



**GAUTENG PROVINCE**  
EDUCATION  
REPUBLIC OF SOUTH AFRICA

**GGT 2030**  
GROWING GAUTENG TOGETHER

Setswana/English

# **Lenaneotokafatso la Dipalo tša Mophato R Grade R Mathematics Improvement Programme**



**Thutano 4 • Workshop 4  
Kaedi ya Mofathosi • 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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Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R ke itshimololelo ya **Lefapha la Thuto la Gauteng (Gauteng Department of Education)** mmogo le badirisani ba bona ba botlhokwa, **Gauteng Education Development Trust**.

Tlhabololo le tlhagiso ya didiriswa tsa katiso le phaposiborutelo ya Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R e kgonthitswe ke tshegetso ya **United States Agency for International Development** le **Zenex Foundation** ka matlole.

Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R e laolwa ke **JET Education Services** mmogo le **Schools Development Unit** ya **UCT** le **Wordworks** jaaka badirisani ba setegeniki.

**Schools Development Unit (SDU)** kwa **University of Cape Town (UCT)** ke badirisani ba setegeniki ba dipalo go Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato wa R. SDU ke yuniti e e ka tlase ga School of Education sa UCT e e totileng tokafatso ya boporofesenele jwa barutabana mo Dipalong, Bonetetshing, Kitsokwalo/Puo le Dikgonotshelo go simolola ka Mophato R go fitlha ka Mophato 12. SDU e neelana ka thuto ka boithutedi jwa borutabana le dithutokhutshwe tse di dumeletsweng tsa UCT, tiro ya kwa sekolong, tlhagiso ya dibukana le dipatlisiso go tshegetsa go ruta le go ithuta mo makaelong otlhe a Aforikaborwa.

#### DITEBOGO

Ditebogo di lebiswa segolobogolo go:

- Batlhankedi ba Lefapha la Thuto la Gauteng mo Lephatheng la Kharikhulamo, Bokaedi jwa Thuto ya Barutabana le Thuto e e Kgethegileng ka ntlha ya seabe sa bona go dirisa dibukana tseno tsa rona.
- Badiri le barutabana ba Western Cape Education Department (WCED) ka ntlha ya seabe sa bona mo go netefatseng gore Grade R Mathematics Programme (*R-Maths*) e a diragadiwa mo Kapabophirima magareng ga 2016 le 2019.
- Setlhophla se se kwalang *R-Maths*: Badiri ba SDU le bagakolodi.



Porojeke ya Lenaneotokafatso la Dipalo tsa Mophato R le tserwe go tswa mo *R-Maths*, e phasaladitswe lwantlha ka 2017 ke Schools Development Unit, ya University of Cape Town. Tetlokhopi ya *R-Maths* e tshwerwe ke University of Cape Town.

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# Overview

## Purpose

This is the fourth 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 implement the Maths Programme in their classrooms. Participants will have the opportunity to reflect on their observations and explore how the **level principle** informs planning, teaching and learning. Participants will also consider the **level principle** and how to respond to learners with individual developmental and learning needs. The sessions will provide additional knowledge and understanding of teaching and learning in the Content Areas covered in Week 10 of Term 1, and Weeks 1–3 of Term 2.

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 Weeks 6–9
- ◆ To explore strategies to support teaching maths in Grade R
- ◆ To start to present solutions to learner progress and developmental levels
- ◆ To apply the Maths Programme principles in weekly planning
- ◆ To engage with the Maths Programme content of Term 1 Week 10 and Term 2 Weeks 1–3 (Data Handling; Numbers, Operations and Relationships; Space and Shape (Geometry))

## Workshop content

- ◆ Opening and reflection (1 hour)
  - ◆ Session 1: Data Handling (1 hour)
- TEA
- ◆ Session 2: Numbers, Operations and Relationships (1 hour)
  - ◆ Session 3: Space and Shape (Geometry) (1 hour)
- LUNCH
- ◆ Session 4: Planning for teaching (2 hours)

# Thadiso

## Maitlhommo

Eno ke thutano ya bone ya dithutano di le lesomepedi tsa Lenaneotokafatso la Dipalo tsa Mophato R, le e leng karolo ya Porojeke ya Lenaneotokafatso la Dipalo le Puo tsa Mophato R la Lefapha la Thuto la Gauteng (GDE).

Maitlhommo a thutano eno ke go thusa barutabana go diragatsa Lenaneo la Dipalo mo diphaposiborutelong tsa bona. Batsayakarolo ba tlaa nna le tšhono ya go akanya ka ga tse ba di etseng tlhoko le go sedisisa gore **molawana wa maemo** o tlhotlheletsa jang ipaakanyo, go ruta le go rutiwa. Batsayakarolo gape ba tlaa ela tlhoko **molawana wa maemo** le gore ba tlaa tsibogela jang barutwana ba ba nang le ditlhokego tsa go rutiwa tsa kgolo le tsa motho ka nosi. Dikarolo di tlaa tlamelwa ka kitso ya tlaletso le go tlhaloganya go ruta le go rutiwa mo Dikaroloteng tse di weditsweng mo Bekeng 10 ya Kgweditharo 1, le mo Dibekeng 1–3 tsa Kgweditharo 2.

