



**GAUTENG PROVINCE**  
EDUCATION  
REPUBLIC OF SOUTH AFRICA

**GGT 2030**  
GROWING GAUTENG TOGETHER

IsiNdebele/English

# **Ihlelo lokuThuthukisa iimBalo zeGreyidi R Grade R Mathematics Improvement Programme**



**Isifundobandulo 10 • Workshop 10  
Umhlahandlela womKghonakalisi • 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**.

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

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

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

## ACKNOWLEDGEMENTS

Special thanks to:

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



The Grade R Mathematics Improvement Programme is adapted from *R-Maths*, first published in 2017 by the Schools Development Unit, University of Cape Town. Copyright of *R-Maths* is held by the University of Cape Town.

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IPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R imuzamo womNyango wezeFundo weGauteng (Gauteng Department of Education) nombambisani wayo oqakathekileko, i-Gauteng Education Development Trust.

Ukwenziwa nokukhiqizwa kweensetjenziswa zebandulo nezetlasi zePhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R kukhona ngomusa wokusekelwa ngemali yephrojekthi ebuya ku-United States Agency for International Development kunye ne-Zenex Foundation.

IPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R ilawulwa yi-JET Education Services ne-Schools Development Unit ye-UCT kunye ne-Wordworks njengababambisani kezobuqharhaqharha.

ISchools Development Unit (SDU) ye-University of Cape Town (UCT) imbambisani kezobuqharhaqharha beemBalo kuPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R. I-SDU iyiyunithi ngaphakathi kwe-School of Education ye-UCT eqalene nokuthuthukiswa kobukhqwari babotitjhere beemBalo, iSayensi, ilwazi lokuTlola nokuFunda/iLimi namaKghono wePilo ukusukela kwaGreyidi R ukuya kwaGreyidi 12. I-SDU inikela abotitjhere iziqu zokufundisa neemfundo ze-UCT ezifitjhani eziphasisiweko, umsebenzi onzinze esikolweni, ukwenziwa kwemethiriyeli nerhubhululo ukusekela ukufundisa nokufunda kibo boke ubujamo beSewula Afrika.

### AMAGAMA WOKUTHOKOZA

Ukuthokoza okukhethekileko:

- Iinkhulu zePhiko labaNgophisi leKharikhyulamu, iPhiko labaNgophisi laboTitjhere bezeFundo nePhiko labaNgophisi leFundo eKhethekileko yomNyango wezeFundo weGauteng, ekutjhugululweni kwemethiriyali yethu.
- Abasebenzi nabotitjhere be-Western Cape Education Department (WCED) ngokufaka kwabo isandla epumelweni yokusetjenziswa kwe-Grade R Mathematics Programme (R-Maths) eTjhingalanga Kapa phakathi komnyaka we-2016 nowe-2019.
- Isiqhema sokutlola se-R-Maths: Abasebenzi nabathintanisi be-SDU.



Ihlelo lokuThuthukisa iimBalo zeGreyidi R lisuselwe ku-R-Maths, eyakhutjwa kokuthoma yi-Schools Development Unit, University of Cape Town ngo-2017. Ilungelo lokukhuphela le-R-Maths liphethwe yi-University of Cape Town.

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# Contents

## Overview

Purpose .....	page 6
Learning outcomes .....	page 6
Workshop content .....	page 6
Preparation .....	page 8
Materials .....	page 8

## Workshop content

Opening and reflection .....	page 10
Session 1: Observation and assessment .....	page 14
Session 2: The guiding principles of teaching maths in Grade R .....	page 22
Session 3: Introducing numbers 10 and 0 .....	page 26
Session 4: Planning for teaching .....	page 36
Closing activities .....	page 38
Appendix A: Term 4 Weekly Planning Template .....	page 42
Appendix B: The Guiding Principles of Teaching Maths in Grade R (pictures) .....	page 48
Appendix C: Expanding Number Cards .....	page 52
Workshop 10 Evaluation Form .....	page 54

# Okumumethweko

## Isirhunyezo

Umnqopho .....	ikhasi 7
Imiphumela yokufunda .....	ikhasi 7
Okumumethweko kwesifundobandulo .....	ikhasi 7
Amalungiselelo .....	ikhasi 9
Imatheriyali .....	ikhasi 9

## Okumumethweko kwesifundobandulo

Ukuvula nokuzindla .....	ikhasi 11
Isetjhini 1: Ukutjheja nokuhlola .....	ikhasi 15
Isetjhini 2: Imithethokambiso ehlahla ukufundiswa kweembalo kuGreyidi R ...	ikhasi 23
Isetjhini 3: Ukwethula iinomboro 10 no-0 .....	ikhasi 27
Isetjhini 4: Ukuhlelela ukufundisa .....	ikhasi 37
Imisebenzi yokuvala .....	ikhasi 39
Isithasiselo A: Ithemu 4 Umfuziselo wokuHlela waqobe yiVeke .....	ikhasi 43
Isithasiselo B: Imithethokambiso eHlahla ukuFundiswa kweemBalo kuGreyidi R (iinthombe) .....	ikhasi 48
Isithasiselo C: Amakarada Weenomboro Zenotheyitjhini Enabileko .....	ikhasi 53
Isifundobandulo 10 Iforomo lokuHlunga .....	ikhasi 55

# Overview

## Purpose

This is the tenth 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.

The purpose of this workshop is to continue assisting teachers to implement the Maths Programme in their classrooms. Participants will have the opportunity to reflect on their implementation of the Maths Programme and discuss their planning, teaching and assessment. They will also consider learner progress, and individual developmental and learning needs. Participants will reflect on appropriate assessment strategies for capturing learner progress. The workshop explores the content for Term 4 Weeks 1–3 and its classroom implementation.

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

## Learning outcomes

- ◆ To reflect on the implementation of Term 3 Weeks 7–10
- ◆ To reflect on the use of the guiding principles of teaching maths in Grade R
- ◆ To deepen understanding of continuous learner observation in Grade R
- ◆ To reflect on informal forms of assessment in Grade R
- ◆ To reflect on challenges and find solutions to implementing the Maths Programme
- ◆ To map out the Maths Programme content to be taught in Term 4 Weeks 1–3

## Workshop content

- ◆ Opening and reflection (1 hour)
  - ◆ Session 1: Observation and assessment (1 hour)
- TEA
- ◆ Session 2: The guiding principles of teaching maths in Grade R (1 hour)
  - ◆ Session 3: Introducing numbers 10 and 0 (1 hour)
- LUNCH
- ◆ Session 4: Planning for teaching (1½ hours)
  - ◆ Closing activities (30 minutes)

# Isirhunyezo

## Umnqopho

Lesi sifundobandulo setjumi kezilitjumi nambili zeHlelo lokuThuthukisa iimBalo zeGreyidi R (iHlelo leemBalo), eliyincenye yomNyango wezeFundo weGauteng (Gauteng Department of Education (GDE)) iPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R.

Umnqopho wesifundobandulwesi kusiza abotitjhere ukusebenzisa iHlelo leemBalo ngematlasinabo. Abahlanganyeli bazakuthola ithuba lokuzindla ngokusebenzisa kwabo iHlelo leemBalo begodu bakhulumisane ngokuhlela, ukufundisa nokuhlola kwabo. Godu bazakuyelela iragelophambili lomfundi, neendingo zokuthuthuka nokufunda komfundi ngamunye. Abahlanganyeli bazakuzindla ngamano afaneleko wokuhlola ukuthola iragelophambili labafundi. Isifundobandulo lesi sikhloka okumumethweko kweThemu 4 limveke 1–3 nokwenziwa komsebenzi ngetlasini.

Iintjengisi zeenGaba zokuMumethweko zeemBalo zakwaGreyidi R zithethwe kusiTatimende somGomo weKharikhyulamu nokuHlola (*i-CAPS*): *IimBalo zakwaGreyidi R (Umtlamo wokugcina)*, 2011, UmNyango wezeFundo esiSekelo, eSewula Afrika.

## Imiphumela yokufunda

- ◆ Ukuzindla ngokusetjenziswa kweThemu 3 limveke 7–10
- ◆ Ukuzindla ngokusetjenziswa kwemithethokambiso ehlahla ukufundisa iimbalo kwaGreyidi R
- ◆ Ukuqinisa ukuzwisisa ukutjheja abafundi okuragela phambili kwaGreyidi R
- ◆ Ukuzindla ngeendlela ezingakahleleki zokuhlola kwaGreyidi R
- ◆ Ukuzindla ngeentjhijilo nokuthola iinsombululo zokuphumelelisa iHlelo leemBalo
- ◆ Ukuhlela okumumethweko kweHlelo leemBalo ekufanele kufundiswe ngeThemu 4 limveke 1–3

## Okumumethweko kwesifundobandulo

- ◆ Ukuvula nokuzindla (I-iri 1)
- ◆ Isetjhini 1: Ukutjheja nokuhlola (I-iri 1)

### ITIYE

- ◆ Isetjhini 2: Imithethokambiso ehlahla ukufundiswa kweembalo kuGreyidi R (I-iri 1)
- ◆ Isetjhini 3: Ukwethula iinomboro 10 no-0 (I-iri 1)

### ISIDLO SEMINI

- ◆ Isetjhini 4: Ukuhlelela ukufundisa (Ama-iri 1½)
- ◆ Imisebenzi yokuvala (Imizuzu 30)

## Preparation

- ◆ PPT welcome and outcomes
- ◆ Familiarise yourself with all the PowerPoints and videos
- ◆ Read:
  - Concept Guide*, pages 14–73
  - Activity Guide: Term 4*, pages 22–69
- ◆ Bring the post box
- ◆ Remind participants to bring their:
  - Concept Guide*
  - Activity Guide: Term 3*
  - Activity Guide: Term 4*
  - Poster Book*
- ◆ Cut out the eight pictures of the guiding principles (Appendix B)
- ◆ Prepare one set of the number cards in Appendix C for each group

