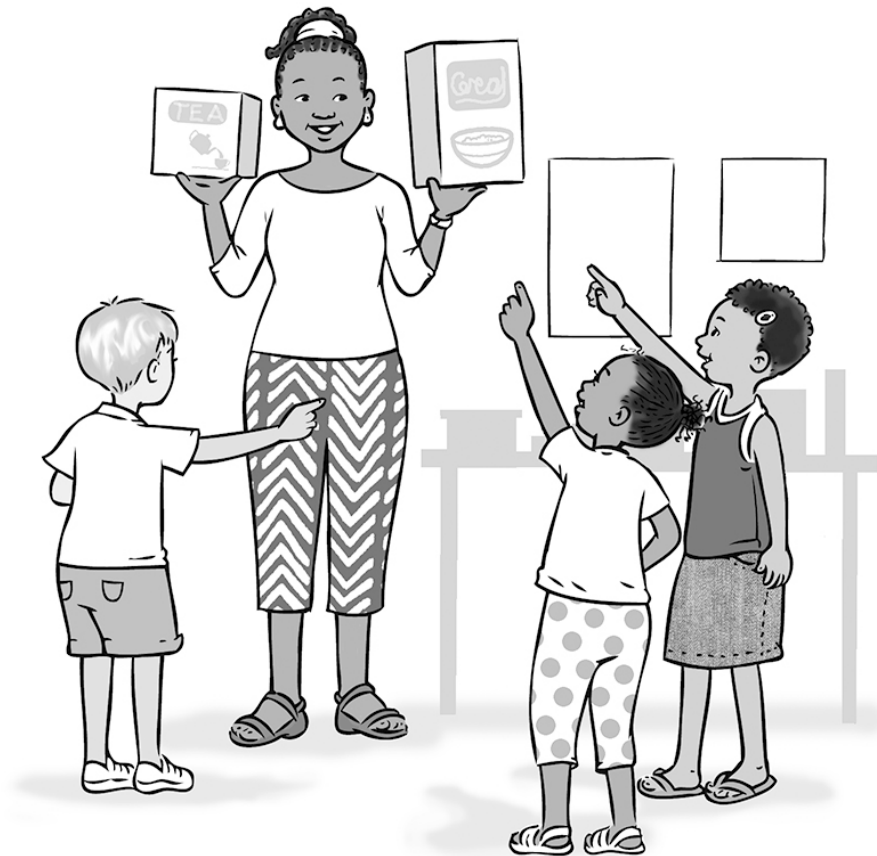


# Luhlelo Lwekwenta Kancono Tibalo TeLibanga R Grade R Mathematics Improvement Programme



**Umhlanganosikolo 5 • Workshop 5  
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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- The R-Maths writing team: SDU staff and consultants.



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# Overview

## Purpose

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

The purpose of this workshop is to assist teachers to continue to implement the Maths Programme in their classrooms, to strengthen their understanding of teaching and learning in the Content Areas covered in Term 2 Weeks 4–7 and to reflect on how they are putting the guiding principles of teaching maths into practice in their classrooms.

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 1 Week 10 and Term 2 Weeks 1–3
- ◆ To explore strategies to support teaching maths in Grade R
- ◆ To reflect on the Maths Programme’s guiding principles of teaching
- ◆ To engage with the Maths Programme content for Term 2 Weeks 4–7 (Space and Shape (Geometry); Numbers, Operations and Relationships; Patterns, Functions and Algebra; and Data Handling)
- ◆ To discuss appropriate observation and assessment in Grade R

## Workshop content

- ◆ Opening and reflection (1 hour)
  - ◆ Session 1: Space and Shape (Geometry) (1 hour)
- TEA
- ◆ Session 2: Numbers, Operations and Relationships (1 hour)
  - ◆ Session 3: Patterns, Functions and Algebra (1 hour)
- LUNCH
- ◆ Session 4: Data Handling (1 hour)
  - ◆ Closing activities (1 hour)

# Sibutsetelo

## Inhloso

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

Inhloso yalomhlanganosikolo kusita bothishela kutsi bafezekise Luhlelo Lwetibalo emaklasini abo, kucinisa kuvisisa kwabo kufundzisa nekufundza kuMikhakha Walokucuketfwe lokwentiwe kuThemu 2 Emaviki 4–7 kanye nekubuyeketa kutsi bayisebentisa kanjani imitsetfosimiso yalengkombandlela emaklasini abo.

Emareferensi kuMikhakha Yalokucuketfwe Tibalo TeLibanga R atsetfwe ku*Sitatimende Senchubomgomo Yekharikhulamu Nekuhlola (i-CAPS): Tibalo TeLibanga R (Luhlaka Lwekugcina)*, 2011, Litiko Letemfundvo Lesisekelo, laseNingizimu Afrika.

## Imiphumela yekufundza

- ◆ Kubuyeketa kufezekiswa kweThemu 1 Liviki 10 neThemu 2 Emaviki 1–3
- ◆ Kwehlwaya emasubuciko ekwesekela kufundzisa tibalo kuLibanga R
- ◆ Kubuyeketa imitsetfomgomo lecondzisako yekufundzisa yeLuhlelo Lwetibalo
- ◆ Kusebenta ngalokucuketfwe Luhlelo Lwetibalo kweThemu 2 Emaviki 4–7 (Sikhala naBunjwa (Ijomethri); Tinombolo, Ema-ophareshini neBudlelwane; Emaphethini, Emafangshini ne-Aljebhra; neKusebenta ngeDatha)
- ◆ Kukhulumisana ngekubukisisa lokufanele neluhlolo kuLibanga R

## Lokucuketfwe kwemhlanganosikolo

- ◆ Kuvula nekubuyeketa (1 li-awa)
  - ◆ Iseshini 1: Sikhala naBunjwa (Ijomethri) (1 li-awa)
- LITIYA
- ◆ Iseshini 2: Tinombolo, Ema-ophareshini neBudlelwane (1 li-awa)
  - ◆ Iseshini 3: Emaphethini, Emafangshini ne-Aljebhra (1 li-awa)
- KUDLA KWASEMINI
- ◆ Iseshini 4: Kusebenta Ngedatha (1 li-awa)
  - ◆ Imisebenti yekuvala (1 li-awa)

## Preparation

- ◆ PPT welcome and outcomes
- ◆ Read:
  - Concept Guide*, pages 114–131 and 136–137
  - Activity Guide: Term 2*, pages 18–21 and pages 70–137
  - Appendix A: Term 2 Weekly Content Summary (Weeks 4–7)
- ◆ Bring a large toy, e.g. a car, a doll.
- ◆ PPT: Data Handling cycle (from Workshop 4).
- ◆ For Session 4, prepare a pictograph chart, 'How did you travel to this workshop?' with picture cards for 'taxi', 'car', 'walk' and 'other' and 'smiley face' cards for each participant.

## Materials

- ◆ Flipchart paper, kokis
- ◆ *Resource Kit* for each group
- ◆ *Concept Guide*
- ◆ Collection of 3-D objects for each group (Session 2)
- ◆ Washing line and pegs for each group (Session 2)



## Kulungiselela

- ◆ PPT kwemukela nemiphumela
- ◆ Fundza:
  - Inkhombandlela Yemcondvo*, emakhasi 114–131 kanye ne-136–137
  - Inkhombandlela Yemsebenti: Ithemu 2*, Likhasi 18–21, nemakhasi 70–137
  - Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7)
- ◆ Wota nelithoyisi lelikhulu, sib. imoto, umdoli.
- ◆ PPT: Umjikeleto wekusebenta ngeDatha (lowentiwe kuMhlanganosikolo 4).
- ◆ KweSeshini 4, lungisa lishadi lemdvwebombhalo, 'Uhambe ngani uma uta kulomhlanganosikolo?' kanye nemakhadi emfundzi etitfombe 'tetekisi', 'temoto', 'ekuhamba ngetinyawo' kanye 'nalokunye' kanye 'nebuso lobumamatsekako' bemhlanganyeli ngamunye.

## Emamethiriyeli

- ◆ Liphepha lefliphushadi, emakhokhi
- ◆ *Ikhithi Yetinsita* yelicembu ngalinye
- ◆ *Inkhombandlela Yemcondvo*
- ◆ Ligcogco lema-objekthi labo-3-D elicembu ngalinye (Iseshini 2)
- ◆ Lilayini lekweneka nemapheksi elicembu ngalinye (Iseshini 2)

# Opening and reflection

1 hour

## Facilitator's notes

- ◆ PPT: Open the session and read through the agenda and learning outcomes for the workshop.
- ◆ Remind participants of the *Take back to school* task from the end of Workshop 4.
- ◆ Ask participants to reflect on their observations and assessment of learners, and how they have been implementing the Maths Programme in their classrooms. Discuss what is working well and any concerns that participants may have.

The **inclusivity principle**: All learners should feel welcome, included and happy to participate. Remember to treat all learners fairly and with respect.

Reflect on your implementation of the Maths Programme in your daily programme and complete the following activity.



### Activity 1

Discuss your progress in implementing the *Take back to school* task from Workshop 4.

1. What progress in maths did you observe in your learners after implementing Term 1?

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2. How did the information in the 'Check that learners are able to' in *Activity Guide: Term 1* assist you in assessing each learner's progress in Term 1?

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3. Did you successfully record each learner's progress using 'Term 1: Exemplar Record of Continuous Assessments' on pages 190–193 of *Activity Guide: Term 1*?

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## Emanotsi emfundzisi

- ◆ PPT: Vula iseshini bese ufundza lonkhe luhlelo lwemhlangano nemiphumela yekufundza yalomhlanganosikolo.
- ◆ Khumbuta bahlanganyeli nge*Msebenti wekubuyisela emuva esikolweni* losekupheleni kweMhlanganosikolo 4.
- ◆ Cela bahlanganyeli babuyekete kubukisisa nekuhlola kwabo bafundzi, nekutsi bebalufezekisa kanjani loLuhlelo Lwetibalo emaklasini abo. Khulumisanani ngaloko lokusebenta kahle kakhulu kanye nanoma ngukuphi kukhatsateka bahlanganyeli labangaba nako.

**Umtsetfosimiso wekufaka wonkhewonkhe ekhatsi:** Bonkhe bafundzi bafanele kutsi bative bemukelekile, bafakwa ekhatsi futsi bakujabulela kuahlanganyela. Khumbula kuphatsa kahle bafundzi ngalokulungile nangenhlonipho.

Cabanga ubuyekete ngekufezekisa kwakho Luhlelo Lwetibalo kuluhlelo lwakho lwemalanga onkhe bese wenta ucedze lomsebenti lolandzelako.



## Umsebenti 1

Khuluma ngenchubekelembili yakho ekufezekiseni u*Msebenti wekubuyisela emuva esikolweni* lowentiwe kuMhlanganosikolo 4.

1. Nguyiphi inchubekelembili yetibalo loyibonile kumfundzi wakho ngemuva kwekufezekisa Ithemu 1?

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2. Lwatiso lwaloku 'Hola kutsi bafundzi bayakhona ku' ku*Nkhombandlela Yemsebenti: Themu 1* lulusite kanjani ekuhloleni inchubekelembili yemfundzi ngamunye kuThemu 1?

