bohlokwa phethagatšong ya SEPHOLEKE le gore le tlo kaonafatša menyetla ye e lego gona ya go ithuta barutwaneng ka moka ba Mphato wa R gore bokgoni bja bona ka moka bo tšwelele.

Lenaneo la Dipalo Mphatong wa R ke eng?

Dinoutse tša monolofatši

- ◆ PPT: Letlakala la 11 la *Pukutlhahlo ya Mareo*, kakaretšo ya tshedimošo ka tlase.

Lenaneo la Dipalo le nepiša go ruta le go ithuta lereo la dipalo goba hlogotaba ka nako e tee. Nepišokgolo ya beke ye nngwe le ye nngwe e ka go Karolo ya Diteng ya SEPHOLEKE ye tee. Tsebo ye mpsha e tsebišwa ka:

- ◆ whole class activities
- ◆ small group activities: teacher-guided activities and independent (side) activities
- ◆ free choice activities.

The Maths Programme:

- ◆ supports, extends and reinforces the content of CAPS Grade R Mathematics. It does not replace CAPS and it assumes that teachers have some prior knowledge and understanding of CAPS Grade R Mathematics.
- ◆ promotes focus time so that learners can practise newly acquired skills and knowledge, and embeds practise opportunities in planned maths activities and experiences.
- ◆ gives teachers a detailed guide that supports teaching and learning.
- ◆ is guided by eight principles that contribute to successful teaching and learning.
- ◆ supports teachers in making the link between Grade R Mathematics concepts and later mathematical competence.
- ◆ emphasises the weekly observation of learners as a tool for gathering information about each child to inform planning and assessment.

Refer to page 10 of the *Concept Guide* to read more about the Grade R Mathematics Improvement Programme.

Read more about the Maths Programme's guiding principles on pages 14–73 of the *Concept Guide*.

- ◆ mešongwana ya barutwana ka moka
- ◆ mešomo ya dihlopha tše nnyane: mošomo wa go hlahlwa ke morutiši le mešongwana ya go ikema (ka thoko)
- ◆ mešongwana ya go ikgethela.

Lenaneo la Dipalo:

- ◆ thekga, katološa le go gatelela diteng tša SEPHOLEKE Dipalo Mphatong wa R. Ga le emele SEPHOLEKE gomme le akanya gore barutiši ba tla ba na le tsebo le kwešišo ya SEPHOLEKE Dipalo Mphatong wa R.
- ◆ hlatloša nako ya nepišo gore barutwana ba ikatiše mabokgoni a maswa ao ba ithutilego ona le tsebo, le go šitlela menyetla ya boikatišo mešongwaneng le maitemogelong a dipalo tša go beakanywa.
- ◆ neela barutiši tlhahlo ka botlalo ya go thekga go ruta le go ithuta.
- ◆ le hlahlwa ke ditheo tše seswai tša go hlola go ruta le go ithuta ka katlego.
- ◆ thekga barutiši go tswalanya mareo a Thuto ya Dipalo Mphatong wa R gomme gwa latela bokgoni bja Dipalo.
- ◆ gatelela temogo ya bana beke ka beke bjalo ka sedirišwa sa go kgoboketša tshedimošo ka ga ngwana yo mongwe le yo mongwe gore e dirišwe ge go dirwa peakanyo le tekolo.

Lebelela letlakala la 13 la *Pukutlhahlo ya Mareo* gore o bale ka ga Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R.

Bala tshedimošo ka ga ditheo tša go hlahlwa Lenaneo la Dipalo matlakaleng a 14–73 a *Pukutlhahlo ya Mareo*.

Time allocation for Mathematics in Grade R

(10 minutes)

Facilitator's notes

- ◆ PPT: Time allocation in Grade R (*Concept Guide*, page 76/77, Table 1).
- ◆ Refer participants to the *Concept Guide*, pages 74–77.

CAPS suggests that the instructional time for Mathematics in Grade R should be 23 hours per week. However, CAPS does not provide a weighting or a breakdown of the time that should be spent on each Content Area for each term.

Maths in the Grade R daily programme

(20 minutes)

The daily programme in Grade R is not a timetable like the ones used in higher grades.

In Grade R the day is organised around the developmental needs of the learners. The day begins with time to talk and sing and ends with rest and stories. During the day, teachers plan activities for Home Language, Life Skills and Mathematics knowledge and understanding. During play and interaction with the teacher and other learners there are many opportunities for the integration of new skills and time to practise what has been learnt.

The Maths Programme suggests a way of organising the daily programme with focus time for Home Language, Life Skills and Mathematics.

Facilitator's notes

- ◆ PPT: Grade R daily programme (*Concept Guide*, page 80/81, Figure 31).
- ◆ Refer participants to the *Concept Guide*, pages 78–81.
- ◆ Ask participants to complete **Activity 5** in their groups. Have each group report back and ask for examples of how maths is taught and learnt in different parts of the daily programme, for example: during routine times, whole class activities, teacher-guided activities, small group workstations and free choice activities.
- ◆ Discuss Mathematics focus time in relation to Home Language focus time, which has already been introduced.

Dinoutse tša monolofatši

- ◆ PPT: Kabo ya nako Mphatong wa R (*Pukutlhahlo ya Mareo*, letlakala la 76/77, Tafola ya 1).
- ◆ E re batšeakarolo ba lebelele *Pukutlhahlo ya Mareo*, matlakala a 74–77.

SEPHOLEKE se šišinya gore nako ya go ruta Thuto ya Dipalo Mphatong wa R e be diiri tše 23 ka beke. Le ge go le bjalo, SEPHOLEKE ga se neelane ka boima goba karoganyo ya nako ya Karolo ye nngwe le ye nngwe ya Diteng kotareng ye nngwe le ye nngwe.

Dipalo tša lenanepethagatšo la tšatši ka tšatši la Mphato wa R

(Metsotso ye 20)

Lenanepethagatšo la tšatši ka tšatši la Mphato wa R ga se lenaneo la nako la go swana le la go dirišwa mephatong ya godingwana.

Ka Mphatong wa R letšatši le beakanywa go ya ka dinyakwa tša kgolo ya barutwana. Letšatši le thongwa ka nako ya go bolela le go opela la fetšwa ka go khutša le dikanegelo. Mo letšatšing, barutiši ba beakanya mešongwana ya Leleme la Gae, Mabokgoni a Bophelo le tsebo ya Dipalo le kwešišo. Ka nako ya papadi le go bolela le morutiši le barutwana ba bangwe go ba le menyetla ye mentši ya tswalanyo ya bokgoni bjo bofsa le nako ya go ikatiša seo se rutilwego.

Lenaneo la Dipalo le šišinya tsela ya go rulaganya lenanepethagatšo la tšatši ka tšatši la nepišo ya nako ya Leleme la Gae, Mabokgoni a Bophelo le Thuto ya Dipalo.

Dinoutse tša monolofatši

- ◆ PPT: Lenanepethagatšo la tšatši ka tšatši la Mphato wa R (*Pukutlhahlo ya Mareo*, letlakala la 80/81, Seswantšho sa 31).
- ◆ E re batšeakarolo ba lebelele *Pukutlhahlo ya Mareo*, matlakala a 78–81.
- ◆ Kgopela batšeakarolo gore ba tlatše **Mošongwana wa 5** ka dihlopha. Kgopela dihlopha ka moka go fa pego o kgopele mehlala ya ka fao go rutwago le go ithuta dipalo dikarolong tša go fapana tša lenanepethagatšo la tšatši ka tšatši, mohlala: ka dinako tša go itlwaetša ditlwaetšo, mešongwana ya barutwana ka moka, mošomo wa go hlhlwa ke morutiši, mafelo a go šomela a dihlopha tše nnyane le mešongwana ya go ikgethela.
- ◆ Ahlaahlang nako ya Thuto ya Dipalo go lebeletšwe le nako ya Leleme la Gae, yeo e šetšego e tsebišitšwe.

Daily Mathematics focus time

Facilitator's notes

- ◆ PPT: Daily Mathematics focus time (*Concept Guide*, page 82/83, Figure 33, or the diagram below). Summarise the information on pages 84–93 of the *Concept Guide*.

Guidelines for classroom organisation and management of the Mathematics focus time

1. Whole class maths sessions

- ◆ 15–25 minutes
- ◆ All learners sit in a circle together with the teacher.
- ◆ Activities:
 - Consolidate and provide practice of previously taught concepts.
 - Introduce a new concept.
 - Extend the concept that is the main focus of the week:
 - oral/rote counting (rhymes, songs, sequencing numbers)
 - counting objects
 - posing problems, memory games.
 - Give instructions for the small group activities at the workstations.

2. Small group maths sessions

- ◆ The class is divided into five groups of six to eight learners each.
- ◆ Each day one group works with the teacher (teacher-guided activity) and four groups work independently on planned maths activities at the workstations.
- ◆ Groups rotate daily.
- ◆ Activities:
 - Consolidate and provide opportunities to practise previously taught concepts.
 - Investigate the new concept that is the main focus of the week.
 - Provide opportunities to practise the concept that is the main focus of the week.
- ◆ The **teacher-guided activity** focuses on working with one group of learners to:
 - consolidate and practise previously taught concepts
 - deepen the understanding of a new concept
 - observe learners' progress.

3. Free choice activities

- ◆ Additional free choice activities with a maths focus are provided for learners who have completed their small group activity.

The Language training introduced you to a two-week teaching and learning cycle. The Maths Programme also follows a structured approach to organising the class for the Mathematics focus time. The Maths Programme's teaching and learning cycle is based on five small group activities that are rotated during one week. The lessons begin on a Monday and end on a Friday.

Nako ya Thuto ya Dipalo ya tšatši ka tšatši

Dinoutse tša monolofatši

- ◆ PPT: Nako ya Thuto ya Dipalo tšatši ka tšatši (*Pukutlhahlo ya Mareo*, letlakala la 82/83, Seswantšho sa 33, goba seswantšho sa ka tlase). Akaretša tshedimošo ya matlakala a 84–93 ka go *Pukutlhahlo ya Mareo*.

Methalohlhali ya thulaganyo ya phapoši le taolo ya nako ya Dipalo

1. Dithutwana tša phapoši ka moka

- ◆ Metsotso ye 15–25
- ◆ Barutwana ba dula ka sediko le morutiši.
- ◆ Mešongwana:
 - Kopanya o be o neelane ka katišo ya mareo ao a rutilwego.
 - Tsebiša lereo le leswa.
 - Katološa lereo le e lego nepišokgolo ya beke:
 - go bala ka molomo/ka hlogo (direto, dikoša, go latelanya dinomoro)
 - go bala dilo
 - kabo ya mathata, meraloko ya kgopolo.
 - Efa ditaelo tša mešomo ya dihlopha tše nnyane mafelong a go šomela.

