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GROWING GAUTENG TOGETHER

IsiZulu/English

Uhlelo Lokuthuthukisa Izibalo Zebanga R Grade R Mathematics Improvement Programme



**Umhlangano Wokucobelelana Ngolwazi 5 • Workshop 5
Umhlahandlela Wabadidiyeli • Facilitator's Guide**

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

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

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Overview

Purpose

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

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

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

Learning outcomes

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

Workshop content

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

Ukubuka ngelibanzi

Inhloso

Lo owesihlanu emihlanganweni yokucobelelana ulwazi eyishumi nambili ngaphansi kwesihloko: Uhlelo Lokuthuthukisa Izibalo ZeBanga R (Uhlelo Lwezibalo), eyingxenye YoMnyango WezeMfundo wesiFundazwe saseGauteng (Gauteng Department of Education (GDE Uhlelo Lokuthuthukisa Izibalo neziLimi ZeBanga R.))

Inhloso yalo mhlango wokucobelelana ngolwazi ukusiza othisha ukuthi basebenzise Uhlelo Lwezibalo emakilasini abo, ukuqinisa ukuqonda kwabo ukufundisa nokufunda eziNgxenyeni zoLwazi okwenziwe kuThemu 2 Amasonto 4–7 kanye nokucabanga ukuthi bayibeka kanjani imigomo elawula ukufundiswa kwezibalo ukuthi yenzeke emakilasini abo.

Ingxenye Yolwazi Yezibalo zeBanga R ithathwe *kuSitatimende Senqubomgomo Yohlelo Lwezifundo Nokuhlola (CAPS): Izibalo Zebanga R (Uhlaka Lokugcina)*, 2011, Umnyango Wemfundo Eyisisekelo, eNingizimu Afrika.

Imiphumela yokufunda

- ◆ Ukucabanga ngokusetshenziswa kweThemu 1 Isonto 10 kanye neThemu 2 Amasonto 1–3
- ◆ Ukuhlola amasu okuxhasa ukufundisa izibalo kuBanga R
- ◆ Ukucabanga ngemigomo elawula ukufundiswa koHlelo Lwezibalo
- ◆ Ukuzibandakanya nokuqokethwe koHlelo Lwezibalo kukaThemu 2 Amasonto 4–7 (Indawo Nesimo (Ijijomethri); Izinombolo, Izimpawu kanye Nobudlelwane Bazo; Amaphethini, Amafankshini kanye ne-Aljebhra; kanye Nokusetshenziswa Kolwazi)
- ◆ Ukuxoxa ngokuqaphela nokuhlola okufanele kulo iBanga R.

Okuqokethwe komhlangano wokucobelelana ngolwazi

- ◆ Ukuvula nokudlinza (1 ihora)
 - ◆ Iseshini 1: Indawo Nesimo (Ijijomethri) (1 ihora)
- ITIYE
- ◆ Iseshini 2: Izinombolo, Izimpawu kanye Nobudlelwane Bazo (1 ihora)
 - ◆ Iseshini 3: Amaphethini, Amafankshini kanye ne-Aljebhra (1 ihora)
- ISIDLO SASEMINI
- ◆ Iseshini 4: Ukusetshenziswa Kolwazi (1 ihora)
 - ◆ Imisebenzi yokuvala (1 ihora)

Preparation

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

Materials

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

Ukulungiselela

- ◆ PPT ukwemukela nemiphumela
- ◆ Funda:
 - Umhlahlandlela Wokuqonda Isifundo*, amakhasi 114–131 kanye no-136–137
 - Umhlahlandlela Wemisebenzi: Ithemu 2*, amakhasi 18–21 kanye namakhasi 70–137
 - Isithasiselo A: Ithemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4–7)
- ◆ Letha ithoyizi elikhulu, isib. imoto, unodoli
- ◆ PPT: Umjikelezo Wokuqokelelwa Kolwazi (kusuka eMhlanganweni Wokucobelelana Ngolwazi 4).
- ◆ Okweseshini 4, lungisa ishadi legrafu yezithombe, 'Uhambe kanjani uza kulo mhlangano wokucobelelana ngolwazi?' namakhadi ezithombe 'okwetekisi', 'imoto', 'hamba' kanye 'nokunye', 'ubuso obumamathekayo' amakhadi ombambiqhaza ngamunye.

Izinto zokusetshenziswa

- ◆ Iphepha leshadi eliphenywayo, amakhokhi
- ◆ *Ikhithi Yezinsiza* yeqembu ngalinye
- ◆ *Umhlahlandlela Wokuqonda Isifundo*
- ◆ Iqoqo lezinto ezingu-3-D kweqoqo ngalinye (Iseshini 2)
- ◆ Ulayini wokuneka namaphekisi kweqembu ngalinye (Iseshini 2)

Opening and reflection

1 hour

Facilitator's notes

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

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

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



Activity 1

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

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

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

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

Amanothi omdidiyeli

- ◆ PPT: Vula iseshini bese ufunda lonke uhlelo kanye nemiphumela yokufunda yoMhlangano Wokucobelelana Ngolwazi.
- ◆ Khumbuza ababambiqhaza ngomsebenzi *obuyela nawo esikoleni kusuka ekupheleni* koMhlangano Wokucobelelana Ngolwazi 4.
- ◆ Cela ababambiqhaza ukuthi bacabange ngokuqaphela nokuhlolwa kwabafundi, nokuthi bebelwenza kanjani Uhlelo Lwezibalo emakilasini abo. Xoxa ukuthi yini esebenza kahle nokuthi yini ekhathaza ababambiqhaza.

Umgomo wokumbandakanya: Bonke abafundi kumele bazizwe bamukelekile, bambandakanywe futhi bajabulele ukuhlanganyela. Khumbula ukuphatha kahle abafundi ngokufanele nangenhlonipho.

Cabanga ngokwenza kwakho Uhlelo Lwezibalo ohlelweni lwakho lwansukuzonke, bese ugcwalisa umsebenzi olandelayo.



Umsebenzi 1

Xoxa ngenqubekela-phambili ekwenzeni Umsebenzi *obuyela nawo esikoleni* osuka eMhlanganweni Wokucobelelana Ngolwazi 4.

1. Iyiphi inqubekela-phambili ezibalweni owayiqaphela kubafundi bakho emva kokwenza Ithemu 1?

2. Lukusize kanjani ulwazi olusengxenyeni ethi- 'Hlola ukuthi abafundi bayakwazi uku-' kuMhlahlandlela *Wemisebenzi: Ithemu 1* ekuhloleni inqubekela-phambili yomfundi ngamunye?

3. Wakwazi ukubhala ngempumelelo inqubekela-phambili yomfundi ngamunye usebenzisa Ithemu 1: Isibonelo seRekhodi Lokuhlola Okuqhubekayo emakhasini 190–193 kuMhlahlandlela *Wemisebenzi: Ithemu 1*?



Video 1

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

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

Facilitator's notes

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



Activity 2

In your small groups, discuss:

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

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

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



Ividiyo 1

Bukela ividiyo kathisha exoxa ngokuqaphela nokuhlola ekilasini lakhe leBanga R.

Ucabanga ukuthi iyini inhloso yomsebenzi? Nakisisa indlela agumba ngayo abafundi ngemibuzo nendlela aqaphela ngayo umfundi ngamunye.

Amanothi omdidiyeli

- ◆ PPT: Amanothi afingqiwe ngamarubhrikhi, neSithombe 39 no-40 woMhlahandlela Wokuqonda Isifundo (amakhasi 106–109).
- ◆ Gququzela ababambiqhaza ukuthi babelane ngezindlela zokuhlola, nokuthi bawasebenzisa kanjani amarubhrikhi. Cela iqembu ngalinye ukuthi libhale amanothi ephepheni eliyishadi, bese lethula lawo manothi emva **koMsebenzi 2**.
- ◆ Bhekisa ku*School Based Assessments* (SBA) naku-SA-SAMS eku-inthanethi ukuthola ukuthi ababambiqhaza bahlanganyela kanjani ngalokhu.
- ◆ Khumbuza ababambiqhaza ngomgomo **wamazinga** bese nixoxa ngokuthi babaphatha kanjani abafundi abanamakhono ahlukene.



