

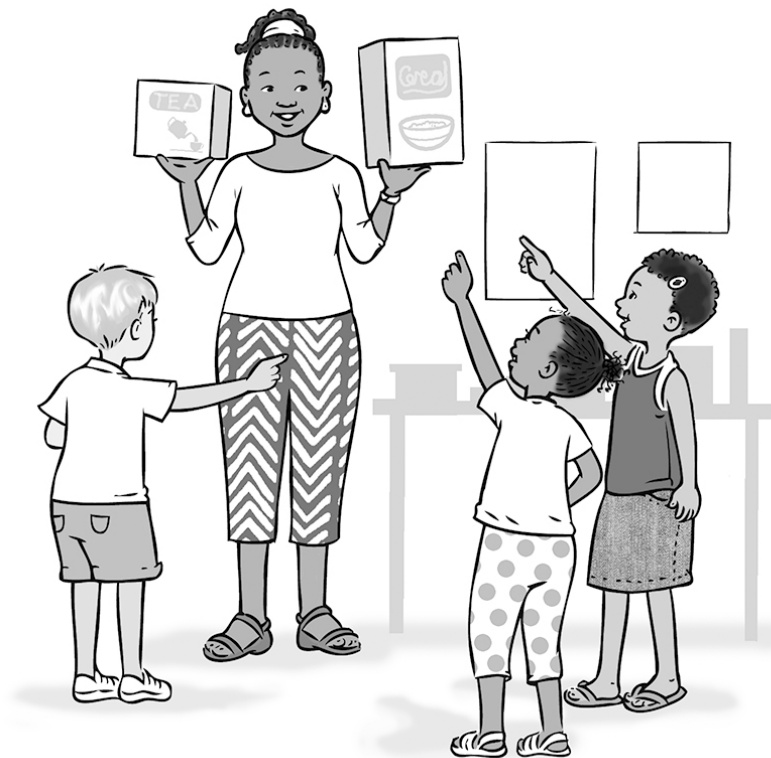


GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GGT 2030
GROWING GAUTENG TOGETHER

Sepedi/English

Lenaneo la go Kaonafatša Thuto ya Dipalo Mphatong wa R Grade R Mathematics Improvement Programme



**Thutofatlhošo ya 5 • Workshop 5
Pukutlhahlo ya Monolofatši • 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**.

The development and production of the training and classroom resources for the Grade R Mathematics and Language Improvement Project were made possible by generous project funding from the **United States Agency for International Development** and the **Zenex Foundation**.

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.

ACKNOWLEDGEMENTS

Special thanks to:

- The Gauteng Department of Education Curriculum, Teacher Education and Special Education Directorate officials for their contribution to the adaptation of our materials.
- The Western Cape Education Department (WCED) officials and teachers for their contribution to the successful implementation of the Grade R Mathematics Programme (R-Maths) in the Western Cape between 2016 and 2019.
- The R-Maths writing team: SDU staff and consultants.



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Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R ke morero wa Kgoro ya Thuto ya Gauteng (**Gauteng Department of Education**) le badirišanimogo ba bohlokwa e lego **Gauteng Education Development Trust**.

Tšweletšo le kgatišo ya tlhahlo le dithušathuto tša phapoši tša Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R e kgontšhitšwe ke thušo ka mašeleng go tšwa go **United States Agency for International Development** le **Zenex Foundation**.

Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R le laolwa ke **JET Education Services** gammogo le **Schools Development Unit** ya **UCT** le **Wordworks** bjalo ka badirišani ba sethekniki.

Schools Development Unit (SDU) kua **University of Cape Town (UCT)** ke badirišani ba sethekniki ba dipalo go Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R. SDU ke uniti ya UCT ya School of Education yeo e hlokometšego tlhahlo le kgodišo ya dithuto tša Dipalo, Saense, Bokgoni bja go ngwala le go bala/Polelo le Mabokgoni a Bophelo go tloga go Mphato wa R go fihla go wa 12. SDU e aba dithuto tša tlhahlo ya barutiši le mangwalo a UCT a dithuto tše kopana tša tlaletšo, tlhahlo ya mošomo yeo e ka dirwago sekolong, bongwadi bja dipuku le go dira dinyakišišo tšeo di thekgago go ithuta le go ruta mabakeng a go fapana dikolong tša Afrika Borwa.

DITEBOGO

Di lebišwa go:

- Bašomi ba Kgoro ya Thuto ya Gauteng Lefapha la Lenanethuto, Tlhahlo ya Barutiši le bašomedi ba Lefapha la Thuto ya go Ikgetha, ka maele a bona phetagatšong ya setšweletšwa se sa rena.
- Bašomi ba Western Cape Education Department (WCED) le barutiši ka maele a bona tšweletšong le tsentšhotirišong ya Grade R Mathematics Programme (*R-Maths*) profenseng ya Kapa Bodikela magareng ga mengwaga ya 2016 le 2019.
- Sehlopha sa bangwadi ba *R-Maths*: Bašomi le baeletši ba SDU.



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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)

Kakaretšo

Morero

Ye ke thutofatlhošo ya bohloano ya tše lesomepedi tša Lenaneo la go Kaonafatša Thuto ya Dipalo Mphatong wa R (Lenaneo la Dipalo), ye e lego karolo ya Kgoro ya Thuto Profenseng ya Gauteng (GDE) Lenaneokaonafatšo la Thuto ya Dipalo le ya Leleme Mphatong wa R.

Morero wa thutofatlhošo ke go thuša barutiši go phethagatša Lenaneo la Dipalo ka diphapošing tša bona, go tiiša kwešišo ya bona ya go ruta le go ithuta Dikarolong tša Diteng tše di dirilwego ka Kotara ya 2 Dibeke tša 4–7 le go naganiša ka fao ba phethagatšago ditheo tša go ruta dipalo ka diphapošing tša bona.

Ditšhupetšo tša Dikarolo tša Diteng tša Thuto ya Dipalo Mphatong wa R di tšwa go *Setatamente sa Pholisi sa Lenaneothuto le Kelo (SEPHOLEKE)*: Thuto ya Dipalo Mphatong wa R (*Kakanywa ya Mafelelo*), 2011, Kgoro ya Thuto ya Motheo, Afrika Borwa.

Dineo tša thuto

- ◆ Go naganiša ka phethagatšo ya Kotara ya 1 Beke ya 10 le Kotara ya 2 Dibeke tša 1–3
- ◆ Go hlohlomiša maano a go thekga go ruta dipalo ka Mphatong wa R
- ◆ Go naganiša ka ditheo tša go ruta Lenaneo la Dipalo
- ◆ Go swaragana le diteng tša Lenaneo la Dipalo la Kotara ya 2 Dibeke tša 4–7 (Sekgoba le Sebopego (Tšeometri); Dinomoro, Tirišo le Tswalano; Dipatrone, Difankšene le Altšebra; le Tšhomišo ya Tshedimošo)
- ◆ Go ahlaahla tlhokomelo le tekolo ya maleba ka Mphatong wa R

Diteng tša thutofatlhošo

- ◆ Pulo le go naganiša (Iri e 1)
- ◆ Thuto ya 1: Sekgoba le Sebopego (Tšeometri) (Iri e 1)

TEYE

- ◆ Thuto ya 2: Dinomoro, Tirišo le Tswalano (Iri e 1)
- ◆ Thuto ya 3: Dipatrone, Difankšene le Altšebra (Iri e 1)

MATENA

- ◆ Thuto ya 4: Tšhomišo ya Tshedimošo (Iri e 1)
- ◆ Mešongwana ya go tswalela (Iri e 1)

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)

Peakanyo

- ◆ Kamogelo ya PPT le ditšweletšo
- ◆ Bala:
 - Pukutlhahlo ya Mareo*, matlakala a 114–131 le 136–137
 - Pukutlhahlo ya Mešongwana: Kotara ya 2*, matlakala a 18–21 le matlakala a 70–137
 - Mamatletšo ya A: *Kotara ya 2* Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7)
- ◆ Etle le sebakadiši se segolo, mohl, sefatanaga, mpopi.
- ◆ PPT: Tšwetšopele ya Tšhomišo ya Tshedimošo (ya Thutofatlošo ya 4).
- ◆ Thutong ya 4, beakanya tšhate ya kgoboketšo ya diswantšho, ‘O sepetše ka eng go tla thutofatlošong?’ le dikarata tša diswantšho tša ‘thekisi’, ‘sefatanaga’, ‘sepela’ le ‘se sengwe’ le dikarata tša ‘sefahlego sa go myemyela’ tša motšearolo yo mongwe le yo mongwe.

