



**GAUTENG PROVINCE**  
EDUCATION  
REPUBLIC OF SOUTH AFRICA

**GGT 2030**  
GROWING GAUTENG TOGETHER

Tshivenda/English

# Mbekanyamushumo ya u Khwinifhadza Mbalo dza Gireidi ya T Grade R Mathematics Improvement Programme



**Wekishopo ya 5 • Workshop 5**

**Bugu ya Mushumo ya Vhashelamulenzhe • Participant's Workbook**

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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Mbalo dza Gireidi ya T na Thandela ya u Khwinisa Dzinyambo ndi vhurangeli ha **Gauteng Department of Education** na vhafarakani navho vha ndeme vha, **Gauteng Education Development Trust**.

Mveledziso na vhubvedzi ha vhubfumbudzi na zwishumiswa zwa kilasirumu ya Mbalo dza Gireidi ya T na Thandela ya u Khwinisa Dzinyambo zwo konadzea nga ndambedzo ya thandela u bva kha vha **United States Agency for International Development** na vha **Zenex Foundation**.

Mbalo dza Gireidi ya T na Thandela ya u Khwinisa Dzinyambo i langulwa nga vha **JET Education Services** na **Schools Development Unit** ya **UCT** na **Wordworks** sa vhafarakani vha thekhnikhala.

**Schools Development Unit (SDU)** ngei **University of Cape Town (UCT)** ndi mufarakani wa thekhnikhala wa mbalo kha Mbalo dza Gireidi ya T na Thandela ya u Khwinisa Dzinyambo. SDU ndi yuniti ngomu ha School of Education tsha UCT ine ya sedzesa kha mveledziso ya phurofeshinala ya vhagudisi kha Mbalo, Saints, Litheresi/Dzinyambo na Zwikili zwa Vhutshilo u bva kha Gireidi ya T u ya kha Gireidi ya 12. SDU i netshedza ndalukanyo dza mugudisi na khoso pfufhi dzo themendelwaho dza UCT, mushumo wo disendekaho nga tshikolo, mveledziso ya matheriala na thodisiso zwa u tikedza u gudisa na u guda nga nyambo dzothe dza Afrika Tshipembe.

## NDIVHUHO

Ndivhuho dzo khetheaho kha:

- Vhaofisiri vha Khethekanyo ya Kharikhulamu, Pfunzo ya Vhagudisi na Pfunzo yo Khetheaho ya Gauteng Department of Education, kha u shela havho mulenzhe kha u shandulela matheriala ashu.
- Vhaofisiri na vhagudisi vha Western Cape Education Department (WCED) kha u shela havho mulenzhe kha u khunyeledza u thomiwa ha Grade R Mathematics Programme (R-Maths) kha la Western Cape vhukati ha 2016 na 2019.
- Tshigwada tsha vhanwani vha R-Maths: vhashumi vha SDU na vhaeletshedzi.



Mbekanyamushumo ya u Khwinifhadza Mbalo dza Gireidi ya T yo shandulelwa u bva kha R-Maths, yo anadzwala lwa u thoma nga 2017 nga vha Schools Development Unit, University of Cape Town. Nzivhanyedziso ya R-Maths yo farwa nga vha University of Cape Town.

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Mbekanyamushumo ya u sika muhumbulo na ndangulo: Vho Cally Kuhne na Vho Tholisa Matheza  
U pindulela na ndangulo ya thandela ya nyanḍadzo: Vho Arabella Koopman  
Mukonanyi wa u pindulela (Tshivenḍa): Vho Ingrid Brink  
U pindulela kha Tshivenḍa: Vho Alugumi Rathumbu  
U dzudzanya na u vhalulula nga Tshivenḍa: Vho Ntshengedzeni Edward Mudau  
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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)

# Manweledzo

## Ndivho

Iyi ndi wekishopo ya vhuṭanu kha dza fumimbili dza Mbekanyamushumo ya u Khwinifhadza Mbalo dza Gireidi ya Ṭ ine ya vhumba tshipiḁa tsha Muhasho wa Pfunzo wa Gauteng (GDE) Mbalo dza Gireidi ya Ṭ na Thandela ya u Khwinisa Dzinyambo.

Ndivho ya wekishopo iyi ndi u thusa vhagudisi u thoma Mbekanyamushumo ya Mbalo ngomu kiḁasirumuni dzavho, u khwaṭhisedza u pfesesa havho ha u funza na u guda kha Sia ḁa Magudiswa ḁo kwamiwaho kha Kotara ya 2 Vhege ya 4–7 na u amba nga uri vha khou shumisa hani milayo ya nyendedzi ya u funza mbalo uri vha shumise ngomu kiḁasini dzavho.

U referentsiwa kha Sia ḁa Magudiswa ḁa Mbalo dza Gireidi ya Ṭ zwo dzhiwa kha *Tshitatamennde tsha Phoḁisi tsha Kharikhuḁamu na u Linga (TSHIPHOKHALI): Mbalo dza Gireidi ya Ṭ (Mvetamveto ya u Fhedzisela), 2011, Muhasho wa Pfunzo ya Mutheo, Afrika Tshipembe.*

## Mvelelo dza u guda

- ◆ U humbula nga u thomiwa ha Kotara ya 1 Vhege ya 10 na Kotara ya 2 Vhege ya 1–3
- ◆ U tandula maano u itela u tikedza u funza mbalo kha Gireidi ya Ṭ
- ◆ U amba nga milayo ya nyendedzi ya u funza ya Mbekanyamushumo ya Mbalo
- ◆ U shuma na magudiswa a Mbekanyamushumo ya Mbalo a Kotara ya 2 Vhege ya 4–7 (Tshikhala na Tshivhumbeo (Dzhometiri); Nomboro, Tswayo na Vhushaka; Phetheni, Fankisheni na Aḁidzhebura; na U shuma na Data)
- ◆ U haseledza nga u vhona na u linga ho teaho kha Gireidi ya Ṭ

## Magudiswa a wekishopo

- ◆ Mvulatswinga na mihumbulo (Awara 1)
  - ◆ Dzulo ḁa 1: Tshikhala na Tshivhumbeo (Dzhometiri) (Awara 1)
- TIE
- ◆ Dzulo ḁa 2: Nomboro, Tswayo na Vhushaka (Awara 1)
  - ◆ Dzulo ḁa 3: Phetheni, Fankisheni na Aḁidzhebura (Awara 1)
- TSHISWITULO
- ◆ Dzulo ḁa 4: U shuma na Data (Awara 1)
  - ◆ Nyito dza u vala (Awara 1)

# Opening and reflection

1 hour

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?

