

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



**Umhlanganosikolo 6 • Workshop 6
Inkhombandlela Yemfundzisi • Facilitator's Guide**

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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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Overview

Purpose

This is the sixth 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 assist teachers with the implementation of the Maths Programme in their classrooms, especially the Content Areas covered in Term 2 Weeks 8–10. Participants will reflect on their ongoing assessment of learners' progress and will document developmental concerns related to the learners that may require special interventions and support. Participants will also reflect on teaching strategies that strengthen learners' problem-solving skills.

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 2 Weeks 4–7
- ◆ To explore strategies to support teaching maths in Grade R
- ◆ To reflect on the Maths Programme's principles in the weekly plan
- ◆ To engage with the Maths Programme content of Term 2 Weeks 8–10 (Space and Shape (Geometry); Measurement; Numbers, Operations and Relationships)
- ◆ To apply knowledge of informal, continuous assessment to learning and teaching

Workshop content

- ◆ Opening and reflection (1 hour)
 - ◆ Session 1: Space and Shape (Geometry) (1 hour)
- TEA
- ◆ Session 2: Measurement (1 hour)
 - ◆ Session 3: Numbers, Operations and Relationships (1 hour)
- LUNCH
- ◆ Session 4: Numbers, Operations and Relationships (45 minutes)
 - ◆ Session 5: Term 2 Assessment (1 hour)
 - ◆ Closing activities (15 minutes)

Sibutsetelo

Inhloso

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

Inhloso yalomhlanganosikolo kusita bothishela kutsi bafezekise Luhlelo Lwetibalo emaklasini abo, ikakhulu Imikhakha Yalokucuketfwe leyentiwe kuThemu 2 Emaviki 8–10. Bahlanganyeli batawubuyeketa luhlolo lwabo loluchubekako lwenchubekembili yebafundzi futsi batawubhala phasi kutfutfuka labakhatsateka ngako lokuphatselene nebafundzi lokungadzinga tingenelelo nekwesekela lokukhetsekile. Bahlanganyeli batawuphindze futsi babuyekete emasubuciko ekufundzisa lacinisa emakhono ebafundzi ekusombulula tinkinga.

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 2 Emaviki 4–7
- ◆ Kwehlwaya emasubuciko kwesekela kufundzisa tibalo kuLibanga R
- ◆ Kubuyeketa imitsetfosimiso yeLuhlelo Lwetibalo ekuhleleni kwanjalo ngeliviki
- ◆ Kusebentisa lokucuketfwe kweLuhlelo Lwetibalo kweThemu 2 Emaviki 8–10 (Sikhala naBunjwa (Ijomethri); Kulinganisa; Tinombolo, Ema-ophareshini neBudlelwane)
- ◆ Kusebenta luhlolo lolungakahleleki, loluchubekako ekufundziseni nasekufundzeni

Lokucuketfwe kwemhlanganosikolo

- ◆ Kuvula nekubuyeketa (1 li-awa)
 - ◆ Iseshini 1: Sikhala naBunjwa (Ijomethri) (1 li-awa)
- LITIYA
- ◆ Iseshini 2: Kulinganisa (1 li-awa)
 - ◆ Iseshini 3: Tinombolo, Ema-ophareshini neBudlelwane (1 li-awa)
- KUDLA KWASEMINI
- ◆ Iseshini 4: Tinombolo, Ema-ophareshini neBudlelwane (45 emaminitisi)
 - ◆ Iseshini 5: Luhlelo lweThemu 2 (1 li-awa)
- Imisebenti yekuvala (15 emaminitisi)

Preparation

- ◆ PPT welcome and outcomes
- ◆ Read:
 - Concept Guide*, pages 114–137
 - Activity Guide: Term 2*, pages 18–21 and pages 138–189
 - Appendix A: Term 2 Weekly Content Summary (Weeks 8–10)
- ◆ Remind participants to bring their *Concept Guide*, *Activity Guide: Term 2*, an example of their assessment of a learner and their evaluation notes from the *Take back to school* task from Workshop 5.
- ◆ Place a *Resource Kit* on each group's table.
- ◆ Cut out a set of shapes from Appendix B for each group. Place the shapes in a separate envelope for each group.

Materials

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

Kulungiselela

- ◆ PPT kwemukela nemiphumela
- ◆ Funda:
 - Inkhombandlela Yemcondvo*, emakhasi 114–137
 - Inkhombandlela Yemsebenti: Ithemu 2*, emakhasi 18–21 nemakhasi 138–189
 - Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 8–10)
- ◆ Khumbuta bahlanganyeli kutsi bete ne*Nkhombandlela Yemcondvo*, *Inkhombandlela Yemsebenti wabo: Ithemu 2*, sibonelo seluhlolo lwabo lwemfundzi kanye nemanotsi abo ekulinganisa kuMsebenti wekubuyela emuva esikolweni lokuMhlangasikolo 5.
- ◆ Beka *Ikhithi Yetinsita* etafuleni lelicembu ngalinye.
- ◆ Sika ukhiphe isethi yabobunjwa kuSengeto B selicembu ngalinye. Beka labobunjwa emvilophini leyehlukile ecenjini ngalinye.

Emamethiriyeli

- ◆ Liphepha lefliphushadi, emakoki
- ◆ *Ikhithi Yetinsita* yelicembu ngalinye
- ◆ *Incwadzi Yemaphosta* yelicembu ngalinye

Opening and reflection

1 hour

Facilitator's notes

- ◆ PPT: Open the session and read through the agenda and learning outcomes for the workshop.
- ◆ Ask participants to reflect on their implementation of Term 2 Weeks 4–7 of the Maths Programme and their observations and assessment of learners.
- ◆ Participants discuss the questions in **Activity 1** in small groups. Spend time with each group during the discussions, joining in where appropriate.

Here is the *Take back to school task* from Workshop 5.



Take back to school task (Workshop 5)

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 used for maths assessment to the next workshop.
4. Bring a completed assessment record for one learner to the next workshop.
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.



Activity 1

1. In your groups, discuss your progress in implementing Term 2 Weeks 4–7.
 - ◆ What worked well (strengths)?
 - ◆ What did not work well (challenges)?
 - ◆ What could you do to improve teaching and learning in your classroom?

Record the main points of your discussion on flipchart paper to share with the other groups later.

Emanotsi emfundzisi

- ◆ PPT: Vula iseshini bese ufundza lonkhe luhlelo lwemhlangano kanye nemiphumela yekufundza yalomhlangano.
- ◆ Cela bahlanganyeli babuyekete kufundza Ithemu 2 Emaviki 4–7 eLuhlelo Lwetibalo kanye nekubukisisa kwabo nekuhlola bafundzi.
- ◆ Bahlanganyeli bakhulumisana nge**Msebenti 1** ngemacembu lamancane. Citsa sikhatsi nelicembu ngalinye ngetikhatsi setingcogco, ungene lapho kufanele khona.

Nawu *Umsebenti wekubuyisela emuva esikolweni* lokuMhlanganosikolo 5.



Umsebenti wekubuyela emuva esikolweni (Umhlanganosikolo 5)

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. Tfola nanoma ngukuphi kukhatsateka mayelana nanoma ngukuphi kubamba kwemfundzi ngmicondvo yetibalo angacapheli lokuvelako.
3. Wota nemakhophi emarubhrikhi lasetjentiswe kuhlola tibalo kumhlanganosikolo lolandzelako.
4. Wota nelirekhodi lekuhlola leliphelele lemfundzi munye kumhlanganosikolo lolandzelako.
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.



Umsebenti 1

1. Emacenjini enu, khulumisanani ngenchubekembili yenu ekufundziseni Ithemu 2 Emaviki 4–7.
 - ◆ Ngukuphi lokusebente kahle kakhulu (lokukahle)?
 - ◆ Ngukuphi lokungakasebenti kahle kakhulu (tinsayeya)?
 - ◆ Yini longayenta kwenta kancono kufundzisa nekufundza eklasini lakho?

Bhala phasi emaphuzu labalulekile engcogco yakho ephepheni lefliphushadi kute kutsi wabelane nalamanye emacembu ekuhambeni kwesikhatsi.

2. Discuss how successful you were in:
 - ◆ recording notes about individual learners after each teacher-guided activity in Weeks 4–7.
 - ◆ completing the Term 2: Record of Continuous Assessments on pages 190–193 of *Activity Guide: Term 2* for each learner.

Record the main points of your discussion on your flipchart paper.

3. Discuss one learner’s areas of success and/or difficulty and how you recorded these. Record the main points of your discussion on your flipchart paper.

Facilitator’s notes

- ◆ Ask each group to share the main points from their discussion. Remind participants to only add points that other groups have not already mentioned.
- ◆ This discussion is intended to reflect on the process of capturing learners’ progress over a period of weeks. Participants were asked to observe learners as they perform tasks in whole class and small group activities and to capture this information. The discussion is intended to help teachers recognise how to use the Record of Continuous Assessments to look for patterns of competence in the learners and to share the assessment tools and processes they use in their schools.

In the *Take back to school task* in Workshop 5 you were asked to bring copies of the learner assessment rubrics you use as part of the Maths Programme to this workshop. In Activity 2, your group will discuss these rubrics and how assessment information is captured and shared. In Session 5, we will discuss rubrics in more detail.



Activity 2

1. In your groups, share examples of maths rubrics you have used as part of your assessment process.
2. Discuss how you capture the learners’ progress on the SA-SAMS system and how this information is shared with parents.

