Luhlelo Lwekwenta Kancono
Tibalo TeLibanga R
Grade R Mathematics
Improvement Programme

Umhlanganosikolo 1 ● Workshop 1
Inkhombandlela Yemfundzisi ● 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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Umklamo Wetibalo TeLibanga R Nekwenta Kancono Lulwimi lisu lelasungulwa **Litiko Letemfundvo laseGauteng (Gauteng Department of Education)** kanye nemlingani walo lomkhulu i-**Gauteng Education Development Trust**.

Lokwentiwa nekukhicitwa kwetinsita tekucecesha netaseklasini kweTibalo TeLibanga R neMklamo Wekwenta Kancono Lulwimi kwenteka ngenca yekwesekelwa ngalokunemusa ngetimali letibuya ku-**United States Agency for International Development** kanye ne-**Zenex Foundation.**

Lomklamo Wetibalo TeLibanga R Nekwenta Kancono Lulwimi uphetfwe yi-**JET Education Services** ikanye ne-**UCT's Schools Development Unit** ne-**Wordworks** njengebalingani betebuchwepheshe.

Le-**Schools Development Unit** (SDU) e-**University of Cape Town** (UCT) ingumlingani wetebuchwepheshe wetibalo kuloMklamo Wetibalo TeLibanga R Nekwenta Kancono Lulwimi. Le-SDU iyiyunithi lengekhatsi e-UCT School of Education lebukene nekutfutfukiswa kwabothishela ngekwebungcweti kuTibalo, Isayensi, Kufundza nekubhala/Lulwimi Nemakhono Ekuphila kusuka kuLibanga R kuya kuLibanga le-12. Le-SDU iniketa ticu tebuthishela kanye netifundvo letifishane letivunywe yi-UCT, umsebenti lophatselene nesikolo, kwentiwa kwemethiriyeli nekucwaninga kusekela kufundzisa nekufundza kuto tonkhe tingcikitsisimo taseNingizimu Afrika.

EMAVI EKUBONGA
Kubongwa ngalokukhetsekile ku:
- Tikhulu Tekharikhulamu Yelitiko Letemfundvo laseGauteng, teMfundvo Yabothishela neteBacondzisi Bemfundvo Lekhetsekile ngeligalelo labo kulokuguculwa kwemethiriyeli yetfu.
- Tiphatsimandla te-Western Cape Education Department (WCED) nabothishela ngeligalelo labo ekuphumeleliseni kusetjentiswa kwale-Grade R Mathematics Programme (R-Maths) eNshonalanga Kapa emkhatsini wa-2016 na-2019.
- Licembu lelibhala i-R-Maths: Basebenti nabonjingalwati be-SDU, netiphatsimandla te-WCED.

Kufaka luhlelo kungcikitsisimo nekuphatsa: Cally Kuhne naTholisa Matheza
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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

> Mathematics is the formal subject name, but in this *Facilitator's Guide* and during our discussions we will refer to it as 'maths'. (Read more about this on page 10 of the *Concept Guide*.)

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)

Sibutsetelo

Inhloso

Lona ngumhlanganosikolo wekucala walelishumi nakubili yeLuhlelo Lwekwenta Kancono Tibalo TeLibanga R (Luhlelo Lwetibalo), loyincenye yeLitiko Letemfundvo laseGauteng (Gauteng Department of Education (GDE)) Umklamo Wetibalo TeLibanga R Nekwenta Kancono Lulwimi.

Bahlanganyeli batawutfola lwatiso mayelana nalemikhakha kanye nemitsetfomgomo letikhombandlela tekufundzisa tibalo kuLibanga R. Batawubuyeketa baphindze futsi bakhulimisane ngalokucuketfwe kwekuhlela nekufundzisa kwabo. Bahlanganyeli batawuphindze futsi babuyekete Sitatimende Senchubomgomo Yekharikhulamu Nekuhlola (i-CAPS) Tibalo TeLibanga R iMikhakha Yalokucuketfwe. Batawuhlela sikhatsi sekugcila semalanga onkhe seluhlelo lweTibalo kulamaviki lamabili ekucala eThemu 1. Kuwo wonkhe umhlanganosikolo batawubuyeketa imitsetfomgomo leyikhombindlela leyesekela kufundzisa nekufundza.

*Imikhakha Yalokucuketfwe Tibalo Telibanga R titsetfwe ku*Sitatimende Senchubomgomo Yekharikhulamu Nekuhlola (i-CAPS): Tibalo Telibanga R (Umbhalo Wekugcina)*, 2011, Litiko Letemfundvo Lesisekelo, laseNingizimu Afrika

Imiphumela yekufundza

♦ Kwati loLuhlelo Lwetibalo nekutsi lukwesekela luphindze futsi lukukhulise njani lokucuketfwe yi-CAPS yeTibalo Telibanga R
♦ Kwehlwaya tincenye teLuhlelo Lwetibalo
♦ Kuvisisa imitsetfomgomo lebekwe lapha yekufundzisa Luhlelo Lwetibalo
♦ Kuhlela liviki leThemu 1 ngalokumiselwe endleleni yekufundza ngemacembu lasihlanu
♦ Kubukana nalokucuketfwe nguloLuhlelo Lwetibalo kweThemu 1 Emaviki 1–2 (Tinombolo, Ema-ophareshini neBudlelwane)

Lokucuketfwe kwemhlanganosikolo

♦ Iseshini 1: Kwetayetwa Luhlelo Lwetibalo   (2 ema-awa)
LITIYA
♦ Iseshini 2: Tinombolo, Ema-ophareshini neBudlelwane   (2 ema-awa)
KUDLA KWASEMINI
♦ Iseshini 3: Kufezekisa imodeli yekufundzisa yemacembu
lasihlanu   (2 ema-awa)

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

Imitsetfo yekuchutjwa kwemhlanganosikolo

♦ Fika ngesikhatsi.
♦ Vala makhalekhukhwini wakho ngesikhatsi semaseshini.
♦ Nika wonkhewonkhe litfuba lekuhlanganyela.
♦ Lalela imibono yalabanye.

Kulungiselela

♦ PPT tetfulo
♦ Fundza:

Inkhombandlela Yemcondvo, emakhasi-114–117

Inkhombandlela Yemsebenti: Ithemu 1, emakhasi 18–21

Sengeto B: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki

♦ Sibeka Luhlelo Lwetibalo *Ikhithi Yetinsita*, emakhokhi nemaphepha etafuleni lelicembu ngalinye.
♦ Lungiselela indzaba yefrizi yetinombolo nalamanye emamethiriyeli.
♦ Yakha ithemplethi yendlu ekhasini lelikhulu leliphepha lefliphushadi – dvweba bunjwa wendlu lowehlukaniswe tincenye letine.
♦ Faka umbala emakhadi efrizi yeNombolo 1 kuSengeto C. Wanamatsisele ngeglu ekhadibhodini.

Emamethiriyeli

♦ Irejista yekuhlanganyela
♦ Emaphepha elishadi lemaphepha efliphushadi, emakhokhi
♦ Emakhophi *eNcwadzi Yekusebentela Yemhlanganyeli, Inkhombandlela Yemcondvo kanye ne*Nkhombandlela Yemsebenti: Ithemu1*
♦ *Ikhithi Yetinsita*
♦ Tincetu tephazili
♦ Ifrizi yenombolo ithemplethi yendlu kanye nemakhadi efrizi

Session 1: Orientation to the Maths Programme

2 hours

<table>
<tr><td colspan="2">Facilitator's notes</td></tr>
<tr><td>♦</td><td>Participants should be seated in small groups of six to eight people. Observe COVID-19 protocols.</td></tr>
<tr><td>♦</td><td>Give each person a Participant's Workbook and the attendance register.</td></tr>
<tr><td>♦</td><td>Welcome the participants and introduce yourself.</td></tr>
<tr><td>♦</td><td>Discuss the house rules for working together during all workshops (see page 8).</td></tr>
<tr><td>♦</td><td>Give participants an opportunity to introduce themselves in their small groups and then to the whole group.</td></tr>
<tr><td>♦</td><td>Encourage them to share their training and teaching experiences.</td></tr>
<tr><td>♦</td><td>Invite participants to share their expectations of the workshop.</td></tr>
</table>

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.

Introductions   (10 minutes)

Activity 1

In your small group, choose a partner. In pairs, share information about yourselves. Find out, for example:

♦ your partner's name
♦ where they teach
♦ about their family
♦ something they enjoy doing over the weekend.

_____
_____
_____
_____

Now introduce your partner to the rest of your group.

Iseshini 1: Kwetayetwa Luhlelo Lwetibalo 2 ema-awa

Kubhalisa

Kubingelela nemitsetfo yekuchutjwa kwemhlanganosikolo   (10 emaminitsi)

Nemukelekile kumhlanganosikolo wetibalo wekucala walelishumi nakubili weMklamo Wekwenta Kancono Lulwimi Netibalo Telibanga R weLitiko Letemfundvo laseGauteng (i-GDE).

Asicale ngekwetfula betfuli bese sivumelana ngemitsetfo yekuchuba umhlanganosikolo.

Tetfulo   (10 emaminitsi)

👥 Umsebenti 1

Emacenjini enu lamancane, khetsani umlingani. Ngalababili, yabelanani lwatiso ngani. Tfolani, sibonelo:

♦ ligama lemlingani wakho
♦ lapho bafundzisa khona
♦ mayelana nemindeni yabo
♦ tintfo labatsandza kutenta ngetimphelansontfo.

_____
_____
_____
_____

Manje yetfula umlingani wakho kulo lonkhe licembu.

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.

Expectations   (10 minutes)

Activity 3

Based on your experience of teaching maths in Grade R and the objectives of the GDE's Grade R Mathematics and Language Improvement Project, what are your expectations of this series of workshops?

_____
_____
_____
_____

Facilitator's notes

♦ Guide the discussion to avoid expectations that are beyond the scope of the Maths Programme.
♦ Provide prompts that help to focus the discussion on Mathematics focus time in the daily programme, integration, planning and assessment.
♦ Prepare a sheet of flipchart paper. Draw a large circle that takes up the whole sheet. Inside it, draw a smaller circle and write 'Expectation' inside it.
♦ Ask a few participants for feedback and write their responses in the large circle.

Kwabelana loko lokuhlangatjetenwe nako nakufundziswa

(15 emaminitsi)

Umsebenti 2

1. Tsatsa sikhatsi ubuyekete loko lohlangabetene nako ekufundziseni Libanga R, ikakhulu kufundzisa tibalo kuLibanga R. Cabanga ngekuceceshwa kwakho nekutsi kwakulungiselela kanjani kutsi ufundzise tibalo. Phindza futsi wetame kubona lapho unemandla ngakhona kanye nalapho ubutsakatsaka khona kutibalo.

   _____

   _____

   _____

   _____

2. Yabela umlingani wakho lokuhle lowahlangabetana nako nalokubi lowahlangabetana nako.

3. Khetsa umuntfu munye ecenjini lotawubhala phasi imicabango wonkhe wonkhe labelane ngayo.

Lokulindzelwe

(10 emaminitsi)

Umsebenti 3

Ngekumisela kuloko lohlangabetene nako uma ufundzisa tibalo teLibanga R kanye nemigomo yeMklamo Wekwenta Kancono Lulwimi Netibalo teLibanga R we-GDE, yini loyilindzele kuloluchungechunge lwemihlanganosikolo?

_____

_____

_____

_____

Emanotsi emfundzisi
♦ Condzisa ingcogco kute kutsi ugweme lokulindzelwe lokungetulu kwemgamu weLuhlelo Lwetibalo.
♦ Niketa tifuci letitawusita kutsi kugcilwe kulengcogco yeSikhatsi sekugcila seTibalo kuluhlelo lwemalanga onkhe, kuhlanganisa, kuhlela kanye nekuhlola.
♦ Lungiselela likhasi leliphepha lefliphushadi. Dweba indingilizi igcwale lonkhe lelikhasi. Ekhatsi kuyo, dvweba indingilizi lencane bese ubhala 'Lokulindzelwe'
♦ Cela bahlanganyeli labambalwa kutsi bakunikete umbiko bese ubhala phasi timphendvulo tabo kulendingilizi lenkhulu.

The Grade R Maths Programme (30 minutes)

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:

Luhlelo Lwetibalo Telibanga R   (30 emaminitsi)

Kungani kuneLuhlelo Lwetibalo teLibanga R?

Emanotsi emfundzisi

♦ PPT: Sibutsetelo selwatiso ngentasi.
♦ Cocisanani ngekubaluleka kwekwenta kancono kufundzisa nekufundza tibalo kuSigaba Sabokhewana. Yetfula Luhlelo Lwekwenta Kancono Tibalo Telibanga R njengekungenelela kwekwenta kancono kufezekiswa kwekharikhulamu ye-CAPS yeLibanga R.

Linyenti lebafundzi baseNingizimu Afrika labanyenti betikolo temabanga lamancane abenti kahle kuLulwimi neTibalo. Emaphesenti lasetulu ebafundzi behluleka ngisho kutfola emazingancane lalindzelekile kuletifundvo letibalulekile. Kunenchubekela phambili lencane ekwentiweni kancono kwemiphumela yekufundza nasekunciphiseni ligebe lekuzuza emkhatsini webafundzi lababuya kulingemuva lelehlukene. Tizatfu taloku timatima, tingetulu kweliklasi futsi titsintse kutfutfuka nenhlalakahle yebantfwana kusukela ekutalweni kwabo.

