INkqubo yeMathematika yokuPhucula yeBanga R
Grade R Mathematics Improvement Programme

INdibano yoCweyo 6 ● Workshop 6
IsiKhokelo somBhexeshi ● Facilitator's Guide

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- Iqela lababhali beR-Maths: Abasebenzi kwiSDU.

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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)

Amagqabantshintshi

Injongo

Le yeyesithandathu kwezilishumi elinambini iindibano zocweyo zeNkqubo yeMathematika yokuPhucula yeBanga R (iNkqubo yeMathematika), eziyinxalenye yeProjekthi yeBanga R yokuPhucula yeMathematika noLwimi yeSebe leMfundo laseGauteng (Gauteng Department of Education (GDE)).

Injongo yale ndibano yocweyo kukuncedisa ootitshala ukuba baphumeze iNkqubo yeMathematika eziklasini zabo, ngakumbi kwiiNkalo zomXholo esezenziwe kwiKota 2 iiVeki 8–10. Abathathinxaxheba baya kucamngca ngenkqubela yohlolo oluqhubekayo lwabafundi yaye kuya kubhalwa phantsi izinto ezixhalabisayo zophuhliso eziphathelelene nabafundi abanokufuna uncedo nenkxaso eyodwa. Abathathinxaxheba baya kucamngca ngeendlela abazisebenzisileyo ukuqinisa izakhono zabafundi zokusombulula iingxaki.

Ubhekiso kwiiNkalo zomXholo weMathematika weBanga R luthathwe *kwiNkcazelo yePolisi yeKharityhulam nokuHlola (CAPS): IBanga R iMathematika (idrafti yokugqibela)*, 2011, iSebe leMfundo esiSiseko, yaseMzantsi Afrika.

Iziphumo zokufunda

♦ Ukuthetha ngokuphunyezwa kweKota 2 iiVeki 4–7
♦ Ukuqwalasela amacebo okunika inkxaso ekufundisweni kwemathematika kwiBanga R
♦ Ukucamngca kwimimiselo yeNkqubo yeMathematika kwisicwangciso seveki
♦ Ukusebenza ngomxholo weNkqubo yeMathematika yeKota 2 iiVeki 8–10 (IsiThuba neMilo (iJiyometri); Umlinganiselo; Amanani, iiOpareyshini noLwalamano)
♦ Ukusebenzisa ulwazi olungekho sikweni, uhlolo oluqhubekayo lokufunda nokufundisa

Umxholo wendibano yocweyo

♦ Ukuvula nocamngco	(1 iyure)
♦ Iseshoni 1: IsiThuba neMilo (iJiyometri)	(1 iyure)
ITI	
♦ Iseshoni 2: Umlinganiselo	(1 iyure)
♦ Iseshoni 3: Amanani, iiOpareyshini noLwalamano	(1 iyure)
ISIDLO SASEMINI	
♦ Iseshoni 4: Amanani, iiOpareyshini noLwalamano	(45 imizuzu)
♦ Iseshoni 5: Uhlolo lweKota 2	(1 iyure)
♦ Imisebenzi yokuqukumbela	(15 imizuzu)

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

Ulungiselelo

- PPT ulwamkelo neziphumo
- Funda:
  IsiKhokelo seeKhonsepthi, amaphepha 114–137
  IsiKhokelo semiSebenzi: Ikota 2, amaphepha 18–21 namaphepha 138–189
  Isingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (Iiveki 8–10)
- Ukukhumbuza abathathinxaxheba ukuba beze ne*siKhokelo seeKhonsepthi*, : *IsiKhokelo semiSebenzi: Ikota 2,* , umzekelo wabo wokuhlolwa kwabafundi namanqaku ovavanyo athathwe kumsebenzi *ekuza kubuyelwa nawo esikolweni* othathwe kwiNdibano yoCweyo 5.
- Beka *iKiti yeziXhobo* kwitafile yeqela ngalinye.
- Sika iimilo kwiSingeniso B seqela ngalinye. Beka iimilo kwimvulophu yeqela ngalinye.

Iimathiriyeli

- Iphepha lefliptshathi, iikhoki
- *IKiti yeziXhobo* yeqela ngalinye
- *INcwadi yeePowusta* yeqela ngalinye

Opening and reflection

1 hour

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.

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Ukuvula nocamngco

Amanqaku ombhexeshi
- PPT: Vula iseshoni ufunde iajenda kunye neziphumo zokufunda zendibano yocweyo.
- Cela abathathinxaxheba ukuba bacamngce ngokuphumeza kwabo umsebenzi weKota 2 iiVeki 4–7 yeNkqubo yeMathematika noko bakuqapheleyo nokuhlola abafundi.
- Abathathinxaxheba baxoxa ngemibuzo eku**Msebenzi 1** ngokwamaqela amancinci. Chitha ixesha neqela ngalinye ngethuba leengxoxo, ungenelele apho kufanelekileyo.

Nanku Umsebenzi *ekubuyelwa nawo esikolweni* othathwe kwiNdibano yoCweyo 5.

> **Umsebenzi ekubuyelwa nawo esikolweni (iNdibano yoCweyo 5)**
>
> 1. Qhubeka nokusebenzisa iRekhodi yoHlolo oluQhubekayo ekwi*siKhokelo semiSebenzi: iKota 2* ukuhlola abafundi bakho. Sebenzisa amanqaku akho oqwalaselo oluqhubekayo ukwakha ubungqina bokuba bayaqonda na kwanento abaya kuyenza.
> 2. Khetha naziphi na izinto ezixhalabisayo onazo malunga nendlela aqalisa ngayo ukubamba iikhonsepthi zemathematika umfundi.
> 3. Yiza neekopi zeerubhriki onazo ozisebenzisileyo kuhlolo lwemathematika kwindibano yocweyo olulandelayo.
> 4. Yiza nerekhodi yohlolo eyenziweyo yomfundi omnye kwindibano yocweyo elandelayo.
> 5. Usebenzisa *isiKhokelo semiSebenzi: iKota 2* ukucwangcisa nokusebenzisa iNkqubo yeMathematika kwiiVeki 4–7, kuquka nokwenza indawo yemathematika egxile kwikhonsepthi kwiveki nganye.
> 6. Ukwenza amanqaku malunga nokusebenze kakuhle, nokungasebenzanga kakuhle noko kufuneka kwenziwe ngokwahlukileyo ukuphucula ukufundisa nokufunda.

