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GROWING GAUTENG TOGETHER

IsiNdebele/English

Ihlelo lokuThuthukisa iimBalo zeGreyidi R Grade R Mathematics Improvement Programme



**Isifundobandulo 6 • Workshop 6
Umhlahandlela womKghonakalisi • Facilitator's Guide**

The Grade R Mathematics and Language Improvement Project is an initiative of the **Gauteng Department of Education** and its key partner, the **Gauteng Education Development Trust**.

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

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

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Ukuthokoza okukhethekileko:

- Iinkhulu zePhiko labaNgophisi leKharikhyulamu, iPhiko labaNgophisi laboTitjhere bezeFundo nePhiko labaNgophisi leFundo eKhethekileko yomNyango wezeFundo weGauteng, ekutjhugululweni kwemetheriyali yethu.
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- Isiqhema sokutlola se-R-Maths: Abasebenzi nabathintanisi be-SDU.



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

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Overview

Purpose

This is the sixth 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 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)

Isirhunyezo

Umnqopho

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

Umnqopho wesifundobandulwesi kusiza abotitjhere ukusebenzisa iHlelo leemBalo ngematlasinabo, khulukhulu iinGaba zokuMumethweko ezenziwe ngeThemu 2 Iimveke 8–10. Abahlanganyeli bazakuzindla ngeragelophambili lokuhlola kwabo abafundi begodu bazakutlola phasi okubatshwenyako okuphathelene nabafundi abangadinga ingenelelo nesekelo elikhethekileko. Abahlanganyeli godu bazakuzindla ngamano aqinisa amakghono wabafundi wokurarulula imiraro.

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

Imiphumela yokufunda

- ◆ Ukuzindla ngokusetjenziswa kweThemu 2 Iimveke 4–7
- ◆ Ukuhlola amano wokusekela ukufundisa iimbalo kwaGreyidi R
- ◆ Ukuzindla ngemithethokambiso yeHlelo leemBalo esehlelweni laqobe yiveke
- ◆ Ukuzibandakanya nokumumethweko kweHlelo leemBalo leThemu 2 Iimveke 8-10 (IsiKhala neBumbeko (Ijyomethri); Ukumeda; Iinomboro, ama-Opharetjhini noBudlelwana)
- ◆ Ukusebenzisa ilwazi lokuhlola okuragela phambili okungakahlaleki ekufundeni nekufundiseni.

Okumumethweko kwesifundobandulo

- ◆ Ukuvula nokuzindla (1-iri)
 - ◆ Isetjhini 1: IsiKhala neBumbeko (Ijyomethri) (1-iri)
- ITIYE
- ◆ Isetjhini 2: Ukumeda (1-iri)
 - ◆ Isetjhini 3: Iinomboro, ama-Opharetjhini noBudlelwana (1-iri)
- ISIDLO SEMINI
- ◆ Isetjhini 4: Iinomboro, ama-Opharetjhini noBudlelwana (Imizuzu 45)
 - ◆ Isetjhini 5: Ukuhlola Ithemu 2 (1-iri)
 - ◆ Imisebenzi yokuvala (Imizuzu 15)

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

Amalungiselelo

- ◆ PPT Ukwamukelwa nemiphumela
- ◆ Funda:
 - UmHlahlandlela womQondo*, amakhasi 114–137
 - UmHlahlandlela wemiSebenzi: Ithemu 2*, amakhasi 18–21 namakhasi 138–189
 - Isithasiselo A: Isirhunyazo sokuMumethweko kwaQobe yiVeke (limveke 8–10
- ◆ Khumbuza abahlanganyeli bonyana beze *nomHlahlandlela womQondo*, *umHlahlandlela wemiSebenzi: Ithemu 2*, isibonelo sabo sokuhlolwa komfundi namanothi wabo wokulunga *womSebenzi obuyiselwa esikolweni wesiFundobandulo 5*.
- ◆ Beka i*Khidi yeenSetjenziswa* etafuleni yesiqhema ngasinye.
- ◆ Sikela isiqhema ngasinye isede yamabumbeko kusiThasisiselo B. Beka amabumbeko ngemvilobhini ezihlukeneko zesiqhema ngasinye.

Imatheriyali

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

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.

Amanothi womkghonakalisi

- ◆ PPT: Vula isetjhini bese ufunda i-ajenda nemiphumela yokufunda kwesifundobandulo.
- ◆ Bawa abahlanganyeli bazindle ngokusebenzisa kwabo iThemu 2 Iimveke 4–7 zeHlelo leemBalo kunye nalokho abakutjhejileko nokuhlola kwabo abafundi.
- ◆ Bakhulumisane ngomSebenzi esiqhemeni esincani. Abahlanganyeli bakhulumisana ngemibuzo **yomSebenzi 1** eenqhemeni ezincani. Yiba nesikhathi sesiqhema ngasinye ngesikhathi semikhulumiswano, uhlanganye le lapho kufanele khona.

Naku *Umsebenzi obuyiselwa esikolweni* wesiFundobandulo 5.



Umsebenzi obuyiselwa esikolweni (isiFundobandulo 5)

1. Ragela phambili nokusebenzisa iRekhodi lokuHlola okuRagela phambili *kumHlahlandlela wemiSebenzi: Ithemu 2* ukuhlola abafundi bakho. Sebenzisa amanothi wakho wokutjheja kwakho okuragako ukwakha ubufakazi balokho abafundi abakuzwisako nalokho abakwazi ukukwenza.
2. Tshwaya nofana ngikuphi okukutshwenyako mayelana nomfundi ngamunye othoma ukuzwisisa imiqondo yeembalo.
3. Letha amakhophi wamarubhrikhi owasebenzisileko ukuhlola iimbalo kusifundobandulo esilandelako.
4. Letha amarekhodo aphelileko wokuhlola womfundi munye kusifundobandulo esilandelako.
5. Sebenzisa *UmHlahlandlela wemiSebenzi: Ithemu 2* ukuhlela nokusebenzisa Iimveke 4–7 zeHlelo leemBalo, ukufaka hlangana ukwakha indawo yeembalo ngokunqopha umqondo weveke ngayinye.
6. Yenza amanothi ngalokho okusebenze kuhle, lokho okungakasebenzi kuhle nalokho ongakwenza ngokuhlukileko ukuthuthukisa ukufundisa nokufunda.