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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?

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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*?

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# Mvulatswinga na mihumbulo

Awara 1

**Mulayo wa vhukateli:** Vhagudi vhothe vha fanela u pfa vho tangedzwa, vho katelwa na u takalela u shela mulenzhe. Vha humbule u fara vhagudi vhothe u fana nahone nga thonifho.

Kha vha ambe nga u thoma havho Mbekanyamushumo ya Mbalo kha mbekanyamushumo ya duvha liñwe na liñwe yavho vha fhedzise nyito i tevhelaho.



## Nyito ya 1

Kha vha haseledze mvelaphanda yavho kha u thoma *Mushumo wa u tuwa nawo tshikoloni* u bva kha Wekishopo ya 4.

1. Ndi mvelaphanda ifhio kha mbalo ye vha i vhona kha vhagudi vhavho nga muraha u thoma Kotara ya 1?

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2. Mafhungo a 'Kha vha tole uri vhagudi vha a kona u' a re kha *Nyendedzi ya Nyito: Kotara ya 1* o vha thusa hani kha u linga mvelaphanda ya mugudi muñwe na muñwe kha Kotara ya 1?

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3. Vho kona u rekhoda zwavhuḏi mvelaphanda ya mugudi muñwe na muñwe vha tshi shumisa 'Kotara ya 1: Tsumbo ya Rekhodo ya u Linga hu yaho Phanda' kha masiatari a 190–193 a *Nyendedzi ya Nyito: Kotara ya 1*?

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### 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.

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### 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.

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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.



## Vidiyo ya 1

Kha vha ɔalele vidiyo ya mugudisi a tshi khou haseledza zwe a vhona na u linga kiɔasini yawe ya Gireidi ya T.

Vha humbula uri tshipikwa tsha nyito ndi tshifhio? Kha vha dzhiele nzhele uri mugudisi u tuɔula hani vhagudi nga mbudziso na uri u sedza hani mugudi muɔwe na muɔwe.

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## Nyito ya 2

Zwigwadani zwavho zwiɔuku, kha vha haseledze:

1. Vha khou langisa hani u linga ngomu kiɔasini yavho.
2. Vha shumisa hani dziruburiki kha maitete avho a u linga.
3. Vha katela hani School Based Assessments (SBA) na sisteme dza inthanethe dza SA-SAMS sa tshipiɔa tshavho tsha maitete a u linga.

Kha vha ɔwale mbuno dza ndeme dza khaseledzo yavho u itela u kovhana na tshigwada tshihulwane. Kha vha limuwe zwine zwa shuma zwavhuɔi na hune vha vha na khaedu dza u linga.

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**Mulayo wa maimo:** Vhaɔwe vhagudi vha nga ɔɔa u ita nɔowedzo lunzhi na thikhedzo u fhira vhaɔwe vhagudi. Vha tendele vhagudi tshifhinga tsho eɔanaho na thikhedzo u itela u fhedzisa nyito, u humbula na u fhindula mbudziso.

# Session 1: Space and Shape (Geometry)

1 hour

## 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?

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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.



### 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.

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# Dzulo la 1: Tshikhala na Tshivhumbeo (Dzhometiri)

Awara 1

## Manweledzo a magudiswa a Kotara ya 2: Tshikhala na Tshivhumbeo (Dzhometiri)

Dzulo ili li sedzesa kha u funza magudiswa a Kotara ya 2 Vhege ya 4 Tshikhala na Tshivhumbeo (Dzhometiri). Vha humbule uri Tshikhala na Tshivhumbeo (Dzhometiri) zwo vha zwo sedzeswa hafhu kha Vhege ya 3 zwe ra ri kwama kha Wekishopo ya 4.

Kha vha vhale manweledzo a magudiswa a Tshikhala na Tshivhumbeo (Dzhometiri) kha masiatari a 126–131 a *Nyendedzi ya Divhaipfi* vha fhedzise Nyito ya 3.



### Nyito ya 3

Ndi divhaipfi ifhio ya Tshikhala na Tshivhumbeo yo kumedzwaho kha 3.1 na 3.2 zwa manweledzo a magudiswa?

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Kha Gireidi ya T vhagudi vha talusa, u vhekanya na u vhambedza zwithu zwa 3-D vha sedzesa na kha zwi fanaho na zwo fhambanaho vhukati hazwo. Kha Kotara ya 2 Vhege ya 4 vhagudi vha vhekanya, u vhambedza na u talusa zwithu zwa 3-D u ya nga saizi, muvhala na tshivhumbeo. Vha dovha hafhu vha sedza na u talusa zwithu zwi tshi elana navho na zwone zwine na u bva kha vhumo ho fhambanaho (orienthesheni na u vhona). Zwiñwe zwo sedzwaho kha Vhege ya 4 ndi u tevhela masia na u shumisa divhaipfi i tshimbilelanaho na vhuimo.



### Nyito ya 4

1. Kha vha haseledze uri vha nga shumisa hani zwithu zwi re ngomu klasini yavho u tũtũwedza vhagudi u amba nga vhuimo havho zwi tshi elana na zwithu zwine vha khou zwi lavhelesa.

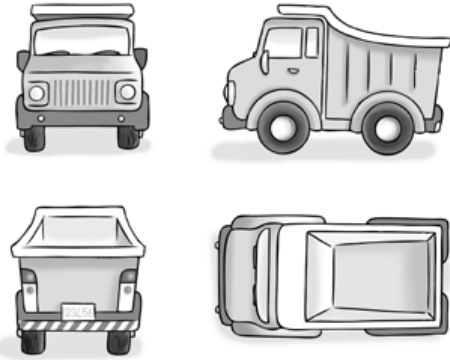
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2. Look at the pictures. Describe where you would stand in order to see each of the views of the truck.



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### 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?

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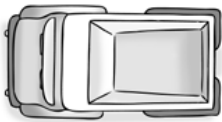
2. Give examples of guiding questions that are asked in the teacher-guided activities. Will these questions encourage learners to talk about the concepts in question 1?