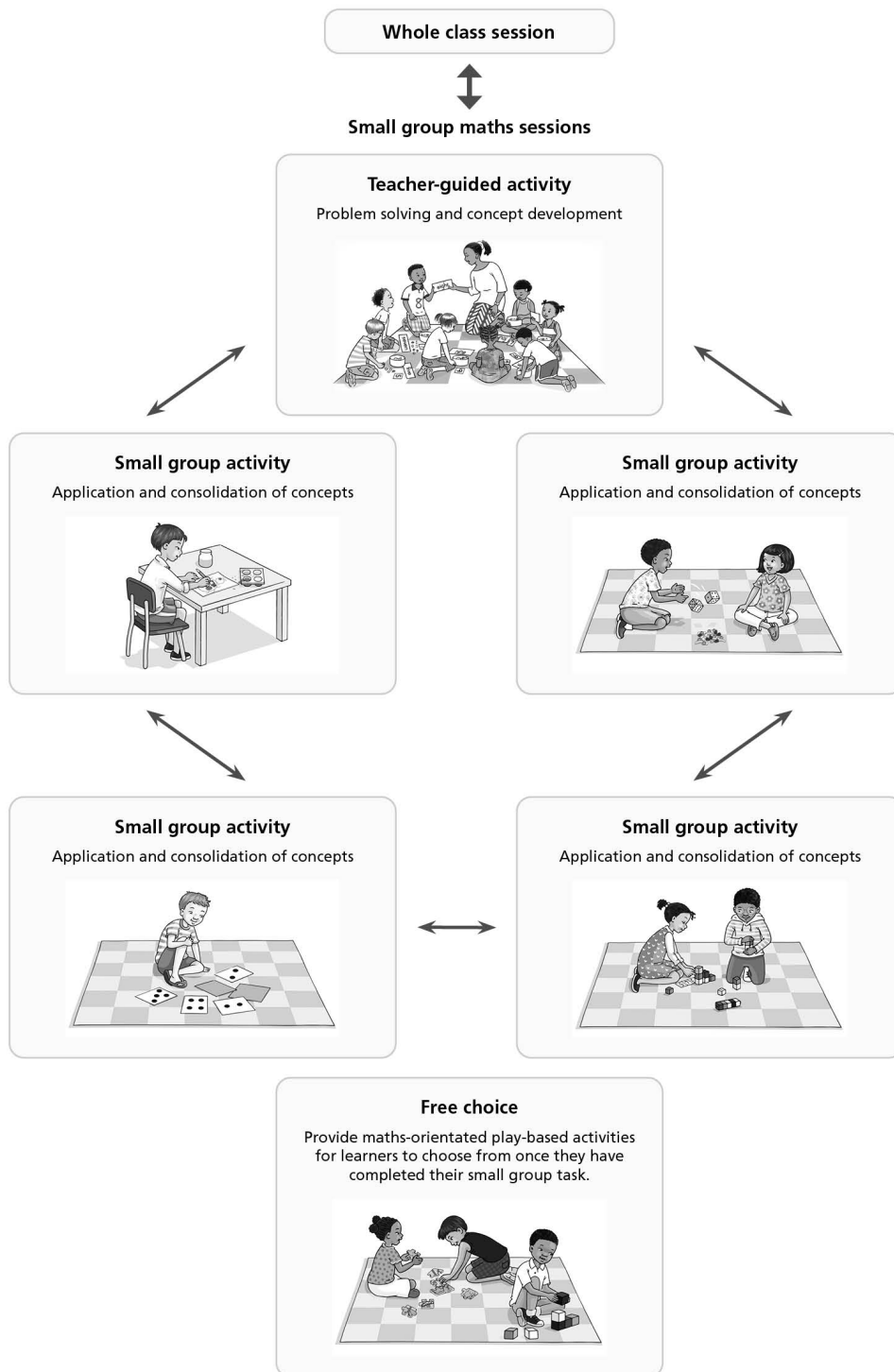
2. Dithutwana tša Dipalo tša dihlopha tše nnyane

- ◆ Mphato o arolwa ka dihlopha tše nne tša barutwana ba tshela go iša go ba seswai.
- ◆ Letšatši le lengwe le le lengwe sehlopha se setee se šoma le morutiši (mošongwana wa go hlhlwa ke morutiši) gomme dihlopha tše nne di dira mešongwana ya dipalo ya go beakanywa ntle le tlhahlo mafelong a go šomela.
- ◆ Dihlopha di šiedišana tšatši ka tšatši.
- ◆ Mešongwana:
 - Kopanya o be o neelane ka menyetla ya go ikatiša ya mareo ao a rutilwego.
 - Nyakišiša lereo le e lego nepišokgolo ya beke.
 - Neelane ka menyetla ya go ikatiša lereo le e lego nepišokgolo ya beke.
- ◆ **Mošomo wa go hlhlwa ke morutiši** o nepiša go šoma le sehlopha se setee sa barutwana go:
 - kopanya le go neelana ka katišo ya mareo ao a rutilwego
 - tiišetša kwešišo ya lereo le leswa
 - lemoga tšwelopele ya barutwana.

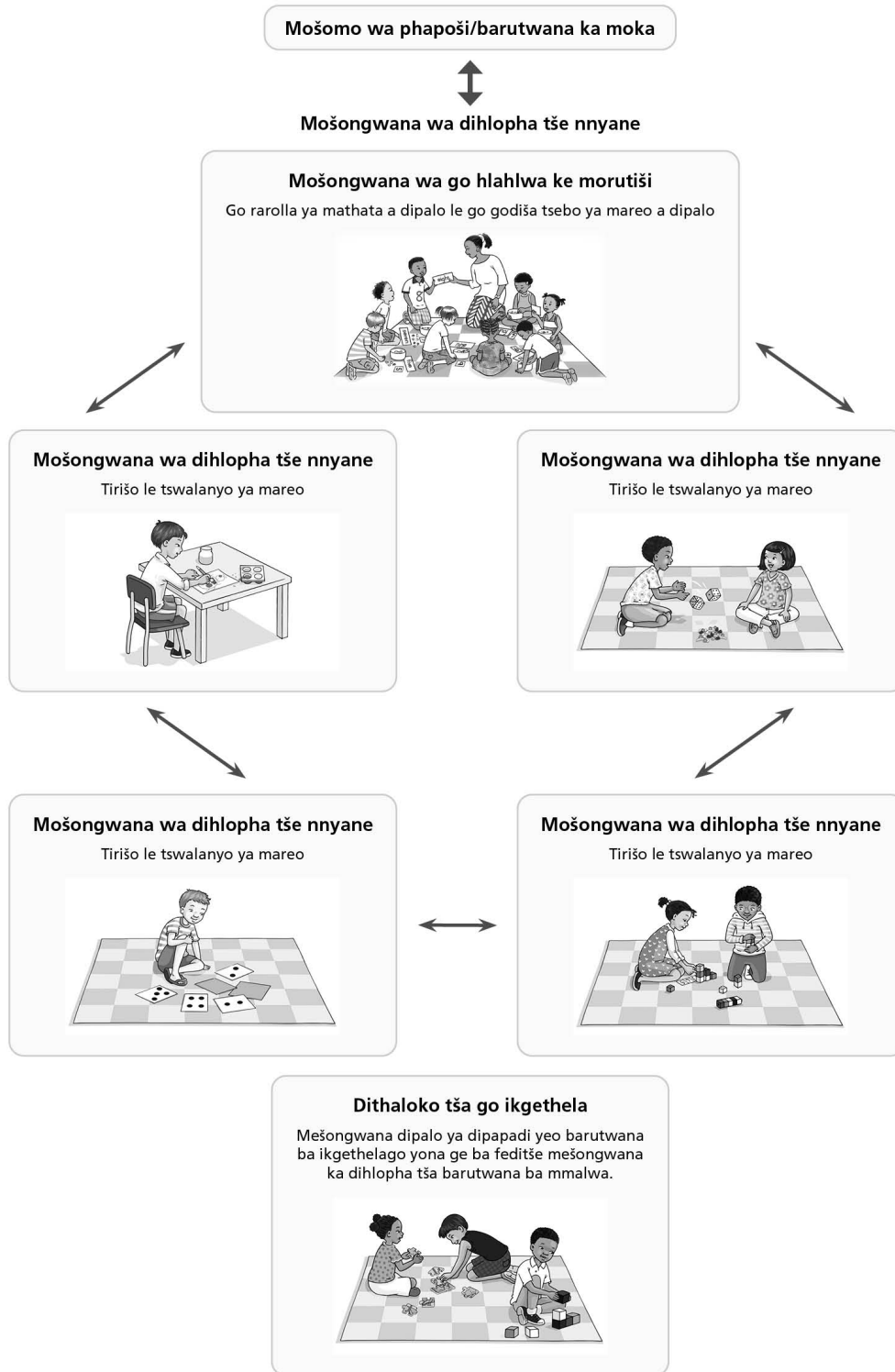
3. Mešongwana ya go ikgethela

- ◆ Barutwana ba go fetša mešongwana ya sehlopha tše nnyane ba fiwa mešongwana ya go ikgethela ya tlaleletšo ya go nepiša dipalo.

Tlhahlo ya Leleme e go tsebišitše go saekele ya go ruta le go ithuta ya dibeke tše pedi. Lenaneo la Dipalo le latela mokgwa wa go beakanywa go rulaganya phapoši ka nako ya Thuto ya Dipalo. Saekele ya go ruta le go ithuta ya Lenaneo la Dipalo e theilwe go mešomo ye mehlano ya dihlopha tše nnyane ka go šiedišana mo bekeng e tee. Dithuto di thoma ka Mošupologo tša fela ka Labohlano.



Refer to pages 82–93 of the *Concept Guide* to read more about organising your classroom for the daily Mathematics focus session.



Lebelela matlakala a 82–93 ka go *Pukutlhahlo ya Mareo* go bala ka ga go rulaganyetša phapoši thutwana ya Thuto ya Dipalo ya tšatši ka tšatši.

Session 2: Numbers, Operations and Relationships

2 hours

Term 1–4 content overview (CAPS)

(45 minutes)

Facilitator's notes

- ◆ PPT: *Concept Guide*, page 110/111, Figure 41 and summary on pages 110–113
- ◆ Refer participants to the *Concept Guide*, pages 114–137. Explain that this content overview provides the framework for all maths planning and will be used and referenced throughout the training.
- ◆ PPT: Discuss the table. Explain that the text in blue is from CAPS and the black text is content that has been added to build and extend CAPS in the Maths Programme.