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3. Uphumelele yini kurekhoda inchubekelembili yemfundzi ngamunye ku'*Themu 1: Sibonelo Selirekhodi Leluhlolo Loluchubekako*' emakhasini 190–193 e*Nkhombandlela Yemsebenti: Ithemu 1*?

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### Video 1

Watch the video of the teacher discussing observation and assessment in her Grade R classroom.

What do you think the intention of the activity is? Pay special attention to how the teacher prompts the learners with questions and how she observes each learner..

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### Facilitator's notes

- ◆ PPT: Summary of notes on rubrics, and Figure 39 and 40 of the *Concept Guide* (pages 106–109).
- ◆ Encourage participants to share their methods of assessment and how they use rubrics. Ask each group to write notes on flipchart paper and present these after **Activity 2**.
- ◆ Refer to the School Based Assessments (SBA) and SA-SAMS online systems to find out how participants engage with these.
- ◆ Remind participants of the **level principle** and discuss how they manage learners with different abilities.



### Activity 2

In your small groups, discuss:

1. How you are managing assessment in your classroom.
2. How you use rubrics in your assessment process.
3. How you incorporate the School Based Assessments (SBA) and SA-SAMS online system as part of your assessment process.

Write down the main points of your discussion to share with the whole group. Consider what works well and where you have challenges with assessment.

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The **level principle**: Some learners may need more practice and support than other learners. Be sure to allow learners enough time and support to complete activities, to think and to answer questions.



## Ividiyo 1

Bukela ividiyo yathishela akhuluma ngekubukisisa nekuhlola eklasini lakhe leLibanga R.

Ucabanga kutsi yini inhloso yalomsebenti? Nakisisa kutsi thishela ubagcugcutela kanjani bafundzi ngemibuto nekutsi umfundzi ngamunye umbukisisa kanjani.

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### Emanotsi emfundzisi

- ◆ PPT: Sibutsetelo semanotsi mayelana nemarubhriki, kanye neSitfombe 39 na-40 seNkhombandlela Yemcondvo (emakhasi 106–109).
- ◆ Khutsata bahlanganyeli kutsi babelane tindlelakwenta tekuhlola nekutsi bawasebentisa kanjani emarubhriki. Cela licembu ngalinye libhale emanotsi ephepheni lefliphushadi bese bayawetfula ngemuva kwe**Msebenti 2**.
- ◆ Buka Luhlolo Lolwentiwa Esikolweni (ema-SBA) kanye netinchubo te-SA-SAMS taku-inthanethi kute utfole kutsi bahlanganyeli babukana njani naloku.
- ◆ Khumbuta bahlanganyeli nge**mtsetfosimiso welizinga** bese nikhulumisana ngekutsi babaphatsa njani bafundzi labanebukhoni lobehlukene.



## Umsebenti 2

Emacenjini enu lamancane, khulumisanani:

1. Uluphatsa kanjani luhlolo eklasini lakho.
2. Uwasebentise kanjani emarubhriki kunchubo yakho yekuhlola.
3. Ulufaka kanjani luhlelo Lwekuhlola Lwesikolo (i-SBA) kanye nenchubo ye-SA-SAMS yaku-inthanethi njengencye yenchubo yakho yekuhlola.

Bhala phasi emaphuzu labalulekile engcogco yakho kute kutsi wabelane nelicembu lonkhe. Cabanga ngalokusebenta kahle kakhulu kanye nalapho unetinsayeya khona mayelana neluhlolo.

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**Umtsetfosimiso welizinga:** Labanye bafundzi bangadzinga kutetayeta nekwesekelwa lokunyenti kunalabanye bafundzi. Yenta siciniseko sekwenta bafundzi babe nesikhatsi nekwesekelwa lokwanele kute kutsi bakhone kwenta bacedze imisebenti, kucabanga kanye nekuphendvula imibuto.

# Session 1: Space and Shape (Geometry)

1 hour

## Facilitator's notes

- ◆ This workshop focuses on teaching the content of Term 2 Weeks 4–7. The Content Area Focus of Week 4 is Space and Shape (Geometry). Remind participants that this was also the focus of Term 2 Week 3 (covered in Workshop 4).
- ◆ Refer participants to pages 126–131 of the *Concept Guide*.
- ◆ Ask participants to work in groups to complete **Activity 3**.

## Term 2 Content overview: Space and Shape (Geometry)

This session focuses on teaching the content of Term 2 Week 4 – Space and Shape (Geometry). Remember that Space and Shape (Geometry) was also the focus of Week 3 which we covered in Workshop 4.

Read the content overview for Space and Shape (Geometry) on pages 126–131 of the *Concept Guide* and complete Activity 3.



### Activity 3

What Space and Shape concepts are presented in 3.1 and 3.2 of the content overview?

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## Facilitator's notes

- ◆ Ensure that participants identify the Space and Shape concepts in 3.1 and 3.2 and understand that the focus is on: position, orientation and views; describing 3-D objects in relation to themselves; following directions.
- ◆ In **Activity 4** the focus is on describing an object from different positions (views).
- ◆ In step 1 of **Activity 4**, show the participants the toy car or doll that you brought along (or a shoe or mug). Ask them to look at the object from different positions and to describe what they see. Ask them where they are in relation to the object e.g. *in front of, behind, next to, underneath, above*.

In Grade R learners describe, sort and compare 3-D objects and focus on the similarities and differences between them. In Term 2 Week 4 learners sort, compare and describe 3-D objects according to size, colour and shape. They also look at and describe objects in relation to themselves and each other and from different positions (orientation and views). Another focus in Week 4 is on following directions and using vocabulary associated with position.

# Iseshini 1: Sikhala naBunjwa (Ijomethri)

1 li-awa

## Emanotsi emfundzisi

- ◆ LoMhlanganosikolo ugicile ekufundziseni lokucuketfwe kuThemu 2 Emaviki 4–7. Kugcila Kwemkhakha Walokucuketfwe kweLiviki 4 Sikhala naBunjwa (Ijomethri). Khumbuta bahlanganyeli kutsi naloku futsi bekukugcila kweThemu 2 Liviki 3 (lokufundvwe kuMhlanganosikolo 4).
- ◆ Tjela bahlanganyeli bafundze emakhasi 126–131 e*Nkhombandlela Yemcondvo*.
- ◆ Cela bahlanganyeli basebente ngemacembu babhale bacedze **Umsebenti 3**.

## Ithemu 2 Sibutsetelo salokucuketfwe: Sikhala naBunjwa (Ijomethri)

Leseshini lena igcile ekufundziseni lokucuketfwe kuThemu 2 Liviki 4– Sikhala naBunjwa (Ijomethri) Khumbula kutsi Sikhala naBunjwa (Ijomethri) nako bekukugcila kweLiviki 3 lokwentiwe kuMhlanganosikolo 4.

Fundza sibutsetelo seSikhala naBunjwa (Ijomethri) kumakhasi 126–131 ku*Nkhombandlela Yemcondvo* bese uyenta ucedza Umsebenti 3.



### Umsebenti 3

Nguyiphi imicondvo yeSikhala naBunjwa lekukhulunywa ngayo ku-3.1 naku-3.2 wesibutsetelo salokucuketfwe?

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## Emanotsi emfundzisi

- ◆ Yenta siciniseko sekutsi bahlanganyeli bayayikhomba imicondvo yeSikhala naBunjwa ku-3.1 naku-3.2 kantsi futsi bayavisisa kutsi kugcilwe ku: sikhundla, kuma nekubukeka; kuchaza ema-objekthi langu-3-D ngekuhlobana kwawo; kulandzela kukhonjwa indlela.
- ◆ Ku**Msebenti 4** kugcila kusekuchazeni i-objekthi ngetikhundla (kubukeka).
- ◆ Kusinyatselo 1 se**Msebenti 4**, khombisa bahlanganyeli imoto lelithoyisi (imoto yekudlala) noma umdoli lote nawo (noma sicutfulo noma imagi). Bacele kutsi babuke le-objekthi ngakutinhlangotsi letehlukene bese sebakuchaza loko labakubonako. Babute kutsi bakuphi malungana nale-objekthi sib. *ngembi kwe, ngemuva, eceleni kwe, ngaphasi, ngetulu*.

KuLibanga R bafundzi bayachaza, bayahlunga baphindze futsi bacatsanise ema-objekthi labo-3-D baphindze futsi bagcile kulokufananako nemehluko lesemkhatsi wabo.

KuThemu 2 Liviki 4 bafundzi bayahlunga, bacatsanise baphindze bachaze ema-objekthi labo-3-D ngekuya kwesayizi, umbala kanye nabunjwa. Baphindze futsi babuke bese bachaza ema-objekthi malungana nawo balelinye kulelinye futsi ngasetinhlangotsini tesikhundla letehlukene (kuma nekubukeka). Lokunye kugcila kuLiviki 4 kukuletindlela letilandzelako kanye nekusebentisa silulumagama lesiphatselene nako.



### Activity 4

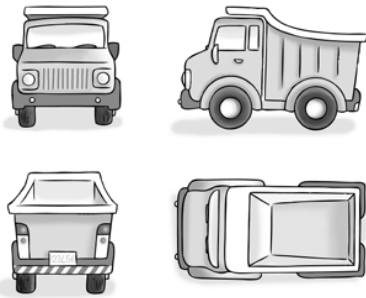
1. Discuss how you could use objects in your classroom to encourage learners to talk about their position in relation to the objects they are looking at.

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2. Look at the pictures. Describe where you would stand in order to see each of the views of the truck.



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In front of the truck, looking at the side of the truck, behind the truck, looking down on the truck (from above).

### Term 2 Week 4

Refer to the teacher-guided activity on pages 80–83 of *Activity Guide: Term 2*.



### Activity 5

1. Which Space and Shape concepts are presented?

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Position, orientation, views: objects look different when viewed from different positions.  
Position vocabulary: *front, back, side, above, below, underneath*.  
Sorting and identifying shapes.





### Umsebenti 4

1. Khuluma ngekutsi ungawasebentisa kanjani ema-objekthi eklasini lakho kukhutsata bafundzi kutsi bakhulume ngesikhundla sabo malungana nema-objekthi labawabukako.

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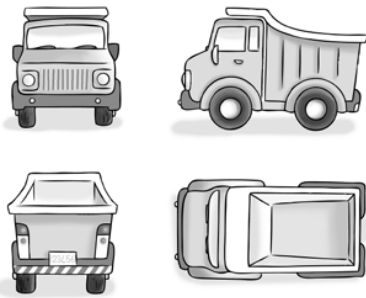


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2. Buka letitfombe. Chaza kutsi ungema kuphi kute kutsi ukhone kubona kubukeka ngakunye kwaleloli.




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Ngembi kwaleloli, kubuka tinhlangothi taleloli, ngemuva kwaleloli, kubuka phasi kuleloli (kubuka ungetulu).

### Ithemu 2 Liviki 4

Buka umsebenti loholwa nguthishela kumakhasi 80–83 e*Nkhombandlela Yemsebenti: Ithemu 2*.