## Materials

- ◆ Flipchart paper, kokis
- ◆ Prestik
- ◆ *A Resource Kit* for each group



## Amalungiselelo

- ◆ PPT ukwamukelwa nemiphumela
- ◆ Zijayeze ngawo woke ama-*PowerPoints* namavidiyo
- ◆ Funda:
  - UmHlahlandlela womQondo*, amakhasi 14–73
  - UmHlahlandlela wemiSebenzi: Ithemu 4*, amakhasi 22–69
- ◆ Letha ibhoksi leposi
- ◆ Khumbuza abahlanganyeli balethe:
  - UmHlahlandlela womQondo*
  - UmHlahlandlela wemiSebenzi: Ithemu 3*
  - UmHlahlandlela wemiSebenzi: Ithemu 4*
  - INcwadi yamaPhosta*
- ◆ Sika iinthombe ezibunane zemithethokambiso ehlahlako (Isithasiselo B)
- ◆ Lungisela isiqhema ngasinye isede yinye yamakarada weenomboro kusiThasiselo C

## Imatheriyali

- ◆ Iphepha letjhadi eliphendlekako, amakhokhi
- ◆ Iphrestiki
- ◆ *IKhidi yeenSetjenziswa* yesiqhema ngasinye

# Opening and reflection

1 hour

Reflection involves thinking and talking about your experiences and what you have learnt.

## Reflection on implementation

### Facilitator's notes

- ◆ PPT: Learning outcomes of the workshop.
- ◆ Discuss the post box comments and feedback from the previous workshop. Remind participants to 'post' any new comments and feedback during the workshop.
- ◆ Remind participants of the *Take back to school task* from the end of Workshop 9.
- ◆ Refer participants to **Activity 1** and read through the instructions aloud.
- ◆ Give each group a sheet of flipchart paper. Participants complete the activity in their groups. Groups then present their newspaper article.
- ◆ After the presentations, summarise the successes and challenges and discuss the implications for classroom implementation.

Here is the *Take back to school task* from Workshop 9.



### Take back to school task (Workshop 9)

1. Use *Activity Guide: Term 3* to plan and implement Term 3 Weeks 7–10 of the Maths Programme.
2. Make notes of what worked well, what did not work well and how you resolved any challenges during your implementation of Term 3 Weeks 7–10.
3. Write comments in the book that you use to keep track of each learner's progress (learner observation book). Use the '**Check that learners are able to**' observation list (eye box) during each of the teacher-guided activities to guide your observations and comments.
4. Bring your learner observation book and the notes you made when reflecting on each day's teaching to the next workshop.
5. Bring a copy of the Term 3: Exemplar Record of Continuous Assessments (from *Activity Guide: Term 3*) to the next workshop.



### Activity 1

1. In your group, prepare a newspaper article on teaching and learning maths in Grade R. Use the Maths Programme and your classroom implementation of it as the basis for your article. Include the following:

# Ukuvula nokuzindla

I-iri 1

Ukuzindla kufaka hlangana ukucabanga nokukhuluma ngelemuko lakho nangalokho okufundileko.

## Ukuzindla ngokusebenza

### Amanothi womkghonakalisi

- ◆ PPT: Imiphumela yokufunda yesifundobandulo lesi.
- ◆ Khulumisanani ngemibono nemibiko ebuyako yebhoksi lokuposa lesifundobandulo esidlulileko. Khumbuza abahlanganyeli 'bapose' nofana ngonjani umbono nombiko obuyako omutjha ngesikhathi sesifundobandulo.
- ◆ Khumbuza abahlanganyeli ngo*Msebenzi obuyiselwa esikolweni* osekupheleni kwesiFundobandulo 9.
- ◆ Layela abahlanganyeli **Umsebenzi 1** bese ufundela phezulu imilayelo yoke.
- ◆ Nikela isiqhema ngasinye iphepha letjhadhi eliphendlekako. Abahlanganyeli benza umsebenzi eenqhemeni zabo. Iinqhema bese zethula i-athikili yephephandaba yabo.
- ◆ Ngemva kwezethulo, rhunyeza okuphumeleleko neentjhihilo bese nikhulumisana ngemithintela yokwenziwa komsebenzi ngetlasini.

Naku *Umsebenzi obuyiselwa esikolweni* wesiFundobandulo 9.



### Umsebenzi obuyiselwa esikolweni (IsiFundobandulo 9)

1. Sebenzisa *umHlahlandlela wemiSebenzi: Ithemu 3* ukuhlela nokwenza Ithemu 3 limveke 7–10 zeHlelo leemBalo.
2. Tlola amanothi ngalokho okusebenze kuhle, lokho okungakasebenzi kuhle nokobana uzirarulule njani iintjhihilo nofana ngezinjani ngesikhathi sokwenza Ithemu 3 limveke 7–10.
3. Tlola imibono ngencwadini oyisebenzisela ukubulunga ilandelelo leragelophambili lomfundi ngamunye (incwadi yokutjheja abafundi). Sebenzisa irhelo lokutjheja '**Tjheja bonyana abafundi bayakwazi uku**' (ngebhoksini lelihlo) ngesikhathi somunye nomunye umsebenzi ohlahlwa ngutjhere ukuhlahla ukutjheja nemibono yakho.
4. Yiza nencwadi yakho yokutjheja abafundi namanothi owenzileko lokha nawuzindla ngelanga lokufundisa ngalinye kusifundobandulo esilandelako.
5. Yiza nekhophi yeThemu 3: Isibonelo seRekhodi yokuHlola okuRagela phambili (*yomHlahlandlela wemiSebenzi: Ithemu 3*) kusifundobandulo esilandelako.



### Umsebenzi 1

1. Esiqhemeni senu, lungisani i-athikili yephephandaba emayelana nokufundisa nokufunda iimbalo kwaGreyidi R. Sebenzisani iHlelo leemBalo nokwenziwa kwalo ngetlasini njengesisekelo se-athikili yenu. Fakani hlangana okulandelako:

- ◆ why maths in Grade R is important
- ◆ your successes and challenges with implementing the Maths Programme in Terms 1, 2 and 3
- ◆ strategies you used to resolve challenges.

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2. Write the newspaper article on flipchart paper.
3. You will present your article to the other groups and answer any of their questions.

- ◆ kubayini iimbalo ziqakathekile kwaGreyidi R
- ◆ okuphumeleleko neentjhijilo zenu zokusebenzisa iHlelo leemBalo kuThemu 1, 2 neye-3
- ◆ amano eniwasebenzisileko ukurarulula iintjhijilo lezi.

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2. Tlolani i-athikili yephephandaba ephepheni letjhadi eliphendlekako.
3. Nizakwethula i-athikili yenu kezinye iinqhema bese niphendula yoke imibuzo yabo.

# Session 1: Observation and assessment

1 hour

## Observation in Grade R

Observation is an important part of the process of teaching, learning and assessment. In Grade R, the main assessment method is observation. Teachers gather information about learners during whole class activities, small group activities and free play (inside and outside the classroom). During the teacher-guided activities, your interaction with individual learners provides valuable information about their progress. By recording the learners' progress in understanding specific maths concepts in your notebook on an ongoing basis, you build up a complete picture of each learner.

## Objective observation

For observation to be effective, teachers need to understand and know what to focus on.

In the next activity, you will practise your observation skills. *This is an individual activity. It is very important that you do not talk to anyone about your observations.*

### Facilitator's notes

- ◆ PPT: Photo from **Activity 2**.
- ◆ Explain that in **Activity 2** participants will practise their observation skills.
- ◆ Read through **Activity 2** together and make sure everyone understands that it is an individual activity and not to be discussed with anyone.
- ◆ When everyone has finished the activity, give participants a turn to call out what they have written. Write down each observation (exactly as it is called out) and tick the observations that are repeated.
- ◆ Discuss the importance of being objective when observing. Make the point that teachers need to record facts (what is seen and heard) and not assumptions or opinions (what they think may be happening and why).
- ◆ Read through the list of observations that participants called out and discuss whether each statement is a **FACT** or an **ASSUMPTION**. Write 'F' or 'A' next to each statement. For example:
  - The learner has built a construction using rectangle-shaped and triangle-shaped blocks. **F**
  - The learner is not managing to balance the triangle-shaped blocks. **A**
  - The learner is focused on the block-building task. **F**
  - The learner in the background is very happy. **A**
- ◆ Participants go through their own lists, marking each statement with an 'F' or an 'A'.
- ◆ Wrap up the activity with a discussion about the importance of objective observation.

# Isetjhini 1: Ukutjheja nokuhlola

I-iri 1

## Ukutjheja kwaGreyidi R

Ukutjheja yingcenywe eqakathekileko yekambiso yokufundisa, ukufunda nokuhlola. KwaGreyidi R, indlela eqakathekileko yokuhlola kutjheja. Abotitjhere babuthelela ilwazi mayelana nabafundi ngesikhathi semisebenzi yetlasi loke, imisebenzi yesiqhema esincani nangesikhathi sokudlala okutjhaphulukileko (ngaphakathi nangaphandle kwetlasi). Ngesikhathi semisebenzi ehlahlwa ngutitjhere, ukukhulumisana kwakho nomfundi ngamunye kunikela ilwazi elinesizo ngokuthuthuka kwabo. Ngokurekhoda ukuthuthuka kwabafundi ekuzwisiseni kwabo imiqondo ekhethekileko yeembalo ngencwadini yakho yamanothi, wakha isithombe esipheleleko somfundi ngamunye. Ukutjheja kuyingcenywe eqakathekileko yekambiso yokufundida, ukufunda nokuhlola.