Umsebenzi 1

1. Ngokwamaqela, xoxani ngenkqubela yenu ekuphumezeni iKota 2 iiVeki 4–7.
   - Yintoni esebenze kakuhle (eqhube kakuhle)?
   - Yintoni engasebenzanga kakuhle (imingeni)?
   - Ungenza ntoni ukuphucula ukufundisa nokufunda eklasini yakho?

Bhalani amanqaku aphambili kwingxoxo yenu ephepheni lefliphtshathi ukuze nibonise kwamanye amaqela ekuhambeni kwexesha.

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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.

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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.

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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. Xoxani ngendlela eniphumelele ngayo:
   ♦ ekurekhodeni amanqaku ngomfundi ngamnye emva komsebenzi ngamnye okhokelwa ngutitshala kwiiVeki 4–7.
   ♦ ekwenzeni iKota 2: iRekhodi yoHlolo oluQhubekayo amaphepha 190–193 *kwisiKhokelo semiSebenzi: iKota 2* kumfundi ngamnye.

Bhalani amanqaku aphambili engxoxo yenu kwiphepha lefliptshathi.

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3. Xoxani ngeenkalo zempumelelo zomfundi kunye/okanye ubunzima nendlela enikurekhode ngayo oku. Bhala amanqaku aphambili engxoxo yenu kwiphepha lefliptshathi.

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Amanqaku ombhexeshi

♦ Cela iqela ngalinye ukuba labelane ngamanqaku alo aphambili eliwathathe kwiingxoxo zawo. Khumbuza abathathinxaxheba ukuba bongeze kuphela amanqaku akhoyo amanye amaqela angawakhankanyanga.

♦ Iinjongo zale ngxoxo kukucamngca kwinkqubo yokubhalwa kwenkqubela yabafundi kwisithuba seeveki. Abathathinxaxheba bebecelwe ukuba baqwalasele abafundi ngexesha besenza imisebenzi yeklasi yonke nakumaqela amancinci nokubhala phantsi ezi nkcukacha. Iinjongo zale ngxoxo kukunceda ootitshala bayibone indlela yokuRekhoda uHlolo oluQhubekayo ukujonga iipateni zolwazi nobuchule kubafundi nokwabelana ngezixhobo zohlolo neenkqubo abazisebenzisayo ezikolweni zabo.

Ku*Msebenzi ekubuyelwa nawo esikolweni* okwiNdibano yoCweyo 5 uyacelwa ukuba uze neekopi zeerubriki zohlolo zomfundi ozisebenzise njengenxalenye yeNkqubo yeMathematika kule ndibano yocweyo. KuMsebenzi 2, iqela lakho liya kuxoxa ngezi rubriki nendlela ekubhalwe ngayo iinkcukacha zohlolo kwaza kwabelwana ngazo . KwiSeshoni 5, siza kuxoxa ngeerubriki nangakumbi.

👥 **Umsebenzi 2**

1. Emaqeleni enu, bonisanani imizekelo yeerubhriki zemathematika enizisebenzisileyo njengenxalenye yenkqubo yenu yohlolo.
2. Xoxani ngendlela yokubhala inkqubela yabafundi kwinkqubo yeSA-SAMS nendlela ekwabelenwe ngayo ngolwazi kunye nabazali.

Bhalani amanqaku engxoxo yenu kwiphepha lefliptshathi ukuze kamva kwabelwane ngayo namanye amaqela.

📹 **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.

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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 katitshala oqwalasele iqela labafundi besenza umsebenzi wemathematika. Mamelani ethetha ngendlela abona ngayo aze arekhode inkqubela yabafundi bakhe nangendlela akhawulelana ngayo namanqanaba angafaniyo olwazi nobuchule.

Xoxani ngendlela enikhawulelana ngayo nabafundi abafumana ubunzima bokuphumelela kwizicwangciso ezilungiselelwe iveki nganye, kwakunye nabo bafundi baqhube ngaphezu kokuba kulindelekile

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Umgaqo wenqanaba: Asingabo bonke abafundi abaya kuqhuba ngesantya esifanayo. Abanye abafundi bafuna ixesha lokudibanisa isakhono okanye ikhonsepthi ngeli xesha abanye bekhawuleza ukubamba oko bakuxelelwayo. Umngeni abajongene nawo ootitshala kukulungiselela abafundi abakumaqanaba ohlukeneyo nokwenza isicwangciso seveki nganye sibe nemisebenzi elungele ukunika inkxaso okanye imisebenzi eyongeziweyo apho kukho imfuneko.

Amanqaku ombhexeshi

♦ Xoxani ngemfuneko yokusebenzisa indlela eyahlukileyo yokufundisa nize nichaze ukuba kutheni iluncedo kubo bonke abafundi eklasini. Nxulumanisani ingxoxo no**mgaqo wenqanaba**.

♦ Kuyo yonke le ndibano yocweyo yenza unxulumano lo**mgaqo wenqanaba** neendlela ezahlukileyo xa unceda abafundi abafumana ubunzina ukuphumelela ngokwezicwangciso ezilungiselelwe iveki nganye kwakunye nabo bafundi baqhuba ngaphezu kokuba kulindelekile.

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.

Iseshoni 1: IsiThuba neMilo (iJiyometri)   **1 iyure**

Le ndibano yocweyo igxile ekufundiseni umxholo weKota 2 iiVeki 8–10. Ekuza kugxilwa kuko kwiKota 2 iVeki 8 isiThuba neMilo (iJiyometri).

Amagqabantshintshi ngomxholo weeKota 1–4: IsiThuba neMilo (iJiyometri)

Qwalaselani amagqabantshintshi ngomxholo wesiThuba neMilo (iJiyometri) **a**kumaphepha 126–131 kw*isiKhokelo seeKhonsepthi* nenze Umsebenzi 3.

Amanqaku ombhexeshi

♦ Injongo yo**Msebenzi 3** kukugxininisa kumxholo kaCAPS nokwandisa umxholo onikwe kwiNqubo yeMathematika.

♦ Yalela abathathinxaxheba ukuba bajonge kumaphepha 126–131 kw*isiKhokelo seeKhonsepthi*: landela izalathiso (3.1) nokunqumla embindini (3.4).

