

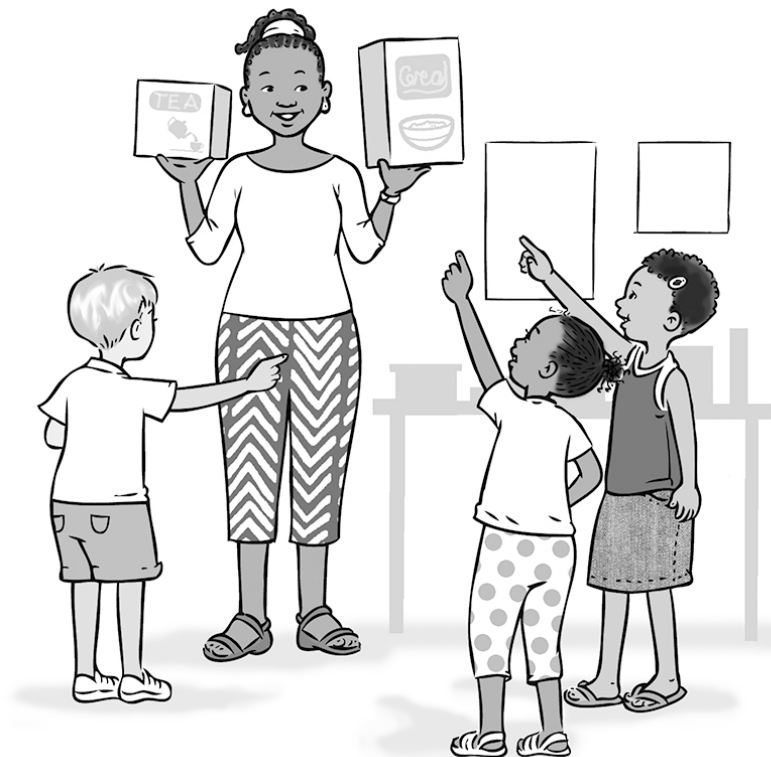


GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GGT 2030
GROWING GAUTENG TOGETHER

IsiXhosa/English

INkqubo yeMathematika yokuPhucula yeBanga R Grade R Mathematics Improvement Programme



**INdibano yoCweyo 5 • Workshop 5
IsiKhokelo somBhexeshi • Facilitator's Guide**

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

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

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

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IProjekthi yeBanga R yokuPhucula yeMathematika noLwimi lilinge **leSebe leMfundo laseGauteng (Gauteng Department of Education)** kunye neqabane layo eliphambili, i**Gauteng Education Development Trust**.

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Overview

Purpose

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

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

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

Learning outcomes

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

Workshop content

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

Amagqabantshintshi

Injongo

Le yeyesihlanu kwezilishumi elinambini iindibano zocweyo zeNkqubo yeMathematika yokuPhucula yeBanga R (iNkqubo yeMathematika) neyinxalenye 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, ukomeleza indlela abaqonda ngayo ekufundiseni nasekufundeni iiNkalo zoMxholo esele zifundisiwe kwiKota 2 iiveki 4–7 nobuyelomva ngeengcinga kwindlela esebenze ngayo imigaqo ekhokela ukufundisa imathematika ibe yesebenzayo eziklasini zabo.

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

Iziphumo zokufunda

- ◆ Ukucamngca ngokuphunyezwa kweKota 1 iVeki 10 kunye neKota 2 iiVeki 1–3
- ◆ Ukuqwalasela amacebo okunika inkxaso ekufundisweni kwemathematika kwiBanga R
- ◆ Ukucamngca kwimigaqo ekhokela ukufundisa iNkqubo yeMathematika.
- ◆ Ukusebenza ngeNkqubo yeMathematika kwiKota 2 iiVeki 4–7 (IsiThuba neMilo (iJiyometri); Amanani, iiOpereyshini noLwalamano; IiPateni, iiFanshini neAljibhra; ULwazi oluQokelelweyo).
- ◆ Ukuxoxa ngendlela efanelekileyo yoqwalaselo nohlolo kwiBanga R

Umxholo wendibano yocweyo

- ◆ Ukuvula nocamngco (1 iyure)
 - ◆ Iseshoni 1: IsiThuba neMilo (iJiyometri) (1 iyure)
- ITI
- ◆ Iseshoni 2: Amanani, iiOpereyshini noLwalamano (1 iyure)
 - ◆ Iseshoni 3: IiPateni, iiFanshini neAljibhra (1 iyure)
- ISIDLO SASEMINI
- ◆ Iseshoni 4: ULwazi oluQokelelweyo (1 iyure)
 - ◆ Imisebenzi yokuqokumbela (1 iyure)

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)

Ulungiselelo

- ◆ PPT ulwamkelo neziphumo
- ◆ Funda:
IsiKhokelo seeKhonsephi, amaphepha 114–131 nele136–137
IsiKhokelo semiSebenzi: Ikota 2, amaphepha 18–21 namaphepha 70–137
Isingeniso A: Ikota 2 Isishwankathelo somXholo weVeki neVeki (Iiveki 4–7)
- ◆ Yiza nento yokudlala enkulu, umz. imoto, unodoli.
- ◆ PPT: Umjikelo woLwazi oluQokelelweyo (okwiNdibano yoCweyo 4).
- ◆ Kwiseshoni yesi4, yenza itshathi yepikthografu, 'Uhambe ngantoni ukuza kule ndibano yocweyo?' umthathinxaxheba ngamnye usebenzisa amakhadi anemifanekiso 'yeteksi', 'imoto', 'ukuhamba ngeenyawo' kunye 'nezinye izinto' ndawonye namakhadi 'anobuso obuncumileyo'.

Iimathiriyeli

- ◆ Iphepha lefliptshathi, iikhoki
- ◆ *IKiti yeziXhobo* yeqela ngalinye
- ◆ *IsiKhokelo seeKhonsephi*
- ◆ Inqokelela yezinto ezingu3-D yeqela ngalinye (Iseshoni 2)
- ◆ Ucingo lokoneka iimpahla neephegi kwiqela ngalinye (Iseshoni 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*?

Amanqaku ombhexeshi

- ◆ PPT: Vula iseshoni kufundwe iajenda neziphumo zokufunda zendibano yocweyo.
- ◆ Khumbuza abathathinxaxheba ngoMsebenzi *ekubuyelwa nawo esikolweni* othathwe ekupheleni kweNdibano yoCweyo 4.
- ◆ Cela abathathinxaxheba ukuba benze ubuyelomva ngeengcinga kwizinto abathe baziqwalasela nohlolo lwabafundi kwanendlela ebekuphunyezwe ngayo iNkqubo yeMathematika eziklasini zabo. Xoxani ngezinto ezisebenze kakuhle kwakunye nezo zixhalabisayo abanazo abathathinxaxheba.

Umgaqo woquko: Bonke abafundi kufuneka bazive bamkelekile, bequkiwe kwaye bakonwabele ukuthabatha inxaxheba. Khumbula ukuphatha bonke abafundi ngendlela efanelekileyo nangentlonelo.

Khawubuyele umva ngeengcinga kwindlela ophumeze ngayo iNkqubo yeMathematika kwinkqubo yakho yemihla ngemihla ngokwenza lo msebenzi ulandelayo.



Umsebenzi 1

Xoxani ngenkqubela ekuphumezeni uMsebenzi *ekubuyelwa nawo esikolweni* weNdibano yoCweyo 4.

1. Yeyiphi inkqubela kwimathematika othe wayiqaphela kubafundi bakho emva kokuba kuphunyezwe iKota 1?

2. Ingaba lukuncede njani ulwazi luka 'Qwalasela ukuba abafundi bayakwazi uku-' kwisiKhokelo semiSebenzi: *Ikota 1* ekuhloleni inkqubela yabafundi kwiKota 1?