## Ukutjheja okunehloso

Ukuze ukutjheja kube yipumelelo, abotitjhere kufanele bezwisiswe bebazi bonyana khuyini ekufanele banqophane nakho.

Emsebenzini olandelako, uzazijayeza amakghono wakho wokutjheja. *Lo msebenzi womuntu ngamunye. Kuqakathekile bonyana ungakhulumi nomuntu namunye ngalokho okutjhejileko.*

### Amanothi womkghonakalisi

- ◆ PPT: Isithombe esibuya **kumSebenzi 2**.
- ◆ Hlathulula bonyana **Umsebenzi 2** abahlanganyeli bazazijayeza amakghono wabo wokutjheja.
- ◆ Fundani **Umsebenzi 2** ndawonye bese niyaqinisekisa bonyana woke umuntu uyezwisisa bonyana msebenzi womuntu ngamunye nokobana akukafaneli kukhulunywane nanofana kungaba ngubani.
- ◆ Lokha woke umuntu nasele awuqedile umsebenzi lo, nikela abahlanganyeli idlhego lokutjho lokho abakutlolileko. Tlola okutjhejiweko ngakunye (ngaso lesi sikhathi kutjhiwo) bese utshwaya lokho okutjhejiweko okubuyelelako.
- ◆ Khulumisanani ngokuqakatheka kokuba nehloso lokha nawutjhejako. Qinisekisa bonyana abotitjhere kufanele barekhode amaqiniso (lokho abakubonileko nabakuzwileko) kungabi kucabangela nofana imibono (lokho abacabanga bonyana kuyenzeka nokobana kubayini).
- ◆ Funda irherho lokutjhejiweko loke abahlanganyeli abalitjhileko bese niyakhulumisana bonyana isitatimende ngasinye siliQINISO nofana sikuCABANGELA. Tlola 'Q' nofana 'C' kusitatimende ngasinye. Isibonelo:
  - Umfundi wakhe umakho ngokusebenzisa amabhlogo wamabumbeko kancamane newakancantathu. **Q**
  - Umfundi akakghoni ukudzimelelisa amabhlogo webumbeko likancantathu. **C**
  - Umfundi unqophene nomsebenzi wokwakha ngamabhlogo. **Q**
  - Umfundi ongemuva uthabe khulu. **C**
- ◆ Abahlanganyeli baqala amarhelo wabo, bamerega isitatimende ngasinye ngo '**Q**' nofana ngo '**C**'.
- ◆ Songa umsebenzi ngokukhulumisana ngokuqakatheka kokutjheja okunehloso.



## Activity 2

Look at the photograph of two Grade R learners playing with blocks. Write down what you observe when you look at the photograph.



**My observations:**

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### Facilitator's notes

- ◆ After watching **Video 1**, add participants' observations to the list you recorded in **Activity 2**.
- ◆ Remind participants of the difference between a **FACT** and an **ASSUMPTION**. Write 'F' or 'A' next to each statement.



## Video 1

*Activity Guide: Term 3, Week 8, Workstation 3: Bingo game (page 150)*

1. Watch the video of a group of learners playing the game, Bingo. Write down your observations of the learners.

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## Umsebenzi 2

Qala isithombe sabafundi ababili bakwaGreyidi R abadlala ngamabhlogo. Tlola phasi lokho okutjhejileko lokha nawuqala isithombe.



Engikutjhejileko:

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### Amanothi womkghonakalisi

- ◆ Ngemva kokubukela **Ividiyo 1**, faka lokho okutjhejwe bahlanganyeli erhelweni olirekhodileko **lomSebenzi 2**.
- ◆ Khumbuza abahlanganyeli ngomehluko phakathi kwamaQINISO nokuziCABANGELA. Tlola 'Q' nofana 'C' eduze nesitatimende ngasinye.



## Ividiyo 1

*UmHlahlandlela wemiSebenzi: Ithemu 3, Iveke 8, Isitetjhi sokusebenzela 3: umdlalo we-Bingo (ikhasi 151)*

1. Bukela ividiyo yesiqhema sabafundi abadlala umdlalo, i-Bingo. Tlola lokho okutjhejileko ngabafundi.

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2. Which of your observations are facts and which are assumptions? Go through your list and write an 'F' or 'A' next to each statement.

When we write what we **think** a learner can or cannot do, or what a learner is feeling, we are making assumptions. The only way to know what a learner is thinking or feeling, is to ask them to tell you.

Objective observation involves:

- ◆ describing only what you see and hear
- ◆ recording what the learner is doing and saying in as much detail as possible
- ◆ not judging – avoid giving your own ideas and opinions
- ◆ observing each learner regularly, in different activities and at different times of the day.



### Activity 3

1. Think about your observations of *one* of your learners in Term 3. What mathematical knowledge and skills is this learner developing?

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2. Refer to (3) to (5) of the *Take back to school task* from Workshop 9 (page 10).
  - ◆ Discuss your use of the '**Check that learners are able to**' observation list (eye box) during teacher-guided activities.
  - ◆ Show members of your group your learner observation book.
  - ◆ Take turns to discuss a learner's progress. Which mathematical skills did you observe? How do you know? (What did the learner do and say?)
  - ◆ Explain how you captured this information using the Term 3: Exemplar Record of Continuous Assessments.
  - ◆ Did you manage to implement a differentiated approach to teaching and learning in your class. If so, how?

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2. Ngikuphi kwalokho okutjhejileko okumaqiniso begodu ngikuphi okukucabangela? Funda irhelo lakho loke bese utlola 'Q' nofana 'C' eduze nesitatimende ngasinye.

Lokha nasitlola lokho **esikucabangako** bonyana umfundi angakghona nofana angekhe akghona ukukwenza, nokobana umfundi uzizwa njani, siyazicabangela. Indlela eyodwa yokwazi bonyana umfundi ucabangani nofana uzizwa njani, kubabuza bakutjele.

Ukutjheja okunehloso kubandakanya:

- ♦ ukutlhadlhula lokho okubonako nokuzwako kwaphela
- ♦ ukurekhoda lokho umfundi akwenzako nalokho akutjhoko ngokuzeleko ngendlela ekungakghonakala ngayo
- ♦ ukungagwebi – balekela ukunikela imibono nemicabango yakho
- ♦ ukutjheja qho umfundi ngamunye, emisebenzini ehlukileko nangeenkhati ezihlukileko zelanga.



### Umsebenzi 3

1. Cabanga ngalokho okutjhejileko ngomfundi *munye* kuThemu 3. Ngiliphi ilwazi namakghono weembalo umfundi lo awathuthukisako?

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2. Qala ku (3) ukuya ku (5) woMsebenzi obuyiselwa esikolweni wesiFundobandulo 9 (ikhasi 11).

- ♦ Khulumisanani ngokusebenzisa kwenu irhelo lokutjheja **Tjheja bonyana abafundi bayakwazi uku'** (ngebhoksini lelihlo) ngesikhathi semisebenzi ehlahlwa ngutitjhere.
- ♦ Khombisa amalunga wesiqhema sakho incwadi yakho yokutjheja abafundi.
- ♦ Dlheganani ngokukhulumisana ngokuthuthuka komfundi. Ngiwaphi amakghono weembalo owatjhejileko? Wazi njani? (Umfundi wenzeni begodu wathini?)
- ♦ Hlathulula bonyana ulitlole njani ilwazi leli ngokusebenzisa Ithemu 3: Isibonelo seRekhodi yokuHlola okuRagela phambili.
- ♦ Ingabe ukwazile ukusebenzisa indlela yokuhlukanisa ukufundisa nokufunda ngetlasini lakho? Nangabe kunjalo, njani?

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## Assessment in Grade R

Assessment in Grade R is used to make decisions about the best way to support each learner's development. During teacher-guided activities, whole class activities as well as other activities in the daily programme, you will have opportunities to observe learners and gain insight into their progress. This information should guide your planning for further teaching and learning.

The continuous assessment tables in CAPS and in the Maths Programme's *Activity Guides* are based on the content that has been taught each term and can be used to summarise each learner's progress during the term.

Note that skills and behaviours should be observed on several occasions so that patterns of development over time can be recorded.

### Facilitator's notes

- ◆ Wrap up this session with a discussion about the importance of continuous observation and the regular recording of learner information as a basis for assessment.

## **Ukuhlola kwaGreyidi R**

Ukuhlola kwaGreyidi R kusetjenziselwa ukuthatha iinqunto mayelana nendlela engcono yokusekela ukuthuthuka komfundi ngamunye. Ngesikhathi semisebenzi ehlahlwa ngutitjhere, imisebenzi yetlasi loke kunye neminye imisebenzi esehlelweni langamalanga, uzakuba namathuba wokutjheja abafundi bese uthola ilwazi ngokuthuthuka kwabo. Ilwazi leli kufanele lihlahle ukuhlela kwakho kobana uragele phambili nokufundisa nokufunda.

Amathebula wokuhlola okuragela phambili ku-CAPS *nakumiHlahlandlela yemiSebenzi* weHlelo leemBalo asekelwe phezu kokumumethweko okufundisiweko ngethemu ngayinye begodu kungasetjenziselwa ukurhunyeka ukuthuthuka komfundi ngamunye ngesikhathi sethemu.

Yeleda bonyana amakghono nokuziphatha kufanele kutjhejwe amahlandla ambalwa kobana iphetheni yokuthuthuka irekhodwe ngokukhamba kwesikhathi.