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2. Kha vha lavhelese kha zwifanyiso. Kha vha taluse uri vha do ima ngafhi u itela u vhona mbonalo inwe na inwe ya thiraka.



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#### Kotara ya 2 Vhege ya 4

Kha vha sedze kha nyito yo rangwaho phanda nga mugudisi kha masiatari a 80–83 a Nyendedzi ya Nyito: Kotara ya 2.



#### Nyito ya 5

1. Ndi divhaipfi ifhio ya Tshikhala na Tshivhumbeo yo kumedzwaho?

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2. Kha vha nee tsumbo dza mbudziso dzi gaidaho dzine dza vhudziswa kha nyito dzo rangwaho phanda nga mugudisi. Mbudziso idzi dzi do tutuwedza vhagudi u amba nga divhaipfi i re kha mbudziso ya 1?

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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)



### 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?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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Vhagudi vha ɽoda zwikhala zwinzhi zwa u tamba nga na vhekanya hekanya khuvhanganyo dza zwithu zwa 3-D. Vhagudisi vha fanela u pfesesa divhaipfi dza Tshikhala na Tshivhumbeo (Dzhometiri) na u amba izwi vha tshi shumisa luambo lwo teaho lwa mbalo.

Mbuno dzi tevhelaho dzi fanela u humbulwa.

- ◆ Tshithu tshi na mielo miraru (3-D). Vha nga tshi lavhelesa u bva nga ntha, fhasi na matungo. Zwithu zwa 3-D zwi na vhulapfu, vhuphara (u tandavhuwa) na vhuntha.
- ◆ Tshivhumbeo tshi na mielo mivhili (2-D). Zwivhumbeo zwi katela zwitendeledzi, dzihofunderaru, zwickwea na dzihofundeina. Zwi na vhulapfu na vhuphara (u tandavhuwa).
- ◆ Zwenezwi vhagudi vha tshi khou tandula vhunzani ha zwithu zwa 3-D vha do topola zwithu zwine 'zwa fana na' zwivhumbeo zwa 2-D, sa tsumbo, munango u fana na thofundeina, luswayo lwa badani lu fana na thofunderaru, phulethi i fana na tshitendeledzi. Vha do thoma u pfesesa uri nyalo dza zwithu zwa 3-D dzi fana na zwivhumbeo zwa 2-D.

**Mulayo wa mvuvhano:** U guda hu katela u davhidzana na u kovhana mihumbulo. U fhindula nga ndila yo teaho kha tshinwe tshithu ndi tshipida tsha ndeme tsha u davhidzana na u funza na u guda. Tshifhinga tshothe vha thetshelese vhagudi musi vha tshi kovhana mihumbulo yavho kana u fhindula mbudziso dzavho.

## Manweledzo a Magudiswa a Kotara ya 2 (Vhege ya 4)



### Nyito ya 6

Kha vha lavhelese kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7). Kha vha vhale manweledzo a magudiswa a Vhege ya 4: Tshikhala na Tshivhumbeo (Dzhometiri) kha siatari la 10 la *Nyendedzi ya Nyito: Kotara ya 2*.

1. Ndi thero dzifhio dza Vhege ya 4?

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2. Ndi ndivho ntswa ifhio ine ya khou divhadzwa kha vhege ino?

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3. Ndi zwikili zwifhio u bva kha vhege dzo fhelaho zwine ha khou itwa ndowedzo yazwo?

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# Session 2: Numbers, Operations and Relationships

1 hour

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

## 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?

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## 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.



### 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

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Day 2

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## Dzulo la 2: Nomboro, Tswayo na Vhushaka Awara 1

Kotara ya 2 Vhege ya 5 yo sedzesa kha Nomboro, Tswayo na Vhushaka.

### Manweledzo a magudiswa a Kotara ya 2: Nomboro, Tswayo na Vhushaka

Wekishopo dzo fhiraho dzo kumedza Sia la Magudiswa lo Sedzwaho: Nomboro, Tswayo na Vhushaka. Kha dzulo ili ri lavhelesa kha manweledzo a magudiswa a Kotara ya 1–4 (*Nyendedzi ya Divhaipfi*, masiatari a 114–123) hafhu.



#### Nyito ya 7

Ndi nomboro dzifhio ntswa dzi no khou divhadzwa kha Kotara ya 2?

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### Kotara ya 2 Vhege ya 5: U funza nomboro

Nomboro 'thanu' i divhadzwa kha Kotara ya 2 Vhege ya 5. Mbekanyamushumo ya Mbalo i tutuwedza u shumiswa ha nomboro kha nyimele dzo fhambanaho na u shumiswa ha u imela hunzhi, sa tsumbo, tshiga, ipfi, tshifanyiso, magarata a tshithoma, zwithu zwa u vhalela ngazwo, u vhandu zwanu. Ndowelo yo shumiswaho u divhadza nomboro inwe na inwe i tumanya vhagudi na ndowelo yo dowealeho, i humbuleleaho, i mvumvusaho na u kumedza nomboro nga ndila dzo fhambanaho.



#### Nyito ya 8

Kha vha sedze kha mishumo ya kilasi yothe i re kha Vhege ya 5 kha *Nyendedzi ya Nyito: Kotara ya 2* (masiatari a 90–99).

Kha vha taluse ndowelo ine ya shumiswa u funza nomboro '5'.

Duvha la 1

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Duvha la 2

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Day 3

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Day 4

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Day 5

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### **The number washing line**

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.

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

Duvha 3

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Duvha 4

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Duvha 5

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### **Muthambi wa u anea nomboro**

Nomboro 1 u ya kha 5 dzo phekwiswa kha muthambi wa u anea nomboro fhethu ha mbalo musi dzi tshi divhadzwa kha Kotara ya 1. Ndi kha Vhege ya 5 fhedzi hune vhagudi vha shuma na muthambi wa u anea nomboro. Vhagudisi vhanzhi vha ita mutalombalo u bva kha 0 u ya kha 10 kana u swika kha 20 ngomu kilasini phanda ha musi vhagudi vha tshi kona u vhalela kana u topola nomboro idzo.

Mathomoni u sedzesa ha Mbekanyamushumo ya Mbalo kha muthambi wa u anea nomboro ndi u guda hu no sokou itea. U bva kha Vhege ya 5 u shumiselwa u sedzesa kha u tevhekanya nomboro na u amba nga vhushaka vhukati ha nomboro.