Lolunye ludzaba lolumatima loluphatselene nekufinyelela nekuhlanganyela, kanye nesakhiwonchanti nekuphatfwa kwesikolo eNingizimu Afrika, sekube yimibuto lemikhulu mayelana nekutsi bantfwana bafundza ini futsi bayifundza kanjani, kute kutsi bonkhe bantfwana batfole litfuba lekukhipha emandla abo kuTibalo, kugcila kufanele kutsi kwenabe kute kutsi kufake ekhatsi kutfutfukiswa kwetibalo kuLibanga R futsi, lokubaluleke kakhulu, kunika bothishela beLibanga R nebasebenti lwati nemakhono ladzingekako ekwesekeleni kufundza tibalo kwebantfwana labancane.

I-GDE itfole Kutfutfukiswa Kwebantfwana Basesebancane njengeLisubuciko lweMgomo-1 futsi munye wemigomo wayo lemikhulu kwenta kancono kufundvwa kweLulwimi Lwasekhaya neTibalo kuLibanga R. NgaloLuhlelo Lwekwenta Kancono Lulwimi Netibalo Telibanga R, i-GDE iphokophelele kwenta kancono kusebenta kuLibanga R nekulungiselela bafundzi Libanga 1.

Sikholelwa ekutseni loLuhlelo Lwetibalo lutawufaka ligalelo lelibalulekile ekufezekisweni kwe-CAPS nekutsi futsi lutawenta kancono lamatfuba ekufundza lakhona abo bonkhe bafundzi beLibanga R kute kutsi batfutfuke ngalokuphelele.

Luyini Luhlelo Lwetibalo Telibanga R?

Emanotsi emfundzisi

♦ PPT: Likhasi le-11 *leNkhombandlela Yemcondvo*, sibutsetelo selwatiso ngentasi.

Luhlelo Lwetibalo lugcila ekufundziseni nasekufundzeni munye umcondvo noma sihloko setibalo ngesikhatsi sinye. Kugcila lokukhulu kweliviki ngalinye kukuMkhakha Walokucuketfwe we-CAPS. Lwati lolusha lungeniswa:

- 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.

The components of the Maths Programme

Facilitator's notes
♦ Show the video and discuss the components of the Maths Programme.
♦ Show the participants the *Concept Guide*, four *Activity Guides*, *Poster Book* and *Resource Kit*.
♦ Briefly outline the contents of the *Concept Guide* and refer participants to pages 12, 13 and 94–97 in their copies of the *Concept Guide*.

Video 1

We know that teaching maths in Grade R requires many resources. Watch the video about the materials you will receive as part of the Maths Programme.

Refer to pages 12, 13 and 94–97 of your *Concept Guide* to find information on the components of the Maths Programme. Discuss each of the components:
- *Concept Guide*
- four *Activity Guides* (Term 1–4)
- *Poster Book*
- classroom *Resource Kit*.

♦ imisebenti yeliklasi lonkhe
♦ imisebenti yemacembu lamancane: imisebenti leholwa nguthishela nemisebenti letimele (leseceleni)
♦ imisebenti lekhetfwa ngekukhululeka.

Luhlelo Lwetibalo:
♦ luyesekela, luyelula luphindze futsi lugcizelele lokucuketfwe Tibalo Telibanga R Te-CAPS. Alutsatsi indzawo ye-CAPS futsi lutsatsa ngekutsi bothishela banelwati nekuvisisa kwaphambilini kweTibalo Telibanga R te-CAPS.
♦ lukhutsata sikhatsi sekugcila kute kutsi bafundzi batetayete emakhono lamasha labasandza kuwatfola kanye nelwati, futsi lujulisa ematfuba ekutetayeta kumisebenti yetibalo lehleliwe kanye nalokuhlangabetwene nako.
♦ lunika bothishela inkhombandlela lebanti lesekela kufundza nekufundzisa.
♦ ikhombandlela yimitsetfomgomo lesiphohlongo lefaka ligalelo ekufundziseni nasekufundzeni ngemphumelelo.
♦ lusekela bothishela ekwakheni luchumano emkhatsini wemicondvo yeTibalo Telibanga R bese kutsi ekuhambeni kwesikhatsi sekuba kwati tibalo.
♦ lugcizelela kubukisisa kwanjalo ngeliviki kwebafundzi njengelithulusi lekutfola lwatiso ngemfundzi ngamunye kute kutsi kumiselwe kuko kuhlela nekuhlola.

Buka likhasi 11 le*Nkhombandlela Yemcondvo* kute kutsi ufundze kabanti ngeLuhlelo Lwekwenta Kancono Tibalo Telibanga R.

Tincenye Teluhlelo Lwetibalo

📹 Ividiyo 1

Siyati kutsi kufundzisa tibalo kuLibanga R kudzinga tinsitakufundza letinyenti. Buka levidiyo lemayelana nemamethiriyeli lotawatfola njengencenye yeLuhlelo Lwetibalo.

Fundza emakhasi 12, 13 kanye na-94–97 e*Nkhombandlela Yemcondvo* yakho kute utfole lwatiso mayelana netincenye teLuhlelo Lwetibalo. Coca ngencenye ngayinye:
♦ *Inkhombandlela Yemcondvo*
♦ *Tinkhombandlela Temsebenti* letine (Ithemu 1–4)
♦ *Incwadzi Yemaphosta*
♦ *Ikhithi Yetinsita* taseklasini.
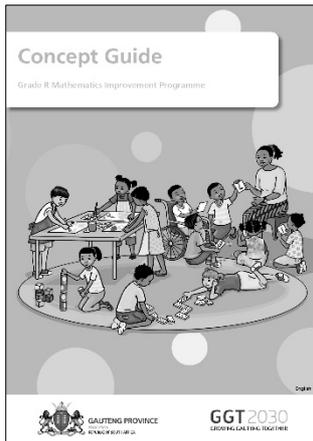
Concept Guide

This guide provides:

♦ principles for teaching maths to young learners

♦ guidelines on how to organise your classroom for effective teaching and learning

♦ a breakdown of Terms 1–4 Grade R content

♦ information on the development of maths knowledge in young learners

♦ guidelines of using the components of the Maths Programme.
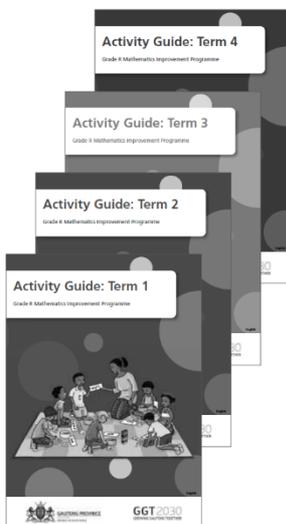
Activity Guides

There are four *Activity Guides* – one for each school term. Each *Activity Guide* includes:

♦ an introduction

♦ an outline of new knowledge to be covered

♦ a continuous assessment template

♦ a Mathematics Content Area topic to be focused on in each week

♦ suggested activities for each week: whole class activities and small group activities (teacher-guided and independent activities)

♦ tips for teacher about planning and organising your maths activities and supporting learners

♦ guidelines for the integration of maths throughout the Grade R daily programme

♦ maths vocabulary that is learnt through the activities each week

♦ information on the resources that will be needed for each week.
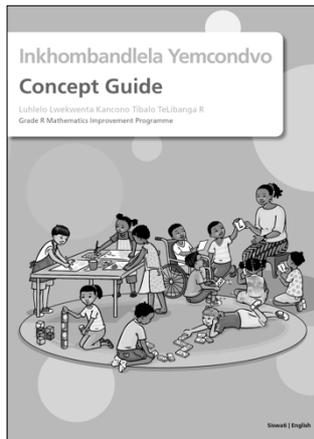
Inkhombandlela Yemcondvo

Lenkhombandlela iniketa:

♦ imitsetfomgomo yekufundzisa bantfu labancane tibalo

♦ tinkhombandlela letimayelana nekuhlela liklasi lakho kute kuzuzwe kufundzisa nekufundza ngemphumelelo

♦ kuhlahlelwa kwalokucuketfwe kweMathemu 1–4

♦ lwatiso lolumayelana nekutfutfukiswa kwelwati kubafundzi labancane

♦ imihlahlandlela yekusebentisa letincenye teLuhlelo lweTibalo.
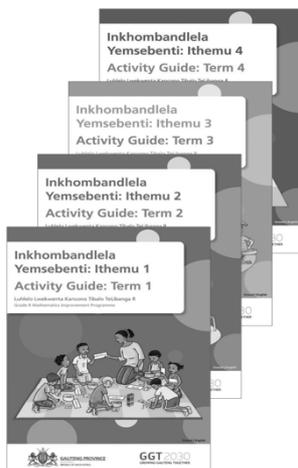
Tinkhombandlela Temsebenti

Kune*Tinkhombandlela Temsebenti* letine – yinye ithemu ngayinye. *Inkhombandlela Yemsebenti* ngayinye ifaka ekhatsi:

♦ singeniso

♦ emabalengwe elwati lolusha lolutawufundvwa

♦ ithemplethi yeluhlolo loluchubekako

♦ sihloko seMkhakha Walokucuketfwe Tibalo lekutawugcilwa kuto liviki ngalinye

♦ imisebenti lephawuliwe liviki ngalinye: imisebenti yeliklasi lonkhe kanye nemisebenti yemacembu lamancane (imisebenti leholwa nguthishela nemisebenti letimele)

♦ emasu athishela ekuhlela nekulungisa imisebenti yakho yetibalo kanye nekwesekela bafundzi

♦ tinkhombandlela tekuhlanganisa tibalo ngeluhlelo lwemalanga onkhe eLibanga R

♦ silulumagama setibalo lesifundvwe kumisebenti yeliviki ngalinye

♦ lwatiso mayelana netinsita letitawudzingeka liviki ngalinye.
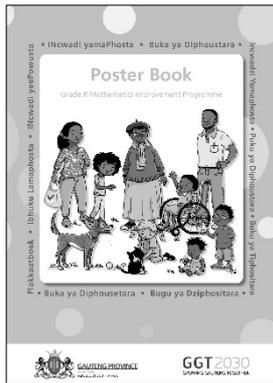
Poster Book

The *Poster Book* consists of 11 big posters. These provide a context for discussion and problem-solving activities. The posters help to link maths to everyday life and can be used in different ways, for example: for counting; for discussing position, direction and shapes; for sequencing events and for problem solving. They can also be used to ask questions that stimulate thinking and reasoning.
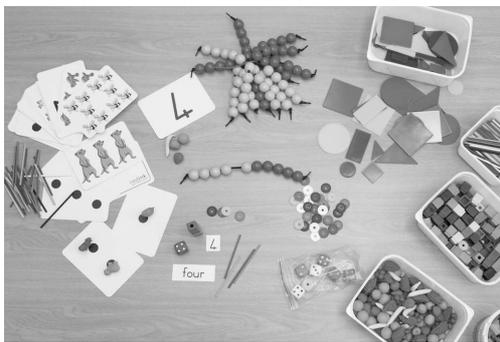
Resource Kit

The *Resource Kit* contains essential teaching and learning materials that will be used regularly as part of the teacher-guided activities. The kit provides enough apparatus for a small group of six learners. Each kit has:

♦ counting materials, e.g. coloured discs and sticks, fruit and animal counters, and Unifix blocks

♦ jumbo dice
♦ strings of ten structure beads
♦ number cards: number symbols (0–10) and number words (zero–ten)
♦ attribute blocks
♦ dot cards.

Other resources to use in Grade R

There are additional resources (not supplied) that are suggested for the activities in the Maths Programme, such as these recycled materials:
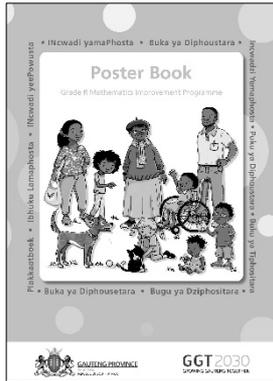
Incwadzi Yemaphosta

Le*Ncwadzi Yemaphosta* icuketse emaphosta lamakhulu la-11. Aniketa tingcikitsi tengcogco kanye nemisebenti yekusombulula tinkinga. Emaphosta asita kuchumanisa tibalo nemphilo yemalanga onkhe futsi angasetjentiswa ngetindlela letehlukene, sibonelo: kubala; kucoca; indlela nabunjwa; kulandzelanisa tehlakalo kanye nekusombulula tinkinga. Angaphindze futsi asetjentiselwe kubuta imibuto levusa kucabanga nekwenta ingcondvo.
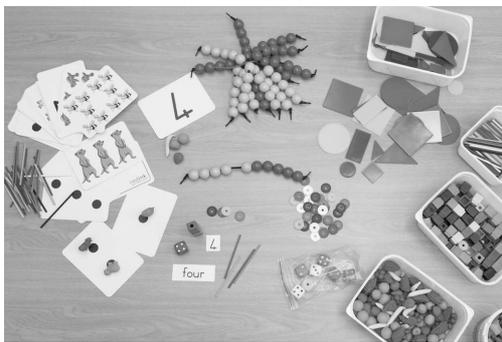
Ikhithi Yetinsita

Ikhithi Yetinsita icuketse imethiriyeli lemcoka yekufundzisa nekufundza letawusetjentiswa njalonjalo njengencenye yemisebenti lekhonjwindlela nguthishela. Lekhithi iniketa ema-apharetha lenele elicembu lelincane lebafundzi labasitfupha kuya kulabasiphohlongo. Ikhithi ngayinye inaloku:

♦ imethiriyeli yekubala, sib. emadiski netindvuku letinemibala, sitselo netibali tetilwane, nemabhlokhi emayunifiksi

♦ lidayisi lelikhulu

♦ tintsambo letilishumi tebuhlalusakhiwo

♦ emakhadi etinombolo: timphawu tetinombolo (0–10) nemagama tinombolo (ziro–lishumi)

♦ emabhlokhi e-athribhiyuthi

♦ emakhadi emacashati.