### **Amanothi womkghonakalisi**

- ◆ Songa isetjheni le ngemikhulumiswano emayelana nokuqakatheka kokutjheja okuragela phambili nokurekhoda qho ilwazi ngomfundi njengesisekelo sokuhlola.

## Session 2: The guiding principles of teaching maths in Grade R

1 hour

Throughout the Maths Programme training, we have referred to the guiding principles of teaching maths in Grade R and how these are incorporated into daily classroom practice. Some of the principles are easier to identify and implement than others. As teachers we need to be constantly aware of how, where and when we are using these principles in our classrooms.

### Facilitator's notes

- ◆ PPT: Figure 5, page 14, *Concept Guide*.
- ◆ Discuss the importance of being conscious of the guiding principles of teaching maths in Grade R and how these inform our approach to teaching. It is only when we are aware of these principles and reflect on how we incorporate them in our teaching that they become a part of how we approach our classroom practice.
- ◆ Divide the participants into eight small groups. Assign one guiding principle to each group. Give the corresponding picture of this principle (Appendix B) to each group.
- ◆ Participants discuss their principle in their small groups. They then present their understanding and observations of how their principle plays out in the classroom.
- ◆ The participants paste the A5 picture on flipchart paper and write their comments underneath it to share with the whole group.



### Activity 4

The facilitator will assign one of the guiding principles of teaching maths in Grade R to your group. You will receive a picture of this principle.

1. In your group, discuss the following questions:
  - ◆ What is your understanding of this principle 'in action'?
  - ◆ Does the Maths Programme make it possible to incorporate this principle in your daily teaching?
  - ◆ Now that you have implemented the Maths Programme for three terms, what are your reflections on this principle?
  - ◆ How would your teaching be affected if this principle was absent from your classroom approach?
2. Paste the picture onto a sheet of flipchart paper. Write your comments below the picture so that you can share these with the whole group.

## Isetjhini 2: Imithethokambiso ehlahla ukufundiswa kweembalo kuGreyidi R

I-iri 1

Kikho koke ukubandulwa ngeHlelo leemBalo, besiqala imithethokambiso ehlahla ukufundisa iimbalo kwaGreyidi R nokobana lokhu kuhlangukambiso njani nekambiso yetlasini yangamalanga. Eminye yemithethokambiso kulula ukuyifanisa nokuyisebenzisa kuneminye. Njengabotitjhere kufanele sihlale siyelela bonyana siyisebenzisa njani imithethokambiso le, kuphi nokobana nini ngematlasini wethu.

### Amanothi womkghonakalisi

- ◆ PPT: Umdwebo 5, ikhasi 15, *UmHlahlandlela womQondo*.
- ◆ Khulumisanani ngokuqakatheka kokuyelela imithethokambiso ehlahla ukufundisa iimbalo kwaGreyidi R nokobana lokhu kulawula njani indlela yethu yokufundisa. Kulokha kwaphela nasiyelela imithethokambiso le nalokha sizindla ngendlela isiyihlanganisa ngayo nokufundisa kwethu lapha iba yingcenywe yekambiso yethu yangetlasini.
- ◆ Hlukanisa abahlanganyeli babe ziinqhema ezincani ezibunane. Nikela isiqhema ngasinye umthethokambiso ohlahlako munye. Nikela isiqhema ngasinye isithombe esikhambelana nomthethokambiso lo (Isithasiselo B).
- ◆ Abahlanganyeli bakhulumisana ngomthethokambiso wabo esiqhemeni sabo esincani. Bese bathula ukuzwisisa kwabo nalokho abakutjhejileko mayelana nokobana umthethokambiso wabo usebenza njani ngetlasini.
- ◆ Abahlanganyeli banamathisela isithombe se-A5 ephepheni letjhadi eliphendlekako bese batlola imibono yabo ngaphasi kwaso bazokwabelana nesiqhema soke.



### Activity 4

Umkghonakalisi uzakunikela isiqhema sakho munye wemithethokambiso ehlahla ukufundisa iimbalo kwaGreyidi R. Nizakuthola isithombe somthethokambiso lo.

1. Esiqhemeni senu, khulumisanani ngemibuzo elandelako:
  - ◆ Khuyini ukuzwisisa kwakho komthethokambiso lo 'ngokwenza'?
  - ◆ Ingabe iHlelo leemBalo lenza kukghonakale ukuhlanganisa umthethokambiso lo nokufundisa kwakho kwangamalanga?
  - ◆ Njengombana sele usebenzise iHlelo leemBalo kumathemu amathathu, khuyini ozindla ngakho mayelana nomthethokambiso lo?
  - ◆ Ukufundisa kwakho kungathinteka njani nangabe umthethokambiso lo awukho kukambiso yakho yangetlasini?
2. Namathiselani isithombe lesi ephepheni letjhadi eliphendlekako. Tlolani imibono yenu ngenzasi kwesithombe kobana nizokwabelana ngalokhu nesiqhema soke.



**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.



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



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

# 8

THE EIGHT PRINCIPLES OF GRADE 8 MATHS



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



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



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



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





8. **Umthethokambiso wokujayeza.** Ukufunda kuhlangukiswa ngokuzijayeza amakghono nelwazi elitjha.



1. **Umthethokambiso wobujamo.** Ukufunda kwenzeka ebujameni obuzwisisekako nobufaneleko.



2. **Umthethokambiso womsebenzi.** Abafundi kufanele babandakanywe bunqophu ekambisweni yokufunda nokufundiswa.



7. **Umthethokambiso wokufaka koke.** Ukufunda kwenzeka endaweni lapho woke umuntu amukelekile, afakwe, aphathwe kuhle, ahlonitjhe begodu akwazi ukuzibandakanya.



3. **Umthethokambiso wokudlala.** Abantwana bafunda ngcono emisebenzini yokudlala ngokutjhaphuluka nokudlala okuhlaliweko.



6. **Umthethokambiso wokuhlala.** Ukufunda kwenzeka lokha abotitjhere bahlahla abafundi bathuthuke elwazini elitjha.



5. **Umthethokambiso wokukhulumisana.** Ukufunda kwenzeka lokha nakunokukhulumisana nokwabelana ngemibono.



4. **Umthethokambiso wezinga.** Abafundi badlula emazingeni ahlukileko wokuzwisisa nokukhula.

## Session 3: Introducing numbers 10 and 0

1 hour

### Introducing number 10

#### Facilitator's notes

- ◆ PPT: Summarise information below.
- ◆ Discuss the base 10 number system that we use. Emphasise that in Grade R learners only need to work with and understand the numbers 0–10. (**Activity 5** is for enrichment. It is not intended for use in Grade R classrooms.)
- ◆ When using expanding number cards (flashcards) like the ones in Appendix C to make two-digit and three-digit numbers, always use the units (ones), tens or hundreds. Never use only the units to represent a two-digit or three-digit number. For example: for 11 use 10 and 1, not 1 and 1.
- ◆ Explain that in Grade 1 learners begin to work with place value. They need to understand the value of each digit in the number. It is important that Grade R learners understand that 10 is a number and not just  $1 + 0$ . Learners should make groups of ten. They should also use sticks to make bundles to represent ten and match the bundle with the 'ten' number word card.
- ◆ **Emphasise that teachers should not introduce place value in Grade R and that Activity 5 is an enrichment activity for workshop participants only.**

The ten numerals used in our place value number system are 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9. These numerals are used to represent units (ones) and to represent an infinite number of values, for example:

- ◆ tens
- ◆ hundreds
- ◆ thousands, and so on.

Learners in the Foundation Phase need to understand that the same numeral can be used to represent different values, depending on the position of the numeral in a number. For example, in each of the numbers below '3' has a different value:

- ◆ in 3, its value is 'three'
- ◆ in 31, its value is 'thirty'
- ◆ in 349, its value is 'three hundred'.

Place value is a difficult concept for learners to understand. Researchers have found that many learners up to the age of eight think that the '1' in 15 means 'one'.

# Isetjhini 3: Ukwethula iinomboro 10 no-0

I-iri 1

## Ukwethula inomboro 10

### Amanothi womkghonakalisi

- ◆ PPT: Rhunyeza ilwazi elingenzasi.
- ◆ Khulumisanani ngerherho ledesimali esilisebenzisako. Gandlela bonyana abafundi bakwaGreyidi R badinga ukusebenza nokuzwisisa iinomboro 0–10 kwaphela. (**Umsebenzi 5** ngewokunothisa. Akukahloswa kobana usetjenziswe ngematlasini weGreyidi R.)
- ◆ Lokha nakusetjenziswa amakarada weenomboro zenotheyitjhini enabileko (ama-*flashcards*) anjengalawo akusiThasiselo C ukwenza iinomboro zamadijithi amabili nezamadijithi amathathu, hlala usebenzisa imivo (ngakunye), amatjhumi namakhulu. Ungathomi usebenzise imivo kwaphela ukujamiselela inomboro enamadijithi amabili nofana enamadijithi amathathu. Isibonelo: ukujamiselela u-11 sebenzisa u-10 no-1, ingasi u-1 no-1.
- ◆ Hlathulula bonyana kwaGreyidi 1 abafundi bathoma ukusebenza ngobukhulu bedijithi. Kufanele bezwisise ubukhulu bedijithi ngayinye enomborweni. Kuqakathekile bonyana abafundi bakwaGreyidi R bezwisise bonyana u-10 yinomboro ingasi 1 + 0 nje. Abafundi kufanele benze iinqhema zetjhumi. Godu kufanele basebenzise iingojwana ukwenza iinyanda ukujamiselela itjhumi bese bakhambelanisa nekarada lenomborogama 'itjhumi'.
- ◆ **Gandlela bonyana abotitjhere akukafaneli bathule ubukhulu beenomboro kwaGreyidi R nokobana Umsebenzi 5 kumsebenzi wokunothisa wabahlanganyeli besifundobandulo kwaphela.**

Amatshwayo weenomboroalitjhumi asetjenziswe ehlelweni lethu lobukhulu beenomboro ngilawa 0, 1, 2, 3, 4, 5, 6, 7, 8 no-9. Amatshwayo weenomboro la asetjenziselwa ukujamiselela imivo (ngakunye) nokujamiselela inomboro engapheleliko yobukhulu, isibonelo:

- ◆ amatjhumi
- ◆ amakhulu
- ◆ iinkulungwana, njalonjalo.