3. Ingaba uyirekhode ngempumelelo inkqubela yomfundi ngamnye usebenzisa 'Ikota 1: Umzekelo weRekhodi yoHlolo oluQhubekayo' ekumaphepha 190–193 kwisiKhokelo semiSebenzi: *Ikota 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 katitshala exoxa ngendlela yokuqaphela nohlolo eklasini yakhe yeBanga R.

Ucinga ukuba zithini iinjongo zalo msebenzi? Qaphela indlela abakhokela ngayo utitshala abafundi ngemibuzo nendlela amqwalasela ngayo umfundi ngamnye.

Amanqaku ombhexeshi

- ◆ PPT: Isishwankathelo samanqaku kwiirubhriki, nakuMfanekiso 39 no40 wesiKhokelo seeKhonsepthe (amaphepha 106–109).
- ◆ Khuthaza abathathinxaxheba ukuba basebenzisane ngeendlela zabo zokuhlola nangeendlela abazisebenzisa ngazo iirubhriki. Cela iqela ngalinye ukuba libhale amanqaku kwiphepha lefliptshathi baze bakubonise oku emva ko**Msebenzi 2**.
- ◆ *KwiSchool Based Assessments (SBA) neSA-SAMS online systems* ukuze ufumane indlela abathe bazibandakanya ngayo abathathinxaxheba koku.
- ◆ Khumbuza abathathinxaxheba ngo**umgaqo woquko** uchaze nangendlela abalawula ngayo abafundi kwizinto ezahlukileyo abakwaziyo ukuzenza.



Umsebenzi 2

Kumaqela enu amancinci, xoxani:

1. Umelana njani nohlolo eklasini yakho.
2. Uzisebenza njani iirubhriki kwiinkqubo zakho zohlolo.
3. Uyifaka njani i*School Based Assessments (SBA) neSA-SAMS online system* njengenxalenye yenkqubo yakho yohlolo.

Bhala phantsi amanqaku aphambili engxoxo yakho onokwabelana ngayo neqela lonke. Khangela ukuba yeyiphi na into esebenze kakuhle nokuba ibe ndawoni na imingeni kuhlolo.

Umgaqo woquko: Abanye abafundi basenokufuna ithuba elongezelelweyo lokuziqhelisa kwanenkxaso kunabanye abafundi. Qiniseka ukuba ubanika ithuba elaneleyo nenkxaso xa besenza imisebenzi yabo, ukucinga nokuphendula imibuzo.

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.

Ishoni 1: IsiThuba neMilo (iJiyometri)

1 iyure

Amanqaku ombhexeshi

- ◆ Le ndibano yocweyo igxile ekufundiseni umxholo weKota 2 iiVeki 4–7. INkalo yomXholo ekuGxiniswa kuwo weVeki 4 ithi isiThuba neMilo (iJiyometri). Khumbuza abathathinxaxheba ukuba oku besele kwenziwe nakwiKota 2 iVeki 3 (esele kwenziwe kwiNdibano yoCweyo 4).
- ◆ Thumela abathathinxaxheba ukuba bajonge kumaphepha 126–131 esiKholelo seeKhonsepthe.
- ◆ Cela abathathinxaxheba ukuba basebenze ngokwamaqela ukwenza **Umsebenzi 3**.

Amagqabantshintshi ngomxholo weKota 2: IsiThuba neMilo (iJiyometri)

Le seshoni igxile ekufundiseni umxholo weKota 2 iVeki 4 – isiThuba neMilo (iJiyometri). Khumbula ukuba isiThuba neMilo (iJiyometri) bekukwagxilwe kuso kwiVeki 3 esele yenziwe kwiNdibano yoCweyo 4.

Fundani isishwankathelo somxholo wesiThuba neMilo (iJiyometri) kumaphepha 126–131 esiKhokelo seeKhonsepthe nenze noMsebenzi 3.



Umsebenzi 3

Zeziphi iikhonsepthe zesiThuba neMilo ezichaziweyo ku3.1 naku3.2 wesishwankathelo somxholo?

Amanqaku ombhexeshi

- ◆ Qinisekisa ukuba abathathinxaxheba bayakwazi ukuzibona iikhonsepthe zesiThuba neMilo ku3.1 naku3.2 nokuba bayaqonda ukuba kugxilwe kwindawo, ulungelelwaniso neembonakalo; ezichaza izinto ezingu3-D ngokuphathelelene nabo; belandela izalathiso.
- ◆ Ku**Msebenzi 4** kugxilwe ekuchazeni into ngokwahluka kweendawo (iimbonakalo) ekuzo.
- ◆ Kwinyathelo 1 lo**Msebenzi 4**, bonisa abathathinxaxheba imoto yokudlala okanye unodoli oze naye (okanye isihlangu nokuba yimagi). Bacele ukuba bajonge into ngokweembonakalo ezahlukeneyo kwaye bachaze abakubonayo. Babuze ukuba bona bandawoni na kwinto leyo bayijongileyo, umz. *ngaphambili, ngasemva, ecaleni, ngaphantsi, ngasentla* kwayo.

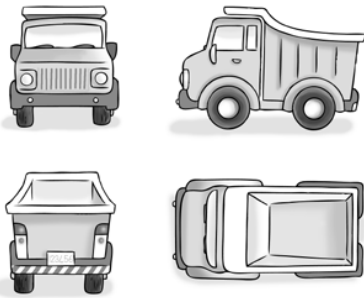
KwiBanga R abafundi bachaza, bahlele yaye bathelekise izinto ezingu 3-D bagxile kwizinto ezifanayo nezahlukeneyo ngazo. KwiKota 2 iVeki 4 abafundi bahlela, bathelekise baze bachaze izinto ezingu 3-D ngokobungakanani, umbala nemilo. Bakwajonga baze bachaze izinto ngendlela ezibonakala ngayo kubo nakwabanye ngokweendawo abakuzo ezahlukeneyo (ulungelelwaniso neembonakalo). Enye into ekugxilwe kuyo kwiVeki 4 isekulandeleni izalathiso kwanokusetyenziswa kwesigama esinxulumene nendawo.



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*.

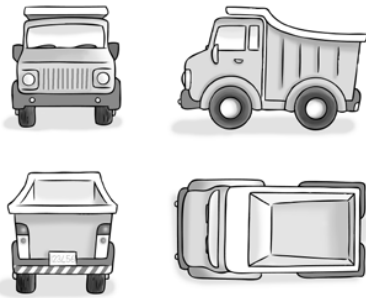
Sorting and identifying shapes.



Umsebenzi 4

1. Xoxani ngendlela enizibona ngayo izinto eziseklasini ukukhuthaza abafundi ukuba bathethe ngeendawo abakuzo ngokuphathelelene nezinto abazijongileyo.

2. Jongani emifanekisweni. Chaza apho unokuma khona ukuze ubone imbonakalo nganye yetrakhi.



Ngaphambi kwetrakhi, ukujonga ecaleni letrakhi, ngasemva kwetrakhi, ukujongela ezantsi kwitrakhi (uvele ngasentla).

Ikota 2 Iveki 4

Jonga kumsebenzi okhokelwa ngutitshala kumaphepha 80–83 esiKhokelo semiSebenzi: Ikota 2.



Umsebenzi 5

1. Zeziphi iikhonsepthe zesiThuba neMilo eziveziweyo?

Indawo, indawo-bume, iimbonakalo: izinto zibonakala zahlukile xa zijongwe kwiindawo ezahlukileyo. Isigama sendawo: *phambili, emva, ecaleni, ngasentla, ngasezantsi, ngaphantsi*. Ukuhlela nokuchonga iimilo.