Metswedi ya Dikaroloteng tsa Dipalo tsa Mophato wa R di tserwe mo *Polelong ya Pholisi ya Kharikhulamo le Tlhatlhobo (PPKT): Dipalo tsa Mophato wa R (Lokwalo lwa Bofelo)*, 2011, Lefapha la Thutotheo, Aforika Borwa.

## Dipoelothuto

- ◆ Go sedisisa tiragatsong ya Kgweditharo 1 Dibeke 6–9
- ◆ Go sedisisa ditogamaano tsa go tshegetsa go ruta dipalo mo Mophato R
- ◆ Go simolola go tlhagisa ditharabololo tsa tswelelopele ya morutwana le maemo a kgolo
- ◆ Go diragatsa melawana ya Lenaneo la Dipalo mo ithulaganyong ya beke le beke
- ◆ Go lepalepana le diteng tsa Lenaneo la Dipalo mo Kgweditharong 1 Beke 10 le mo Kgweditharong 2 Dibeke 1–3 (Go Ranola Tshedimosetso; Dinomore, Ditiro le Dikamano; Boalo le Popego (Jeometeri))

## Diteng tsa thutano

- ◆ Pulo le tshedisiso (Ura e le1)
- ◆ Karolo 1: Go Ranola Tshedimosetso (Ura e le1)

### TEE

- ◆ Karolo 2: Dinomore, Ditiro le Dikamano (Ura e le 1)
- ◆ Karolo 3: Boalo le Popego (Jeometeri) (Ura e le 1)

### DIJOTSHEGARE

- ◆ Karolo 4: Go ithulaganyetsa go ruta (Diura di le 2)

## Preparation

- ◆ PPT welcome and outcomes
- ◆ Read:  
*Concept Guide*, pages 136–137, 212–219  
*Activity Guide: Term 1*, pages 18–21  
Appendix A: Term 1 and 2 Weekly Content Summary
- ◆ Set out a Maths Programme *Resource Kit* on each group's table.
- ◆ PPT: Data Handling cycle.
- ◆ Prepare the story, *They pulled and they pulled*, (*Activity Guide: Term 2*, pages 62 and 198).

## Materials

- ◆ Flipchart paper, kokis
- ◆ *Resource Kit*: animal counters
- ◆ *Resource Kit*: attribute blocks
- ◆ A copy of *Activity Guide: Term 2* for each participant



## Ipaakanyo

- ◆ PPT kamogelo le dipoelo

- ◆ Buisa:

*Kaedi ya Mogopolo*, ditsebe 136–137, 212–219

*Kaedi ya Ditirwana: Kgweditharo 1*, ditsebe 18–21

Mametlelelo A: Kgweditharo 1 le 2 Khutshwafatso ya Diteng tsa Beke le Beke

- ◆ Baakanya *Kgetsana ya Didiriswa* tsa Lenaneo la Dipalo mo tafoleng e nngwe le e nngwe ya sethopho se sengwe le se sengwe.

- ◆ PPT: Tsheko ya Go Ranola Tshedimosetso.

- ◆ Rulaganya kanelo, *Ba gogile ba boa ba goga*, (*Kaedi ya Ditirwana: Kgweditharo 2*, ditsebe 63 le 199).

## Didiriswa

- ◆ Pampiri ya tšhatephetogi, dikhokhi

- ◆ *Kgetsana ya Didiriswa*: dibadi tsa diphologolo

- ◆ *Kgetsana ya Didiriswa*: dibolokoponagalo

- ◆ Khophi ya *Kaedi ya Ditirwana: Kgweditharo 2* ya motsayakarolo yo mongwe le yo mongwe

# Opening and reflection

1 hour

## Facilitator's notes

- ◆ PPT: Learning outcomes of the workshop.
- ◆ Remind participants of the *Take back to school* task from the end of Workshop 3.
- ◆ Refer participants to **Activity 1** and read through the instructions. Participants complete the activity in their groups. Groups share key points with the large group.
- ◆ Remind participants of the **level principle** and the importance of taking into account the learners' different abilities and developmental levels.

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



### Activity 1

Discuss your progress in implementing the *Take back to school* task from Workshop 3.

Refer to the observation check boxes at the end of each week in *Activity Guide: Term 1*, Weeks 6, 7, 8 and 9.

1. What insights did you gain while observing learners during their Mathematics focus time?

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2. What did you find difficult about the observation during the teacher-guided activity?

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3. Mention one new thing that is working well with your implementation of Term 1 Weeks 6–9. Have you found that the Maths Programme is assisting with teaching and learning in your Grade R class?

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According to the **level principle**, differentiation means that what you teach and how you teach it needs to take into account the different abilities or developmental levels of your learners. To use this approach, you need to continuously observe and record each learner's progress and development in maths.