Umsebenzi 1

1. Ngeenqhema zenu, khulumisanani ngeragelophambili lokusebenzisa iThemu 2 Iimveke 4–7.
 - ◆ Khuyini okusebenze kuhle (okunamandla)?
 - ◆ Khuyini okungakasebenzi kuhle (iintjhihilo)?
 - ◆ Khuyini ongakwenza ukwenza ngcono ukufundisa nokufunda ngetlasini yakho?
- Rekhoda amaphuzu aqakathekileko wemikhulumiswano yenu ephepheni letjhadi ephendlekako nizokwabelana nezinye iinqhema ngemva kwesikhathi.
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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. Khulumisanani ngokobana niphumelele njani kilokhu:
 - ◆ ukurekhoda amanothi mayelana nomfundi ngamunye ngemva komsebenzi ohlahlwa ngutitjhere ngamunye weemVeke 4–7.
 - ◆ ekwenzeni Ithemu 2: Irekhodi yokuHlola okuRagela phambili emakhasini 190–193 *womHlahlandlela wemiSebenzi: Ithemu 2* lomfundi ngamunye.

Rekhoda amaphuzu aqakathekileko wemikhulumiswano yenu etjhadini eliphendlekako.

3. Khulumisanani ngeendawo lapha umfundi oyedwa aphumelela khona/anobudisi khona nokobana ukurekhode njani lokhu. Rekhodani amaphuzu aqakathekileko wemikhulumiswano yenu etjhadini eliphendlekako.
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Amanothi womkghonakalisi

- ◆ Bawa isiqhema ngasinye sabelane ngamaphuzu aqakathekileko wemikhulumiswano yabo. Khumbuza abahlanganyeli bafake kwaphela amaphuzu lawo ezinye iinqhema ezingakawatjho.
- ◆ Ikulumiswano le ihlose ukuzindla ngekambiso yokubuthelela iragelophambili labafundi esikhathini esingangeemveke. Abahlanganyeli bebabawiwe bonyana batjheje abafundi lokha nabenza imisebenzi yetlasi loke kunye nemisebenzi yesiqhema esincani bese babuthelela ilwazi leli. Ikulumiswano le ihlose ukusiza abotitjhere bakhumbule bonyana iRekhodi yokuHlola okuRagela Phambili lisetjenziswa njani ukuqala iphetheni yamakghono wabafundi nokwabelana ngamathulusi wokuhlola neenkambiso ebazisebenzisako eenkolweni zabo.

Umsebenzi obuyiselwa esikolweni wesiFundobandulo 5 ubawiwe bonyana ulethe amakhophi werubhrikhi yokuhlola abafundi oyisebenzisa njengengcenywe yeHlelo leemBalo kilesi isifundobandulo. Umsebenzi 2, isiqhema sakho sizakukhulumisana ngamarubhrikhi lawa nokobana ilwazi lokuhlola litlolwe belabiwa njani. Kusetjhini 5, sizakukhulumisana ngamarubhrikhi ngokunabileko.



Umsebenzi 2

1. Eenqhemeni zebu, yabelanani ngeembonelo zamarubhrikhi weembalo owasebenzise njengengcenywe yekambiso yokuhlola.
2. Khulumisanani ngokobana nilitole njani iragelophambili labafundi ehlelweni le-SA-SAMS nokobana ilwazi leli labiwa njani nababelethi.

Rekhodani amaphuzu aqakathekileko wemikhulumiswano yenu ephepheni letjhadini eliphendlekako kobana nizowabelana neenqhema ezinye ngemuva kwesikhathi.

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

Bukelani ividiyo katitjhere otjheja isiqhema sabafundi abenza umsebenzi weembalo. Mlaleleni lokha nakakhuluma ngokobana utjheja begodu arekhode njani iragelophambili labafundi bakhe nokobana uqalana njani namazinga wabo ahlukileko wamakghono.

Khulumisanani ngokobana niqalana njani nabafundi abangaphumeleliko emahlelweni ahlelekileko weveke, kunye nabafundi abaphumelela ngokudluleleko.

Umthethokambiso wezinga: Akusibo boke abafundi abathuthuka ngebelo elifanako. Abanye abafundi badinga isikhathi esingaphezulu ukubamba ikghono nofana umqondo lokha abanye nababamba imibono msinyana. Isitjhijilo sabotitjhere kukwamukela abafundi emazingeni ahlukileko nokutjhugulula ihlelo laqobe yiveke ukunikela isekelo nofana ukunabisa imisebenzi lapho kutlhogeka khona.



Amanothi womkghonakalisi

- ◆ Khulumisanani ngesidingo sendlela ehlukileko yokufundisa nokobana kubayini lokhu kulisizo kibo boke abafundi ngetlasini. Hlanganisani imikhulumiswano **nomthethokambiso wezinga**.
- ◆ Kiso soke isifundobandulo lesi hlanganisa **umthethokambiso wezinga** namano wendlela yokuhlukanisa wokuqalana nabafundi abangaphumeleliko emahlelweni ahlelekileko waqobe yiveke, kunye nalabo abafundi abaphumelela ngokudluleleko.

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.

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.

Isetjhini 1: IsiKhala neBumbeko (Ijijomethri)

1-iri

Lesi sifundobandulo siqophene nokufundisa okumumethweko kweThemu 2 Iimveke 8–10. Umnqopho weThemu 2 Iveke 8 IsiKhala neBumbeko (Ijijomethri).

Ithemu 1–4 Isirhunyezo sokumumethweko: IsiKhala neBumbeko (Ijijomethri)

Qala isirhunyezo sokumumethweko kwesiKhala neBumbeko (Ijijomethri) emakhasini 126–131 *womHlahlandlela womQondo* bese nenza Umsebenzi 3.

Amanothi womkghonakalisi

- ◆ Ihloso **yomSebenzi 3** kuqakathekisa okumumethweko kwe-CAPS nokumumethweko okunabisiweko okunikelwe kuHlelo leemBalo.
- ◆ Layela abahlanganyeli emakhasini 126–131 *womHlahlandlela womQondo*: ukulandela iinkombatjhuba (3.1) kunye nokweqa umuda oqunta phakathi (3.4).
- ◆ Dosela itjhejo labahlanganyeli kokumumethweko kweVeke 8 ebhoksini Ilwazi elitjha ekhasini 139 *UmHlahlandlela wemiSebenzi: Ithemu 2*.
- ◆ Khumbuza abahlanganyeli ngokumumethweko kwesiKhala neBumbeko (Ijijomethri) okwenziwe eemvekeni ezidlulileko.