♦ Tsala umdla wabathathinxaxheba kumxholo weVeki 8 kwibhokisi yolwazi olutsha kwiphepha 139 o*kwisiKhokelo semiSebenzi: iKota 2*.

♦ Khumbuza abathathinxaxheba ngomxholo wesiThuba neMilo (iJiyometri) owenziwe kwiiveki ezidlulileyo.

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.

Iimpawu zeemilo

Abafundi bafuna amathuba amaninzi okuthelekisa nokuhlela iimilo ngokweempawu baze bachaze izinto ezifana nezahluke ngazo iimilo.

Amanqaku ombhexeshi

- ♦ Khupha iseti enye yeemilo ekwiSingeniso B unike iqela.
- ♦ Cela abathathinxaxheba ukuba bahlele iimilo. Ungabangxamisi. Bakuba begqibile ukuzihlela buza uthi: *Nizihlele njani iimilo?* Cela abathathinxaxheba bacacise ukuba kutheni behlele iimilo ngolu hlobo.
- ♦ Ngoku cela abathathinnxaxheba ukuba bahlele iimilo ngolunye uhlobo. Buza abathathinxaxheba ukuba kutheni behlele iimilo ngolu hlobo.
- ♦ Qinisekisa ukuba le ndlela ilandelayo yokuhlela ikhankanyiwe:
  - imilo
  - ubungakanani
  - inani lamacala
  - inani leekona
  - imigca engqalileyo negobileyo.
- ♦ Khuthaza abathathinxaxheba ukuba basebenzise isigama esichanekileyo semathematika ukuchaza iimpawu zeemilo umz. *amacala, iikona, imigca*.

 Umsebenzi 4

Umbhexeshi uza kunika iqela lakho iseti yeemilo.

1. Hlelani iimilo.
2. Chazani ukuba kutheni nizihlele ngolu hlobo.
3. Hlelani iimilo ngolunye uhlobo.
4. Chazani ukuba kutheni nizihlele ngolu hlobo.

IsiShwankathelo soMxholo weKota 2: Iveki 8

Jonga kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 8–10). Funda amagqabantshintshi ngomxholo weVeki 8: IsiThuba neMilo (iJiyometri) kwiphepha 21 *kwisiKhokelo seMisebenzi: Ikota 2*.

IsiThuba neMilo (Ijiyometri) iNkalo yoMxholo yenye into ekwakugxilwe kuyo kwiKota 2 iiVeki 3 no4. Kwiindibano zocweyo ezidlulileyo, nixoxe ngekhonsepthi eza kwenziwa yesiThuba neMilo.

IsiShwankathelo soMxholo weVeki neVeki kaVeki8 sinika amagqabantshintshi ngesicwangciso seveki: imisebenzi yeklasi yonke, imisebenzi ekhokelwa ngutitshala nemisebenzi yesitishi sokusebenzela eyenziwa ngokuzimela ngamaqela amancinci.

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.

Amanqaku ombhexeshi

♦ Injongo **yoMsebenzi 5** kukuba ootitshala baqaphele unxulumano phakathi:
  - komxholo kaCAPS kumagqabantshintshi ngomxholo weKota 1–4 okumaphepha 126–131 kw*isiKhokelo seeKhonsepthi*
  - amagqabantshintshi ngomxholo okwiphepha 21 kw*isiKhokelo semiSebenzi: IKota 2*
  - Isingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 8–10)
  - imisebenzi yemihla ngemihla kwiVeki 8 kw*isiKhokelo semiSebenzi: IKota 2* (amaphepha 138–153).
♦ Kwiseshoni yokunika ingxelo yeqela lonke qinisekisa ukuba abathathinxaxheba baqhelene nolunguselelo nesicwangciso sokufundisa seVeki 8. Bancedise ukuba babone unxulumano phakathi kwemisebenzi ecetyisiweyo kw*isiKhokelo semiSebenzi: Ikota 2* nakumagqabantshintshi ngomxholo. Nxulumanisa le ngxoxo nendlela othe wahambelana ngayo lo mxholo weveki kunye noCAPS.

 Umsebenzi 5

1. Thatha imizuzu embalwa uziqhelisa nomxholo weVeki 8 kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 8–10).

2. Tshatisa oku nomxholo okumaphepha 138–153 kw*isiKhokelo semiSebenzi: Ikota 2*. Bonakalisa indlela enxibelelana ngayo imisebenzi yeklasi yonke, imisebenzi ekhokelwa ngutitshala neyezitishi zokusebenzela noMxholo weVeki 8 kwiSingeniso 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.

Iseshoni 2: Umlinganiselo

1 iyure

Ekugxilwe kuko kwiKota 2 neVeki 9 nguMlinganiselo.

Amagqabantshintshi ngomxholo weKota 1–4: Umlinganiselo

Bhekisa kumagqabantshintshi ngomxholo oMlinganiselo kumaphepha 132–135 kw*isiKhokelo seeKhonsepthi*.

Amanqaku ombhexeshi

♦   Injongo yo**Msebenzi 6** kukugxininisa kumxholo kaCAPS.

♦   Khumbuza ootitshala ukuba uhlolo kwiBanga R kufuneka lusekwe kuCAPS, kwanokuba umxholo owongezelelweyo weNkqubo yeMathematika ngowokuxhobisa ngamava okufundisa nokufunda.

Umsebenzi 6

1.   Zeziphi iikhonsepthi zoMlinganiselo ezenziweyo kwiKota 2?

_____

_____

_____

2.   Ngowuphi umahluko phakathi komxholo weNkqubo yeMathematika nomxholo kaCAPS?

_____

_____

_____

Uthelekiso ngqo lwezinto: ubude

KwiKota 1 yeNkqubo yeMathematika iNkalo yoMxholo yoMlinganiselo ebekugxilwe kuyo lixesha (imini, ubusuku, iintsuku zeveki, iinkqubo zokulandelelanisa, njlnjl.) netshati yomphakamo. KwiKota 2 iVeki 9, kugxilwe ekusebenziseni iiyunithi ezingekho sikweni ukwenza umlinganiselo nokuthelekisa ubude.

Umsebenzi 7

1.   **Uthelekiso olungqalileyo**
     Khetha iqabane oza kuma ecaleni kwalo. Amanye amalungu eqela lakho mabathelekise umphakamo.
     ♦   Ngomphi omde kunomnye? _____
     ♦   Ngomphi omfutshane kunomnye? _____
     ♦   Khangela umntu wesithathu omde kunaba bantu bobabini.