Didirišwa

- ◆ Pampiri ya tšhate ya go phetla, dikoki
- ◆ *Dithušathuto tša Phapoši* tša sehlopha se sengwe le se sengwe
- ◆ *Pukutlhahlo ya Mareo*
- ◆ Kgoboketšo ya dilo tša mahlakoretharo tša sehlopha se sengwe le se sengwe (Thuto ya 2)
- ◆ Mothaladi wa diaparo le diphekese tša sehlopha se sengwe le se sengwe (Thuto ya 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*?

Dinoutse tša monolofatši

- ◆ PPT: Bula thuto gomme o bale lenaneo la letšatši le dineo tša thuto ya thutofatlhošo.
- ◆ Gopotša batšeakarolo ka mošomo wa *Mošomo wo o tlo boelago le wona sekolong* wa mafelelong a Thutofatlhošo ya 4.
- ◆ Kgopela batšeakarolo gore ba naganiše ka tlhokomelo le tekolo ya barutwana, le ka fao ba bego ba phethagatša Lenaneo la Dipalo ka diphapošing tša bona. Bolelang ka seo se šomago gabotse le tšeo batšeakarolo ba ka bego ba belaela ka tšona.

Setheo sa boakaretši: Barutwana ka moka ba swanetše go ikwa ba amogegile, ba akaretšwa ebile ba thabela go tšea karolo. O gopole go swara barutwana ka moka gabotse o be o ba hlomphe.

Naganiša ka go phethagatša Lenaneo la Dipalo lenaneong la gago la tšatši ka tšatši gomme o tlatše mošongwana wo o latelago.



Mošongwana wa 1

Ahlaaahlang tšwelopele ya lena phethagatšong ya *Mošomo wo o tlo boelago le wona sekolong* wa Thutofatlhošo ya 4.

1. Na o lemogile tšwelopele efe ya dipalo barutwaneng morago ga go phethagatša Kotara ya 1?

2. Na tshedimošo ya go 'Lekola gore barutwana ba kgona go' ka go *Pukutlhahlo ya Mareo: Kotara ya 1* e go thušitše bjang tekolong ya tšwelopele ya morutwana yo mongwe le yo mongwe Kotareng ya 1?

3. Na o rekhotle tšwelopele ya morutwana yo mongwe le yo mongwe o diriša 'Kotara ya 1: Mohlala wa Rekhote ya Tekolo/Kelotšweledi' matlakaleng a 190–193 ka go *Pukutlhahlo ya Mareo: Kotara ya 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.



Bideo ya 1

Bogelang bideo ya morutiši a bolela ka tlhokomelo le tekolo ka phapošing ya gagwe ya Mphato wa R.

O nagana gore maikemišetšo a mošongwana ke eng? Ela šedi go tsela yeo morutiši a hlohleletšago barutwana ka dipotšišo le ka fao a hlokomelago morutwana yo mongwe le yo mongwe.

Dinoutse tša monolofatši

- ◆ PPT: Kakaretšo ya dinoutse tša dirubriki, le Seswantšho 39 le 40 ka go *Pukutlhahlo ya Mareo* (matlakala a 106–109).
- ◆ Hlohleletša batšeakarolo gore ba abelane ka mekgwa ya bona ya tekolo le ka fao ba dirišago dirubriki. Kgopela sehlopha se sengwe le se sengwe gore se ngwale dinoutse pampiring ya tšhate ya go phetla gomme ba di bege ka morago ga **Mošongwana wa 2**.
- ◆ Lebelela Ditekolo tša Sekolo (SBA) le mokgwa wa inthanete wa SA-SAMS go bona gore batšeakarolo ba šomane bjang le se.
- ◆ Gopotša batšeakarolo ka ga setheo sa kgato ya maleba gomme le ahlaahle ka fao ba šomanago le barutwana ba mabokgoni a go fapana.



Mošongwana wa 2

Ka dihlopha tša lena tše dinnyane, ahlaahlang:

1. O dira tekolo bjang ka diphapošing ya gago.
2. Ka fao o dirišago rubriki ge o dira tekolo.
3. Ka fao o dirišago School Based Assessments (SBA) le mokgwa wa inthanete wa SA-SAMS bjaloka ka karolo ya tekolo ya gago.

Ngwalang dintlhakgolo tša dipoledišano tša lena gomme le abelane le sehlopha ka moka. Naganiša ka tše di šomago gabotse le fao o bago le ditlhohlo ge o dira tekolo.

Setheo sa kgato ya maleba: Barutwana ba bangwe ba ka hloka go ikatiša go gontši le thekgo go feta ba bangwe. O kgonthiše gore o fa barutwana nako ye e lekanego le thekgo gore ba fetše mešongwana, go nagana le go araba dipotšišo.

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.

Thuto ya 1: Sekgoba le Sebopego (Tšeometri) Iri e 1

Dinoutse tša monolofatši

- ◆ Thutofatlhošo ye e nepiša go ruta diteng tša Kotara ya 2 Dibeke tša 4–7. Nepišo ya Karolo ya Diteng ya Beke ya 4 ke Sekgoba le Sebopego (Tšeometri). Gopotša batšeakarolo gore ke nepišo yona yela ya Kotara 2 Beke ya 3 (ya go akaretšwa Bekeng ya 4).
- ◆ Laela batšeakarolo gore ba lebelele matlakala a 126–131 ka go *Pukutlhahlo ya Mareo*.
- ◆ Kgopela batšeakarolo gore ba dire **Mošongwana wa 3** ka dihlopha.

Kotara ya 2 Kakaretšo ya diteng: Sekgoba le Sebopego (Tšeometri)

Thuto ye e nepiša go ruta diteng tša Kotara ya 2 Beke ya 4 – Sekgoba le Sebopego (Tšeometri). O gopole gore Sekgoba le Sebopego (Tšeometri) e be e le nepišo ya Beke 3 ye e akareditšwego Thutofatlhošong ya 4.

Bala kakaretšo ya diteng ya Sekgoba le Sebopego (Tšeometri) matlakaleng a 126–131 ka go *Pukutlhahlo ya Mareo* gomme o dire Mošongwana wa 3.



Mošongwana wa 3

Na ke mareo afe a Sekgoba le Sebopego a go tšweletšwa go 3.1 le 3.2 ka kakaretšong ya diteng?

Dinoutse tša monolofatši

- ◆ Kgonthiša gore batšeakarolo ba hlatha mareo afe a Sekgoba le Sebopego go 3.1 le 3.2 le gore ba kwešiša gore nepišo e mo go: boemo, peakanyo le dipono; go hlaloša dilo tša mahlakoretharo mabapi le bona; go latela ditšhupetšo.
- ◆ Ka go **Mošongwana wa 4** go nepišwa tlhalošo ya selo go tšwa maemong a go fapana (dipono).
- ◆ Legatong la 1 la **Mošongwana wa 4**, bontšha batšeakarolo sefatanaga sa go bapadiša goba mpopi wo o tlilego le ona (goba seeta goba mmaka). Ba kgopela gore ba lebelele selo go tšwa maemong a go fapana gomme ba hlaloše se ba se bonago. Ba botšiše gore ba mo kae mabapi le selo mohl, *ka pele ga, ka morago, kgauswi le, ka tlase, ka godimo*.