Abafundi besiGaba seFundo esiSekelo kufanele bezwisise bonyana iinomboro ezifanako zingasetjenziswa ukujamiselela ubukhulu obuhlukileko, ngokuya ngesikhundla sobunomboro enomborweni. Isibonelo, inomboro ngayinye engenzasi u-'3' unobukhulu obuhlukileko:

- ◆ ngaku 3, ubukhulu bakhe 'kuthathu'
- ◆ ngaku 31, ubukhulu bakhe 'matjhumi amathathu'
- ◆ ngaku 349, ubukhulu bakhe 'makhulu amathathu'.

Ubukhulu bedijithi muqondo obudisi kobana abafundi bawuzwisise. Abarhubhululi bathola bonyana abafundi abanengi ukufikela eminyakeni yobudala ebunane bacabanga bonyana u-'1' ngaku-15 utjho 'kunye'.

In Grade 1 learners explore the base ten number system, working with numbers from 11 onwards. They represent these numbers with groups of tens and single ones (units). When they work with numbers 11–19, they begin to understand that in a number like 14, the numeral 1:

- ◆ does not mean 1
- ◆ represents 10 ones
- ◆ therefore, is also 1 ten (1 group of ten).

They also understand that the numeral 4 in 14, represents 4.

### **DID YOU KNOW?**

In the Foundation Phase, learners talk about ‘tens’ and ‘units’ as ‘groups of ten’ and single ‘ones’. They represent two-digit and three-digit numbers using grouping models and expanding number cards.

We do not introduce place value in Grade R. The focus in this grade is on understanding the value of the numbers 0–10 and on building a strong number concept within this range. If learners have a good concept of the numbers to 10, this knowledge can be extended in Grade 1 and other grades.



### **Activity 5**

#### **IMPORTANT!**

**This activity is for the development of your own knowledge and enrichment. It is not appropriate for Grade R learners. Do NOT introduce this activity in Grade R.**

Use the counters, sticks and number cards provided to represent the following numbers:

14 31 22 43

1. Represent each number using counters: make groups of ten and single ones.
2. Represent each number using sticks and string: make bundles of ten and single ones.
3. Label the bundles with the correct number cards.
4. Talk about how many groups of ten and how many ones each number has.
5. Discuss the value of each numeral.

KwaGreyidi 1 abafundi bahlola irherho ledisimali, ngokusebenza ngeenomboro ukusuka ku-'11' ukuya phambili. Bajamiselela iinomboro lezi ngeenqhema zamatjumi nangakunye (imivo). Lokha nabasebenza ngeenomboro 11-19, bathoma ukuzwisisa bonyana ngenomborweni efana no-14, itshwayo lenomboro 1:

- ◆ alitjho ku-1
- ◆ ijamiselela abokunye aba-10
- ◆ ngalokho-ke, litjumi li-1 (isiqhema si-1 setjumi).

Bayezwisisa godu bonyana itshwayo lenomboro 4 ku-14, lijamiselela ku-4.

### **UTHI BEWAZI?**

KusiGaba seFundo esiSekelo, abafundi bakhuluma 'ngamatjumi' 'nemivo' njenge 'iinqhema zamatjumi' nabo 'kunye' ababodwa. Bajamiselela iinomboro zamadijithi amabili nezamadijithi amathathu ngokusebenzisa iindlela zokwenza iinqhema namakarada wenotheyitjhini enabileko.

Asithuli ubukhulu bedijithi kwaGreyidi R. Umnqopho kileGreyidi usekuzwisiseni ubukhulu beenomboro 0-10 nekwakheni umqondo wenomboro oqinileko ngakilelirherho. Nangabe abafundi banomqondo omuhle weenomboro ukufika ku-10, ilwazi leli lingalulelwa kuGreyidi 1 nakwamanye amagreyidi.



### **Umsebenzi 5**

#### **OKUQAKATHEKILEKO!**

**Umsebenzi lo ngewokuthuthukisa nokunothisa ilwazi lakho. Awukafaneli abafundi bakwaGreyidi R. UNGAWETHULI umsebenzi lo kwaGreyidi R.**

Sebenzisa iimbalisi, iingoqwana namakarada weenomboro anikelweko ukujamiselela iinomboro ezilandelako:

14 31 22 43

1. Jamiselela inomboro ngayinye ngokusebenzisa iimbalisi: yenza iinqhema zetjumi nezomuvo ngamunye.
2. Jamiselela inomboro ngayinye ngokusebenzisa iingoqwana nentambo: yenza iinyanda zetjumi nezomuvo ngamunye.
3. Lebula iinyanda ngamakarada weenomboro afaneleko.
4. Khulumani ngokobana ziinqhema ezingaki zetjumi nokobana inomboro ngayinye inakunye okungaki.
5. Khulumisanani ngobukhulu betshwayo lenomboro ngayinye.

6. Which apparatus do you think was more appropriate for representing the concepts of 'groups of ten' ('tens') and 'ones'? Explain your answer.

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7. What do you notice about the value of the numerals in the numbers you represented with the number cards?

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Grade R learners **do not need to understand place value**. They do need to:

- ◆ understand the value (the 'how muchness') of numbers 0–10
- ◆ understand the different combinations of numbers up to 10
- ◆ understand that even though 10 is made up of the numerals 1 and 0, it is NOT  $1 + 0$  and it has its own value ('how muchness')
- ◆ understand and be able to represent the different values of 1, 0 and 10.

### Facilitator's notes

- ◆ After **Activity 6**, take feedback from the groups on ideas for teaching the number 10. These could include:
  - number frieze and story
  - dot card activities
  - number washing line
  - comparing groups of objects
  - structure beads
  - number track.
- ◆ Discuss whether these activities would be suitable for whole class, teacher-guided or small group activities.
- ◆ Emphasise that when applying the number symbol 10 to a group of objects, learners should use the number symbol card '10' and not number symbol cards '1' and '0'.



### Activity 6

1. In your group, discuss ideas for teaching the number 10 in your Grade R classroom. Include the use of different representations.

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6. Ngisiphi isisetjenziswa ocabanga bonyana besifaneleke khulu ukujamiselela imiqondo 'yeenqhema zetjhumi' ('amatjhumi') begodu nabo 'kunye'? Hlathulula ipendulo yakho.

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7. Khuyini okutjhejako okumayelana nobukhulu betshwayo lenomboro eenomborweni ozijamiselele ngamakarada weenomboro?

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Abafundi bakwaGreyidi R **abadingi ukuzwisisa ubukhulu bedijithi**. Bafanele uku:

- ◆ zwisisa ubukhulu ('ubungaki') beenomboro 0–10
- ◆ zwisisa iinhlanganisela ezihlukileko zeenomboro ukufika e-10
- ◆ zwisisa bonyana nanyana u-10 akhiwe ngamatshwayo weenomboro 1 no-0, AKUSUYE u-1+0 nokobana unobukhulu bakhe ('ubungaki')
- ◆ zwisisa nokwazi ukujamiselela ubukhulu obuhlukileko buka-1, 0 no-10.

### Amanothi womkghonakalisi

- ◆ Ngemva **komSebenzi 6**, thatha umbiko obuyako weenqhema omayelana nemibono yokufundisa inomboro 10. Lokhu kufaka hlangana:
  - umhlobiso wenomboro nendatjana
  - imisebenzi yekarada lamaqatjhazi
  - idrada yokweneka yeenomboro
  - ukumadanisa iinqhema zezinto
  - imincamo ehlelekileko
  - umzila weenomboro.
- ◆ Khulumisanani ngokobana imisebenzi le izakufanela imisebenzi yetlasi loke, ehlahlwa ngutitjhere nofana yesiqhema esincani.
- ◆ Gandelela bonyana lokha nawusebenzisa itshwayo lenomboro 10 esiqhemeni sezinto, abafundi kufanele basebenzise ikarada letshwayo lenomboro '10' begodu ingasi amakarada wetshwayo lenomboro '1' no'0'.



### Umsebenzi 6

1. Esiqhemeni senu, khulumisanani ngemibono yokufundisa inomboro 10 ngetlasini yakho yakwaGreyidi R. Fakani hlangana ukusetjenziswa kweenjamiseleli ezihlukileko.

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2. Present your ideas to the whole group.

### **Introducing number 0**

In Grade R, learners need to understand that zero is a number and the number symbol for it is '0'.

Young children find the concept of 'emptiness' difficult to understand. When learners are faced with an empty plate, container, box or bag they will often use words such as 'no more', 'all gone', 'nothing left', 'none' or 'empty' to describe the situation. Teachers should accept these correct descriptions, but should also introduce the word 'zero'. The word 'zero' should be used consistently, even when counting down or backwards, e.g., when counting backwards from four: 'four, three, two, one, zero'. The symbol '0' should be placed on the number washing line. The 0 number cards should be used to represent that an object (such as a plate, tub, lid, box) is empty.



*Activity Guide: Term 4, Week 3, Day 1 #4 and #5, Day 2 #2 and #4, Day 3 #3, Day 4 #4, Day 5 #4 (pages 56-63)*

1. Watch the video of a teacher introducing and consolidating the concept of zero.
  - ◆ What do you see happening?
  - ◆ How was the concept of zero introduced?
  - ◆ What did the learners do and say?
  - ◆ What was the role of the teacher?
  - ◆ What was the benefit of using a variety of activities to teach the concept?