Umsebenzi 2

Emaqenjini enu amancane, xoxani ngokuthi:

1. Nikuphatha kanjani ukuhlola ekilasini lenu.
2. Uwasebenzisa kanjani amarubhrikhi kwinqubo yakho yokuhlola.
3. Uyihlanganisa kanjani *iSchool Based Assessments* (SBA) ne-SA-SAMS ku-inthanethi njengengxenyane yenqubo yakho yokuhlola.

Bhala amaphuzu asemqoka engxoxo yenu enizokwabelana ngawo neqembu lonke. Cabanga ukuthi yini esebenza kahle nalapho unezinselelo ngokuhlola.

Umgomo wamazinga: Abanye abafundi kungenzeka badinge ukuzejwayeza kanye nokwesekwa kakhudlwana kunabanye abafundi. Qiniseka ukunika abafundi isikhathi esanele ubaseke futhi ukuthi baqede imisebenzi, bacabange baphendule nemibuzo.

Session 1: Space and Shape (Geometry)

1 hour

Facilitator's notes

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

Term 2 Content overview: Space and Shape (Geometry)

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

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



Activity 3

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

Facilitator's notes

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

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

Iseshini 1: Indawo Nesimo (Ijijomethri)

1 ihora

Amanothi omdidiyeli

- ◆ Lo mhlangotho wokucobelelana ngolwazi ugxile ekufundiseni ulwazi lukaThemu 2 Amasonto 4-7. Ingxenywe Yolwazi Okugxilwe Kuyo yeSonto 4 Indawo Nesimo (Ijijomethri). Khumbuzwa ababambiqhaza ukuthi lokhu bekugxilwe kukho futhi kuThemu 2 Isonto 3 (kwenziwe eMhlanganweni Wokucobelelana Ngolwazi 4)
- ◆ Thumela ababambiqhaza emakhasini 126–131 o*Mhlahlandlela Wokuqonda Isifundo*
- ◆ Cela ababambiqhaza basebenze ngamaqembu ukuqeda **Umsebenzi 3**

Ithemu 2 Ukubuka ulwazi ngelibanzi: Indawo Nesimo (Ijijomethri)

Le seshini igxile ekufundiseni okuqukethwe kukaThemu 2 Isonto 4– Indawo Nesimo (Ijijomethri) Khumbula ukuthi Indawo Nesimo (Ijijomethri) bekugxilwe kukona ngeSonto 3 okwenziwe eMhlanganweni Wokucobelelana Ngolwazi 4.

Funda ukubuka ngelibanzi ulwazi lwendawo Nesimo (Ijijomethri) emakhasini 126–131 ku*Mhlahlandlela Wokuqonda Isifundo* bese uqedela Umsebenzi 3.



Umsebenzi 3

Yiluphi ulwazi lweNdawo Nesimo olwethulwe ku-3.1 no-3.2 wokubuka ulwazi ngelibanzi?

Amanothi omdidiyeli

- ◆ Qinisekisa ukuthi ababambiqhaza bahlonza ulwazi lweNdawo Nesimo ku-3.1 no-3.2 bese beqonda ukuthi kugxilwa engxenyeni ethi: Isikhundla, isimo nokubukeka kwento; ukuchaza izinto ezingu-3-D ngokuphathelene nabo; ukulandela izinkomba.
- ◆ **Kumsebenzi 4** kugxilwe ekuchazeni into ngezikhundla ezihlukene (ukubukeka kwento).
- ◆ Esinyathelweni 1 **soMsebenzi 4**, khombisa ababambiqhaza ithoyizi lemoto noma unodoli ofike nako (noma isicathulo noma imagi). Bacele ukuthi babuke into ngezikhundla ezihlukene, bese bechaza ukuthi babonani. Babuze ukuthi bakuphi ngokuphathelene nento, isibonelo *ngaphambi kwa-*, *ngemuva*, *eceleni kwa-*, *ngaphansi*, *ngaphezulu*.

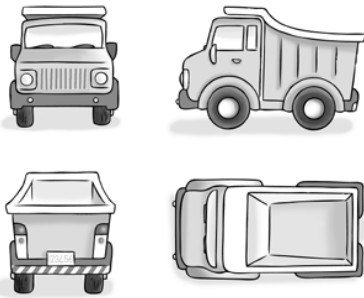
Ebangeni R abafundi bachaza, bahlele, baqhathanise izinto ezingu-3-D, bese begxila kokufanayo nokuhlukile phakathi kwazo. KuThemu 2 Isonto 4 abafundi bahlele, baqhathanise, bese bechaza izinto ezingu-3-D ngobungako, umbala nesimo. Babuye babuke, bese bechaza izinto ngokuqondene nabo, nabanye kanye nasezikhundleni ezihlukene (ukuma nokubuka). Okunye okugxilwe kukho eSontweni 4 ukulandela izinkomba nokusebenzisa ulwazimagama oluphathelene nesikhundla.



Activity 4

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

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



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

Term 2 Week 4

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



Activity 5

1. Which Space and Shape concepts are presented?

Position, orientation, views: objects look different when viewed from different positions.

Position vocabulary: *front, back, side, above, below, underneath*.

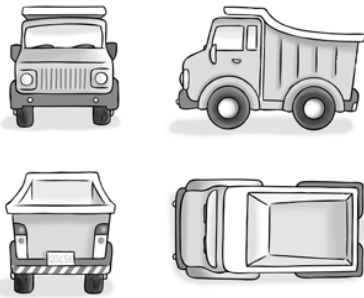
Sorting and identifying shapes.



Umsebenzi 4

1. Xoxa ukuthi ungazisebenzisa kanjani izinto ekilasini lakho ukugqugquzela abafundi ukuthi bakhulume ngezikhundla zabo ngokuphathelene nezinto abazibukayo.

2. Buka izithombe. Chaza ukuthi ungama kuphi ukuze ubone ukubukeka kweloli ngakunye.



Ngaphambi kweloli, ukubuka ecaleni leloli, ngemuva kweloli, ukubuka iloli ulivelela ngaphezulu.

Ithemu 2 Isonto 4

Bhekisa kumsebenzi oholwa uthisha emakhasini 80-83 oMhlahlandlela Wemisebenzi: *Ithemu 2.*



Umsebenzi 5

1. Yiluphi ulwazi lweNdawo neSimo olwethuliwe?

Isikhundla, isimo, ukubuka: Izinto zibukeka zihlukile uma zibukwa ezikhundleni ezihlukene.

Ulwazi: *phambili, emuva, eceleni, ngaphansi, ngaphezulu, ngaphansi kwayo into.*

Ukuhlela nokuhlonza izimo.

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

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

The following points should be remembered.

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

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

Term 2 Content Summary (Week 4)

Facilitator's notes

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

2. Nika izibonelo zemibuzo ekuholayo ebuzwa uthisha emisebenzini eholwa uthisha. Ngabe le mibuzo izobagquguzela yini abafundi ukuthi baxoxe ngolwazi kumbuzo 1?
-
-
-

Abafundi badinga amathuba amaningi ukuthi badlale futhi bahlele amaqoqo ezinto ezingu-3D. Othisha badinga ukuqonda ulwazi oluyisisekelo kuyo indawo nesimo (Ijyomethri), bese bezixoxa lezi besebenzisa ulimi olufanele lwezibalo.

Amaphuzu alandelayo kumele akhunjulwe.

- ◆ Into inezinhlangothi ezintathu (3-D). Ungayibuka ngaphezulu, ngaphansi kanye nasemaceleni. Izinto ezingu-3-D zinobude kanye nobubanzi.
- ◆ Izimo zinezinhlangothi ezimbili (2-D). Izimo zimbandakanya izindilinga, onxantathu, izikwele kanye nonxande. Zinobude kanye nobubanzi.
- ◆ Ngesikhathi abafundi behlola izimpawu zezinto ezingu-3-D, bazohlolona izinto 'ezibukeka njenge'zimo ezingu-2-D, isibonelo, isicabha sibukeka njengonxande, uphawu lomgwaqo lubukeka ngengonxantathu, ipuleti libukeka njengendilinga. Bazoqala ukuqonda ukuthi ingaphandle lezinto ezingu-3-D lifana nezimo ezingu-2-D.