Record the main points of your discussion on flipchart paper to share with the other groups later.

2. Khuluma ngekutsi uphumelele kanjani:
 - ◆ ekubhaleni emanotsi ngebafundzi labatsite ngemuva kwemsebenti loholwa nguthishela ngamunye kuMaviki 4–7.
 - ◆ ekwenteni ucedze Ithemu 2: Lirekhodi Leluhlolo Loluchubekako kumakhasi 190–193 e*Nkhombandlela Yemsebenti: Ithemu 2* kwemfundzi ngamuye.

Bhala phasi emaphuzu labalulekile engcogco yakho ephepheni lefliphushadi

3. Khuluma ngetindzawo lapho umfundzi aphumelele khona kanye/noma letimatima nekutsi loku ukubhale kanjani. Bhala phasi emaphuzu labalulekile engcogco yakho ephepheni lefliphushadi
-
-
-

Emanotsi emfundzisi

- ◆ Cela licembu ngalinye kutsi labelane emaphuzu labalulekile enkhulumiswano. Khumbuta bahlanganyeli kutsi bengete emaphuzu lamanye emacembu lasengakashiwo.
- ◆ Lenkhulumiswano yentelwe kubuyeketa inchubo yekubhala inchubekelebili yemfundzi kulamaviki. Bahlanganyeli bacelwa kutsi babukisise ngesikhatsi benta umsebenti weliklasi lonkhe nemisebenti yemacembu kanye nekubhala phasi lolwatiso. Lencogco yentelwe kusita bothishela kutsi babone kutsi baluRekhode kanjani Luhlole Loluchubekako kute bafune emaphethini elikhono kubafundzi kanye nekwabelana ngemathulusi netinchubo tekuhlola labatisebentisako esikolweni sabo.

Ku*Msebenti wekubuyela emuva esikolweni* kuMhlanganosikolo 5 nicelwe kutsi nite nemakhophi emarubhrikhi njengencye yeLuhlelo Lwetibalo kulomhlanganosikolo. Ku*Msebenti 2*, licembu lakho litawukhulumisana ngalamarubhrikhi nekutsi lwatiso lwekuhlola lubhalwe luphindze futsi kwabelwane ngalo kanjani. Kuseshini 5, sitawukhuluma kabanti ngemarubhrikhi.



Umsebenti 2

1. Emacenjini enu, yabelanani ngetibonelo temarubhrikhi etibalo lotisebentisile enchubeni yakho yeluhlolo.
2. Chaza kutsi uyibhala kanjani inchubekelebili yebafundzi enchubeni ye-SA-SAMS nekutsi lolwatiso lwabelwa batali kanjani.

Bhala phasi emaphuzu labalulekile engcogco yakho ephepheni lefliphushadi kute kutsi wabelane nalamanye emacembu ekuhambeni kwesikhatsi.

 **Video 1**

Watch the video of a teacher observing a group of learners completing a maths activity. Listen to her talking about how she observes and records her learners' progress and how she deals with their different levels of competence.

Discuss how you deal with learners who are not achieving success in the structured weekly plans, as well as those learners who exceed expectations.

The **level principle**: Not all learners progress at the same speed. Some learners need more time to consolidate a skill or concept while others grasp ideas more quickly. The challenge for teachers is to accommodate learners at different levels and to adapt the weekly plan to provide support or extension activities where necessary.



Facilitator's notes

- ◆ Discuss the need for a differentiated approach to teaching and why this is beneficial for all the learners in the class. Link the discussion to the **level principle**.
- ◆ Throughout this workshop make links to the **level principle** and differentiation strategies for dealing with learners who are not achieving success in the structured weekly plans, as well as those learners who exceed expectations.



Ividiyo 1

Bukela levidiyo yathishela abukisa licembu lebafundzi benta bacedzela umsebenzi wetibalo. Mlalele uve kutsi ubukisisa aphindze futsi ayibhale kanjani inchubekelebili yebafundzi bakhe nekutsi ubukana njani nemazinga abo ekwati.

Khuluma ngekutsi ubukana njani nebafundzi labangayitfoli inchubekelebili kumasu lahleliwe eliviki, kanye nalabo bafundzi labasebenta bengce lizinga lelilindzelekile.

Umtsetfomgomo welizinga: Akusibo bonkhe bafundzi labachubekela embili ngesikhatsi lesifananako. Labanye bafundzi badzinga sikhatsi lesinyenti sekuhlanganisa likhono noma umcondvo kantsi labanye babamba imibono masinyane. Insayeya bothishela labanayo kwemukela bafundzi emazingeni lehlukene bese benta kutsi luhlelo lwanjalo ngeliviki luniketa kwesekeleka noma imisebenti leyeluliwe lapho kunesidzingo khona.



Emanotsi emfundzisi

- ◆ Khuluma ngesidzingo sendlela leyehlukile yekufundzisa nekutsi kungani loku kuyinzuzo kubo bonkhe bafundzi eklasini. Chumanisa lengcogco **nemtsetfomgomo welizinga**.
- ◆ Kuwo wonkhe lomhlanganosikolo yenta luchumano **nemtsetfomgomo welizinga** nemasubuciko ekwehlukana ekubukana nebafundzi labangayitfoli imphumelelo kumasubuciko lahleliwe eliviki, kanye nalabo bafundzi labasebenta bengce lizinga lelilindzelekile.

Session 1: Space and Shape (Geometry)

1 hour

This workshop focuses on teaching the content of Term 2 Weeks 8–10. The focus of Term 2 Week 8 is Space and Shape (Geometry).

Terms 1–4 Content overview: Space and Shape (Geometry)

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



Activity 3

1. What Space and Shape content has already been introduced in Terms 1 and 2?

2. What concepts still need to be covered in Term 2?

Facilitator's notes

- ◆ The aim of **Activity 3** is to highlight the content of CAPS and the extended content provided in the Maths Programme.
- ◆ Refer participants to pages 126–131 of the *Concept Guide*: follow directions (3.1) and crossing the midline (3.4).
- ◆ Draw participants' attention to the Week 8 content in the New knowledge box on page 138 of *Activity Guide: Term 2*.
- ◆ Remind participants of Space and Shape (Geometry) content covered in previous weeks.

Iseshini 1: Sikhala naBunjwa (Ijomethri)

1 li-awa

LoMhlanganosikolo ugicile ekufundziseni lokucuketfwe kuThemu 2 Emaviki 8–10.
Kugcila kweThemu 2 Liviki 8 Sikhala naBunjwa (Ijomethri).

Ithemu1–4 Sibutsetelo Salokucuketfwe: Iseshini 1: Sikhala naBunjwa (Ijomethri)

Fundza sibutsetelo salokucuketfwe seSikhala naBunjwa (Ijomethri) emkhatsini 126–131 e*Nkhombandlela Yemcondvo* bese uyenta ucedza Umsebenti 3.



Umsebenti 3

1. Ngukuphi lokucuketfwe kweSikhala naBunjwa lesekuvele kungenisiwe kuThemu 1 na-2?

2. Nguyiphi imicondvo lesadzinga kufundziswa kuThemu 2?

Emanotsi emfundzisi

- ◆ Inhloso ye**Msebenti 3** kugcamisa lokucuketfwe yi-CAPS kanye nalokucuketfwe lokweluliwe lokuniketwe kuLuhlelo Lwetibalo.
- ◆ Tjela bahlanganyeli bafundze emakhasi 126–131 e*Nkhombandlela Yemcondvo*: landzela tindlela (3.1) kanye nekwendlula umugcamkhatsi (3.4).
- ◆ Yenta bahlanganyeli banake lokucuketfwe kweLiviki 8 ebhokisini leLwati lolusha kulikhasi le-139 ku*Nkhombandlela Yemsebenti: Ithemu 2*.
- ◆ Khumbuta bahlanganyeli ngalokucuketfwe kuSikhala naBunjwa (Ijomethri) lokufundvwe emavikini lendlulile.

Properties of shapes

Learners need many opportunities to compare and sort shapes according to their properties and to describe the similarities and differences of shapes.

Facilitator's notes

- ◆ Hand out one set of shapes from Appendix B to each group.
- ◆ Ask participants to sort the shapes. Don't prompt them. Once they have sorted them, ask: *How did you sort the shapes?* Ask participants to explain why they sorted the shapes in this way.
- ◆ Now ask participants to sort the shapes in another way. Ask participants to explain why they sorted the shapes in this way.
- ◆ Make sure that the following sorting criteria are mentioned:
 - shape
 - size
 - number of sides
 - number of corners
 - straight or curved lines.
- ◆ Encourage participants to use the correct maths vocabulary to describe the properties of shapes, e.g. *sides, corners, lines*.



Activity 4

The facilitator will give your group a set of shapes.

1. Sort the shapes.
2. Discuss why you sorted them in this way.
3. Sort the shapes in another way.
4. Discuss why you sorted them in this way.

Term 2 Content Summary: Week 8

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 8–10). Read the content overview for Week 8: Space and Shape (Geometry) on page 20 of *Activity Guide: Term 2*.

The Space and Shape (Geometry) Content Area was also the focus of Term 2 Weeks 3 and 4. In previous workshops, you have discussed the Space and Shape concepts that need to be covered.

The Weekly Content Summary for Week 8 provides an overview of planning for the week: whole class activities, teacher-guided activities and workstation activities done in independent small groups.