Kha vha shumise muthambi wa u anea nomboro u:

- ◆ tevhekanya na u vhambedza nomboro, sa tsumbo:
  - Ndi nomboro ifhio idaho phanda ha 3?
  - Ndi nomboro ifhio i re vhukati ha 3 na 5?
  - Ndi nomboro ifhio idaho nga murahu ha 4?
- ◆ kha vha tandule uri nomboro dzi engedzea hani u bva kha monde u ya kha tshauḽa, na u fhungudzea u bva kha tshauḽa u ya kha monde.
- ◆ kha vha shumise luambo lwa mbalo u fana na *phanda ha, murahu ha, vhukati ha*.

Kha vidiyo mutshimbidzi u khou sumbedza nyito ya muthambi wa u anea ine ya tikedza u funza nomboro.

Kha vha vhalele vhagudi nyito ine ya divhadza muthambi wa u anea i re kha siatari 3a 95 3a Nyendedzi ya Nyito: Kotara ya 2.

 **Video 2**

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.

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

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**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).

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.



## Vidiyo ya 2

Kha vha ɽalele vidiyo ya mugudisi a tshi khou shumisa muthambi wa u anea nomboro u itela u tevhekanya nomboro 1 u swika kha 5. Vha dzhieze nzhele uri u shumisa hani thekiniki dza u funza nyito nahone vha dzhieze nzhele mbudziso dzine a vhudzisa u itela u ɽuɽula vhagudi.

Kha vha haseledze ndeme ya u shumisa muthambi wa u anea nomboro kha Gireidi ya ɽ.

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**U tevhekanya nomboro:** Vhagudi vha vhea nomboro nga mutevhe wo teaho wa u vhalela. Vhagudi vha vhona mutalombalo ɽuvha liñwe na liñwe nahone nga tshifhinga tsha khaseledzo dza u sokou itea kha vha ambe nga nomboro iñwe na iñwe.

**U tevhekana:** Vhagudi vha haseledza vhushaka vhukati ha nomboro. Mugudisi u vhudzisa uri ndi nomboro ifhio idaho phanɽa ha, nga murahu ha kana vhukati ha dziñwe nomboro. Vhagudi vha shumisa luambo lwo teaho lwa mbalo u ɽalusa vhuimo ha nomboro hu tshi vhambedzwa na dziñwe.

## Vhulungu ha u vhalela

Vhulungu ha u vhalela vhu re ngomu ha *Khithi ya Zwishumiswa* vhu ɽa nga vhulapfu ha vhulungu ha 10 ho vhewa nga zwigwada zwa vhuɽanu, u ya nga muvhala (vhulungu vhuɽanu vhutswuku na vhulungu vhuɽanu ha ɽaɽa).

Vhulungu ha u vhalela vhu thusa vhagudi u:

- ◆ topola nomboro dza vhulungu tshigwadani nga vhone vhane vha songo vhalela, sa tsumbo, '4'.
- ◆ pfesesa uri nomboro nthihi i nga vha phaɽhekanyo ya nomboro mbili kana dziñwe nnzhi, sa tsumbo, '4' yo vhumbwa nga 2 na 2 kana 1 na 3.
- ◆ bveledza zwikili zwa u vhalela u ya phanɽa u bva kha nomboro yo ñewaho, sa tsumbo, u thoma kha 3 vha vhalela u ya phanɽa u swika kha 5.
- ◆ thoma u shuma nga u ɽanganya na u ɽusa.
- ◆ thoma u shuma nga nomboro dzine arali dzo ɽanganywa dza vhumba fumi.

Kha nyito i tevhelaho, kha vha shumise vhulungu ha u vhalela havho ha 10 u tandula phaɽhekanyo dza nomboro dzo fhambanaho. Kha vha tevhele mutshimbidzi wavho vha fhindlele mbudziso sa zwe dza vhudziswa kha Nyito ya 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.



### Activity 10

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

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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.





### Nyito ya 9

1. Kha vha ntsumbedze vhulungu vhuvhili.
2. Kha vha ntsumbedze vhulungu vhuṅwe vhuthihi.
3. Kha vha ntsumbedze vhulungu vhuṅku nga vhuthihi kha vhulungu vhuṅa.
4. Kha vha ntsumbedze vhulungu vhuṅa. Zwino kha vha ntsumbedze vhunzhi kha vhuṅa nga vhuthihi. Vha na vhungana zwino?
5. Vho ita mini uri vhu vhe vhunzhi nga vhuthihi?
6. Kha vha ntsumbedze vhuṅku nga vhuthihi kha vhuṅanu. Vha na vhulungu vhungana?
7. Vho ita mini uri vhu vhe vhuṅku nga vhuthihi?
8. Zwino kha vha ṅuse vhuthihi. Vha na vhungana?
9. Kha vha engedze vhuthihi. Vha na vhungana?

Kha vha vhalele vhagudi nyito ine ya ḍivhadza vhulungu ha u vhalela i re kha siaṅari ḷa 101 ḷa *Nyendedzi ya Nyito: Kotara ya 2, ḷiga ḷa 3*. Nga zwigwada, kha vha haseledze nyito iyi.



### Nyito ya 10

Nyito iyi ya vhulungu ha u vhalela i thusa hani u bveledza ṅdivho ya nomboro ya vhagudi?

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**Mulayo wa ṅdowedzo:** Vhagudi vha fanela u vha na tshifhinga tshinzhi tsha u ita ṅdowedzo ya zwickili zwiswa na ṅdivho. Musi vhagudi vha tshi ita ṅdowedzo tshifhinga tshoṅhe ya zwithu zwine vho no ḍi zwi guda, vha vha khwine khazwo nahone vha vha na vhuḍifulufheli. Vha ḍiphina nga ndovhololo na ṅdowedzo.

## Term 2 Content Summary (Week 5)



### 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?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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

## Manweledzo a Magudiswa a Kotara ya 2 (Vhege ya 5)



### Nyito yo 11

Kha vha lavhelese kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7). Kha vha vhale manweledzo a magudiswa a Vhege ya 5: Nomboro, Tswayo na Vhushaka kha siatari la 19 la *Nyendedzi ya Nyito: Kotara ya 2*.