### Umsebenti 5

1. Ngumuphi umcondvo weSikhala naBunjwa lofundziswako?

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Sikhundla, kuma, kubukeka: ema-objekthi abukeka ehluKile uma abukwa etikhundleni letehlukene. Silulumagama sesikhundla: *embili, emuva, licela, etulu, ngentasi, ngaphasi*. Kuhlunga nekukhomba bobunjwa.

2. Give examples of guiding questions that are asked in the teacher-guided activities. Will these questions encourage learners to talk about the concepts in question 1?

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Learners need many opportunities to play with and sort collections of 3-D objects. Teachers need to understand the underlying concepts in Space and Shape (Geometry) and communicate these using the correct maths language.

The following points should be remembered.

- ◆ An object is three-dimensional (3-D). You can look at it from the top, the bottom and the sides. 3-D objects have length, breadth (width) and height.
- ◆ A shape is two-dimensional (2-D). Shapes include circles, triangles, squares and rectangles. They have length and breadth (width).
- ◆ As learners explore the properties of 3-D objects they will identify objects that 'look like' 2-D shapes, e.g. the door looks like a rectangle, the road sign looks like a triangle, the plate looks like a circle. They will start to understand that the surfaces of 3-D objects look like 2-D shapes.

The **interaction principle**: Learning involves communication and the sharing of ideas. Responding in an appropriate way to something is a very important part of communication and of teaching and learning. Always listen to learners when they share their ideas or respond to your questions.

## Term 2 Content Summary (Week 4)

### Facilitator's notes

- ◆ By this stage, participants will have engaged with the Weekly Content Summaries in previous workshops. It is important that they make the connection between the CAPS content, planning for a week and the activities for the small group sessions.
- ◆ Remind participants that they also need to plan free choice activities that are linked to the concepts being taught in the week.

2. Niketa tibonelo temibuto lekhombindlela lebutwa kumisebenti leholwa nguthishela. Lemibuto itawubakhutsata yini bafundzi kutsi bakhulume ngalomcondvo lokumsebenti 1?
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Bafundzi badzinga emafuba lamanyenti ekudlala nekuhlunga emagcogco ema-objekthi abo-3-D. Bothishela bafanele kutsi bavisise imicondvo lefihlakele kuSikhala naBunjwa (Ijomethri) baphindze futsi bakhulume ngalokusebentisa lulwimi lwetibalo lolufanele.

Lamaphuzu lalandzelako afanele kutsi akhunjulwe.

- ◆ I-objekthi ithree-dimensional (3-D). Ungayibuka ngetulu, ngaphasi kanye nasemaceleni. I-objekthi lengu-3-D ine budze, kujula (bubanti) nebudzekuphakama.
- ◆ Bunjwa u two-dimensional (2-D). Bobunjwa bafaka ekhatsi tindingilizi, bocalantsatfu, tikwele nabocalandze. Banebudzekuphakama nekujula (bubanti).
- ◆ Ngesikhatsi bafundzi behlwaya emaphrophathi ema-objekthi labo-3-D batawukhomba ema-objekthi 'labukeka njengabo-' bunjwa longu 2-D, sib. umnyango ubukeka njengacalandze, luphawu lwemgwaco lubukeka njengacalantsatfu, lipuleti libukeka njengendingilizi. Batawucala kuvisisa kutsi tindzawo letingetulu te-objekthi leyi 3-D tibukeka njengabobunjwa lababo-2-D.

**Umtsetfosimiso wekusebentisana:** Kufundza kufaka ekhatsi kuchumana nekwabelana imibono. Kuphendvula ngendlela lefanele entfweni letsite kuyincenye lebaluleke kakhulu yekuchumana kanye neyekufundzisa nekufundza. Ngaso sonkhe sikhatsi lalela bafundzi uma babelana imibono yabo noma baphendvula imibuto.

## Sibutsetelo Salokucuketfwe SeThemu 2 (Liviki 4)

### Emanotsi emfundzisi

- ◆ Kulesigaba lesi, bahlanganyeli batawube sebente Tibutsetelo Talokucuketfwe Teliviki kumihlanganosikolo leyendlulile. Kubalulekile kutsi bente luchumano emkhatsini walokucuketfwe, kuhlela kweliviki kanye nemisebenti yemaseshini emacembu lamancane.
- ◆ Khumbuta bahlanganyeli kutsi badzinga kuhlela imisebenti yekutikhetsela lechumene nalemicondvo lefundziswa kulelo viki.



### Activity 6

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 4–7). Read the content overview for Week 4: Space and Shape (Geometry) on page 10 of *Activity Guide: Term 2*.

1. What are the topics for Week 4?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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## Umsebenti 6

Buka Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7). Fundza sibutsetelo salokucuketfwe seLiviki 4: Sikhala naBunjwa (Ijomethri) kulikhasi 10 leNkhombandlela Yemcondvo: Ithemu 2.

1. Ngutiphi tihloko teLiviki 4

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2. Nguluphi lwatiso lolusha lolwetfuliwe kuleliviki?

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3. Ngumaphi emakhono emaviki lengcile lentiwako?

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# Session 2: Numbers, Operations and Relationships

1 hour

The focus of Term 2 Week 5 is Numbers, Operations and Relationships.

## Facilitator's notes

- ◆ Explain that the focus in Term 2 Week 5 is on Numbers, Operations and Relationships again. Remind participants that this was also the focus of Term 2 Weeks 1 and 2 (covered in Workshop 4).
- ◆ Refer participants to pages 114–123 of the *Concept Guide*.
- ◆ Ask participants to work in groups to complete **Activity 7**.

## Term 2 Content overview: Numbers, Operations and Relationships

Previous workshops have presented the Content Area Focus: Numbers, Operations and Relationships. In this session we look at the Term 1–4 content overview (*Concept Guide*, pages 114–123) again.



### Activity 7

What new numbers are introduced in Term 2?

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4 and 5

## Term 2 Week 5: Teaching number

The number 'five' is introduced in Term 2 Week 5. The Maths Programme encourages the use of numbers in different situations and the use of multiple representations, e.g. a symbol, a word, a picture, dot cards, counters, claps. The routine used for introducing each number engages learners in a routine that is familiar, predictable, fun and presents the number in different ways.

## Facilitator's notes

- ◆ Ask participants to think back to how they introduced numbers in previous weeks.
- ◆ Reflect on how the same routine is used to introduce each new number. Explain that the number 'five' is introduced in Term 2 Week 5 using the same routine as before. Discuss how this routine actively engages learners in learning about the concept of number.
- ◆ Refer participants to page 90 of *Activity Guide: Term 2*.
- ◆ Let them complete **Activity 8** in groups and then report back.

# Iseshini 2: Tinombolo, Ema-ophareshini neBudlelwane

1 li-awa

Kugcila kuThemu 2 Liviki 5 Tinombolo, Ema-ophareshini neBudlelwane.

## Emanotsi emfundzisi

- ◆ Chaza kutsi kugcila kweThemu 2 kweLiviki 5 kukuTinombolo, Ema-ophareshini neBudlelwane futsi. Khumbuta bahlanganyeli kutsi loku bekuphindze futsi kube kugcila kweThemu 2 Liviki 1 na 2 (lokweniwe kuMhlanganosikolo 4).
- ◆ Tjela bahlanganyeli bafundze emakhasi 114–123 e*Nkhombandlela Yemcondvo*.
- ◆ Cela bahlanganyeli basebente ngemacembu bente bacedze **Umsebenti 7**.

## Ithemu 2 Sibutsetelo salokucuketfwe: Tinombolo, Ema-ophareshini neBudlelwane

Imihlanganosikolo leyendlulile yetfule Kugcila Kwenkhundla Yalokucuketfwe: Tinombolo, Ema-ophareshini neBudlelwane. Kuleseshini sibuka sibutsetelo salokucuketfwe seThemu1–4 (emakhasi e*Nkhombandlela Yemcondvo*, emakhasi 114–123) futsi.



### Umsebenti 7

Ngutiphi tinombolo letinsha letetfulwe kuThemu 2?

4 ne-5

## Ithemu 2 Liviki 5: Inombolo lefundvwako

Inombolo 'sihlanu' yetfulwe kuThemu 2 Liviki 5. LoLuhlelo Lwetibalo lukhutsata kusetjentiswa kwetinombolo etimeni letehlukene kanye nekusetjentiswa kwekukhombisa lokunyenti, sib. luphawu, ligama, sitfombe, emakhadi emacashati, tibali, kushaya tandla. Inhlalayenta lesetjentiswa kungenisa inombolo ngayinye yenta bafundzi kutsi bente inhlalayenta leyetayelekile, lecombelekako, lejabulisako futsi ikhombisa lenombolo ngetindlela letinyenti letehlukene.

## Emanotsi emfundzisi

- ◆ Cela bahlanganyeli kutsi babuke emuva bacabange ngekutsi bebatetfula kanjani tinombolo emavikini lengcile.
- ◆ Buyeketa kutsi lenhlalayenta isetjentiswa kanjani kwetfula inombolo ngayinye. Chaza kutsi lenombolo 'sihlanu' yetfulwa kuThemu 2 Liviki 5 kusetjentiswa inhlalayenta lefananako neyaphambilini. Chaza kutsi kwenta lenhlalayenta kwenta umfundzi afundze umcondvo wenombolo.
- ◆ Tjela bahlanganyeli babuke likhasi 91 ku*Nkhombandlela Yemsebenti: Itthemu 2*.
- ◆ Bayekele bente bacedze **Umsebenti 8** ngemacembu bese babika ngawo.

- ◆ Make sure that the following points about the routine are mentioned:
  - A story is told about an animal/s and used to build the number frieze.
  - Objects are collected to represent the number and put on the table in the maths area.
  - Learners match the number symbol and number word to dot cards, and also use a combination of dot cards to make the number.
  - Learners use body movements to dramatise the story.
  - The *Poster Book* provides opportunities to count and solve problems in context.
- ◆ The order of the items in the routine may change, but each week these aspects of introducing a number are included in the whole class activities.



### Activity 8

Refer to the Week 5 whole class activities in *Activity Guide: Term 2* (pages 90–99).

Describe the routine that is used to teach the number '5'.

Day 1

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Day 2

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Day 3

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Day 4

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Day 5

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- ◆ Yenta siciniseko sekutsi lamaphuzu enhlalayenta lalandzelako ayashiwo:
  - Kucocwa indzaba lekhuluma ngesi/tilwane futsi isetjentiselwa kwakha ifrizi yetinombolo.
  - Kubutfwa ema-objekthi kukhombisa lenombolo bese abekwa etafuleni endzaweni yetibalo.
  - Bafundzi bamatanisa timphawu tetinombolo nemagama etinombolo nemakhadi emacashati, baphindze futsi basebentise inhlanganisela yemakhadi emacashati kwakha lenombolo.
  - Bafundzi basebentisa iminyakato yemtimba kukhombisa tehlakalo letisenzabeni.
  - *LeNcwadzi Yemaphosta* iniketa ematfuba ekubala nekusombulula tinkinga engcikitsini.
- ◆ Luhlembiso lwetintfo kunhlalayenta lungantjintja kepha njalo ngeliviki letinhlangotsi tekwetfula inombolo tifakwe kumsebenti weliklasi lonkhe.