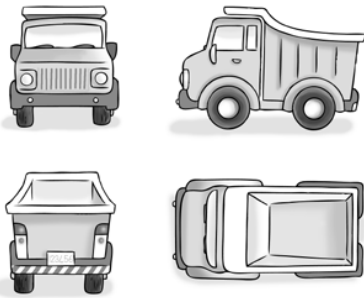
Ka Mphatong wa R barutwana ba hlaloša, hlaola le go bapetša dilo gomme ba nepiša dilo tša go swana le tša go fapana magareng ga tšona. Kotareng ya 2 Bekeng ya 4 barutwana ba hlaola, bapetša le go hlaloša dilo tša mahlakoretharo go ya ka bogolo, mmala le sebopego. Gape ba lebelele le go hlaloša dilo mabapi le bona le dilo tše dingwe le go tšwa maemong a go fapana (peakanyo le dipono). Nepišo ye nngwe mo Bekeng ya 4 e mo go tatelano ya tšhupetšo le go diriša tlotlontšu ya go tswalanywa le boemo.



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*.

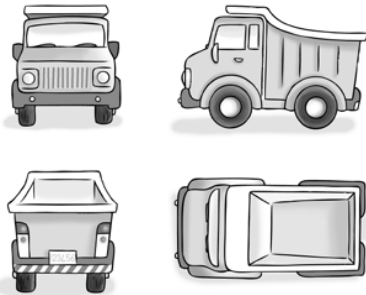
Sorting and identifying shapes.



Mošongwana wa 4

1. Hlaloša ka fao o ka dirišago dilo tša ka phapošing go hlohleletša barutwana go bolela ka boemo bja bona mabapi le dilo tše ba di lebeletšego.

2. Lebelela diswantšho. Hlaloša gore o tlo ema kae go bona dipono tša theraka.



Ka pele ga theraka, o lebeletše ka thoko ga theraka, ka morago ga theraka, o lebeletše theraka tlase (go tšwa godimo).

Kotara ya 2 Beke ya 4

Lebelela mošongwana wa go hlahlwa ke morutiši matlakaleng a 80–83 ka go *Pukutlhahlo ya Mareo: Kotara ya 2.*



Mošongwana wa 5

1. Go hlagišitšwe mareo afe a Sekgoba le Sebopego?

Boemo, peakanyo, dipono: dilo di bonala di fapana ge di lebeletšwe go tšwa maemong a go fapana. Tlotlontšu ya boemo: *ka pele, ka morago, ka thoko, godimo, ka tlase, tlase.* Go hlaola le go hlatha dibopego.

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. Efa mehlala ya dipotšišo tša go hlahla tše di botšišwago mešongwaneng ya go hlahlwa ke morutiši. Na dipotšišo tše di tlo hlohleletša barutwana go bolela ka mareo ao a lego go potšišo 1?
-
-
-

Barutwana ba hloka menyetla ye mentši ya go bapala ka le go hlaola mekgobo ya dilo tša mahlakoretharo. Barutiši ba hloka go kwešiša mareo a Sekgoba le Sebopego (Tšeometri) gomme ba bolele ka ona ba diriša leleme la dipalo la go nepagala.

Dintlha tše di latelago di swanetše go gopolwa.

- ◆ Selo se na le mahlakoretharo (3-D). O ka se lebelela go tšwa godimo, botlase le ka mathoko. Dilo tša mahlakoretharo di na le botelele, bophara le bogodimo.
- ◆ Sebopego se na le mahlakorepedi (2-D). Dibopego di akaretša didiko, dikhutlotharo, disekwere le dikhutlonnethwii. Di na le botelele le bophara.
- ◆ Ge barutwana ba hlohlomiša dipharologantšho tša dilo tša mahlakoretharo ba tlo hlatha dilo tša 'go swana le' dibopego tša mahlakorepedi, mohl, lebati le swana le khutlonnethwii, leswao la tsela le swana le khutlotharo, poleiti e swana le sediko. Ba tlo thoma go kwešiša gore bogodimo bja dilo tša mahlakoretharo bo swana le bja dibopego tša mahlakorepedi.

Setheo sa tswalano: Go ithuta go ama poledišano le go abelana dikgopolo. Go araba ka tsela ya maleba ke karolo ya bohlokwa kudu ya poledišano le ya go ruta le go ithuta. Ka dinako tšohle o theeletše barutwana ge ba abelana ka dikgopolo goba ba araba dipotšišo tša gago.

Kotara ya 2 Kakaretšo ya Diteng (Beke ya 4)

Dinoutse tša monolofatši

- ◆ Legatong le, batšeakarolo ba tla be ba šomane le Dikakaretšo tša Diteng tša Beke ka Beke ka dithutofatlhošong tša go feta. Go bohlokwa gore ba lemoge tswalano magareng ga diteng tša SEPHOLEKE, go beakanyetša beke, le mešongwana ya dithuto tša sehlopha se sennyane.
- ◆ Gopotša batšeakarolo gore ba hloka le go beakanya mešongwana ya go ikgethela ya go tswalana le mareo ao a rutwago bekeng yeo.



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?



Mošongwana wa 6

Lebelela Mamatletšo ya A: Kotara ya 2 Kakaretšo ya Diteng tša Beke ka Beke (Dibeke tša 4–7). Bala kakaretšo ya diteng ya Beke ya 4: Sekgoba le Sebopego (Tšeometri) matlakaleng a 10 ka go *Pukutlhahlo ya Mareo: Kotara ya 2*.

1. Dihlogotaba tša Beke ya 4 ke dife?

2. Go tsebišwa tsebo efe ye mpsha bekeng ye?

3. Go ikatišwa mabokgoni afe a beke ya go feta?

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.

Thuto ya 2: Dinomoro, Tirišo le Tswalano Iri e 1

Nepišo ya Kotara ya 2 Beke ya 5 ke Dinomoro, Tirišo le Tswalano.

Dinoutse tša monolofatši

- ◆ Hlaloša gore Nepišo ya Kotara ya 2 Beke ya 5 ke Dinomoro, Tirišo le Tswalano gape. Hlalošetša batšeakarolo gore se e be e le nepišo ya Kotara ya 2 Dibeke tša 1 le 2 (ya go akaretšwa Thutofatlhošong ya 4).
- ◆ Laela batšeakarolo gore ba lebelele matlakala a 114–123 ka go *Pukutlhahlo ya Mareo*.
- ◆ Kgopela batšeakarolo gore ba dire **Mošongwana wa 7** ka dihlopha.

Kotara ya 2 Kakaretšo ya diteng: Dinomoro, Tirišo le Tswalano

Dithutofatlhošo tša go feta di hlagošitše Nepišo ya Karolo ya Diteng: Dinomoro, Tirišo le Tswalano. Thutong ye re lebelela kakaretšo ya diteng ya Kotara ya 1–4 (*Pukutlhahlo ya Mareo*, matlakala a 114–123) gape.



Mošongwana wa 7

Go tsebišwa dinomoro dife tše diswa ka go Kotara ya 2?

4 le 5

Kotara ya 2 Beke ya 5: Go ruta nomoro

Nomoro 'hlano' e tsebišwa ka go Kotara ya 2 Beke ya 5. Lenaneo la Dipalo le hlohleletša tirišo ya dinomoro maemong a go fapana le tirišo ya ditlhagišo tše dintši, mohl, leswao, leina, seswantšho, dikarata tša marontho, dibaledi, mephaphatho. Mokgwa wa go itlwaetša tlwaelo wo o dirišitšwego go tsebiša nomoro ye nngwe le ye nngwe o diriša barutwana tlwaelo ye ba e tlwaetšego, ya go akanyega, ya boithabišo gape ya go hlagoša nomoro ka ditsela tša go fapana.