1. Ndi thero dzifhio dza Vhege ya 5?

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2. Ndi ndivho ntswa ifhio ine ya khou divhadzwa kha vhege ino?

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3. Ndi zwikili zwifhio u bva kha vhege dzo fhelaho zwine ha khou itwa ndowedzo yazwo?

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4. Kha vha fanyise nyito dzi re kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7) na ngudo dza vhege inwe na inwe.

# Session 3: Patterns, Functions and Algebra 1 hour

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

## 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?

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

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## 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:
  - 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.

# Dzulo la 3: Phetheni, Fankisheni na Alidzhebura

Awara 1

Kotara ya 2 Vhege ya 6 yo sedzesa kha Phetheni, Fankisheni na Alidzhebura.

## Manweledzo a magudiswa a Kotara ya 2: Phetheni, Fankisheni na Alidzhebura

Kha vha sedze kha Phetheni, Fankisheni na Alidzhebura kha manweledzo a magudiswa (Nyendedzi ya Divhaipfi, siatari la 125).



### Nyito ya 12

1. Ndi divhaipfi ifhio yo kwamiwaho kha Kotara ya 2?

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2. Ndi phambano dzifhio dzi re vhukati ha Mbekanyamushumo ya Mbalo na magudiswa a TSHIPHOKHALI?

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## Kotara ya 2 Vhege ya 6: U talusa, u kopa na u engedza phetheni

Kha Wekishopo ya 3, u sedzesa kha Phetheni, Fankisheni na Alidzhebura zwo vha zwi kha u divha/u topola ndovhololo kha phetheni. Ro dovha hafhu ra haseledza phambano vhukati ha thevhekano na phetheni. Kotara ya 2 Vhege ya 6 zwi fhaṭa kha magudiswa o divhadzwaho kha Kotara ya 1 Vhege ya 6.

Kha Kotara ya 2 Vhege ya 6 vhagudi vha:

- ◆ talusa ndovhololo kha phetheni vha tshi shumisa zwithu, zwifanyiso na mibvumo.
- ◆ kopa phetheni dze vhaṅwe vha ita nga zwithu, zwifanyiso na mibvumo.
- ◆ engedza phetheni dze vhaṅwe vha ita.
- ◆ sika phetheni dza vhone vhaṅe kha levele dzi konḁaho dzo fhambanaho u fana na:
  - tshitendeledzi, tshikwea; tshitendeledzi, tshikwea
  - tshitendeledzi, tshikwea, ṭhofunderaru; tshitendeledzi, tshikwea, ṭhofunderaru
  - tshitendeledzi, tshitendeledzi, tshikwea; tshitendeledzi, tshitendeledzi, tshikwea
  - tshitendeledzi tshitswuku, tshitendeledzi tsha lutombo, tshikwea tsha ṭaḁa; tshitendeledzi tshitswuku, tshitendeledzi tsha lutombo, tshikwea tsha ṭaḁa.

Kha vha bule uri hu khou ṭahela mini musi tshipiḁa tsha phetheni tsho dzumbiwa.



### 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.

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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?

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## Term 2 Content Summary (Week 6)



### 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?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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



### Nyito ya 13

Kha vha sedze kha Vhege ya 6 ngomu ha *Nyendedzi ya Nyito: Kotara ya 2* (masiatari a 104–119).

1. Kha vha haseledze uri mishumo ya kilasi yothe i kumedza hani ngudo kha phetheni.

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2. Kha vha vhale liga la 5 na 6 a nyito yo rangwaho phanda nga mugudisi kha siatari la 117. Mugudisi u shumisa hani thekiniki dza u funza kha nyito na u endedza vhagudi nga mbudziso?

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### Manweledzo a Magudiswa a Kotara ya 2 (Vhege ya 6)



### Nyito ya 14

Kha vha lavhelese kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7). Kha vha vhale manweledzo a magudiswa a Vhege ya 6: Phetheni, Fankisheni na Alidzhebura kha siatari la 21 la *Nyendedzi ya Nyito: Kotara ya 2*.

1. Ndi thero dzifhio dza Vhege ya 6?

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2. Ndi ndivho ntswa ifhio ine ya khou divhadzwa kha vhege ino?

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3. Ndi zwikili zwifhio u bva kha vhege dzo fhelaho zwine ha khou itwa ndowedzo yazwo?

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4. Kha vha fanyise nyito dzi re kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7) na ngudo dza vhege inwe na inwe.

# Session 4: Data Handling

1 hour

The focus of Term 2 Week 7 is Data Handling.

## 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?

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

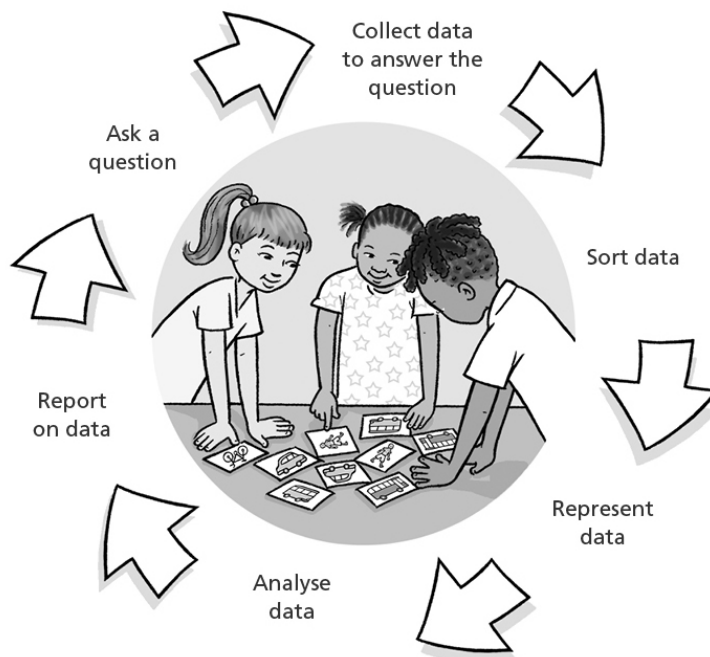
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## Data Handling

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.





# Dzulo la 4: U shuma na Data

Awara 1

Kotara ya 2 Vhege ya 7 yo sedzesa kha U shuma na Data.