## Umsebenti 8

Buka Liviki 5 imisebenti yeliklasi lonkhe ku*Nkhombandlela Yemsebenti: Ithemu 2* (emakhasi 90–99). Chaza inhlalayenta lesetjentiswa kufundzisa inombolo '5'.

Lilanga 1

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Lilanga 2

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Lilanga 3

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Lilanga 4

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Lilanga 5

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## The number washing line

### Facilitator's notes

- ◆ Find out if participants have set up number washing lines in their classrooms.
- ◆ Review the importance of the number washing line activities in helping learners to build an understanding of the sequence of counting words and the relationship between numbers.

The numbers 1 to 5 were pegged onto the number washing line in the maths area as they were introduced in Term 1. It is only in Week 5 that learners actively engage with the number washing line. Many teachers put up number lines from 0 to 10 or even to 20 in the classroom before learners are able to count or recognise these numbers.

Initially the Maths Programme's focus on the number washing line is incidental. From Week 5 it is used to focus on sequencing (ordering) numbers and talking about the relationship between numbers.

Use the number washing line to:

- ◆ order and compare numbers e.g.:
  - What number comes before 3?
  - What number is between 3 and 5?
  - What number comes after 4?
- ◆ explore how numbers increase from left to right, and decrease from right to left.
- ◆ use maths language such as *before*, *after*, *between*.

In the video the facilitator demonstrates a washing line activity that supports the teaching of number.

### Facilitator's notes

- ◆ Demonstrate how to use the number washing line.
- ◆ Refer participants to the washing line activity on page 94 of *Activity Guide: Term 2*.

Read the activity that introduces the washing line to learners on page 94 of *Activity Guide: Term 2*.



### Video 2

*Activity Guide: Term 2, Week 5, Day 3 #4 (page 94)*

Watch the video of the teacher using the number washing line to order the numbers 1 to 5. Notice how she scaffolds the activity and note the questions that she asks to prompt the learners.

## Lilayini lekweneka letinombolo

### Emanotsi emfundzisi

- ◆ Tfola kutsi ngabe bafundzi sebakhile yini bolayini bekweneka betinombolo emaklasini abo.
- ◆ Buyeketa kubaluleka kwemisebenti yalayini wekweneka wetinombolo kusita bafundzi kuvisisa kulandzelana kwemagama ekubala kanye nebudlelwane lobusemkhatsini wetinombolo.

Tinombolo 1 kuya ku-5 tenekwa tafaswa ngemaphekisi kulilayini lekweneka letinombolo kundzawo yetibalo ngesikhatsi tetfulwa kuThemu 1. KuLiviki 5 lapho khona bafundzi basebenta ngemdlandla ngalolayini wekweneka wetinombolo. Bothishela labanyenti benta bolayini betinombolo kucala ku-0 kuye ku-10 noma ngisho ku-20 eklasini ngembi kwekutsi bafundzi bakwati kubala noma-ke kubona letinombolo.

Ekucaleni kugcila kwaloLuhlelo Lwetibalo kulayini wekweneka wetibalo bekukufundza ungakucapheli. Kusukela kuLiviki 5 kusetjentiselwa kugcila kukulandzelanisa (kuhlelebisa) tinombolo kanye nekukhuluma ngebudlelwane emkhatsini wetinombolo.

Sebentisa lolayini wekweneka ku:

- ◆ hlelebisa nekucatsanisa tinombolo sib:
  - Nguyiphi inombolo leta ngembi kwa-3?
  - Nguyiphi inombolo lesemkhatsini wa-3 ne-5?
  - Nguyiphi inombolo lelandzela-4?
- ◆ hlwaya kutsi tinombolo tikhula kanjani kusuka ngasencele uye ngasekudla, tiphindze futsi tinciphe kusuka ngasekudla tiye ngasencele.
- ◆ sebentisa lulwimi lwetibalo njengangembi, ngemuva, emkhatsini.

Kuvidiyo umfundzisi ukhombisa umsebenti walayini wekweneka lowesekela kufundziswa kwenombolo.

### Emanotsi emfundzisi

- ◆ Khombisa kusetjentiswa kwalayini wetinombolo.
- ◆ Tjela bahlanganyeli bafundze kumsebenti walayini wekweneka kulikhasi 95 leNkhombandlela Yemcondvo: Ithemu 2.

Fundza umsebenti longenisa layini wekweneka kubafundzi kulikhasi 95 leNkhombandlela Yemsebenti: Ithemu 2.



### Ividiyo 2

*Inkhombandlela Yemsebenti: Ithemu 2, Liviki 5, Lilanga 3 #4 (likhasi 95)*

Bukela ividiyo yathishela asebentisa layini wekweneka wetinombolo kuhlelebisa letinombolo 1 kuya ku-5. Caphela kutsi uwukhulisa kanjani lomsebenti ucapehe futsi nemibuto layibutako kuchubela bafundzi.

Discuss the value of using a number washing line in Grade R.

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**Sequencing numbers:** Learners place the numbers in the correct counting order. Learners see the number line each day and during incidental discussions talk about each number.

**Order:** Learners discuss the numbers in relation to each other. The teachers asks which number comes before, after or between other numbers. Learners use correct maths language to describe the position of the numbers in relation to each other.

## Structure beads

The structure beads in your *Resource Kit* come in lengths of 10 beads grouped in fives, according to colour (five red beads and five yellow beads).

### Facilitator's notes

- ◆ Discuss the 10-bead structure (five beads, five fingers). Demonstrate the use of a string of beads.
- ◆ Ask participants to take a set of 10 structure beads from the table.
- ◆ Using the information below, discuss the purpose of structure beads.

Structure beads help learners to:

- ◆ automatically recognise the number of beads in a group without counting, e.g. '4'.
- ◆ understand that one number may be a combination of two or more other numbers, e.g. '4' is made up of 2 and 2 or 1 and 3.
- ◆ develop skills in counting on from a given number, e.g. start at 3 and count on to 5.
- ◆ begin to work with addition and subtraction.
- ◆ begin to work with bonds of ten.

In this next activity, use your 10 structure beads to explore different number combinations. Follow your facilitator's lead and respond to the questions as set out in Activity 9.

Khuluma ngebuhle bekusebentisa lolayini wekweneka wetinombolo kuLibanga R.

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**Kulandzelanisa tinombolo:** Bafundzi babeka tinombolo ngekuleka lokungiko. Bafundzi babona umugcanombolo onkhe emalanga futsi nangesikhatsi setincumo letitsatfwa ngengoti bakhuluma ngenombolo ngayinye.

**Kuhleleka:** Bafundzi bakhuluma ngekuhlobana kwaletinombolo lenye nalenye. Thishela ubuta kutsi nguyiphi inombolo leta ngembali, ngemuva noma emkhatsini waletinye tinombolo. Bafundzi basebentisa lulwimi lwetibalo lolungilo kuchaza sikhundla setinombolo ngekuhlobana kwato lenye nalenye.

## Buhlalusakhiwo

Buhlalusakhiwo *kuKhithi Yetinsita* takho budze ngebuhlalu lobu-10 lobuhleleke ngemacembu alokusihlanu, ngekuya kwemibala (lobusihlanu bubovu bese kutsi lobu lobunye lobusihlanu bube mtfubi).

### Emanotsi emfundzisi

- ◆ Khuluma ngalobuhlalusakhiwo lobu-10 (buhlalu lobusihlanu, iminwe lesihlanu). Khombisa kusetjentiswa kwebuhlalu lobuphotselwe entsanjeni.
- ◆ Cela bahlanganyeli kutsi batsatse isethi yebuhlalusakhiwo lobu-10 etafuleni.
- ◆ Usebentisa lolwatiso lolungentasi, khuluma ngenhloso yebuhlalusakhiwo.

Buhlalusakhiwo busita bafundzi kutsi ba:

- ◆ vele-nje babone linani lebuhlalu ecenjini ngaphandle kwekububala, sib. '4'.
- ◆ visise kutsi inombolo yinye ingaba yinhlanganisela yaletinye tinombolo letimbili noma ngetulu, sib. '4' bakhiwe nga-2 na-2 noma nga-1 na-3.
- ◆ tfutfukise emakhono ekubala basuka enombolweni labayinikiwe, sib, kucala ku-3 bese bayabala baya ku-5.
- ◆ cale kusebenta ngekuhlanganisa nekususa.
- ◆ cala kusebenta ngemabhondi elishumi.

Kulomsebenti lolandzelako, sebentisa buhlalusakhiwo bakho lobu-10 kwehlwaya tinhlanganisela tetinombolo letehlukene. Landzela kuhola kwemfundzisi wakho bese uphendvula imibuto lebekwe kuMsebenti 9.



### Activity 9

1. Show me two beads.
2. Show me one more bead.
3. Show me one fewer than four beads.
4. Show me four beads. Now show me one more than four. How many do you have?
5. What did you do to make it one more?
6. Show me one fewer than five. How many do you have?
7. What did you do to make it one less?
8. Now take one away. How many do you have?
9. Add one. How many do you have?

Read the activity that introduces the structure beads to learners on page 100 of *Activity Guide: Term 2*, step 3. In groups, discuss this activity.

#### Facilitator's notes

- ◆ Explain that participants will now work with their beads and that they should follow your directions and write down their responses.
- ◆ Ask them to work in groups to complete **Activity 10**.



### Activity 10

How does this structure bead activity help to develop the learners' number sense?

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Learners begin to show a total number of beads (e.g. 3) without having to count in ones. They are able to show 'one more' or 'one fewer' than a stated amount without counting. Learners recognise that one number is made up of different combinations of numbers (e.g. 5 consists of 2 and 3, or 1 and 2 and 2). They begin to use the language of addition and subtraction and apply the concepts to combine/separate groups without counting. The structure beads provide a physical experience of the total number of beads.



### Umsebenti 9

1. Ngikhombise buhlalu lobubili.
2. Ngikhombise bunye buhlalu.
3. Ngikhombise buhlalu lobumbalwa kakhudlwana kunalobunye
4. Ngikhombise buhlalu lobune. Manje ngikhombise lobungetulu kwabune ngabunye. Unabungaki?
5. Wenteni kute kutsi bube bunyenti ngabunye?
6. Ngikhombise lobumbalwa kakhudlwana kunesihlanu. Unabungaki?
7. Wenteni kute kutsi bube mbalwa?
8. Manje susa bunye. Unabungaki?
9. Ngeta uhlanganise bunye. Unabungaki?

Fundza umsebenti lowetfula buhlalusakhiwo kubafundzi kulikhasi 101  
le*Nkhombandlela Yemsebenti: Ithemu 2*, sinyatselo 3. Ngemacembu, khulumisanani  
ngalomsebenti.

### Emanotsi emfundzisi

- ◆ Chaza kutsi bahlanganyeli manje bawusebenta ngebuhlalu babo futsi bafanele kutsi balandzele ticondziso takho bese babhala phasi timphendvulo tabo.
- ◆ Bacele basebente ngemacembu bente bacedze **Umsebenti 10**.