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.

Amatshwayo wamabumbeko

Abafundi badinga amathuba amanengi wokumadanisa nokuhlela amabumbeko ngokuya ngokwamatshwayo wawo nokuthadhlhula ukufana nokuhluka kwamabumbeko.

Amanothi womkghonakalisi

- ◆ Nikela isiqhema ngasinye isede eyodwa yamabumbeko wesiThasiselo B.
- ◆ Bawa abahlanganyeli bahlele amabumbeko ngamaneko. Ungabarhabisi. Nasele bawahlelile, buza: *Uwahlele njani amabumbeko wakho?* Bawa abahlanganyeli bahlathulule bonyana kubayini bahlele amabumbeko ngalindlela.
- ◆ Kwanjesi bawa abahlanganyeli bahlele amabumbeko la ngenye indlela. Bawa abahlanganyeli bahlathulule bonyana kubayini bahlele amabumbeko ngalindlela.
- ◆ Qinisekisa bonyana iindlela zokuhlela ezilandelako ziyatjhiwo:
 - ibumbeko
 - ubukhulu
 - inani lamahlangothi
 - inani lamakhona
 - imida enqophileko nofana egobeneko.
- ◆ Khuthaza abahlanganyeli basebenzise ilwazimagama leembalo elifaneleko ukuthadhlhula amatshwayo wamabumbeko, isib. *amahlangothi, amakhona, imida.*



Umsebenzi 4

Umkghonakalisi uzakunikela isiqhema sakho isede yamabumbeko.

1. Hlelani ngamaneko amabumbeko la.
2. Khulumisanani ngokobana kubayini niwahlele ngalindlela.
3. Hlelani amabumbeko ngenye indlela.
4. Khulumisanani ngokobana kubayini niwahlele ngalindlela.

Ithemu 2 Isirhunyezo sokuMumethweko: Iveke 8

Qala Isithasiselo A: Isirhunyezo sokuMumethweko kwaQobe yiVeke (Iimveke 8–10).
Funda isirhunyezo sokumumethweko kweVeke 8: Isikhala neBumbeko (Iijiyomethri) ekhasini 21 *UmHlahlandlela wemiSebenzi: Ithemu 2.*

IsiGaba sokuMumethweko kwesiKhala neBumbeko (Iijiyomethri) naso besimnqopho weThemu 2 Iimveke 3 neye-4. Kumfundobandulo ezidlulileko, nikhulumisene ngemiqondo yesiKhala neBumbeko ekufanele yenziwe.

Isirhunyezo sokuMumethweko kwaqobe yiVeke kweVeke 8 kunikela isirhunyezo sokuhlelela iveke: imisebenzi yetlasi yoke, imisebenzi ehlahlwa ngutitjhere nemisebenzi yeentetjhini zokusebenzela eyenziwa ngeenqhema ezincani ezizijameleko.

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.

Amanothi womkghonakalisi

- ◆ Ihloso **yomSebenzi 5** kukobana amatitjhere akhumbule ukuhlobana phakathi:
 - kwesirhunyezo sokumumethweko kwe-CAPS kuThemu 1–4 emakhasini 126–131 *UmHlahlandlela womQondo*
 - kwesirhunyezo sokumumethweko ekhasini 21 *UmHlahlandlela wemiSebenzi: Ithemu 2*
 - Isithasiselo A: Ithemu 2 Isirhunyezo sokuMumethweko kwaQobe yiVeke (limveke 8–10)
 - kwemisebenzi yangamalanga lveke 8 *yomHlahlandlela wemiSebenzi: Ithemu 2* (amakhasi 38–153).
- ◆ Kusetjhini yombiko obuyako wesiqhema soke qinisekisa bonyana abahlanganyeli bazi isakhiwo nokuhlelela ukufundisa ngeVeke 8. Basize ukufanisa ukuhlobana phakathi kwemisebenzi ephakanyisiweko *kumHlahlandlela wemiSebenzi: Ithemu 2* nesirhunyezo sokumumethweko. Hlanganiso ikulumiswano le nemuva kobana okumumethweko kweveke kungena njani ku-CAPS.



Umsebenzi 5

1. Thatha imizuzu embalwa ukuzijayeza ngokumumethweko kweVeke 8 Isithasiselo A: Isirhunyezo sokuMumethweko kwaQobe yiVeke (limveke 8–10).
2. Khambelanisa lokhu nokumumethweko okusemakhasini 138–153 *womHlahlandlela wemiSebenzi: Ithemu 2*. Fanisani bonyana imisebenzi yetlasi loke, ehlahlwa ngutitjhere neyesitetjhi sokusebenzela ihlangana njani nokumumethweko kweVeke 8 isiThasiselo 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.

Isetjhini 2: Ukumeda

1-iri

Umnqopho weThemu 2 Iveke 9 Ukumeda.

Ithemu 1–4 Isirhunyezo sokuMumethweko: Ukumeda

Qala isirhunyezo sokumumethweko Ukumeda emakhasini 32–135 womHlahlandlela womQondo.

Amanothi womkghonakalisi

- ◆ Ihloso yom**Sebenzi 6** kuqakathekisa okumumethweko kwe-CAPS.
- ◆ Khumbuza abotitjhere bonyana ukuhlola kwaGreyidi R kufanele kube nesisekelo se-CAPS, nokobana okumumethweko kweHlelo leemBalo okungezelelweko kungokokunothisa ilemuko lokufundisa nokufunda.



Umsebenzi 6

1. Ngimiphi imiqondo yokumeda eyenziwe bgeThemu 2?

2. Ngimiphi imehluko phakathi kokumumethweko kweHlelo leemBalo nokumumethweko kwe-CAPS?

Ukumadanisa izinto bunqopha: ubude

KuThemu 1 yeHlelo leemBalo umnqopho wesiGaba sokuMumethweko sokuMeda bekusikhathi (imini, ubusuku, amalanga weveke, ukulandelanisa izehlakalo, njll.) netjhadi lokuphakama. KuThemu 2 Iveke 9, umnqopho usekusebenziseni amayunithi wokumeda angakavami ukumeda nokumadanisa ubude.



Umsebenzi 7

1. **Ukumadanisa bunqopha**

Khetha umlingani ongajama eduze naye. Woke amanye amalunga wesiqhema kufanele amadanise ukuphakama kwenu.