## Manweledzo a Magudiswa a Kotara ya 2: U shuma na Data

Kha vha sedze kha U shuma na Data kha manweledzo a magudiswa (*Nyendedzi ya Divhaipfi, siaṭari la 137*).



### Nyito ya 15

1. Ndi divhaipfi ifhio yo kwamiwaho kha Kotara ya 2?

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2. Ndi phambano ifhio i re hone vhukati ha magudiswa a Mbekanyamushumo ya Mbalo na magudiswa a TSHIPHOKHALI?

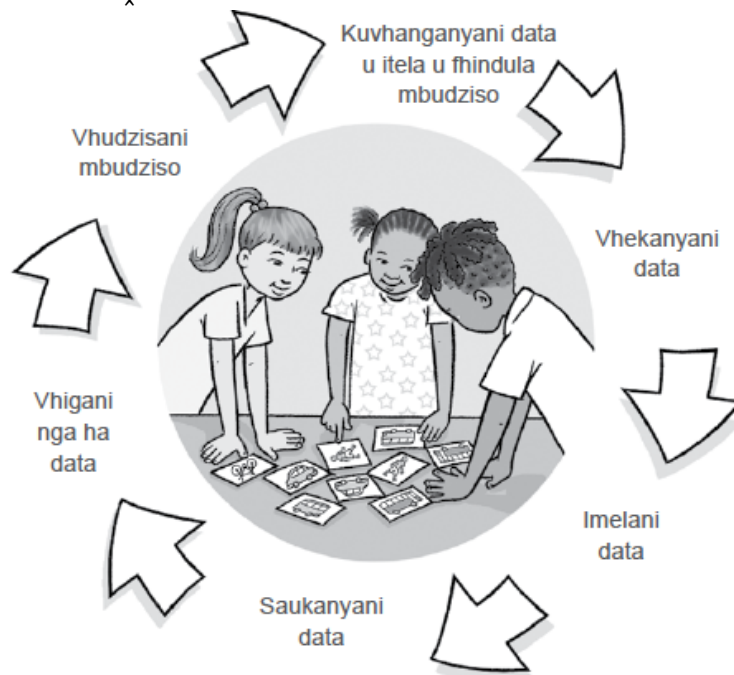
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## U shuma na Data

Sia la Magudiswa la U shuma na Data li sedzesa kha ndivho na maitele a u shuma na data. Li katela u tandulula thaidzo kana u fhindula mbudziso nga u kuvhanganya, u vhekanya, u imela na u ṭalutshedza 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?
- ◆ 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?'

Kha Gireidi ya T̄ vhagudi vha fanela u vha na zwikhala zwinzhi zwa u vhekanya zwithu u ya nga tshidodombedzwa tshithihi kana zwinzhi, u fana na muvhala, saizi kana tshivhumbeo. U vhekanya ndi tshipida tsha U shuma na Data, fhedzi a si zwone zwi zwothe zwo sedzeswaho. Ndi zwa ndeme tshifhinga tshothe u vhuisa vhagudi murahu kha mbudziso ye ya vhudziswa na tshiitisi tsha uri ndi ngani vha tshi khou kuvhanganya, u vhekanya na u humbula nga ndila dza u imela data.

Mbudziso ndi dza ndeme kha U shuma na Data, sa tsumbo:

- ◆ Ndi a divhudzisa uri ndi nyamunaithi ifhio i no funeswa nga vhagudi vhanzhi?
- ◆ Ri fanela u kuvhanganya hani data yashu?
- ◆ Ri fanela u vhekanya hani data?
- ◆ Ri fanela u imela hani data?



### Nyito ya 16

Kha vha haseledze uri vha nga pulana hani na u thoma nyito ya U shuma na Data vho disendeka nga mbudziso dzi re afho ntha. Kha vha rekhode mihumbulo yavho kha bammbiri la filipitshati.

### U imela data

Vhagudi vha Gireidi ya T̄ vha tandula ndila dzo fhambanaho dza u sumbedza kana u tana mafhungo e vha kuvhanganya. **Girafu ya zwifanyiso** ndi ndila ya u imela data hu tshi shumiswa zwifanyiso. Kha mushumo wa kilasi yothe nga Duvha la 3 la Vhege ya 7, vhagudi vha haseledza uri vha disa hani tshikoloni. Mugudi muñwe na muñwe u newa tshifhatuwo tshi mwemwelaho kha **tshipida tsha bammbiri la saizi i fanaho kokotolo**. Vha tana data nga u vhea zwifanyiso zwavho kha kholumu u itela u imela tshakha nna dzo fhambanaho dza vhuendi. Ndi zwa ndeme u vhea data kha kholumu, **hu si na zwikhala** vhukati ha zwipida zwa bammbiri. Data i vha yo imelwa zwavhudi nahone yo leluwa u i talutshedzela u itela u fhindula mbudziso: 'Vhagudi vhanzhi vha disa hani tshikoloni?'

## 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?

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2. What new knowledge is introduced in this week?

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3. What skills from previous weeks are practised?

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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

## Manweledzo a Magudiswa a Kotara ya 2 (Vhege ya 7)



### Nyito ya 17

Kha vha lavhelese kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7). Kha vha vhale manweledzo a magudiswa a Vhege ya 7: U shuma na Data kha siaṭari la 21 la *Nyendedzi ya Nyito: Kotara ya 2*.

1. Ndi thero dzifhio dza Vhege ya 7?

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2. Ndi ndivho ntswa ifhio ine ya khou divhadzwa kha vhege ino?

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3. Ndi zwikili zwifhio u bva kha vhege dzo fhelaho zwine ha khou itwa ndowedzo yazwo?

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4. Kha vha fanyise nyito dzi re kha Thumetshedzo ya A: Manweledzo a Magudiswa a Vhege nga Vhege a Kotara ya 2 (Vhege ya 4–7) na ngudo kha vhege inwe na inwe.

5. Kha vha sedze nyito yo rangwaho phanda nga mugudisi kha Vhege ya 7 (*Nyendedzi ya Nyito: Kotara ya 2*, siaṭari la 133). Kha vha haseledze uri mugudisi u endedza hani vhagudi u vhekanya phukha a konaha u imela data kha giridi.