The Maths Programme is aligned to and extends the content of the five Mathematics Content Areas of CAPS. The table on pages 114–137 of the *Concept Guide* provides a content overview of the maths to be taught in Grade R. It also shows what content is to be taught each term.

- ◆ The text in blue is the content from the CAPS for Grade R Mathematics.
- ◆ The text in black has been added to extend and build on CAPS.
- ◆ The topics are sequenced to show a developmental progression from one topic to the next.

Refer to pages 110–113 of the *Concept Guide* and read 1.1, 1.2 and 1.3 on pages 114–117. After reading numbers 1.1, 1.2 and 1.3, complete Activities 7 and 8.

Facilitator's notes

- ◆ Have participants complete **Activity 2** in their groups. Ask a person from each group to share their ideas.



Activity 2

Look through the Term 1–4 content overview for the Content Area: Numbers, Operations and Relationships, in the *Concept Guide* and in the CAPS document. In your group, discuss:

1. What does the Maths Programme add to the content of CAPS?

Thuto ya 2: Dinomoro, Tirišo le Tswalano

Diiri tše 2

Kotara ya 1–4 kakaretšo ya diteng (SEPHOLEKE)

(Metsotso ye 45)

Dinoutse tša monolofatši

- ◆ PPT: *Pukutlhahlo ya Mareo*, matlakala a 110/111, Seswantšho sa 41 le kakaretšo matlakaleng a 110–113
- ◆ E re batšeakarolo ba lebelele *Pukutlhahlo ya Mareo*, matlakala a 114–137. Hlaloša gore kakaretšo ye ya diteng e neelana ka tlhamo ya peakanyo ka moka ya dipalo gomme e tlo dirišwa le go šupetšwa nako le nako mo tlhahlong.
- ◆ PPT: Ahlaahlang tafola. Hlaloša gore sengwalwa sa botalalerata se tšwa go SEPHOLEKE gomme sengwalwa se seso ke diteng tše di tsentšwego go aga le go katološa SEPHOLEKE ka go Lenaneo la Dipalo.

Lenaneo la Dipalo le sepedišana le le go katološa diteng tša Dikarolo tša Diteng tša Thuto ya Dipalo tša SEPHOLEKE tše hlano. Tafola ye e lego matlakaleng a 114–137 a *Pukutlhahlo ya Mareo* e neelana ka kakaretšo ya diteng tša dipalo tše di tlo rutwago Mphatong wa R. E bontšha le gore go rutwa diteng dife kotareng e tee.

- ◆ Sengwalwa sa botalalerata ke diteng tša go tšwa go SEPHOLEKE sa Thuto ya Dipalo Mphatong wa R.
- ◆ Sengwalwa se seso se tsenyeditšwe go katološa le go oketša SEPHOLEKE.
- ◆ Dihlogotaba di latelantšwe go bontšha tšwelopele ye e golago go tšwa go hlogotaba go ya go ye nngwe.

Lebelela matlakala a 110–113 ka go *Pukutlhahlo ya Mareo* o be o bale 1.1, 1.2 le 1.3 matlakaleng a 114–117. Morago ga go bala dinomoro 1.1, 1.2 le 1.3, feleletša Mešongwana ya 7 le 8.

Dinoutse tša monolofatši

- ◆ Laela batšeakarolo go tlatša **Mošongwana wa 2** ka dihlopha. Kgopela yo mongwe sehlopheng se sengwe le se sengwe go abelana ka dikgopolo tša bona.



Mošongwana wa 2

Lebelela Karolo ya Diteng: Dinomoro, Tirišo le Tswalano, go kakaretšo ya diteng ya Kotara ya 1–4 ka go *Pukutlhahlo ya Mareo* le ka tokomaneng ya SEPHOLEKE. Sehlopheng sa gago, ahlaahlang:

1. Lenaneo la Dipalo le tsenya eng go diteng tša SEPHOLEKE?

Refer to the black text on pages 114–117 of the *Concept Guide*. Main content added: dot cards, multiple representations, structure beads, jumping track, number washing line, matching with number symbol/word, breaking down and building up collections, ordering of number symbols, ordinal numbers in everyday activities, orally solving problems, equal sharing.

2. What counting concepts are covered in Numbers, Operations and Relationships in Term 1?

Refer to the black text on pages 114–115 of the *Concept Guide*: one-to-one correspondence, estimation, matching, multiple representations, counting forwards 1–10, counting backwards 5–1.

Facilitator's notes

- ◆ Explain that during the workshops the focus is on the implementation of the Maths Programme and that participants need to understand the maths concepts themselves so that they are able to support their learners. This workshop provides an understanding of important concepts in Numbers, Operations and Relationships.

Important concepts in Numbers, Operations and Relationships

(1¼ hours)

Counting

Oral counting (rhythmic, rote or acoustic counting)

Facilitator's notes

- ◆ Ask participants to divide themselves into small groups of five and then to find an open space in the training room. Refer participants to **Activity 8** and let them say the rhyme, *One, two, three, four, five* (*Activity Guide: Term 1*, page 196) with actions.
- ◆ In their small groups, participants reflect on the activity and the counting skills they used and complete **Activity 8** and **9**.
- ◆ Ask the groups to report back on their discussions. List each new counting skill on the flipchart.
- ◆ Make sure that participants understand that oral counting involves memorising the names of numbers and does not mean that children can count.
- ◆ Read the information on oral counting below.
- ◆ Discuss the following terms: oral, rhythmic, rote and acoustic counting.
- ◆ PPT: such as: book, chair, dog, house.
- ◆ Explain that for learners the counting sequence of number names does not initially have any association with the concept of number, e.g. like: book, chair, dog, house, ... Learners gradually understand that each word stands alone in the sequence and that each word represents a specific number.

Lebelela sengwalwa se seso matlakaleng a 114–117 ka go *Pukutlhahlo ya Mareo*. Ditengkgolo di tsentšwe: dikarata tša marontho, dikemedi tše dintši, lenti la pheta, palotatelano, mothalopalo, tswalanya sekapalo/leinapalo, arola le go hlakanya kgoboketšo, go latelanya maswao a dinomoro, dipaloghle mešongwaneng ya tšatši ka tšatši, go rarolla mathata ka molomo, go abelana ka go lekana.

2. Go akareditšwe mareo afe a go hlakanya ka go Dinomoro, Tirišano le Tswalano go Kotara ya 1?

Lebelela sengwalwa se seso matlakaleng a 114–115 ka go *Pukutlhahlo ya Mareo*: tee ka tee, akanya, go tswalanya, dikemedi tše dintši go balela pele 1–10, go balela morago 5–1.

Dinoutse tša monolofatši

- ◆ Hlaloša gore ka nako ya thutofatlhošo go nepišwa phethagatšo ya Lenaneo la Dipalo le gore batšeakarolo ba kwešiše mareo a dipalo gore ba kgone go thekga barutwana ba bona. Thutotlhahlo ye e neelana ka kwešišo ya mareo a bohlokwa a Dinomoro, Tirišo le Tswalano.

Mareo a bohlokwa a Dinomoro, Tirišo le Tswalano

(Diiri tše 1¼)

Go bala

Go balela godimo (morethetho, go bala ka modumo)

Dinoutse tša monolofatši

- ◆ Kgopela batšeakarolo gore ba ikarole ka dihlopha tše nnyane tša ba bahlano gomme ba hwetše sekgoba sa go bulega ka phapošing ya tlhahlo. Laela batšeakarolo gore ba lebelele **Mošongwana wa 8** gomme ba rete sereto, *Tee, pedi, tharo, nne, hlano* (*Pukutlhahlo ya Mešongwana: Kotara ya 1*, letlakala la 197) le dire ditiro.
- ◆ Ka dihlopha tša bona tše nnyane, ba naganiša ka mošongwana le mabokgoni a go bala ao ba a dirišitšego gomme ba dira **Mošongwana wa 8** le **9**.
- ◆ Kgopela dihlopha go fa dipego go tšwa dipoledišanong tša bona. Ngwala mabokgoni a go bala ka moka ga ona tšhateng ya go phetla.
- ◆ Kgonthiša gore batšeakarolo ba kwešiša gore go balela godimo go akaretša go swara maina a dinomoro ka hlogo gomme seo ga se re gore barutwana ba kgona go bala.
- ◆ Bala tshedimošo ya go balela godimo ka fa tlase.
- ◆ Ahlaahlang mareo a latelago: go balela godimo, ka morethetho le ka modumo.
- ◆ PPT: bjalo ka: puku, setulo, mpša, ntlo.
- ◆ Hlaloša gore mo barutwaneng go bala tatelano ya maina a dinomoro ga go amane le lereo la nomoro, mohl: puku, setulo, mpša, ntlo, ... Barutwana gannyane-gannyane ba kwešiša gore lentšu le lengwe le le lengwe le ema le le tee tatelanong le gore lentšu le lengwe le le lengwe le emela nomoro ye itšego.

Oral counting involves a learner memorising the names and counting order of numbers, often in a rhyme or song.

In Grade R learners learn the correct order of number names and repeat the sequence daily. The purpose of counting out loud is to help learners understand that when we count aloud there is a set order for the numbers: beginning at one, then two, three, four, etc. Initially learners do not fully understand the meaning of the number names and might skip numbers in a counting sequence. Reciting a rhyme or series of numbers orally means repeating the number names from memory. Even when learners count in steps of two, five and ten they are using their knowledge of this number order. Memorising number names and repeating them in the correct counting order does not necessarily mean that learners can count. This is different from counting to find out 'how much'.

Arrange yourselves into small groups of five and find an open space in the training room for the next activity.



Activity 3

1. In your small groups, say the rhyme, *One, two, three, four, five*, with actions.

One, two, three, four, five

One, two, three, four, five
Once I caught a fish alive.
'Why did you let it go?'
Because it bit my finger so.
One, two, three, four, five
Then I caught a frog alive.
'What did you do with that?'
I said hello and put it back.

2. Do you think using a rhyme like this one is good practice for teaching counting in Grade R? Give reasons for your answer.

Refer to pages 76 and 196 of *Activity Guide: Term 1* for this rhyme.

Go balela godimo go akaretša gore morutwana o swara maina ka hlogo le go bala dinomoro ka tatelano, gantšhi ka morethetho goba koša.