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 imizekelo yemibuzo ekhokelayo ebuziweyo kwimisebenzi ekhokelwa ngutitshala. Ingaba le mibuzo iya kubakhuthaza abafundi ukuba bathethe ngeekhonsepthe ezikumbuzo 1?
-
-
-

Abafundi kufuneka babenamathuba amaninzi okudlala ngazo baze bahlele zonke izinto oziqokeleleyo ezingu 3-D. Ootitshala kufuneka baziqonde iikhonsepthe ezingundoqo zesiThuba neMilo (iJiyometri) nokuthetha ngezi zinto ngokolwimi oluchanekileyo lwemathematika.

Mawakhunjulwe la manqaku alandelayo.

- ◆ Into ineenkangeleko ezintathu (3-D). Unokuyibona uyivele ngasentla, ngasezantsi nasemacaleni. Izinto ezineenkangeleko ezintathu (3-D) zinobude, ububanzi nomphakamo.
- ◆ Imilo ineenkangeleko ezimbini (2-D). Imilo ziquka izangqa, oonxantathu, izikwere neengxande. Zinobude nobubanzi.
- ◆ Ngeli xesha abafundi bephonononga iimpawu zezinto ezingu3-D bayakwazi ukuchonga izinto 'ezifana' neemilo ezingu2-D, umz. ucango lujongeka njengoxande, uphawu lwendlela lujongeka njengonxantathu, ipleiyiti ijongeka njengesangqa. Baya kuqala ngokuqonda ukuba imiphezulu yezinto ezingu3-D ibonakala njengeemilo ezingu2-D.

Umgaqo wentsebenziswano: Ukufunda kubandakanya ukuthetha nokwabelana ngezimvo. Ukuphendula ngendlela efanelekileyo kuyinto ebaluleke kakhulu kunxibelelwano nasekufundiseni nokufunda. Soloko ubamamela abafundi xa benika izimvo zabo okanye xa bephendula imibuzo yakho.

Isishwankathelo soMxholo weKota 2 (Iveki 4)

Amanqaku ombhexeshi

- ◆ Kwesi sigaba, abathathinxaxheba bazakwenza iziShwankathelo zomXholo weVeki weendibano zocweyo ezidlulileyo. Kubalulekile ukuba benze unxibelelwano phakathi komxholo kaCAPS, isicwangciso seveki nemisebenzi yeeseshoni zamaqela amancinci.
- ◆ Khumbuza abathathinxaxheba ukuba kufuneka benze isicwangciso sokuzikhethela semisebenzi enxibelelene neekhonsepthe ezifundiswa evekini.



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

Jonga kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (iiVeki 4–7).
Funda amagqabantshintshi omxholo weVeki 4: isiThuba neMilo (ijiyometri) kwiphepha
10 lesiKhokelo semiSebenzi: Ikota 2.

1. Zeziphi izihloko zeVeki 4?

2. Loluphi ulwazi olutsha olwaziswayo kule veki?

3. Zeziphi izakhono ezisukela kwiiveki ezidlulileyo eziqheliswayo?

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.

Ishoni 2: Amanani, iiOpareyshini noLwalamano

1 iyure

Ekuza kugxilwa kuko kwiKota 2 iVeki 5 ngaManani, iiOpareyshini noLwalamano.

Amanqaku ombhexeshi

- ◆ Cacisa ukuba ekuza kugxilwa kuko kwiKota 2 iVeki 5 ngaManani, iiOpareyshini noLwalamano kwakhona. Khumbuza abathathinxaxheba ukuba oku bekugxilwe kuko nakwiKota 2 iVeki 1 no 2 (eyenziwe kwiNdibano yoCweyo 4).
- ◆ Thumela abathathinxaxheba ukuba bajonge kumaphepha 114–123 kwisiKhokelo *seeKhonsepthi*.
- ◆ Cela abathathinxaxheba ukuba basebenze ngokwamaqela ukwenza **Umsebenzi 7**.

Amagqabantshintshi ngomxholo weKota 2: Amanani, iiOpareyshini noLwalamano

Kwiindibano zocweyo ezidlulileyo kwandlalwe iNkalo yomXholo ekuGxininiswa kuyo: Amanani, iiOpareyshini noLwalamano. Kule seshoni sijonga kumagqabantshintshi ngomxholo eKota 1–4 (*isiKhokelo seeKhonsepthi*, amaphepha 114–123) kwakhona.



Umsebenzi 7

Ngawaphi amanani athe aziswa kwiKota 2?

4 no5

Ikota 2 iVeki 5: Inani lokufundisa

Inani ‘untlanu’ linani eliye laziswa kwiKota 2 iVeki 5. Inkqubo yeMathematika ikhuthaza ukusetyenziswa kweemeko ezahlukeneyo nokusetyenziswa komelo oluphindwaphindwayo, umz. isimboli, igama, umfanekiso, amakhadi anamachokoza, izixhobo zokubala, ukuqhwaba. Inkqubo esetyenzisiweyo ukwazisa inani ngalinye asebenza ngalo umfundi ngokwenkqubo yesiqhelo iqhelekile, iyaqikeleleka, iyonwabisa ize ilibonise inani ngeendlela ezahlukeneyo.

Amanqaku ombhexeshi

- ◆ Cela abathathinxaxheba ukuba babuyele umva ngokucinga ngendlela athe aziswa ngayo amanani kwiiveki ezidlulileyo.
- ◆ Buyela umva ucacisa ngendlela efanayo esetyenzisiweyo ukwazisa inani elitsha. Cacisa ukuba inani ‘untlanu’ uza kwaziswa kwiKota 2 iVeki 5 kusetyenziswa indlela efanayo neyokuqala. Xoxani ngendlela esisiqhelo esenza babandakanyeke ngayo abafundi ekufundeni ingqikelelo yenani.
- ◆ Thumela abathathinxaxheba ukuba bajonge kwiphepha 91 kwisiKhokelo *semiSebenzi: Ikota 2*.
- ◆ Banike ithuba lokwenza **Umsebenzi 8** ngokwamaqela emava koko kunikwe ingxelo.

- ◆ 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 teacher the number '5'.

Day 1

Day 2

Day 3

Day 4

Day 5

- ◆ Qinisekisa ukuba amanqaku alandelayo endlela yesiqhelo ekwenziwa ngayo akhankanyiwe:
 - Kubaliswa ibali elingelwanyana/ngezilwanyana nelisetyenziselwa ukwakha ifrizi yamanani.
 - Izinto ziyaqokelelwa zize zimele inani kwaye zibekwe etafileni kwindawo yemathematika.
 - Abafundi batshatisa amakhadi eesimboli zamanani nawamanani angamagama kumakhadi anamachokoza, bekwasebenzisa indibanisela yamakhadi anamachokoza ukwenza inani.
 - Abafundi basebenzisa iintshukumo zomzimba ukulinganisa ibali.
 - *INcwadi yeePowusta* inika mathuba okubala nokusombulula iingxaki ekubhekiselelwa kuzo.
- ◆ Ulandelelwano lwezinto kwindlela ebekusenziwa ngayo lusenokutshintsha, kodwa iveki nganye ezi mbonakalo zokwazisa inani ziqukiwe kwimisebenzi yeklassi yonke.



Umsebenzi 8

Jonga kwiVeki 5 imisebenzi yeklassi yonke kwisi*Khokelo semiSebenzi: Ikota 2* (amaphepha 90–99). Chaza indlela esetyenzisiweyo ukufundisa inani u'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.

Ucingo lokoneka amanani

Amanqaku ombhexeshi

- ◆ Khangela ukuba abathathinxaxheba banazo na iingcingo zokoneka amanani eziklasini zabo.
- ◆ Phonononga ukubaluleka kwemisebenzi yocingo lokoneka amanani ukuncedisa abafundi ukuba bakwazi yaye bakuqonde ukulandelelana kwamagama okubala nonxulumano phakathi kwamanani.