# Closing activities

1 hour



## 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.
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.

# Nyito dza u vala

Awara 1



## Nyito ya 18

**Ngudo dzo gudwaho:** Kha vha humbule nga zwe vha guda nga tshifhinga tsha wekishopo vha fhedzise thebuḽu.

Zwithu zwine ndi a zwi ita zwi ntshumelaho zwavhuḽi	Mihumbulo miswa ine nda tama u i lingedza



### Mushumo wa u ṽuwa nawo tshikoloni

1. Kha vha bvele phanḽa na u shumisa Rekhodo ya U linga hu yaho phanḽa kha *Nyendedzi ya Nyito: Kotara ya 2* u itela u linga vhagudi vhavho. Kha vha shumise notsi dzavho dza u sedza hu bvelaho phanḽa u fhaṽa vhuṽanzi ha zwine vhagudi vha pfesesa na zwine vha nga ita.
2. Kha vha topole mbilaelo dziṽwe na dziṽwe dzine vha vha nadzo nga mugudi nga eṽhe dza u guda u fara ḽivhaipfi ya mbalo.
3. Kha vha ḽise khophi dza ruburiki dze vha dzi shumisa u itela u linga mbalo kha wekishopo i tevhelaho.
4. Kha vha ḽe na rekhodo ya u linga yo ḽadzwaho ya mugudi muthihi kha wekishopo i tevhelaho.
5. Kha vha shumise *Nyendedzi ya Nyito: Kotara ya 2* u itela u pulana na u thoma Vhege ya 4–7 dza Mbekanyamushumo ya Mbalo, hu tshi katelwa na u sika fhethu ha mbalo ho sedzeswa kha ḽivhaipfi ya vhege iṽwe na iṽwe.
6. Kha vha ite notsi nga zwe zwa shuma zwavhuḽi, zwe zwa zwi shume zwavhuḽi na zwine vha nga ita nga iṽwe nḽila yo fhambanaho u khwinisa u funza na u guda.

### U linga

Kha vha ḽadze Fomo ya u Linga.

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

### Term 2: Activity Plan

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



**THUMETSHEDZO YA A: MANWELEDZO A MAGUDISWA A VHEGE NGA VHEGE A KOTARA YA 2 (VHEGE YA 4-7)**

**Kotara ya 2: Pulane ya Nyito**

Vhege ya 4			
<b>SIA LA MAGUDISWA:</b> TSHIKHALA NA TSHIVHUMBEO (DZHOMETIRI)			
<b>THERO:</b> Vhuimo, orienthesheni na mihumbulo; u talusa, u vhekanya na u vhambedza zwithu zwa 3-D <b>KHA VHA DIVHADZE NDIVHO NTSWA:</b> U vhekanya zwithu zwa 3-D u ya nga zwi fanaho na zwo fhambanaho, zwinzhi nga tshithihi, zwiṭuku nga tshithihi <b>NDOWEDZO:</b> U vhalela ha mutevhetsindo 1-15 na 5-1, u vhalela zwithu 1-7, divhaipfi ya nomboro 1-4, u khwaṭhisedza zwivhumbeo zwoṭhe			
Nyito dza kilasi yoṭhe		Nyito yo rangwaho phanda nga mugudisi	Nyito dza tshitiṭshini tsha u shumela
<b>Duvha la 1</b>	U khwaṭhisedza zwivhumbeo zwoṭhe /u zwima tshivhumbeo.	Nḍowedzo ya 1-4. U talusa tshithu u bva kha vhuimo ho fhambanaho. U ita nḍowedzo ya zwivhumbeo na vhuimo.	<b>Nyito ya 1</b> <b>Nyito ya 2</b> <b>Nyito ya 3</b> <b>Nyito ya 4</b> Tshitendeledzi/tshikwea/ṭhofunderaru zwi nga vha hafhu ... (kha vha sike tshifanyiso). U ita zwivhumbeo vha tshi shumisa zwithu zwa u tumula zwickontsi na suko la u tambisa. U fhaṭa nga zwiḅuḅoko – kha vha shumise zwiḅuḅoko/zwiḅuḅoko zwa Yunifikisi. Dziphazili (gumotuku la zwipiḍa zwa 12).
<b>Duvha la 2</b>	Tshisagana tsha u phuphuledza – u phuphuledza zwivhumbeo zwo fhambanaho na u zwi talusa.		
<b>Duvha la 3</b>	U ṭoda zwivhumbeo ngomu kilasini vha tshi shumisa maipfi a vhuimo.		
<b>Duvha la 4</b>	U ṭodisisa tshivhumbeo. Zwinzhi nga tshithihi, zwiṭuku nga tshithihi.		
<b>Duvha la 5</b>	Sia na vhuimo. Tshikundisi tshi fanelaho u kundwa.		
Vhege ya 5			
<b>SIA LA MAGUDISWA:</b> NOMBORO, TSWAYO NA VHUSHAKA			
<b>THERO:</b> U topola zwiga zwa nomboro na ipfinomboro; u talusa, u tevhekanya na u vhambedza nomboro <b>KHA VHA DIVHADZE NDIVHO NTSWA:</b> U divhadza nomboro 5 <b>NDOWEDZO:</b> U vhalela ha mutevhetsindo 1-15, u vhalela zwithu 1-7, u vhalela u humela murahu u bva kha 5 (zwidade), u khwaṭhisedza divhaipfi ya nomboro 1-4, u tevhekanya nomboro 1-4, zwinzhi/zwiṭuku			
Nyito dza kilasi yoṭhe		Nyito yo rangwaho phanda nga mugudisi	Nyito dza tshitiṭshini tsha u shumela
<b>Duvha la 1</b>	U divhadza 5 (ṭhoho 5 kha nḍu ya vhuṭanu).	U vhambedza zwiga zwa nomboro, maipfinomboro na magarata a tshithoma (4 na 5). U vhalela 1-7. U anganyela na u vhalela. Vhulungu ha u vhalela. Phaṭhekanyo dzo fhambanaho dza nomboro i fanaho.	<b>Nyito ya 1</b> <b>Nyito ya 2</b> <b>Nyito ya 3</b> <b>Nyito ya 4</b> Methe wa suko la u tambisa 5. Nomboro dza tshipembenene (u vhumba tshivhalo tsho teaho tsha bola dza mabambiri). U fanyisa nomboro – dziphekhisi. Phazili dza nomboro u swika kha 5 (vha tshi shumisa maipfinomboro).
<b>Duvha la 2</b>	U khwaṭhisedza 4 na 5 (zwiga zwa nomboro na maipfinomboro).		
<b>Duvha la 3</b>	U vhalela u ya phanda na u humela murahu. Mutalombalo.		
<b>Duvha la 4</b>	U khwaṭhisedza 4 na 5.		
<b>Duvha la 5</b>	U khwaṭhisedza nomboro 1-5 (magarata a tshithoma, zwiga zwa nomboro, maipfinomboro ane vha do vhona).		