- ◆ Ngubani omude khulu? _____
- ◆ Ngubani omfitjhani khulu? _____
- ◆ Tholani umuntu wesithathu ophakamileko kunabo bobabili abantu laba.

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*.

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

2. Ukusebenzisa amayunithi wokumeda angakavami

Khetha izinto ezintathu (isib. isikhiya, ufunjathwako, isipatjhi).

- ◆ Sebenzisa yinye yama-ayithemu lawa ngasikhathi sinye ukumeda *iNcwadi yokuSebenzela yomHlanganyeli*.
 - ◆ Bika lokho okutholileko esiqhemeni.
-
-
-

Amanothi womkghonakalisi

- ◆ Veza bonyana amayunithi wokumeda angakavami asetjenziswe ukumeda *iNcwadi yokuSebenzela yomHlanganyeli* akanabukhulu obufanako. Lokha abahlanganyeli nabamadanisa iimedo zabo (mangaki amayunithi, isib. isikhiya), bazakukhumbula bonyana ukukhetha iyunithi kunikela isiqunto sokobana mayunithi amangaki weyunithi ngenanini lamayunithi apheleleko – ngalokho, izinto ezihlukileko ezisetjenziselwa ukumeda zizakuba nemiphumela yenani elihlukileko lamayunithi ependulweni (inani lamayunithi elipheleleko), isib. *iNcwadi yokuSebenzela yomHlanganyeli* imeda iinkhiya ezi-17 nakumadaniswa nabofunjathwako aba-4.
- ◆ Yelalisa abahlanganyeli bonyana ubukhulu bamayunithi wokumeda angakavami bungahluka phakathi kwabantu, isib. umuntu oyedwa angaba nofunjathwako omncazana kunomunye. Lokho godu kungaba nomphumela ohlukileko wenani lamayunithi elipheleleko.
- ◆ Tjheja abahlanganyeli lokha nabamedako bese uqinisekisa bonyana amayunithi wokumeda angakavami asetjenziswa ngokunembako (ekugcineni ukuya ekugcineni).

Ithemu 2 Isirhunyezo sokuMumethweko: Iveke 9

Qala Isithasiselo A: Isirhunyezo sokuMumethweko kwaQobe yiVeke (Iimveke 8–10).

Funda isirhunyezo sokumumethweko kweVeke 9: Ukumeda ekhasini 21

UmHlahlandlela wemiSebenzi: Ithemu 2.

Funda yoke imisebenzi yetlasi loke yeVeke 9 amakhasi 154–165 *womHlahlandlela wemiSebenzi: Ithemu 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.



Umsebenzi 9

Eenqhemeni zenu, khulumisanani ngokobana ubude bafundiswa njani ngesikhathi semisebenzi yetlasi loke ngeVeke 9.

1. Ngikuphi ongakwenza nangabe umfundi usengakakwazi ukumadanisa nokurhemisa izinto ngokuya ngobude – de/-de khulu nokufitjhani/fitjhani khulu ekupheleni kweVeke 9?

Nqophana nelimi, emisebenzini ephathekako. Nikela ukubuyelela okunengi, imikhulumiswano eminengi, imibono eminengi evela kutitjhere. Beka umfundi nomlingani.

2. Ngikuphi ongakwenza nange abanye abafundi bangaqeda umsebenzi wesitetjhini sokusebenzela ngepumelelo msinyana kunalokho obekuhleliwe?

Lungisa imisebenzi yokuzikhethela ngokutjhaphulukileko efaneleko. Banikele umsebenzi 'omkhulu' bonyana bawenze isib. sebenzisa inyathelo lakho ukumeda ihlangothi elilodwa letlasi.

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.

Isetjhini 3: Iinomboro, ama-Opharetjhini noBudlelwana

i-Iri 1

Umnqopho weThemu 2 Iveke 10 ziiNomboro, ama-Opharetjhini noBudlelwana.

Ithemu 1–4 Isirhunyezo sokumumethweko: Iinomboro, ama-Opharetjhini noBudlelwana

IsiGaba sokuMumethweko iiNomboro, ama-Opharetjhini noBudlelwana nakho bekumnqopho weeVeke 1, 2, neye-5 zeThemu 2, begodu nikhulumisene ngoqondo weenomboro obekufanele wenziwe ngemfundobandulo ezidlulileko. Qala isirhunyezo sokumumethweko kweeNomboro, ama-Opharetjhini noBudlelwana emakhasini 114–123 womHlahlandlela womQondo.



Umsebenzi 10

Ngiwuphi umqondo weenomboro osafanele ukwenziwa ngeThemu 2?

Ukurarulula umraro

Abotitjhere kufanele banikele abafundi amathuba amanengi wokurarulula imiraro kobana bakwazi ukusebenzisa ilwazi namakghono wabo weembalo ebujameni obutjha. Yoke imidlalo nemisebenzi ibandakanya ukurarulula umraro. Imiraro yamagama eembalweni yethula ihlobo lokurarulula umraro elikhethekileko elibandakanya imiraro yokuhlanganisa, ukukhupha, ukubuyabuyelela nokuhlukanisa. KwaGreyidi R abafundi bararulula imiraro yokuhlanganisa nokukhupha ngokubala nokusebenzisa iinsetjenziswa eziphathekako ukubasiza bathole isisombululo. Basebenzisa ukwenza iinqhema nokwaba ngakunye kokunye ukurarulula imiraro yokubuyabuyelela nokuhlukanisa.

Isitjhijilo esikhulu ekuthuleni imiraro yamagama kubafundi, kuqinisekisa bonyana kunokubuza nokusetjenziswa kwelimi ngefanelo. Lokha abotitjhere nabathula umraro wegama, kufanele balalele kuhle iimpendulo zabafundi bese bayabahlahla ukurarulula umraro ngokusebenzisa amano afaneleko akhambisana nezinga labo lokuzwisisa.

Amaphosta we-Ncwadi yamaPhosta atlanyelwe ukunikela abafundi isede yeenthombe ezikhambelana nepilo yabo nokunikela ubujamo bokurarulula imiraro yepilo yamambala.

NgeVeke 10 iLanga 4 (ikhasi 181 umHlahlandlela wemiSebenzi: Ithemu 2), iPhosta 1 isetjenziselwa ukukhuthaza abafundi ukurarulula imiraro ebandakanya iinomboro 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.