Amanani u1 ukuya ku5 ebexhonywe kucingo lokoneka amanani kwindawo yemathematika ngexesha ebesaziswa kwiKota 1. Asiyoveki 5 yodwa apho abafundi bebandakanyiwe besebenza kucingo lokoneka amanani. Ootitshala benza umgcamanani osuka ku0 ukuya kwi10 okanye noya kutsho kuma20 eklasini ngaphambi kokuba abafundi bakwazi ukubala okanye ukuwaqaphela la manani.

Ekuqaleni into ekwakugxilwe kuyo ngocingo lokoneka amanani kwiNkqubo yeMathematika kwenzeka ngebhaqo. Ukusuka kwiVeki 5 kusetyenziswe ukugxila kulandelelaniso (udweliso) lwamanani nokuthethetha ngonxulumano oluphakathi kwamanani.

Sebenzisa ucingo lokoneka amanani uku-:

- ◆ landelelanisa nokuthelekisa amanani umz.:
 - Leliphi inani eliphambi kuka3?
 - Leliphi inani eliphakathi kuka3 no5?
 - Leliphi inani elilandela emva kuka4?
- ◆ khangela indlela alandelelana ngayo ukunyuka amanani ukusuka ekhohlo ukuya ekunene.
- ◆ sebenzisa isigama semathematika esifana *nongaphambi, emva, phakathi*.

Kwividiyo umbhexeshi ubonisa ngomsebenzi wocingo lokoneka amanani oxhasa inani elifundiswayo.

Amanqaku ombhexeshi

- ◆ Bonisa indlela yokusebenzisa ucingo lokoneka amanani.
- ◆ Thumela abathathinxaxheba ukuba bajonge umsebenzi wocingo lokoneka amanani kwiphepha 95 kwisiKhokelo semiSebenzi: Ikota 2.

Funda umsebenzi wokwazisa abafundi ngocingo lokoneka amanani kwiphepha 95 kwisiKhokelo semiSebenzi: Ikota 2.



IsiKhokelo semiSebenzi: Ikota 2, iVeki 5, uSuku 3 #4 (iphepha 95)

Bukela ividiyo katitshala esebenzisa ucingo lokoneka amanani ukusuka ku1 ukuya ku5. Qaphela indlela awuxhasa ngayo umsebenzi uqwalasele nemibuzo ayibuzayo ukukhuthaza 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.

Xoxani ngokubaluleka kokusetyenziswa kocingo lokoneka amanani kwiBanga R.

Ukulandelelanisa amanani: Abafundi babeka amanani ngendlela echanekileyo yokubala. Abafundi babona umgcamanani yonke imihla nangexesha leengxoxo zebhaqo xa bencokola nabanye.

Ulandelelwaniso: Abafundi baxoxa ngamanani ngokubhekiselele kwamanye. Ootitshala babuza ukuba leliphi inani eliphambi, elisemva okanye eliphakathi kwamanye amanani. Abafundi basebenzisa ulwimi lwemathematika oluchanekileyo ukuchaza indawo akuyo amanani ngokubhekiselele kwamanye.

Amaso okuhlela

Amaso okuhlela kwi*Kiti yeziXhobo* yakho aba nobude bamaso ali10 abekwe ngokwamaqela amahlanu, ngokwemibala yawo (amaso abomvu amahlanu namaso amthubi amahlanu).

Amanqaku ombhexeshi

- ◆ Xoxani ngamaso okuhlela ali10 (amaso amahlanu, iminwe emihlanu). Bonisa ukuba intambo yamaso isebenza njani.
- ◆ Cela abathathinxaxheba ukuba bathathe isethi yamaso okuhlela ali10 etafileni.
- ◆ Usebenzisa olu lwazi lungasezantsi, chaza injongo yamaso okuhlela.

Amaso okuhlelaanceda abafundi ukuba:

- ◆ baliqaphele ngokulula inani lamaso abekwe ngokwamaqela ngaphandle kokuwabala, umz. '4'.
- ◆ baqonde ukuba inani elinye lisenokuba lidityaniswe namanye amanani amabini okanye ngaphezulu, umz. u'4' wenziwe ngu2 no2 okanye ngu1 no3.
- ◆ kuphuhle izakhono ekubaleni ukusuka kwinani elinikiweyo, umz. ukuqala ku3 nokubala aye kufika ku5.
- ◆ baqalise ukusebenza ngokudibanisa nangokuthabatha.
- ◆ baqalise ukusebenza ngendibanisela yeshumi.

Kulo msebenzi ulandelayo, sebenzisa amaso okuhlela ali10 ukukhangela iindibanisela ezahlukeneyo zamanani. Landela isikhokelo sombhexeshi wakho uze uphendule imibuzo njengoko ibekiwe 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. Ndibonise amanye amaso amabini.
2. Ndibonise elinye iliso elinye.
3. Ndibonise amaso ambalwa ngeliso elinye kumaso amane.
4. Ndibonise amaso amane. Ngoku ndibonise amaso amaninzi ngeliso elinye ngaphezu kwamaso amane. Mangaphi onawo ngoku?
5. Wenze ntoni ukuwenza ongezeke ngelinye?
6. Ndibonise ambalwa ngeliso elinye kunamaso amahlanu. Mangaphi onawo ngoku?
7. Wenze ntoni ukuwenza abe ngaphantsi ngeliso elinye?
8. Ngoku khawususe libe linye. Mangaphi onawo ngoku?
9. Dibanisa elinye. Mangaphi ngoku?

Funda umsebenzi wokwazisa amaso okuhlela kubafundi okwiphepha 101 lesi*Khokelo semiSebenzi: Ikota 2, inyathelo 3. Ningamaqela, xoxani ngalo msebenzi.*

Amanqaku ombhexeshi

- ◆ Cacisela abathathinxaxheba ukuba baza kusebenza ngamaso abo nokuba kufuneka balandele izalathiso zakho baze babhale phantsi iimpendulo zabo.
- ◆ Bacele ukuba basebenze ngokwamaqela ukwenza **Umsebenzi 10**.



Umsebenzi 10

Ingaba ukunceda njani umsebenzi wamaso okuhlela ukuphuhlisa ingqiqo yabafundi bakho ngamanani?

Abafundi baqalisa ukubonisa inani lamaso elipheleleyo (umz. 3) bengawabalanga ngoononye. Baya kukwazi ukubonisa 'amaninzi ngeliso elinye' okanye 'ambalwa ngeliso elinye' bewachaza bengawabalanga.

Abafundi baqaphela ukuba inani elinye lenziwe ziindibanisela ezahlukeneyo zamanani (umz. u5 wenziwe ngu2 no3, okanye ngu1 no2 no2).

Baqalisa ukusebenzisa isigama sokudibanisa nesokuthabatha basisebenzise kwikhonsepthi yendibanisela /yokwahlula amaqela ngaphandle kokubala.

Amaso okuhlela enza babe namava okubala inani elipheleleyo lamaso.

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.

Amanqaku ombhexeshi

- ◆ Xoxani ngokubaluleka kokwenza isicwangciso ukunika abafundi ixesha elaneleyo lokuziqhelisa izakhono nolwazi lwabo olutsha (**umgaqo wokuziqhelisa**).

Umgaqo wokuziqhelisa: Abafundi kufuneka babe nexesha elaneleyo lokuziqhelisa izakhono ezitsha nolwazi. Xa abafundi beziqhelisa rhoqo into abayifundileyo, baya kuqhuba kakuhle kuyo kwaye babe nokuqiniseka. Bonwabela ukuphindaphinda nokuziqhelisa.

Isishwankathelo soMxholo weKota 2 (Iveki 5)

Amanqaku ombhexeshi

- ◆ Khumbuza abathathinxaxheba ukuba bacebe ngokwabo imisebenzi enxulumene neekhonsephthi eziza kufundiswa evekini.