Dinoutse tša monolofatši

- ◆ Kgopela batšeakarolo gore ba nagane ka tsela yeo ba tsebišitšego dinomoro dibekeng tša go feta.
- ◆ Naganiša ka fao mokgwa wa go itlwaetša tlwaelo wo o dirišwago go tsebiša nomoro ye nngwe le ye nngwe ye mpsha. Hlaloša gore nomoro 'hlano' e tsebišwa ka go Kotara ya 2 Beke ya 5 go dirišwa mokgwa wa go itlwaetša tlwaelo wa go swana le wa pele. Ahlaahlang ka fao mokgwa wa go itlwaetša tlwaelo o dirago gore barutwana ba ithute lereo la nomoro ka gona.
- ◆ Laela batšeakarolo gore ba lebelele letlakala la 91 ka go *Pukutlhahlo ya Mareo: Kotara ya 2*.
- ◆ Ba laele gore ba dire **Mošongwana wa 8** ka dihlopha gomme ba fe dipego.

- ◆ 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

- ◆ Kgonthiša gore dintlha tše di latelago tša go itlwaetša ditlwaelo di a laetšwa:
 - Go anegwa kanegelo ka ga di/phoofolo gape e dirišwa go aga tšhate ya tlotlontšu ya dinomoro.
 - Go kgoboketšwa dilo tša go emela dinomoro gomme tša bewa tafoleng mo sebakeng sa dipalo.
 - Barutwana ba bapetša leswao la nomoro le leina la nomoro le dikarata tša marontho, gomme ba diriša le dikarata tša marontho tša go kopanywa go dira nomoro.
 - Barutwana ba diragatša kanegelo ka mesepelo ya mmele.
 - *Puku ya Diphoustara* e neelana ka menyetla ya go bala le go rarolla mathata kamanong.
- ◆ Tatelano ya dilo tša go itlwaetša ditlwaelo e ka fetoga, efela ditebo tše tša go tsebiša nomoro beke ye nngwe le ye nngwe di akaretšwa ka mešongwaneng ya barutwana ka moka.



Mošongwana wa 8

Lebelela mešongwana ya barutwana ka moka ya Beke ya ka go *Pukutlhahlo ya Mareo: Kotara ya 2* (matlakala a 90–99). Hlaloša mokgwa wa go itlwaetša tlwaelo wo o dirišitšwego go ruta nomoro '5'.

Letšatši la 1

Letšatši la 2

Letšatši la 3

Letšatši la 4

Letšatši la 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.

Mothalopalo

Dinoutse tša monolofatši

- ◆ Botšiša ge eba batšeakarolo ba beakantše methalopalo ka diphapošing tša bona.
- ◆ Lekola bohlokwa bja mešongwana ya mothalopalo go thuša barutwana gore ba be le kwešišo ya tatelano ya maina a go balwa le tswalano magareng ga dinomoro.

Dinomoro 1 go fihla ka 5 di be di phekesitšwe mothalopalong ka sebakeng sa dipalo ge di tsebišwa ka Kotara ya 1. Barutwana ba šomana le mothalopalo mo Bekeng ya 5. Barutiši ba bantši ba dira methalopalo ya go thoma ka 0 go fihla ka 10 goba 20 ka phapošing pele barutwana ba kgona go bala goba go lemoga dinomoro tše.

Nepišo ya Lenaneo la Dipalo mothalopalong ke ya sewelo. Go thoma ka Beke ya 5 e nepiša tatelano (go latelanya) ya dinomoro le go bolela ka tswalano magareng ga dinomoro.

Diriša mothalopalo go:

- ◆ latelanya le go bapetša dinomoro, mohl:
 - Ke nomoro efe ye e tlogo pele ga 3?
 - Ke nomoro efe ye e lego gare ga 3 le 5?
 - Ke nomoro efe ye e tlogo ka morago ga 4?
- ◆ hlohloliša ka fao dinomoro di oketšegago go thoma go la ngele go ya go la go ja, le ka fao di fokotšegago go thoma go la go ja go ya go la ngele.
- ◆ diriša leleme la dipalo le bjalo ka *pele ga, ka morago ga, gare ga*.

Mo bideong monolofatši o bontšha mošongwana wa mothalopalo wa go thekga go ruta nomoro.

Dinoutse tša monolofatši

- ◆ Bontšha gore mothalopalo o dirišwa bjang.
- ◆ Laela batšeakarolo gore ba lebelele mošongwana wa mothalopalo letlakaleng la 95 ka go *Pukutlahlo ya Mešongwana: Kotara ya 2*.

Bala mošongwana wa go tsebiša barutwana mothalopalo letlakaleng la 95 ka go *Pukutlahlo ya Mešongwana: Kotara ya 2*.



Bideo ya 2

Pukutlahlo ya Mešongwana: Kotara ya 2, Beke ya 5, Letšatši la 3 #4 (letlakala la 95)

Bogela bideo ya morutiši a diriša mothalopalo go latelanya dinomoro 1 go fihla go 5. Lemoga ka fao a neelanago ka thekgo mošongwaneng le dipotšišo tše a di botšišago go hlohleletša barutwana.

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.

Ahlaahlang mohola wa go diriša mothalopalo ka Mphatong wa R.

Go latelanya dinomoro: Barutwana ba bea dinomoro go ya ka tatelano ya go bala ya go nepagala. Barutwana ba bona mothalopalo letšatši le lengwe le le lengwe gomme ka nako ya dipoledišano tša sewelo ba bolela ka nomoro ye nngwe le ye nngwe.

Tatelano: Barutwana ba ahlaahla dinomoro mabapi le tše dingwe. Morutiši o botšiša gore ke nomoro efe ye e tlogo pele ga, ka morago ga goba gare ga dinomoro tše dingwe. Barutwana ba hlaloša boemo bja dinomoro mabapi le tše dingwe ba diriša leleme la dipalo la go nepagala.

Lenti la dipheta

Lenti la dipheta la ka gare ga *Dithušathuto tša Phapoši* ke la botelele bja dipheta tše 10 di hlophilwe ka tše hlano tše hlano, go ya ka mmala (dipheta tše dihubedu tše hlano le dipheta tše diserolane tše hlano).

Dinoutse tša monolofatši

- ◆ Ahlaahlang lenti la dipheta tše 10 (dipheta tše hlano, menwana ye mehlano). Bontšha ka fao lenti la dipheta le dirišwago ka gona.
- ◆ Kgotela batšeakarolo gore ba tšee lenti la dipheta tše 10 tafoleng.
- ◆ Ahlaahlang morero wa lenti la dipheta, le diriša tshedimošo ya ka tlase.

Lenti la dipheta le ruta barutwana go:

- ◆ lemoga palo ya dipheta sehlopheng ntle le go di bala, mohl, '4'.
- ◆ kwešiša gore nomoro e tee e ka ba dinomoro tše pedi goba go feta ge di kopantšwe, mohl, '4' e dirwa ke 2 le 2 goba 1 le 3.
- ◆ hlabolla mabokgoni a go bala go thoma nomorong ye e filwego, mohl, go 3 gomme ba bala go fihla go 5.
- ◆ thoma go šoma ka go hlakanya le go ntšha.
- ◆ thoma go šoma ka tše lesome.

Ka mošongwaneng wa go latela, diriša lenti la dipheta tše 10 go hlohlomiša dinomoro tša go fapana tše di kopantšwego. Latela monolofatši gomme o arabe dipotšišo tše di lego Mošongwaneng wa 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.



Mošongwana wa 9

1. Mpontšhe dipheta tše pedi.
2. Mpontšhe pheta ye nngwe ye tee.
3. Mpontšhe dipheta tša go fetwa ke tše nne ka e tee.
4. Mpontšhe dipheta tše nne. Bjale mpontšhe tša go feta dipheta tše nne ka ye tee. O na le tše kae?
5. O dirile eng gore di fete ka ye tee?
6. Mpontšhe tša go fetwa ke tše hlano ka ye tee. O na le tše kae?
7. O dirile eng gore e be tše dinnyane ka ye tee?
8. Bjale ntšha ye tee. O na le tše kae?
9. Tsenya ye tee. O na le tše kae?