Letinye tinsita letingasetjentiswa kuLibanga R

Emanotsi emfundzisi
♦ Coca ngetinsita letengetiwe letidzingeka kuLibanga R.

Kunetinsita letengetiwe (letingakaniketwa lapha) lekuphawulwe ngato temisebenti yeLuhlelo Lwetibalo, njengemamethiriyeli laphindze asetjentiselwe kwakha lokunye:

- bottle caps and lids (different shapes, sizes and colours)
- different-sized boxes (toothpaste, matchbox, cereal, medicine, packaging)
- plastic containers (500-ml and 1-litre bottles, margarine tubs, 250-ml and 500-ml yoghurt tubs, ice-cream containers, vegetable packaging)
- tubes and cylinders (cardboard toilet roll inners, paper towel inners, foil roll inners, tins)
- egg boxes
- buttons, old keys, plastic spoons, ice-cream sticks, bread packet tags
- variety of balls, beanbags, hula hoops.

Other maths resources that should be included in the Maths Programme are:
- crayons, paint, glue, scissors
- playdough or modelling clay
- books that can be used for maths discussions
- building blocks and construction toys (collect wood offcuts if necessary)
- a variety of jigsaw puzzles and games, for example, dominoes, snakes and ladders, Ludo, Lotto
- height chart
- jumbo playing cards
- pretend money: coins and notes (to use in a play shop)
- large analogue wall clock
- balance scale
- beads for sorting, threading and patterning
- equipment for sand and water play
- apparatus for climbing, balancing, swinging and skipping.

- ♦ timbonyo temabhodlela (bobunjwa labehlukene, emasayizi, nemibala)
- ♦ emabhokisi emasayizi lehlukene (inhlama lesigezamatinyo, emabhokisi emetjiso, emasiriyeli, umutsi, kwekupakisha tintfo)
- ♦ timumatsi temaplastiki (emabhodlela langemamililitha lange-500 nalalilitha li-1, tikopoti temajerini, timumatsi teyogathi letingemamililitha lange-250 nalange-500, timumatsi te-ayiskhrimu, kwekupakisha tibhidvo)
- ♦ emashubhu nemasilinda (emakhadibhodi lagocotela ithoyilethiphepha, kwangekhatsi kwelithawula leliphepha, kwangekhatsi kweroli yefoyili, tikotela)
- ♦ emabhokisi emacandza
- ♦ emakinobho, tikhiya lentidzala, tipunu temaplastiki, tintsi te-ayiskhrimu, emathegi emaplastiki esinkhwa
- ♦ tinhlobonhlobo temabhola, emabhinibhegi, emahulahuphu.

Letinye tinsita letifanele kutsi tifakwe kuLuhlelo Lwetibalo nguleti:
- ♦ emakhrayoni, pendi, iglu, tikelo
- ♦ inhlama yekudlala noma lubumba lwekudlala
- ♦ tincwadzi letingasetjentiselwa etingcocweni tetibalo
- ♦ emabhlokhi ekwakha nemathoyisi ekwakha (gcogca tincenye tetigodvo letijutjiwe uma kunesidzingo)
- ♦ tinhlobonhlobo temaphazili langemajikso nemidlalo, sibonelo, emadomino, umdlalo wetinyoka nemaladi, Iludo, Ilotho
- ♦ lishadi lebudzekuphakama
- ♦ emakhadi ekudlala lamakhulu kakhulu
- ♦ imali yekudlala: buhhehlu nemaphepha (yekuyisebentisa kudlala sitolo)
- ♦ liwashi letintsi laselubondzeni lelikhulu
- ♦ sikali sekulinganisa
- ♦ buhlalu bekuhlunga, kuphotsela nekwenta emaphethini
- ♦ tintfo tekusebenta temdlalo wesihlabatsi nemanti
- ♦ ema-apharetha ekugibela, kulinganisa, kudlala mjikeni, nekudlala incatfu.

Maths Programme training model

The Maths Programme training consists of 12 six-hour workshops (72 hours in total). These workshops are scheduled across the year and offered monthly with a two-day block scheduled for mid-year. Each workshop deals with the content to be taught over a two- to four-week period and is supported by videos and slides that will give insight into how to plan, teach and assess learners during the year.

Refer to the training schedule that your facilitator will hand out to see the dates that have been scheduled for these workshops in 2022.

Guiding principles of teaching maths in Grade R   (15 minutes)

The Language Improvement Programme training introduced the eight principles that guide teaching in Grade R. These principles also underpin all maths-related activities in the Maths Programme.

Imodeli yekucecesha yeLuhlelo Lwetibalo

Emanotsi emfundzisi
♦ PPT: Imodeli yekucecesha ye-GDE.
♦ Ihendawuthi: Ishejuli ye-GDE yetinsuku tekucecesha kanye netihloko temhlanganosikolo ngamunye wanga-2022.
♦ Samba sesikhatsi sekucecesha Tibalo = 72 ema-awa: Imihlanganosikolo le-12 letsatsa ema-awa lasitfupha:
- Bhimbidvwane–Inhlaba: lilanga linye leligcwele ngenyanga
- Kholwane: ibhlokhi yinye yemalanga lamabili
- Ingci–Lweti: lilanga linye leligcwele ngenyanga.
♦ Inhloso kulungiselela bothishela kutsi bafezekise Luhlelo.
♦ Umsebenti ngamunye ugcila kulokucuketfwe tibalo letitawufundziswa bothishela emavikini lalandzelako.
♦ Bahlanganyeli batawubukana nemgamu nekujula kwalokucuketfwe tibalo letitawufundziswa kuLibanga R kuMkhakha Walokucuketfwe We-CAPS lesihlanu.
♦ Lemihlanganosikolo itawukhulisa iphindze futsi ijulise lwati nekuvisisa imicondvo yetibalo lengumgogodla.
♦ Kugcila ekuvisiseni lemicondvo nemakhono ladzinga kufundziswa nekufundvwa.
♦ Sitawubuyeketa kufezekisa emkhatsini wemihlanganosikolo.

LoLuhlelo Lwetibalo lwekucecesha lucuketse imihlanganosikolo le-12 letsatsa ema-awa lasitfupha (72 ema-awa lasitfupha sekawonkhe). Lemihlanganosikolo ihlelelwe kubakhona wonkhe umnyaka futsi ibanjwa njalo ngenyanga ngebhlokhi yemalanga lamabili lahlelelwa kuba semkhatsini wemnyaka. Umhlanganosikolo ngamunye ukhuluma ngalokucuketfwe lokutawufundziswa sikhatsi lesingemaviki lamabili kuya kulamane futsi kwesekelwa ngemavidiyo nemaslayidi latakunika lwati mayelana nekuhlela, kufundzisa kanye nekuhlola bafundzi ekuhambeni kwemnyaka.

Buka ishejuli yekucecesha umfundzisi wakho latakunika yona kute kutsi ubone tinsuku letihlelelwe imihlanganosikolo yanga-2022.

Imitsetfosimiso leyinkhombandlela yekufundzisa tibalo kuLibanga R
(15 emaminitsi)

Emanotsi emfundzisi
♦ PPT: Imidvwebo lesekhasini 14/15 le*Nkhombandlela Yemcondvo* kanye nesibutsetelo selwatiso kuSengeto A.
♦ Chaza kutsi Luhlelo Lwetibalo lukhonjwa indlela yemitsetfomgomo lebalulekile leyakha sisekelo sekufundzisa tibalo kuLibanga R.

Lucecesho Lweluhlelo Lwekwenta Kancono Lulwimi lwetfule lwemitsetfomgomo lesiphohlongo lekhombindlela kufundzisa kuLibanga R. Lemitsetfomgomo lena iphindze futsi yesekele yonkhe imisebenti lephatselene netibalo kuLuhlelo Lwetibalo.

THE EIGHT PRINCIPLES OF GRADE R MATHS

1. **The context principle.** Learning takes place in meaningful and appropriate situations.

2. **The activity principle.** Learners should be directly involved in the learning–teaching process.

3. **The play principle.** Children learn best in free-play and guided-play activities.

4. **The level principle.** Learners pass through various levels of understanding and development.

5. **The interaction principle.** Learning takes place when there is communication and sharing of ideas.

6. **The guidance principle.** Learning takes place when teachers guide learners in developing new knowledge.

7. **The inclusivity principle.** Learning takes place in an environment where everyone is welcomed, included, treated fairly, respected and can participate.

8. **The practice principle.** Learning is consolidated through practising new skills and knowledge.

Activity 4

In your group, complete the challenge that has been prepared by the facilitator.

Read 'The Guiding Principles of Teaching Maths in Grade R' in Appendix A.

1.   Which of the principles are your currently focusing on in your teaching of
        learners in your Grade R class?

        _____
        _____
        _____
        _____
        _____

26

1. **Umtsetfosimiso wengcikitsisimo.** Kufundza kwenteka etimeni letisho lokutsite lokwakhako futsi letifanele.

2. **Umtsetfosimiso wemsebenti.** Bafundzi kufanele batibandzakanya-ngco enchubeni yekufundza nekufundzisa.

3. **Umtsetfosimiso wekudlala.** Bantfwana bafundza kancono uma badlala ngekukhululeka futsi nasemisebentini yekudlala lekhonjwindlela.

4. **Umtsetfosimiso welizinga.** Bafundzi bendlula emazingeni lamanyenti ekuvisisa nekutfutfuka.

5. **Umtsetfosimiso wekuhlangana.** Kufundza kwenteka uma kunekuchumana nekwabelana ngemibono.

6. **Umtsetfosimiso wekukhombindlela.** Kufundza kwenteka ngesikhatsi thishela abeluleka bafundzi ekutfutfukiseni lwati lolusha.

7. **Umtsetfosimiso wekufaka wonkhewonkhe ekhatsi.** Kufundza kwenteka kusimondzawo lapho wonkhe umuntfu emukelekile, afakwa ekhatsi, aphatfwa kahle, ahlonishwa futsi akhona kuhlanganyela.

8. **Umtsetfosimiso wekutetayeta kwenta.** Kufundza kuciniswa kutetayeta emakhono lamasha nelwati.

IMITSETFOSIMISO LESIPHOHLONGO
GRADE R MATHS

Umsebenti 4

Ecenjini lakho, cedzela lensayeya lelungiselelwe ngumfundzisi.

Fundza 'Imitsetfosimiso leyinkhombandlela yekufundzisa tibalo kuLibanga R' kuSengeto A.

1. Nguyiphi yalemitsetfosimiso logcile kuyo kwamanje ekufundziseni bafundzi bakho eklasini leLibanga R?

_____
_____
_____
_____
_____

2.   Do you think some principles are more important than others? Which ones?
      Say why.

_____
_____
_____
_____
_____
_____
_____

3.   Are some principles more difficult to implement than others? Which ones?
      Say why.

_____
_____
_____
_____
_____
_____
_____

4.   Are there other principles that you think are important? Say why.

_____
_____
_____
_____

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

2.   Ucabanga kutsi leminye imitsetfosimiso ibaluleke kakhulu kunaleminye?
        Nguyiphi leyo? Shano kutsi kungani usho njalo.

_____
_____
_____
_____
_____
_____
_____

3.   Ngabe leminye imitsetfosimiso ilukhuni kakhulu kuyifezekisa kunaleminye?
        Nguyiphi leyo? Shano kutsi kungani usho njalo.

_____
_____
_____
_____
_____
_____
_____

4.   Ikhona yini leminye imitsetfosimiso locabanga kutsi ibalulekile? Shano kutsi
        kungani usho njalo.

_____
_____
_____
_____

Emanotsi emfundzisi

♦   Songa iseshini ngekucela umuntfu munye ecenjini ngalinye atfule umbiko mayelana neM**sebenti 4**.
♦   PPT: Buyela emuva ku*Nkhombandlela Yemcondvo*, likhasi 14/15, Sitfombe 5.
♦   Khutsata bahlanganyeli kutsi bacoce ngemtsetfosimiso ngamunye kabanti baphindze futsi babuyekete kutsi ngesikhona kwenteka/tibonakalisa kanjani emaklasini abo.
♦   Bhala phasi kufliphushadi emaphuzu labalulekile kanye netinsayeya.
♦   Uma ngabe bahlanganyeli baphakamisa leminye imitsetfosimiso ngakafakwa lapha kuloLuhlelo Lwetibalo, cocisanani ngaloku uphindze futsi ubuke kutsi iyangena yini kuyinye yemitsetfosimiso lesiphohlongo yeLuhlelo Lwetibalo.