Umsebenzi 11

Jonga kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (iiVeki 4–7). Funda amagqabantshintshi eVeki 5: Amanani, iiOpareyshini noLwalamano kwiphepha 19 *isiKhokelo semiSebenzi: Ikota 2*.

1. Zeziphi izihloko zeVeki 5?

2. Loluphi ulwazi olutsha olwaziswa kule veki?

3. Zeziphi izakhono ezisukela kwiiveki ezidlulileyo eziqheliswayo?

4. Tshatisa imisebenzi ekwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (Iiveki 4–7) kunye nezifundo kwiveki nganye.

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:

Ishoni 3: IiPateni, iiFanshini neAljibhra

1 iyure

Ekugxilwe kuko kwiKota 2 iVeki 6 ziiPateni, iiFanshini neAljibhra.

Amanqaku ombhexeshi

- ◆ Ukucacisa ekugxilwe kuko kwiKota 2 iVeki 6 ziiPateni, iiFanshini neAljibhra. Ukukhumbuza abathathinxaxheba ukuba oku kwakugxilwe nakwiKota 1 iVeki 6 (esele yenziwe kwiNdibano yoCweyo 3).
- ◆ Thumela abathathinxaxheba ukuba bajonge kwiphepha 125 *isiKhokelo seeKhosephti*.
- ◆ Cela abathathinxaxheba basebenze ngokwamaqela ukwenza **Umsebenzi 12**.

Amagqabantshintshi ngomxholo weKota 2: IiPateni, iiFanshini neAljibhra

Bhekisa kwiiPateni, iiFanshini neAljibhra kumagqabantshintshi ngomxholo (*isiKhokelo seeKhonsephti*, iphepha 125).



Umsebenzi 12

1. Zeziphi iikhonsephti ezenziweyo kwiKota 2?

2. Yintoni umahluko phakathi komxholo weNkqubo yeMathematika kunye nomxholo weCAPS?

Ikota 2 iVeki 6: Chaza, khuphela wandise iipateni

KwiNdibano yoCweyo 3, ukugxila kwiiPateni, iiFanshini neAljibhra yayikukuqaphela/ ukuchonga iipateni ephindaphindanayo. Saxoxa nangomahluko phakathi kolandelelwano nepateni. IKota 2 iVeki 6 yakhela kumxholo owaziswe kwiKota 1 iVeki 6.

KwiKota 2 iVeki 6 abafundi:

- ◆ bachaza uphindaphindo olukwiipateni besebenzisa izinto, imifanekiso nezandi.
- ◆ bakhuphela iipateni ezenziwe ngabanye ngezinto, imifanekiso nezandi.
- ◆ bandisa iipateni ezenziwe ngabanye.
- ◆ benza ezabo iipateni kumanqanaba ahlukileyo ngokobunzima njenge:

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

Facilitator's notes

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



Activity 13

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

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

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).

- isanga, isikwere; isangqa, isikwere
- isangqa, isikwere, unxantathu; isangqa, isikwere, unxantathu
- isangqa, isikwere, isangqa, isikwere, isangqa, isikwere
- isangqa esibomvu, isangqa esizuba, isikwere esimthubi; isangqa esibomvu, isangqa esizuba, isikwere esimthubi.

- ◆ chaza into engekho xa inxenyepateni ifihliwe.

Amanqaku ombhexeshi

- ◆ Cinga ubuyele umva ngeNdibani yoCweyo 3: Chonga iipateni. Sebenzisa iibhloko zeathribyuthi ne*Ncwadi yeePowusta*. Xoxani ngomahluko ophakathi kolandelelwano lwezinto, imifanekiso okanye iziganeko, kwanezinto ezenza ipateni. Khumbuza abathathinxaxheba ukuba ipateni kufuneka iphindaphinde ulandelelwano. Kubonise oku.
- ◆ Cela abathathinxaxheba basebenze ngokwamaqela ukwenza **Umsebenzi 13**.



Umsebenzi 13

Bhekisa kwiVeki 6 kwisi*Khokelo semiSebenzi: Ikota 2* (amaphepha 104–119).

1. Xoxa ngendlela eza kuthi iklasi yonke iyenze ngayo imisebenzi ukubonisa izifundo ngeepateni.

Ukuchonga iipateni, esebenzisa umzimba wonke, achonge iipateni kumfanekiso okwi*Ncwadi yeePowusta*. Ukhuphela andise iipateni zakhe nezabanye. Uchaza ukuba kutheni iyipateni okanye ingeyopateni.

2. Funda inyathelo 5 nele6 lomsebenzi okhokelwa ngutitshala kwiphepha 117. Ingaba utitshala ubaxhasa abakhokele njani abafundi ngemibuzo?

IsiShwankathelo somXholo weKota 2 (Iveki 6)

Amanqaku ombhexeshi

- ◆ Qinisekisa ukuba abathathinxaxheba benza unxulumano phakathi kukaCAPS nesicwangciso seveki nganye kwiVeki 6 umz. Isihloko nomxholo weKota 2 ukuba zivela kuCAPS, kunye nomxholo owongezelelweyo ofakwe kwiNkqubo yeMathematika.
- ◆ Xoxani ngokuba kutheni inani lifakiwe kule veke ngeli xesha kugxilwe kwiiPateni, iiFanshini neAljibhra. Bacacisele ukuba nangona kugxilwe kwiiipateni ngomxholo, kodwa kufuneka siziqhelise amanani yonke imihla kwimisebenzi yeklasi yonke nemisebenzi ekhokelwa ngutitshala.
- ◆ Khumbuza abathathinxaxheba ukuba baquke zonke iikhonsepthi ezenzeke ngebhaqo ngeli xesha bebesenza inkqubo yemihla ngemihla, umz. ulandelelwano lwemisebenzi kwiinkqubo zemihla ngemihla nangeentsuku zeveki ukuba ziikhonsepthi zemilinganiselo (ixesha), ngeli xesha bedwelise – eyokuqala, yesibini, yesithathu – iingqikelelomanani (amanani olandelelwano).



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 kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 4–7).
Funda amagqabantshintshi ngomxholo weVeki 6: iiPateni, iiFanshini neAljibhra
kwiphepha 21 kwisi*Khokelo semiSebenzi: Ikota 2*.

1. Zeziphi izihloko zeVeki 6?

2. Loluphi ulwazi olutsha olwaziswe kule veki?

3. Zeziphi izakhono ezisukela kwiiveki ezidlulileyo eziqheliswayo?

4. Tshatisa imisebenzi ekwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki
neVeki (IiVeki 4–7) nezifundo kwiveki nganye.

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.

Iseshoni 4: ULwazi oluQokelelweyo

1 iyure

Ekugxilwe kuko kwiKota 2 iVeki 7 luLwazi oluQokelelweyo.

Amanqaku ombhexeshi

- ◆ Cacisa ukuba into ekugxilwe kuyo kwiKota 2 iVeki 7 luLwazi oluQokelelweyo. Khumbuza abathathinxaxheba ukuba oku bekugxilwe kuko nakwiKota 1 iVeki 10 (esele yenziwe kwiNdibano yoCweyo 4).
- ◆ Yalela abathathinxaxheba ukuba bajonge kwiphepha 137 lesi*Khokelo seeKhonsepthi*.
- ◆ Cela abathathinxaxheba ukuba basebenze ngokwamaqela ukwenza **Umsebenzi 15**.

Amagqabantshintshi ngomxholo weKota 2: ULwazi oluQokelelweyo

Bhekisa kuLwazi oluQokelelweyo kumagqabantshintshi omxholo (*IsiKhokelo seeKhonsepthi*, iphepha 137).