Bala mošongwana wa go tsebiša barutwana lenti la dipheta letlakaleng la 101 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 2, kgato ya 3*. Bolelang ka mošongwana wo, ka dihlopha.

Dinoutse tša monolofatši

- ♦ Hlaloša gore bjale batšeakarolo ba tlo šoma ka dipheta le gore ba latele ditaello tša gago gomme ba ngwale dikarabo tša bona.
- ♦ Ba kgopele gore ba dire **Mošongwana wa 10** ka dihlopha.



Mošongwana wa 10

Mošongwana wo wa lenti la dipheta o thuša bjang go hlabolla kwešišo ya dinomoro barutwaneng?

Barutwana ba thoma go bontšha palomoka ya dipheta (mohl, 3) ntle le go bala ka e tee ka e tee. Ba kgona go bontšha 'tee go feta' goba 'nnyane ka tee' go na le palo ye e laeditšwego ntle le go bala. Barutwana ba lemoga gore nomoro e tee e dirwa ke dinomoro tša go fapana tšeo di kopantšwego (mohl, 5 e dirwa ke 2 le 3, goba 1 le 2 le 2).

Ba thoma go diriša leleme la go hlakanya le go ntšha gomme ba diriša mareo go kopanya/kgaoganya dihlopha ntle le go bala.

Lenti la dipheta le neelana ka maitemogelo a nnete a palomoka ya dipheta.

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.

Dinoutse tša monolofatši

- ◆ Ahlaahlang bohlokwa bja go beakanya go dumelela barutwana gore ba be le nako ye e lekanego ya go ikatiša mabokgoni a maswa le tsebo ye mpsha (**setheo sa go itlwaetša**).

Setheo sa go itlwaetša: Barutwana ba swanetše go ba le nako ye e lekanego ya go ikatiša mabokgoni a maswa le tsebo ye mpsha. Ge barutwana ba ikatiša seo ba ithutilego sona ka mehla, ba se dira bokaone, gomme le boitshepo bja bona bja oketšega. Ba ipshina ka poeletšo le katišo.

Kotara ya 2 Kakaretšo ya Diteng (Beke ya 5)

Dinoutse tša monolofatši

- ◆ Gopotša batšeakarolo gore le bona ba hloka go beakanya mešongwana ya go ikgethela ya go tswalana le mareo ao a rutwago mo bekeng.



Mošongwana wa 11

Lebelela Mamatletšo ya A: Kotara ya 2 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7). Bala kakaretšo ya diteng ya beke ya 5: Dinomoro, Tirišo le Tswalano letlakaleng la 19 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 2*.

1. Dihlogotaba tša Beke ya 5 ke dife?

2. Go tsebišwa tsebo efe ye mpsha bekeng ye?

3. Go ikatišwa mabokgoni afe a dibeke tša go feta?

4. Tswalanya mešongwana ya Mamatletšo ya A: Kotara ya 2 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7) le dithuto tša beke ye nngwe le ye nngwe.

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:

Thuto ya 3: Dipatrone, Difankšene le Altšebra

Iri e 1

Nepišo ya Kotara ya 2 Beke ya 6 ke Dipatrone, Difankšene le Altšebra.

Dinoutse tša monolofatši

- ◆ Hlaloša gore nepišo ya Kotara ya 2 Beke ya 6 ke Dipatrone, Difankšene le Altšebra. Gopotša batšeakarolo gore se e be e le nepišo ya Kotara ya 1 Beke ya 6 (ya go akaretšwa Thutofatlhošong ya 3).
- ◆ Laela batšeakarolo gore ba lebelele letlakala la 125 ka go *Pukutlhahlo ya Mareo*.
- ◆ Laela batšeakarolo gore ba dire **Mošongwana wa 12** ka sehlopha.

Kotara ya 2 Kakaretšo ya diteng: Dipatrone, Difankšene le Altšebra

Lebelela Dipatrone, Difankšene le Altšebra ka go kakaretšo ya diteng (*Pukutlhahlo ya Mareo*, letlakala la 125).



Mošongwana wa 12

1. Go akaretšwa mareo afe Kotareng ya 2?

2. Phapano ke eng magareng ga diteng tša Lenaneo la Dipalo le diteng tša SEPHOLEKE?

Kotara ya 2 Beke ya 6: Hlaloša, kopiša o be o oketše dipatrone

Thutofatlhošong ya 3, nepišo ya Dipatrone, Difankšene le Altšebra e be e le go temogo/go hlatha poeletšo ya patrone. Re boletše le ka phapano magareng ga tatelano le patrone. Kotara ya 2 Beke ya 6 e aga godimo ga diteng tše di tsebišitšwego ka Kotara ya 1 Beke ya 6.

Ka Kotara ya 1 Beke ya 6 barutwana:

- ◆ ba hlaloša poeletšo dipatroneng ba diriša dilo, diswantšho le medumo.
- ◆ ba kopolla dipatrone tša go dirwa ke ba bangwe ka dilo, diswantšho le medumo.
- ◆ ba oketša dipatrone tša go dirwa ke ba bangwe.
- ◆ ba hlama dipatrone tša bona maemong a go fapafapana a bothata bjalo ka:

- 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).

- sediko, sekwere; sediko, sekwere
- sediko, sekwere, khutlotharo; sediko, sekwere, khutlotharo
- sediko, sediko, sekwere; sediko, sediko, sekwere
- sediko se sehubedu, sediko se setalalerata, sekwere se sesorolane; sediko se
- sehubedu, sediko se setalalerata, sekwere se sesorolane.

◆ ba bolela gore ke eng seo se sego gona ge karolo ya patrone e fihlilwe.

Dinoutse tša monolofatši

- ◆ Nagana ka Thutofatlošo ya 3: Go hlatha dipatrone. Diriša dipoloko tšeo di dirišwago go hlaola le *Puku ya Diphoustara*. Bolelang ka phapano magareng ga tatelano ya dilo, diswantšho goba ditiragalo, le seo se dirago patrone. Gopotša batšeakarolo gore patrone e nyaka poeletšo ya tatelano. Bontšha kokwane ye.
- ◆ Laela batšeakarolo gore ba dire **Mošongwana wa 13** ka dihlopha.



Mošongwana wa 13

Lebelela Beke ya 6 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 2* (matlakala a 104–119).

1. Hlaloša ka fao mešongwana ya barutwana ka moka e hlagišago dithuto ka ga patrone.

Go hlatha dipatrone, go diriša mmele ka moka, go hlatha dipatrone seswantšhong sa ka *Pukung ya Diphoustara*.

Kopiša o be o oketše patrone ya gago le tša ba bangwe.

Hlaloša gore ke ka lebaka la eng e le patrone goba e se patrone.

2. Bala dikgato tša 5 le 6 tša mošongwana wa go hlahlwa ke morutiši letlakaleng la 117. Morutiši o thekga mešongwana le go hlahlwa barutwana ka dipotšišo bjang?

Kotara ya 2 Kakaretšo ya Diteng (Beke ya 6)

Dinoutse tša monolofatši

- ◆ Kgonthiša gore batšeakarolo ba kgona go tswalanya SEPHOLEKE le peakanyo ya beke ka beke ya Beke ya 6, mohl, Hlogotaba le diteng tša Kotara ya 2 di tšwa ka gare ga SEPHOLEKE, le diteng tša tlaleletšo tše ditsentšwego go Lenaneo la Dipalo.
- ◆ Ahlaahlang gore ke ka lebaka la eng nomoro le yona e akareditšwe bekeng ya nepišo ya Dipatrone, Difankšene le Altšebra. Hlaloša gore le ge nepišo ya diteng e le go patrone, re hloka go ikatiša nomoro letšatši le lengwe le le lengwe ka mešongwana ya barutwana ka moka le ya go hlahlwa ke morutiši.
- ◆ Gopotša batšeakarolo gore ba akaretše mareo ka moka ka sewelo ka nako ya lenaneo la tšatši ka tšatši, mohl, tatelano ya mešongwana lenaneong la tšatši ka tšatši le gore matšatši a beke ke mareo a kelo (nako), ge go emiwa mothalading – mathomo, bobedi, boraro – ke mareo a dinomoro (dipaloghle).