### Umsebenti 10

Lomsebenti webuhlalusakhiwo usita kanjani kutfutukisa umcondvo webafundzi wetinombolo?

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Bafundzi bacala kukhombisa samba sebhulalu (sib. 3) ngaphandle kwekutsi babubale ngabunye. Bayakwati kukhombisa kutsi 'kukhulu ngakunye' noma 'kuncane kakhudlwana ngakunye' kunelinani lelibekiwe ngaphandle kwekutsi babale.

Bafundzi bayabona kutsi inombolo iyinye yakhiwe yinhlanganisela yetinombolo letehlukile (sib. 5 wakhiwe nga-2 na-3, noma nga-1 na-2 na-2).

Bacala kusebentisa lulwimi lwekuhlanganisa nekukhipha bese basebentisa lemicondvo kuhlanganisa/kwehlukana emacembu ngaphandle kwekubala.

Lobuhlalusakhiwo benta ubone mbamba samba sebhulalu.

### Facilitator's notes

- ◆ Discuss the importance of planning in order to allow learners enough time to practise their new skills and knowledge (the **practice principle**).

The **practice principle**: 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.

## Term 2 Content Summary (Week 5)

### Facilitator's notes

Remind participants that they also need to plan free choice activities that are linked to the concepts being taught in the week.



### Activity 11

Refer to Appendix A: Sibutsetelo Salokucuketfwe Seliviki SeThemu 2 (Emaviki 4–7).  
Read the content overview for Week 5: Numbers, Operations and Relationships on page 18 of *Activity Guide: Term 2*.

1. What are the topics for Week 5?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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4. Match the activities in Appendix A: Term 2 Weekly Content Summary (Weeks 4–7) with the lessons in each week.



### Emanotsi emfundzisi

- ◆ Khuluma ngekubaluleka kwekuhlela kute kutsi bafundzi babe nesikhatsi lesanele sekutetayeta emakhono nelwati lwabo lolusha (**umtsetfosimiso wekutetayeta kwenta**).

**Umtsetfosimiso wekutetayeta kwenta:** Bafundzi kufanele kutsi babe nesikhatsi lesinyenti sekutetayeta emakhono nelwati lolusha. Uma bafundzi batfola kutetayeta njalo-nje loko lasebakufundzile, babancono kakhulu kuko bese bayatitsembe kakhulu. Bayakujabulela kuphindzaphindza nekutetayeta.

## Sibutsetelo Salokucuketfwe NguThemu 2 (Liviki 5)

### Emanotsi emfundzisi

Khumbuta bahlanganyeli kutsi badzinga kuhlela imisebenti yekutikhetsela lechumene nalemicondvo lefundziswa kulelo viki.



### Umsebenti 11

Buka Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7). Fundza sibutsetelo salokucuketfwe seLiviki 5: Tinombolo, Ema-ophareshini neBudlelwane kulikhasi 19 le*Nkhombandlela Yemsebenti: Ithemu 2*.

1. Ngutiphi tihloko teLiviki 5?

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2. Nguluphi lwati lolusha lolwetfuliwe kuleliviki?

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3. Ngumaphi emakhono emaviki lengcile lentiwako?

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4. Matanisa imisebenti lekuSengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7) netifundvo kuliviki ngalinye.

# Session 3: Patterns, Functions and Algebra 1 hour

The focus of Term 2 Week 6 is Patterns, Functions and Algebra.

## Facilitator's notes

- ◆ Explain that the focus in Term 2 Week 6 is on Patterns, Functions and Algebra. Remind participants that this was also the focus of Term 1 Week 6 (covered in Workshop 3).
- ◆ Refer participants to page 124 of the *Concept Guide*.
- ◆ Ask participants to work in groups to complete **Activity 12**.

## Term 2 Content overview: Patterns, Functions and Algebra

Refer to Patterns, Functions and Algebra in the content overview (*Concept Guide*, page 124).



### Activity 12

1. What concepts are covered in Term 2?

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2. What are the differences between the Maths Programme content and the CAPS content?

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## Term 2 Week 6: Describe, copy and extend patterns

In Workshop 3, the focus of Patterns, Functions and Algebra was on recognising/identifying the repeat in a pattern. We also discussed the difference between a sequence and a pattern. Term 2 Week 6 builds on the content introduced in Term 1 Week 6.

In Term 2 Week 6 learners:

- ◆ describe the repeat in patterns using objects, pictures and sounds.
- ◆ copy patterns that others have made with objects, pictures and sounds.
- ◆ extend patterns that others have made.
- ◆ create their own patterns at various levels of difficulty such as:

# Iseshini 3: Emaphethini, Emafangshini ne-Aljebhra

1 li-awa

Kugcila kwaThemu 2 Liviki 6 kukuMaphethini, Emafangshini ne-Aljebhra.

## Emanotsi emfundzisi

- ◆ Chaza kutsi kugcila kukuThemu 2 Liviki 6 kuMaphethini, Emafangshini ne-Aljebhra. Khumbuta bafundzi kutsi loku bekukugcila kweThemu 1 Liviki 6 (kwentiwe kuMhlanganosikolo 3).
- ◆ Tjela bahlanganyeli babuke likhasi 125 le*Nkhombandlela Yemcondvo*.
- ◆ Cela bahlanganyeli basebente ngemacembu babhale **Umsebenti 12**.

## Ithemu 2 Sibutsetelo salokucuketfwe: Emaphethini, Emafangshini ne-Aljebhra

Buka Emaphethini, Emafangshini ne-Aljebhra kusibutsetelo salokucuketfwe (*Inkhombandlela Yemcondvo*, likhasi 125).



### Umsebenti 12

1. Nguyiphi imicondvo lefundziswe kuThemu 2?

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2. Yini umehluko emkhatsini walokucuketfwe Luhlelo Lwetibalo nalokucuketfwe yi-CAPS?

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## Ithemu 2 Liviki 6: Chaza, kopa bese welula emaphethini

KuMhlanganosikolo 3, kugcila kweMaphethini, Emafangshini ne-Aljebhra bekukubona/kukhomba kuphindzaphindza kuphethini. Siphindze futsi sakhuluma ngekulandzelanisa nephethini. Ithemu 2 Liviki 6 kwakhelwe kulokucuketfwe lokwetfulwe kuThemu 1 Liviki 6.

KuThemu 2 Liviki 6 bafundzi:

- ◆ bachaza kuphindza lokukumaphethini basebentisa ema-objekthi, titfombe nemisindvo.
- ◆ bakopa emaphethini lakhiwe ngulabanye ngema-objekthi, titfombe nemisindvo.
- ◆ belula emaphethini lakhiwe ngulabanye.
- ◆ batakhela abo emaphethini emazingeni lehlukene ebumatima njenge:

- circle, square; circle, square
  - circle, square, triangle; circle, square, triangle
  - circle, circle, square; circle, circle, square
  - red circle, blue circle, yellow square; red circle, blue circle, yellow square.
- ◆ tell what is missing when part of a pattern is hidden.

### Facilitator's notes

- ◆ Think back to Workshop 3: Identifying patterns. Use the attribute blocks and the *Poster Book*. Discuss the difference between a sequence of objects, pictures or events, and what makes a pattern. Remind participants that a pattern requires the repeating of a sequence. Demonstrate this aspect.
- ◆ Have participants work in groups to complete **Activity 13**.



### Activity 13

Refer to Week 6 in *Activity Guide: Term 2* (pages 104–119).

1. Discuss how the whole class activities present lessons on pattern.

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Identifying patterns, using whole body, identifying patterns in the *Poster Book* picture.  
Copy and extend own and others' patterns.  
Explain why it is a pattern or not a pattern.

2. Read steps 5 and 6 of the teacher-guided activity on page 116. How does the teacher scaffold the activities and guide the learners with questions?

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## Term 2 Content Summary (Week 6)

### Facilitator's notes

- ◆ Ensure that participants make the connection between CAPS and the weekly planning for Week 6, e.g. the Topic and Term 2 content are from CAPS, with some additional content added for the Maths Programme.
- ◆ Discuss why number is also included in a week where the focus is Patterns, Functions and Algebra. Explain that although the content focus is on pattern, we need to practise number every day through whole class and teacher-guided activities.
- ◆ Remind participants to include all concepts incidentally during the daily programme, e.g. the sequence of activities in the daily programme and days of the week are measurement concepts (time), while lining up – first, second, third – are number concepts (ordinal numbers).

- indingilizi, sikwele; indingilizi, sikwele
- indingilizi, sikwele, calantsatfu; sikwele, calantsatfu
- indingilizi, indingilizi, sikwele; indingilizi, sikwele
- indingilizi lebovu, indilizi leluhlata sasibhakabhaka, sikwele lesimtfubi; indingilizi lebovu, indingilizi leluhlata sasibhakabhaka, sikwele lesimtfubi.

◆ shano kutsi yini leshodako uma ngabe iphethini ibhacile.

### Emanotsi emfundzisi

- ◆ Cabanga emuva kuMhlanganosikolo 3: Kukhomba emaphethini Sebentisa emabhlokhi e-athribhuyithi kanye neNcwadzi Yemaphosta. Chaza umehluko emkhatsini wekulandzelana kwema-objekthi, titfombe noma tehlo, naloko lokwenta iphethini. Khumbuta bahlanganyeli kutsi iphethini idzinga kuphindzeka kwekulandzelana. Khombisa lokuphindzeka.
- ◆ Yenta bahlanganyeli basebente ngemacembu bente bacedze **Umsebenti 13**.



### Umsebenti 13

Buka Liviki 6 kuNkhombandlela Yemsebenti: Ithemu 2 ( emakhasi 104–119).

1. Khuluma ngekutsi imisebenti yeliklasi lonkhe iyikhombisa kanjani imisebenti kuphethini.

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Kukhomba emaphethini, usebentisa umtimba wonkhe, kukhomba emaphethini esitfombeni seNcwadzi Yemaphosta.

Ukopa aphindze elule akhe emaphethini nemaphethini alabanye.

Kuchaza kutsi kungani kuyiphethini noma kungasiyo iphethini.

2. Fundza sinyatselo se-5 nese-6 semsebenti loholwa nguthishela kulikhasi le-117. Thishela uwukhulisa kanjani lomsebenti aphindze futsi akhombe bafundzi indlela ngemibuto?

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### Sibutsetelo Salokucuketfwe SeThemu 2 (Liviki 6)

#### Emanotsi emfundzisi

- ◆ Yenta siciniseko sekutsi bahlanganyeli bayalwenta luchumano emkhatsini we-CAPS nekuhlela kwanjalo ngeliviki kweLiviki 6, sib. Sihloko nalokucuketfwe nguThemu 2 kuphuma ku-CAPS, nalokucuketfwe lokwengetiwe kweLuhlelo Lwetibalo.
- ◆ Khuluma ngekutsi kungani inombolo nayo ifakiwe kuliviki lapho khona kugcila kukuMaphethini, Emafangshini ne-Aljebhra. Chaza kutsi noma-nje kugcila kwalokucuketfwe kukuphethini, sidzinga kutetayeta inombolo onkhe emalanga ngemisebenti yeliklasi lonkhe naleholwa nguthishela.
- ◆ Khumbuta bahlanganyeli kutsi bafake ekhatsi yonkhe imicondvo ngengoti ngesikhatsi saloluhlelo, sib. kulandzelana kwemisebenti kuluhlelo lwemalanga onkhe eliviki kunemicondvo yekulinganisa (sikhatsi), ulandzelanisa – kwekucala, kwesibili, kwesitsatfu – yimicondvo yetinombolo (tinombolondzawo).