Umsebenzi 15

1. Zeziphi iikhonsepthi ezenziweyo kwiKota 2?

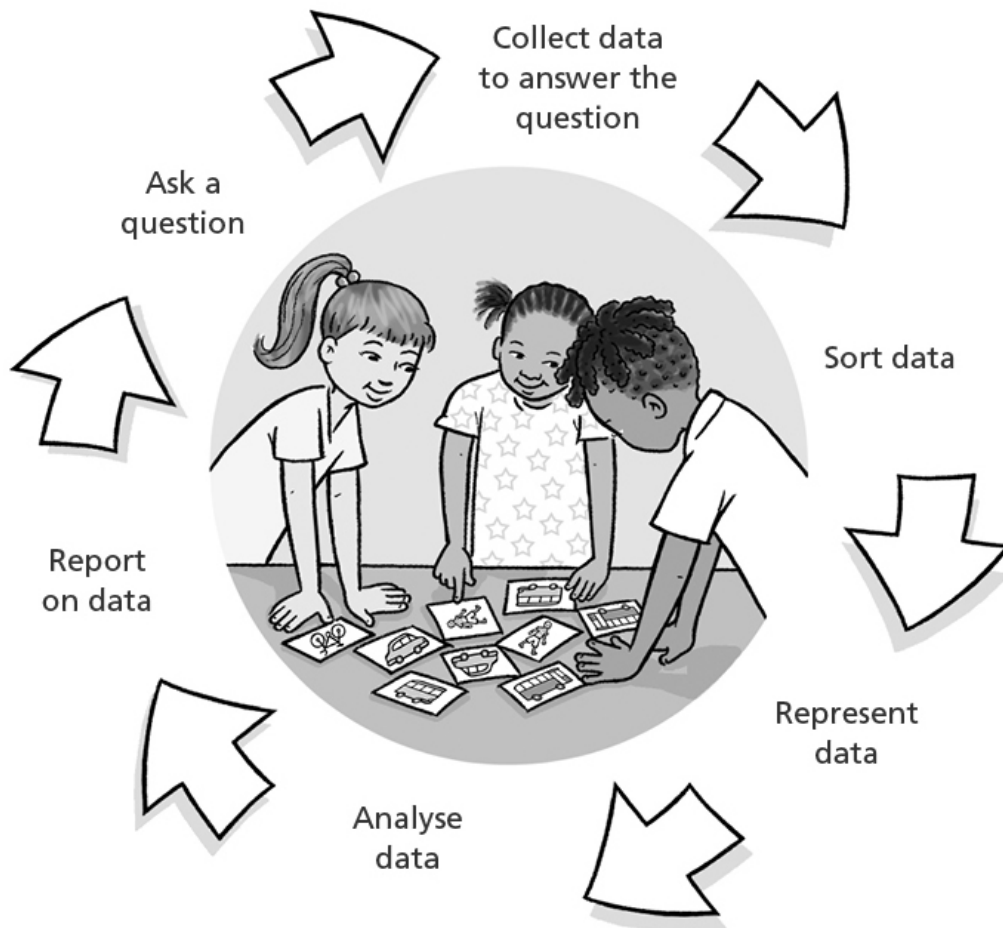
2. Yintoni umahluko phakathi komxholo weNkqubo yeMathematika nomxholo kaCAPS?

Amanqaku ombhexeshi

- ◆ Cacisela abathathinxaxheba ukuba iNkalo yomXholo yoLwazi oluQokelelweyo kwiBanga R igxile kwinjongo nakwinkqubo yolwazi oluqokelelweyo. Iquka ukusombulula ingxaki okanye ukuphendula umbuzo ngokuqokelela, ukuhlela, ukubonisa nokutolika ulwazi.
- ◆ Ukuqokelela nokuhlela (ukwahlula) ulwazi yinxenye nje yenkqubo yolwazi oluqokelelweyo. Ukuba ootitshala abagxili ekuphendulweni kombuzo, umsebenzi ke ngoko umalunga nokuhlela.
- ◆ Yalela abathathinxaxheba ukuba balandele inkqubo yolwazi oluqokelelweyo baze banike amagama amanyathelo ohlukileyo kule nkqubo:
 1. Buza umbuzo.
 2. Qokelela ulwazi (xoxa ngeyona ndlela ifanekileyo yokwenza oku).
 3. Hlela ulwazi.
 4. Bonisa ngolwazi.
 5. Hlalutya ulwazi.
 6. Nika ingxelo ngolwazi (phendula umbuzo).
- ◆ Nika abathathinxaxheba ithuba lokusebenza ngokwamaqela ukwenza **Umsebenzi 16**.
- ◆ Cela iqela elinye libonise ngomsebenzi walo.

Data Handling

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



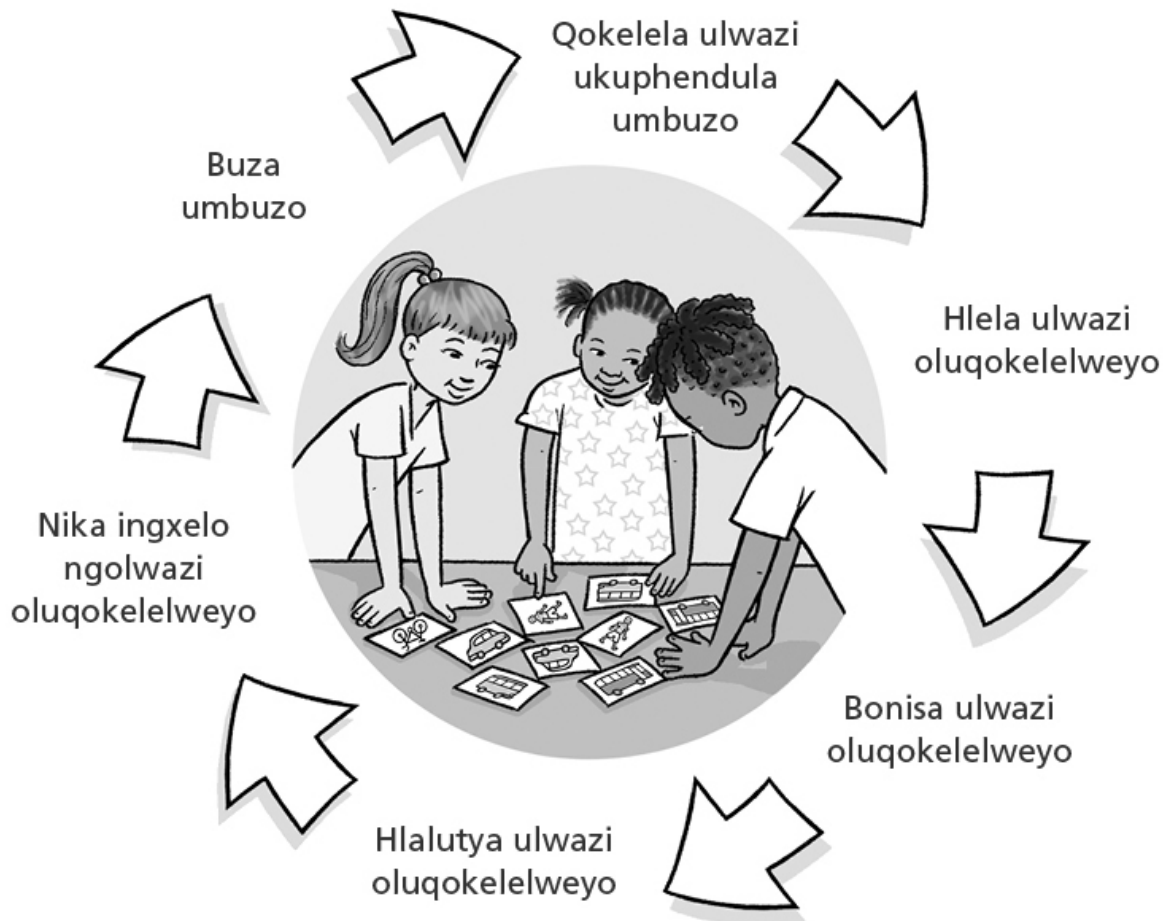
In Grade R learners should have many opportunities to sort objects according to one or more attributes, such as colour, size or shape. Sorting is part of Data Handling, but it is not the only focus. It is important to always bring the learners back to the question that has been posed and the reason why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

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

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

ULwazi oluQokelelweyo

INkalo yomXholo yoLwazi oluQokelelweyo igxile kwinjongo nakwinkqubo yolwazi oluqokelelweyo. Iquka ukusombulula ingxaki okanye ukuphendula umbuzo ngokuqokelela, ukuhlela, ukubonisa nokutolika ulwazi.