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.



Mošongwana wa 14

Lebelela Mamatletšo ya A: Kotara ya 2 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7). Bala kakaretšo ya diteng ya Beke ya 6: Dipatrone, Difankšene le Altšebra letlakaleng la 21 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 2*.

1. Dihlogotaba tša Beke ya 6 ke dife?

2. Go tsebišwa tsebo efe ye mpsha bekeng ye?

3. Go ikatišwa mabokgoni afe a dibeke tša go feta?

4. Tswalanya mešongwana ya Mamatletšo ya A: Kotara ya 2 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7) le dithuto tša beke ye nngwe le ye nngwe.

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.

Thuto ya 4: Tšhomišo ya Tshedimošo

Iri e 1

Nepišo ya Kotara ya 2 Beke ya 7 ke Tšhomišo ya Tshedimošo.

Dinoutse tša monolofatši

- ◆ Hlaloša gore nepišo ya Kotara ya 2 Beke ya 7 ke Tšhomišo ya Tshedimošo. Gopotša batšeakarolo gore e be e le nepišo ya Kotara ya 1 Beke ya 10 (e akaretšwa ka Thutofatlhošong ya 4).
- ◆ Laela batšeakarolo gore ba lebelele letlakala la 137 ka go *Pukutlhahlo ya Mareo*.
- ◆ Laela batšeakarolo gore ba dire **Mošongwana wa 15** ka dihlopha.

Kotara ya 2 Kakaretšo ya diteng: Tšhomišo ya Tshedimošo

Lebelela Tšhomišo ya Tshedimošo ka kakaretšong ya diteng (*Pukutlhahlo ya Mareo*, letlakala la 137).



Mošongwana wa 15

1. Go akaretšwa mareo afe Kotareng ya 2?

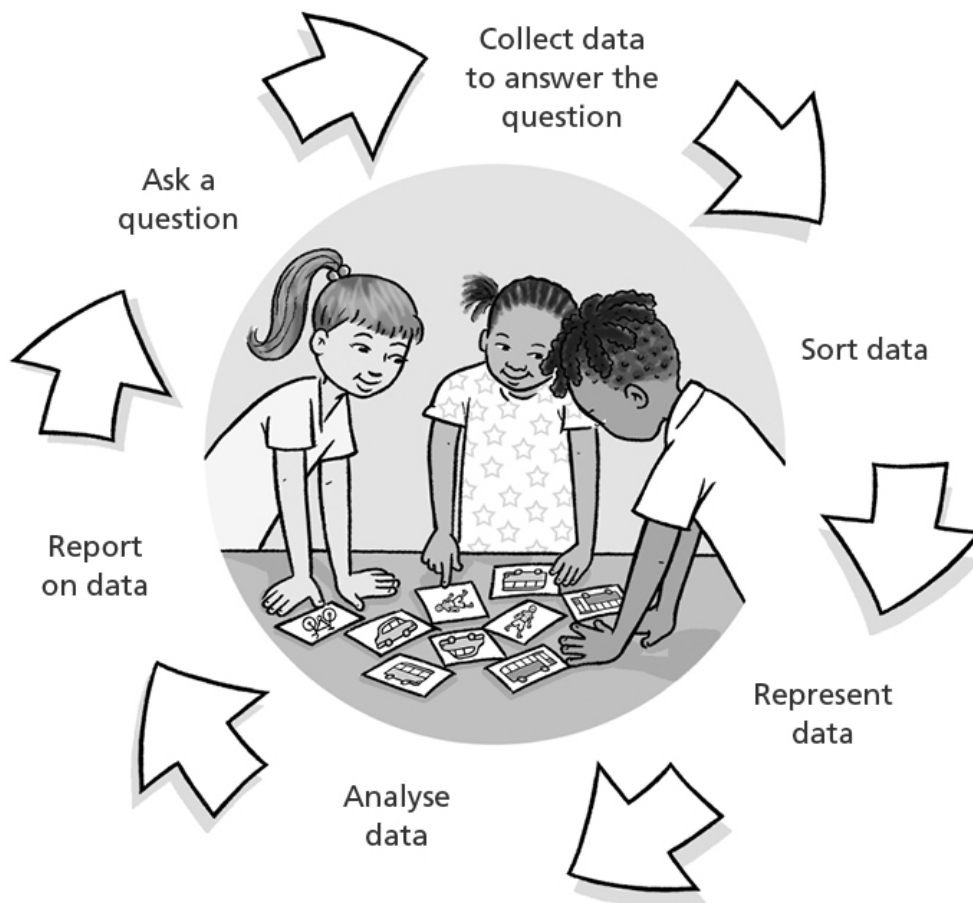
2. Phapano ke eng magareng ga diteng tša Lenaneo la Dipalo le diteng tša SEPHOLEKE?

Dinoutse tša monolofatši

- ◆ Hlalošetša batšeakarolo gore Karolo ya Diteng ya Tšhomišo ya Tshedimošo ya Mphato wa R e nepiša morero le tshepedišo ya tšhomišo ya tshedimošo. E akaretša go rarolla bothata goba go araba potšišo ka go kgoboketša, go hlaola, go hlagiša le go hlatholla tshedimošo.
- ◆ Go kgoboketša le go hlaola (hlopha) tshedimošo ke karolo ya tshepedišo ya tšhomišo ya tshedimošo. Ge barutiši ba sa nepiše go araba potšišo, go ra gore ke mošongwana wa go hlaola.
- ◆ Laela batšeakarolo gore ba latele tshepedišo ya tšhomišo ya tshedimošo gomme ba fe maina a dikgato tša go fapana tshepedišong ye:
 1. Botšiša potšišo.
 2. Kgoboketša tshedimošo (ahlaahlang tsela ye kaone ya go dira se).
 3. Hlaola tshedimošo.
 4. Hlagiša tshedimošo.
 5. Sekaseka tshedimošo.
 6. Bega ka ga tshedimošo (araba potšišo).
- ◆ Laela batšeakarolo gore ba dire **Mošongwana wa 16** ka dihlopha.
- ◆ Kgopela sehlopha se setee gore se fe pego ka ga mošongwana wa sona.

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.