### Activity 14

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 4–7). Read the content overview for Week 6: Patterns, Functions and Algebra on page 20 of *Activity Guide: Term 2*.

1. What are the topics for Week 6?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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4. Match the activities in Appendix A: Term 2 Weekly Content Summary (Weeks 4–7) with the lessons in each week.



## Umsebenti 14

Buka Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7). Fundza sibutsetelo salokucuketfwe seLiviki 6: Emaphethini, Emafangshini ne-Aljebra kulikhasi 21 le*Nkhombandlela Yemsebenti: Ithemu 2*.

1. Ngutiphi tihloko teLiviki 6?

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2. Nguluphi lwati lolusha lolwetfuliwe kuleliviki?

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3. Ngumaphi emakhono emaviki lengcile lentiwako?

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4. Matanisa imisebenti lekuSengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7) netifundvo kuliviki ngalinye.

# Session 4: Data Handling

1 hour

The focus of Term 2 Week 7 is Data Handling.

## Facilitator's notes

- ◆ Explain that the focus in Term 2 Week 7 is on Data Handling. Remind participants that this was also the focus of Term 1 Week 10 (covered in Workshop 4).
- ◆ Refer participants to page 136 of the *Concept Guide*.
- ◆ Ask participants to work in groups to complete **Activity 15**.

## Term 2 Content overview: Data Handling

Refer to Data Handling in the content overview (*Concept Guide*, page 136).



### Activity 15

1. What concepts are covered in Term 2?

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2. What are the differences between the Maths Programme content and the CAPS content?

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## Facilitator's notes

- ◆ Explain to participants that the Data Handling Content Area for Grade R focuses on the purpose and process of data handling. It involves solving a problem or answering a question by collecting, sorting, representing and interpreting data.
- ◆ Collecting and sorting (classifying) data is only part of the data handling process. If teachers do not keep the focus on answering the question, the activity is simply about sorting.
- ◆ Direct participants to follow the data handling process and name the different steps in the process:
  1. Pose a question.
  2. Collect the data (discuss the best way of doing this).
  3. Sort the data.
  4. Represent that data.
  5. Analyse the data.
  6. Report on the data (answer the question).
- ◆ Let participants to work in groups to complete **Activity 16**.
- ◆ Ask one group to present their activity.



# Iseshini 4: Kusebenta Ngedatha

1 li-awa

Kugcila kweThemu 2 Liviki 7 Kusebenta ngeDatha.

## Emanotsi emfundzisi

- ◆ Chaza kutsi kugcila kweThemu 2 Liviki 7 Kusebenta Ngedatha. Khumbuta bahlanganyeli kutsi loku bekukugcila kweThemu 1 Liviki 10 (kwentiwe kuMhlanganosikolo 4).
- ◆ Tjela bahlanganyeli babuke likhasi 137 le*Nkhombandlela Yemcondvo*.
- ◆ Cela bahlanganyeli basebente ngemacembu babhale bacedze **Umsebenti 15**.

## Ithemu 2 Sibutsetelo salokucuketfwe: Kusebenta Ngedatha

Buka Kusebenta Ngedatha kusibutsetelo salokucuketfwe (*Inkhombandlela Yemcondvo*, likhasi 137).



### Umsebenti 15

1. Nguyiphi imicondvo lefundziswe kuThemu 2?

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2. Yini umehluko emkhatsini walokucuketfwe Luhlelo Lwetibalo nalokucuketfwe yi-CAPS?

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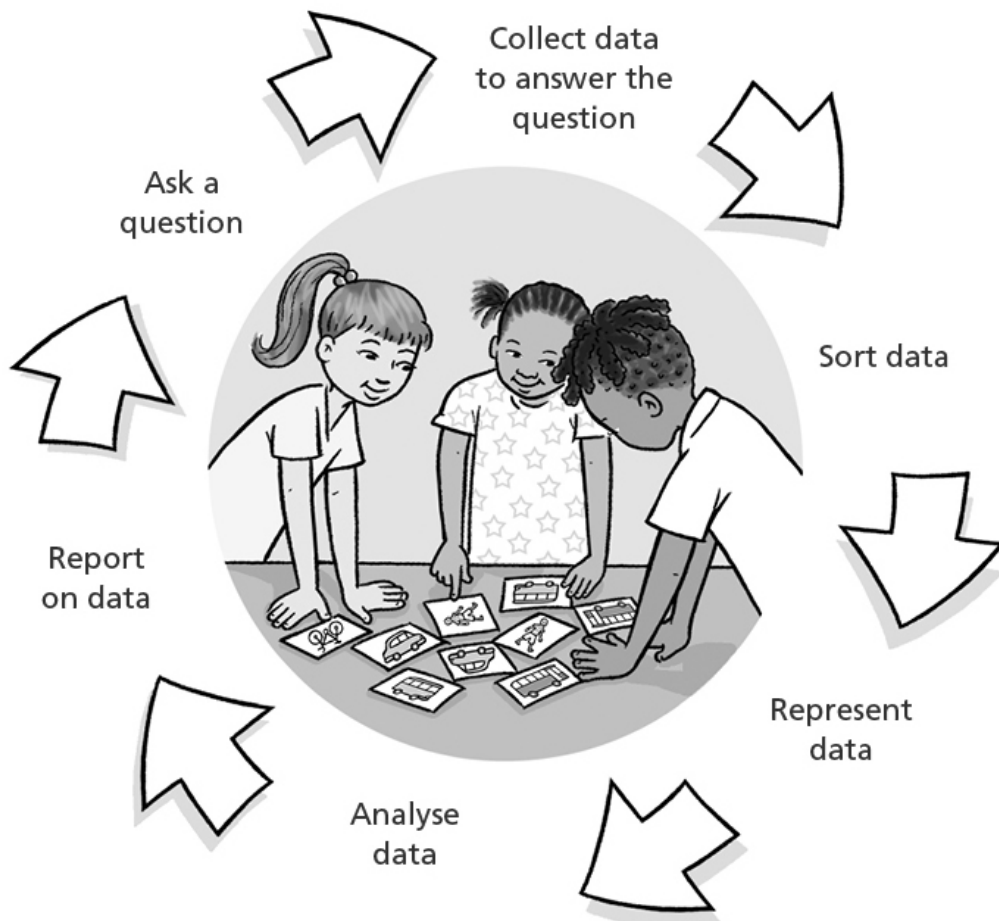
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## Emanotsi emfundzisi

- ◆ Chazela bahlanganyeli kutsi Umkhakha Walokucuketfwe weKusebenta ngeDatha weLibanga R ugcula kunhloso nenchubo yekusebenta ngedatha. Kufaka ekhatsi kusombulula tinkinga noma kuphendvula imibuto ngekugcogca, kuhlunga, kukhombisa nekuhumusha idatha.
- ◆ Kugcogca nekuhlunga (kuhlembisa) idatha kuyincenye-nje kuphela yenchubo yekusebenta ngedatha. Uma ngabe bothishela abagcili ekuphendvuleni imibuto, umsebenti-ke wekuhlunga.
- ◆ Condzisa bahlanganyeli kutsi balandzele inchubo yekusebenta ngedatha bese basho tinyatselo letehlukene tenchubo:
  1. Buta umbuto.
  2. Gcogca idatha (khuluma ngendlela lekahle kakhulu yekwenta loku).
  3. Hlunga idatha.
  4. Khombisa ledatha.
  5. Hlatiya idatha.
  6. Bika mayelana nedatha (phendvula imibuto).
- ◆ Cela bahlanganyeli basebente ngemacembu bente bacedze **Umsebenti 16**.
- ◆ Cela licembu linye likhombise umsebenti walo.

## Data Handling

The Data Handling Content Area focuses on the purpose and process of handling data. It involves solving a problem or answering a question by collecting, sorting, representing and interpreting data.



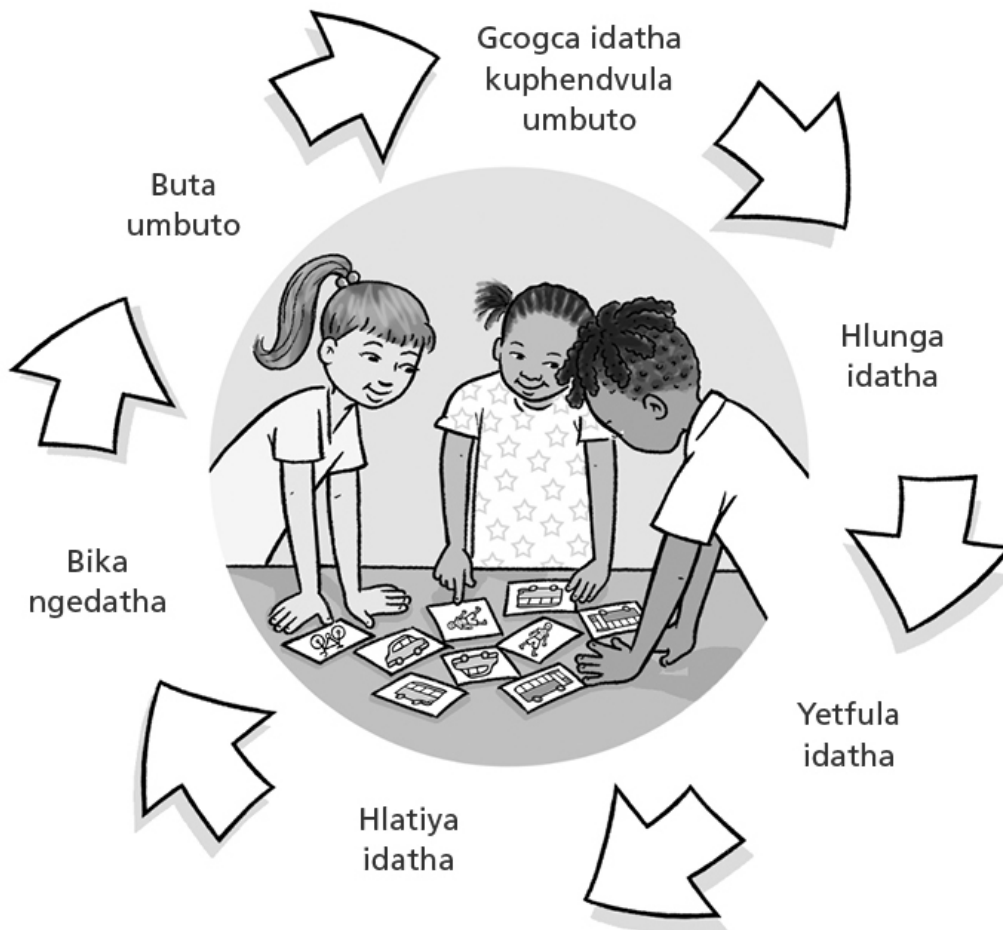
In Grade R learners should have many opportunities to sort objects according to one or more attributes, such as colour, size or shape. Sorting is part of Data Handling, but it is not the only focus. It is important to always bring the learners back to the question that has been posed and the reason why they are collecting, sorting and thinking of ways to represent the data.