2. Write down your observations.

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2. Yethulani imibono yenu esiqhemeni soke.

### **Ukwethula inomboro 0**

KwaGreyidi R, abafundi bafanele ukuzwisisa bonyana uziro uyinomboro begodu itshwayo lenomboro yakhe ngu-'0'.

Abantwana abancani bathola umqondo 'welize' kunzima ukuwuzwisisa. Lokha abafundi nabaqalene nepuleyidi, isiphathi, ibhoksi nofana umgodla onganalitho, bavame ukusebenzisa amagama afana nokuthi 'akusenalitho', 'kuphele koke', 'akukasali litho', 'akunanto' nofana 'kudududu' ukutlhadlhula ubujamo. Abotitjhere kufanele bamukele iintlhadlhulo lezi ezifaneleko, kodwa kufanele godu bathule igama 'ziro'. Igama 'ziro' kufanele lihlale lisetjenziswa, nalokha kubalwa ukuya phambili nofana ukuya emuva, isib., lokha nakubalwa ukuya emuva ukusuka kokune: 'kune, kuthathu, kubili, kunye, ziro'. Itshwayo '0' kufanele libekwe kudrada yokweneka yeenomboro. Amakarada wenomboro 0 kufanele asetjenziswe ukujamiselela bonyana into (enjengepuleyidi, isikhafthini, isivalo, ibhoksi) ayinalitho.



### **Ividiyo 2**

*UmHlahlandlela wemiSebenzi: Ithemu 4, Iveke 3, Ilanga 1 #4 ne- #5, Ilanga 2 #2 ne-#4, Ilanga 3 #3, Ilanga 4 #4, Ilanga 5 #4 (amakhasi 56-63)*

1. Bukela ividiyo katitjhere athula abe ahlanganisa umqondo kaziro.

- ◆ Khuyini okubona kwenzeka?
- ◆ Umqondo kaziro wethulwe njani?
- ◆ Khuyini abafundi abakwenzako nabakutjhoko?
- ◆ Kwakuyini indima edlalwa ngutitjhere?
- ◆ Kwakuyini umvuzo wokusebenzisa imisebenzi ehlukeleko ukufundisa umqondo lo?

2. Tlola phasi lokho okutjhejileko.

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### Facilitator's notes

- ◆ Discuss the kinds of classroom activities that were used to help learners understand the value of '0', for example:
  - adding '0' to the jumping number track and asking what number the learner started on ('no jumps yet')
  - counting groups of objects that include 0 objects
  - matching empty groups of objects to the '0' number card
  - including '0' in the counting sequence (on the number line)
  - showing empty hands to represent '0'.

## Amanothi womkghonakalisi

- ◆ Khulumisanani ngemihlobo yemisebenzi yangetlasini esetjenziselwe ukusiza abafundi ukuzwisisa ubukhulu buka-'0', isibonelo:
  - ukungezelela u'0' emzileni wokweqa weenomboro nokubuza bonyana ngiyiphi inomboro umfundi athome kiyi ('ukweqa akukabikhona')
  - ukubala iinqhema zezinto ezifaka hlangana izinto ezingu'0'
  - ukukhambelanisa iinqhema zezinto ezinganalitho nekarada lenomboro '0'
  - ukufaka hlangana u-'0' elandelanweni lokubala (kunambalayini)
  - ukukhombisa izandla ezinganalitho ukujamiselela u-'0'.

## Session 4: Planning for teaching

1½ hours

This workshop session prepares participants for implementing Term 4 Weeks 1–3. By this stage of the year, the teacher will have noticed distinct differences between learners' levels of progress. Term 4 builds on the content of Terms 1, 2 and 3. Some learners will be ready for this, while others will need support and more consolidation to progress. It is important to plan and prepare for this difference in learner competence to ensure that all the content and skills of Grade R Mathematics are covered, and learners are well prepared for Grade 1.

### Facilitator's notes

- ◆ Move between the small groups as participants discuss the planning and preparation for teaching Term 4 Weeks 1–3 in **Activity 7**. Assist them by making suggestions on overcoming challenges.
- ◆ Each small group plans the three weeks and completes the templates in Appendix A.
- ◆ The small groups present their responses to the questions in **Activity 7**. The whole group discusses differentiated teaching and learning.



### Activity 7

1. In your group, complete the planning templates for Term 4 Weeks 1–3 (Appendix A).
2. Discuss the following questions:
  - ◆ How is the week structured?
  - ◆ How does the content build on previous lessons?
  - ◆ Do the whole class activities successfully create opportunities for the discussion and exploration of new knowledge?
  - ◆ How does the teacher-guided activity provide opportunities for the teacher to assess and support the learners?
  - ◆ Do the independent small group activities allow for adequate practice of new knowledge and skills?
  - ◆ How could you prepare additional activities to support learners who have not yet mastered a particular skill?
  - ◆ Suggest some ways to extend learning opportunities for advanced learners.
  - ◆ How could you work with a colleague to prepare for each week?

## Isetjhini 4: Ukuhlelela ukufundisa

Ama-iri 1½

Isetjhini yesifundobandulo lesi ilungiselela abahlanganyeli ukwenziwa kweThemu 4 Iimveke 1–3. Kilesisigaba somnyaka, utitjhere kufanele bona sele ayelele umehluko obonakalako 37hakathi kwamazinga wokuthuthuka kwabafundi. Ithemu 4 yakhela phezu kokumumethweko kweThemu 1, 2 neye-3. Abanye abafundi bazakulungela lokhu, lokha abanye bazakudinga isekelo nokuhlanganiswa kobana baragele phambili. Kuqakathekile ukuhlela nokulungiselela umahluko lo osepumelelweni yomfundi ukuqinisekisa bonyana koke okumumethweko namakghono weembalo zakwaGreyidi R kwenziwe, nabafundi balungiselelwe iGreyidi 1 ngokwaneleko.

### Amanothi womkghonakalisi

- ◆ Khambakhamba phakathi kweenqhema lokha abahlanganyeli nabakhulumisana ngokuhlela nokulungiselela ukufundisa kuThemu 4 Iimveke 1–3 **Umsebenzi 7**. Basize ngokuveza imibono mayelana nokuhlula iintjhijilo.
- ◆ Isiqhema esincani ngasinye sihlelela iimveke ezintathu bese siqedelela umfuziselo wesiThasiselo A.
- ◆ Iinqhema ezincani lezi zethula iimpendulo zabo zom**Sebenzi 7**. Isiqhema soke sikhulumisana ngokufundisa nokufunda okuhlukahlukeneko.



### Umsebenzi 7

1. Esiqhemeni senu, yenzani imifuziselo yokuhlela yeThemu 4 Iimveke 1–3 (Isithasiselo A).
2. Khulumisanani ngemibuzo elandelako:
  - ◆ Iveke yakheke njani?
  - ◆ Okumumethweko kwakhela njani phezu kweemfundo ezidlulileko?
  - ◆ Ingabe imisebenzi yetlasi loke yakha amathuba wemikhulumiswano nokuhlola ilwazi elitjha ngepumelelo?
  - ◆ Umsebenzi ohlahlwa ngutitjhere uwanikela njani amathuba wokobana utitjhere ahlole abe asekele abafundi?
  - ◆ Ingabe imisebenzi yesiqhema esincani esizijameleko ivumela ngokwaneleko ukuzijayeza ilwazi namakghono amatjha?
  - ◆ Ungayilungisa njani imisebenzi yokungezelela ukusekela abafundi abangakghoni ngokwaneleko ikghono elithileko?
  - ◆ Phakamisa iindlela ezinye zokunabisa amathuba wokufunda kwabafundi esele bathuthukile.
  - ◆ Ungasebenza njani nomsebenzisani ukulungiselela iveke ngayinye?

# Closing activities

30 minutes

## Facilitator's notes

- ◆ **Workshop reflection:** Ask participants to take a few minutes to reflect on the day and to page through their *Participant's Workbook*. Ask them to jot down any questions or comments to share with the whole group.  
Ask individual participants to volunteer responses to the following:
  - I learnt ...
  - I did not like ...
  - I enjoyed ...
  - I now understand ...
  - I'm still not clear about ...
  - I would like more information on ...
- ◆ Encourage participants to add any comments and feedback not yet shared to the post box.
- ◆ **Take back to school task:** Read through this task. Ask if there is anything that is not clear and that requires more explanation.
- ◆ **Evaluation:** Hand out copies of the Workshop Evaluation Form and have participants complete the form.
- ◆ **Next workshop:** Give dates for the next workshop and close the workshop.



## Activity 8

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

- ◆ I learnt \_\_\_\_\_  
\_\_\_\_\_
- ◆ I did not like \_\_\_\_\_  
\_\_\_\_\_
- ◆ I enjoyed \_\_\_\_\_  
\_\_\_\_\_
- ◆ I now understand \_\_\_\_\_  
\_\_\_\_\_
- ◆ I'm still not clear about \_\_\_\_\_  
\_\_\_\_\_
- ◆ I would like more information on \_\_\_\_\_  
\_\_\_\_\_

Share your reflections with the whole group.