Ka Mphatong wa R barutwana ba ithuta tatelano ya go nepagala ya maina a dinomoro gomme ba boeletša tatelano tšatši ka tšatši. Morero wa go balela godimo ke go thuša barutwana go kwešiša gore ge re balela godimo go na le tatelano ya dinomoro ye e beilwego: go thoma ka tee, gwa latela pedi, tharo, nne, bj.bj. Barutwana mathomong ga ba kwešiše gabotse gore maina a dinomoro a ra go reng ebile ba ka tshela dinomoro ge ba bala go ya ka tatelano. Go reta sereto goba tthatlamano ya dinomoro ka molomo go ra gore go boeletša maina a dinomoro tše di swerwego ka hlogo. Le ge barutwana ba bala ka dikgato tša pedi, hlano le lesome ba diriša tsebo ya bona ya tatelano ya dinomoro. Go swara maina a dinomoro ka hlogo le go a boeletša ka tatelano ya go nepagala ga go laetše gore barutwana ba kgona go bala. Se se fapana le go balela go hwetša 'bokae'.

Ipeakanyeng ka dihlopha tše nnyane tša ba bahlano gomme le hwetše sekgoba sa go bulega sa mošongwana wa go latela ka phapošing ya tlhahlo.



Mošongwana wa 3

1. Ka dihlopha tša lena tše nnyane, retang sereto, *Tee, pedi, tharo, nne, hlano*, le dire ditiro.

Tee, pedi, tharo, nne, hlano

Tee, pedi, tharo, nne, hlano

Nkile ka swara hlapi ya go phela.

'Nkane o e tlogetše ya sepela?'

Ka gobane e ntomile monwana.

Tee, pedi, tharo, nne, hlano

Ka morago ka swara segwagwa sa go phela.

'O dirile eng ka sona?'

Ke rile dumela gomme ka se bušetša morago.

2. Na o nagana gore go diriša sereto sa go swana le se ke mokgwa o mobotse wa go ruta go bala Mphatong R? efa mabaka a karabo ya gago.

Lebelela matlakala a 77 le 197 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 1* o direla sereto se.



Activity 4

In the same small groups, answer these questions:

1. What would learners learn by saying this rhyme?

2. What do learners learn when they repeat a sequence of numbers in the correct counting order?

Count in ones in the correct order.

Sequence of the counting numbers.

Correct number words.

Distinguish the number words.

Helps with memorising the sequence of counting order.

Counting objects (rational counting)

Facilitator's notes

- ◆ Demonstrate how to count objects using one-to-one correspondence.
- ◆ Ask participants to take two handfuls of counters from the *Resource Kit* equipment in the tub on their table and place them in front of them. Ask them to say which pile has more/fewer counters. Ask participants how they can determine this without counting. Prompt them to match the elements in each group one-to-one in order to say which group has more/less.
- ◆ Ask participants to count the items in each group to find out which has more/fewer.
- ◆ Ask participants what vocabulary was used, e.g. count, one, two, three ..., how many, more, fewer, group.
- ◆ Read the information about counting objects (rational counting) below.
- ◆ Make sure that participants understand the difference between oral counting and counting objects:
 - **Oral counting** involves memorising and sequencing number words.
 - **Counting objects** involves matching a number word to each object being counted and understanding that the last number said represents the total number counted (how many).



Mošongwana wa 4

Ka dihlopha tšona tšela tše nnyane, arabang dipotšišo tše:

1. Barutwana ba tlo ithuta eng ka go reta sereto se?

2. Barutwana ba ithuta eng ge ba boeletša tatelano ya dinomoro ka tatelano ya go bala ya go nepagala?

Bala ka e tee ka e tee ka tatelano ya go nepagala.

Tatelano ya dinomoro tša go balwa.

Maina a dinomoro a go nepagala.

Pharologanya maina a dinomoro.

Thuša ka go swara tatelano ya go bala dinomoro ka hlogo.

Go bala dilo (go gopola)

Dinoutse tša monolofatši

- ◆ Bontšha gore dilo di balwa bjang o diriša e tee go e tee.
- ◆ Kgopela batšeakarolo gore ba tšee dibaledi tša go tlala diatla tše pedi setlabelong sa *Dithušathuto tša Phapoši* ka seswarong seo se lego tafoleng ya bona gomme ba di bee pele ga bona. Ba kgopele go bolela gore ke mokgobo ofe wa go ba le dibaledi tše dintši/dinnyane. Botšiša batšeakarolo gore ba tlo laetša se bjang ntle le go bala. Ba hlohletše go tswalanya dielemente sehlopheng se sengwe le se sengwe ka e tee go e tee go bolela gore ke sehlopha sefe sa go ba le tše dintši/dinnyane.
- ◆ Kgopela batšeakarolo gore ba bale dilo tša sehlopha se sengwe le se sengwe go hwetša sa go ba le tše dintši/dinnyane.
- ◆ Botšiša batšeakarolo gore go dirišitšwe tlotlontšu efe, mohl, bala, tee, pedi, tharo, ..., tše kae, ntši, nnyane, sehlopha.
- ◆ Bala tshedimošo ka ga go bala dilo (go bala dilo) ka tlase.
- ◆ Kgonthiša gore batšeakarolo ba kwešiša phapano magareng ga go balela godimo le go bala dilo:
 - **Go balela godimo** go akaretša go swara ka hlogo le go latelanya maina a dinomoro.
 - **Go bala dilo** go akaretša go tswalanya leina la nomoro le selo sa go balwa le go kwešiša gore nomoro ya go bolelwa la mafelelo e emela palomoka ye e badilwego (tše kae).

Counting objects involves one-to-one correspondence. This means that each object or event to be counted is matched with a number word. To count 'how many', learners need to realise that each object in a collection gets a number word ('one, two, three, four ...') and that you count each object only once.

Once learners know the order of the counting numbers, they begin to understand that each number in the counting sequence is one bigger than the number before and one smaller than the next number. They:

- ◆ can mentally compare numbers and see that two is one more than one and that three is one more than two.
- ◆ realise that numbers grow by one each time.
- ◆ realise that any number in the counting sequence is exactly one more than the previous number.

Facilitator's notes

- ◆ Explain to participants that learners do not learn number concepts and skills in isolation. They need daily experiences with number in different contexts that involve oral counting, counting objects and representing a number in different ways.
- ◆ Emphasise that learners are not required to write number symbols in Grade R. Learning to write number symbols should be regarded the same way as Emergent Writing. Refer to Numbers, Operations and Relationships in the CAPS document and to pages 114–117 of the *Concept Guide*.



Video 3

Activity Guide: Term 1, Week 2, Teacher-guided activity #2, 3 (page 46/47)

Watch the video of learners counting a collection of objects. This is a teacher-guided activity. Notice how the teacher observes each learner and asks questions to prompt them to share their ideas.

Go bala dilo go akaretša tee-ka-tee. Se se ra gore selo se sengwe le se sengwe goba tiragalo ye e tlo balwago e tswalanywa le leina la nomoro. Go bala 'tše kae', barutwana ba hloka go lemoga gore selo se sengwe le se sengwe mokgobong se na le leina la nomoro ('tee, pedi, tharo, nne ...') le gore o ka se bale selo se setee gatee fela.

Ge barutwana ba tseba tatelano ya go bala dinomoro, ba thoma go kwešiša gore nomoro ye nngwe le ye nngwe tatelanong ya go bala e feta nomoro ya ka morago ga yona ka tee gape ke ye nnyane go nomoro ya go latela ka e tee. Ba:

- ◆ ka bapetša dinomoro ka hlogo gomme ba bona gore pedi e feta tee ka e tee le gore tharo e feta pedi ka e tee.
- ◆ lemoga gore dinomoro di gola ka tee nako le nako.
- ◆ Lemoga gore nomoro efe goba efe tatelanong ya go bala dinomoro e feta ya ka morago ka e tee.

Dinoutse tša monolofatši

- ◆ Hlalošetša batšeakarolo gore barutwana ga ba ithute mareo a dinomoro le mabokgoni ba le nnoši. Ba hloka maitemogelo a tšatši ka tšatši a dinomoro dikamanong tša go fapana tša go akaretša go balela godimo, go bala dilo le go emela nomoro ka ditsela tša go fapana.
- ◆ Gatelela gore barutwana ga ba swanela go ngwala maswao a dinomoro ka Mphatong wa R. Go ngwala maswao a dinomoro go tšewe bjalo ka Go Ithuta go Ngwala. Lebelela Dinomoro, Tirišo le Tswalano ka tokomaneng ya SEPHOLEKE le matlakaleng a 114–117 ka go *Pukutlhahlo ya Mareo*.



Bideo ya 3

Pukutlhahlo ya Mešongwana: Kotara ya 1, Beke ya 2, Mošomo wa go hlahlwa ke morutiši #2, 3 (matlakala a 46/47)

Bogela bideo ya barutwana ba bala mokgobo wa dilo. Ke mošomo wa go hlahlwa ke morutiši. Lemoga ka fao morutiši a lebelelago morutwana ka gona a botšiša le dipotšišo go dira gore ba abelana ka dikgopolo.

Representing numbers

Facilitator's notes

- ◆ Say to participants: *Show me five.*
- ◆ Participants will most likely hold up five fingers. Explain that the concept or idea of a number is in our heads and that we cannot see numbers. We can't see them, but we can represent them in different ways, for example, using fingers, counters, claps, birthday candles. We represent numbers to show 'how many'.
- ◆ Ask participants to think about the different ways to represent a number and ask them to complete **Activity 10** individually. Then ask participants to share their ideas.
- ◆ Use the information below to summarise how learners begin to represent numbers.



Activity 5

How many different ways can you find to represent the number 5?

Learners begin to represent numbers using their fingers, and then gradually start to use other methods, such as objects, drawings, pictures or symbols. Learners progress:

- ◆ from using actual objects to represent (stand in for) numbers, e.g. lemons, sweets, pencils, leaves
- ◆ to using pictures or drawings to represent the objects, e.g. a drawing of a lemon, person, car
- ◆ to using counters to represent the objects or pictures, e.g. plastic discs to show the number of lemons
- ◆ to using marks to represent the physical objects and pictures, e.g. circles, dots, tally marks, clapping sounds, drumbeats, stamping feet
- ◆ to using number symbols and number words, e.g. '2' or 'two'.

Facilitator's notes

- ◆ PPT: Explain that the Maths Programme uses an approach of teaching one number at a time and follows the same routine for each number taught. Summarise the text below to provide a brief outline of the routine.
- ◆ Tell the *Number 1 story* on page 196 of *Activity Guide: Term 1*.