Fundza kabanti ngalemitsetfosimiso yeLuhlelo Lwetibalo lweNkhombandlela
emakhasini 14–73 e*Nkhombandlela Yemcondvo*.

Time allocation for Mathematics in Grade R   (10 minutes)

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.

Activity 5

Refer to pages 78–81 of the *Concept Guide*.

1. Discuss the weighting of maths content in Grade R.

_____

_____

Kwabiwa kwesikhatsi seTibalo kuLibanga R (10 emaminitsi)

I-CAPS ibeka umbono wekutsi sikhatsi sekufundzisa Tibalo Telibanga kufanele kutsi kube ngema-awa lange-23 ngeliviki. Nanoma kunjalo, i-CAPS ayiniketi limaki noma kuhlahlelwa kwesikhatsi lesifanele kutsi sisetjentiswe kuMkhakha Walokucuketfwe ngamunye ithemu ngayinye.

Tibalo kuLibanga R luhlelo lwemalanga onkhe (20 emaminitsi)

Loluhlelo lwemalanga onkhe kuLibanga R alusilo lithebula lesikhatsi njengalolo lolusetjentiwe kumabanga laphakeme.

KuLibanga R lilanga lihlelwa ngekuya kwetidzingo tebafundzi tekutfutfuka. Lilanga licala ngesikhatsi sekukhuluma kanye nekuhlabela bese ligcina ngekuphumula kanye netindzaba. Ekuhambeni kwelilanga, bothishela bahlela imisebenti yelwati nekuvisisa Lulwimi Lwasekhaya, Emakhono Ekuphila neTibalo. Ngesikhatsi sekudlala nekubonana nathishela kanye nalabanye bafundzi kunematfuba lamanyenti ekuhlanganisa lwati lolusha kanye nesikhatsi sekutetayeta loko labakufundzile.

LoLuhlelo Lwetibalo lubeka umbono wendlela yekuhlela loluhlelo lwemalanga onkhe ngesikhatsi sekugcila seLulwimi Lwasekhaya, Emakhono Ekuphila kanye neTibalo.

👪 Umsebenti 5

Buka emakhasi 78–81 e*Nkhombandlela Yemcondvo*.

1. Coca ngemtsamo walokucuketfwe tibalo kuLibanga R.

_____

_____

2. How much focus time is allocated to maths?

_____

_____

50 minutes per day

3. How is the rest of the day organised in Grade R to accommodate other subject area focus times and free play?

_____

_____

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.

2. Singakanani sikhatsi sekugcila lesabelwa tibalo?

_____

_____

Emaminitsi lange-50 ngelilanga

3. Lihlelwa kanjani lilanga lonkhe kuLibanga R kute kutsi kubonelelwe letinye tikhatsi tekugcila temkhakha wesifundvo kanye nekudlala lokukhululekile?

_____

_____

Sikhatsi sekugcila seTibalo Sawonkhe emalanga

Emanotsi emfundzisi
♦ PPT: Sikhatsi sekugcila seTibalo Sawonkhe emalanga (*Inkhombandlela Yemcondvo*, likhasi 82/83, Sitfombe 33, noma lomdvwebo longentasi). Butsetela lolwatiso lolusemakhasini 84–93 e*Nkhombandlela Yemcondvo.*

Tinkhombandlela tekuhlela liklasi nekulawulwa kwesikhatsi sekugcila seTibalo

1. Emaseshini eliklasi lonkhe

♦ 15–25 emaminitsi

♦ Bonkhe bafundzi bahlala phasi kanye nathishela wabo bente indingilizi.

♦ Imisebenti:
- Hlanganisa uphindze futsi wente kutsi kube nekutetayeta imicondvo lefundvwe ngaphambilini.
- Yetfula umcondvo lomusha.
- Yelula umcondvo lekugcilwe kuwo kakhulu kuleliviki:

  kubala ngemlomo/kubala ngekuphindzaphindza (tilandzelo, tingoma, kulandzelanisa tinombolo)

  tintfo letisetjentiselwa tintfokubala

  kuveta tinkinga, imidlalo yekukhumbula.
- Niketa ticondziso temisebenti yemacembu lamancane kutindzawo tekusebentela.

2. Emaseshini emacembu lamancane

♦ Liklasi lehlukaniswa ngemacembu lasihlanu lanebafundzi labasitfupha kuya kulabasiphohlongo licembu ngalinye.

♦ Lilanga ngalinye licembu linye lisebenta nathishela (umsebenti loholwa nguthishela) bese kutsi emacembu lamane asebenta odvwana enta imisebenti yetibalo lehleliwe kutindzawo tekusebentela.

♦ Emacembu ayantjintjana onkhe emalanga.

♦ Imisebenti:
- Hlanganisa ubuye unikete ematfuba ekuticecesha ngemicondvo lebeyicatjangwe ngalokundlulile.
- Phenya lomcondvo lomusha lokunguwona kugcilwe kuwo kakhulu kuleliviki.
- Yenta kutsi kube nematfuba ekutetayeta lomcondvo lokunguwona kugcilwe kuwo kakhulu kuleliviki.

♦ **Lomsebenti loholwa nguthishela** ugcile ekusebenteni nelicembu linye lebafundzi ku:
- hlanganisa nekutetayeta imicondvo lefundvwe phambilini
- julisa kuvisisa umcondvo lomusha
- bukisisa inchubekelembili yemfundzi.

3. Imisebenti yekutikhetsela

♦ Imisebenti yekutikhetsela leyengetiwe legcile kutibalo inikwa bafundzi lasebawucedzile umsebenti wabo wemacembu lamancane.

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.

Whole class session

Small group maths sessions

Teacher-guided activity
Problem solving and concept development

Small group activity
Application and consolidation of concepts

Small group activity
Application and consolidation of concepts

Small group activity
Application and consolidation of concepts

Small group activity
Application and consolidation of concepts

Free choice
Provide maths-orientated play-based activities for learners to choose from once they have completed their small group task.

Lolucecesho lweLulwimi lukungenise kumaviki lamabili ekufundzisa nemjikeleto wekufundza. LoLuhlelo Lwetibalo luphindze futsi lulandzele indlela lehlelekile ekuhleleni liklasi lihlelelwe sikhatsi sekugcila seTibalo. Umjikeleto weTibalo wekufundza nekufundzisa umiselwe kumisebenti yemacembu lasihlanu labekajikeleta ekuhambeni kweliviki. Tifundvo ticala ngeMsombuluko tite tiphele ngaLesihlanu.

Iseshini yeliklasi lonkhe

Emaseshini etibalo emacembu lamancane

Umsebenti loholwa nguthishela
Kusombulula tibalo nekutfutfukisa umcondvo

Umsebenti welicembu lelincane
Kusetjentiswa nekuhlanganiswa kwemicondvo

Umsebenti welicembu lelincane
Kusetjentiswa nekuhlanganiswa kwemicondvo

Umsebenti welicembu lelincane
Kusetjentiswa nekuhlanganiswa kwemicondvo

Umsebenti welicembu lelincane
Kusetjentiswa nekuhlanganiswa kwemicondvo

Kukhetsa ngekukhululeka
Nika bafundzi imisebenti lephatselene netibalo leyentelwe kudlala kutsi bakhetse kuyo uma sebacedze umsebenti wabo wemacembu lamancane.

Video 2

Watch the video of a teacher encouraging learners to sing the song, *Hokey Pokey*, as they move from the whole class activity to the small group workstations. You will find this song on page 194 of *Activity Guide: Term 1*.

<table>
<tr><td>Facilitator's notes</td></tr>
<tr><td>

♦ Ask participants to think about what they are doing in their own classrooms and how this is similar and different to the Mathematics focus time.
♦ Allow participants to complete **Activity 6**.
♦ As groups report back on their discussions, draw participants' attention to the similarities and differences in their current teaching and the model of the Maths Programme.

</td></tr>
</table>

Activity 6

In your group, discuss the following questions.

1. How does the Maths Programme's Mathematics focus time differ from what you are currently doing in your classroom?

_____

_____

_____

_____

Focus on one concept at a time from one Content Area per week.

Five-group model includes a teacher-guided activity and four workstations.

Learning consolidated through practising new skills and knowledge.

Based on the eight guiding principles.

2. Does the Maths Programme suggest any changes to the way you are currently teaching maths? Explain your response.

_____

_____

_____

_____

Whole class sessions, small group teacher-guided sessions with six to eight learners, free choice activities.

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

📹 Ividiyo 2

Bukela levidiyo yathishela akhutsata bafundzi kutsi bahlabele lengoma, *Bamba Lukhalo*, ngesikhatsi basuka kumsebenti weliklasi lonkhe baya kutiteshi tekusebenta temacembu lamancane. Lengoma utayitfola kulikhasi 195 le*Nkhombandlela Yemsebenti: Ithemu 1*.

Emanotsi emfundzisi
♦ Cela bahlanganyeli bacabange ngaloko labakwentako eklasini labo nekutsi loku kufanana ngani nekutsi kwehluke ngani kulesikhatsi sekugcila leTibalo.
♦ Vumela bahlanganyeli bacedze **Umsebenti 6**.
♦ lapho emacembu atfula imibiko yetingcogco tawo, yenta bahlanganyeli banake kufanana nemehluko lekhona ekufundziseni kwabo kwamanje kanye nekwendlela yeLuhlelo Lwetibalo.

👥 Umsebenti 6

Ecenjini lakho, coca ngalemibuto lelandzelako.

1. Sikhatsi sekugcila seLuhlelo Lwetibalo sehlukile kunaloko lokwentako kwamanje eklasini?

_____
_____
_____
_____

Gcila kumcondvo munye ngesikhatsi sinye kusuka kumunye Umkhakha Walokucuketfwe ngeliviki. Indlela yekufundzisa yemacembu lasihlanu ifaka ekhatsi umsebenti loholwa nguthishela kanye netindzawo tekusebentela letine.
Kufundza kuhlanganisa ngekutetayeta emakhono nelwati lolusha.
Ngekumisela kulemitsetfomgomo lesiphohlongo.

2. Ngabe Luhlelo Lwetibalo lubeka imibono mayelana nendlela lofundzisa ngayo tibalo kwamanje? Chaza timphendvulo takho.

_____
_____
_____
_____

Emaseshini eliklasi lonkhe, emaseshini laholwa nguthishela emacembu lamancane lanebafundzi labasitfupha kuya kulabasiphohlongo, imisebenti yekutikhetsela lekhululekile.

Bhekisa kumakhasi 82–93 e*Nkhombandlela Yemcondvo* kufundza lokunye ngekuhlela liklasi lakho lesigaba semalanga onkhe sekugcila kuTibalo.

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 7** in their groups. Ask a person from each group to share their ideas.

Activity 7

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?

_____

_____

_____

_____

Iseshini 2: Tinombolo, Ema-ophareshini neBudlelwane

2 ema-awa

Sibutsetelo salokucuketfwe nguThemu 1–4 (i-CAPS) (45 emaninitsi)

Emanotsi emfundzisi

- ♦ PPT: *Inkhombandlela Yemcondvo*, likhasi 110/111, Sitfombe 41 kanye nesibutsetelo kumakhasi 110–113.
- ♦ Khombisa bahlanganyeli kule*Nkhombandlela Yemcondvo*, emakhasi 114-137. Chaza kutsi lesibutsetelo salokucuketfwe siniketa luhlakamsebenti lwako konkhe kuhlelela tibalo futsi kutawusetjentiswa kukhonjiswe kulo lonkhe luceceesho.
- ♦ PPT: Coca ngelithebuli. Chaza kutsi lombhalo lobhalwe ngalokuluhlata sasibhakabhaka iphume ku-CAPS bese kutsi kulombhalo lomnyama ngulokucuketfwe lokwengetelwe kwakha nekukhulisa Luhlelo Lwetibalo lwe-CAPS.

LoLuhlelo Lwetibalo luhambisana nalokucuketfwe futsi lukhulisa lokucuketfwe kweMikhakha Yalokucuketfwe Kwetibalo te-CAPS lokusihlanu. Lelithebula lelikumakhasi 114–137 e*Nkhombandlela Yemcondvo* liniketa sibutsetelo salokucuketfwe kwetibalo letifundziswa kuLibanga R. Kuphindze futsi kukhombise kutsi ngukuphi lokucuketfwe lokufanele kutsi kufundziswe ithemu ngayinye.

- ♦ Lombhalo lobhalwe ngalokuluhlata sasibhakabhaka ngulokucuketfwe lokutsetfwe ku-CAPS yeTibalo Telibanga R.
- ♦ Lombhalo lomnyama ufakelwe kukhulisa nekwakhela ku-CAPS.
- ♦ Letihloko tilandzelaniswe kukhombisa inchubekela phambili yentfutfuko kusuka kusinye sihloko kuye kulesilandzelako.

Buka emakhasi 110–113 e*Nkhombandlela Yemcondvo* bese ufundza 1.1, 1.2 na-1.3 emakhasini 114–117. Ngemuva kwekufundza tinombolo 1.1, 1.2 na-1.3, yenta Imisebenti 7 na-8.