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 iiyunithi ezingekho sikweni zomlinganiselo**
   Khetha izinto zibe ntathu (umz. isitshixo, iselfowuni, ipesi).
   ♦ Sebenzisa enye yezi zinto ngexesha lokwenza umlinganiselo kw*iNcwadi yokuSebenzela yoMthathinxaxheba*.
   ♦ Nika ingxelo ngezinto ezifunyaniswe liqela.

   _____

   _____

   _____

Amanqaku ombhexeshi

♦ Bonisa ukuba iiyunithi ezingekho sikweni ezisetyenziswe ukwenza umlinganiselo we*Ncwadi yokuSebenzela yoMthathinxaxheba* azilingani ngobungakanani. Xa abathathinxaxheba bethelekisa eyabo imilinganiselo (zingaphi iiyunithi, umz. isitshixo), baya kuqaphela ukuba iyunithi ekhethiweyo ibonisa ukuba zingaphi iiyunithi ezilapho ngokwenani elipheleleyo leeyunithi – ngoko ke, izinto ezahlukeneyo ezisetyenziswe ekwenzeni umlinganiselo ziya kuba nesiphumo esinenani leeyunithi elingafaniyo kwimpendulo (inani elipheleleyo leeyunithi), umz. *Incwadi yokuSebenzela yoMthathinxaxheba* inemilinganiselo yezitshixo ezili17 kunaxa kuthelekiswa neeselfowuni ezi 4.

♦ Yenza abathathinxaxheba bayazi ukuba ubungakanani beyunithi engekho sikweni bungohluka phakathi kwabantu, umz. omnye umntu uya kuba neselfowuni encinci kuneyomnye. Oku kuya kuba nesiphumo esahlukileyo kumanani apheleleyo eeyunithi.

♦ Qwalasela abathathinxaxheba xa besenza umlinganiselo yaye uqinisekise ukuba iyunithi engekho sesikweni isetyenziswa ngokuchaneke kangangoko (kude kube sekugqibeleni).

IsiShwankathelo somXholo weKota 2: Iveki 9

Jonga kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 8–10). Funda amagqabantshintshi ngomxholo weVeki 9: Umlinganiselo kwiphepha lama21 kw*isiKhokelo semiSebenzi: Ikota 2*.

Funda imisebenzi yeklasi yonke yeVeki 9 kumaphepha 154–165 kw*isiKhokelo semiSebenzi: Ikota 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

Kumaqela enu, xoxani ngendlela obufundiswa ngayo ubude ngexesha lemisebenzi yeklasi yonke kwiVeki 9.

1. Ungenza ntoni xa umfundi engekakwazi ukuthelekisa nokulandelelanisa izinto ngokobude – nde/nde kune- nofutshane/futshane kune- ekupheleni kweVeki 9?

    _____

    _____

    _____

Gxila kulwimi, kwimisebenzi eyenziwayo. Nikeza olunye uphindaphindo, ezinye iingxoxo, elinye igalelo likatitshala. Beka umfundi nogxa wakhe.

2. Yintoni ongayenza xa abanye abafundi bewenza ngempumelelo nangokukhawuleza umsebenzi wesitishi sokusebenzela kunoko bekumiselwe?

    _____

    _____

    _____

Lungisa imisebenzi efanelekileyo yokuzikhethela. Banike umsebenzi 'omkhulu' abaza kuwenza umz. sebenzisa isihlangu sakho ukwenza umlinganiselo wecala leklasi.

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.

Iseshoni 3: Amanani, iiOpareyshini noLwalamano

1 iyure

Ekuza kugxilwa kuko kwiKota 2 iVeki 10 ngaManani, iiOpareyshini noLwalamano.

Amagqabantshintshi ngomxholo weKota 1–4: Amanani, iiOpareyshini noLwalamano

INkalo yomXholo waManani, iiOpareyshini noLwalamano bekukwagxilwe kuwo kwiiVeki 1, 2 neye5 yeKota 2, kwaye nixoxe nangeengqikelelomanani ezisafuna ukwenziwa kwiindibano zocweyo ezidlulileyo. Jonga amagqabantshintshi ngomxholo waManani, iiOpareyshini noLwalamano kumaphepha 114–123 kw*isiKhokelo seeKhonsepthi*.

Umsebenzi 10
Zeziphi iingqikelelomanani ezisafuna ukwenziwa kwiKota 2?

_____

_____

Ukusombulula iingxaki

Ootitshala kufuneka banike abafundi amathuba amaninzi okusombulula iingxaki ukuze bakwazi ukusebenzisa ulwazi nezakhono zabo zemathematika kwimixholo emitsha. Yonke imidlalo nemisebenzi ibandakanya ukusonjululwa kwengxaki. Iingxaki zamagama kwimathematika zazisa udidi olulodwa lokusombulula ingxaki oluquka ukusombulula ukudibanisa, ukuthabatha, ukuphindaphinda, nokwahlulahlula. Abafundi beBanga R basombulula iingxaki zokudibanisa nezokuthabatha ngokubala nokusebenzisa izixhobo eziphathekayo ukubancedisa bafumane isisombululo. Basebenzisa ukuhlela ngokwamaqela nokwaba nganye nganye ukusombulula iingxaki zokuphindaphinda nokwahlulahlula.

Owona mngeni mkhulu ekusebenzeni ngeengxaki zamagama kubafundi, kukuqinisekisa ukuba imibuzo efanelekileyo ikhona kwanokusetyenziswa kolwimi ngokufanelekileyo. Xa ootitshala besebenza ngengxaki yegama, kufuneka bazimamelisise iimpendulo zabafundi bandule ukubakhokela basombulule ingxaki besebenzisa ubuchule obufanele inqanaba labo lokuqonda.

Iipowusta ezikw*iNcwadi yePowusta* zenzelwe ukunika abafundi uluhlu lwemifanekiso enxulumene nobomi babo zikwanika neemixholo yokusombulula iingxaki kubomi babo bokwenene.

KwiVeki 10 uSuku 4 (iphepha 181 le*siKhokelo semiSebenzi: Ikota 2*), iPowusta 1 isetyenziselwe ukukhuthaza abafundi ukuba basombulule iingxaki eziquka amanani 1–5.

- 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.