Go emela dinomoro

Dinoutse tša monolofatši

- ◆ E re go batšeakarolo: *Mpontšhe hlano*.
- ◆ Gantši batšeakarolo ba tlo emiša menwana ye mehlanu. Hlaloša gore lereo goba kgopolo ya nomoro e ka dihlogong tša rena gomme re ka se bone dinomoro. Re ka se di bone, efela re ka di emela ka ditsela tša go fapana, mohlala, ka go diriša menwana, dibaledi, mephaphatho, dikerese tša letšatši la matswalo. Re emela dinomoro go bontšha 'tše kae'.
- ◆ Kgopela batšeakarolo go nagana ka ditsela tša go fapana tša go emela nomoro o ba kgopele go tlatša **Mošongwana wa 10** ka o tee ka o tee. Ka morago kgopela batšeakarolo gore ba abelane dikgopolo.
- ◆ Diriša tshedimošo ya ka tlase go akaretša ka fao barutwana ba thomago go emela dinomoro.



Mošongwana wa 5

O ka hwetša ditsela tše kae tša go fapana tša go emela nomoro 5?

Barutwana ba ithuta go šomiša menwana ya bona go emela dinomoro gomme ba thoma go šomiša mkgwa woo ka dilo tše dingwe bjalo ka didirišwa, dithalwa, diswantšho goba maswao. Barutwana ba thoma go:

- ◆ šomiša dilo go ema legatong la (ema legatong) dinomoro, mohl. dinamune, malekere, pensele, matlakala
- ◆ šomiša diswantšho go ema legatong la dilo, mohl. seswantšho sa namune, motho, kolo
- ◆ šomiša dibaledi go emela dilo tše di lego diswantšhong, mohl. dikhurumelo tša mapotlelo go bontšha palo ya dinamune
- ◆ šomiša leswao go emela selo sa nnete goba seswantšho, mohl. sediko, marontho, lekanyetša, medumo ya go phaphatha, meropa, go kiba fase ka maoto
- ◆ šomiša palontšu le sekapalo, mohl. '2' goba 'pedi'.

Dinoutse tša monolofatši

- ◆ PPT: Hlaloša gore Lenaneo la Dipalo le diriša mkgwa wa go ruta nomoro e tee ka nako gomme le latele seo le ka dinomoro tše dingwe tše di rutwago. Akaretša sengwalwa sa ka tlase go neelana ka go hlaloša tlwaelo.
- ◆ Anega *Kanegelo ya nomoro 1* letlakaleng la 197 of *Pukutlahlo ya Mešongwana: Kotara ya 1*.

- ◆ Retell the story, this time involving the participants in dramatising the story as you tell it, e.g. by moving like elephants, painting the number 1 on the roof of the house, smelling one flower, flying around like one bird.
- ◆ Demonstrate different number representations by displaying the house template on the wall of the training room and re-telling the *Number 1 story*. Exaggerate 'one' each time it occurs in the story, e.g. one bird, one tree, one bench, one flower, one cloud, one door, one doorbell. Place the number 1 frieze cards in the house template as you progress through the story:
 - the animal (picture)
 - the number symbol (1)
 - the dot (doorbell)
 - the number word (one).

The Maths Programme uses an approach that introduces numbers 0–10 one at a time and follows the same teaching routine for each number.

- ◆ A story is told about the number. This raises learners' interest and provides a familiar, fun context that connects with learners' lives and interests.
- ◆ Each number has a particular animal character. The story featuring the animal is used to build a number frieze to represent the number.
- ◆ Dramatising the story provides opportunities for learners to respond kinaesthetically (learning through acting and moving their bodies).
- ◆ Objects are collected to represent the number in various ways. The objects are put in the maths area.
- ◆ Learners match objects to pictures, dot cards, number symbols and number words.
- ◆ The *Poster Book* provides real-life contexts to stimulate discussion and encourage problem solving.

The number 'one' is introduced in the second week of Term 1 to familiarise learners with this routine. The same routine is used as each new number is introduced, adding one more to the number the learners learnt previously.

Before completing the next activity, interact with the facilitator as she tells the story for number 1 and builds up the number frieze using the house template and animal frieze cards. After listening to the story, complete Activity 11.

Facilitator's notes

- ◆ After the demonstration, ask participants to complete **Activity 11**.
- ◆ Allow participants to discuss the question in small groups and then to share their ideas in the big group.
- ◆ Reflect on the vocabulary used during the activity, e.g. one, number, number symbol, number name, number word, how many, group, collection, count, the same.

- ◆ Anega kanegelo leswa, ga bjale ama batšeakarolo ka go e diragatša ge o le gare o anega, mohl, ka go sepela bjalo ka ditlou, go penta nomoro 1 marulelong a ntlo, go dupa letšoba le letee, go fofa bjalo ka nonyana e tee.
- ◆ Bontšha dikemedi tša go fapana tša dinomoro ka go bea thempoleiti ya ntlo lebotong la phapoši ya tlhahlo gomme wa anega *kanegelo ya Nomoro 1* leswa. Feteletša 'tee' nako le nako ge e tšwelela kanegelong, mohl, nonyana e tee, mohlare o tee, pank a e tee, letšoba le letee, leru le letee, pele ya lebati ye tee. Bea dikarata tša tšhate ya dinomoro le tlotlontšu ya nomoro1 ka thempoleiting ya ntlo ge o le gare o anega kanegelo:
 - phoofolo (seswantšho)
 - leswao la nomoro (1)
 - lerontho (pele ya lebati)
 - leina la nomoro (tee).

Lenaneo la Dinomoro le diriša moggwa wa go tsebiša dinomoro 0–10 e tee ka nako gomme gwa latela tlwaelo yeo ya go ruta nomoro ye nngwe le ye nngwe.

- ◆ Go anegwa kanegelo ya nomoro. Se se tanya kgahlego ya barutwana sa neelana ka kamano ya go tlwaelega ya boipshino ya go tswalana le maphelo le dikgahlego tša barutwana.
- ◆ Nomoro ye nngwe le ye nngwe e na le moanegwa wa phoofolo. Kanegelo ya go hlagiša phoofolo e dirišwa go bopa tšhate ya dinomoro le tlotlontšu go emela nomoro.
- ◆ Tiragatšo ya kanegelo e nea barutwana menyetla ya go araba ka ditiro (go ithuta ka go diragatša le go sepetša mebele ya bona).
- ◆ Go kgoboketšwa dilo go emela dinomoro ka ditsela tša mehutahuta. Dilo di bewa sebakeng sa dipalo.
- ◆ Barutwana ba tswalanya dilo le diswantšho, dikarata tša marontho, maswao a dinomoro le maina a dinomoro.
- ◆ *Puku ya Diphoustara* e neelana ka kamano ya nnete go hlohleletša poledišano le tharollo ya mathata.

Nomoro 'tee' e tsebišwa bekeng ya bobedi ya Kotara ya 1 go tlwaetša barutwana tlwaelo ye. Go dirišwa tlwaelo yona ye go tsebiša dinomoro ka moka, o tsenya e tee go nomoro yeo barutwana ba e thutilego yona.

Pele o feleletša mošongwana wa go latela, bolela le monolofatši ge a anega kanegelo ya nomoro 1 le go bopa tšhate ya dinomoro le tlotlontšu ka thempoleiti ya ntlo le dikarata tša tšhate ya dinomoro le tlotlontšu ya diphoofolo. Morago ga go theeletša kanegelo, feleletša Mošongwana wa 11.

Dinoutse tša monolofatši

- ◆ Morago ga go bontšha, kgopela batšeakarolo go feleletša **Mošongwana wa 11**.
- ◆ Dumelela batšeakarolo go ahlaahla potšišo ka dihlopha tše nnyane gomme ba abelane ka dikgopolo sehlopheng se segolo.
- ◆ Naganiša ka tlotlontšu ye e dirišitšwego mošongwaneng, mohl, tee, nomoro, leswao la nomoro, leina la nomoro, tše kae, sehlopha, moggobo, bala, swana.



Activity 6

What are the different ways that the number 1 was represented in the story?

Picture, dot, number symbol, number word



Mošongwana wa 6

Nomoro 1 e tšweleditšwe ka ditsela dife tša go fapana ka kanegelong ye?

Seswantšho, lerontho, leswao la nomoro, leina la nomoro

Session 3: Implementing the five-group teaching model

2 hours

We have already discussed how to organise your classroom for maths teaching and learning during Mathematics focus time. This section outlines how to plan and implement the Maths Programme and focuses on preparing for the teaching of Weeks 1 and 2 of Term 1.

Term 1 Content Summary (Weeks 1–2)

(1 hour)

Facilitator's notes

- ◆ PPT: Daily Mathematics focus time (*Concept Guide*, page 82, Figure 33) and Week 1 of Appendix B.
- ◆ Refer participants to Week 1 of Appendix B: Term 1 Weekly Content Summary (Weeks 1–2). Explain that the Weekly Content Summary provides a summary of the maths content for each week. Explain that this framework was developed and then the content of the *Activity Guides* was written.
- ◆ Outline the different features of the week. Read the whole class activities, teacher-guided activity and independent small group (workstation) activities. Have participants work in groups to complete **Activity 12**.
- ◆ Focus on the structure of the Weekly Content Summary:
 - Content Area, Topic, New knowledge, Practise
 - Whole class activities: done with all the learners, activities linked to the Content Area and Topic, involves a routine that includes rhymes/songs, oral counting and counting objects.
 - Teacher-guided small group activity: focuses specifically on the concepts to be taught, involves a small group of six to eight learners.
 - Independent small group (workstation) activities: provide practice and consolidation of the concept being introduced in the whole class and teacher-guided activities.
- ◆ Explain that the Weekly Content Summary provides a structure and framework for planning the Mathematics focus time each week.

Appendix B: Term 1 Weekly Content Summary (Weeks 1–2) provides a summary of the content and offers suggestions for teaching and learning maths for each week with the following information:

- ◆ main Content Area Focus for the week
- ◆ topic(s) to be covered
- ◆ New knowledge and Practise focus for the week
- ◆ suggested activities for whole class and small groups (teacher-guided activity and workstation activities) for the week.

Thuto ya 3: Phethagatšo ya motlele wa go ruta wa sehlopha sa ba bahlano

Diiri tše 2

Re boletše ka thulaganyo ya phapoši ya go ruta le go ithuta dipalo ka nako ya go Ithuta Dipalo. Karolo ye e hlaloša peakanyo le phethagatšo ya Lenaneo la Dipalo gomme ya nepiša go lokišetša go ruta Dibekeng tša 1 le 2 tša Kotara ya 1.