Emanotsi emfundzisi

- ♦ Yenta bafundzi bente bacedze **Umsebenti 7** emacenjini abo. Cela kube nemuntfu ecenjini ngalinye babelane imibono yabo.

Umsebenti 7

Buka sibutsetelo salokucuketfwe kuThemu 1–4 weMKhakha Wekufundza: Tinombolo, Ema-ophareshini neBudlelwane, ku*Nkhombandlela Yemcondvo* kanye nedokhumenti ye-CAPS. Ecenjini lakho, coca ngaloku:

1. Luhlelo Lwetibalo lufaka ini kulokucuketfwe yi-CAPS?

_____

_____

_____

_____

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.

Buka umbhalo lomnyama emakhasini 114–117 *Inkhombandlela Yemcondvo*. Kufakwe lokucuketfwe lokusha: emakhadi emacashati, tetfulo letiphindzaphindziwe, buhlalusakhiwo, indlela yekuzupha, lilayini lekweneka letinombolo, matanisa nemakhadi etimphawu tetinombolo/temagama, kuhlahlela nekwakha emagcogco, kuhlela timphawu tetinombolo, tinombolondzawo kumisebenti yemalanga onkhe, kusombulula ngemlomo, kwaba ngalokulinganako.

2. Nguyiphi imicondvo yekubala letfolakala kuTinombolo, Ema-opharshini neBudlelwane kuThemu 1?

_____

_____

_____

_____

Buka umbhalo lomnyama emakhasini 114–115 e*Nkhombandlela Yekusebentela*: kucondzana kwakunye nakunye, kulinganisela, kumatanisa, tetfulo letiphindzaphindzekile, kubala uye embili 1–10, kubala uye emuva 5–1.

Emanotsi emfundzisi

♦ Chaza kutsi ngesikhatsi semihlanganosikolo kugcila kusekufezekiseni Luhlelo Lwetibalo nekutsi bahlanganyeli badzinga kuvisisa imicondvo yetibalo kute kutsi bakwati kwesekela bafundzi. Lomhlanganosikolo uniketa kuvisisa imicondvo lebalulekile kuTinombolo, Ema-ophareshini neBudlelwane.

Imicondvo lebalulekile kuTinombolo, Ema-ophareshini neBudlelwane (1¼ ema-awa)

Kubala

Kubala ngemlomo (kubala ngekuphindzaphindza, sakuhlabela noma kubala lokuvakalako)

Emanotsi emfundzisi

♦ Cela bahlanganyeli batehlukanise babe ngemacembu lamancane alabasihlanu kutsi batfole sikhala kuleligumbi lekucecesha. Tjela bahlanganyeli baye ku**Msebenti 8** bese uyabayekela basho lesilandzelo, *Kunye, kubili, kutsatfu, kune, sihlanu* (*Inkhombadlela Yemsebenti: Ithemu 1*, emakhasi 197) bente iminyakato.

♦ Emacenjini abo lamancane, bahlanganyeli babuyeketa lomsebenti nemakhono ekubala labawasebentise ku**Msebenti 8** na **9**.

♦ Cela lamacembu kutsi etfule umbiko mayelana netingcogco tabo. Bhala kufliphushadi yinye likhono lekubala.

♦ Yenta siciniseko sekutsi bahlanganyeli bayavisisa kutsi kubala ngemlomo kufaka ekhatsi kukhumbula emagama etinombolo futsi akusho kutsi bantfwana abakwati kubala.

♦ Fundza lwatiso mayelana nekubala ngemlomo ngentasi.

♦ Coca ngalamagama lalandzelako: ngemlomo, ngesigci, ngekuphindzaphindza kanye nekubala ngekulandzelanisa.

♦ PPT: njenge: incwadzi, situlo, inja, indlu.

♦ Chazela bafundzi loko kwekutsi lokubala kwekulandzelana kwemagama etinombolo akunabo budlelwane nemcondvo wenombolo, sib. njenge: incwadzi, situlo, inja, indlu, … Bafundzi kancane kancane bayevisisa kutsi ligama ngalinye lima lodvwa kulokulandzelana nekutsi ligama ngalinye limele inombolo letsite.

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 8

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.

Kubala ngemlomo kufaka ekhatsi kutsi bafundzi bakhumbule emagama nendlela yekubala tinombolo, kuvamise kuba silandzelo noma ingoma.

KuLibanga R bafundzi bafundza kuhleleka lokungiko kwemagama etinombolo kanye nekuphindze balandzelanise onkhe emalanga. Inhloso yekubala ngekuphimisa kakhulu kusita bafundzi bavisisise kutsi uma sibala siphimisela kakhulu kunekuhleleka lokuncunyiwe kwetinombolo: kucala kukunye, kubili, kutsatfu, kune, njll. Ekucaleni bafundzi abayivisisi ngalokuphelele inshokutsi yemagama etinombolo futsi kungenteka kutsi kube netinombolo labatecako ekubaleni ngekulandzelanisa. Kuhaya silandzelo noma luchungechunge lwetinombolo ngemlomo kusho kuphindza emagama etinombolo ekukhumbuleni. Ngisho nalapho bafundzi babala ngetinyatselo letimbili, sihlanu kanye nelishumi basebentisa lwati lwabo lwaloluhlelo lwetinombolo. Kukhumbula emagama etinombolo kanye nekutiphindza ngendlela yekubala lengiyo akusho kutsi bafundzi bayakwati kubala. Loku kwehlukile ekubaleni kute utfole kutsi 'kungaki'.

Tihleleni nibe ngemacembu lamancane alabasihlanu bese nitfola sikhala lesivulekile kuleligumbi lekucecesha nentele umsebenti lolandzelako.

Umsebenti 8

1. Emacenjini enu lamancane, shanoni lesilandzelo, *Kunye, kubili, kutsatfu, kune, kusihlanu* nente neminyakato.

Kunye, kubili, kutsatfu, kune, kusihlanu
Kunye, kubili, kutsatfu, kune, sihlanu
Ngase ngabamba inhlanti iphila.
'Wayiyekelelani yahamba?'
Ngoba yangiluma umunwe wami.
Kunye, kubili, kutsatfu, kune, sihlanu
Ngase ngabamba sicoco siphila.
'Yini lowayenta ngaloko?'
Ngatsi sawubona ngase ngisibuyisela emuva.

2. Ucabanga kutsi kusebentisa silandzelo lesinjengalesi kutetayeta lokukahle kufundzisa kubala kuLibanga R? Niketa tizatfu temphendvulo yakho.

_____

_____

_____

Buka emakhasi 77 na-197 ku*Nkhombandlela Yemsebenti: Ithemu 1* mayelana nalesilandzelo.

Activity 9

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).*

Umsebenti 9

Kulawo macembu lamancane, phendvulani lemibuto:

1. Bafundzi bafundzani ngekusho lesilandzelo?

_____

_____

_____

_____

2. Yini lefundvwa bafundzi uma baphindza kulandzelana kwetinombolo ngekuhleleka lokufanele?

_____

_____

_____

_____

Bala ngabokunye ngendlela lefanele.

Luchungechunge lwekubala tinombolo.

Emagama etinombolo langiwo.

Kwehlukanisa emagama etinombolo.

Kusita ngekukhumbula kulandzelana ngendlela yekubala lefanele.

Kubala tintfo (kubala ngekumatanisa)

Emanotsi emfundzisi
♦ Khombisa kutsi utibala njani tintfo usebentisa kucondzana kwakunye nakunye.
♦ Cela bahlanganyeli batsatse tibali kusikopoti se*Khithi Yetinsita* etafuleni bagcwalise tandla tabo totimbili bese batibeka embikwabo. Bacele basho kutsi nguyiphi incumbi lenetibali letinyenti/letimbadlwana. Buta bahlanganyeli kutsi bangakutfola kanjani loko ngaphandle kwekutsi batibale. Bafucele ekutsini bamatanise tintfo letisecenjini ngalinye ticondzane ngakunye kukunye kute kutsi bakhone kusho kutsi nguliphi lelicembu lelinakunyenti/lokuncane.
♦ Cela bahlanganyeli kutsi babale letintfo ecenjini ngalinye kute kutsi batfole kutsi nguliphi lelinakunyenti/kuncanyana.
♦ Buta bahlanganyeli kutsi kusetjentiswe siphi silulumagama, sib. bala, kunye, kubili, kutsatfu ..., kungaki, nyenti, ncanyana, licembu.
♦ Fundza lolwatiso lolumayelana nekubala tintfo (kubala ngekunika intfo inombolo) ngentasi.
♦ Ciniseka kutsi bahlanganyeli bayawuvisisa umehluko emkhatsini wekubala ngemlomo nekubala ngetintfo:
- ***Kubala ngemlomo*** *kufaka ekhatsi kukhumbula nekulandzelanisa emagama etinombolo.*
- ***Kubala tintfo*** *kufaka ekhatsi kumatanisa ligama lenombolo nentfo ngayinye lebalwako kuvisisa kutsi inombolo yekugcina leshiwo imelela samba setinombolo letibaliwe (kungaki).*

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.

_____

_____

_____

_____

Kubala tintfo kufaka ekhatsi kucondzana kwakunye nakunye. Loku kusho kutsi intfo noma sehlakalo ngasinye lesifanele kutsi sibalwe simataniswa neligama lenombolo. Kubala 'kukangaki', bafundzi badzinga kubona kutsi intfo ngayinye kuligcogco itfola ligama lenombolo ('kunye, kubili, kutsatfu, kune …') nekutsi futsi ubala intfo ngayinye kanye kuphela.

Uma ngabe bafundzi sebayayati indlela yekubala tinombolo, babese bacala kubona kutsi inombolo ngayinye kulokubala ngekulandzelanisa yinkhulu ngakunye kunenombolo leshiwo phambilini nekutsi futsi yincane ngakunye kunenombolo lelandzelako. Bangakhona ku:

♦ catsanisa ngenhloko tinombolo babone futsi kutsi kubili mkhulu ngakunye nekutsi kutsatfu mkhulu ngakunye kunakubili.

♦ bona kutsi tinombolo tikhula ngakunye ngesikhatsi sinye.

♦ bona kutsi nanoma nguyiphi inombolo kulokubala ngekulandzelanisa yinkhulu ngakunye-ngco kunenombolo yaphambilini.

Emanotsi emfundzisi

♦ Chazela bahlanganyeli kutsi bafundzi abafundzi imicondvo nemakhono etinombolo ngekwehlukana. Badzinga kuhlangabetana netinombolo etimeni letehlukene temalanga onkhe letifaka ekhatsi kubala ngemlomo, kubala tinombolo nekulalela tinombolo ngetindlela letehlukene.

♦ Gcizelela kutsi bafundzi akudzingeki kutsi babhale timphawu tetinombolo kuLibanga R. Kufundza kubhala timphawu tetinombolo kufanele kutsatfwe njengeKubhala Kwekucala. Buka Tinombolo, Ema-ophareshini neBudlelwane kudokhumenti ye-CAPS nemakhasi 114–117 e*Nkhombandlela Yemcondvo.*

📹 **Ividiyo 3**

Inkhombandlela Yemsebenti: Ithemu 1, Liviki 2, Umsebenti loholwa nguthishela #2, 3 (likhasi 46/47)

Bukela levidiyo yebafundzi babala ligcogco letintfo. Lona ngumsebenti loholwa nguthishela. Caphela kutsi thishela umbukisisa kanjani umfundzi ngamunye futsi babute imibuto lebachubela ekutseni babelane imibono yabo.

_____

_____

_____

_____

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 10

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*.

Kumelela tinombolo

Umsebenti 10

Tingaki tindlela letehlukene longatitfola kumelela inombolo 5?

_____

_____

_____

_____

Bafundzi bacala kumelela tinombolo basebentisa iminwe yabo bese kancane kancane bacala kusebentisa letinye tindlela, njengetintfo, imidvwebo, titfombe noma timphawu. Bafundzi bayachubeka:

♦ kusuka ekusebentiseni tintfo tangempela kuye ekuhleleni (kumela) tinombolo, sib. emalamula, emaswidi, emapeniseli, emacembe

♦ kuye ekusebentiseni titfombe noma imidvwebo kumelela letintfo, sib. umdvwebo welilamula, umuntfu, imoto

♦ kuye ekusebentiseni tibali kumela letintfo noma titfombe, sib. emadiski epulasitiki kukhombisa inombolo yemalamula

♦ kuye ekusebentiseni imidvwebotimphawu kumelela letintfo letiphatsekako netitfombe, sib. tindingilizi, emacashati, imidvwebotimphawu yemathali, imisindvo yekushaya tandla, tigci tetigubhu, kugcoba phasi ngetinyawo

♦ kuye ekusebentiseni timphawu tetinombolo letibhaliwe neligamanombolo, sib. '2' noma 'kubili'.

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.

LoLuhlelo Lwetibalo lusebentisa indlela lengenisa tinombolo 0–10 ngayinye ngesikhatsi ngasinye futsi ilandzela inhlalayenta yinye yekufundzisa yenombolo ngayinye.

♦ Kucocwa indzaba yenombolo. Loku kuvusa inkhabunkhabu yebafundzi futsi kuniketa simo lesetayelekile, lesijabulisanako lesichumana netimphilo tebafundzi naloko labakutsandzako.