Amanqaku ombhexeshi

- ♦ Ku**Msebenzi 11** abathathinxaxheba bajonga kwiPowsta 1 ukwenza uluhlu lwemibuzo efanelekileyo ehambelana namanani.
- ♦ Le mibuzo iquka ezi zakhono zilandelayo: ukuthelekisa, ukutshatisa, ukubala, ukudibanisa, ukuthabatha, ukubeka ngokwamaqela nokwaba ngokulinganayo. Kufuneka baquke uthotho lwesigama. Khumbuza abathathinxaxheba ukuba imibuzo yabo kufuneka igxile kwimathematika nokuba ulwimi olusetyenzisweyo kufuneka lucace kwaye lube lula.

  Sebenzisa le mizekelo ingasezantsi ukuqoshelisa **Umsebenzi 11**.

  Ukuthelekisa/ukuhambelana kwenye nenye (ukutshatisa)

  - Ingaba anele amacephe kwisitya ngasinye?

  - Ingaba mangaphi amacephe asafunekayo ukuze kubekho icephe elinye kwisitya ngasinye?

  - Ingaba zininzi iiglasi ezikwishelufu ephezulu okanye kwishelufu esezantsi?

  Ukubala

  - Zingaphi iiglasi ezisekhabhathini?

  - Ingaba zilanele inani labantu abasekhitshini izitulo?

  Ukudibanisa

  - Kukho ama-apile amane aluhlaza nama-apile amane abomvu efrijini. Mangaphi ewonke ama-apile asefrijini?

  - UThami uneebhloko ezintathu. Iibhloko ezine ziphantsi. Zingaphi zizonke iibhloko zidibene?

  Ukuthabatha

  - Mathandathu amaqanda asecangweni lwefriji. Utata upheka amaqanda amane. Mangaphi amaqanda ashiyekileyo efrijini?

  - Zintlanu iimagi ezisekhitshini. Iimagi ezine zimhlophe. Zingaphi iimagi ezimthubi?

  - Asibhozo ama-apile asefrijini. Ama-apile amane aluhlaza. Mangaphi ama-apile abomvu?

  Ukubeka ngokwamaqela

  - Umntwana ngamnye unamehlo amabini. Mangaphi ewonke amehlo aya kuba khona kubantwana abathathu?

  Ukwaba ngokulinganayo

  - Kukho iiorenji ezintathu engxoweni. Abantwana abathathu babelana ngeeorenji. Ufumana iiorenji ezingaphi umntwana emnye?

Umsebenzi 11

Kumaqela enu, khangelani kwiPowusta 1. Cingani ngeengxaki zamagama ezifanelekileyo ngesakhono ngasinye kwezi:

- ♦ ukuthelekisa
- ♦ ukutshatisa
- ♦ ukubala
- ♦ ukudibanisa
- ♦ ukuthabatha
- ♦ ukuhlela ngokwamaqela
- ♦ ukwaba ngokulinganayo.

_____

_____

_____

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

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

♦   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.

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

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.

_____
_____

_____

Xa usenza imisebenzi yengxaki yamagama kunye nabafundi bakho, bavumele basebenzise iminwe yabo okanye izixhobo zokubala ukubancedisa basombulule iingxaki.

Elinye lamacandelo kuManani, iiOpareyshini noLwalamano 'kukuSombulula iiNgxaki ngokwemeko'. Kumaqela enu, fundani amagqabantshintshi ngomxholo weKota 2 yeli candelo kwiphepha lama121 kw*isiKhokelo seeKhonsepthi*. Emva koko yenzani Umsebenzi 12.

👪 Umsebenzi 12

Camngca ngoMsebenzi 11.

1. Zeziphi iikhonsepthi nezakhono ezifundiswayo nezifundiweyo kwesi sihloko: ubuchule bokusombulula iingxaki?

_____
_____

Ukubala usebenzisa izixhobo eziphathekayo, oko kukuthi, izixhobo zokubala, ileli yamanani ephathekayo, amaso okuhlela alishumi.

2. Zeziphi iikhonsepthi nezakhono ezifundiswayo nezifundiweyo kwisihloko: Ukudibanisa nokuthabatha?

_____
_____

Sebenzisa izixhobo zokubala; sombulula iingxaki 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*.

Uthekelelo

Abafundi bakhulisa izakhono zothekelelo nokuqashela 'ngokufanelekileyo' malunga nokuba 'zingaphi izinto' ezikwingqokelela. Ngexesha lemisebenzi yomlinganiselo, bathekelela ukuba inzima kangakanani okanye inde kangakanani na into, okanye zingaphi iikomityi eziya kugcwalisa ijagi ngaphambi kokuba benze owona mlinganiselo wayo.

👥 Umsebenzi 13

Umbhexeshi uya kubonisa ngezikhongozeli ezimbini. Thekelela ukuba zingaphi izinto ezikwisikhongozeli uphendule nemibuzo yakhe.

_____

_____

Abafundi kufuneka bakwazi ukusebenzisa amagama afana no-: *zimbalwa kakhulu, zininzi kakhulu, zingaphezulu kune-, zanele, azanelanga, phantse, kufutshane ne-, ziphantse zafana, zingaphantsi nje kancinci, zingaphezulu nje kancinci*.

Ootitshala baya kwenza isicwangciso semisebenzi yokuthekelela eya kukhuthaza abafundi ukuba baqashisele ubungakanani beqela lezinto okanye umlinganiselo wento.

Ikota 2 IsiShwankathelo soMxholo: Iveki 10

Jonga kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 7–10). Funda amagqabantshintshi ngomxholo eVeki 10: Amanani, iiOpareyshini noLwalamano kwiphepha lama21 kwi*siKhokelo seMisebenzi: Ikota 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. Zeziphi izihloko zeVeki 10?

_____

_____

2. Loluphi ulwazi olutsha olwaziswayo kule veki?

_____

_____

_____

3. Zeziphi izakhono zeeveki ezidlulileyo eziqheliswayo?

_____

_____

_____

Jonga kwimisebenzi yothekelelo kwiVeki 10 (*IsiKhokelo semiSebenzi: Ikota 2*, amaphepha 175 (Usuku 1), 177 (Usuku 2) nele179 (Usuku 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				

Iseshoni 4: Amanani, iiOpareyshini noLwalamano

45 imizuzu

INkqubo yeMathematika igxininisa kwiNkalo yomXholo enye engundoqo kwiveki nganye. Uya kuqaphela ukuba nangona iNkalo yomXholo ekuGxininiswa kuyo ngeveki 'ingelonani', inkqubo yamanani iyaqhubeka yonke imihla iveki nganye. Isizathu soku kukuba uphindaphindo noqheliso lubaluleke kakhulu ukomeleza izakhono zamanani ezikhulayo zabafundi.