Amanothi womkghonakalisi

- ◆ **Umsebenzi 11** abahlanganyeli baqala iPhosta 1 ukukhiqhiza umlandelane wemibuzo efaneleko ekhambelana neenomboro.
- ◆ Imibuzo le ifaka amakghono alandelako: ukumadanisa, ukukhambelanisa, ukubala, ukuhlanganisa, ukukhupha, ukwenza iinqhema nokwabelana ngokulingana. Kufanele ibandakanye irherho lelwezimagama. Khumbuza abahlanganyeli bonyana umnqopho wemibuzo yabo kufanele ube phezu kweembalo nokobana ilimi elisetjenziswako kufanele litsenge begodu libelula.

Sebenzisa iimbonelo ezingenzasi ukusonga **Umsebenzi 11**.

Ukumadanisa/kunye kokunye okukhambelanako (ukukhambelanisa)

- *Ingabe kuneengobho ezaneleko zesitja ngasinye?*
- *Sidinga iingobo ezinye ezingaki kobana kube nesigobho sinye sesitja ngasinye?*
- *Ingabe kunamarhalasi amanengi ngaphezu kwetjhelfu nofana ngaphasi kwetjhelfu?*

Ukubala

- *Mangaki amarhalasi akhona ngekhabeteni?*
- *Ingabe kuneentulo ezaneleko zenani labantu abangephunyaneni?*

Ukuhlanganisa

- *Kunamahabhula amane ahlaza namane abovu ngesiqandisini. Mangaki amahabhula angesiqandisini?*
- *UThami unamabhlogo amathathu. Kunamabhlogo amane phasi. Kunamabhlogo amangaki nasele awoke?*

Ukukhupha

- *Kunamaqanda asithandathu emnyango wesiqandisi. Ubaba upheka amaqanda amane. Mangaki amaqanda azakusala ngesiqandisini?*
- *Kuneembhigiri ezihlanu ngephunyaneni. Iimbhigiri ezine zimhlophe. Zingaki iimbhigiri ezisarulani?*
- *Kunamahabhula abunane ngesiqandisini. Amahabhula amane ahlaza. Mangaki amahabhula abovu?*

Ukwenza iinqhema

- *Umntwana ngamunye unamehlo amabili. Mangaki amehlo azabakhona abantwana nababathathu?*

Ukwaba ngokulingana

- *Kunama-orentji amathathu ngemgodleni. Abantwana abathathu babelana ngama-orentji. Umntwana ngamunye uzakuthola ama-orentji amangaki?*



Umsebenzi 11

Eenqhemeni zenu, qalani iPhosta 1. Cabangani ngemiraro yamagama efaneleka amakghono lawa ngalinye:

- ◆ ukumadanisa
- ◆ ukukhambelanisa
- ◆ ukubala
- ◆ ukuhlanganisa
- ◆ ukukhupha
- ◆ ukwenza iinqhema
- ◆ ukwabelana ngokulingana.

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.

Lokha nawenza imisebenzi yomraro wegama nabafundi, bavumele basebenzise imino yabo nofana iimbalisi ukubasiza bararulule imiraro.

Amanothi womkghonakalisi

- ◆ Kusetjhini yesiqhema soke bawa iimbonelo zemibuzo yesigaba ngasinye. Tlola lokhu etjhadini eliphendlekako kobana kuzokuragelwa phambili kukhulunywane ngayo.
- ◆ Amaphuzu aqakathekileko wokukhulumisana afaka hlangana:
 - Indlela ewakha ngayo ilimi lomraro wegama ngiyo ekhetha bona ulula nofana ubudisi kobana abafundi bangawuzwisisa bebawurarulule, isib:
 - * *Kunamaswidi ali-10. Ngidla ma-4. Mangaki aseleko?* (Lokhu kusebenzisa isakhiwo esilula selimi.)
 - * *Ngithenge amaswidi. Ngadla amaswidi asi-6. Kusele a-4. Mangaki amaswidi engiwathengileko?* (Lokhu kusebenzisa isakhiwo ezibudisi khulu.)
 - Abafundi kufanele benziswe izakhiwo ezihlukileko zomraro wegama bonyana bakwazi ukusebenzisa amakghono nokuhlathulula kwabo ebumeni obuhlukileko.

Esinye seengaba zeeNomboro, ama-Opharetjhini noBudlelwana ku-, 'Ukurarulula imiraro ebumeni'. Eenqhemeni zenu, fundani isirhunyezo sokumumethweko kweThemu 2 ngesigaba lesi ekhasini 121 *umHlahlandlela womQondo*. Bese nenza Umsebenzi 2.



Umsebenzi 12

Zindlani ngomSebenzi 11.

1. Ngimiphi imiqondo namakghono afundisiweko begodu yafundwa esihlokweni: Amano wokurarulula umraro?
-

Ukubala ngokusebenzisa iinsetjenziswa eziphathekako, okutjho. iimbalisi, ilere yeenomboro ephathekako, imincamo ehlelekileko elitjhumi.

2. Ngimiphi imiqondo namakghono afundisiweko begodu yafundwa esihlokweni: Ukuhlanganisa nokukhupha?
-

Sebenzisa iimbalisi; ukurarulula imiraro ngomlomo.

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*.

Isilinganiso

Abafundi baba namakghono wokulinganisa bese benza ukufunisela 'okuzwakalako' nbokobana 'zingaki izinto' ezisebuthelweni. Ngesikhathi semisebenzi yokumeda, balinganisa bonyana into ibudisi nofana yide kangangani, nofana makopi amangaki azakuzalisa ijeje ngaphambi kobana bamede kwamambala.

Amanothi womkghonakalisi

- ◆ Thola iimphathi ezimbili ezikhanyelako (isib. amabhodlelo webhodoro yamantongomani). Zalisa sinye ngezinto ezincani ezibunane bese esinye sizalise ngezinto ezibunane ezikulu.
Buza:
 - *Zingaki izinto ocabanga bonyana zingebhodlelweni leli?*
 - *Zingaki izinto ocabanga bonyana zingebhodlelweni elinye?*
 - *Ucabanga bonyana kunenani elifanako ngebhodlelweni ngalinye?*
 - *Singathola njani bonyana ngiliphi ibhodlelo elinezinto ezinengi? (Balani izinto.)*
- ◆ Khumbuza abahlanganyeli bonyana ukulinganisa kufunisela okuzwakalako. Ngokukhombisa inani elifanako lezinto ngemabhodlelweni kodwana usebenzisa ubukhulu obuhlukileko bezinto, abafundi baqalana nenomboro kunobukhulu bento nofana ubungako besikhala esizizalisako ngesiphathini (ivolomu).