Umgomomo wokuxhumana: Ukufunda kuhlenganisa ukuxoxisana kanye nokwabelana ngemibono. Ukuphendula ngendlela efanele entweni kuyingxenywe ebaluleke kakhulu yokuxoxisana kanye nokufundisa nokufunda. Lalela njalo abafundi uma babelana ngemibono noma bephendula imibuzo yakho.

Ithemu 2 Iqoqa Lolwazi (Isonto 4)

Amanothi omdidiyeli

- ◆ Kulesi sigaba, ababambiqhaza bazobe sebeke bahlanganyela Namaqoqo Okuqokethwe Kwesonto eMihlanganweni Yokucobelelana Ngolwazi edlule. Kubalulekile ukuthi baxhumanise ulwazi luka-CAPS, ukuhlelela isonto kanye nemisebenzi yamaseshini amaqembu amancane.
- ◆ Khumbuza ababambiqhaza ukuthi bazodinga futhi ukuhlelela imisebenzi ekhethwe ngokukhululeka exhumene nolwazi olufundiswa ngesonto.



Activity 6

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

1. What are the topics for Week 4?

2. What new knowledge is introduced in this week?

3. What skills from previous weeks are practised?



Umsebenzi 6

Bhekisa kuSithasiselo A: Ithemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4–7).
Funda ukubuka ngelibanzi ulwazi lweSonto 4: Indawo Nesimo (Ijyomethri) ekhasini
le-10 loMhlahlandlela Wemisebenzi: *Ithemu 2*.

1. Yiziphi izihloko zeSonto 4?

2. Yiluphi ulwazi olusha olwethulwayo kuleli sonto?

3. Yimaphi amakhono asuka emasontweni adlule ajwayezwayo?

Session 2: Numbers, Operations and Relationships

1 hour

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

Facilitator's notes

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

Term 2 Content overview: Numbers, Operations and Relationships

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



Activity 7

What new numbers are introduced in Term 2?

4 and 5

Term 2 Week 5: Teaching number

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

Facilitator's notes

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

Iseshini 2: Izinombolo, Izimpawu kanye Nobudlelwane Bazo

1 ihora

Okugxilwe kukho kuThemu 2 Isonto 5 Izinombolo, Izimpawu kanye Nobudlelwane Bazo.

Amanothi omdidiyeli

- ◆ Chaza ukuthi kuThemu 2 Isonto 5 kugxilwe kwiNombolo, Izimpawu Nobudlelwano Bazo. Bakhumbuze ababambiqhaza ukuthi lokhu kwakugxilwe kukho nakuThemu 2 Amasonto 1 no-2 (kwenziwa kuwo futhi uMhlangano Wokucobelelana Ngolwazi 4
- ◆ Thumela ababambiqhaza emakhasini e-114–123 o*Mhlahlandlela Wokuqonda Isifundo*
- ◆ Cela ababambiqhaza ukuthi basebenze ngamaqembu ukuqedela **Umsebenzi 7**.

Ithemu 2 Ukubuka ulwazi ngelibanzi: Izinombolo, Izimpawu kanye Nobudlelwane Bazo

Imihlangano Yokucobelelana Ngolwazi edlule yethula Ingxenye Yolwazi Okugxilwe Kuyo: Izinombolo, Izimpawu Nobudlelwano Bazo. Kule seshini sizobheka Itemu 1-4 Ukubuka ulwazi ngelibanzi (*Umhlahlandlela Wemisebenzi*, amakhasi 114–123) futhi.



Umsebenzi 7

Yiziphi izinombolo ezintsha ezethulwayo kuThemu 2?

4 no-5

Ithemu 2 Isonto 5: Ukufundisa inombolo

Inombolo 'kuhlanu' yethulwa kuThemu 2 Isonto 5. Uhlelo Lwezibalo lugqugquzela ukusetshenziswa kwezinyombolo ezimeni ezehlukene kanye nokusetshenziswa kokumelwa okuningi, isibonelo: uphawu, igama, isithombe, ichashazi izibalisi, ukushaya izandla. Inqubo esetshenziswa ukwethula inombolo ngayinye ibandakanya abafundi kwinqubo eyejwayelekile, eqagelekayo, nemnandi, futhi iveza inombolo ngezindlela ezihlukene.

Amanothi omdidiyeli

- ◆ Cela ababambiqhaza ukuthi bacabange ngokuthi bazethule kanjani izinombolo emasontweni adlule.
- ◆ Khumbula nokuthi inqubo efanayo isetshenziswa ukwethula inombolo entsha ngayinye. Chaza ukuthi inombolo 'kuhlanu' yethulwa kuThemu 2 Isonto 5 kusetshenzisa inqubo efanayo neyasekuqaleni.
- ◆ Thumela ababambiqhaza ekhasini 91 lo*Mhlahlandlela Wemisebenzi: Itemu 2*.
- ◆ Bayeke baqedele **Umsebenzi 8** ngamaqembu, bese bebika.

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



Activity 8

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

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

Day 1

Day 2

Day 3

Day 4

Day 5

- ◆ Qiniseka ukuthi la maphuzu alandelayo aphaathelene nenqubo ayashiwo:
 - Indaba ephathelene nesilwane/nezilwane iyaxoxwa futhi iyasetshenziswa ukwakha ifrizi yezinombolo.
 - Izinto ezizomela inombolo ziqoqwa bese zibekwa etafuleni endaweni yezibalo.
 - Abafundi baqondanisa uphawu lwenombolo negama lenombolo emakhadini anamachashazi, bese besebenzisa futhi inhlanguanisela yamakhadi anamachashazi ukwakha inombolo.
 - Abafundi basebenzisa iminyakazo yomzimba ukwenza indaba ibe samdlalo.
 - *Ibhuku LamaPhosta* linika amathuba okubala nokuxazulula izinkinga ezimeni.
- ◆ Ukuhleleka kwezinto kwinqubo kungashintsha, kodwa esontweni ngalinye lezi zinto zokwethula inombolo zifakwa emisebenzini yekilasi lonke.



Umsebenzi 8

Bhekisa emisebenzini yekilasi lonke yeSonto 5 ku*Mhlahlandlela Wemisebenzi: Ithemu 2* (amakhasi angama-90–99). Chaza inqubo esetshenziswa ukufundisa inombolo '5'.

Usuku 1

Usuku 2

Usuku 3

Usuku 4

Usuku 5

The number washing line

Facilitator's notes

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

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

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

Use the number washing line to:

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

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

Facilitator's notes

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

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



Video 2

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

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

Ulayini wokweneka wezinombolo

Amanothi omdidiyeli

- ◆ Thola ukuthi ababambiqhaza seabamisile yini olayini bokweneka emakilasini abo.
- ◆ Buyekeza ukubaluleka kwemisebenzi kalayini wokweneka ekusizeni abafundi ukuqonda ukulandelaniswa kwamagama okubala kanye nobudlelwano phakathi kwezinombolo.

Izinombolo 1 kuya kweyesi-5 zifakwe kulayini wokweneka wezinombolo endaweni yezibalo njengoba zazethulwe kuThemu 1. KuseSontweni 5 kuphela lapho abafundi bezibandakanya khona ngomfutho nolayini wokweneka wezinombolo. Othisha abanengi babeka umugqa wezinombolo kusuka koku-0 kuya kokuyi-10 noma kuze kufike kokungama-20 ekilasini ngaphambi kokuba abafundi bakwazi ukubala noma bazibone lezi zinombolo.

Ekuqaleni ukugxila kulayini wokweneka wezinombolo koHlelo Lwezibalo kwenzeka unganakile. Kusuka eSontweni 5 kusetshenziselwa ukugxila ekulandelaniseni (ekuhleleni) izinombolo kanye nasekuxoxeni ngobudlelwano phakathi kwezinombolo.