Emaphrophathi abobunjwa

Bafundzi badzinga emafuba lamanyenti kucatsanisa nekuhlunga bobunjwa ngekuya ngemaphrophathi abo kanye nekuchaza kufanana nekwehlukana kwabobunjwa.

Emanotsi emfundzisi

- ◆ Nika licembu ngalinye yinye isethi yabobunjwa lekuSengeto B.
- ◆ Cela bahlanganyeli bahlunge bobunjwa. Ungabakhutsati. Uma seabacedzile kubahlunga, buta: *Ubahlunge kanjani labobunjwa?* Cela bahlanganyeli bachaze kutsi kungani bahlunge labobunjwa ngalendlela.
- ◆ Manje cela bahlanganyeli bakho kutsi bahlunge labobunjwa ngalinye indlela. Cela bahlanganyeli bachaze kutsi kungani labobunjwa babahlunge ngalendlela lababahlunge ngayo.
- ◆ Yenta siciniseko sekutsi lamaphuzu lalandzelako ayashiwo:
 - bunjwa
 - isayizi
 - linani lenombolo yemacala
 - linani lenombolo yemakona
 - imigca legobekile noma lecondzile.
- ◆ Khutsata bahlanganyeli basebentise silulumagama setibalo lesifanele kuchaza emaphrophathi abobunjwa, sib. *emacala, emakona, imigca*.



Umsebenti 4

Umfundzisi utawunika licembu lakho isethi yabobunjwa.

1. Hlunga labobunjwa.
2. Khuluma ngekutsi kungani ubahlunge ngalendlela.
3. Hlunga labobunjwa ngalinye indlela.
4. Khuluma ngekutsi kungani ubahlunge ngalendlela.

Ithemu 2 Sibutsetelo Salokucuketfwe: Liviki 8

Kufundza Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 8–10).

Fundza sibutsetelo salokucuketfwe seLiviki 8: Sikhala naBunjwa (Ijomethri) ekhasini le-21 le*Nkhombandlela Yemsebenti: Ithemu 2*.

Sikhala naBunjwa (Ijomethri) Umkhakha Walokucuketfwe nawo bewungulokunye lokugcilwe kuko kuThemu 2 Emaviki 3 na-4. Kulemihlanganosikolo leyendlulile, ukhulumile ngemcondvo weSikhala naBunjwa lofanele kutsi ufundziswe.

Sibutsetelo Salokucuketfwe seLiviki 8 siniketa sibutsetelo sekuhlelela liviki: imisebenti yeliklasi lonkhe, imisebenti leholwa nguthishela kanye nemisebenti yenzawo yekusebentela leyentiwa ngemacembu lamancane latimele.

Facilitator's notes

- ◆ The aim of **Activity 5** is for teachers to recognise the link between:
 - the CAPS content in the Term 1–4 content overview on pages 126–131 of the *Concept Guide*
 - the content overview on page 20 of *Activity Guide: Term 2*
 - Appendix A: Term 2 Weekly Content Summary (Weeks 8–10)
 - the daily activities in Week 8 of *Activity Guide: Term 2* (pages 138–153).
- ◆ In the whole group feedback session make sure that participants are familiar with the structure of and planning for the teaching of Week 8. Help them to identify the links between the suggested activities in *Activity Guide: Term 2* and the content overview. Link this discussion back to how the content of the week fits with CAPS.



Activity 5

1. Take a few minutes to familiarise yourself with the Week 8 content in Appendix A: Term 2 Weekly Content Summary (Weeks 8–10).
2. Match this with the content on pages 138–153 of *Activity Guide: Term 2*. Identify how the whole class, teacher-guided and workstation activities link with the Week 8 content in Appendix A.

Emanotsi emfundzisi

- ◆ Inhloso ye**Msebenti 5** kutsi bothishela babone luchumano emkhatsini:
 - walokucuketfwe yiCAPS kuThemu kusibutsetelo salokucuketfwe 1–4 kumakhasi 126–131 e*Nkhombandlela Yemcondvo*
 - sibutsetelo salokucuketfwe kulikhasi 21 le*Nkhombandlela Yemsebenti: Ithemu 2*
 - Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Sangeliviki (Emaviki 8–10)
 - imisebenti yanjalo ngelilanga kuLiviki 8 le*Nkhombandlela Yemsebenti: Ithemu 2* (emakhasi 138–153).
- ◆ Ngeseshini yekwetfula umbiko welicembu lonkhe yenta sicinisekise kutsi bayalwati luhlaka nekuhlela kufundzisa kuLiviki 8. Sibasita kukhomba kuchumana emkhatsini wemisebenti lephawuliwe ku*Nkhombandlela Yemsebenti: Ithemu 2* kanye nesibutsetelo salokucuketfwe. Chumanisa lengcogco nalokusemuva mayelana nekutsi lokucuketfwe kwaleliviki kungena ku-CAPS.



Umsebenti 5

1. Tsatsa emaminitsi lambalwa utetayete lokucuketfwe kweLiviki 8 Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 8–10).
2. Matanisa loku kanye nalokucuketfwe kumakhasi 138–153 e*Nkhombandlela Yemsebenti: Ithemu 2*. Khomba kutsi umsebenti welicembu lonkhe, loholwa nguthishela kanye newenzawo yekusebentela ichumana kanjani nalokucuketfwe kweLiviki 8 kuSengeto A.

Session 2: Measurement

1 hour

The focus of Term 2 Week 9 is Measurement.

Terms 1–4 Content overview: Measurement

Refer to the content overview for Measurement on pages 132–135 of the *Concept Guide*.

Facilitator's notes

- ◆ The aim of **Activity 6** is to highlight the content of CAPS.
- ◆ Remind teachers that assessment in Grade R should be based on CAPS, and that the additional Maths Programme content is for enriching the teaching and learning experience.



Activity 6

1. What Measurement concepts are covered in Term 2?

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

Directly comparing objects: length

In Term 1 of the Maths Programme the focus of the Measurement Content Area was time (day, night, days of the week, sequencing events, etc.) and the height chart. In Term 2 Week 9, the focus is on using non-standard units to measure and compare length.



Activity 7

1. **Direct comparison**

Choose a partner to stand next to. The rest of your group members should compare your heights.

- ◆ Who is taller? _____
- ◆ Who is shorter? _____
- ◆ Find a third person who is taller than both of these people.

Iseshini 2: Kulinganisa

1 li-awa

Kugcila kweThemu 2 Liviki 9 kuLinganisa.

Ithemu 1–4 Sibutsetelo Salokucuketfwe: Kulinganisa

Fundza Inkhundla Yalokucuketfwe yeKulinganisa kumakhasi 132–135 eNkhombandlela Yemcondvo.

Emanotsi emfundzisi

- ◆ Inhloso ye**Msebenti 6** kugcamisa lokucuketfwe yiCAPS.
- ◆ Khumbuta bothishela kutsi luhlolo kuLibanga R lufanele kutsi lususelwe kuCAPS, nekutsi futsi lokucuketfwe kweLuhlelo Lwetibalo lokwengetiwe kwekwenta kancono kufundzisa nekufundza.



Umsebenti 6

1. Nguyiphi imicondvo yeKulinganisa lefundziswe kuThemu 2?

2. Yini umehluko emkhatsini walokucuketfwe kweLuhlelo Lwetibalo kanye nelokucuketfwe yiCAPS?

Kucatsanisa-ngco ema-objekthi: budzekuphakama

KuThemu1 weLuhlelo Lwetibalo kugcila kweMkhakha Walokucuketfwe Wetibalo bekusikhatsi (lilanga, buso, emalanga eliviki, kulandzelanisa tenteko) kanye nelishadi lebudzekuphakama. KuThemu 2 Liviki 9, kugcila ekusebentiseni emayunithi langedkho ezingeni kulinganisa nekucatsanisa budzekuphakama.



Umsebenti 7

1. **Kucatsanisa-ngco**

Khetsa umlingani lotawuma eceleni kwakhe. Onkhe lawa lamanye emalunga elicembu afanele kutsi acatsanise budzekuphakama bakho.

- ◆ Ngubani lomudze kakhudlwana? _____
- ◆ Ngubani lomfishane kakhudlwana? _____
- ◆ Tfolo umuntfu wesitsatfu lomudze kakhudlwana kunalabantfu lababili.

2. Using non-standard units of measurement

Choose three objects (e.g. a key, a cellphone, a purse).

- ◆ Use one of these items at a time to measure this *Participant's Workbook*.
- ◆ Report your findings to the group.

Facilitator's notes

- ◆ Point out that the non-standard units used to measure the *Participant's Workbook* are not the same size. When participants compare their measurements (how many units, e.g. the key), they will recognise that the choice of the unit determines how many of a unit there are in the total number of units – so, the different objects used for measuring will result in a different number of units in the answer (total number of units), e.g. the *Participant's Workbook* measures 17 keys versus 4 cellphones.
- ◆ Make participants aware that the size of a non-standard unit can vary between people, e.g. one person may have a smaller cellphone than another. This will also result in a different total number of units.
- ◆ Observe participants as they measure and make sure that the non-standard unit is being used accurately (end-to-end).

Term 2 Content Summary: Week 9

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 8–10). Read the content overview for Week 9: Measurement on page 20 of *Activity Guide: Term 2*.