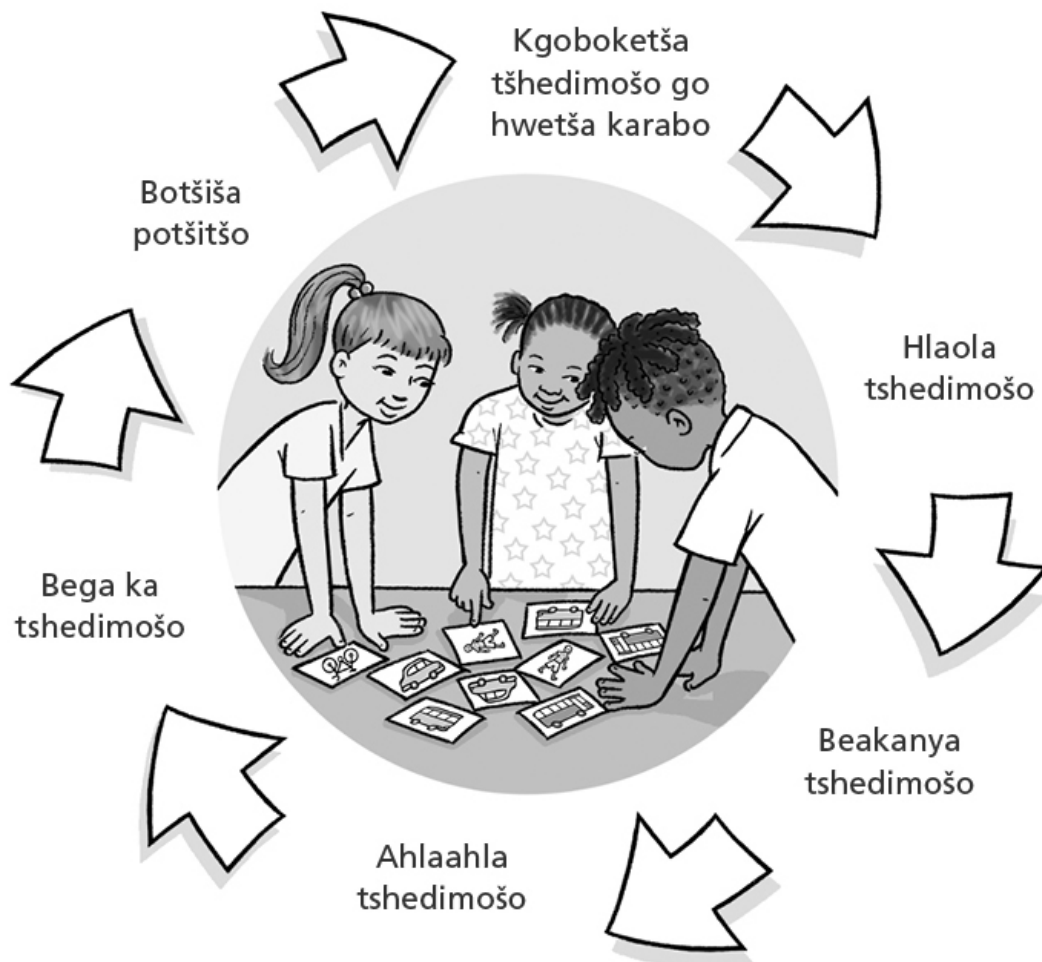
In Grade R learners should have many opportunities to sort objects according to one or more attributes, such as colour, size or shape. Sorting is part of Data Handling, but it is not the only focus. It is important to always bring the learners back to the question that has been posed and the reason why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

Tšhomišo ya Tshedimošo

Karolo ya Tšhomišo ya Tshedimošo e nepiša morero le tshepedišo ya tšhomišo ya tshedimošo. E akaretša go rarolla bothata goba go araba potšišo ka go kgoboketša, go hlaola, go emela le go hlatholla tshedimošo.



Ka Mphatong wa R barutwana ba swanetše go ba le menyetla ye mentši ya go hlaola dilo go ya ka lehlaodi le letee goba a mantši, a bjalo ka mmala, bogolo le sebopego. Go hlaola ke karolo ya Tšhomišo ya Tshedimošo, efela ga go nepišwe yona fela. Go bohlokwa go bušetša barutwana potšišong ye e botšišitšwego le lebaka la go kgoboketša, go hlaola le go nagana ka ditsela tša go emela tshedimošo.

Dipotšišo di bohlokwa mo go Tšhomišo ya Tshedimošo, mohl:

- ◆ Ke ipotšiša gore barutwana ba bantši ba rata senwamaphodi sefe?
- ◆ Re swanetše go kgoboketša tshedimošo ya rena bjang?

- ◆ 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?

- ◆ Re swanetše go hlaola tshedimošo bjang?
- ◆ Re swanetše go bega tshedimošo bjang?



Mošongwana wa 16

Ahlaahlang ka fao le ka beakanyago le go phethagatša mošongwana wa Tšhomišo ya Tshedimošo go ya ka dipotšišo tša ka godimo. Rekhota dikgopolo tša lena pampiring ya tšhate ya go fetlega.

Go hlagiša tshedimošo

Barutwana ba Mphato wa R ba hlohlomiša ditsela tša go fapana tša go bontšha le go hlagiša tshedimošo ye ba e kgobokeditšego. **Kgoboketšo ya diswantšho** ke tsela ya go hlagiša tshedimošo ka diswantšho. Ka mošongwaneng wa barutwana ka moka wa Letšatši la 3 Beke ya 7, barutwana ba bolela gore ba tla sekolong bjang. Morutwana yo mongwe le yo mongwe o fiwa sefahlego sa go myemyela godimo ga **seripa sa pampiri sa go lekana ka bogolo**. Ba bontšha tshedimošo ka go tsenya seswantšho sa bona ka kholomong go hlagiša mehuta ya go fapana ye mene ya dinamelwa. Go bohlokwa go tsenya tshedimošo ka dikholomong, **ntle le dikgoba** gare ga diripa tša pampiri. Tshedimošo e hlagišwa gabotse gomme gwa ba bonolo go e hlatholla gore go arabiwe dipotšišo: 'Barutwana ba bantši ba tla bjang sekolong?'

Kotara ya 2 Kakaretšo ya Diteng (Beke ya 7)



Mošongwana wa 17

Lebelela Mamatletšo ya A: Kotara ya 2 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7). Bala kakaretšo ya diteng ya Beke ya 7: Tšhomišo ya Tshedimošo letlakaleng la 21 la *Pukutlhahlo ya Mešongwana: Kotara ya 2*.

1. Dihlogotaba tša Beke ya 7 ke dife?

2. Go tsebišwa tsebo efe ye mpsha bekeng ye?

3. Go ikatišwa mabokgoni afe a dibeke tša go feta?

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. Tswalanya mešongwana ya Mamatletšo ya A: Kotara ya 2 ka go Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 4–7) le dithuto tša beke ye nngwe le ye nngwe.
5. Lebelela mošongwana wa go hlahlwa ke morutiši ka go Beke ya 7 (*Pukutlhahlo ya Mešongwana: Kotara ya 2*, letlakala la 133). Ahlaahlang ka fao morutiši a hlalago barutwana go hlaola diphoofolo gomme le hlagiše tshedimošo kriting.

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.

Dinoutse tša monolofatši

- ◆ **Dithuto tše go ithutilwego tšona:** Kgopela batšeakarolo go nagana ka se ba ithutilego sona ka thutofatlhošong le go feleletša **Mošongwana wa 18** ka o tee ka o tee.
- ◆ **Mošomo wo o tlo boelago le wona sekolong:** Bala mošomo wo. O botšiše ge go na le seo se sa kwagalego gabotse sa go nyaka tlhalošo ye ntši.
- ◆ **Tekolo:** Aba dikhophi tša Foromo ya Tekolo ya Thutofatlhošo gomme batšeakarolo ba e tlatše.
- ◆ **Thutofatlhošo ya go latela:** Efa matšatšikgwedi a thutofatlhošo ya go latela gomme o tswalele thutofatlhošo.



Mošongwana wa 18

Dithuto tše go ithutilwego tšona: Nagana ka se o ithutilego sona ka thutofatlhošong gomme o feleletše tafola.

Dilo tše ke di dirago tše di šomago gabotse	Dikgopolo tše diswa tše ke ratago go di leka



Mošomo wo o tlo boelago le wena

1. Tšwela pele go lekola barutwana ba gago o diriša Rekhote ya Tekolo/Kelotšweledi ka go *Pukutlhahlo ya Mešongwana: Kotara ya 2*. Diriša dinoutse tša tlhokomelo tše o tšwelago pele go di ngwala go aga bohlatse bja tše barutwana ba di kwešišago le tše ba kgonago go di dira.
2. Hlatha tše o belaelago ka tšona ka ga ka fao barutwana ba go fapana ba kwešišago mareo a dipalo.
3. Etle le dikhophi tša dirubriki tše o di dirišitšego go lekola dipalo thutofatlhošong ya go latela.
4. O tle le rekhote ya go felelela ya morutwana o tee thutofatlhošong ya go latela.

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. Diriša *Pukutlhahlo ya Mešongwana: Kotara ya 2* go beakanya le go phethagatša Dibeke tša 4–7 tša Lenaneo la Dipalo, go akaretšwa le go hlama karolo ya dipalo ya go nepiša lereo la beke ye nngwe le ye nngwe.
6. Ngwala dinoutse ka ga tše di šomilego gabotse, tše di sa šomago gabotse le se o ka se dirago ka tsela ye e fapanego go kaonafatša go ruta le go ithuta.