♦ Inombolo ngayinye inemlingisi lotsite wesilwane. Indzawo lenesilwane isetjentiselwa kwakha ifrizi yenombolo kumelela lenombolo.

♦ Kudlala lendzaba kunika bafundzi ematfuba ekufundza ngekuhambisa umtimba (kufundza ngekuhambisa ngekulingisa nekuhambisa imitimba yabo).

♦ Kugcogcwa kwetintfo letitawumelela lenombolo ngetindlela letehlukene. Tintfo tibekwa endzaweni yetibalo.

♦ Bafundzi bamatanisa tintfo netitfombe, emakhadi emacashati, timphawu tetinombolo kanye nemagama etinombolo.

♦ Le*Ncwadzi Yemaphosta* inikana timo temphilo mbamba letivusa ingcogco tiphindze futsi tikhutsate kusonjululwa kwetinkinga.

Inombolo 'kunye' yetfulwa ngeliviki lesibili leThemu 1 kwetayeta bafundzi inhlalayenta. Kusetjentiswa yona leyo nhlalayenta lapho kungeniswa inombolo lensha ngayinye, kwengeta kunye futsi enombolweni bafundzi labayifundze esikhatsini lesengcile.

Ngembi kwekwenta umsebenti lolandzelako bawucedze, chumana nemfundzisi ngesikhatsi acoca indzaba yenombolo 1 bese wakha ifrizi yenombolo usebentisa lethemplethi yendlu nemakhadi efrizi etilwane. Ngemuva kwekulalela lendzaba, yenta ucedze Umsebenti 11.

Emanotsi emfundzisi

♦ Ngemuva kwekukhombisa, cela bahlanganyeli bese bacedze **Umsebenti 11**.

♦ Vumela bahlanganyeli bacocisane ngembuto kumacembu lamancane bese babelana imibono ecenjini lelikhulu.

♦ Buyeketa silulumagama lesisetjentiswe ngesikhatsi semsebenti, sib. kunye, inombolo, luphawu lwenombolo, libito lenombolo, ligama lenombolo, kungaki, licembu, ligcogco, bala, kuyafanana (kuyalingana).

Activity 11

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

_____
_____
_____
_____

Picture, dot, number symbol, number word

Umsebenti 11

Inombolo 1 imelelwe ngatiphi tindlela letehlukene kulendzaba?

_____
_____
_____
_____

Sitfombe, licashati, luphawu lwenombolo, ligama lenombolo

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.

Iseshini 3: Kufezekisa imodeli yekufundzisa yemacembu lasihlanu

2 ema-awa

Sesikhulumile ngekuhlela liklasi lakho lekufundzisa nekufundza tibalo ngesikhatsi sekugcila seTibalo. Lesigaba lesi sibeka emabalengwe mayelana nekuhlela nekufezekisa Luhlelo Lwetibalo kanye nekugcila ekulungiseleleni kufundzisa Emaviki 1 na-2 eThemu 1.

Sibutsetelo Salokucuketfwe Seliviki Sethemu (Emaviki 1–2)   (1 li-awa)

Emanotsi emfundzisi
♦ PPT: Sikhatsi sekugcila seTibalo Semalanga Onkhe (*Inkhombandlela Yemcondvo*, likhasi 83, Sitfombe 33) neLiviki 1 leSengeto B.
♦ Tjela bahlanganyeli babuke Liviki 1 leSengeto B: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki Emaviki 1–2). Chaza kutsi leSibutsetelo Salokucuketfwe Seliviki siniketa sibutsetelo salokucuketfwe tibalo teliviki ngalinye. Chaza kutsi kwentiwa kwaloluhlakamsebenti kwabese kubhalwa lokutawufundvwa kwe*Nkhombandlela Yemsebenti*.
♦ Bala emabalengwe etibonisi teliviki. Fundza imisebenti yeliklasi lonkhe, umsebenti loholwa nguthishela kanye nemisebenti yemacembu lamancane latimele (indzawo yekusebentela). Yenta bahlanganyeli basebente ngemacembu bese bacedza **Umsebenti 12**.
♦ Gcila kusakhiwo seSibutsetelo Salokucuketfwe Seliviki:
- Umkhakha Walokucuketfwe, Sihloko, Lwati lolusha, Kutetayeta
- Imisebenti yeliklasi lonkhe: yentiwa nabo bonkhe bafundzi, imisebenti lechumene neMkhakha Walokucuketfwe neSihloko, kufaka ekhatsi inhlalayenta lefaka ekhatsi tilandzelo/tingoma, kubala ngemlomo nekubala tintfo.
- Umsebenti wemacembu lamancane loholwa nguthishela: ugcila kakhulu kumisindvo lefundzisiwe, lefaka ekhatsi emacembu lamancane alabasitfupha nalabasiphohlongo.
- Imisebenti yemacembu lamancane latimele (indzawo yekusebentela): iniketa kutetayeta nekuhlanganisa imicondvo leyetfula eklasini lonkhe kanye nemisebenti leholwa nguthishela.
♦ Chaza kutsi Sibutsetelo Salokucuketfwe Seliviki siniketa sakhiwo neluhlakamsebenti loluhlela sikhatsi sekugcila seTibalo liviki ngalinye.

Sengeto B: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 1–2) siniketa sibutsetelo salokucuketfwe kanye nekuniketa imibono mayelana nekufundzisa nekufundvwa kwetibalo liviki ngalinye lelinalolwatiso lolulandzelako:

♦ kugcila Kwemkhakha Walokucuketfwe weliviki

♦ sihloko (tihloko) letifundvwako

♦ Lwati lolusha kanye nekuTetayeta kugcila kweliviki

♦ imisebenti lephawuliwe yeliklasi lonkhe kanye nemacembu lamancane (umsebenti loholwa nguthishela kanye nemisebenti yendzawo yekusebentela) yeliviki.

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

🏫 Activity 12

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.

Fundza imisebenti yeliklasi lonkhe, umsebenti loholwa nguthishela kuSengeto B: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 1–2).

👥 Umsebenti 12

Buka Sengeto B: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 1–2). Phendvula lemibuto.

Imibuto	Liviki 1	Liviki 2
Ngumuphi Umkhakha Walokucuketfwe Wekugcila kuleliviki?	Tinombolo, Ema-ophareshini neBudlelwane	Tinombolo, Ema-ophareshini neBudlelwane
Nguyiphi imicondvo lebalulekile letawufundvwa bafundzi?	Kubala ngemlomo Kubala tintfo	Timphawu tetinombolo Emagama etinombolo
Nguluphi lwatiso lolusha lolwetfuliwe?	Kubala ngemlomo 1–5 Kubala tintfo 1–3 Kucondzana kwakunye nakunye Kulandzelanisa tenteko	Inombolo 1 Kusombulula tinkinga kutingcikitsisimo temalanga onkhe
Ngumaphi emakhono latawetayetwa kuLiviki 2?		Kubala ngemlomo 1–5 Kubala tintfo 1–3 Silulumagama kusuka kuLiviki 1

Emanotsi emfundzisi
- PPT: Buyeketa kafishane indlela yekufundza ngemacembu lasihlanu nekutsi imisebenti yesikhatsi sekugcila seTibalo ihlelwe kanjani (imisebenti yeliklasi lonkhe, yemacembu lamancane nekutikhetsela ngekukhululeka).
- Khumbuta bahlanganyeli kutsi kugcilwe kumunye umcondvo/sihloko ngesikhatsi sinye lophuma kumKhakha Walokucuketfwe.

Inkhombandlela Yemsebenti: Ithemu 1

Emanotsi emfundzisi
- Chaza kutsi *Inkhombandlela Yemsebenti: Ithemu 1* inika bothishela imibono njalo ngeliviki yekufundzisa tibalo kuLibanga R.
- PPT: Tibonisi te*Nkhombandlela Yemsebenti: Ithemu 1* (*Inkhombandlela Yemsebenti: Ithemu 1*, likhasi 6/7).
- Chaza kutsi lomsebenti lolandzelako utawunika bahlanganyeli litfuba lekufundza kabanti nge*Nkhombandlela Yemsebenti: Ithemu 1*.
- Yenta bahlanganyeli basebente ngemacembu lamancane bente bacedze **Umsebenti 13** bese babelana timphendvulo tabo nelicembu lelikhulu.
- Yenta kuchumana emkhatsini we*Nkhombandlela Yemsebenti: Ithemu 1* neSibutsetelo Salokucuketfwe Seliviki.

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 13

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

Race around *Activity Guide: Term 1*	
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 *Grade R Maths family story*.	
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.

Inkhombandlela Yemsebenti iniketa bothishela beLibanga R sakhiwo neluhlakamsebenti iphindze futsi ibanike imibono yekufundzisa nekufundza tibali.

Buka emakhasi 1 na-2 ku*Nkhombandlela Yemsebenti*: *Ithemu 1* neSibutsetelo Salokucuketfwe Seliviki kuSengeto B. Yenta Umsebenti 13 ecenjini lakho.

👪 Umsebenti 13

1. Buka *Inkhombandlela Yemsebenti: Ithemu 1* bese wengeta lwatiso kulelithebula.

Buhlanga ku*Nkhombandlela Yemsebenti: Ithemu 1*	
Yini lekumakhasi 7, 9 ne-11?	
Ikuliphi likhasi iphosta 'Yemitsetfo yeliklasi letfu'?	
Sibutsetelo salokucuketfwe seThemu 1 sikuliphi likhasi?	
Nguluphi lwatiso lolusekucaleni kweliviki?	
Tfola *Indzaba yemndeni we-Grade R Maths*.	
Nguyiphi ingoma leyetfulwe kuLiviki 2?	
Tfola lapho inombolo 1 yetfulwe khona.	
Tfola umsebenti weliklasi lonkhe logcile ekubaleni ngemlomo.	
Tfola umsebenti loholwa nguthishela logcile ekuhlanganiseni umcondvo ngenombolo kukunye kwakunye.	
Tfola umsebenti wendzawo yekusebentela logcile ekuhlanganiseni umcondvo wenombolo '1'.	

2. Buka imisebenti yeliklasi lonkhe, leholwa nguthishela kanye nemisebenti yendzawo yekusebentela kuSengeto B. Tfola lemisebenti *kuNkhombandlela Yemsebenti: Ithemu 1*.

👁 KuLibanga R luhlolo luhlelekile futsi luyachubeka. Sidzinga kubukisisa bafundzi lilanga lonkhe, ngekhatsi nangaphandle kweliklasi.

LoLuhlelo Lwetibalo lwentiwe lwamisela ekujikeliseni emacembu lamancane ekuhambeni kweliviki futsi thishela unaka licembu linye ngelilanga, abuke futsi alalele bafundzi ngesikhatsi benta imisebenti yabo. Manje nika bafundzi litfuba lekubukisisa umfundzi ngamunye bese ugcogca lwatiso ngenchubekelembili yabo.

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.

Buka ibhlokhi lehlikihliwe ekugcineni kwemsebenti loholwa nguthishela kuLiviki 2: **'Hlola kutsi bafundzi bayakhona ku'**. Loluphawu lweliso lusikhumbuta kutsi sidzinga kubukisisa bantfwana ngesikhatsi basematasatasa, futsi sidzinga kulalelisisa ngesikhatsi bakhuluma natsi nabontsanga yabo.

Thishela ubhala emanotsi akhe engcondvweni kutawutsi bafundzi bangacedza umsebenti welusuku, bese thishela ubhala encwadzini yakhe yemsebenti wekubukisisa lenendzawo yemanotsi emntfwana ngamunye.

Incwadzi Yemaphosta neKhithi Yetinsita   (10 emaminitsi)

Emanotsi emfundzisi

♦   Chaza kutsi tisetjentiswa te*Khithi* titawusetjentiswa ngesikhatsi semisebenti leholwa nguthishela kanye nekutsi kunetisetjentiswa letenele temacembu lamancane alabasitfupha kuya kulabasiphohlongo. Khumbuta bahlanganyeli ngalokucuketfwe yi*Khithi Yetinsita* bese ubakhombisa letisetjentiswa bese nicoca ngekutsi titawusetjentiswa kanjani ngasinye:
    - imethiriyeli yekubala: emadiski lanemibala netindvuku, tibali tetitselo netilwane, Emabhlokhi eYunifiksi
    - lidayisi
    - buhlalusakhiwo
    - emakhadi etinombolo (timphawu tetinombolo nemagama etinombolo)
    - emabhlokhi e-athribhuyithi.
♦   Khombisa bahlanganyeli *Incwadzi Yemaphosta* ubachazela kutsi kunemisebenti ku*Tinkhombandlela Temsebenti* lesebentisa le*Ncwadzi Yemaphosta kuvusa ingcogco* nekuchumanisa ingcikitsi yetibalo esikolweni, ekhaya kanye nasemmangweni.

Le*Khithi Yetinsita* inetisetjentiswa letenele temacembu lamancane ebafundzi labasitfupha kuya kulabasiphohlongo. Tisetjentiswa letitawusetjentiswa kuThemu 1 Emaviki 1 na-2 tifaka ekhatsi:

♦   tibali: tibali tetilwane netetitselo

♦   emakhadi etinombolo: eluphawu lwenombolo (1) neweligama lenombolo (kunye).