Sebenzisa ulayini wokweneka wezinombolo:

- ◆ ukuhlela nokuqhathanisa izinombolo, isibonelo:
 - Iyiphi inombolo eza ngaphambi koku-3?
 - Iyiphi inombolo ephakathi koku-3 nokuyisihlanu?
 - Iyiphi inombolo eza ngemuva koku-4?
- ◆ ukuhlola ukuthi izinombolo zikhula kanjani kusuka kwesobunxele kuya kwesokudla, futhi zincipha kanjani kusuka kwesokudla kuya kwesobunxele.
- ◆ ukusebenzisa ulimi lwezibalo njenga-*phambili, emuva, phakathi*.

Kuvidiyo umdidiyeli ukhombisa umsebenzi kalayini wokweneka oweseka ukufundiswa kwenombolo.

Amanothi omdidiyeli

- ◆ Khombisa ukuthi usetshenziswa kanjani ulayini wokweneka wezinombolo.
- ◆ Thumela ababambiqhaza emsebenzini kalayini wokweneka ekhasini lama-95 *Umhlahlandlela Wemisebenzi: Ithemu 2*.

Funda umsebenzi owethula ulayini wokweneka wezinombolo kubafundi ekhasini lama-95 loMhlahlandlela Wemisebenzi: Ithemu 2.



Ividiyo 2

Umhlahlandlela Wemisebenzi: Ithemu 2, Isonto 5, Usuku3 #4 (ikhasi 95)

Buka ividiyo kathisha esebenzisa ulayini wokweneka wezinombolo ukuhlela izinombolo ku-1 kuya koku-5. Qaphela ukuthi uyehlukanisa kanjani imisebenzi ngokukhula kwayo futhi uqaphele imibuzo ayibuzayo ukugumba abafundi.

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

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

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

Structure beads

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

Facilitator's notes

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

Structure beads help learners to:

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

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

Xoxa ngokubaluleka kokusetshenziswa kukalayini wokweneka wezinombolo kulo futhi iBanga R.

Ukulandelanisa izinombolo: Abafundi babeka izinombolo ngendlela yokubala eyiyo. Abafundi babona umugqa wezinombolo ngosuku ngalunye nangesikhathi sezingxoxo ezingahleliwe bakhulume ngenombolo ngayinye.

Hlela: Abafundi baxoxa ngezinombolo nobudlelwano bazo. Othisha babuza ukuthi iyiphi inombolo eza kuqala, ngemuva noma ephakathi kwezinye izinombolo. Abafundi basebenzise ulimi lwezibalo oluyilo ukuchaza isikhundla sezinombolo nobudlelwano bazo.

Ubuhlalu bokuhlela

Ubuhlalu bokuhlela *obukuKhithi Yezinsiza* buza bunobude bobuhlalu obuyishumi bungamaqoqo angamahlanu, buhlelwe ngokombala (ubuhlalu obuyisihlanu obubomvu kanye nobuhlalu obuyisihlanu obuphuzi).

Amanothi omdidiyeli

- ◆ Xoxani ngobuhlalu bokuhlela i-10 (ubuhlalu obuyisihlanu, iminwe eyisihlanu) Khombisa ukusetshenziswa kwentambo yobuhlalu.
- ◆ Cela ababambiqhaza bathathe iqoqo lobuhlalu bokuhlela obuyishumi etafuleni.
- ◆ Sebenzisa ulwazi olungezansi ukuxoxa ngenhloso yobuhlalu bokuhlela.

Ubuhlalu bokuhlela busiza abafundi uku-:

- ◆ bona ngokuzenzekelayo inani lobuhlalu obuseqoqweni ngaphandle kokubala, isib. '4'
- ◆ qonda ukuthi inombolo eyodwa ingaba yinhlanganisela yezinombolo ezimbili noma ngaphezulu, isib. Oku-'4' kwakhiwe ngoku-'2' noku-'2' noma oku-1 noku-3.
- ◆ thuthukisa amakhono okubala uqhubeke usukela enombolweni enikiwe, isb. Qala koku-3 bese ubala uqhubeke uye koku-5.
- ◆ qala ukusebenza ngokuhlanganisa nokususa.
- ◆ qala ukusebenza ngamabhondi eshumi.

Kulo msebenzi olandelayo, sebenzisa obakho ubuhlalu bokuhlela beshumi ukuhlola inhlanganisela yezinombolo ezihlukahlukene. Landela umdidiyeli bese uphendula imibuzo njengoba ihleliwe kuMsebenzi 9.



Activity 9

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

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

Facilitator's notes

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



Activity 10

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

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



Umsebenzi 9

1. Ngikhombise ubuhlalu obubili.
2. Ngikhombise ubuhlalu obengeziwe ngobunye obubodwa.
3. Ngikhombise ubuhlalu obumbalwa ngokukodwa kunobuhlalu obune.
4. Ngikhombise ubuhlalu obune. Manje ngikhombise obengezwe ngobubodwa ngaphezu kobune. Unobungaki?
5. Wenzeni ukwenza bube buningi ngobubodwa?
6. Ngikhombise obumbalwa ngokukodwa kunobuyisihlanu. Unobungaki?
7. Wenze njani ukwenza kube ngaphansi ngokukodwa?
8. Manje susa obubodwa. Unobungaki?
9. Hlanganisa nobubodwa. Unobungaki?

Fundela abafundi umsebenzi owethula ubuhlalu bokuhlela ekhasini le-101 loMhlahlandlela Wemisebenzi: Ithemu 2, isinyathelo 3. Emaqenjini xoxa ngalo msebenzi.

Amanothi omdidiyeli

- ◆ Chaza ukuthi ababambiqhaza manje sebezosebenza ngobuhlalu babo, nokuthi bazolandela imiyalelo yakho uma bebhala phansi izimpendulo zabo.
- ◆ Bacele basebenze ngamaqembu ukuqeda **Umsebenzi 10**.



Umsebenzi 10

Usiza kanjani kubafundi lo msebenzi wobuhlalu bokuhlela ukuthuthukisa umqondo ngezinombolo?

Abafundi baqala ukukhombisa inani lenombolo yobuhlalu (isib. 3) ngaphandle kokubala ngakunye. Sebeyakwazi ukukhombisa 'okuningi ngokukodwa' noma 'okumbalwa ngokukodwa', bese kuba yinani elishiwo ngaphandle kokubala.

Abafundi bayabona ukuthi inombolo eyodwa yakhiwe yinhlanganisela yezinombolo (isib. 5 wakhiwe ngu-2 no-3, noma u-1 no-2 no-2).

Baqala ukusebenzisa ulimi lokuhlanganisa nokususa besebenzisa umqondo wokuhlanganisa/nokuhlukanisa amaqoqo ngaphandle kokubala.

Ubuhlalu bokuhlela bunika ithuba lokubamba inani eliphelele lobuhlalu.

Facilitator's notes

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

The **practice principle**: Learners should have plenty of time to practise new skills and knowledge. When learners get regular practice in what they have already learnt, they get better at it and become more confident. They enjoy repetition and practice.

Term 2 Content Summary (Week 5)

Facilitator's notes

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



Activity 11

Refer to Appendix A: Term 2 Weekly Content Summary (Weeks 4–7). Read the content overview for Week 5: Numbers, Operations and Relationships on page 18 of *Activity Guide: Term 2*.

1. What are the topics for Week 5?

2. What new knowledge is introduced in this week?

3. What skills from previous weeks are practised?

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

Amanothi omdidiyeli

- ◆ Xoxani ngokubaluleka kokuzilungiselela ukunikeza abafundi isikhathi esanele ukuzejwayeza amakhono nolwazi lwabo olusha (**umgomo wokwenza**).

Umgomo wokwenza: Abafundi kumele babe nesikhathi esanele sokuzejwayeza amakhono amasha nolwazi. Uma abafundi bethola ukuzejwayeza njalo kulokho asebekufundile, baba ngcono kukhona, bese beba nokuzithemba okukhulu. Bathokozela ukuphindaphinda izinto kanye nokuzejwayeza.