Questions are key to Data Handling, e.g.:

- ◆ I wonder which coldrink most learners like?
- ◆ How should we collect our data?

## Kusebenta Ngedatha

Umkhakha Walokucuketfwe weKusebenta Ngedatha ugcila kunhloso nenchubo yekusebenta ngedatha. Kufaka ekhatsi kusombulula tinkinga noma kuphendvula imibuto ngekugcogca, kuhlunga, kukhombisa nekuhumusha idatha.



KuLibanga R bafundzi bafanele kutsi babe nematfuba lamanyenti ekuhlunga ema-objekthi ngekuya kwe-athribhuyithi yinye noma ngetulu kwayinye, njengembala, isayizi noma bunjwa. Kuhlunga kuyincenye yeKusebenta ngeDatha, kepha loko akusiko kugcila kukunye kuphela. Kubalulekile kuvama kubuyisela bafundzi emuva kumbuto lobutiwe nesizatfu sekutsi kungani bagcogca, bahlunga futsi bacabanga nangetindlela tekukhombisa idatha.

Imibuto ibalulekile kuKusebenta Ngedatha, sib.:

- ◆ Ngifisa kwati kutsi ngusiphi sinatfo lesibandzako lesitsandvwa bafundzi labanyenti?
- ◆ Sifanele kutsi siyigcogce kanjani idatha?

- ◆ How should we sort the data?
- ◆ How should we represent the data?



### Activity 16

Discuss how you could plan and implement a Data Handling activity based on the above questions. Record your ideas on flipchart paper.

### Representing data

Grade R learners explore different ways of showing or displaying the information they have collected. A **pictograph** is a way of representing data using pictures. In the whole class activity on Day 3 of Week 7, learners discuss how they come to school. Each learner is given a smiley face on **exactly the same size piece of paper**. They display the data by putting their picture in a column to represent four different means of transport. It is important to place the data in the columns, **without spaces** between the pieces of paper. The data is clearly represented and easy to interpret in order to answer the question: 'How do most learners come to school?'

## Term 2 Content Summary (Week 7)



### Activity 17

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 4–7). Read the content overview for Week 7: Data Handling on page 20 of *Activity Guide: Term 2*.

1. What are the topics for Week 7?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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- ◆ Sifanele kutsi siyihlunge kanjani idatha?
- ◆ Sifanele kutsi siyikhombise kanjani idatha?



### Umsebenti 16

Khuluma ngekutsi ungahlela uphindze futsi uwufezekise kanjani umsebenti weKusebenta ngeDatha ngekususela kulemibuto lengetulu. Bhala imibono yakho ephepheni lefliphushadi.

#### Khombisa idatha

Bafundzi beLibanga R bakhombisa tindlela letehlukene nekukhombisa nekukhangisa lwatiso labalugcogcile. **Umdvwebonkhulumo** yindlela yekukhombisa idatha ngekusebentisa titfombe. Kumsebenti weliklasi lonkhe kuLilanga 3 leLiviki 7, bafundzi bakhuluma ngekutsi bahamba uma beta esikolweni. Umfundzi ngamunye unikwa buso lobumamatsekako **ekhasini leliphepha lesayizi yinye**. Bakhombise idatha ngekubeka titfombe tabo tibe ngemakholomu kukhombisa tinhlobo letine letehlukene tetitfutsi. Kubalulekile kubeka idatha ngemakholomu, **kungasali tikhala** emkhatsini walamaphepha. Idatha ikhonjiswa ngalokucacile futsi kulula kuyihumusha kute kutsi ukwati kuphendvula umbuto: 'Bafundzi labanyenti bahamba ngani uma beta esikolweni'.

### Sibutsetelo Salokucuketfwe SeThemu 2 (Liviki 7)



### Umsebenti 17

Buka Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7). Fundza sibutsetelo salokucuketfwe seLiviki 7: Kusebenta ngeDatha kulikhasi 21 leNkhombandela Yemsebenti: Ithemu 2.

1. Ngutiphi tihloko teLiviki 7?

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2. Nguluphi lwatiso lolusha lolwetfuliwe kuleliviki?

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3. Ngumaphi emakhono emaviki lengcile lentiwako?

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4. Match the activities in Appendix A: Term 2 Weekly Content Summary (Weeks 4–7) with the lessons in each week.
5. Refer to the teacher-guided activity in Week 7 (*Activity Guide: Term 2*, page 132). Discuss how the teacher guides the learners to sort the animals and then represent the data on a grid.

4. Matanisa imisebenti kuSengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 4–7) netifundvo liviki ngalinye.
5. Buka umsebenti loholwa nguthishela kuLiviki 7 (*Inkhombandlela Yemsebenti: Ithemu 2*, likhasi 133). Khuluma ngekutsi thishela ubakhombindlela kanjani bafundzi kuhlunga tilwane bese bakhombisa idatha kugridi.

# Closing activities

1 hour

## Facilitator's notes

- ◆ **Lessons learnt:** Ask participants to think about what they have learnt during the workshop and to complete **Activity 18** individually.
- ◆ **Take back to school task:** Read through this task. Ask if there is anything that is not clear and that requires more explanation.
- ◆ **Evaluation:** Hand out copies of the Workshop Evaluation Form and have participants complete the form.
- ◆ **Next workshop:** Give dates for the next workshop and close the workshop.



## Umsebenti 18

**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. Continue to use the Record of Continuous Assessments in *Activity Guide: Term 2* to assess your learners. Make use of your ongoing observation notes to build up evidence of what learners understand and can do.
2. Identify any concerns you have about individual learner's emerging grasp of maths concepts.
3. Bring copies of rubrics that you have used for maths assessment to the next workshop.
4. Bring a completed assessment record for one learner to the next workshop.



## Emanotsi emfundzisi

- ◆ **Sifundvo lesifundziwe:** Cela bahlanganyeli bacabange ngaloko labakufundzile kulomhlanganosikolo nekutsi babhale **Umsebenti 18** 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:** Niketa tinsuku temhlanganosikolo lolandzelako.



## Umsebenti 18

**Sifundvo lesifundziwe:** Cabanga ngaloko lokufundzile kumhlanganosikolo bese ugcwalisa lelithebula.

Tintfo lesengivele ngitenta letisebenta kahle	Imibono lemisha lengitayetama



## Umsebenti wekubuyela emuva esikolweni

1. Sebentisa Lirekhodi leLuhlolo Loluchubekako leliku *Nkhombandlela Yemsebenti: Ithemu 2* kuhlola bafundzi bakho. Sebentisa emanotsi akho ekubukisisa lokuchubekako kute wakhe bufakazi balokuvisiswa bafundzi nalabangakhona kukwenta.
2. Tfolana noma ngukuphi kukhatsateka mayelana noma ngukuphi kubamba kwemfundzi ngemicondvo yetibalo angacapheli lokuvelako.
3. Wota nemakhophi emarubhrikhi lasetjentiswe kuhlola tibalo kumhlanganosikolo lolandzelako.
4. Wota nelirekhodi lekuhlola leliphelele lemfundzi munye kumhlanganosikolo lolandzelako.

5. Use *Activity Guide: Term 2* to plan and implement Weeks 4–7 of the Maths Programme, including creating a maths area with a focus on the concept for each week.
6. Make notes on what worked well, what did not work so well and what you could do differently to improve teaching and learning.

### **Evaluation**

Complete the Evaluation Form.

5. Sebentisa *Inkhombandlela Yemsebenti: Ithemu 2* kuhlela nekufezekisa Emaviki 4–7 eLuhlelo Lwetibalo, kufaka ekhatsi kwakha indzawo yetibalo ngekugcila kumcondvo weliviki ngalinye.
6. Bhala emanotsi ngaloko lokuhambe kahle kakhulu, naloko lokungakahambi kahle kakhulu kanye naloko longakwenta ngalokwehlukile kwenta kancono kufundzisa nekufundza.

### **Kuhlolisisa**

Gcwalisa leLifomu Lekuhlolisisa.

## APPENDIX A: TERM 2 WEEKLY CONTENT SUMMARY (WEEKS 4–7)

### Term 2: Activity Plan

Week 4				
<b>CONTENT AREA: SPACE AND SHAPE (GEOMETRY)</b>				
<b>TOPIC: Position, orientation and views; describes, sorts and compares 3-D objects</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b> Sort 3-D objects according to similarities and differences, one more, one less				
<b>PRACTISE:</b> Oral counting 1–15 and 5–1, counting objects 1–7, number concept 1–4, reinforce all shapes				
Whole class activities		Teacher-guided activity	Workstation activities	
<b>Day 1</b>	Reinforce all shapes/shape hunt.	Practise 1–4.	<b>Activity 1</b>	A circle/square/triangle can also be a ... (create a picture).
<b>Day 2</b>	Feely bag – feel different shapes and describe them.	Describing an object from different positions.	<b>Activity 2</b>	Make shapes using cookie cutters and playdough.
<b>Day 3</b>	Find shapes in class using position words.	Practising shapes and positions.	<b>Activity 3</b>	Block construction – use blocks/Unifix blocks.
<b>Day 4</b>	Shape detectives. One more, one less.		<b>Activity 4</b>	Puzzles (minimum of 12 pieces).
<b>Day 5</b>	Direction and position. Obstacle course.			
Week 5				
<b>CONTENT AREA: NUMBERS, OPERATIONS AND RELATIONSHIPS</b>				
<b>TOPIC: Recognise number symbols and number words; describes, orders and compares numbers</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b> Introduce number 5				
<b>PRACTISE:</b> Oral counting 1–15, counting objects 1–7, count backwards from 5 (rhymes), reinforce number concept 1–4, sequencing numbers 1–4, more/fewer				
Whole class activities		Teacher-guided activity	Workstation activities	
<b>Day 1</b>	Introduce 5 (5 monkeys in the fifth house).	Match number symbols, number words and dot cards (4 and 5).	<b>Activity 1</b>	Playdough mat 5.
<b>Day 2</b>	Reinforce 4 and 5 (number symbols and number words).	Counting 1–7.	<b>Activity 2</b>	Ladybird numbers (roll correct number of paper balls).
<b>Day 3</b>	Counting forward and backwards. Number line.	Estimate and count. Structure beads.	<b>Activity 3</b>	Number matching – pegs.
<b>Day 4</b>	Reinforce 4 and 5.	Different configurations of the same number.	<b>Activity 4</b>	Number puzzles to 5 (using number words).
<b>Day 5</b>	Reinforce numbers 1–5 (dot cards, number symbols, number words to recognise).			