## Amanothi womkghonakalisi

- ◆ **Ukuzindla ngesifundobandulo:** Bawa abahlanganyeli bathathe imizuzu embalwa bazindle ngelanga bese baphendla *INcwadi yokuSebenzela yomHlanganyeli*. Babawe batlole phasi nofana ngimuphi umbuzo nofana umbono wokwabelana nesiqhema soke. Bawa umhlanganyeli ngamunye bonyana anikele ngokuthanda iimpendulo zokulandelako:
  - Ngifunde ...
  - Akhenge ngithande ...
  - Ngizithabisile ...
  - Sengiyezwisisa kwanje ...
  - Ngisengakacacelwa mayelana ne ...
  - Ngingathanda ilwazi elingaphezulu mayelana ...
- ◆ Khuthaza abahlanganyeli bafake nofana ngiwuphi umbono nombiko obuyako ekungakabelwana ngebhoksini leposi.
- ◆ **Umsebenzi obuyiselwa esikolweni:** Funda umsebenzi lo woke. Buza nangabe kukhona ongakuzwisisi kuhle nokufuna ihlathululo enabileko.
- ◆ **Ukuhlunga:** Phakisa amakhophi weForomo lokuHlunga lesiFundobandulo bese unikela abahlanganyeli bawazalise.
- ◆ **Isifundobandulo esilandelako:** Nikela amalanga wesifundobandulo esilandelako bese uvala isifundobandulo.



## Umsebenzi 8

**Ukuzindla ngesifundobandulo:** Thatha imizuzu embalwa uzindle ngelanga leli. Phendla *INcwadi yokuSebenzela yomHlanganyeli* ukuzikhumbuza ngalokho esele kwenziwe. Tlola phasi imicabango yakho.

- ◆ Ngifunde \_\_\_\_\_
- ◆ Akhenge ngithande \_\_\_\_\_
- ◆ Ngizithabisile \_\_\_\_\_
- ◆ Sengiyezwisisa kwanje \_\_\_\_\_
- ◆ Ngisengakacacelwa mayelana \_\_\_\_\_
- ◆ Ngingathanda ilwazi elingaphezulu mayelana \_\_\_\_\_

Yabelana ngokuzindla kwakho nesiqhema soke.



### **Take back to school task**

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

### **Evaluation**

Complete the Evaluation Form.





### **Umsebenzi obuyiselwa esikolweni**

1. Sebenzisa *umHlahlandlela wemiSebenzi: Ithemu 4* ukuhlela nokwenza Ithemu 4 limveke 1–3 zeHlelo leemBalo.
2. Tlola imibono ngencwadini oyisebenzisela ukubulunga ilandelelo leragelophambili lomfundi ngamunye (incwadi yokutjeja abafundi). Sebenzisa irhelo lokutjeja **‘Tjheja bonyana abafundi bayakwazi uku’** (ngebhoksini lelihlo) ngesikhathi somunye nomunye umsebenzi ohlahlwa ngutitjhere ukuhlahla okutjeja nemibono yakho.
3. Tlola amanothi ngalokho okusebenze kuhle, lokho okungakasebenzi kuhle nokobana uzirarulule njani iintjhijilo nofana ngezinjani ngesikhathi sokwenza Ithemu 4 limveke 1–3.
4. Yiza nencwadi yakho yokutjeja abafundi namanothi owenzileko lokha nawuzindla ngelanga lokufundisa ngalinye kusifundobandulo esilandelako.

### **Ukuhlunga**

Zalisa iForomo lokuHlunga.

**APPENDIX A: TERM 4 WEEKLY PLANNING TEMPLATE**

**Term 4: Activity Plan: Week \_\_\_\_**

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

**ISITHASISELO A: ITHEMU 4 UMFUZISELO WOKUHLELA WAQOBE YIVEKE**

**Ithemu 4: Ihlelo Lomsebenzi: Iveke \_\_\_\_**

<b>ISIGABA SOKUMUMETHWEKO:</b>				
<b>ISIHLOKO:</b>				
<b>YETHULA ILWAZI ELITJHA:</b>				
<b>UKUJAYEZA:</b>				
<b>Imisebenzi yetlasi loka</b>		<b>Umsebenzi ohlahlwa ngutitjhere</b>	<b>Imisebenzi yesitetjhi sokusebenzela (imisebenzi ezijameleko esiqhema esincani)</b>	
<b>Ilanga 1</b>			<b>Umsebenzi 1</b>	
<b>Ilanga 2</b>			<b>Umsebenzi 2</b>	
<b>Ilanga 3</b>			<b>Umsebenzi 3</b>	
<b>Ilanga 4</b>			<b>Umsebenzi 4</b>	
<b>Ilanga 5</b>				

**Term 4: Activity Plan: Week \_\_\_\_**

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

**Ithemu 4: Ihlelo Lomsebenzi: Iveke \_\_\_\_**

<b>ISIGABA SOKUMUMETHWEKO:</b>				
ISIHLOKO:				
YETHULA ILWAZI ELITJHA:				
UKUJAYEZA:				
<b>Imisebenzi yetlasi loke</b>		<b>Umsebenzi ohlahlwa ngutitjhere</b>	<b>Imisebenzi yesitetjhi sokusebenzela (imisebenzi ezijameleko esiqhema esincani)</b>	
<b>Ilanga 1</b>			<b>Umsebenzi 1</b>	
<b>Ilanga 2</b>			<b>Umsebenzi 2</b>	
<b>Ilanga 3</b>			<b>Umsebenzi 3</b>	
<b>Ilanga 4</b>			<b>Umsebenzi 4</b>	
<b>Ilanga 5</b>				

**Term 4: Activity Plan: Week \_\_\_\_**

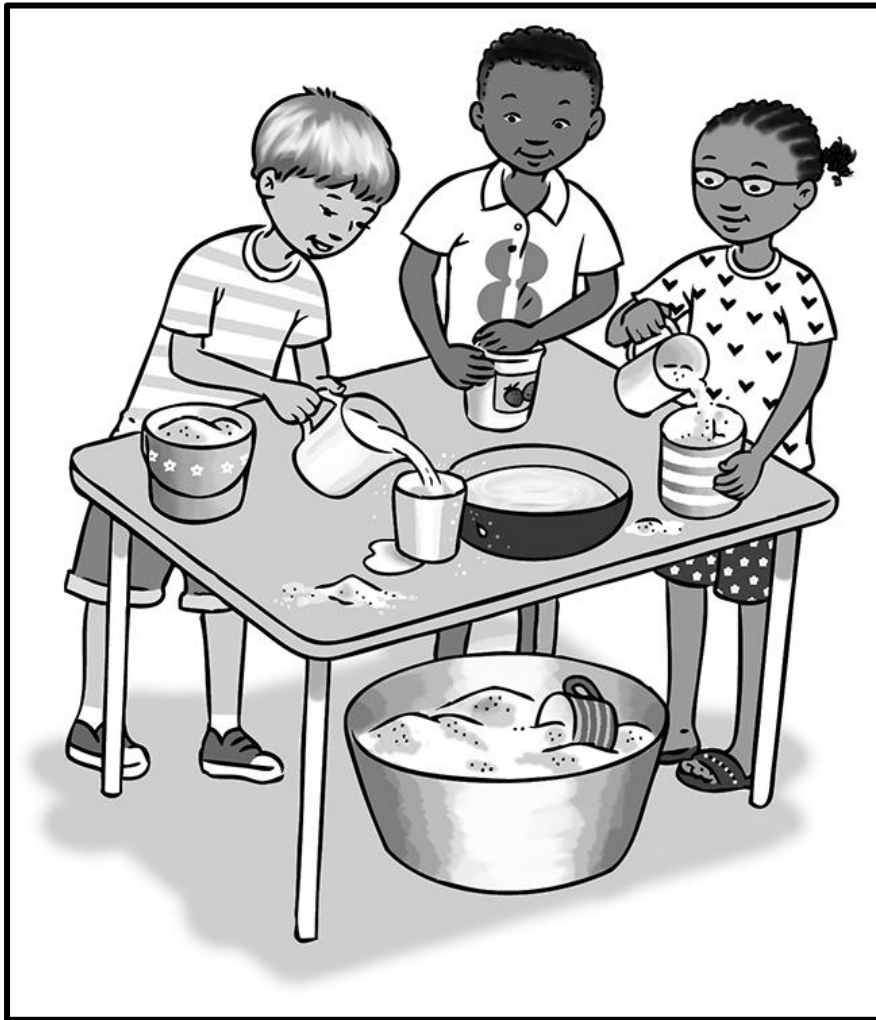
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<b>TOPIC:</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b>				
<b>PRACTISE:</b>				
<b>Whole class activities</b>		<b>Teacher-guided activity</b>	<b>Workstation activities (independent small group activities)</b>	
<b>Day 1</b>			<b>Activity 1</b>	
<b>Day 2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