Activity 8

1. What are the topics for Week 9?

2. What new knowledge is introduced in this week?

3. What skills from previous weeks are practised?

2. Kusebentisa emayunithi ekulinganisa langekho ezingeni

Khetsa ema-objekthi lamatsatfu (sib. sikhiya, makhalekhukhwini, sipashi).

- ◆ Sebentisa ngakunye kwaletintfo leti sikhatsi ngasinye kulinganisa *Incwadzi Yekusebentela Yemhlanganyeli*.
 - ◆ Bikela licembu ngaloko lokutfolile.
-
-
-

Emanotsi emfundzisi

- ◆ Khombisa kutsi emayunithi ekukala langekho ezingeni lasetjentsiwe kulinganisa *Incwadzi Yekusebentela Yemhlanganyeli* akalingani ngesayizi. Uma bahlanganyeli bacatsanisa kukala kwawo (mangaki emayunithi, sib. sikhiya), batawubona kutsi likhetselo lemayunithi lincuma kutsi mangaki emayunithi lakhona kusamba semayunithi – ngako-ke, lama-objekthi lehlukene lasetjentsiwe kukala atawuba nelinani lenombolo yemayunithi lehlukene emphendvulweni (linani lenombolo yemayunithi), sib. *Incwadzi Yekusebentela Yemhlanganyeli* tikhya leti-17 timelene nabomakhalekhukhwini laba-4.
- ◆ Yenta bahlanganyeli bacaphele isayizi yeyunithi lengekho ezingeni ingahluka emkhatsini webantfu, sib, umuntfu munye angaba namakhalekhukhwini lomncane kunalomunye. Loku kutawuphindze futsi kube nemphumela wesamba senombolo yemayunithi lehlukene.
- ◆ Bukisisa bahlanganyeli ngesikhatsi bakala futsi benta siciniseko sekutsi emayunithi ekulinganisa langekho ezingeni asetjentsiwa ngalokunembako (kusuka ekugcineni kuye ekugcineni).

Ithemu 2 Sibutsetelo Salokucuketfwe: Liviki 9

Fundza Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 8–10).

Fundza sibutsetelo salokucuketfwe seLiviki 9: Kulinganisa kulikhasi 21

le*Nkhombandlela Yemsebenti: Ithemu 2*.



Umsebenti 8

1. Ngutiphi tihloko teLiviki 9?

2. Nguluphi lwati lolusha lolungeniswako kuleliviki?

3. Ngumaphi emakhono emaviki lendlulile lafundziswa?

Read the whole class activities for Week 9 on pages 154–165 of *Activity Guide: Term 2*.



Activity 9

In your groups, discuss how length is taught during the whole class activities in Week 9.

1. What could you do if a learner is not yet able to compare and order objects according to length – long/longer and short/shorter by the end of Week 9?

Focus on language, on practical activities. Provide more repetition, more discussion, more input from the teacher. Pair learner with a peer.

2. What could you do if some learners complete a workstation activity successfully quicker than planned?

Prepare appropriate free choice activities. Give them a ‘big’ task to do e.g. use your shoe to measure one side of the classroom.

Fundza yonkhe imisebenti yeliklasi lonkhe yeLiviki 9 kumakhasi 154–165
eNkhombandlela Yemsebenti: Umsebenti 2.



Umsebenti 9

Emacenjini enu, khulumani ngekutsi budze bafundziswa ngesikhatsi semisebenti yeliklasi lonkhe kuLiviki 9.

1. Bewungenta njani uma ngabe umfundzi usengakakhoni kucatsanisa nekuhlela ema-objekthi ngekuya ngebudze – kudze/kudze kakhudlwana kanye nakufishane/kufishane kakhudlwana ekupheleni kweLiviki 9?

Gcila elulwimini, kumisebenti yekutetayeta. Yenta kube nekuphindzaphindza lokunyenti, kukhulumisana lokunyenti, kufaka ligalelo lelinyenti kwabothishela. Beka umfundzi nemlingani.

2. Yini longayenta uma bafundzi benta bacedza umsebenti wenzawo yekufundza ngemphumelelo masinyane kunaloko bekuhleliwe?

Lungiselela imisebenti yekutikhetsela ngekululeka. Banike umsebenti 'lomkhulu' kutsi bawente sib. sebentisa sicutfulo sakho kulinganisa licala linye lweluhlangotsi lweliklasi.

Session 3: Numbers, Operations and Relationships

1 hour

The focus of Term 2 Week 10 is Numbers, Operations and Relationships.

Terms 1–4 Content overview: Numbers, Operations and Relationships

The Numbers, Operations and Relationships Content Area was also the focus in Weeks 1, 2 and 5 of Term 2, and you discussed the number concepts that need to be covered in previous workshops. Look at the content overview for Numbers, Operations and Relationships on pages 114–123 of the *Concept Guide*.



Activity 10

What number concepts still need to be covered in Term 2?

Problem solving

Teachers need to provide learners with many opportunities to solve problems so that they can apply their maths knowledge and skills in new contexts. All games and activities involve problem solving. Word problems in maths introduce a specific type of problem solving that involves solving addition, subtraction, multiplication and division problems. In Grade R learners solve addition and subtraction problems by counting and using concrete apparatus to help them find a solution. They use grouping and one-to-one sharing to solve multiplication and division problems.

The biggest challenge in presenting word problems to learners, is to ensure that there is appropriate questioning and use of language. When teachers present a word problem, they need to listen carefully to learners' responses and guide them to solve the problem using a strategy that is suitable for their level of understanding.

The posters in the *Poster Book* have been designed to provide learners with a set of pictures that relate to their lives and provide contexts for solving real-life problems.

In Week 10 Day 4 (page 180 of *Activity Guide: Term 2*), Poster 1 is used to encourage learners to solve problems that involve numbers 1–5.

Iseshini 3: Tinombolo, Ema-ophareshini neBudlelwane

1 li-awa

Kugcila kweThemu 2 Liviki 10 Tinombolo, Ema-ophareshini neBudlelwane.

Ithemu 1–4 Sibutsetelo Salokucuketfwe: Tinombolo, Ema-ophareshini neBudlelwane

Umkhakha Walokucuketfwe weTinombolo, Kubala kanye Nebudlelwane nawo bewugcile kuLiviki 1, 2 nele-5 eThemu 2, futsi ukhulume ngemicondvo ledzinga kufundziswa kumihlanganosikolo leyendlulile. Buka lokucuketfwe sibutsetelo seTinombolo, Ema-ophareshini neBudlelwane kumakhasi 114–123 eNkhombandlela Yemcondvo.



Umsebenti 10

Nguyiphi imicondvo lesadzinga kufundziswa kuThemu 2?

Kusombulula tinkinga

Bothishela badzinga kutsi banike bafundzi ematfuba lamanyenti ekusombulula tinkinga kute kutsi bakwati kusebentisa lwati lwabo lwetibalo nemakhono kutimo letinsha. Yonkhe imidlalo nemisebenti ifaka ekhatsi kusombulula tinkinga. Tinkinga tetibalo kutibalo tingenisa luhlobo lolutsite lwekusombulula tibalo letifaka ekhatsi kusombulula kuhlanganisa, kususa, kuphindzaphindza kanye netibalo tekwehlukhanisa. KuLibanga R bafundzi basombulula tibalo ngekubala nekusebentisa ema-apharethasi kubasita kutfolo sisombululo. Basebentisa kuhlela ngemacembu nekwabelana ngakunye nakunye kusombulula tinkinga tekuphindzaphindza nekwehlukhanisa.

Insayeya lenkhulu ekwetfuleni tibalo temagama kubafundzi, kucinisekisa kutsi kunekubutwa kwemibuto nekusetjentiswa kwelulwimi. Uma bothishela betfula inkinga yemagama, badzinga kulalelisisa timphendvulo tebafundzi bese babakhombindlela yekusombulula lenkinga basebentisa lisubuciko lelifanele lizinga labo lekuvisisa.

LeNcwadzi Yemaphosta yentelwe kunika bafundzi isethi yetitfombe letihambisana netimphilo tabo letiphindze futsi tinikete lokucuketfwe kwekusombulula tinkinga temphilo mbamba.

KuLiviki 10 Lilanga 4 (likhasi 181 leNkhombandlela Yemsebenti: Ithemu 2), Iphosta 1 isetjentiselwa kusombulula tinkinga letifaka ekhatsi tinombolo 1–5.

Facilitator's notes

- ◆ In **Activity 11** participants refer to Poster 1 to generate a series of appropriate number-related questions.
- ◆ These questions cover the following skills: comparing, matching, counting, addition, subtraction, grouping and equal sharing. They should involve a range of vocabulary. Remind participants that the focus of their questions should be on maths and that the language used should be clear and simple. Use the examples below to wrap up **Activity 11**.

Comparing/one-to-one correspondence (matching)

- *Are there enough spoons for each bowl?*
- *How many more spoons do we need so that there is one spoon for each bowl?*
- *Are there more glasses on the top shelf or on the bottom shelf?*

Counting

- *How many glasses are there in the cupboard?*
- *Are there enough chairs for the number of people in the kitchen?*

Addition

- *There are four green apples and four red apples in the fridge. How many apples are there in the fridge?*
- *Thami has three blocks. There are four blocks on the floor. How many blocks are there altogether?*

Subtraction

- *There are six eggs in the door of the fridge. Dad cooks four eggs. How many eggs will be left in the fridge?*
- *There are five mugs in the kitchen. Four mugs are white. How many mugs are yellow?*
- *There are eight apples in the fridge. Four apples are green. How many apples are red?*

Grouping

- *Each child has two eyes. How many eyes would there be altogether on three children?*

Equal sharing

- *There are three oranges in a bag. Three children share the oranges. How many oranges will each child get?*



Activity 11

In your groups, refer to Poster 1. Think of appropriate word problems for each of these skills:

- ◆ comparing
- ◆ matching
- ◆ counting
- ◆ addition
- ◆ subtraction
- ◆ grouping
- ◆ equal sharing.