KwiBanga R abafundi mabafumane amathuba amaninzi okuhlela izinto ngokweathribhyuthi enye nangaphezulu, njengombala, ubungakanani okanye imilo. Ukuhlela inxenye yoLwazi okuQokelelweyo, kodwa kungagxilwa kuloo nto yodwa. Kubalulekile ukumana ubuyisela abafundi kumbuzo obubuziweyo nokubanika isizathu sokuba kutheni beqokelela, bahlele kwaye bacinge ngeendlela zokubonisa ngolo lwazi.

Imibuzo ingundoqo kuLwazi oluQokelelweyo, umz.:

- ◆ Inokuba bethu uninzi lwabafundi luthanda esiphi isiselo?
- ◆ Singaluqokelela njani 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 njani ulwazi?
- ◆ Singalubonisa njani ulwazi?



Umsebenzi 16

Xoxani ngendlela eninokwenza ngayo isicwangciso nokwenza umsebenzi nisebenzisa uLwazi oluQokelelweyo ngokwale mibuzo ingasentla. Bhalani phantsi enikucingayo kwiphepha lefliptshathi.

Bonisa ulwazi oluqokelelweyo

Abafundi beBanga R bakhangela iindlela azahlukeneyo zokubonisa okanye zokwandlala iinkcukacha abaziqokeleleyo. **Ipikthografu** (igrafu yemifanekiso) yindlela yokubonisa ulwazi oluqokelelweyo usebenzisa imifanekiso. Kumsebenzi weklasi yonke ngoSuku 3 lweVeki 7, abafundi baxoxa ngendlela abeza ngayo esikolweni. Umfundi ngamnye unikwa ubuso obuncumileyo **ephepheni elilingana nabo ngqo**. Babonisa ulwazi lwabo ngokubeka umfanekiso wabo kwikholamu ukubonisa iindlela ezine ezahlukeneyo zothutho. Kubalulekile ukubeka ulwazi kwiikholamu, **kungabikho zithuba** phakathi kweziqwengana zephepha. Olu lwazi luboniswe ngokucacileyo kwaye kulula ukuluchaza khon'ukuze kuphendulwe umbuzo: 'Ingaba beza ngantoni abafundi abaninzi esikolweni?'

Isishwankathelo soMxholo weKota 2 (Iveki 7)



Umsebenzi 17

Bhekisa kwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 4–7). Funda amagqabantshintshi omxholo eVeki 7: ULwazi oluQokelelweyo kwiphepha 21 lesiKhokelo semiSebenzi: Ikota 2.

1. Zeziphi izihloko zeVeki 7?

2. Loluphi ulwazi olutsha olwaziswayo kule veiki?

3. Zeziphi izakhono zeeveki ezidlulileyo eziqheliswayo?

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. Tshatisa imisebenzi ekwiSingeniso A: Ikota 2 Isishwankathelo soMxholo weVeki neVeki (IiVeki 4–7) nezifundo kwiveki nganye.
5. Bhekisa kumsebenzi okhokelwa ngutitshala iVeki 7 (*IsiKhokelo semiSebenzi: Ikota 2, iphepha 133*). Xoxani ngendlela abakhokela ngayo utitshala abafundi ukuhlela izilwanyana emva koko babonise ulwazi kwigradi.

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.

Amanqaku ombhexeshi

- ◆ **Izifundo ezifundiweyo:** Cela abathathinxaxheba bacinge malunga noko bakufundileyo kule ndibano yocweyo baze benze **Umsebenzi 18** ngabanye ngabanye.
- ◆ **Umsebenzi ekubuyelwa nawo esikolweni:** Fundisisa lo msebenzi. Buza ukuba ikhona na into engacacanga efuna ukucaciswa banzi.
- ◆ **Uhlolo:** Gqithisa iikopi zeFomu yokuHlolwa kweNdibano yoCweyo uze ucele abathathinxaxheba ukuba bayigcwalise.
- ◆ **Indibano yocweyo elandelayo:** Chaza imihla yendibano yocweyo elandelayo uze uyivale indibano yocweyo.



Umsebenzi 18

Izifundo ezifundiweyo: Cinga malunga noko ukufundileyo ngexesha lendibano yocweyo uze ugcwalise le theybhile.

Izinto esele ndizenza ezisebenza kakuhle	Iimbono ezintsha endingathanda ukuzizama



Umsebenzi ekubuyelwa nawo esikolweni

1. Qhubeka nokusebenzisa iRekhodi yoHlolo oluQhubekayo ekwisi*Khokelo semiSebenzi: Ikota 2* ukuhlola abafundi bakho. Sebenzisa amanqaku akho oqwalaselo oluqhubekayo ukwakha ubungqina boko bakuqondayo kwanabakwazi ukukwenza.
2. Chonga naziphi na iinkxalabo onazo ngendlela umfundi aqalisa ngayo ukubamba iikhonsepthe zemathematika.
3. Yiza neekopi zeerubhriki onazo ozisebenzisileyo kuhlolo lwemathematika kwindibano yocweyo olulandelayo.
4. Yiza nerekhodi yohlolo egcwalisiweyo yomfundi omnye kwindibano yocweyo elandelayo.

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 *isiKhokelo semiSebenzi: Ikota 2* ukucwangcisa nokusebenzisa iNkqubo yeMathematika kwiiVeki 4–7, kuquka nokwenza indawo yemathematika egxile kwikhonsepthi kwiveki nganye.
6. Yenza amanqaku ngokusebenze kakuhle, okungasebenzanga kakuhle noko kufuneka kwenziwe ngokwahlukileyo ukuphucula ukufundisa nokufunda.

Uhlolo

Gcwalisa iFomu yoHlolo.

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. Describing an object from different positions. Practising shapes and positions.	Activity 1 A circle/square/triangle can also be a ... (create a picture). Activity 2 Make shapes using cookie cutters and playdough. Activity 3 Block construction – use blocks/Unifix blocks. Activity 4 Puzzles (minimum of 12 pieces).
Day 2	Feely bag – feel different shapes and describe them.		
Day 3	Find shapes in class using position words.		
Day 4	Shape detectives. One more, one less.		
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). Counting 1-7. Estimate and count. Structure beads. Different configurations of the same number.	Activity 1 Playdough mat 5. Activity 2 Ladybird numbers (roll correct number of paper balls). Activity 3 Number matching – pegs. Activity 4 Number puzzles to 5 (using number words).
Day 2	Reinforce 4 and 5 (number symbols and number words).		
Day 3	Counting forward and backwards. Number line.		
Day 4	Reinforce 4 and 5.		
Day 5	Reinforce numbers 1-5 (dot cards, number symbols, number words to recognise).		