Ithemu 2 Iqoqa Lolwazi (Isonto 5)

Amanothi omdidiyeli

- ◆ Khumbuza ababambiqhaza ukuthi kudingeka ukuba bahlele imisebenzi ekhethwe ngokukhululeka exhumene nolwazi olufundiswa ngesonto.



Umsebenzi 11

Bhekisa engxenyeni ethi Isithasiselo A: Itemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4–7) Funda ukubuka ulwazi ngelibanzi kweSonto 5: Izinombolo, Izimpawu kanye Nobudlelwane Bazo ekhasini le-19 ku*Mhlahlandlela Wemisebenzi: Itemu 2*.

1. Yiziphi izihloko zeSonto 5?

2. Yiluphi ulwazi olusha olwethulwayo kuleli sonto?

3. Yimaphi amakhono asuka emasontweni adlule ajwayezwayo?

4. Qondanisa imisebenzi kuSithasiselo A: Itemu 2 Itemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4–7) nezifundo zesonto ngalinye.

Session 3: Patterns, Functions and Algebra 1 hour

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

Facilitator's notes

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

Term 2 Content overview: Patterns, Functions and Algebra

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



Activity 12

1. What concepts are covered in Term 2?

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

Term 2 Week 6: Describe, copy and extend patterns

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

In Term 2 Week 6 learners:

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

Iseshini 3: Amaphethini, Amafankshini kanye ne-Aljebhra

1 ihora

Okugxilwe kukho kuThemu 2 Isonto 6 Amaphethini, Amafankshini kanye ne-Aljebhra.

Amanothi omdidiyeli

- ◆ Chaza ukuthi okugxilwe kukho kuThemu 2 Amaphethini, Amafankshini ne-Algebra. Khumbuza ababambiqhaza ukuthi lokhu bekugxilwe kukho futhi kuThemu 1 Isonto 6 (kwenziwe eMhlanganweni Wokucobelelana Ngolwazi 3).
- ◆ Thumela ababambiqhaza ekhasini le-125 *Umhlahlandlela Wokuqonda Isifundo*.
- ◆ Cela ababambiqhaza ukuthi basebenze ngamaqembu ukuqedela **Umsebenzi 12**.

Ithemu 2 Ukubuka ulwazi ngelibanzi: Amaphethini, Amafankshini kanye ne-Aljebhra

Bhekisa kuMaphethini, Amafankshini kanye ne-Aljebhra ekubukeni ulwazi ngelibanzi (*Umhlahlandlela Wokuqonda Isifundo*, ikhasi le-125).



Umsebenzi 12

1. Yiluphi ulwazi olwenziwe kuThemu 2?

2. Yimuphi umehluko phakathi kolwazi lohlelo LweziBalo kanye nolwazi luka-CAPS?

Ithemu 2 Isonto 6: Chaza, kopisha ubuye unwebe amaphethini

Emhlanganweni Wokucobelelana Ngolwazi 3, kwakugxilwe kuMaphethini, Amafankshini kanye ne-Aljebhra ukubona/ukuhlonza ukuphindaphinda iphethini. Saxoxa futhi ngomehluko phakathi kokulandelana kanye nephethini. Itemu 2 Isonto 6 yakhela kulwazi olwethulwe kuThemu 1 Isonto 6.

KuThemu 2 Isonto 6 abafundi:

- ◆ bachaza okuphindiwe kuphethini besebenzisa izinto, izithombe kanye nemisindo.
- ◆ bakopisha amaphethini enziwe abanye ngezinto, ngezithombe kanye nangemisindo.
- ◆ banweba amaphethini enziwe abanye.
- ◆ bazakhela amaphethini abo esemazingeni obulukhuni obuhlukene njengalokhu:

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

Facilitator's notes

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



Activity 13

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

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

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

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

Term 2 Content Summary (Week 6)

Facilitator's notes

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

- indilinga, isikwele, indilinga, isikwele
 - indilinga, isikwele, unxantathu, indilinga, isikwele, unxantathu
 - indilinga, indilinga, isikwele; indilinga, indilinga, isikwele
 - indilinga ebomvu, indilinga eluhlaza okwesibhakabhaka, isikwele esiphuzi,
- ◆ basho ukuthi yini engekho lapho ingxenywe yephephethini ifihliwe.

Amanothi omdidiyeli

- ◆ Buyela emuva ucabange ngoMhlangano Wokucobelelana Ngolwazi 3: Ukuhlonza amaphethini. Sebenzisa amabhulokhi angama-athributhi kanye ne*Bhuku lamaPhosta*. Xoxani ngomehluko phakathi kokulandelanisa izinto, izithombe noma izehlakalo, kanye nokuthi yini eyenza iphethini. Khumbuza ababambiqhaza ukuthi iphethini idinga ukuphindaphindeka kokulandelana. Kukhombise lokhu.
- ◆ Yenza ababambiqhaza ukuthi basebenze ngamaqembu ukuqeda **Umsebenzi 13**.



Umsebenzi 13

Bhekisa engxenyeni ethi iSonto 6 ku*Mhlahlandlela Wemisebenzi: Ithemu 2* (amakhasi 104–119).

1. Xoxa ukuthi imisebenzi yekilasi lonke izethula kanjani izifundo zamaphethini.

Ukuhlonza amaphethini, ukusebenzisa umzimba wonke, ukuhlonza amaphethini esithombeni se*Bhuku Lamaphosta*

Kopisha futhi unwebe amaphethini akho kanye namaphethini abanye.

Chaza ukuthi kungani kuyiphethini noma kungeyona iphethini.

2. Funda isinyathelo 5 no-6 kumsebenzi oholwa uthisha ekhasini le-117. Uthisha uyehlukanisa kanjani imisebenzi ngokukhula kwayo, abahole kanjani futhi abafundi ngemibuzo?

Ithemu 2 Iqoqa Lolwazi (Isonto 6)

Amanothi omdidiyeli

- ◆ Qinisekisa ukuthi ababambiqhaza bamxhumanisa kanjani u-CAPS nokuhlelela Isonto 6, isib. Isihloko kanye nolwazi lukaThemu 2 kuphuma ku-CAPS, noHlelo lweZibalo lunye oluhlanganisiwe lwathasiselwa.
- ◆ Xoxa ngokuthi kungani kufakwe inombolo futhi esontweni okugxilwe kumaPhethini kulo, kumafankshini kanye naku-Aljebhra. Chaza ukuthi noma ulwazi okugxilwe kulo kungamaphethini, siyadinga ukuzejwayeza inombolo zonke izinsuku ngesikhathi semisebenzi yekilasi lonke kanye nesemisebenzi eholwa nguthisha.
- ◆ Khumbuza ababambiqhaza ukuthi kuzenzekele nje ukuthi bafake zonke izinto ezidingekayo ohlelweni lwansuku zonke, isib, ukulandelana kwemisebenzi ohlelweni lwansuku zonke kanye nezinsuku zesonto ziwulwazi ezisiza ukulinganisa (isikhathi) ngesikhathi bemi emugqeni – owokuqala, owesibili, owesithathu- kube yizinombolo (ezisho isikhundla).



Activity 14

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

1. What are the topics for Week 6?

2. What new knowledge is introduced in this week?

3. What skills from previous weeks are practised?

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



Umsebenzi 14

Bhekisa kuSithasiselo A: Ithemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4–7)
Funda Ukubukwa ngelibanzi kolwazi lweSonto 6: Amaphethini, AmaFankshini kanye
ne-Aljebhra ekhasini lama-21 *Umhlahlandlela Wemisebenzi: Ithemu 2*

1. Yiziphi izihloko zeSonto 6?

2. Yiluphi ulwazi olusha olwethulwayo kuleli sonto?

3. Yimaphi amakhono amasonto edlule ajwayezwayo?

4. Qondanisa imisebenzi kusiThasiselo A: Ithemu 2 Iqoqa Lolwazi Lwesonto Ngalinye
(Amasonto 4–7) nezifundo esontweni ngalinye.