Emanotsi emfundzisi

- ◆ Ku**Msebenti 11** bahlanganyeli babuka Iphosta kute bakhe luchungengechunge lwemibuto lefanele lephatselene netinombolo.
- ◆ Lemibuto ifaka ekhatsi lamakhono lalandzelako: kucatsanisa, kumatanisa, kubala, kuhlanganisa, kususa, kucembula (kuhlela ngemacembu) kanye nekwaba ngekulingana. Ifanele kutsi ifake ekhatsi silulumagama lesinyenti. Khumbuta bahlanganyeli kutsi kugcila kwalemibuto kufanele kube kutibalo futsi nelulwimi lolusetjentiswako lufanele kutsi lucace luphindze futsi lube melula. Sebentisa letibonelo letingentasi kusonga **Umsebenti 11**.

Kucatsanisa/kucondzana kwakunye nakunye (kumatanisa)

- *Tipunu letikhona tenela indishi ngayinye yini?*
- *Tingaki letinye tipunu lesitidzingako kute kutsi kube nesipunu sinye sendishi ngayinye?*
- *Kunetingilazi letinyenti yini ngetulu kwelishelufu noma ngentasi kwelishelufu?*

Kubala

- *Tingaki tingilazi letikhona ekhabetheeni?*
- *Titulo tenele linani lenombolo yebantfu yini ekhishini?*

Kuhlanganisa

- *Kunemahhabhula laluhlata lamane nalamanye emahhabhula labovu lamane efrijini. Kunamangaki emahhabhula efrijini?*
- *Thami unemabhlokhi lamatsatfu. Kunemabhlokhi lamane phasi esiyilweni. Mangaki emabhlokhi lakhona asawonkhe?*

Kususa

- *Kunemacandza lasitfupha esivalweni sefrijini. Babe upheka lamane. Mangaki emacandza latawusala efrijini?*
- *Kunemamagi lasihlanu ekhishini. Emamagi lamane amhlophe. Mangaki emamagi lamtfubi?*
- *Kunemahhabhula lasiphohlongo efrijini. Emahhabhula lamane aluhlata. Mangaki emahhabhula labovu?*

Kucembula

- *Umntfwana ngamunye unemehlo lamabili. Atawuba mangaki emehlo latawuba khona ebantfwana labatsatfu asawonkhe?*

Kwaba ngalokulinganako

- *Esikhwameni kunemawolintji lamatsatfu. Bantfwana labatsatfu babelana lamawontji. Umntfwana ngamunye utawutfole emawolintji lamangaki?*



Umsebenti 11

Emacenjini enu, bukani Iphosta 1. Cabanga ngetinkinga tetibalo letifanele tangalinye lalamakhono:

- ◆ kucatsanisa
- ◆ kumatanisa
- ◆ kubala
- ◆ kuhlanganisa
- ◆ kususa
- ◆ kucembula
- ◆ kwaba ngalokulinganako.

When you do word-problem activities with your learners, allow them to use their fingers or counters to help them solve the problems.

Facilitator's notes

- ◆ In a whole group session ask for examples of questions for each of the categories. Write these on a flipchart for further discussion.
- ◆ Main point to discuss include:
 - The way that you structure the language in a word problem determines whether it is easy or difficult for the learners to understand and solve, e.g.:
 - * *There are 10 sweets. I eat 4. How many are left?* (This uses a simple language structure.)
 - * *I bought some sweets. I ate 6 sweets. There are 4 left. How many sweets did I buy?* (This uses a more difficult structure.)
 - Learners need to be exposed to different word-problem structures so that they are able to apply their skills and reasoning in different contexts.

One of the sections in Numbers, Operations and Relationships is, 'Solve problems in context'. In your groups, read the content overview for Term 2 for this section on page 120 of the *Concept Guide*. Then complete Activity 12.



Activity 12

Reflect on Activity 11.

1. What concepts and skills are taught and learnt in the topic: Problem-solving techniques?

Counting using concrete apparatus, i.e. counters, physical number ladder, ten structure beads.

2. What concepts and skills are taught and learnt in topic: Addition and subtraction?

Use counters; orally solve problems.

Uma wenta imisebenti yetinkinga temagama ukanye nebafundzi bakho, bavumele kutsi basebentise iminwe yabo kubala kubasita kutsi basombulule letinkinga.

Emanotsi emfundzisi

- ◆ Kuseshini yelicembu lonkhe cela tibonelo temibuto temkhakha ngamunye. Tibhale kufliphushadi kute kutsi kukhulunyiswane ngato ekuhambeni kwesikhatsi.
- ◆ Liphuzu lelikhulu lekutawukhulunywa ngalo kufaka ekhatsi:
 - Indlela lohlela ngayo lulwimi kutibalo temagama kuncuma kutsi ingabe kulula yini noma kulukhuni kutsi bafundzi bavisise baphindze futsi basombulule, sib.:
 - * *Kunemaswidi la-10. Udla la-4. Kusele lamangaki?* (Loku kusebentisa luhlaka lwelulwimi lolulula.)
 - * *Ngitsenge emaswidi. ngaadla emaswidi la-6. Kusele la-4. Bengitsenge emaswidi lamangaki?* (Loku kusebentisa luhlaka lolulukhuni kakhulu.)
 - Bafundzi bafanele kutsi bavuleleke kutinhlaka letehlukene tetibalo temagama kute kutsi bakhone kusebentisa emakhono nekucabanga kwabo kutingcikititimo letehlukene.

Sinye setigaba kuTinombolo, Ema-ophareshini neBudlelwane, 'Kusombulula tinkinga kungcikititimo'. Emacenjini enu, fundza sibutsetelo salokuceketfwe seThemu 2 salesigaba lesikulikhasi 121 le*Nkhombandlela Yemcondvo*. Ngemuva kwaloko yenta ucedzele Umsebenti 12.



Umsebenti 12

Buyeketa Umsebenti 11.

1. Nguyiphi imicondvo nemakhono lafundziswa aphindze futsi afundvwe kulesihloko: Emasu ekusombulula inkinga?

Kubala basebentisa ema-apharethasi lacinile, kk. tibali, lilada letinombolo leliphatsekako, buhlalusakhiwo lobulishumi.

2. Nguyiphi imicondvo nemakhono lafundziswa aphindze futsi afundvwe kulesihloko: Kuhlangukisa nekususa?

Sebentisa tibali; usombulule tinkinga ngemlomo.

Estimation

Learners develop estimation skills and make a 'sensible' guess about 'how many objects' there are in a collection. During measurement activities, they estimate how heavy or how long something is, or how many cups will fill a jug before they do the actual measuring.

Facilitator's notes

- ◆ Find two see-through containers (e.g. peanut butter jars). Fill one with eight small objects and the other with eight larger objects.
- ◆ Ask:
 - *How many objects do you think are in this jar?*
 - *How many objects do you think are in the other jar?*
 - *Do you think there are the same number of objects in each jar?*
 - *How can we find out which jar has more objects? (Count the objects.)*
- ◆ Remind participants that estimation is a reasonable guess. By showing the same number of objects in the bottles but using different-sized objects, learners are focusing on the number rather than the size of the object or the amount of space they fill in the container (volume).



Activity 13

The facilitator will show you two jars. Estimate how many objects are in each jar and respond to her questions.

Learners need to be able to use terms such as: *too few, too many, more than, enough, not enough, nearly, close to, about the same, just under, just over.*

Teachers can plan estimation activities that encourage learners to make sensible guesses about the quantity of a group of objects or the measurement of an object.

Term 2 Content Summary: Week 10

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 8–10). Read the content overview for Week 10: Numbers, Operations and Relationships on page 20 of *Activity Guide: Term 2*.

Kulinganisela

Bafundzi batfutukisa emakhono ekulinganisela baphindze futsi bacombele 'ngalokunengcondvo' mayelana nekutsi 'mangaki ema-objekthi' lakhona kuligcogco. Ngesikhatsi semisebenti yekulinganisa, balinganisele kutsi intfo isindza noma yindze kangakanani, tingaki tinkomishi letingagcwalisa lijeke ngembi kwekutsi bente lomsebenti wekulinganisa mbamba.

Emanotsi emfundzisi

- ◆ Tfolo timumatsi letimbili letikhanyako (sib. emabhodlela abhotela wemantongomane). Gcwalisa sinye ngema-objekthi lasiphohlango lamancane bese kutsi lesi lesinye usigcwalisa ngema-objekthi lasiphohlango lamakhulu.
- ◆ Buta:
 - Ucabanga kutsi mangaki ema-objekthi lakulelibhodlela?
 - Ucabanga kutsi mangaki ema-objekthi lakuleli lelinye libhodlela?
 - Ucabanga kutsi alinani lenombolo lelilinganako (fananako) ebhodleleni ngalinye?
 - Singatfolo kanjani kutsi nguliphi libhodlela lelinema-objekthi lamanyenti? (Wabale.)
- ◆ Khumbuta bahlanganyeli kutsi kulinganisela kukucombela lokulungile. Ngekukhombisa linani lelilinganako lema-objekthi kulamabhodlela kepha usebentisa ema-objekthi emasayizi lehlukene, bafundzi bagcila kulelinani kunesayizi yaletintfo noma-ke bukhulu besikhala lasitsatsako kulesimumatsi (ivolumu).