Week 6				
<b>CONTENT AREA: PATTERNS, FUNCTIONS AND ALGEBRA</b>				
<b>TOPIC: Copies and extends simple repeating patterns; creates own patterns; describes the repeat in patterns</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b> Copy and extend simple patterns, create and explain own pattern, oral counting 1–20, count backwards from 7				
<b>PRACTISE:</b> 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	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.		Activity 2	
Day 3	Problem solving using patterns.		Activity 3	
Day 4	Making patterns using everyday objects.		Activity 4	
Day 5	Sound patterns.			
Week 7				
<b>CONTENT AREA: DATA HANDLING</b>				
<b>TOPIC: Collects and sort objects; represents sorted collections of objects; discusses and reports on sorted collections of objects</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b> Draw a picture of collected objects, answer questions on own picture				
<b>PRACTISE:</b> 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	Cutting and sorting transport pictures. Sorting waste objects. Shape graph (use cut out shapes). Sorting by colour.
Day 2	Sorting game. Poster 8.		Activity 2	
Day 3	Pictograph: How do you get to school?		Activity 3	
Day 4	Discuss Day 3 results (asking questions).		Activity 4	
Day 5	Collect and sort classroom objects.			

Vhege ya 6			
<b>SIA LA MAGUDISWA:</b> PHETHENI, FANKISHENI NA AĀIDZHEBURA			
<b>THERO:</b> U kopa na u engedza phetheni dzi didovhololaho dzo leluwaho; u sika phetheni vhone vhaṅe; u ṭalusa ndovhololo kha phetheni <b>KHA VHA DIVHADZE NDI VHO NTSWA:</b> U kopa na u engedza phetheni dzo leluwaho, u sika na u ṭalutshedza phetheni vhone vhaṅe, u vhalela ha mutevhetsindo 1–20, u vhalela u humela murahu u bva kha 7 <b>NḐOWEDZO:</b> U tevhékanya nomboro 1–5, u vhalela zwithu 1–7, u ita uri zwiḡwada zwi fane			
Nyito dza kilasi yoṭhe		Nyito yo rangwaho phanda nga mugudisi	Nyito dza tshitiṭshini tsha u shumela
<b>Duvha la 1</b>	Phetheni dza muvhili.	U sedzesa kha divhaipfi ya nomboro 1–5. U dzinginya na u kwasha. U ita zwiḡwada zwi eḡanaho. Phetheni na mufarakani. Zwiḡḡoko zwa Yunifikisi.	<b>Nyito ya 1</b>  <b>Nyito ya 2</b>  <b>Nyito ya 3</b>  <b>Nyito ya 4</b>
<b>Duvha la 2</b>	U topola phetheni kha zwithu zwa duvha liṅwe na liṅwe.		
<b>Duvha la 3</b>	U tandulula thaidzo vha tshi shumisa phetheni.		
<b>Duvha la 4</b>	U ita phetheni vha tshi shumisa zwithu zwa duvha liṅwe na liṅwe.		
<b>Duvha la 5</b>	Phetheni dza mubvumo.		
<b>Vhege ya 7</b>			
<b>SIA LA MAGUDISWA:</b> U SHUMA NA DATA			
<b>THERO:</b> U kuvhanganya na u vhekanya zwithu; u imela kuvhanganyo dza zwithu dzo vhekanywaho; u haseledza na u vhiga nga kuvhanganyo dza zwithu dzo vhekanywaho <b>KHA VHA DIVHADZE NDI VHO NTSWA:</b> U ola tshifanyiso tsha zwithu zwo kuvhanganywaho, u fhindula mbudziso nga tshifanyiso tshavho <b>NḐOWEDZO:</b> U vhalela ha mutevhetsindo 1–20 na u humela murahu u bva kha 7, u vhalela zwithu 1–7, zwinzhi kha/zwiṭuku kha/eḡana na, divhaipfi ya nomboro 1–5, u vhekanya na u khethekanya			
Nyito dza kilasi yoṭhe		Nyito yo rangwaho phanda nga mugudisi	Nyito dza tshitiṭshini tsha u shumela
<b>Duvha la 1</b>	U kuvhanganya na u vhekanya zwithu (tshipulumbu kana tshikwea).	Nyanganyelo. U vhalela. U vhekanya kuvhanganyo dza phukha. Girafu ya zwifayiso: zwinzhi/zwiṭuku. U vhudzisa.	<b>Nyito ya 1</b> <b>Nyito ya 2</b> <b>Nyito ya 3</b>  <b>Nyito ya 4</b>
<b>Duvha la 2</b>	Mutambo wa u vhekanya. Phositaru ya 8.		
<b>Duvha la 3</b>	Girafu ya tshifanyiso: Ni isa hani tshikoloni?		
<b>Duvha la 4</b>	Kha vha haseledze mvelelo dza Duvha la 3 (u vhudzisa mbudziso).		
<b>Duvha la 5</b>	U kuvhanganya na u vhekanya zwithu kilasini.		

# Workshop 5 Evaluation Form

1. Did the workshop meet your expectations?

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2. What did you learn in this workshop that helped you the most?

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3. Was there anything that you did not like or had difficulty understanding?

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4. How will you apply what you have learnt in your Grade R classroom?

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5. Do you have any suggestions for improving further workshops?

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## Fomo ya u Linga ya Wekishopo ya 5

1. Wekishopo yo swikelela ndavhelelo dzavho?

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2. Ndi zwifhio zwe vha guda kha iyi wekishopo zwe zwa vha thusesa?

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3. Ho vhuya ha vha na zwiṅwe zwe vha si zwi takalele kana zwe vha konḑelwa u zwi pfesesa?

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4. Vha ḑo shumisa hani zwe vha guda ngomu kiḷasirumuni yavho ya Gireidi ya T?

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5. Vha na zwine vha tama u dzinginya u itela u khwinisa wekishopo dzi tevhelaho?

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