Imisebenzi yeklasi yonke yomhla ngamnye weveki isoloko iqala ngeekqubo ezintathu zamanani:

♦ ingoma okanye isicengcelezo

♦ ukubala ngomlomo

♦ ukubala izinto.

Ezi nkqubo zesiqhelo zintathu zamanani zilungiselelwe ukutshatiswa noluhlu lwamanani kwikota nganye.

Amanqaku ombhexeshi

♦ Ku**Msebenzi 15**, abathathinxaxheba baza kusebenzisa *isiKhokelo semiSebenzi: Ikota 2* ukufumana iinkqubo zamanani zemihla ngemihla bagqibezele itheyibhile. Oku kukugxininisa ukuba ziqheliswe yonke imihla kwiveki nganye iinkqubo zamanani nokuba ithini iNkalo yomXholo ekuGxininiswa kuyo nokubonisa ukuba luyaqhubeka ulwandiso lwamanani kuyo yonke ikota.

Umsebenzi 15

Khangela kwiKota 2 iinkqubo zamanani zemihla ngemihla *kwisiKhokelo semiSebenzi: IKota 2* ugqibezele itheyibhile. IVeki 1 sele uyenzelwe.

IVeki	INkalo yomXholo eku-Gxininiswa kuyo	Ingoma okanye isicengcelezo	Ukubala ngomlomo	Izinto zokubala
1	Amanani, iiOpareyshini noLalwamano	Isicengcelezo seKota 1	1–10 5–1	1–5 (itshathi yemihla yokuzalwa)
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			

Njengoko nijongile kumxholo wamanani kwiKota 2, niya kuqaphela ukuba iinkqubo zamanani ziqheliswa yonke imihla kwiveki nganye nokuba ithini na iNkalo yomXholo ekuGxininiswa kuyo kwanokuba luyaqhubeka ulwandiso lwamanani kwikota yonke.

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.

_____
_____
_____
_____
_____

Iseshoni 5: Uhlolo lweKota 2

1 iyure

Ividiyo 2

Bukelani ividiyo katitshala ebonisa iingxaki zamagama kwiqela elincinci labafundi.

Qwalasela indlela umfundi asombulula iingxaki ngayo. Qaphela indlela ayisebenzisa ngayo imibuzo exhokonxayo xa umfundi efumana ubunzima.

Amanqaku ombhexeshi
♦ PPT: Irubhriki enesikali sokureyitha 1–7.
♦ Xoxa ngendlela iinkcaza ezikwirubhriki ezinika ngayo inkqubo yokugweba eyahlukileyo yohlolo ngalunye kwikhowudi yokureyitha.

Umsebenzi 16

Jonga irubhriki ekwiphepha 107 le*siKhokelo seeKhosepthi.*

Kumaqela enu, xoxani ngendlela eniya kunika ngayo amanqaku umfundi ngamnye nisebenzisa esi sikali. Nikani izizathu zezigqibo zenu ngokusekwe kwinkqubo yokugweba yohlolo ngalunye kwikhowudi yokureyitha.

_____
_____
_____
_____
_____

Closing activities

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.

Imisebenzi yokuqukumbela

Amanqaku ombhexeshi

♦ **Ucamngco kwindibano yocweyo:** Cela umthathinxaxheba ukuba athathe imizuzu embalwa ukucamngca ngaloo mhla baze batyhile kwi*Ncwadi yokuSebenzela yoMthathinxaxheba*. Bacele ukuba babhale phantsi nayiphi na imibuzo okanye iimbono abaza kwabelana ngazo neqela lonke.

♦ **Umsebenzi ekubuyelwa nawo esikolweni:** Fundisisa lo msebenzi. Buza ukuba ikhona na into engacacanga efuna ukucaciswa banzi.

♦ **Uhlolo:** Gqithisa iikopi zeFomu yoHlolo yeNdibano yoCweyo uze ucele abathathinxaxheba ukuba bayigcwalise.

♦ **Indibano yocweyo elandelayo:** Chaza imihla yendibano yocweyo elandelayo uze uyivale indibano yocweyo.

Umsebenzi 17

Ucamngco ngendibano yocweyo: Thatha imizuzu embalwa ucamngce ngosuku. Tyhila *iNcwadi yokuSebenzela yoMthathinxaxheba* uzikhumbuza ngoko kwenziweyo. Bhala phantsi nayiphi imibuzo okanye iimbono ozakwabelana ngazo neqela.

_____

_____

_____

_____

_____

Umsebenzi ekubuyelwa nawo esikolweni

1. Sebenzisa *isiKhokelo semiSebenzi: Ikota 2* ukucwangcisa nokuphumeza iNkqubo yeMathematika kwiiVeki 8–10.
2. Bhala uphononongo lwezinto ezisebenze kakuhle, ezingaqhubanga kakuhle kwanento onokuyenza ukuphucula ukufundisa nokufunda.
3. Yiza nophononongo lwakho kwindibano yocweyo elandelayo.

Uhlolo

Gcwalisa iFomu yoHlolo.