Umsebenzi 13

Umkghonakalisi uzanikhombisa amabhodlelo amabili. Linganisani bonyana zizinto ezingaki ezingebhodlelweni ngalinye bese niphendula imibuzo yakhe.

Abafundi kufanele bakwazi ukusebenzisa amathemu anjengokuthi: *kumbalwa khulu, kunengi khulu, kungaphezulu kuna-, kwanele, akukaneli, pheze, eduze na-, pheze kuyafana, ngaphasana, ngaphezudlwana.*

Abotitjhere bangahlela imisebenzi yokulinganisa ekhuthaza abafundi ukwenza ukufunisela okuzwisisekako mayelana nobungako bebuthelelo lezinto nofana ukumeda into.

Ithemu 2 Isirhunyezo sokuMumethweko: Iveke 10

Qala Isithasiselo A: Isirhunyezo sokuMumethweko kwaQobe yiVeke (Iimveke 8–10). Funda isirhunyezo sokumumethweko kweVeke 10: Iinomboro, ama-Opharetjhini noBudlelwana ekhasini 21 *umHlahlandlela wemiSebenzi: 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)).



Umsebenzi 14

1. Ngiziphi iinhloko zeVeke 10?

2. Ngiliphi ilwazi elitjha elethulwa ngeveke le?

3. Ngiwaphi amakghono wangeemveke ezidlulileko ajayezwako?

Qala imisebenzi yesilinganiso kuVeke 10 (*umHlahlandlela wemiSebenzi: Ithemu 2*, amakhasi 175 (Ilanga 1), 177 (Ilanga 2) nele-179 (Ilanga 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				

Isetjhini 4: Iinomboro, ama-Opharetjhini noBudlelwana

Imizuzu 45

Ihlelo leemBalo linqophana nesiGaba sokuMumethweko esiqakathekileko esisodwa iveke ngayinye. Kufanele bonyana sele utjhejile bonyana nanyana umNqopho wesiGaba sokuMumethweko waqobe yiveke ungasiyo 'inomboro', iinkambiso zenomboro ziragela phambili ngamalanga iveke ngayinye. Unobangela walokhu kukobana ukubuyelela nokujayeza kuqakathekile ekuhlenganiseni amakghono wabafundi athuthukako wenomboro.

Imisebenzi yetlasi loke yelanga ngalinye leveke ivame ukuthoma ngeenkambiso ezintathu zenomboro:

- ◆ ingoma nofana umlolozelo
- ◆ ukubala ngomlomo
- ◆ ukubala izinto.

Iinkambiso ezintathu zenomboro lezi zihlelelwe ukukhambelanisa irherho lenomboro yethemu ngayinye.

Amanothi womkghonakalisi

- ◆ **Umsebenzi 15**, abahlanganyeli bazakusebenzisa *umHlahlandlela wemiSebenzi: Ithemu 2* ukuthola iinkambiso zenomboro zangamalanga bese bazalisa ithebula. Lokhu kukuqakathekisa iphuzu lokobana iinkambiso zenomboro ziyajayezwa ngamalanga weveke ngayinye nofana kungimuphi umNqopho wesiGaba sokuMumethweko kunye nokukhombisa iragelo phambili erherhweni lenomboro ithemu yoke.



Umsebenzi 15

Thola iinkambiso zenomboro zangamalanga kuThemu 2 *kumHlahlandlela wemiSebenzi: Ithemu 2* bese uzalisa ithebula. Iveke 1 sewenzelwe yona.

Iveke	Umnqopho wesiGaba sokuMumethweko	Ingoma nofana umlolozelo	Ukubala ngomlomo	Ukubala izinto
1	Iinomboro, ama-Opharetjhini noBudlelwana	Umlolozelo weThemu 1	1-10 5-1	1-5 (itjhadi lamalanga wokubelethwa)
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				

Ngemva kobana kuqalwe okumumethweko kwenomboro kweThemu 2, uzakutjheja bonyana iinkambiso zenomboro zijayezwa ngamalanga weveke ngayinye nofana kungimuphi umNqopho wesiGaba sokuMumethweko neragelophambili lokungezeleleka kwerherho lenomboro ithemu yoke.

Session 5: Term 2 Assessment

1 hour



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.



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.

Isetjhini 5: Ukuhlola ithemu 2

1-iri



Ividiyo 2

Bukelani ividiyo katitjhere nakathula imiraro yamagama esiqhemeni esincani sabafundi.

Tjheja bonyana umfundi ngamunye uwurarulula njani umraro. Yeleda bonyana utitjhere uzisebenzisa njani iinkhuthazi lokha umfundi nakanobudisi.

Amanothi womkghonakalisi

- ◆ PPT: Irubhrikhi enesikala sokulinganisa 1–7.
- ◆ Khulumisanani ngokobana iintlhadhuli ezikurubhrikhi zinikela njani iindlela zokuhlola ezihlukanisako zekhowudu yokulinganisa ngayinye.



Umsebenzi 16

Qala irubhrikhi ekhasini 107 *umHlahlandlela womQondo*.

Eenqhemeni zenu, khulumisanani ngokobana nizomnikela njani umfundi ngamunye umphumela ngokusebenzisa isikala lesi. Nikela abonobangela besiqunto enisithetheko ngokusekelwa ziindlela zokuhlola zekhowudu yokulinganisa ngayinye.

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.

Amanothi womkghonakalisi

- ◆ **Ukuzindla kwesiundobandulo:** Bawa abahlanganyeli bathathe imizuzu embalwa bazindle ngelanga lelo begodu baphendle *iNcwadi yokuSebenzela yomHlanganyeli*. Babawe batlole phasi nofana ngimiphi iimbuzo nofana imibono abazokwabelana ngayo nesiqhema soke.
- ◆ **Umsebenzi obuyiselwa esikolweni:** Funda umsebenzi lo woke. Buza nangabe kukhona ongakuzwisisi kuhle nokufuna ihlathululo enabileko.
- ◆ **Ukuhlunga:** Khupha amakhophi weForomo lokuHlunga lesiFundobandulo bese unikela abahlanganyeli bawazalise.
- ◆ **Isifundobandulo esilandelako:** Nikela amalanga wesifundobandulo esilandelako bese uvala isifundobandulo.