Tekolo

Tlatša Foromo ya Tekolo.

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).			

MAMATLETŠO YA A: KOTARA YA 2 KAKARETŠO YA DITENG YA BEKE KA BEKE (DIBEKE TŠA 4-7)

Kotara ya 2: Peakanyo ya Mošongwana

Beke ya 4				
KAROLO YA DITENG: SEKGOBA LE SEBOPEGO (TŠEOMETRI)				
HLOGOTABA: Maemo, peakanyo le dipono, Hlaloša, hlaola le go bapetša dilo tša 3-D mahlakoretharo				
TSEBO YE MPSHA: Go hlaola dilo tša 3-D mahlakoretharo go ya ka dilo tša go swana le diphapano, ntši ka tee, nnyane ka tee, Maemo: godimo				
GO IKATIŠA: Go balela godimo 1-15 le 5-1, Go bala dilo 1-7, Temogopalo 1-4, Maemo: ka tlase, go, ka gare, ka ntle, Diboepogo: sediko, sekwere, khutlotharo, Marara a diripa tša lesomepedi				
Mešongwana ya barutwana ka moka		Mošomo wa go hlhlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Gatelela dibopego ka moka /go tsoma sebopego.	Go ikatiša 1-4. Go hlaloša selo go tšwa maemong a go fapana. Go ikatiša dibopego le maemo.	Mošongwana wa 1 Mošongwana wa 2 Mošongwana wa 3 Mošongwana wa 4	Sediko/sekwere/khutlotharo gape e ka ba ... (hlama seswantšho). Dira dibopego ka diripa-dikokisana le tlhama. Kago ya dipoloko – diriša dipoloko/dipoloko tša Unifix. Marara (bonnyane diripa a 12).
Letšatši la 2	Mokotla wa go phopholwa – phophola dibopego tša go fapana o di hlaloše.			
Letšatši la 3	Hwetša dibopego ka phapošing o diriša mantšu a boemo.			
Letšatši la 4	Matseka a dibopego. Ntši ka tee, nnyane ka tee.			
Letšatši la 5	Tšhupetšo le boemo. Lepatlelo la ditšhitišo.			
Beke ya 5				
KAROLO YA DITENG: DINOMORO, TIRIŠO LE TSWALANO				
HLOGOTABA: Lemoga maswao a dinomoro le maina a dinomoro; Hlaloša, latelanya o be o bapetše dinomoro				
TSEBO YE MPSHA: Nomoro 5				
GO IKATIŠA: Go balela godimo 1-15 le 5-1, Go bala dilo 1-7, , Temogopalo 1-4, Go latelanya dinomoro 1-4, Ntši/nnyane				
Mešongwana ya barutwana ka moka		Mošomo wa go hlhlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Tsebiša 5 (dikgabo tše 5 ka ntlong ya bohloano).	Tswalanya maswao a dinomoro, maina a dinomoro le dikarata tša marontho (4 le 5). Go bala 1-7. Akanya o be o bale. Lenti la dipheta. Dipopego tša go fapana tša nomoro e tee.	Mošongwana wa 1 Mošongwana wa 2 Mošongwana wa 3 Mošongwana wa 4	Mmete wa tlhama 5. Dinomoro tša podilekgwane (kgokološa palo ya go nepagala ya dikgwele tša pampiri). Go bapetša dinomoro – diphekese. Marara a dinomoro go fihla go 5 (o diriša maina a dinomoro).
Letšatši la 2	Gatelela 4 le 5 (maswao a dinomoro le maina a dinomoro).			
Letšatši la 3	Go balela pele le morago. Mothalopalo.			
Letšatši la 4	Gatelela 4 le 5.			
Letšatši la 5	Gatelela dinomoro1-5 (dikarata tša marontho, maswao a dinomoro, maina dinomoro a go lemogwa).			

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.			

Beke ya 6				
KAROLO YA DITENG: DIPATRONE, DIFANKŠENE LE ALTŠEBRA				
HLOGOTABA: Kopolla o be o katološe dipatrone tša poeletšo tše bonolo o tlhame dipatrone tša gago; Hlaloša poeletšo ye e lego dipatroneng				
TSEBO YE MPSHA: Kopolla o be o katološe dipatrone tša poeletšo tše bonolo; Itlamele o be o hlaloše dipatrone tša gago, Go balela godimo 1–20, Go balela morago go thoma go 7-1				
GO IKATIŠA: Go latelanya dinomoro 1–5, Go bala dilo 1–7, Temogopalo 1-5, Go latelanya dinomoro 1-5, Go dira gore dihlopha di swane				
Mešongwana ya barutwana ka moka		Mošomo wa go hlhlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Dipatrone tša go swarega.	Nepiša lereo la nomoro 1–5. Šikinya o be o aroganye. Dira dihlopha tša go lekana. Dipatrone le modirišanimmogo. Dipoloko tša Unifix.	Mošongwana wa 1	Katološo ya patrone – go thala le go khalara.
Letšatši la 2	Go hlatha dipatrone dilong tša ka mehla.		Mošongwana wa 2	Dipatrone tša noga – go diriša diboego.
Letšatši la 3	Go rarolla mathata ka dipatrone.		Mošongwana wa 3	Dikarata tša dipatrone – go diriša dipoloko tša Unifix.
Letšatši la 4	Go dira dipatrone ka dilo tša ka mehla.		Mošongwana wa 4	Go dira dipatrone ka dipheta.
Letšatši la 5	Dipatrone tša modumo.			
Beke ya 7				
KAROLO YA DITENG: TŠHOMIŠO YA TSHEDIMOŠO				
HLOGOTABA: Kgoboketša o be o hlaole dilo; Emela mekgobo ye e hlaotšwego ya dilo; Bolelang le be le bege ka ga mekgobo ye e hlaotšwego ya dilo				
TSEBO YE MPSHA: Kgoboketša, hlaola o be o emele mekgobo ya dilo, Sekaseka o be o bege tshedimošo				
GO IKATIŠA: Go balela godimo 1–20 le 7-1, Go bala dilo 1–7, Ntši go, nnyane go, lekana le , Temogopalo 1–5, Go hlaola le go hlopha, Diboego: sediko, sekwere, khutlotharo				
Mešongwana ya barutwana ka moka		Mošomo wa go hlhlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Kgoboketša le go hlaola dilo (nkgokolo goba sekwere).	Go akanya. Go bala. Go hlaola mekgobo ya diphoofole. Kgoboketšo ya diswantšho: ntši/nnyane. Go botšiša dipotšišo.	Mošongwana wa 1	Go ripa le go hlaola diswantšho tša dinamelwa.
Letšatši la 2	Moraloko wa go hlaola. Phoustara ya 8.		Mošongwana wa 2	Go hlaola dilo tša go lhlwa.
Letšatši la 3	Kgoboketšo ya diswantšho: O ya sekolong bjang?		Mošongwana wa 3	Kerafo ya diboego (diriša diboego tša go ripiwa).
Letšatši la 4	Ahlaahlang dipoelo tša Letšatši la 3 (go botšiša dipotšišo).		Mošongwana wa 4	Go hlaola go ya ka mmala.
Letšatši la 5	Kgoboketša le go hlaola dilo tša ka phapošing.			

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?

Foromo ya Tekolo ya Thutofatlhošo ya 5

1. Na thutofatlhošo e fihleletše tše o bego o di lebeletše?

2. O ithutile eng go thutofatlhošo ye se se go thušitšego kudu?

3. Go na le se o se go wa se rata goba o sa se kwešiše go?

4. O tlo phethagatša se o ithutilego sona bjang phapošing ya gago ya Mphato wa R?

5. Go na le tše o di šišinyago go kaonafatša dithutofatlhošo tše di latelago?