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

Term 2: Activity Plan

<table>
<tr><td colspan="5" align="center">Week 8</td></tr>
<tr><td colspan="5">CONTENT AREA: SPACE AND SHAPE (GEOMETRY)</td></tr>
<tr><td colspan="5">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</td></tr>
<tr><td colspan="2">Whole class activities</td><td>Teacher-guided activity</td><td colspan="2">Workstation activities</td></tr>
<tr><td>Day 1</td><td>Forwards/backwards.</td><td rowspan="5">Counting – show me 1–3, 5–7 counters. Working with all taught shapes. Midline crossing. Position – direction. Forwards/backwards.</td><td>Activity 1</td><td rowspan="2">Sorting activity – using cut-out shapes. Make shapes using playdough and make a copy.</td></tr>
<tr><td>Day 2</td><td>Reinforce all shapes (I spy …).</td><td>Activity 2</td></tr>
<tr><td>Day 3</td><td>Shape game.</td><td rowspan="2">Activity 3</td><td rowspan="2">Masking tape shapes – learners follow shapes using blocks.</td></tr>
<tr><td>Day 4</td><td>What can I do: Lost my … (shape).</td></tr>
<tr><td>Day 5</td><td>Obstacle course (requires a big space/outdoors). Midline crossing.</td><td>Activity 4</td><td>Match shapes using shape cards.</td></tr>
<tr><td colspan="5" align="center">Week 9</td></tr>
<tr><td colspan="5">CONTENT AREA: MEASUREMENT</td></tr>
<tr><td colspan="5">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</td></tr>
<tr><td colspan="2">Whole class activities</td><td>Teacher-guided activity</td><td colspan="2">Workstation activities</td></tr>
<tr><td>Day 1</td><td>Longer/shorter (height).</td><td rowspan="5">Longer than/shorter than. Taller than/shorter than. Measurement with everyday objects.</td><td>Activity 1</td><td rowspan="2">Shorter/longer (pre-cut strips of different length). Wiggly worms (to make a poster shortest to longest).</td></tr>
<tr><td>Day 2</td><td>Comparing lengths of ribbons.</td><td>Activity 2</td></tr>
<tr><td>Day 3</td><td>Sorting objects by length (coloured paper strips).</td><td rowspan="3">Activity 3
Activity 4</td><td rowspan="3">Measure blocks using string. Playdough and lined paper (different lengths).</td></tr>
<tr><td>Day 4</td><td>Height chart comparison (from Term 1).</td></tr>
<tr><td>Day 5</td><td>Height chart comparison (taller/shorter than you).</td></tr>
</table>

ISINGENISO A: IKOTA 2 ISISHWANKATHELO SOMXHOLO WEVEKI NEVEKI (IIVEKI 8–10)

Ikota 2: Isicwangciso semiSebenzi

Iveki 8				
INKALO YOMXHOLO: ISITHUBA NEMILO (IJIYOMETRI)				
ISIHLOKO: Iimpawu zeemilo – thelekisa ezifanayo nezahlukileyo, hlela ngokweempawu; indawo; indawo-bume neembonakalo **YAZISA ULWAZI OLUTSHA:** Landela isalathiso nokunqumla embindini **ZIQHELISE:** Ukubala ngomlomo 1–20, ukubala ubuyela umva ukusuka ku7, ukulandelelanisa amanani 1–5, ukubala izinto 1–7, ukubethelela ingqikelelomanani 1–5, leliphi inani eliphambi ko-/elisemva ko-, ukuziqhelanisa kusetyenziswa zonke iimilo				
Imisebenzi yeklasi yonke		**Umsebenzi okhokelwa ngutitshala**	**Imisebenzi yesitishi sokusebenzela**	
Usuku1	Ekuya phambili/ukubuyela umva.	Ukubala – ndibonise izixhobo zokubala 1–3, 5–7. Ukusebenza ngazo zonke iimilo ezifundisiweyo. Ukunqumla embindini, Indawo – isalathiso. Ukuya phambili/ukubuyela umva.	**Umsebenzi 1**	Umsebenzi wokuhlela – kusetyenziswa iimilo ezisikiweyo.
Usuku 2	Ukubethelela zonke iimilo (Ndibonisele ...).		**Umsebenzi 2**	Ukwenza iimilo kusetyenziswa intlama yokudlala nokwenza ikopi.
Usuku 3	Umdlalo weemilo.		**Umsebenzi 3**	Iimilo ezenziwe ngeteyiphu encamathelayo – abafundi balandela iimilo besebenzisa iibhloko.
Usuku 4	Ndiza kuthini: Ilahlekile ... (imilo) yam.		**Umsebenzi 4**	Tshatisa iimilo usebenzisa amakhadi eemilo.
Usuku 5	Umzila wemiqobo (kufuneka indawo enkulu/phandle). Ukunqumla embindini.			
Iveki 9				
INKALO YOMXHOLO: UMLINGANISELO				
ISIHLOKO: Ubude – thelekisa izinti uzilandelelanise usebenzisa isigama esifanelekileyo ukuchaza ubude **YAZISA ULWAZI OLUTSHA:** Ukwenza umlinganiselo nokuthelekisa ubude (de/futshane, ndana kune/futshane kune, de kakhulu/futshane kakhulu) **ZIQHELISE:** Ukubala ngomlomo 1–20, ukubala ubuyela umva ukusuka ku 7, ukubala izinto 1–7, uthelekelelo 1–7, de/futshane				
Imisebenzi yeklasi yonke		**Umsebenzi okhokelwa ngutitshala**	**Imisebenzi yesitishi sokusebenzela**	
Usuku 1	Nde kuno-/futshane kuno- (umphakamo).	Nde kune-/mfutshane kune-. Nde kune-/mfutshane kune-. Umlinganiselo wezinto zemihla ngemihla.	**Umsebenzi 1**	Futshane kune-/nde kune- (imicu esele isikiwe enobude obungalinganiyo).
Usuku 2	Ukuthelekisa ubude beeribhoni.		**Umsebenzi 2**	Imibungu egosogoso (ukwenza ipowusta ibe yeyona imfutshane iye isiba yeyona inde).
Usuku 3	Ukuhlela izinto ngokobude (imicu eyimibalabala yamaphepha).		**Umsebenzi 3**	Ukwenza umlinganiselo weebhloko usebenzisa umsonto.
Usuku 4	Uthelekiso lwetshathi yomphakamo (ekwiKota 1).		**Umsebenzi 4**	Intlama yokudlala nephepha elinomgca (ubude obungalinganiyo).
Usuku 5	Uthelekiso lwetshati yomphakamo (de kuno- /futshane kunawe).			