Umsebenzi 17

Ukuzindla kwesifundobandulo: Thatha imizuzu embalwa uzindle ngelanga leli. Phendla *iNcwadi yokuSebenzela yomHlanganyeli* ukuzikhumbuza ngalokho okwenziweko. Tlola phasi nofana ngiwuphi umbuzo nofana imibono uzokwabelana nesiqhema soke.



Umsebenzi obuyiselwa esikolweni

1. Sebenzisa *umHlahandlela wemiSebenzi: Ithemu 2* ukuhlela nokwenza nokusebenzisa iiVeke 8–10 zeHlelo leemBalo.
2. Tlola ukuhlunga ngalokho okusebenze kuhle, lokho okungakasebenzi kuhle nalokho ongakwenza ngokuhlukileko ukuthuthukisa ukufundisa nokufunda.
3. Yiza nokuhlunga kwakho kusifundobandulo esilandelako.

Ukuhlunga

Zalisa iForomo lokuHlunga.

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	

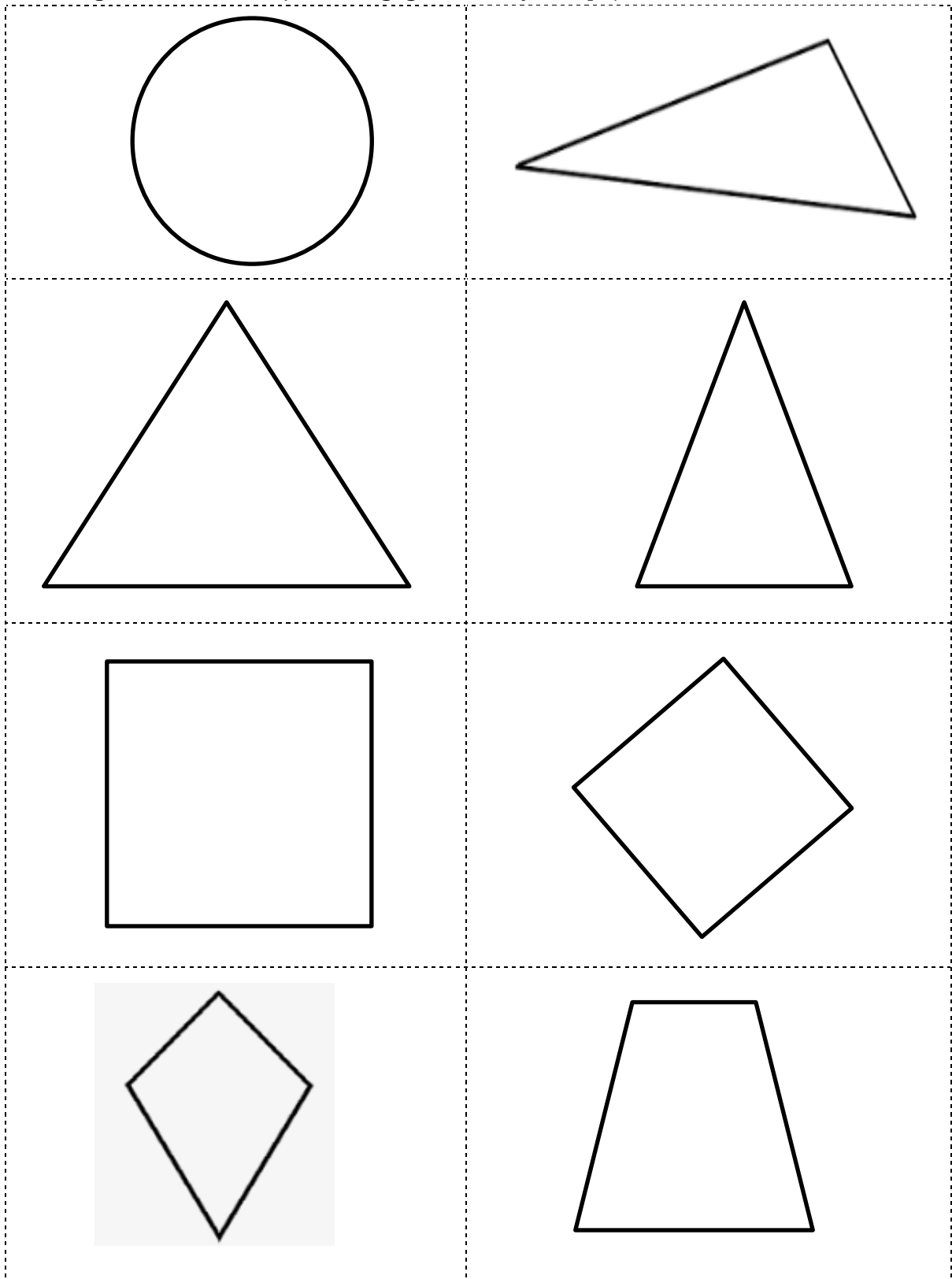
ISITHASISELO A: ITHEMU 2 ISIRHUNYEZO SOKUMUMETHWEKO KWAQOBE YIVEKE (IIMVEKE 8-10)