ISINGENISO A: IKOTA 2 ISISHWANKATHELO SOMXHOKO WEVEKI NEVEKI (IIVEKI 4-7)

Ikota 2: Isicwangciso somSebenzi

Iveki 4			
INKALO YOMXHOLO: ISITHUBA NEMILO (IJIYOMETRI)			
ISIHLOKO: Indawo, ulungelelwaniso neembonakalo; uchaza, ahlele aze atshatise izinto ezingu3-D			
YAZISA ULWAZI OLUTSHA: Hlela izinto ezingu3-D ngokufana nangokwahluka kwazo, ngaphezulu ngenye, ngaphantsi ngenye			
ZIQHELISE: Ukubala ngomlomo 1-15 no5-1, ukubala izinto 1-7, ingqikelelomanani 1-4, ukubethelela zonke iimilo			
Imisebenzi yeklasi yonke		Imisebenzi ekhokelwa ngutitshala	Imisebenzi yesitishi sokusebenzela
Usuku 1	Bethelela zonke iimilo/khangelani iimilo.	Ziqhelise 1-4. Ukuchaza into ngokweendawo ezahlukeneyo okuzo. Ukuziqhelisa iimilo neendawo.	Umsebenzi 1 Umsebenzi 2 Umsebenzi 3 Umsebenzi 4
Usuku 2	Ingxowa yokumpampha - mpamphathani iimilo ezahlukeneyo nokuzichaza .		
Usuku 3	Khangelani iimilo eklasini nisebenzisa amagama eendawo.		
Usuku 4	Abacuphi beemilo. Enye ngaphezulu, enye ngaphantsi.		
Usuku 5	Isalathiso nendawo. Umzila wemiqobo.		
Umsebenzi 1 Isangqa/isikwere/unxantathu unako uku ... (yenza umfanekiso).			
Umsebenzi 2 Yenza iimilo usebenzisa izisiki zamaqebengwana nentlama yokudlala.			
Umsebenzi 3 Iibhloko zokwakha - sebenzisa iibhloko/iibhloko ze <i>Unifix</i> .			
Umsebenzi 4 Iiphazili (amaqhekaza ali 12 ubuncinane).			
Iveki 5			
INKALO YOMXHOLO: AMANANI, IOPAREYSHINI NOLALWAMANO			
ISIHLOKO: Qaphela iisimboli zamanani namagama amanani; uchaza, ulandelelanisa aze atshatise amanani			
YAZISA ULWAZI OLUTSHA: Yazisa inani u5			
ZIQHELISE: Ukubala ngomlomo 1-15, ukubala izinto 1-7, ukubala ubuya umva usuka ku5 (izicengcelezo), bethelela ingqikelelomanani 1-4, ulandelelaniso lwamanani 1-4, maninzi/ambalwa			
Imisebenzi yeklasi yonke		Imisebenzi ekhokelwa ngutitshala	Imisebenzi yesitishi sokusebenzela
Usuku 1	Yazisa inani u5 (iinkawu ezi5 kwindlu yesihlanu).	Tshatisa amakhadi aneesimboli zamanani, amanani angamagama namakhadi anamachokoza (u4 no5). Ukubala ukusuka ku1-7. Thelekelela ubale. Amaso okuhlela. Ukwakheka kwenani elinye ngeendlela ezahlukeneyo.	Umsebenzi 1 Umsebenzi 2 Umsebenzi 3 Umsebenzi 4
Usuku 2	Bethelela u4 no5 (iisimboli zamanani namanani angamagama).		
Usuku 3	Ukubala usiya phambili nokubala ubuyela umva. Umgamanani.		
Usuku 4	Ukubethelela u4 no5.		
Usuku 5	Ukubethelela amanani 1-5 (amakhadi anamachokoza, iisimboli zamanani, amanani angamagama ekufuneka aqatshelwe).		
Umsebenzi 1 Imethi yentlama yokudlala 5.			
Umsebenzi 2 Amanani kabhantom (qengqa inani elichanekileyo leebhola zamaphepha).			
Umsebenzi 3 Ukutshatisa amanani - iiphegi.			
Umsebenzi 4 Iiphazili zamanani ukuya ku5 (usebenzisa amanani angamagama).			

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.			

Iveki 6			
INKALO YOMXHOLO: IIPATENI, IIFANSHINI NEALJIBHRA			
USIHLOKO: Ukhuphela andise iipateni eziphindaphindayo ezilula; wenza ezakhe iipateni; uchaza uphindaphindo kwiipateni			
YAZISA ULWAZI OLUTSHA: Ukukhuphela andise iipateni eziphindaphindayo ezilula; wenza acacise ezakhe iipateni, ukubala ngomlomo 1–20, ubala ebuya umva ukusuka ku7			
ZIQHELISE: Ukulandelelanisa amanani ukusuka ku1–5, ukubala izinto ukusuka ku1–7, wenza amaqela afane			
Imisebenzi yeklasu yonke		Imisebenzi ekhokelwa ngutitshala	Imisebenzi yesitishi sokusebenzela
Usuku 1	Iipateni ezibambekayo.	Gxila kwingqikelelo manani 1–5. Hlukungela uze uchithe. Yenza amaqela alinganayo. Iipateni neqabane. Iibhloko ze <i>Unifix</i> .	Umsebenzi 1 Umsebenzi 2 Umsebenzi 3 Umsebenzi 4
Usuku 2	Ukuchonga iipateni kwizinto zemihla ngemihla.		
Usuku 3	Ukusombulula iingxaki kusetyenziswa iipateni.		
Usuku 4	Ukwenza iipateni kusetyenziswa izinto zemihla ngemihla.		
Usuku 5	Iipateni zesandi.		
Ukwandisa iipateni – ukuzoba nokufaka umbala. Iipateni zenyoka – kusetyenziswa iimilo. Iipateni zamakhadi –kusetyenziswa iibhloko ze <i>Unifix</i> . Ukuhlola iipateni ngamaso.			
Iveki 7			
INKALO YOMXHOLO: ULWAZI OLUQOLELWEYO			
USIHLOKO: Ukuqokelela nokuhlela izinto; ukubonisa ingqokelela yezinto ezihleliweyo; ukuxoxa nokunika iingxelo ngengqokelela yezinto ezihleliweyo			
YAZISA ULWAZI OLUTSHA: Zoba umfanekiso wezinto eziqokelelweyo, phendula imibuzo ngezinto ezisemfanekisweni wakhe			
ZIQHELISE: Ukubala ngomlomo 1–20 nokubala abuye umva ukusuka ku7, ukubala izinto ukusuka ku1–7, ngaphezulu kune-/ngaphantsi kune-/ilingana ne-, ingqikelelomanani ukusuka ku1–5, ukuhlela nokwahlula			
Imisebenzi yeklasu yonke		Umsebenzi okhokelwa ngutitshala	Imisebenzi yesitishi sokusebenzela
Usuku 1	Ukuqokelela nokuhlela izinto (engqukuva okanye eisisikwere).	Uthelekelelo. Ukubala. Ukuhlela ingqokelela yezilwanyana. Ipikthografu: ngaphezulu/ngaphantsi. Ukubuzwa imibuzo.	Umsebenzi 1 Umsebenzi 2 Umsebenzi 3 Umsebenzi 4
Usuku 2	Umdlalo wokuhlela. IPowusta 8.		
Usuku 3	Ipikthografu: Uya kunjani esikolweni?		
Usuku 4	Ukuxoxa ngeziphumo zoSuku 3 (ukubuzwa imibuzo).		
Usuku 5	Ukuqokelela nokuhlela izinto eziseklasini.		
Ukusika nokuhlela imifanekiso yezithuthi. Ukuhlela izinto eziyinkunkuma. Igrafu yeemilo (sebenzisa iimilo ezisikwe zakhutshwa). Ukuhlela ngokombala.			

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 yokuHlola yeNdibano yoCweyo 5

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. Uzakukusebenzisa njani oko ukufundileyo apha kwiklasi yakho yeBanga R?

5. Ingaba unazo iingcebiso zokuphucula nangakumbi iindibano zocweyo?