Session 4: Data Handling

1 hour

The focus of Term 2 Week 7 is Data Handling.

Facilitator's notes

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

Term 2 Content overview: Data Handling

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



Activity 15

1. What concepts are covered in Term 2?

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

Facilitator's notes

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

Iseshini 4: Ukusetshenziswa Kolwazi

1 ihora

Okugxilwe kukho kuThemu 2 Isonto 7 Ukusetshenziswa Kolwazi.

Amanothi omdidiyeli

- ◆ Chaza ukuthi okugxilwe kukho kuThemu 2 Isonto 7 Ukusetshenziswa Kolwazi. Khumbuza ababambiqhaza ukuthi lokhu bekugxilwe kukho futhi kuThemu 1 Isonto 10 (kwenziwe emhlanganweni wokucobelelana 4).
- ◆ Thumela ababambiqhaza ekhasini le-137 *Umhlahlandlela Wemisebenzi*.
- ◆ Cela ababambiqhaza basebenze emaqenjini ukuqedela **Umsebenzi 15**

Ithemu 2 Ukubuka ulwazi ngelibanzi: Ukusetshenziswa Kolwazi

Bhekisa engxenyeni ethi Ukusetshenziswa Kolwazi ekubukeni ulwazi ngelibanzi (*Umhlahlandlela Wokuqonda Isifundo*, ekhasini le-137).



Umsebenzi 15

1. Yiluphi ulwazi olwenziwe kuThemu 2?

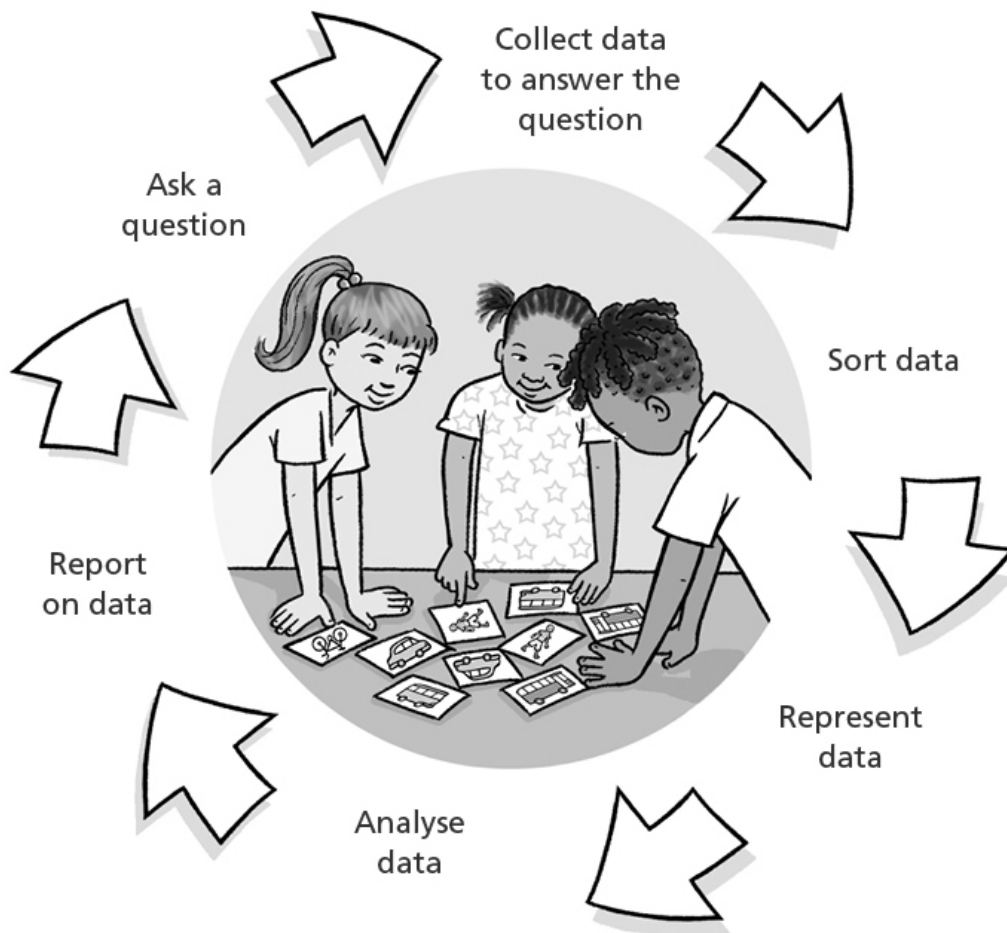
2. Yimuphi umehluko okhona phakathi kokuqukethwe kohlelo lweziBalo kanye nokuqukethwe kuka-CAPS?

Amanothi omdidiyeli

- ◆ Chazela ababambiqhaza ukuthi Ingxenywe Yolwazi yokusetshenziswa kolwazi kweBanga R igxile enhlosweni nakuyo inqubo yokusetshenziswa kolwazi. Lokhu kuhlukanisa ukuxazulula izinkinga noma ukuphendula imibuzo ngokuqoqa, ukuhlela, ukumela kanye nokuhumusha ulwazi.
- ◆ Ukuqoqa kanye nokuhlela (ukuhlukanisa) ulwazi kuyingxenywe yenqubo yokusetshenziswa kolwazi. Uma othisha bengaxili ekuphendulweni kwemibuzo, umsebenzi kumele ube mayelana nokuhlela kuphela.
- ◆ Yalela ababambiqhaza balandele inqubo yokusetshenziswa kolwazi, bese begagula izinyathelo ezahlukene zenqubo.
 1. Buza umbuzo.
 2. Qoqa ulwazi (xoxani ngendlela engaba yinhle ukwenza lokhu).
 3. Hlela ulwazi olutholakele.
 4. Lumele ulwazi olutholakele.
 5. Hlaziya ulwazi.
 6. Yethula umbiko ngolwazi.
- ◆ Dedela ababambiqhaza baqedele **Umsebenzi 16** ngamaqembu.
- ◆ Cela iqembu elilodwa lizokwethula umsebenzi wabo.

Data Handling

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



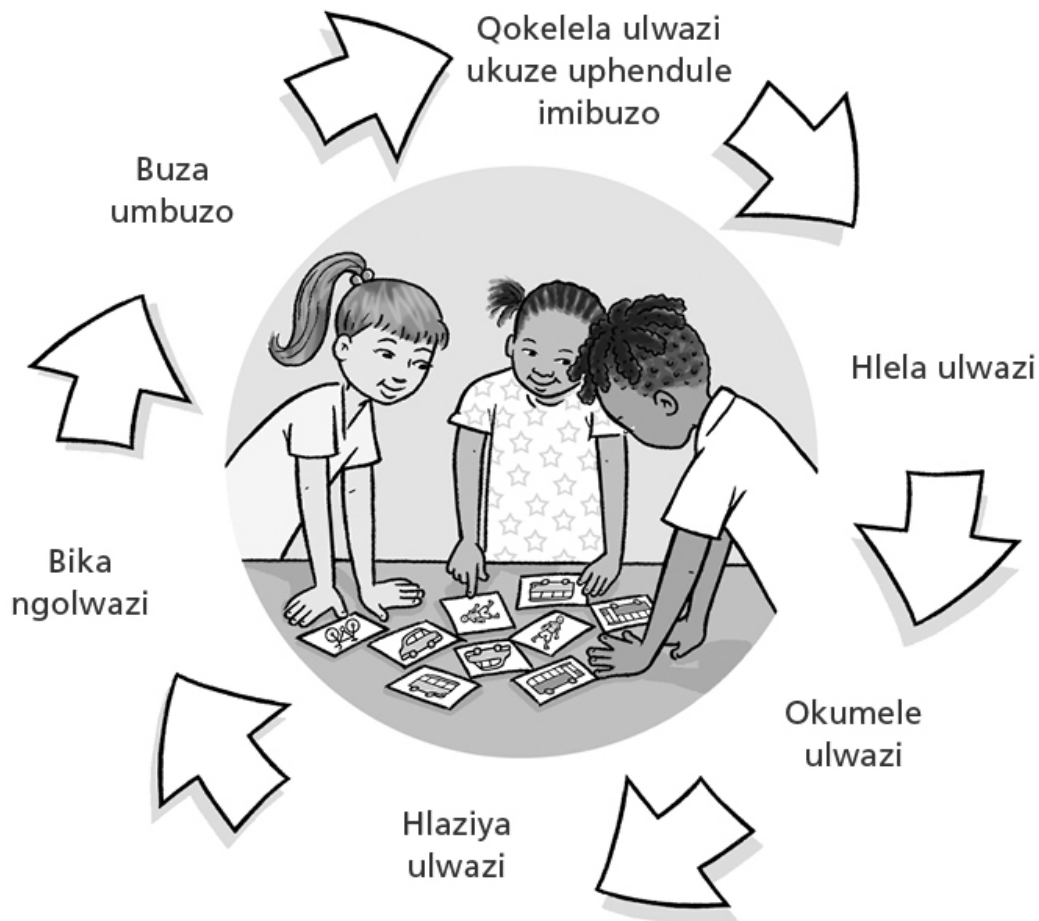
In Grade R learners should have many opportunities to sort objects according to one or more attributes, such as colour, size or shape. Sorting is part of Data Handling, but it is not the only focus. It is important to always bring the learners back to the question that has been posed and the reason why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