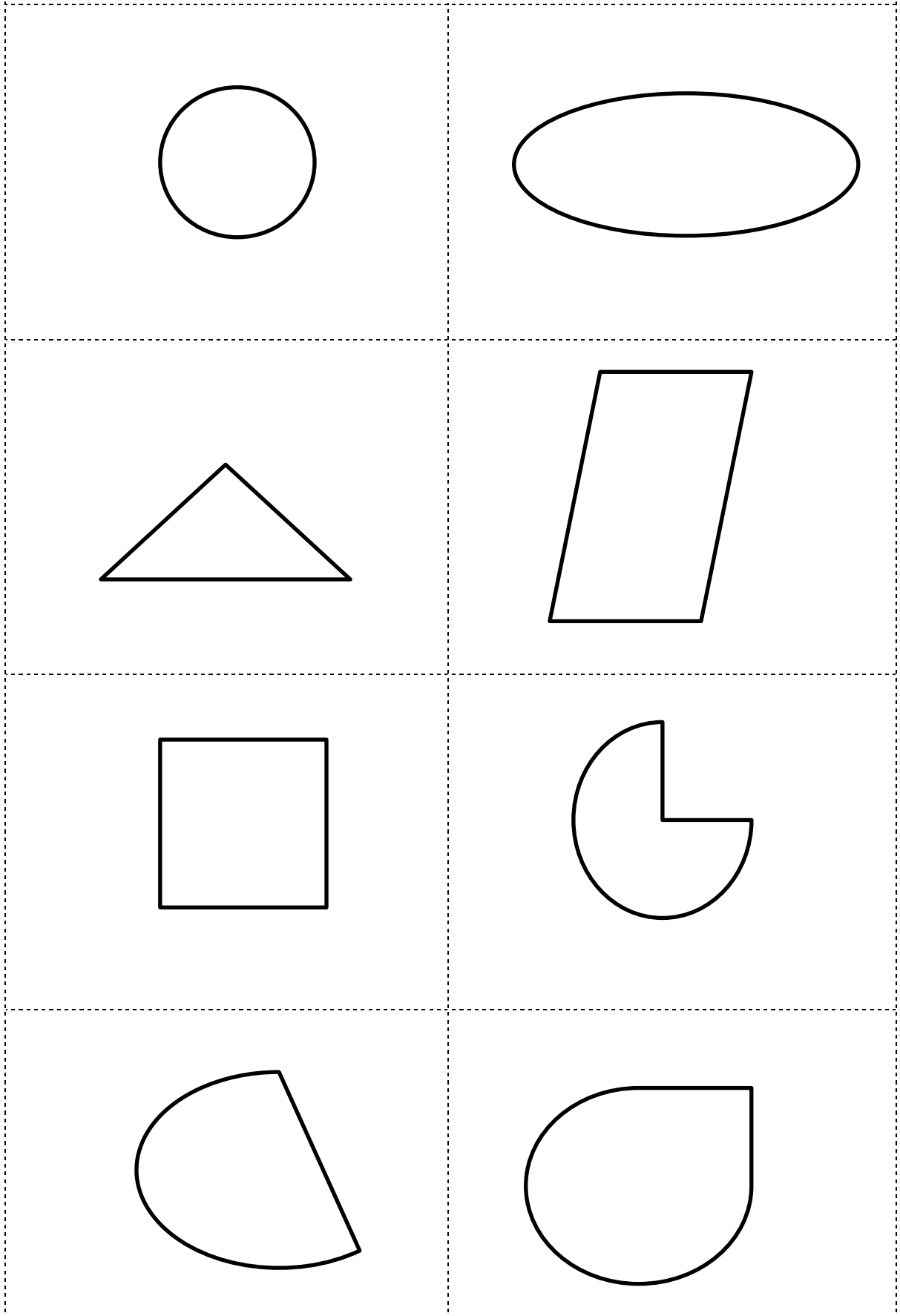
Ithemu 2: Ihlelo Lemisebenzi

Iveke 8			
ISIGABA SOKUMUMETHWEKO: ISIKHALA NEBUMBeko (IJIYOMETHRI)			
ISIHLOKO: Amatshwayo wamabumbeko – madanisa okufanako nokuhlukileko, hlela ngokwamatshwayo; isikhundla, ubujamo nokuqaleka kwento			
UKWETHULA ILWAZI ELITJHA: Landela ikombatjhuba nomuda oqunta phakathi			
UKUJAYEZA: Ukubala ngomlomo 1–20, ukubala ukuya emuva ukusuka ku-7, ukulandelanisa iinomboro 1–5, ukubala izinto 1–7, ukugandelela umqondo wenomboro 1–5, khuyini okuza ngaphambili/ngemva, jayeza ukusebenzisa woke amabumbeko			
Imisebenzi yetlasi loke		Umsebenzi ohlahlwa ngutitjhere	Imisebenzi yesitetjhi sokusebenzela
Ilanga 1	Ukuya phambili/ukuya emuva.	Ukubala – ngikhombisa iimbalisi 1–3, 5–7. Ukusebenza ngamabumbeko woke afundisiweko. Ukweqa umuda oqunta phakathi. Isikhundla – ikombatjhuba. Ukuya phambili/ukuya emuva.	Umsebenzi 1 Umsebenzi 2 Umsebenzi 3 Umsebenzi 4
Ilanga 2	Gandelela woke amabumbeko (Ngiyahlola ...).		
Ilanga 3	Umdlalo wamabumbeko.		
Ilanga 4	Ngingenzani: Ngilahlekelwe yi ... (ibumbeko).		
Ilanga 5	Isiqabomdlalo (kufuneka isikhala esikhulu/ngaphandle). Ukweqa umuda oqunta phakathi.		
Iveke 9			
ISIGABA SOKUMUMETHWEKO: UKUMEDA			
ISIHLOKO: Ubude – madanisa bese urhemisa izinto ngokusebenzisa ilwazimagama elifaneleko ukutlahlhula ubude			
YETHULA ILWAZI ELITJHA: Ukumeda nokumadanisa ubude (-de/fitjhani, -danyana/-fitjhazana, -de khulu/-fitjhani khulu)			
UKUJAYEZA: Ukubala ngomlomo 1–20, ukubala uye emuva ukusuka ku-7, ukubala izinto 1–7, ukulinganisa 1–7, -phakama/-fitjhani			
Imisebenzi yetlasi loke		Umsebenzi ohlahlwa ngutitjhere	Imisebenzi yesitetjhi sokusebenzela
Ilanga 1	-danyana/fitjhazana/(ukuphakama).	-danyana kuna-/fitjhazana kuna. -phakeme kuna-/fitjhazana kuna. Ukumeda ngezinto zangamalanga.	Umsebenzi 1 Umsebenzi 2 Umsebenzi 3 Umsebenzi 4
Ilanga 2	Ukumadanisa ubude bamaribhoni.		
Ilanga 3	Ukuhlela izinto ngobude (imitletle yephepha enombala).		
Ilanga 4	Ukumadanisa ngetjhadi lokuphakama (ukusukela ngeThemu 1).		
Ilanga 5	Ukumadanisa ngetjhadi lokuphakama (uphakeme/mfitjhazana kunawe).		

APPENDIX B: SHAPES FOR SORTING/ISITHASISELO B: AMABUMBEKO WOKUHLELA

Cut along the dotted lines./Sika magega nemida yamaqatjhazi.





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?

Isifundobandulo 6 Iforomo lokuHlunga

1. Ingabe isifundobandulo sibe ngilokho ebegade ukulindele?

2. Khuyini okufundileko kilesisifundobandulo okukusize khulu?

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

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

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