## SENGETO A: ITHEMU 2 SIBUTSETELO SALOKUCUKETFWE SELIVIKI (EMAVIKI 4-7)

### Ithemu 2: Luhlelolisu Lwemsebenti

Liviki 4				
<b>INKHUNDLA YALOKUCUKETFWE: SIKHALA NABUNJWA (IJOMETHRI)</b>				
<b>SIHLOKO: Sikhundla, kuma nekubukeka ; kuchaza, kuhlunga nekucatsanisa i-objekthi lengu-3-D</b>				
<b>YETFULA LWATI LOLUSHA:</b> Hlunga ema-objekthi ngekuya kwekufanana nemehluko yawo, kunyenti ngakunye, kuncane ngakunye				
<b>TETAYETE:</b> Kubala ngemlomo 1-15, na-5-1, kubala ema-objekthi 1-7, umcondvo wetinombolo 1-4, kugcizelela umcondvo wabo bonkhe bobunjwa				
Umsebenti weliklasi lonkhe		Umsebenti loholwa nguthishela	Imisebenti yenzawo yekusebentela	
<b>Lilanga 1</b>	Gcizelela bonkhe bobunjwa/kufunwa kwabobunjwa.	Tetayete 1-4. Chaza i-objekthi ngasetikhundleni letehlukile. Kutetayeta bobunjwa netikhundla.	<b>Umsebenti 1</b>	Indingilizi/sikwele/calantsatfu angaphindze futsi abe ... (yakha sitfombe).
<b>Lilanga 2</b>	sikhwama sekufaka – vani bobunjwa labehlukene bese uyabachaza.		<b>Umsebenti 2</b>	Yakha bobunjwa usebentisa kwekusika emakukisi kanye nenhlama yekudlala.
<b>Lilanga 3</b>	Tfola bobunjwa eklasini usebentisa emagama esikhundla.		<b>Umsebenti 3</b>	Kwakhe ngemabhlokhi – sebentisa emabhlokhi/emabhlokhi eYunifiksi.
<b>Lilanga 4</b>	Baphenyi babobunjwa. Kunyenti ngakunye, kuncane ngakunye.		<b>Umsebenti 4</b>	Emaphazili (tincenye buncane bato bube li-12).
<b>Lilanga 5</b>	Indlela nesikhundla. Sihibe.			
Liviki 5				
<b>INKHUNDLA YALOKUCUKETFWE: TINOMBOLO, EMA-OPHARESHINI NEBUDLELWANE</b>				
<b>SIHLOKO: Ubona timphawu tetinombolo nemagama etinombolo; uyachaza, uyahlembisa aphindze acatsanise tinombolo</b>				
<b>YETFULA LWATI LOLUSHA:</b> Yetfula inombolo 5				
<b>KUTETAYETA:</b> Kubala ngemlomo 1-15, kubala ema-objekthi 1-7, kubala uye emuva kusuka ku-5 (tilandzelo), gcizelela umcondvo wetinombolo 1-4, kulandzelanisa tinombolo 1-4, kunyenti/kumbalwa kakhudlwana				
Imisebenti yeliklasi lonkhe		Umsebenti loholwa nguthishela	Imisebenti yenzawo yekusebentela	
<b>Lilanga 1</b>	Yetfula 5 (5 wetingobiyane endlini yesihlanu).	Matanisa timphawu tetinombolo, emagama etimphawu nemakhasi emacashati (4 ne-5). Kubala 1-7. Linganisela bese uyabala. Buhlalusakhiwo Imibono leyehlukene yenombolo yinye.	<b>Umsebenti 1</b>	Limethi lenhlama yekudlala 5.
<b>Lilanga 2</b>	Gcizelela 4 na-5 (timphawu tetinombolo nemagama etinombolo).		<b>Umsebenti 2</b>	Tinombolo telibhunganemacashati (goca linani lenombolo yemaphepha lelenele).
<b>Lilanga 3</b>	Kubala uye embili nasemuva. Umugcanombolo.		<b>Umsebenti 3</b>	Emapheksi – lamatana nenombolo.
<b>Lilanga 4</b>	Gcizelela 4 na-5.		<b>Umsebenti 4</b>	Emaphazili etinombolo 5 (usebentisa emagama etinombolo).
<b>Lilanga 5</b>	Gcizelela tinombolo 1-5 (emakhadi emadothi, timphawu tetinombolo, emagama etinombolo kutibona).			

Week 6				
<b>CONTENT AREA:</b> PATTERNS, FUNCTIONS and ALGEBRA				
<b>TOPIC:</b> Copies and extends simple repeating patterns; creates own patterns; describes the repeat in patterns				
<b>INTRODUCE NEW KNOWLEDGE:</b> Copy and extend simple patterns, create and explain own pattern, oral counting 1–20, count backwards from 7				
<b>PRACTISE:</b> Sequencing numbers 1–5, counting objects 1–7, making groups the same				
Whole class activities		Teacher-guided activity	Imisebenti yenzawo yekusebentela	
Day 1	Physical patterns.	Focus on number concept 1–5. Shake and break. Make equal groups. Patterns with a partner. Unifix blocks.	Activity 1	Extension of a pattern – drawing and colouring in. Snake patterns – using shapes. Pattern cards – using Unifix blocks. Threading patterns with beads.
Day 2	Identifying patterns in everyday objects.		Activity 2	
Day 3	Problem solving using patterns.		Activity 3	
Day 4	Making patterns using everyday objects.		Activity 4	
Day 5	Sound patterns.			
Week 7				
<b>CONTENT AREA:</b> DATA HANDLING				
<b>TOPIC:</b> Collects and sort objects; represents sorted collections of objects; discusses and reports on sorted collections of objects				
<b>INTRODUCE NEW KNOWLEDGE:</b> Draw a picture of collected objects, answer questions on own picture				
<b>PRACTISE:</b> Oral counting 1–20 and backwards from 7, counting objects 1–7, more than/less than/equal to, number concept 1–5, sorting and classifying				
Whole class activities		Teacher-guided activity	Imisebenti yenzawo yekusebentela	
Day 1	Collects and sort objects (round or square).	Estimating. Counting. Sorting collections of animals. Pictograph: more/less. Questioning.	Activity 1	Cutting and sorting transport pictures. Sorting waste objects. Shape graph (use cut out shapes). Sorting by colour.
Day 2	Sorting game. Poster 8.		Activity 2	
Day 3	Pictograph: How do you get to school?		Activity 3	
Day 4	Discuss Day 3 results (asking questions).		Activity 4	
Day 5	Collect and sort classroom objects.			

<b>Liviki 6</b>				
<b>INKHUNDLA YALOKUCUKETFWE: EMAPHETHINI, EMAFANGSHINI NE-ALJEBHRA</b>				
<b>SIHLOKO: Uyakopa aphindze elule emaphethini laphindzako lalula; utakhela akhe emaphethini; uchaza lamaphethini laphindzako</b>				
<b>YETFULA LWATI LOLUSHA: Kopa bese welula emaphethini lalula, uyakha futsi achaze emaphethini akhe, ubala ngemlomo 1–20, ubala aye emuva kusuka ku-7</b>				
<b>KUTETAYETA: Kulandzelanisa tinombolo 1–5, kubala ema-objekthi 1–7, kwakha ema-objekthi 1–7, kwenta emacembu afanane</b>				
<b>Imisebenti yeliklasi lonkhe</b>		<b>Umsebenti loholwa nguthishela</b>	<b>Imisebenti yenzawo yekusebentela</b>	
<b>Lilanga 1</b>	Emaphethini laphatsekako.	Kugcila kumcondvo wetinombolo 1–5. Khuhlutisa uphindze wehlukanise. Kwakha emacembu lalinganako. Emaphethini nantsanga. Emabhlokhi eYunifiksi.	<b>Umsebenti 1</b>  <b>Umsebenti 2</b> <b>Umsebenti 3</b>  <b>Umsebenti 4</b>	Kwelulwa kwephethini – dvweba bese ufaka umbala. Emaphethini enyoka – kusebetisa bobunjwa. Emakhadi emaphethini – kusebentisa emabhlokhi eYunifiksi. Kuphotsela emaphethini ngebuhlalu.
<b>Lilanga 2</b>	Kukhomba emaphethini kuma-objekthi emalanga onkhe.			
<b>Lilanga 3</b>	Kusombulula tinkinga ngekusebentisa emaphethini.			
<b>Lilanga 4</b>	Kwakha emaphethini kuma-objekthi emalanga onkhe.			
<b>Lilanga 5</b>	Emaphethini emsindvo.			
<b>Liviki 7</b>				
<b>INKHUNDLA YALOKUCUKETFWE: KUSEBENTA NGEDATHA</b>				
<b>SIHLOKO: Kugcoga nekuhlunga ema-objekthi; ukhombisa emagcogco ema-objekthi lahlungiwe; ukhuluma aphindze abike ngemagcogco ema-objekthi lahlungiwe</b>				
<b>YETFULA LWATI LOLUSHA: Dvweba sitfombe sema-objekthi lagcogciwe, phendvula imibuto lengesitfombe sakho</b>				
<b>KUTETAYETA: Kubala ngemlomo 1–20 nekubala uye emuva kusuka ku-7, Kubala ema-objekthi 1–7, kunyenti kuna/kuncane kuna/kuyalingana na, umcondvo wetinombolo 1–5, kuhlunga nekuhlembisa</b>				
<b>Imisebenti yeliklasi lonkhe</b>		<b>Umsebenti loholwa nguthishela</b>	<b>Imisebenti yenzawo yekusebentela</b>	
<b>Lilanga 1</b>	Kugcoga nekuhlunga ema-objekthi (layimbulunga noma sikwele).	Kulinganisela. Kubala. Kuhlunga emagcogco etilwane. Umdvwebonkhulumo: kunyenti/kuncane. Kubuta.	<b>Umsebenti 1</b> <b>Umsebenti 2</b> <b>Umsebenti 3</b>  <b>Umsebenti 4</b>	Kusika nekuhlunga titfombe tetitfutsi. Kuhlunga tintfo lesetingenamsebenti. Igrafu yabobunjwa (sebentisa bobunjwa labasikwe bakhishwa). Kuhlunga imibala.
<b>Lilanga 2</b>	Umdlalo wekuhlunga. Iphosta 8.			
<b>Lilanga 3</b>	Umdvwebonkhulumo: Uhamba ngani uma uya esikolweni?			
<b>Lilanga 4</b>	Khuluma ngemiphumela yeLilanga 3 (kubuta imibuto).			
<b>Lilanga 5</b>	Gcogca ema-objekthi aseklasini bese uyahlunga.			

# Workshop 5 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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# Lifomu Lekuhlolisisa Umhlanganosikolo 5

1. Lomhlanganosikolo ufinyelele yini ezingeni lebewulilindzele?

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2. Yini lokufundzile kulomhlanganosikolo lokubalulekile lokukusite kakhulu?

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3. Kukhona yini longakakutsandzi noma lokutfole kulukhuni?

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4. Utakusebentisa kanjani eklasini leLibanga R loku lokufundzile?

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5. Ikhona yini imibono lonayo yekwenta kancono imihlanganosikolo lechubekako?

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