Emanotsi emfundzisi

♦   Nika umhlanganyeli ngamunye *Ikhithi Yetinsita* ne*Ncwadzi Yemaphosta*.

Ngamunye nitawutfola *Ikhithi Yetinsita* ne*Ncwadzi Yemaphosta*.

Buka emakhasi 6–17 e*Nkhombandlela Yemsebenti: Ithemu 1* kufundza ngetinsita teliklasi nekwenta simondzawo sekufundzela tibalo.

Closing activities (10 minutes)

Activity 14

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.

Emanotsi emfundzisi

♦ **Sifundvo lesifundziwe**: Cela bahlanganyeli bacabange ngaloko labakufundzile kulomhlanganosikolo nekutsi babhale **Umsebenti 14** ngamunye.

♦ **Umsebenti wekubuyela emuva esikolweni**: Fundza wonkhe lomsebenti. Babute kutsi kukhona yini lokungacaci futsi lokudzinga kuchazwa kabanti.

♦ **Kuhlolisisa:** Banike emakhophi eLifomu Lekuhlolisisa Umhlanganosikolo futsi yenta bahlanganyeli baligcwalise lelifomu.

♦ **Umhlanganosikolo lolandzelako**: Cela bahlanganyeli kutsi babuye nale*Ncwadzi Yemaphosta, Inkhombandlela Yemcondvo kanye neNkhombandlela Yemsebenti: Ithemu 1* kumhlanganosikolo lolandzelako. Niketa tinsuku temhlanganosikolo lolandzelako.

♦ **Kubhalisa**: Khumbuta bonkhe bahlanganyeli kutsi basayine irejista.

♦ Vala umhlanganosikolo.

Umsebenti 14

Sifundvo lesifundziwe: Cabanga ngaloko lokufundzile kumhlanganosikolo bese ugcwalisa lelithebula.

Tintfo lesengivele ngitenta letisebenta kahle	Imibono lemisha lengitayetama

Umsebenti wekubuyisela emuva esikolweni

1. Fundza emakhasi e*Nkhombandlela Yemcondvo* lekubhekiswe kuwo ngesikhatsi semhlanganosikolo.

2. Sebentisa *Inkhombandlela Yemsebenti: Ithemu 1* kuhlela nekufezekisa Emaviki 1–2 eLuhlelo Lwetibalo.

3. Buyeketa kutsi imitsetfomgomo yenkhombindlela yekufundzisa nekufundza Luhlelo Lwetibalo ikusite njani eklasini.

4. Hlela indzawo yetibalo. Yishuthe sitfombe bese uta naso kumhlanganosikolo.
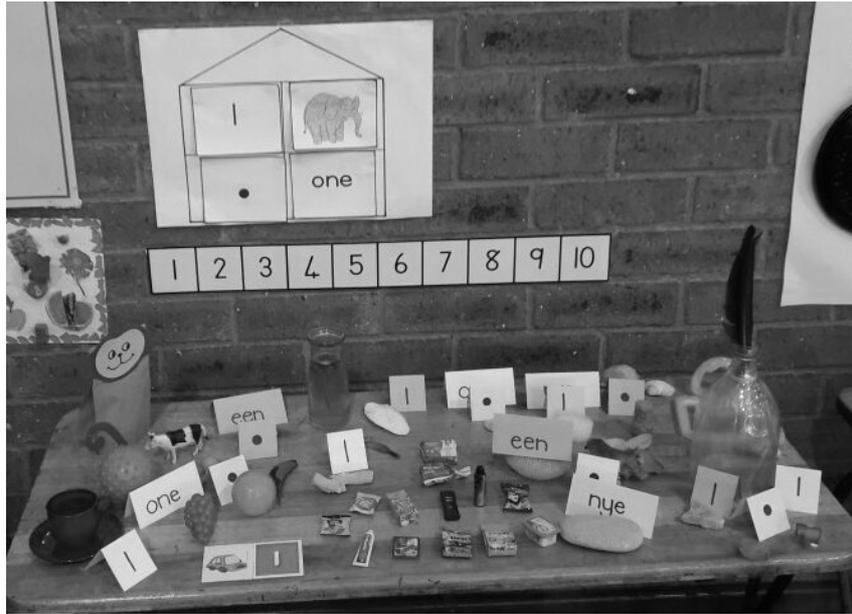
Bring the following to the next workshop:

♦ *Poster Book*

♦ *Concept Guide*

♦ *Activity Guide: Term 1*.

Evaluation

Complete the Evaluation Form.
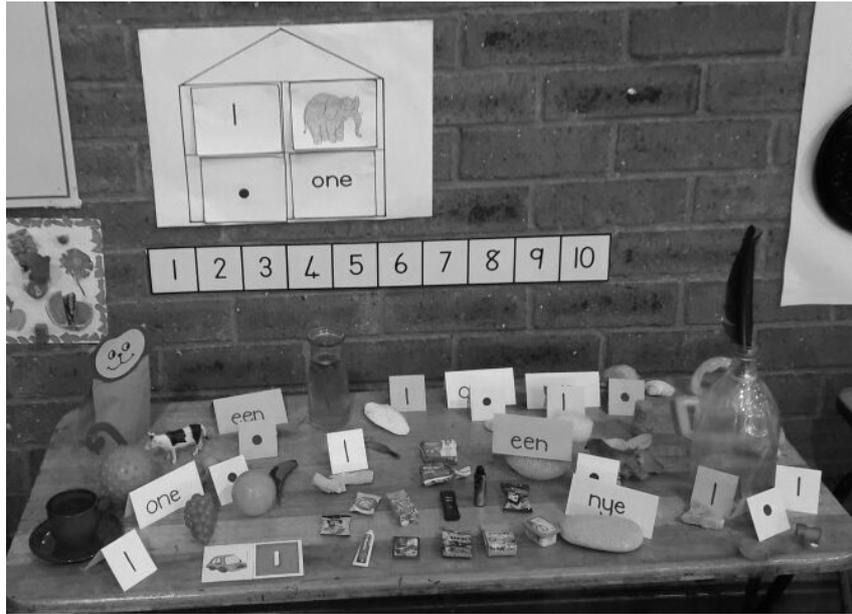
Wota naloku lokulanzelako kumhlanganosikolo lolandzelako:

♦   *Incwadzi Yemaphosta*

♦   *Inkhombandlela Yemcondvo*

♦   *Inkhombandlela Yemsebenti: Ithemu 1.*

Kuhlolisisa

Gcwalisa leLifomu Lekuhlolisisa.

APPENDIX A: THE GUIDING PRINCIPLES OF TEACHING MATHS IN GRADE R

1. The context principle

Learning takes place when a situation (or context) is meaningful to the learner. Very often, the best kinds of maths problems involve maths ideas that come from real-life situations. Learners find it easier to explore solutions to problems that they are able to relate to because of their life experience.

2. The activity principle

Learners should be directly involved in the learning–teaching process. The **activity principle** means learning by doing things yourself. Learners should be actively involved in their own learning. Learning maths in Grade R should consist of enjoyable, hands-on activities and meaningful experiences that make use of different objects and symbols. Wherever possible, the activities should provide learners with the opportunities to use their whole bodies and their senses, especially sight, hearing and touch.

3. The play principle

Learning takes place best in free-play and guided-play activities. The **play principle** indicates that learning and play are not separate activities. The play-based approach recognises that play consists of activities that are enjoyable and that promote a child's growth and development. Play has behavioural, social, physical, cognitive and emotional benefits for learning.

4. The level principle

Learners pass through various levels of understanding and development. The **level principle** says that skills and concepts build on one another. This is called developmental progression. Learners build their knowledge on what they already know and can already do. Good teaching depends on the teacher first finding out what learners already know and understand, and then planning and using activities and everyday situations to build on that to help them learn new knowledge and skills.

5. The interaction principle

Learning involves communication and the sharing of ideas. Learners should be encouraged to talk with the teacher and with each other about what they are thinking and doing. Sharing ideas, asking questions and explaining what they are doing helps them to develop their understanding of concepts. It also helps them learn to use maths language with confidence.

SENGETO A: IMITSETFOTIMISO LEYINKHOMBANDLELA YEKUFUNDZISA TIBALO KULIBANGA R

1. Umtsetfosimiso walokutawufundvwa

Kufundza kwenteka ngesikhatsi simo (noma ingcikitsisimo) sisho lokutsite lokwakhako kumfundzi. Etikhatsini letinyenti, luhlobo lolukahle kakhulu lwetinkinga tetibalo lufaka ekhatsi imicondvo yetibalo levela kutimo temphilo tangempela. Bafundzi batfola kumalula kwehlwaya tisombululo tetinkinga lebangakhona kutiyamanisa netimo labake bahlangana nato emphilweni.

2. Umtsetfosimiso wekwenta

Bafundzi bafanele kutsi bahlanganyele-ngco enchubeni yekufundza–neyekufundzisa. **Umtsetfosimiso wekwenta** usho kufundza ngekwenta tintfo wena ngekwakho. Bafundzi bafanele kutsi bahlanganyele ngemdlandla ekufundzeni kwabo. Kufundza tibalo kuLibanga R kufanele kutsi kufake ekhatsi imsebenti lejabulisanako, lesebentisanako nalefundzisako lesebentisa tintfo netimphawu letehlukene. Lapho kungenteka khona lemisebenti ifanele kutsi inikete bafundzi ematfuba ekusebentisa imitimba yabo yonkhe nemiva yabo, ikakhulukati, kubona, kulalela nekutsintsa.

3. Umtsetfosimiso wekudlala

Kufundza kwenteka ekudlaleni ngekukhululeka nakumisebenti lekhonjwindlela. **Umtsetfosimiso wekudlala** ukhombisa kutsi kufundza nekudlala akusiyo imisebenti leyehlukene. Indlela lemiselwe ekudlaleni ibona kutsi kudlala kunemisebenti lejabulisanako nalekhutsata kutfutfuka nekukhula kwemntfwana. Kudlala kunetinzuzo tekufundza tendlela yekutiphatsa, tetenhlalo, tetemtimba, tetengcondvo kanye netemiva.

4. Umtsetfosimiso welizinga

Bafundzi bendlula emazingeni lahlukene ekuvisisa nekutfutfuka. **Umtsetfosimiso welizinga** utsi emakhono nemicondvo kwakhela lokunye etukwalokunye. Loku kutsiwa yinchubekelaphambili yekutfutfuka. Bafundzi bakha lwati lwabo etukwaloku lesevele bakwati kanye futsi naloko labangakwenta. Kufundzisa lokuhle kweyeme ekutseni thishela acale atfole kutsi yini bafundzi lesebakwati nalabakuvisisako, bese kuhlela-ke nekusebentisa imisebenti etimeni temalanga onkhe kwakheleka kuloko kubasita kutsi bafundze lwati nemakhono lamasha.

5. Umtsetfosimiso wekuhlanganyela

Kufundza kufaka ekhatsi kuchumana nekwabelana imibono. Bafundzi kufanele bakhutsatwe kutsi bakhulume nathishela baphindze bakhulumisane nabo lomunye nalomunye ngaloku labakucabangako nalabakwentako. Kwabelana imibono, kubuta imibuto nekuchaza kutsi bentani kubasita kutfutfukisa kuvisisa kwabo imicondvo. Kuyabasita futsi kutsi bafundze kusebentisa lulwimi lwetibalo ngekutetsemba.

6. The guidance principle

Learning takes place when teachers guide learners in developing new knowledge. Teachers organise the teaching and learning situation to give the learners opportunities to focus on specific tasks and materials, so that they can explore an idea and share their thinking about a maths problem. Teachers model what to do and ask guiding questions to help learners solve the problem. This is sometimes called mediation. Through mediation learners develop new knowledge, behaviours and strategies for solving problems that they can use in other contexts.

7. The inclusivity principle

Learning takes place in an environment where everyone is welcomed, included, treated fairly, respected and can participate. Respect for diversity, equality and inclusion are children's rights. They are essential if we want all learners to learn and develop to their full potential. Teachers need to be aware of each learner's identity, needs and interests.

8. The practice principle

Learning is consolidated through practising new skills and knowledge. Learners should have plenty of time to practise new skills and knowledge. When learners get regular practice in what they have already learnt, they get better at it and become more confident. They enjoy repetition and practice. Teachers should provide multiple opportunities for learners to practise and improve new skills.

6. Umtsetfosimiso wekukhombindlela

Kufundza kwenteka uma bothishela bakhomba bafundzi indlela ekutfutfukiseni lwati lolusha. Bothishela bahlela timo tekufundzisa nekufundza kwakha ematfuba ebafundzi ekunaka imisebenti (emathaski) letsite nemethiriyeli kute kutsi bafundzi behlwaye umbono bese babelana labakucabangako ngenkinga yetibalo. Bothishela babonisa loku lokufanele kwentiwe bese babuta imibuto lekhombindlela kusita bafundzi kusombulula tinkinga. Loku ngalesinye sikhatsi kubitwa ngekutsi kungenelela. Ngekungenelela, bafundzi batfola lwati lolusha, tindlela tekutiphatsa nemasubuciko ekusombulula tinkinga labangatisebentisa kuletinye tingcikitsisimo.