Umsebenti 13

Umfundzisi utanikhombisa emabhodlela lamabili. Linganisela kutsi mangaki ema-objekthi lasebhodleleni ngalinye bese uphendvula umbuto.

Bafundzi badzinga kutsi bakwati kusebentisa emagama lafana na: *ncane kakhulu, nyenti kakhulu, nyenti kuna, kwanele, akwaneli, cishe, kusondzele kakhulu ku, cishe kuyalingana (fanana), kungaphasana, kungetudlwana.*

Bothishela bangahlela imisebenti yekulinganisela lekhutsata bafundzi kutsi bacombele ngalokulungile mayelana nelinani lencumbi yema-objekthi noma kukalwa kwe-objekthi.

Ithemu 2 Sibutsetelo Salokucuketfwe: Liviki 10

Fundza Sengeto A: Ithemu 2 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 8–10).

Fundza sibutsetelo salokucuketfwe seLiviki 10: Tinombolo, Ema-opharehini neBudlelwane kulikhasi 21 leNkhombandlela Yemsebenti: Ithemu 2.



Activity 14

1. What are the topics for Week 10?

2. What new knowledge is introduced in this week?

3. What skills from previous weeks are practised?

Refer to the estimation activities in Week 10 (*Activity Guide: Term 2*, pages 174 (Day 1), 176 (Day 2) and 178 (Day 3)).



Umsebenti 14

1. Ngutiphi tihloko teLiviki 10?

2. Nguluphi lwati lolusha lolungeniswako kuleliviki?

3. Ngumaphi emakhono emaviki lendlulile lafundziswako?

Buka imisebenti yekulinganisela kuLiviki 10 (*Inkhombandlela Yemsebenti: Ithemu 2*, emakhasi 175 (Lusuku 1), 177 (Lusuku 2) kanye ne-179 (Lilanga 3)).

Session 4: Numbers, Operations and Relationships

45 minutes

The Maths Programme focuses on one main Content Area each week. You will have noticed that even though when the weekly Content Area Focus is not ‘number’, the number routines continue every day of each week. The reason for this is that repetition and practice are essential for consolidating the learners’ developing number skills.

The whole class activities for each day of the week always start with three number routines:

- ◆ a song or rhyme
- ◆ oral counting
- ◆ counting objects.

These three number routines are planned to match the number range for each term.

Facilitator’s notes

- ◆ In **Activity 15**, participants will use *Activity Guide: Term 2* to find the daily number routines and complete the table. This is to highlight the fact that number routines are practised every day of each week regardless of the Content Area Focus and to show the progression in number range across the term.



Activity 15

Find the Term 2 daily number routines in *Activity Guide: Term 2* and complete the table. Week 1 has been done for you.

Week	Content Area Focus	Song or rhyme	Oral counting	Counting objects
1	Numbers, Operations and Relationships	A rhyme from Term 1	1–10 5–1	1–5 (birthday chart)
2				

Isheshini 4: Tinombolo, Ema-ophareshini neBudlelwane

45 emaminitsi

Luhlelo Lwetibalo lugcila kuMkhakha Walokucuketfwe lomkhulu liviki ngalinye. Ubonile kutsi nanoma-nje kuGcila Kwemkhakha Walokucuketfwe akusiyiyo 'inombolo', inhlalayenta yetinombolo ichubeka onkhe emalanga eliviki ngalinye. Sizatfu saloku kutsi kuphindzaphindza kanye nekutetayeta kubaluleke kakhulu ekuhlanganiseni emakhono emfundzi ekutfufukisa emakhono etinombolo.

Imisebenti yeliklasi lonkhe yelilanga ngalinye leliviki ngaso sonkhe sikhatsi icala ngenhlalayenta yetinombolo letintsatfu:

- ◆ ingoma noma silandzelo
- ◆ kubala ngemlomo
- ◆ kubala ema-objekthi.

Lenhlalayenta yetinombolo letintsatfu ihlelelwe kumatana nemkhakha wetinombolo wethemu ngayinye.

Emanotsi emfundzisi

- ◆ Ku**Msebenti 15**, bahlanganyeli batawusebentisa *Inkhombandlela Yemsebenti: Ithemu 2* kutfoli inhlalayenta yetinombolo emalanga onkhe bese bayenta bacedzela lelithebuli. Loku kwentelwe kugcamisa liciniso lekutsi inhlalayenta yetinombolo yentiwa onkhe emalanga eliviki ngalinye ngekunganaki Kugcila Kwemkhakha Walokucuketfwe kukhombisa inchubekelebili yemkhakha wetinombolo kuyo yonkhe ithemu.



Umsebenti 15

Tfoli inhlalayenta yetinombolo yemalanga onkhe eThemu 2 ku*Nkhombandlela Yemsebenti: Ithemu 2* bese ucedzela lelithebuli. Liviki 1 sewentelwe.

Liviki	Kugcila Kwemkhakha Walokucuketfwe	Ingoma noma silandzelo	Kubala ngemlomo	Kubala ema-objekthi
1	Tinombolo, Kubala kanye Nebudlelwane	Silandzelo lesikuThemu 1	1-10 5-1	1-5 (lishadi letinsuku tekutalwa)
2				

3				
4				
5				
6				
7				
8				
9				
10				

Having looked through the number content for Term 2, you will have noticed that the number routines are practised every day of each week regardless of the Content Area Focus and that the progression in number range increases across the term.

3				
4				
5				
6				
7				
8				
9				
10				

Ngemuva kwekubuka lokucuketfwe kwetinombolo kuThemu 2, kufanele kutsi ubonile inhlalayenta yetinombolo yentiwa onkhe malanga eliviki ngaphandle kwekubuka Kugcila Kwemkhakha Walokucuketfwe kutsi inchubekelembili yemkhakha wetinombolo iyakhula kuyo yonkhe ithemu.

Session 5: Term 2 Assessment

1 hour

Video 2

Watch the video of a teacher presenting word problems to a small group of learners.

Observe how each learner solves the problem. Notice how the teacher uses prompts when a learner has difficulty.

Facilitator's notes

- ◆ PPT: Rubric with the 1–7 rating scale.
- ◆ Discuss how the descriptions in the rubric provide distinguishing assessment criteria for each rating code.

Activity 16

Look at the rubric on page 106 of the *Concept Guide*.

In your groups, discuss how you would score each of the learners using this scale. Give reasons for your decisions based on the assessment criteria for each rating code.

Iseshini 5: Luhlolo lweThemu 2

1 li-awa



Ividiyo 2

Bukela ividiyo yathishela etfula tinkinga temagama ecenjini lelincane lebafundzi.

Bukisisa kutsi umfundzi ngamunye kutsi inkinga uyisombulula kanjani. Caphela kutsi lothishela ukusebentisa kanjani kukhutsata uma ngabe umfundzi unebulukhuni.

Emanotsi emfundzisi

- ◆ PPT: Irubhrikhi yesikali selizinga lekuniketa emamaki 1-7.
- ◆ Khuluma ngekutsi letinchazelo kulerubhrikhi tiyuniketa kanjani indlela yekwehlukana luhlolo lwemazinga ekuniketa emamaki.



Umsebenti 16

Buka irubhrikhi lekulikhasi 107 le*Nkhombandlela Yemcondvo*.

Emacenjini enu, khulumani ngekutsi umfundzi ngamunye nitamunika kanjani emamaki nisebentisa lesikali lesiniketa tizatfu tetincumo takho ngekumisela kundlela yekuhlola yelizinga lekuniketa limaki ngalinye.

Closing activities

15 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.
- ◆ **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 17

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 any questions or comments to share with the group.



Take back to school task

1. Use *Activity Guide: Term 2* to plan and implement Weeks 8–10 of the Maths Programme.
2. Write an evaluation of what worked well, what did not work so well and what you could do differently to improve teaching and learning.
3. Bring your evaluation to the next workshop.

Evaluation

Complete the Evaluation Form.

Emanotsi emfundzisi

- ◆ **Lubuyeketo lwemhlanganosikolo:** Cela bahlanganyeli kutsi bente emaminitsi lambalwa babuyekete lusuku nekutsi bavule babuke yonkhe *Incwadzi Yekusebentela Yebahlanganyeli*. Bacele kutsi babhale phasi nanoma nguyiphi imibuto noma tiphakamiso kwabelana nelicembu lonkhe.
- ◆ **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 bese uyawuvala lomhlanganosikolo.



Umsebenti 17

Lubuyeketo lwemhlanganosikolo: Tsatsa emaminitsi lambalwa ubuyekete lilanga lakho. Fundza yonkhe *Incwadzi Yekusebentela Yemhlanganyeli* kutikhumbuta loko lokufundziwe. Bhala phasi nanoma nguyiphi imibuto noma tiphakamiso kwabelana nelicembu.