Kakaretšo ya Diteng ya Kotara ya 1 (Dibeke tša 1-2)

(Diiri e 1)

Dinoutse tša monolofatši

- ◆ PPT: Nako ya go ruta dipalo tšatši ka tšatši (*Pukutlhahlo ya Mareo*, letlakala la 83, Seswantšho sa 33) le Beke ya 1 ya Mamatletšo ya B.
- ◆ Laela batšeakarolo gore ba lebelele Beke ya 1 ya Mamatletšo ya B: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke ya (Dibeke tša 1-2). Hlaloša gore Kakaretšo ya Diteng ya Beke ka Beke e neelana ka kakaretšo ya diteng tša dipalo tša beke ye nngwe le ye nngwe. Hlaloša gore tlhamo ye e hlabotšwe gomme diteng tša *Dipukutlhahlo tša Mešongwana* di ngwadilwe.
- ◆ Hlaloša dikarolo tša go fapana tša beke. Bala mešongwana ya barutwana ka moka, mošomo wa go hlhlwa ke morutiši le mešomo ya dihlopha tše nnyane tša go ikema (lefelo la go šomela). Laela batšeakarolo gore ba šome ka dihlopha ba feleletše **Mošongwana wa 12**.
- ◆ Nepiša popego ya Kakaretšo ya Diteng ya Beke ka Beke:
 - Karolo ya Diteng, Hlogotaba, Tsebo ye mpsha, Katišo
 - Mešongwana ya barutwana ka moka: e dirwa le barutwana ka moka, mešongwana e tswalanywa le Karolo ya Diteng le Hlogotaba, e ama tlwaelo ya go akaretša direto/dikoša, go balela godimo le go bala dilo.
 - Mešomo ya dihlopha tše nnyane ya go hlhlwa ke morutiši: e nepiša mareo a go rutwa, e ama sehlopha se sennyane sa barutwana ba tshela go ya go seswai.
 - Mešomo ya dihlopha tše nnyane tša go ikema (lefelo la go šomela): e neelana ka katišo le kopanyo ya lereo la go tsebišwa phapoši ka moka le mošomo wa go hlhlwa ke morutiši.
- ◆ Hlaloša gore Kakaretšo ya Diteng ya Beke ka Beke e neelana ka popego le tlhako ya peakanyo ya nako ya go ruta dipalo beke ka beke.

Mamatletšo ya B: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 1-2) e neelana ka kakaretšo ya diteng le ditšhišinyo tša go ruta le go ithuta dipalo beke ka beke le tshedimošo ye e latelago:

- ◆ nepišo ya Karolo ya Diteng ye kgolo ya beke
- ◆ (di)hlogotaba ye e akaretšwago
- ◆ Tsebo ye mpsha le Go ikatiša nepišo ya beke
- ◆ mešongwana ye e šišintšwego ya phapoši ka moka le sehlopha se sennyane (mošomo wa go hlhlwa ke morutiši le mešongwana ya lefelo la go šomela) ya beke.

Read whole class activities, teacher-guided activity and workstation activities in Appendix B: Term 1 Weekly Content Summary (Weeks 1–2).



Activity 7

Look at Appendix B: Term 1 Weekly Content Summary (Weeks 1–2). Answer the questions.

Questions	Week 1	Week 2
What is the Content Area Focus for the week?	Numbers, Operations and Relationships	Numbers, Operations and Relationships
What are the key concepts that learners will be learning?	Oral counting Counting objects	Number symbols Number words
What new knowledge is introduced?	Oral counting 1–5 Counting objects 1–3 One-to-one correspondence Sequencing events	Number 1 Solving problems in everyday contexts
What skills are being practised in Week 2?		Oral counting 1–5 Counting objects 1–3 Vocabulary from Week 1

Facilitator's notes

- ◆ PPT: Briefly review the five-group teaching model and how the Maths Programme's focus time activities are organised (whole class, small group and free choice activities).
- ◆ Remind participants that the focus is on one concept/topic at a time from one Content Area.

Activity Guide: Term 1

Facilitator's notes

- ◆ Explain that *Activity Guide: Term 1* provides teachers with weekly suggestions for teaching maths in Grade R.
- ◆ PPT: Features of *Activity Guide: Term 1* (*Activity Guide: Term 1*, page 6/7).
- ◆ Explain that the next activity will give participants an opportunity to learn more about *Activity Guide: Term 1*.
- ◆ Let participants work in small groups to complete **Activity 13** and then share their responses with the large group.
- ◆ Make links between *Activity Guide: Term 1* and the Weekly Content Summary.

Bala mešongwana ya barutwana ka moka, mošomo wa go hlahlwa ke morutiši le mešongwana ya mafelong a go šomela ka go Mamatletšo ya B: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 1–2).



Mošongwana wa 7

Lebelela Mamatletšo ya B: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke ya (Dibeke tša 1–2). Araba dipotšišo.

Dipotšišo	Beke ya 1	Beke ya 2
Nepišo ya Karolo ya Diteng ya beke ke efe?	Dinomoro, Tirišo le Tswalano	Dinomoro, Tirišo le Tswalano
Barutwana ba tlo ithuta mareokgolo afe?	Go balela godimo Go bala dilo	Maswao a dinomoro Maina a dinomoro
Go tsebišwa tsebo efe ye mpsha?	Go balela godimo 1–5 Go bala dilo 1–3 Tee-ka-tee tša go swana Go latelanya ditiragalo tša tšatši ka tšatši	Nomoro 1 Go rarolla mathata kamegong ya letšatši le lengwe le le lengwe
Go ikatišwa mabokgoni afe mo Bekeng ya 2?		Go balela godimo 1–5 Go bala dilo 1–3 Tlotlontšu go thoma ka Beke ya 1

Dinoutse tša monolofatši

- ◆ PPT: Ka bokopana lekola thulaganyo ya mešongwana ya motlele wa sehlopha sa ba bahlano le gore Lenaneo la Dipalo le beakantšwe bjang (barutwana ka moka, sehlopha se sennyane le mešongwana ya go ikgethela).
- ◆ Gopotša batšeakarolo gore nepišo e mo go lereo/hlogotaba e tee ka nako go tšwa ka go Karolo ya Diteng ye tee.

Pukutlhahlo ya Mešongwana: Kotara ya 1

Dinoutse tša monolofatši

- ◆ Hlaloša gore *Pukutlhahlo ya Mešongwana: Kotara ya 1* e nea barutiši ditšhišinyo tša beke ka beke tša go ruta dipalo ka Mphatong wa R.
- ◆ PPT: Dikarolo tša *Pukutlhahlo ya Mešongwana: Kotara ya 1* (*Pukutlhahlo ya Mešongwana: Kotara ya 1*, matlakala a 6/7).
- ◆ Hlaloša gore mošongwana wa go latela o tlo nea batšeakarolo monyetla wa go ithuta ka ga *Pukutlhahlo ya Mešongwana: Kotara ya 1*.
- ◆ Laela batšeakarolo go šoma ka dihlopha ge ba tlatša **Mošongwana wa 13** gomme ba abelane dikarabo tša bona le sehlopha se segolo.
- ◆ Tswalanya *Pukutlhahlo ya Mešongwana: Kotara ya 1* le Kakaretšo ya Diteng ya Beke ka Beke.

The *Activity Guides* provide Grade R teachers with a structure and framework and offer weekly suggestions for maths teaching and learning.

Refer to Weeks 1 and 2 in *Activity Guide: Term 1* and the Weekly Content Summary in Appendix B. Complete Activity 13 in your group.



Activity 8

1. Look at *Activity Guide: Term 1* and add the information to the table.

Race around <i>Activity Guide: Term 1</i>	
What is on pages 6, 8 and 10?	
On which page is the 'Our classroom rules' poster?	
On which pages is the content overview for Term 1?	
What information is at the start of each new week?	
Find the <i>Grade R Maths family story</i> .	
Which song is introduced in Week 2?	
Find where number 1 is introduced.	
Find a whole class activity that focuses on oral counting.	
Find a teacher-guided activity that focuses on one-to-one correspondence.	
Find a workstation activity that focuses on consolidating the number concept '1'.	

2. Refer to the whole class activities, teacher-guided activity and workstation activities in Appendix B. Find these activities in *Activity Guide: Term 1*.



In Grade R assessment is informal and continuous. We need to observe learners throughout the day, inside and outside the classroom.

The Maths Programme is designed around the rotation of small groups during a week and the teacher pays special attention to one group a day, watching and listening as the learners complete specific tasks. This time gives the teacher the opportunity to carefully observe each learner and gather information on their progress.

Dipukutlhahlo tša Mešongwana di nea barutiši ba Mphato wa R mokgwa le tlhamo tša abelana le ka ditšhišinyo tša go ruta le go ithuta dipalo tša beke ka beke.

Lebelela Dibeke tša 1 le 2 ka go *Pukutlhahlo ya Mareo: Kotara ya 1* le Kakaretšo ya Diteng ya Beke ka Beke ka go Mamatletšo ya B. Feleletša Mošongwana wa 13 sehlopheng sa gago.



Mošongwana wa 8

1. Lebelela *Pukutlhahlo ya Mareo: Kotara ya 1* gommeo tsenye tshedimošo tafoleng.

Go dikologa <i>Pukutlhahlo ya Mareo: Kotara ya 1</i>	
Go na le eng matlakaleng a 7, 9 le 11?	
Phoustara ya 'Melao ya phapoši ya rena' e letlakaleng lefe?	
Kakaretšo ya diteng ya Kotara ya 1 e matlakaleng afe?	
Go na le tshedimošo efe mathomong a beke ye nngwe le ye nngwe ye mpsha?	
Hwetša kanegelo ya lapa ya <i>Grade R Maths</i> .	
Go tsebišwa koša efe Bekeng ya 2?	
Hwetša mo nomoro 1 e tsebišwago gona.	
Hwetša mešongwana ya barutwana ka moka wa go nepiša go bala ka molomo.	
Hwetša mošomo wa go hlahlwa ke morutiši wa go nepiša poledišano gare ga batho ba babedi.	
Hwetša mošomo wa lefelong la go šomela wa go nepiša kopanyo ya lereo la nomoro '1'.	

2. Lebelela mešomo ya barutwana ka moka, mošomo wa go hlahlwa ke morutiši le mešongwana ya mafelong a go šomela ka Mamatletšong ya B. Hwetša mešongwana ye ka go *Pukutlhahlo ya Mareo: Kotara ya 1*.



Ka Mphatong wa R go dirwa tekolo ye e sego ya semmušo ye e tšwelago pele. Re swanetše go lebelela barutwana letšatši ka moka, ka gare le ka ntle ga phapoši.