APPENDIX B: SHAPES FOR SORTING/ISINGENISO B: IIMILO ZOKUHLELA

Cut along the dotted lines./Sika kwimigca engamachokoza.
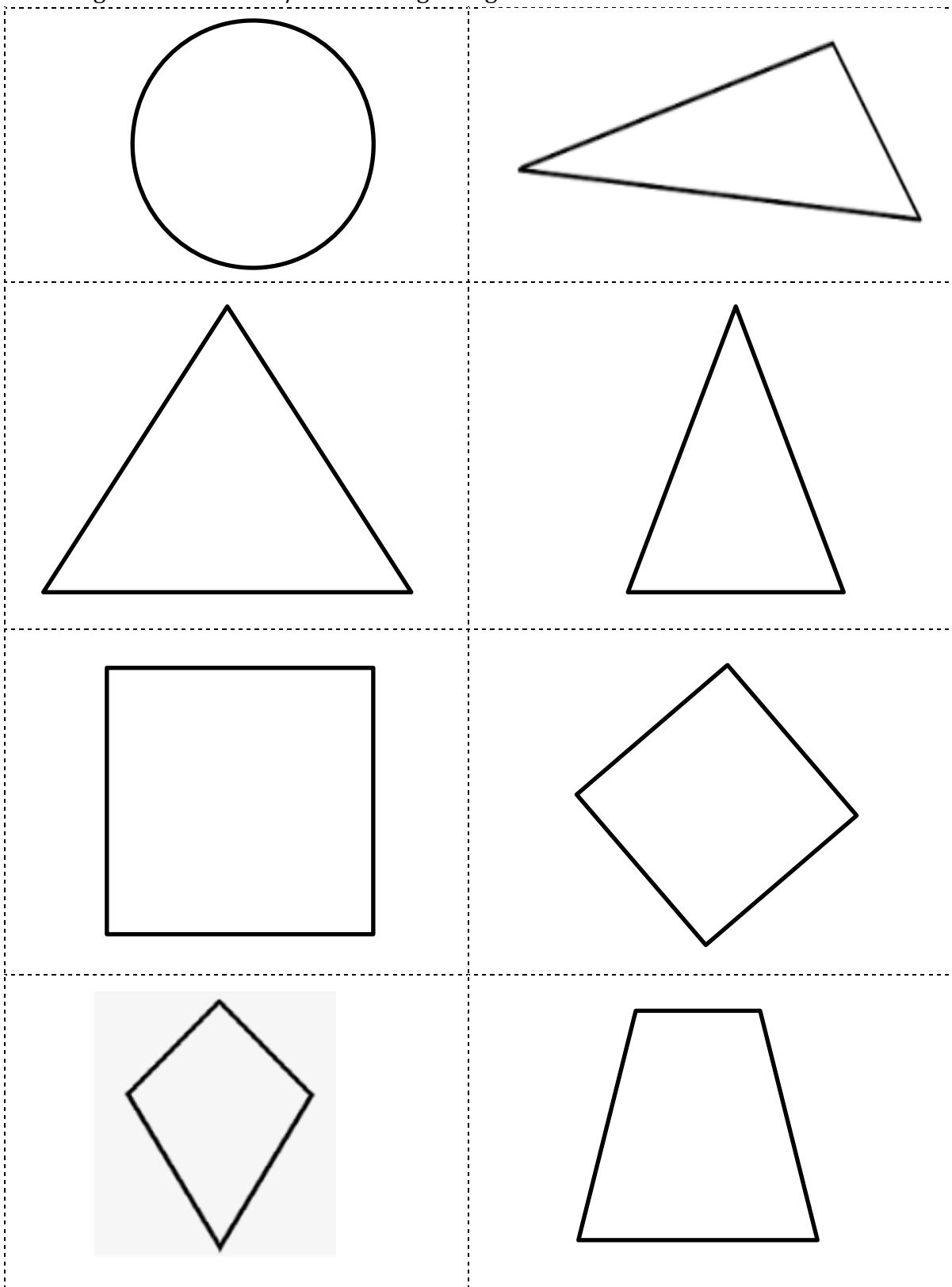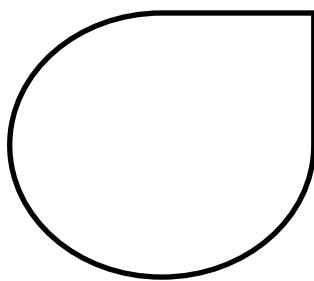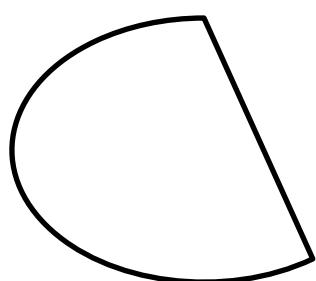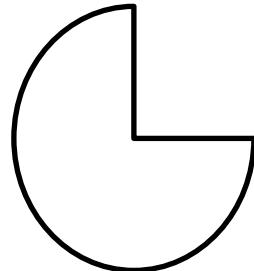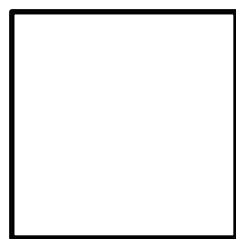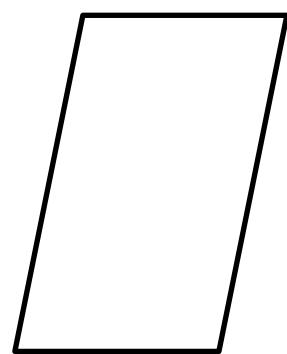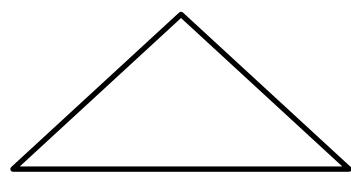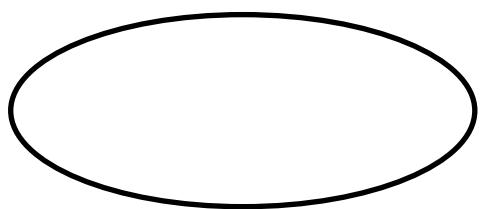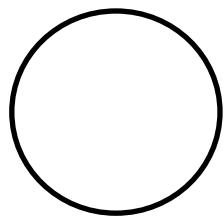
Workshop 6 Evaluation Form

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?

_____
_____
_____
_____

IFomu yokuHlola yeNdibano yoCweyo 6

1. Ingaba indibano yocweyo ifikelele koko ubukulindele?

_____
_____
_____
_____

2. Ufunde ntoni kule ndibano yocweyo ekuncede kakhulu?

_____
_____
_____
_____

3. Ingaba ikhona into ongakhange uyithande okanye obenobunzima bokuyiqonda?

_____
_____
_____
_____

4. Uza kukusebenzisa njani oko ukufundileyo apha kwiklasi yakho yeBanga R?

_____
_____
_____
_____

5. Ingaba unazo iingcebiso zokuphucula nangakumbi iindibano zocweyo?

_____
_____
_____
_____