Umsebenti wekubuyela emuva esikolweni

1. *Inkhombandlela Yemsebenti: Ithemu 2* kuhlela nekufezekisa Emaviki 8–10 eLuhlelo Lwetibalo.
2. Bhala silinganiso saloko lokusebente kahle kakhulu naloko lokungakasebenti kahle kakhulu nekutsi lotawuyenta ngalokwehlukile kwenta kancono kufundzisa nekufundza.
3. Wota nekulinganisa kwakho kumhlanganosikolo lolandzelako.

Kuhlolisisa

Gcwalisa leLifomu Lekuhlolisisa.

APPENDIX A: TERM 2 WEEKLY CONTENT SUMMARY (WEEKS 8-10)

Term 2: Activity Plan

Week 8				
CONTENT AREA: SPACE AND SHAPE (GEOMETRY)				
TOPIC: Properties of shapes – compare same and different, sort according to properties; position; orientation and views				
INTRODUCE NEW KNOWLEDGE: Follow direction and midline crossing				
PRACTISE: Oral counting 1–20, counting backwards from 7, sequencing numbers 1–5, counting objects 1–7, reinforce number concept 1–5, what number comes before/after, practise using all shapes				
Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Forwards/backwards.	Counting – show me 1–3, 5–7 counters. Working with all taught shapes. Midline crossing. Position – direction. Forwards/backwards.	Activity 1	Sorting activity – using cut-out shapes. Make shapes using playdough and make a copy. Masking tape shapes – learners follow shapes using blocks. Match shapes using shape cards.
Day 2	Reinforce all shapes (I spy ...).			
Day 3	Shape game.		Activity 2	
Day 4	What can I do: Lost my ... (shape).		Activity 3	
Day 5	Obstacle course (requires a big space/outdoors). Midline crossing.		Activity 4	
Week 9				
CONTENT AREA: MEASUREMENT				
TOPIC: Length – compare and order objects using appropriate vocabulary to describe length				
INTRODUCE NEW KNOWLEDGE: Measuring and comparing length (long/short, longer/shorter, longest/shortest)				
PRACTISE: Oral counting 1–20, counting backwards from 7, counting objects 1–7, estimation 1–7, tall/short				
Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Longer/shorter (height).	Longer than/shorter than. Taller than/shorter than. Measurement with everyday objects.	Activity 1	Shorter/longer (pre-cut strips of different length). Wiggly worms (to make a poster shortest to longest). Measure blocks using string. Playdough and lined paper (different lengths).
Day 2	Comparing lengths of ribbons.			
Day 3	Sorting objects by length (coloured paper strips).		Activity 2	
Day 4	Height chart comparison (from Term 1).		Activity 3	
Day 5	Height chart comparison (taller/shorter than you).		Activity 4	

SENGETO A: ITHEMU 2 SIBUTSETELO SALOKUCUKETFWE SELIVIKI (EMAVIKI 8-10)

Ithemu 2: Luhlelolisu Lwemsebenti

Liviki 8					
UMKHAKHA WALOKUCUKETFWE: SIKHALA naBUNJWA (IJOMETHRI)					
SIHLOKO: Emaphrophathi abobunjwa – catsanisa kuyafanana (kuyalingana) nakwehlukile (akufanani), hlunga ngekuya ngemaphrophathi; sikhundla; kuma nekubukeka					
YETFULA LWATI LOLUSHA: Kulandzela indlela nekweca umugcamkhatsini					
TETAYETE: kubala ngemlomo 1-20, kubala uye emuva ucale ku-7, kulandzelanisa tinombolo 1-5, kubala ema-objekthi 1-7, kugcizelela umcondvo wetinombolo 1-5, nguyiphi inombolo leta ngembi/ngemuva, tetayete kusebentisa bobunjwa					
Imisebenti yeliklasi lonkhe		Umsebenti loholwa nguthishela		Imisebenti yenzawo yekusebentela	
Lilanga 1	Embili/emuva	Kubala – ngikhombise tibali1-3, 5-7. Kusebenta ngabo bonkhe bobunjwa labafundzisiwe. Kweca umugcamkhatsi. Sikhundla – indlela. Embili/emuva.		Umsebenti 1	Umsebenti wekuhlunga – usebentisa bobunjwa labasikwe bakhishwa.
Lilanga 2	Gcizelela bonkhe bobunjwa (Ngiyatjopola ...)			Umsebenti 2	Yakha bobunjwa usebentisa inhlama yekudlala bese wenta ikhophi.
Lilanga 3	Umdlalo wabobunjwa.			Umsebenti 3	Bobunjwa bemaskingi theyiphu – bafundzi balandzela bobunjwa basebentisa emabhlokhi.
Lilanga 4	Yini lengingayenta: Ngilahlekelwe ... (bunjwa).			Umsebenti 4	Matanisa bobunjwa usebentisa emakhadi abobunjwa.
Lilanga 5	Sihibe (kudzingeka indzawo lenkhulu/ngaphandle). Kweca umugcamkhatsini.				
Liviki 9					
UMKHAKHA WALOKUCUKETFWE: KULINGANISA					
SIHLOKO: Budze – catsanisa uphindze uhlele ema-objekthi usebentisa silulumagama lesifanele kuchaza budze					
YETFULA LWATI LOLUSHA: Kulinganisa nekucatsanisa budze (kudze/kufishane, kudze kakhudlwana/kufishane kakhudlwana, kudze kakhulu/kufishane kakhulu)					
TETAYETE: Kubala ngemlomo 1-20, kubala uye emuva kusuka ku-7, kubala ema-objekthi 1-7, kulinganisela 1-7, phakeme/fishane					
Imisebenti yeliklasi lonkhe		Umsebenti loholwa nguthishela		Imisebenti yenzawo yekusebentela	
Lilanga 1	Kudze kakhudlwana/kufishane kakhudlwana (budzekuphakama).	Kudze kuna/kufishane kuna. kudze ngalokuphakeme kuna/fishane kuna. Kulinganisa ngema-objekthi emalanga onkhe.		Umsebenti 1	Fishane kakhudlwana/kudze kakhudlwana (imicu lesikwe phambilini yebudze lobehlukene).
Lilanga 2	Catsanisa budze bemaribhoni.			Umsebenti 2	Tibungu letintjikitako (kwakha iphosta lemfishane kakhulu ibe ngulendze kakhulu).
Lilanga 3	Kuhlunga ema-objekthi ngebudze (imicu yeliphepha lelinembala).			Umsebenti 3	Kala emabhlokhi usebentisa intsambo.
Lilanga 4	Kucatsaniswa kweLishadi lebudze (leThemu 1).			Umsebenti 4	Inhlama yekudlala neliphepha lelentiwe umugca (budze lobehlukene).
Lilanga 5	Kucatsanisa kwelishadi lebudzekuphakama (kudze kuna/kufishane kuna).				

Week 10

CONTENT AREA: NUMBERS, OPERATIONS AND RELATIONSHIPS

TOPIC: Describe, compare and order numbers; addition and subtraction (oral); problem solving

INTRODUCE NEW KNOWLEDGE: Breaking down and building up numbers, problem-solving techniques, addition and subtraction using concrete objects, numbers in familiar settings (address and phone number)

PRACTISE: Oral counting 1–20, counting backwards from 7, sequencing numbers 1–5, counting objects 1–7, reinforce number concept 1–5, what number comes before/after

Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Ordering, using numbers 1–5. Dot cards.	Ordering numbers and dot cards (1–5). Fewer/more/less than. Decomposition of numbers. Phone numbers and addresses.	Activity 1	Write numbers 1–5 and draw dots using white board markers and plastic sheets. Count sticks to match. Tracing shapes according to given number. Feely cups with number of objects – feel amount and show number symbol. Number matching pictures.
Day 2	Addition using concrete objects. Musical chairs.		Activity 2	
Day 3	Subtraction using concrete objects.		Activity 3	
Day 4	Problem solving. Poster 1.		Activity 4	
Day 5	Memory game: Address and phone number. Game: Making groups of 1–5 learners.			

Liviki 10

UMKHAKHA WALOKUCUKETFWE: TINOMBOLO, EMA-OPHARESHINI NEBUDLELWANE

SIHLOKO: Chaza, catsanisa bese uhlela tinombolo; kuhlanganisa nekususa (ngemlomo); kusombulula inkinga