7. Umtsetfosimiso wekufaka wonkhewonkhe

Kufundza kwenteka kusimondzawo lapho wonkhewonkhe emukeleka, afakwa ekhatsi, aphatfwa ngalokufanele, ahlonishwa futsi ahlanganyela. Kuhlonipha kwehlukahlukana, kulingana nekufaka ekhatsi ngemalungelo ebantfwana. Abalulekile uma ngabe sifuna kutsi bonkhe bafundzi bafundze futsi batfutfuke ngalokuphelele. Bothishela bafanele kutsi bacaphele kutatisa kwebantfwana ngamunye, tidzingo tabo kanye naloko labakutsandzako.

8. Umtsetfosimiso wekutetayeta kwenta

Kufundza kuhlanganiswa ngekutetayeta emakhono nelwati lolusha. Bafundzi kufanele kutsi babe nesikhatsi lesenele sekutetayeta emakhono nelwati lolusha. Uma bafundzi batfola kutetayeta njalonjalo ngaloko lesebakufundzile, batfola buncono kuko futsi babe nekutetsemba kakhulu. Bayakujabulela kuphindzaphindza nekutetayeta. Bothishela bafanele kutsi bente ematfuba lamanyenti ebafundzi ekutetayeta nekwenta kancono emakhono lamasha.

## 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 *Resource Kit*).
Day 2	Helper's chart, rhyme, *Grade R Maths family story*.		**Activity 2**	Playdough or clay modelling.
Day 3	Helper's chart, Tidy-up chart, rhyme, oral counting and the *Grade R Maths family story*.		**Activity 3**	Draw a picture.
			Activity 4	Six-piece puzzle.
Day 4	Rhyme, oral counting, counting objects, sequencing daily events, bowls.		**Activity 5**	Building blocks.
Day 5	Rhyme, oral counting, learners' symbols.			
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.
			Activity 2	Make one playdough object and draw it.
Day 2	Song, oral counting, frieze for number 1, body games.			
Day 3	Song, oral counting, counting objects, reinforce number 1, look for 1 object.		**Activity 3**	'One' template using playdough.
			Activity 4	Building blocks.
Day 4	Rhyme, oral counting, problem solving – poster story.			
Day 5	Rhyme, oral counting, counting objects in the poster, solving problems.			

## SENGETO B: ITHEMU 1 SIBUTSETELO SALOKUCUKETFWE SELIVIKI (EMAVIKI 1–2)

Ithemu 1: Luhlelolisu Lwemsebenti

Liviki 1					
UMKHAKHA WALOKUCUKETFWE: TINOMBOLO, EMA-OPHARESHINI NEBUDLELWANE					
SIHLOKO: Kubala ngemlomo nekubala tintfo					
YETFULA LWATI LOLUSHA: kubala ngemlomo 1–5, kubala tintfo 1–3, kucondzana kwakunye kukunye, luhlelo lwemalanga onkhe lwekulandzelanisa					
Imisebenti yeliklasi lonkhe		**Umsebenti loholwa nguthishela**	**Imisebenti yendzawo yekusebentela**		
Lilanga 1	Inhlalayenta, imitsetfo yeliklasi, timphawu temfundzi neluhlelo lwemalanga onkhe.	Kute umsebenti wemacembu lamancane loholwa nguthishela kuliviki lekucala kute thishela avumeleke kujikeleta emkhatsini wetindzawo tekufundzela tonkhe letisihlanu: akhombindlela, asita futsi akhutsata bafundzi. Labanye bafundzi kungenteka kutsi abakaze babone noma basebentise emathulusi phambilini ngako-ke thishela utawudzinga kutsi akhombise aphindze esekele kwetama kwabo kwekucala.	**Umsebenti 1**	Kuhlunga tibali tetilwane netetitselo ngemibala (ku*Khithi Yetinsita*).
Lilanga 2	Lishadi lemsiti, silandzelo, *Indzaba yemndeni weTibalo Telibanga R.*		**Umsebenti 2**	Inhlama yekudlala noma lubumba lwekubumba.
Lilanga 3	Lishadi lemsiti, Lishadi lekwekhweta, silandzelo, kubala ngemlomo ne*Ndzaba Yemndeni weTibalo Telibanga R.*		**Umsebenti 3**	Dvweba sitfombe.
			Umsebenti 4	Iphazili lenetincetu letisitfupha.
Lilanga 4	Silandzelo, kubala ngemlomo, kubala ngetintfo, kulandzelanisa tehlakalo telilanga, tindishi.		**Umsebenti 5**	Emabhuloki ekwakha.
Lilanga 5	Silandzelo, kubala ngemlomo, timphawu temfundzi.			
Liviki 2					
UMKHAKHA WALOKUCUKETFWE: TINOMBOLO, EMA-OPHARESHINI NEBUDLELWANE					
SIHLOKO: Timphawu tetinombolo nemagama etinombolo					
YETFULA LWATI LOLUSHA: Yetfula inombolo 1, kusombulula tinkinga kuto tonkhe tingcikitsi telilanga (tilandzelo nemaphosta)					
TETAYETE: Kubala ngemlomo 1–5, kubala ngetintfo 1–3, silulumagama seliviki leliphelile					
Imisebenti yeliklasi lonkhe		**Umsebenti loholwa nguthishela**	**Imisebenti yendzawo yekusebentela**		
Lilanga 1	Ingoma, kubala ngemlomo, yetfula inombolo 1 nefrizi yenombolo 1, titfo temtimba (umdlalo lotsi 'kungaki?'), tfola intfo yinye.	Sekela bafundzi emitameni yabo yekwenta umsebenti. Buta imibuto lekhombindlela uphindze ukhutsate bafundzi kutsi babelane imibono yabo. Bala tintfo: kucondza kwakunye nakunye. Hlunga tibali tetilwane ngekuya ngemibala yato. Matanisa luphawu lwenombolo 1 nemakhadi emagama lanemakhadi emacashati netibali tetilwane.	**Umsebenti 1**	Kwekubala lokufana nemacashata usebentisa emabhokisi emacandza.
Lilanga 2	Ingoma, kubala ngemlomo, ifrizi yenombolo 1, imidlalo yemtimba.		**Umsebenti 2**	Yakha intfo yinye ngenhlama yekudlala uphindze futsi uyidvwebe.
Lilanga 3	Ingoma, kubala ngemlomo, intfo, gcizelela inombolo 1, buka intfo yinye.		**Umsebenti 3**	Ithemplethi ya'Kunye' usebentisa inhlama yekudlala.
Lilanga 4	Silandzelo, kubala ngemlomo, kusombulula inkinga – indzaba yephosta.		**Umsebenti 4**	Emabhloki ekwakha.
Lilanga 5	Silandzelo, kubala ngemlomo, kubala tintfo kulephosta, kusombulula tinkinga.			

APPENDIX C: NUMBER 1 FRIEZE CARDS
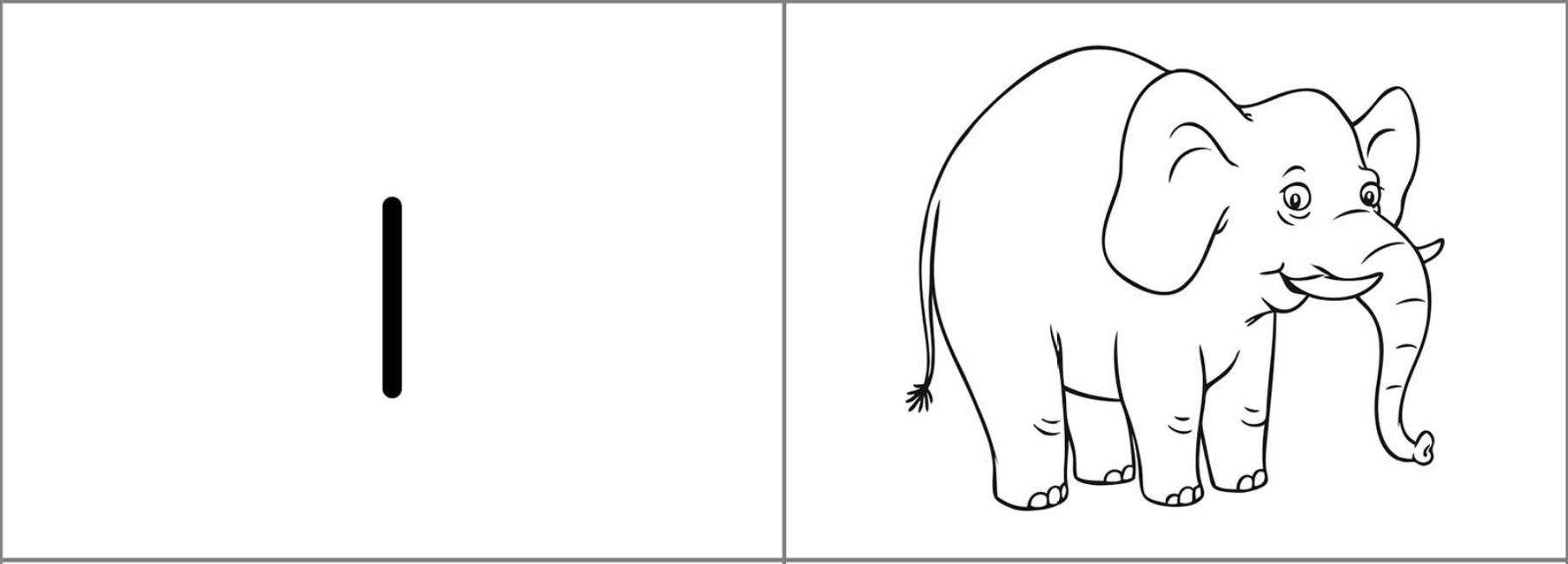
SENGETO C: EMAKHADI EFRIZI YENOMBOLO 1

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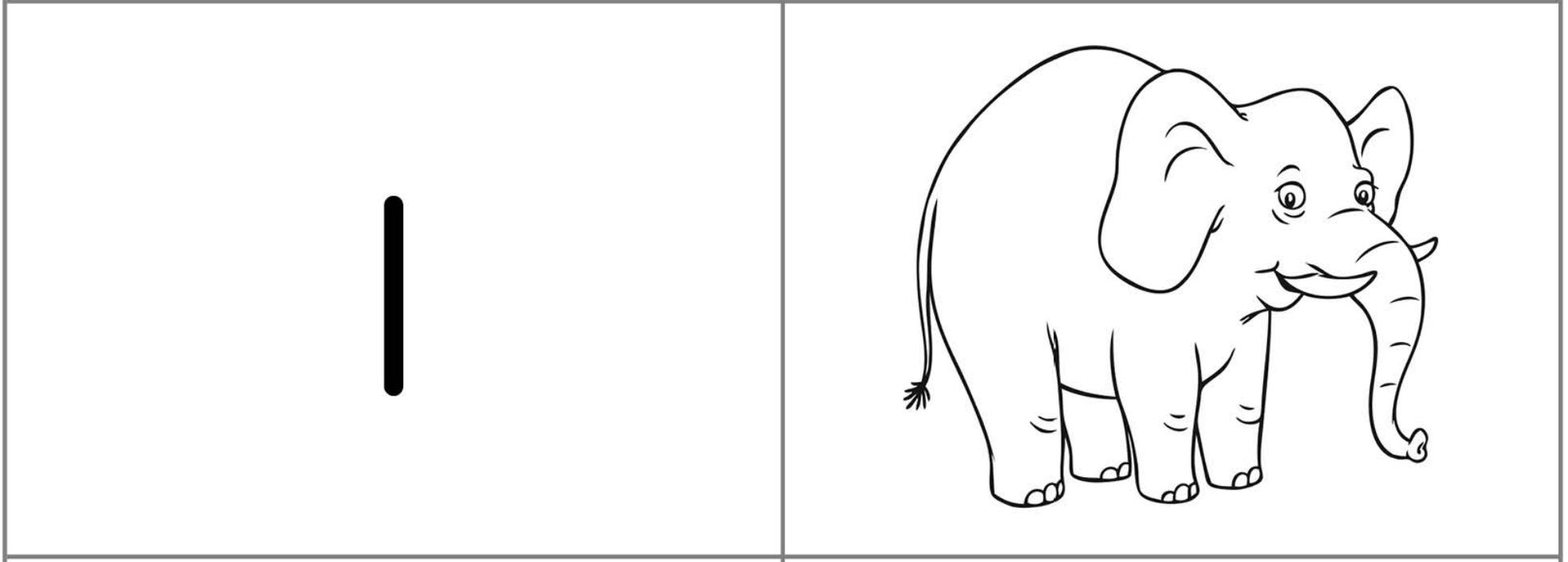
Workshop 1 Evaluation Form

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?

_____
_____
_____
_____

Lifomu Lekuhlolisisa Umhlanganosikolo 1

1. Lomhlanganosikolo ufinyelele yini ezingeni lebewulilindzele?

_____
_____
_____
_____

2. Yini lokufundzile kulomhlanganosikolo lokubalulekile lokukusite kakhulu?

_____
_____
_____
_____

3. Kukhona yini longakakutsandzi noma lokutfole kulukhuni?

_____
_____
_____
_____

4. Utakusebentisa kanjani eklasini leLibanga R loku lokufundzile?

_____
_____
_____
_____

5. Ikhona yini imibono lonayo yekwenta kancono imihlanganosikolo lechubekako?

_____
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