Lenaneo la Dipalo le diretšwe go fana sebaka ga dihlopha tše nnyane mo bekeng gomme morutiši o fa sehlopha se setee šedi ya go kgethega ka letšatši, a bogetše le go theeletša barutwana ge ba dira mošomo wo itšego. Nako ye e fa morutiši monyetla wa go lebelela morutwana yo mongwe le yo mongwe gabotse le go kgoboketša tshedimošo ya tšwelopele ya bona.

Look at the shaded block at the end of the teacher-guided activity in Week 2: '**Check that learners are able to**'. The eye icon reminds us that we need to observe the learners while they are busy, and we need to listen carefully while they are talking to us and to their peers.

The teacher makes a mental note of each learner and once the learners have left for the day, she writes down her observations in a dedicated observation book that has space for each learner's notes.

Poster Book and Resource Kit

(10 minutes)

Facilitator's notes

- ◆ Explain that the *Resource Kit* apparatus will be used during teacher-guided activities and that there is enough apparatus for a small group of six to eight learners. Remind participants of the contents of the *Resource Kit* and show them the following pieces of apparatus and discuss how each will be used:
 - counting materials: coloured discs and sticks, fruit and animal counters, Unifix blocks
 - dice
 - structure beads
 - number cards (number symbols and number words)
 - attribute blocks.
- ◆ Show participants the *Poster Book* and explain that there are activities in the *Activity Guides* that use the *Poster Book* to stimulate discussion and link maths to familiar contexts at school, home and in the community.

The *Resource Kit* has enough apparatus for a small group of six to eight learners. The apparatus that will be used in Term 1 Weeks 1 and 2 includes:

- ◆ counters: animal and fruit counters
- ◆ number cards: number symbol (1) and number word (one).

Facilitator's notes

- ◆ Give a *Resource Kit* and a *Poster Book* to each participant.

You will each receive a *Resource Kit* and a *Poster Book*.

Refer to pages 6–17 of *Activity Guide: Term 1* to read about classroom resources and setting up a maths learning environment.

Lebelela poloko ya go fifatšwa mafelelong a mošomo wa go hlahlwa ke morutiši mo Bekeng ya 2: '**Lekola gore barutwana ba kgona go**'. Seswantšho sa leihlo se re gopotša gore re swanetše go lebelela barutwana ge ba šoma, le gore re hloka go theeletša ka hlokomelo ge ba bolela le rena le barutwana ba bangwe.

Morutiši o swara tše a di bonago ka ga morutwana yo mongwe le yo mongwe ka hlogong gomme ge barutwana ba ile gae, o ngwala se a se bonego ka pukung ya temogo ya go ba le sekgoba sa morutwana yo mongwe le yo mongwe.

Puku ya Diphoustara le Dithušathuto tša Phapoši (Metsotso ye 10)

Dinoutse tša monolofatši

- ◆ Hlaloša gore ditlabele tša *Dithušathuto tša Phapoši* di tlo dirišwa ka nako ya mošomo wa go hlahlwa le gore go na le ditlabele tša go lekana sehlopha se sennyane sa barutwana ba tshela go ya go seswai. Gopotša batšeakarolo ka ga diteng tša *Dithušathuto tša Phapoši* o ba bontšhe diripa tše di latelago tša ditlabele gomme le ahlaahle gore se sengwe le se sengwe se tlo dirišwa bjang:
 - di šomišwa tša go bala: didiski le dikotana tša mebala, dibaledi tša dienywa le tša diphoofolo, dipoloko tša *Unifix*
 - letaese
 - lenti la pheta
 - dikarata tša dinomoro (leswao la dinomoro le maina a dinomoro)
 - dipoloko tše di dirišwago go hlaola.
- ◆ Bontšha batšeakarolo *Puku ya Diphoustara* o be o hlaloše gore go na le mešongwana ya ka gare ga *Dipukutlhahlo tša Mešongwana* ya go diriša *Puku ya Diphoustara* go tutuetša poledišano le go tswalanya dikamano tša dipalo tša tlwaelo sekolong, gae le setšhabeng.

Dithušathuto tša Phapoši di na le ditlabele tša go lekana sehlopha se sennyane sa barutwana ba go lekana tshela go ya go seswai. Ditlabele tše di tlo dirišwago ka Kotara ya 1 Dibeke tša 1 le 2 di akaretša:

- ◆ dibaledi: dibaledi tša diphoofolo le tša dienywa
- ◆ dikarata tša dinomoro: leswao la nomoro (1) le leina la nomoro (tee).

Dinoutse tša monolofatši

- ◆ Abela batšeakarolo ka moka *Dithušathuto tša Phapoši* le *Puku ya Diphoustara*.

Yo mongwe le yo mongwe o tlo amogelaa *Dithušathuto tša Phapoši* le *Puku ya Diphoustara*.

Lebelela matlakala a 6–17 a *Pukutlhahlo ya Mešongwana: Kotara ya 1* go bala ka ga didirišwa tša ka phapošing le go beakanya tikologo ya go ithuta dipalo.

Closing activities

(10 minutes)

Facilitator's notes

- ◆ **Lessons learnt:** Ask participants to think about what they have learnt during the workshop and to complete **Activity 14** individually.
- ◆ **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:** Ask participants to bring the *Poster Book*, *Concept Guide* and *Activity Guide: Term 1* to the next workshop. Give dates for the next workshop.
- ◆ **Register:** Remind all participants to make sure that they have signed the register.
- ◆ Close the workshop.



Activity 9

Lessons learnt: Think about what you learnt during the workshop and complete the table.

Things I am already doing that work well	New ideas that I would like to try



Take back to school task

1. Read the *Concept Guide* pages that were referred to during this workshop.
2. Use *Activity Guide: Term 1* to plan and implement Weeks 1–2 of the Maths Programme.
3. Reflect on how the Maths Programme's guiding principles informed teaching and learning in your classroom.
4. Set up a maths area. Take a photograph of it and bring it to the next workshop.

Dinoutse tša monolofatši

- ◆ **Thuto ye go ithutilwego yona:** Kgopela batšeakarolo go nagana ka se ba ithutilego sona ka thutofatlhošong le go feleletša **Mošongwana wa 14** ka o tee ka o tee.
- ◆ **Mošomo wo o tlo boelago le wona sekolong:** Bala mošomo wo. O botšiše ge go na le seo se sa kwagalego gabotse sa go nyaka tlhalošo ye ntši.
- ◆ **Tekolo:** Aba dikhophi tša Foromo ya Tekolo ya Thutofatlhošo gomme batšeakarolo ba e tlatše.
- ◆ **Thutofatlhošo ya go latela:** Kgopela batšeakarolo gore ba tle le *Puku ya Diphoustara, Pukutlhahlo ya Mareo le Pukutlhahlo ya Mešongwana: Kotara ya 1* thutofatlhošo ye e latelago. Efa matšatšikgwedi a thutofatlhošo ye e latelago.
- ◆ **Boingwadišo:** Gopotša batšeakarolo ka moka go kgonthiša gore ba a ingwadiša.
- ◆ Tswalela thutofatlhošo.



Mošongwana wa 9

Dithuto tše go ithutilwego tšona: Nagana ka se o ithutilego sona ka thutofatlhošong gomme o feleletše tafola.

Dilo tše ke di dirago tše di šomago gabotse	Dikgopolo tše diswa tše ke ratago go di leka



Mošomo wo o tlo boelago le wona sekolong

1. Bala matlakala a *Pukutlhahlo ya Mareo* ao a šupeditšwego ka thutofatlhošong ye.
2. Diriša *Pukutlhahlo ya Mešongwana: Kotara ya 1* go beakanya le go phethagatša Dibeke tša 1–2 tša Lenaneo la Dipalo.
3. Naganiša ka fao ditheo tša Lenaneo la Dipalo di bilego motheo wa go ruta le go ithuta ka phapošing ya gago.
4. Beakanya lefelo la dipalo. Tšea senepe sa lona gomme o tle le sona thutofatlhošong ya go latela.



Bring the following to the next workshop:

- ◆ *Poster Book*
- ◆ *Concept Guide*
- ◆ *Activity Guide: Term 1.*

Evaluation

Complete the Evaluation Form.



Thutofatlhošong ye e latelago o tle le tše di latelago:

- ◆ *Puku ya Diphoustara*
- ◆ *Pukutlhahlo ya Mareo*
- ◆ *Pukutlhahlo ya Mešongwana: Kotara ya 1.*

Tekolo

Tlatša Foromo ya Tekolo.

APPENDIX B: TERM 1 WEEKLY CONTENT SUMMARY (WEEKS 1-2)