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

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

Ukusetshenziswa Kolwazi

Ingxenye Yolwazi Yokusetshenziswa Kolwazi igxila kwinhloso kanye nenqubo yokusetshenziswa kolwazi. Ihlanganisa ukuxazulula izinkinga noma ukuphendula umbuzo ngokuqoqa, ukuhlela, ukumela kanye nokuhumusha ulwazi.



Kulo futhi iBanga R abafundi kufanele babe namathuba amaningi okuhlela izinto ngendlela ye-athribhuthi eyodwa noma ngaphezulu, njengombala, ubungako noma isimo. Ukuhlela kuyingxenye yokuSetshenziswa Kolwazi, kodwa akugxiliwe kuyona kuphela. Kubalulekile ukuhlala njalo kubuyiselwa abafundi emuva embuzweni obuziwe kanye nakuso isizathu sokuthi kungani beqoqa, behlela futhi becabanga ngezindlela zokumela ulwazi.

Imibuzo yoKusetshenziswa Kolwazi ibalulekile, isib.:

- ◆ Ngiyamangala ukuthi abafundi abaningi bathanda siphiso?
- ◆ Singaluqoqa kanjani ulwazi lwethu?

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



Activity 16

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

Representing data

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

Term 2 Content Summary (Week 7)



Activity 17

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

1. What are the topics for Week 7?

2. What new knowledge is introduced in this week?

3. What skills from previous weeks are practised?

- ◆ Singaluhlela kanjani ulwazi olutholakele?
- ◆ Singenzanjani ukumela ulwazi olutholakele?



Umsebenzi 16

Xoxa ukuthi ungawulungiselela kanjani, uwenze kanjani umsebenzi wokuSetshenziswa Kolwazi kusukela emibuzweni engenhla. Qophani imibono yenu ephepheni eliphenywayo leshadi.

Ukumela ulwazi olutholakele

Abafundi beBanga R bahlola izindlela ezehlukene zokukhombisa noma zokubukisa ulwazi abaluloqile. Igrafu yezithombe iyindlela yokumela ulwazi olutholakele kusetshenziswa izithombe. Emsebenzini wekilasi lonke ngoSuku 3 lweSonto7, abafundi baxoxa ngokuthi beza kanjani esikoleni. Umfundi ngamunye unikwa ubuso obumamathekayo **esiqeshini sephepha esilingana ngokuphelele**. Babukisa ulwazi ngokubeka kukhalamu izithombe ezine zezithuthi ezimele izindlela. Kubalulekile ukubeka ulwazi kumakhalamu, **kungabikhona zikhala** phakathi kweziqephu zephepha. Ulwazi lumeleka kahle kube lula nokuluhumusha ukuze kuphendulwe umbuzo: “Ngabe iningi lezingane liza kanjani esikoleni?”

Ithemu 2 Iqoqa Lolwazi (Isonto 7)



Umsebenzi 17

Bhekisa kuSithathiselo A: Itemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4–7). Funda Ukubuka Ngelibanzi Ulwazi lweSonto 7: Ukusetshenziswa Kolwazi ekhasini lama-21 *loMhlahlandlela Wemisebenzi: Itemu 2*

1. Yiziphi izihloko zeSonto 7?

2. Yiluphi ulwazi olusha olwethulwa kuleli sonto?

3. Yimaphi amakhono asemasontweni adlule ajwayezwayo?

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

4. Qondanisa imisebenzi ekusiThasiselo A: Ithemu 2 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 4-7) nezifundo zesonto ngalinye.
5. Bhekisa emsebenzini oholwa uthisha weSonto 7 (*Umhlahlandlela Wemisebenzi: Ithemu 2*, ikhasi le-133). Xoxa ukuthi uthisha ubahola kanjani abafundi ukuhlela izilwane bese uveza ulwazi olutholakele kugridi.

Closing activities

1 hour

Facilitator's notes

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



Activity 18

Lessons learnt: Think about what you learnt during the workshop and complete the table.

Things I am already doing that work well	New ideas that I would like to try



Take back to school task

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

Amanothi omdidiyeli

- ◆ **Izifundo ezifundiwe:** Cela ababambiqhaza ukuthi bacabange ngalokho abakufunde ngesikhathi somhlangano, bese ngamunye eqedela **Umsebenzi 18**.
- ◆ **Umsebenzi obuyela nawo esikoleni:** Funda lo msebenzi. Buza ukuthi kukhona yini okungacacile futhi okudinga incazelo eyengeziwe.
- ◆ **Ukuhlola:** Nikeza amakhophi eFomu Lokuhlola Lomhlangano Wokucobelelana Ngolwazi bese ucela ababambiqhaza ukuthi bagcwalise leli fomu.
- ◆ **Umhlangano wokucobelelana ngolwazi olandelayo:** Nikeza izinsuku zomhlangano wokucobelelana ngolwazi olandelayo, bese uvala umhlangano wokucobelelana ngolwazi.



Umsebenzi 18

Izifundo ezifundiwe: Cabanga ngalokho okufundile ngesikhathi somhlangano wokucobelelana ngolwazi bese uqedela ithebhula.

Izinto esengivele ngizenza ezisebenza kahle	Ulwazi olusha engingathanda ukuluzama



Umsebenzi obuyela nawo esikoleni

1. Qhubeka ukusebenzisa iRekhodi lokuHlola okuqhubekayo *kuMhlahlandlela Wemisebenzi: Ithemu 2* ukuhlola abafundi bakho. Sebenzisa amanothi akho okuqaphela okuqhubekayo ukwakha ubufakazi balokho okuqondwa ngabafundi kanye nabakwazi ukukwenza.
2. Hlonza noma yikuphi ukukhathazeka komfundi ngamunye onakho ngokuqala kwabo ukubamba ulwazi lweziBalo.
3. Phatha amakhophi amarubhrikhi owasebenzisele ukuhlola iziBalo emhlanganweni wokucobelelana ngolwazi olandelayo.
4. Phatha emhlanganweni wokucobelelana ngolwazi olandelayo irekhodi eliphelele lokuhlola umfundi oyedwa.

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

Evaluation

Complete the Evaluation Form.

5. Sebenzisa *Umhlahlandlela Wemisebenzi: Ithemu 2* Ukulungiselela kanye nokwenza amaSonto 4–7 oHlelo LweziBalo, ubandakanya nokwenza indawo yezibalo egxile olwazini lwesonto ngalinye.
6. Yenza amanothi alokho okusebenze kahle, okungasebenzanga kahle kanye nalokho ongakwenza ngokuhlukile ukwenza ngcono ukufunda nokufundisa.