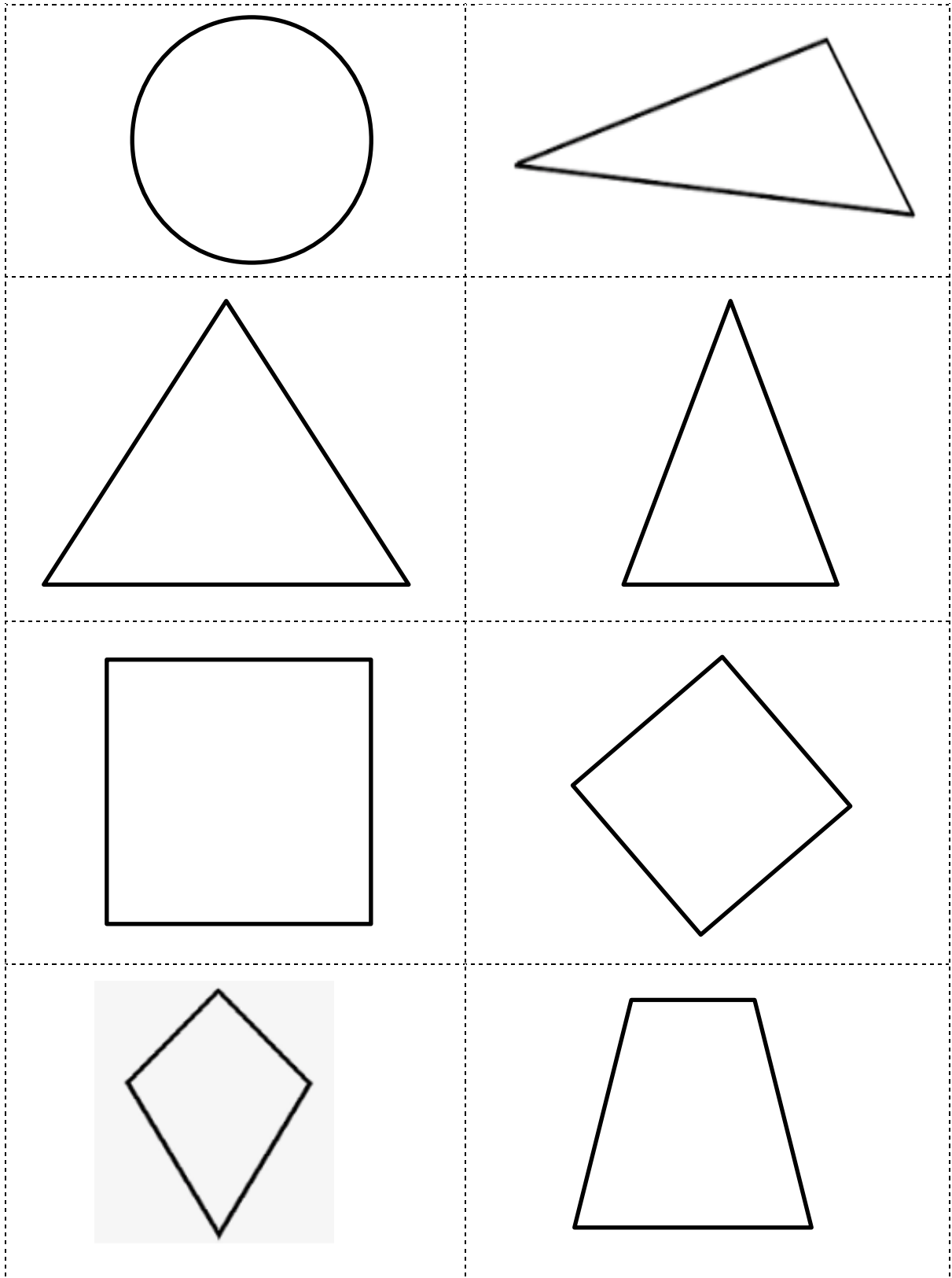
YETFULA LWATISO LOLUSHA: Kubhidlita nekwakha tinombolo, emasu ekusombulula tinkinga, kuhlanganisa nekususa usebentisa ema-objekthi laphatsekako, tinombolo etimeni letetayelekile (likheli netinombolo telucingo)

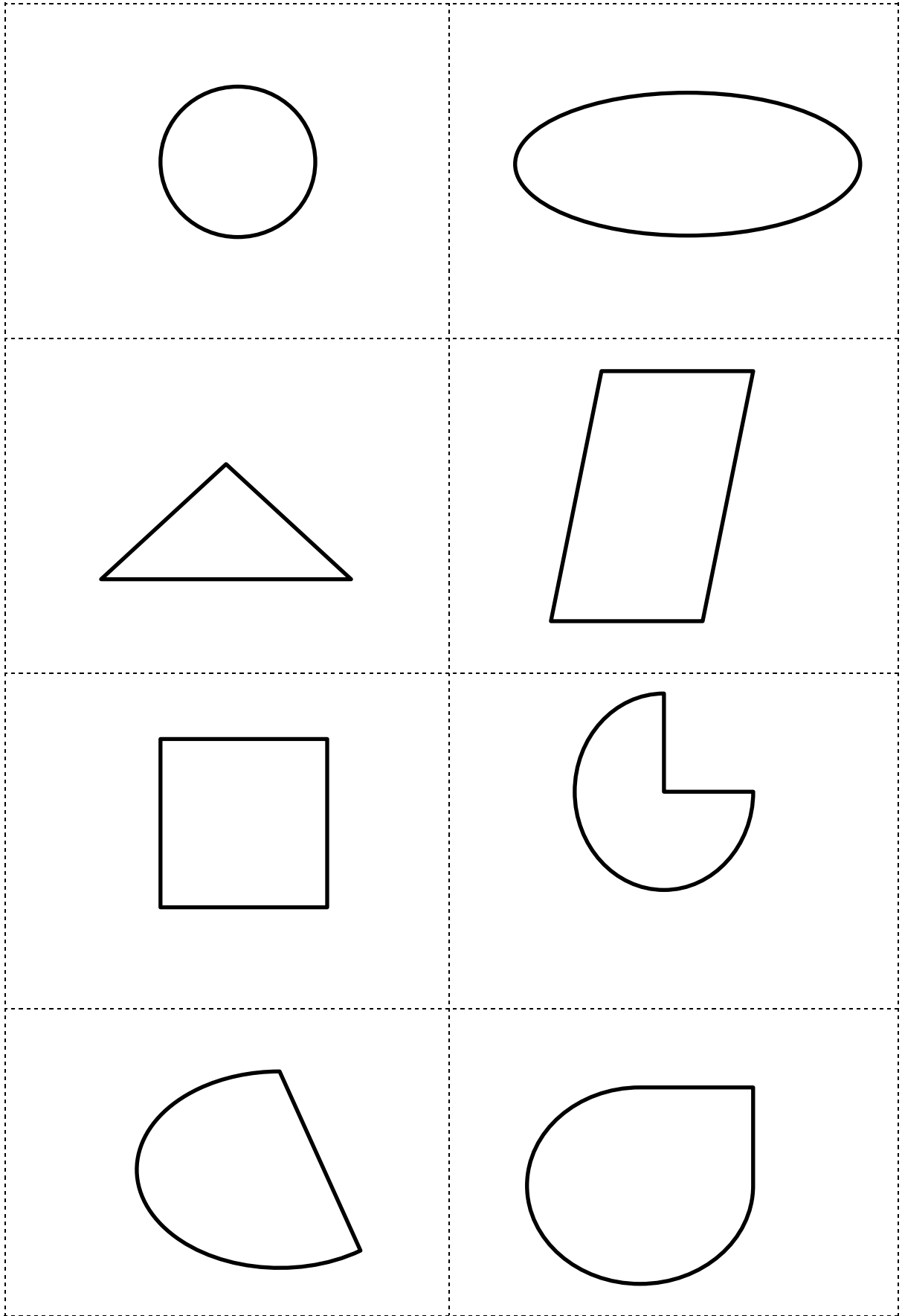
KUTETAYETA: Kubala ngemlomo 1–20, kubala uye emuva kusuka ku-7, sekulandzelanisa tinombolo 1–5, kubala ema-objekthi 1–7, kugcizelela umcondvo wetinombolo 1–5, nguyiphi inombolo leta ngembi/ngemuva

Imisebenti yeliklasi lonkhe		Umsebenti loholwa nguthishela	Imisebenti yenzawo yekusebentela	
Lilanga 1	Kuhlembisa, usebentisa tinombolo 1–5. Emakhadi emacashati.	Kuhlembisa tinombolo emakhadi etinombolo (1–5). Ncane kakhudlwana/nyenti/ncane kuna. Kubhidlita tinombolo. Tinombolo tetincingo netemakheli.	Umsebenti 1	Bhala tinombolo 1–5 bese udvweba emacashati usebentisa tikhombisi tebhodi lemhlophe nemakhasi eplastiki. Bala tintsi kumatanisa.
Lilanga 2	Kuhlanganisa usebentisa ema-objekthi laphatsekako. Titulo temculo.		Umsebenti 2	Kuthreyisa bobunjwa ngekuya kwenombolo loyiniwe.
Lilanga 3	Kususa usebentisa ema-objekthi laphatsekako.		Umsebenti 3	Tinkomishi tefili letinetinombolo tema-objekthi – vani linani bese ukhombisa luphawu lwenombolo.
Lilanga 4	Kusombulula tinkinga. Iphosta 1.		Umsebenti 4	Titfombe letimatana netinombolo.
Lilanga 5	Umdlalo wekukhumbula: Likheli nenombolo yelucingo. Umdlalo: Kwakha emacembu ebafundzi 1–5.			

APPENDIX B: SHAPES FOR SORTING/SENGETO B: BOBUNJWA BEKUHLUNGWA

Cut along the dotted lines./Sika kulemigca yemacashati.





Workshop 6 Evaluation Form

1. Did the workshop meet your expectations?

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

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

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

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

Lifomu Lekuhlolisisa Umhlanganosikolo 6

1. Lomhlanganosikolo ufinyelele yini ezingeni lebewulilindzele?

2. Yini lokufundzile kulomhlanganosikolo lokubalulekile lokukusite kakhulu?

3. Kukhona yini longakakutsandzi noma lokutfole kulukhuni?

4. Utakusebentisa kanjani eklasini leLibanga R loku lokufundzile?

5. Ikhona yini imibono lonayo yekwenta kancono imihlanganosikolo lechubekako?