Term 1: Activity Plan

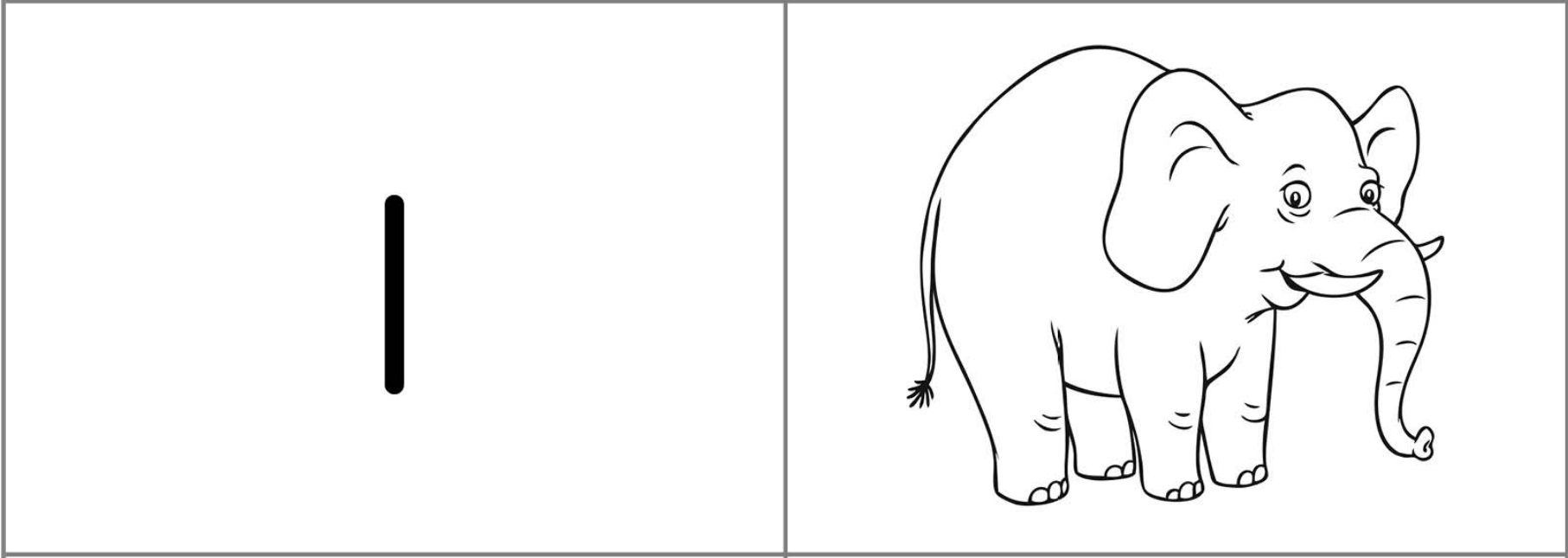
Week 1				
CONTENT AREA: NUMBERS, OPERATIONS AND RELATIONSHIPS				
TOPIC: Oral counting and counting objects				
INTRODUCE NEW KNOWLEDGE: Oral counting 1–5, counting objects 1–3, one-to-one correspondence, sequencing daily programme				
Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Routine, class rules, learner symbols and daily programme.	No teacher-guided small group activity in the first week to allow the teacher to rotate between all five workstations: guiding, assisting and encouraging the learners. Some learners may not have seen or used the equipment before so the teacher will need to demonstrate and support their first attempts.	Activity 1	Sorting animal and fruit counters by colour (from the <i>Resource Kit</i>).
Day 2	Helper’s chart, rhyme, <i>Grade R Maths family story</i> .		Activity 2	Playdough or clay modelling.
Day 3	Helper’s chart, Tidy-up chart, rhyme, oral counting and the <i>Grade R Maths family story</i> .		Activity 3	Draw a picture.
Day 4	Rhyme, oral counting, counting objects, sequencing daily events, bowls.		Activity 4	Six-piece puzzle.
Day 5	Rhyme, oral counting, learners’ symbols.		Activity 5	Building blocks.
Week 2				
CONTENT AREA: NUMBERS, OPERATIONS AND RELATIONSHIPS				
TOPIC: Number symbols and number words				
INTRODUCE NEW KNOWLEDGE: Introduce number 1, solving problems in everyday contexts (rhymes and posters)				
PRACTISE: Oral counting 1–5, counting objects 1–3, vocabulary from previous week				
Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Song, oral counting, introduce number 1 and the number 1 frieze, body parts (‘how many?’ games), find one object.	Support learners in their efforts to complete tasks. Ask guiding questions and encourage learners to share their ideas. Count objects: one-to-one correspondence. Sort animal counters according to colour. Match number 1 symbol and word cards with dot card and animal counters.	Activity 1	Matching counters to dots using egg boxes.
Day 2	Song, oral counting, frieze for number 1, body games.		Activity 2	Make one playdough object and draw it.
Day 3	Song, oral counting, counting objects, reinforce number 1, look for 1 object.		Activity 3	‘One’ template using playdough.
Day 4	Rhyme, oral counting, problem solving – poster story.		Activity 4	Building blocks.
Day 5	Rhyme, oral counting, counting objects in the poster, solving problems.			

MAMATLETŠO YA B: KOTARA YA 1 KAKARETŠO YA DITENG YA BEKE KA BEKE (DIBEKE TŠA 1-2)

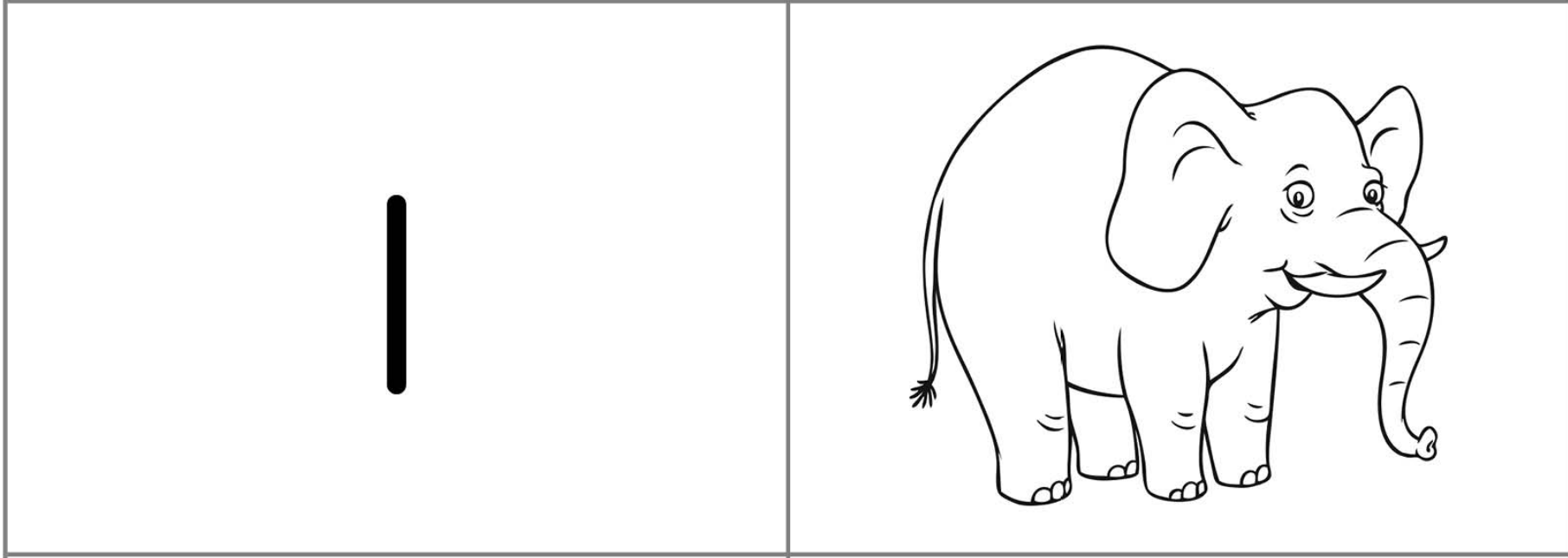
Kotara ya 1: Peakanyo ya Mošongwana

Beke ya 1				
KAROLO YA DITENG: DINOMORO, TIRIŠO LE TSWALANO				
HLOGOTABA: Go balela godimo le go bala dilo				
TSEBIŠA TSEBO YE MPSHA: Go balela godimo 1-5, go bala dilo 1-3, go tswalanya tee-ka-tee, go latelanya lenaneo la tšatši ka tšatši				
Mešongwana ya barutwana ka moka		Mošomo wa go hlahlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Go itlwaetša ditlwaelo, melao ya phapoši, maswao a barutwana le lenanephethagatšo la tšatši ka tšatši.	Ga go mošomo wa go hlahlwa ke morutiši wa sehlopha se sennyane bekeng ya mathomo go dumelela morutiši go sepela mafelong a go šomela a mahlano ka moka: go hlahlwa, go thuša le go hlohleletša barutwana. Barutwana ba bangwe ba ka be ba sa ka ba bona goba go diriša setlabele gomme morutiši o tlo swanela go bontšha le go thekga maitekelo a bona a mathomo.	Mošongwana wa 1 Mošongwana wa 2 Mošongwana wa 3 Mošongwana wa 4 Mošongwana wa 5	Go hlaola dibaledi tša diphoofolo le tša dienywa ka mebala (go tšwa go <i>Dithušathuto tša Phapoši</i>). Tlhama goba letsopa. Thala seswantšho. Marara a diripa tše tshela. Dipoloko tša go aga.
Letšatši la 2	Tšhate ya mothuši, sereto, <i>kanegelo ya lapa ya Grade R Maths</i> .			
Letšatši la 3	Tšhate ya mothuši, Tšhate ya go hlwekiša, sereto, go balela godimo le <i>kanegelo ya lapa ya Grade R Maths</i> .			
Letšatši la 4	Sereto, go balela godimo, go bala dilo, go latelanya ditiragalo tša tšatši ka tšatši, dikotlolo.			
Letšatši la 5	Sereto, go balela godimo, maswao a barutwana.			
Beke ya 2				
KAROLO YA DITENG: DINOMORO, TIRIŠO LE TSWALANO				
HLOGOTABA: Maina a maswao le maina a mantšu				
TSEBIŠA TSEBO YE MPSHA: Tsebiša nomoro 1, go rarolla mathata dikamanong tša ka mehla (direto le diphoustara)				
GO IKATIŠA: Go balela godimo 1-5, go bala dilo 1-3, tlotlontšu ya beke ya go feta				
Mešongwana ya barutwana ka moka		Mošomo wa go hlahlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Koša, go balela godimo, tsebiša nomoro 1, tsebiša tšhate ya tlotlontšu le dinomoro ya nomoro 1, ditho tša mmele (meraloko 'e mekae?'), hwetša selo se setee.	Thekga barutwana ge ba leka go dira mešomo. Botšiša dipotšišo tša go hlahlwa o hlohloletše barutwana go abelana dikgopolo. Bala dilo: go tswalanya tee-ka-tee. Hlaola dibaledi tša diphoofolo go ya ka mmala. Tswalanya dikarata tša maswao le maina tša nomoro 1 le karata ya marontho le dibaledi tša diphoofolo.	Mošongwana wa 1 Mošongwana wa 2 Mošongwana wa 3 Mošongwana wa 4	Go tswalanya dibaledi le marontho o diriša mapokisi a mae. Dira selo se setee ka tlhama o be o se thale. Thempoleiti ya 'Tee' ka tlhama. Dipoloko tša go aga.
Letšatši la 2	Koša, go balela godimo, tšhate ya tlotlontšu le dinomoro ya nomoro 1, meraloko ya mmele.			
Letšatši la 3	Koša, go balela godimo, go bala dilo, gatelela nomoro 1, lebelela selo se 1.			
Letšatši la 4	Sereto, go balela godimo, tharollo ya mathata – phoustara ya dikanegelo.			
Letšatši la 5	Sereto, go balela godimo, go bala dilo phoustareng, go rarolla mathata.			

APPENDIX C: NUMBER 1 FRIEZE CARDS



MAMATLETŠO YA C: DIKARATA TŠA TŠHATE YA TLOTLONTŠU LE DINOMORO TŠA NOMORO 1





one



tee

Workshop 1 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 Tekolo ya Thutofatlhošo ya 1

1. Na thutofatlhošo e fihleletše tše o bego o di lebeletše?

2. O ithutile eng go thutofatlhošo ye se se go thušitšego kudu?

3. Go na le se o se go wa se rata goba o sa se kwešiše go?

4. O tlo phethagatša se o ithutilego sona bjang phapošing ya gago ya Mphato wa R?

5. Go na le tše o di šišinyago go kaonafatša dithutofatlhošo tše di latelago?