Ukuhlola

Gcwalisa iFomu Lokuhlola.

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

Term 2: Activity Plan

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

ISITHASISELO A: ITHEMU 2 IQOQA LOLWAZI LWESONTO NGALINYE (AMASONTO 4-7)

Ithemu 1: Uhlelo Lomsebenzi

Isonto 4				
INGXENYE YOLWAZI: INDAWO NESIMO (IJIYOMETHRI)				
ISIHLOKO: Isikhundla, isimo nokubuka; chaza, hlela uqhathanise izinto ezingu -3-D				
YETHULA ULWAZI OLUSHA: Hlela izinto ezingu 3-D ngokufana nangokwehluka kwazo okwengezwe ngokukodwa, okuncishiswe ngokukodwa				
ZEJWAYEZE: Ukubala ngomlomo 1-15, ukubala izinto 1-7, ulwazi lwezinombolo 1-4, Ukugxilisa zonke izimo				
Imisebenzi yekilasi lonke		Umsebenzi oholwa uthisha	Imisebenzi yesiteshi sokusebenzela	
Usuku 1	Gxilisa zonke izimo/ukuthungatha izimo	Zejwayeze 1-4. Ukuchaza into ezikhundleni ezihlukahlukene. Ukuzejwayeze izimo kanye nezikhundla.	Umsebenzi 1	Indilinga/isikwele/unxantathu kungaba futhi... (yakha isithombe). Akha izimo usebenzise izisikamakhekhe kanye nenhlama yokudlala. Ukwakha ngamabhulokhi – sebenzisa amabhulokhi/Amabhulokhi axhumekayo. Amaphazili (angaqala enanini eliyizingcezu eziyi-12).
Usuku 2	Isikhwama sokuzwa - thinta izimo ezehlukene bese uzichaza.			
Usuku 3	Thola izimo ekilasini usebenzisa amagama esikhundla.			
Usuku 4	Umphenyi wesimo. okwengezwe ngokukodwa, okuncishiswe ngokukodwa.			
Usuku 5	Inkombandlela nesikhundla. Indlela eneziphazamiso.			
Isonto 5				
INGXENYE YOLWAZI: IZINOMBOLO, IZIMPAWU KANYE NOBUDLELWANE BAZO				
ISIHLOKO: Ukubona izimpawu zezinombolo namagama ezinombolo; uchaza, ahlele aqhathanise izinombolo				
YETHULA ULWAZI OLUSHA: Yethula inombolo 5				
ZEJWAYEZE: Ukubala ngomlomo 1-15, ubala izinto 1-7, bala uye emuva usukela koku-5 (imilozelo), gxilisa ulwazi lwezinombolo 1-4, ukulandelanisa izinombolo 1-4, ukwengeza/ukunciphisa				
Imisebenzi yekilasi lonke		Umsebenzi oholwa uthisha	Imisebenzi yesiteshi sokusebenzela	
Usuku 1	Yethula inombolo 5 (izinkawu ezi-5 endlini yesihlanu).	Qondanisa izimpawu zezinombolo, amagama ezinombolo kanye namakhadi anamachashazi (4 no-5). Ukubala 1-7. Linganisela bese ubala. Ubuhlalu bokuhlela. Ukumiswa okuhlukene kwenombolo efanayo.	Umsebenzi 1	Inhlamayokudlala umata 5. Izinombolo zenyosikazi (goqa amaphepha ayibhola ayinombolo eyiyo). Ukuqondanisa izinombolo - amaphekisi. Iphazili yezinombolo kufike koku-5 (sebenzisa izinombolo zamagama).
Usuku 2	Gxilisa ku-4 no-5 (izimpawu zezinombolo kanye namagama ezinombolo).			
Usuku 3	Ukubala uye phambili ubuye uye emuva. Umugqa wezinombolo.			
Usuku 4	Gxilisa ku-4 no-5.			
Usuku 5	Gxilisa izinombolo 1-5 (ukubona amakhadi anamachashazi, izimpawu zezinombolo, amagama ezinombolo adinga ukuhlonzwa).			

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

Isonto 6				
INGXENYE YOLWAZI: AMAPHETHINI, AMAFANKSHINI KANYE NE-ALJEBRA				
ISIHLOKO: Kopisha ubuye unwebe amaphethini alula aphindaphindayo; uzakhela amaphethini akhe; uchaza ukuphindaphinda emaphethinini				
YETHULA ULWAZI OLUSHA: Akopishe bese enweba amaphethini alula, ukwakha bese achaze amaphethini akhe, ukubala ngomlomo 1–20, bala uye emuva kusuka kokuyisi-7				
ZEJWAYEZE: Ukulandelanisa izinombolo 1–5, ukubala izinto 1–7, ukwenza amaqoqo afane				
Imisebenzi yekilasi lonke		Umsebenzi oholwa uthisha	Imisebenzi yesiteshi sokusebenzela	
Usuku 1	Amaphethini ezinto eziphathekayo.	Gxila kulwazi lwenombolo 1–5. Xukuza uhlephule. Yakha amaqoqo alinganayo. Wakha amaphethini nophathina. Amabhulokhi axhumekayo.	Umsebenzi 1	Ukunwetshwa kwepethini- ukudweba kanye nokufaka umbala. Amaphethini ezinyoka – usebenzisa izimo. Amakhadi amaphethini – usebenzisa amabhulokhi axhumekayo. Ukutshutsha amaphethini ngobuhlalu.
Usuku 2	Ukuhlonza amaphethini ezintweni zansuku zonke.			
Usuku 3	Ukuxazulula izinkinga usebenzisa amaphethini.			
Usuku 4	Ukwakha amaphethini usebenzisa izinto zansuku zonke.			
Usuku 5	Amaphethini omsindo.			
Isonto 7				
ZEJWAYEZE: UKUSETSHENZISWA KOLWAZI				
ISIHLOKO: Uqoqa ahlele izinto; umela amaqoqo ezinto ezihleliwe; xoxa bese ubika ngamaqoqo ezinto ezihleliwe				
YETHULA ULWAZI OLUSHA: Dweba isithombe sezinto eziqoqiwe, uphendula imibuzo ngesithombe sakhe				
ZEJWAYEZE: Ukubala ngomlomo 1–20 nokuhlehla usuka kokuyisi-7, Ukubala izinto 1–7, okuningi kunokunye/okumbalwa kunokunye/okulingana noku-, ulwazi lwenombolo 1–5, ukuhlela nokuhlukanisa				
Imisebenzi yekilasi lonke		Umsebenzi oholwa uthisha	Imisebenzi yesiteshi sokusebenzela	
Usuku 1	Qoqa bese uhlela izinto (indilinga noma isikwele).	Ukulinganisela. Ukubala. Ukuhlela amaqoqo ezilwane. Igrafu yezithombe: okwengeziwe/okuncishisiwe. Ukubuza imibuzo.	Umsebenzi 1	Ukusika kanye nokuhlela izithombe zezithuthi. Ukuhlela izinto ezilahliwe. Igrafu yesimo (sebenzisa izimo ezisikiwe). Ukuhlela ngokombala.
Usuku 2	Umdlalo wokuhlela. IPhosta 8.			
Usuku 3	Igrafu yezithombe: Ufika kanjani esikoleni?			
Usuku 4	Xoxa ngemiphumela yoSuku 3 (ukubuza imibuzo).			
Usuku 5	Qoqa bese uhlela izinto zasekilasini.			

Workshop 5 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 Lokuhlola Lomhlangano Wokucobelana Ngolwazi 5

1. Ngabe umhlangano wokucobelana ngolwazi uhlangabezene nalokho obukulindele?

2. Yini oyifundile kulo mhlangano wokucobelana ngolwazi ekusize kakhulu?

3. Ngabe kukhona ongakuthandanga noma okuthola kunzima ukukuqonda?

4. Uzokusebenzisa kanjani lokho okufundile ekilasini lakho leBanga R?

5. Ngabe unazo iziphakamiso zokuthuthukisa eminye imihlangano yokucobelana ngolwazi?