**Ithemu 4: Ihlelo Lomsebenzi: Iveke \_\_\_\_**

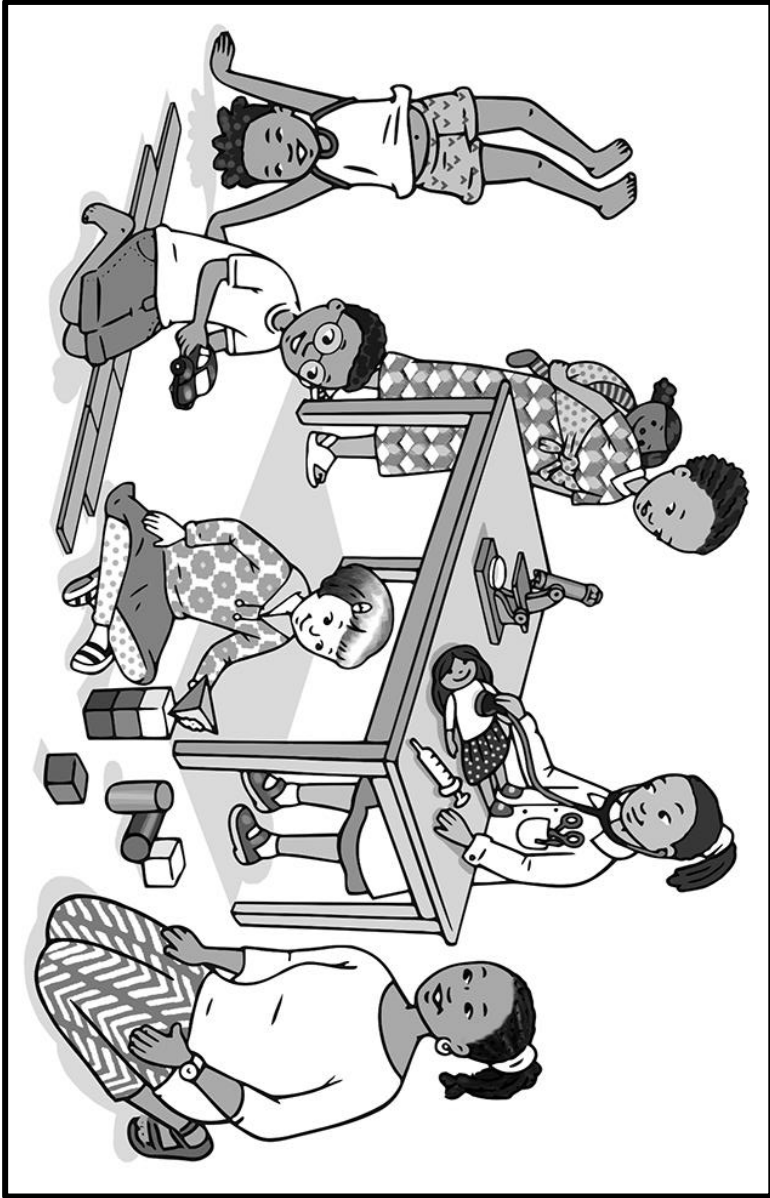
<b>ISIGABA SOKUMUMETHWEKO:</b>				
ISIHLOKO:				
YETHULA ILWAZI ELITJHA:				
UKUJAYEZA:				
<b>Imisebenzi yetlasi loko</b>		<b>Umsebenzi ohlahlwa ngutitjhere</b>	<b>Imisebenzi yesitetjhi sokusebenzela (imisebenzi ezijameleko esiqhema esincani)</b>	
<b>Ilanga 1</b>			<b>Umsebenzi 1</b>	
<b>Ilanga 2</b>			<b>Umsebenzi 2</b>	
<b>Ilanga 3</b>			<b>Umsebenzi 3</b>	
<b>Ilanga 4</b>			<b>Umsebenzi 4</b>	
<b>Ilanga 5</b>				

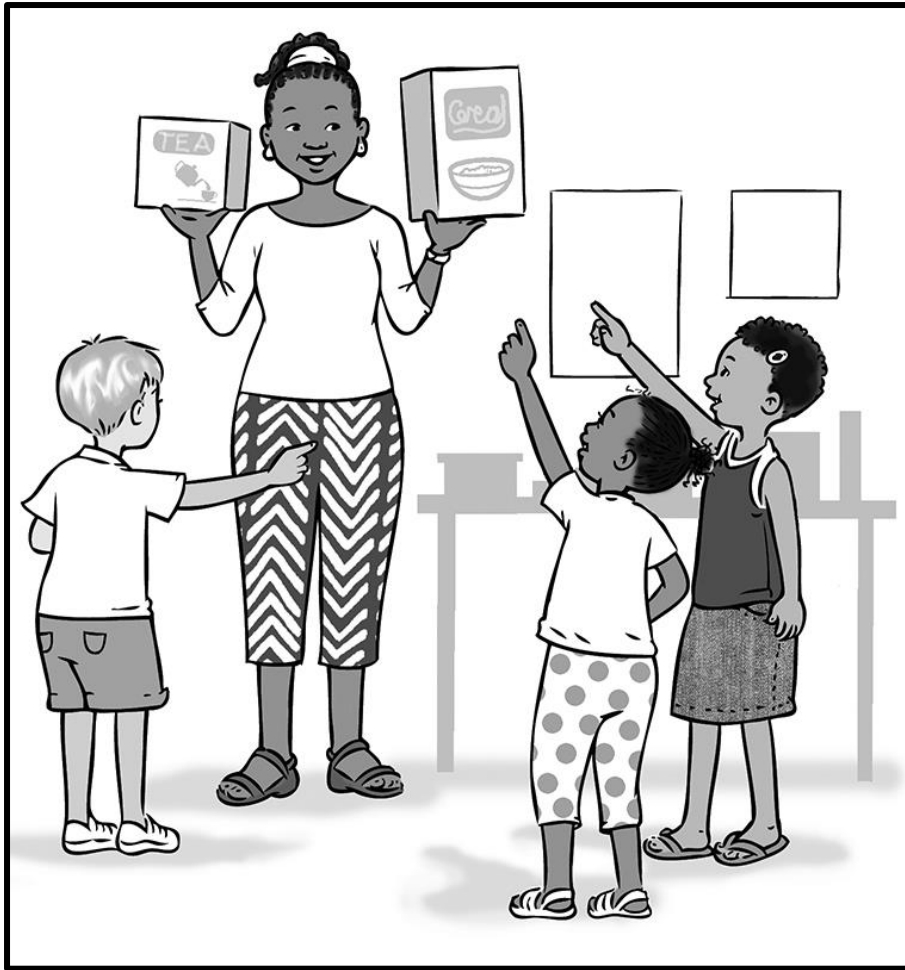
**APPENDIX B: THE GUIDING PRINCIPLES OF TEACHING MATHS IN GRADE R (PICTURES)**

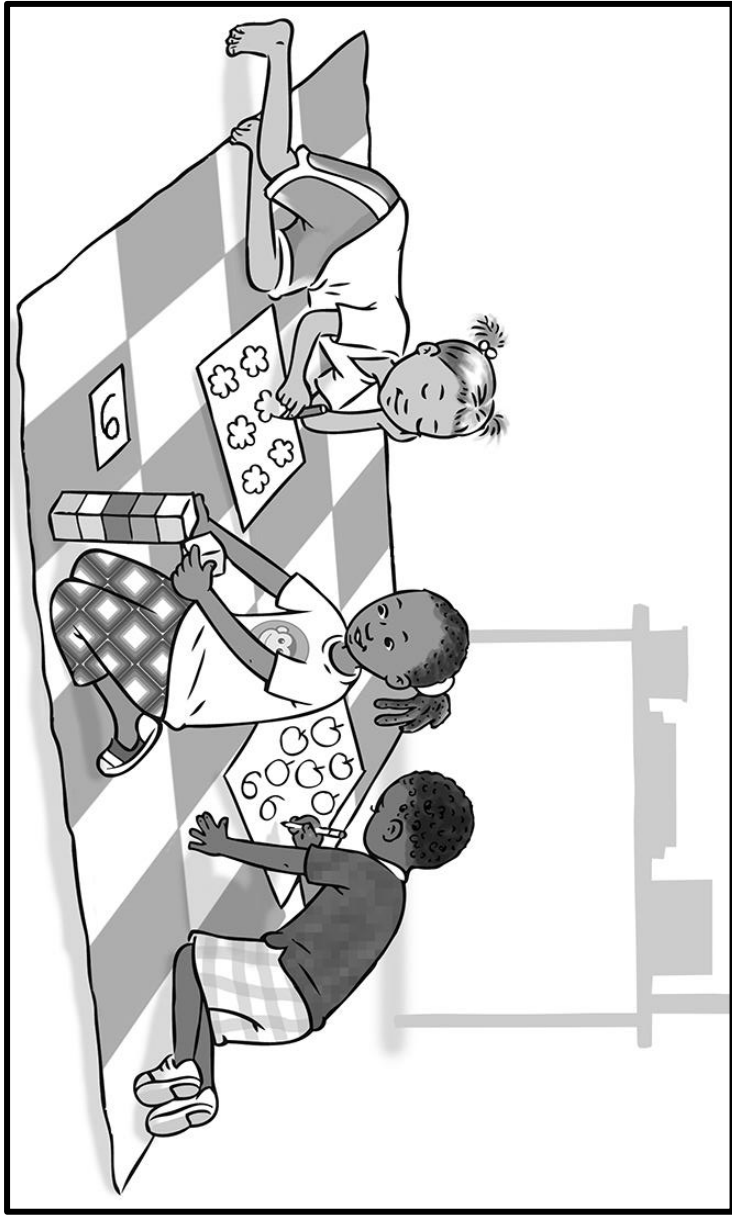
**ISITHASISELO B: IMITHETHOKAMBISO EHLAHA UKUFUNDISWA KWEEMBALO KUGREYIDI R (IINTHOMBE)**











**APPENDIX C: EXPANDING NUMBER CARDS**

10	
20	
30	
40	
1	2
3	4

ISITHASISELO C: AMAKARADA WEENOMBORO ZENOTHEYITJHINI ENABILEKO

10	
20	
30	
40	
1	2
3	4

# Workshop 10 Evaluation Form

1. Did the workshop meet your expectations?

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

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

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

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

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# Isifundobandulo 10 Iforomo lokuHlunga

1. Ingabe isifundobandulo sibe ngilokho ebegade ukulindele?

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2. Khuyini okufundileko kilesisifundobandulo okukusize khulu?

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3. Ikhona into nofana khuyini ongakhange uyithande nofana obenobudisi ukuyizwisisa?

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4. Uzokusebenzisa njani lokho okufundileko ngetlasini yakho yakwa-Greyidi R?

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5. Kukhona imibono onayo emayelana nokwenza iimfundobandulo ezizako zibe ngcono?

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