## Dintlha tsa mofatlhosi

- ◆ PPT: Dipolelo tsa thutano tsa go ithuta.
- ◆ Gopotsa batsayakarolo ka ga *Tirwana e o e busetsang kwa sekolong* go tswa kwa bokhutlong jwa Thutano 3.
- ◆ Kopa batsayakarolo go lebelela **Tirwana 1** le go buisa ditaelo. A batsayakarolo ba dire tirwana mo ditlhopheng tsa bona. A ditlhopho di arogane dintlha tsa botlhokwa le sethopho se segolo.
- ◆ Gopotsa batsayakarolo ka ga **molawana wa maemo** le botlhokwa jwa go ela tlhoko bokgoni jo bo farologaneng jwa barutwana le maemo a bona a kgolo.

Sedisisa tiragatso ya Lenaneo la Dipalo mo lenaneong la gago la letsatsi le letsatsi mme o dire tirwana e e latelang mo sethopheng sa gago.



### Tirwana 1

Buisanang ka ga kgatelepele ya gago tebang le go diragatsa *Tirwana e o e busetsang kwa sekolong* go tswa mo Thutanong 3.

Lebelela mabokoso a kelotlhoko kwa bofelong jwa beke e nngwe le e nngwe mo *Kaeding ya Ditirwana: Kgweditharo 1*, Dibeke 6, 7, 8 le 9.

1. Ke botlhale bofe jo o bo boneng fa o ntse o etse barutwana tlhoko ka nako ya bona e e tobilweng ya Dipalo?

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2. Ke eng se o boneng se le thata ka ga kelotlhoko mo tirwaneng e e kaelwang ke morutabana?

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3. Tlhagisa selo se le sengwe fela se sentšhwa se se dirang sentle mo Tiragatsong ya gago ya Kgweditharo 1 Dibeke 6–9. A o bone gore Lenaneo la Dipalo le a thusa mo go ruteng le mo go ithuteng mo phaposiborutelong ya gago ya Mophato wa R?

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Go ya ka **molawana wa maemo**, pharologantsho e kaya gore se o se rutang le ka moo o se rutang ka teng o tlhoka go ela tlhoko bokgoni jo bo farologaneng jwa barutwana kgotsa maemo a bona a kgolo. Fa o dirisa tsela eno, o tlhoka go ba ela tlhoko ka gale le go rekota tswelolepele ya morutwana mongwe le mongwe mmogo le kgolo mo dipalong.

# Session 1: Data Handling

1 hour

## Facilitator's notes

- ◆ This workshop focuses on teaching the content of the Maths Programme for Term 1 Week 10 and Term 2 Weeks 1–3.
- ◆ Explain that the focus of Term 1 Week 10 is on Data Handling.
- ◆ Refer participants to pages 136–137 of the *Concept Guide*.
- ◆ Ask participants to work in groups to complete **Activity 2**. Ask one person from each group to share their ideas.

This workshop focuses on teaching the following Maths Programme content: Term 1 Week 10 and Term 2 Weeks 1–3. This session focuses on Term 1 Week 10: Data Handling.

## Term 1 Content overview: Data Handling

Refer to the Data Handling Content Area on pages 136–137 of the *Concept Guide*.



### Activity 2

In your group, discuss:

1. What Data Handling content is covered in Term 1?

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2. What does the Maths Programme add to the content from CAPS?

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## Working with data

### Facilitator's notes

- ◆ Start this session with the following activity.  
Ask participants who are wearing trainers to stand together.  
Ask participants who are wearing sandals to stand together.  
Ask participants who are wearing high heels to stand together.  
Ask participants who are wearing closed shoes to stand together.  
(NOTE: Change this activity according to the season and the types of shoes participants are wearing.)  
Once the participants are in groups, discuss the following questions:  
*Which group has more people?*  
*Which group has fewer people?*  
*Which groups have the same number of people in them?*

# Karolo 1: Go Ranola Tshedimosetso

Ura e le 1

## Dintlha tsa mofatlhosi

- ◆ Thutano eno e tobile go ruta diteng tsa Lenaneo la Dipalo tsa Kgweditharo 1 Beke 10 le Kgweditharo 2 Dibeke 1-3.
- ◆ Tlhalosa gore Kgweditharo 1 Beke 10 e tobile Go Ranola Tshedimosetso.
- ◆ Kopa batsayakarolo go lebelela ditsebe 136-137 tsa *Kaedi ya Mogopolo*.
- ◆ Kopa batsayakarolo go dira ka ditlhophha go wetsa **Tirwana 2**. Kopa motho a le mongwe go tswa mo setlhopheng se sengwe le se sengwe go arogana dikakanyo tsa bona.

Thutano eno e tobile go ruta diteng tse di latelang tsa Lenaneo la Dipalo: Kgweditharo 1 Beke 10 le Kgweditharo 2 Dibeke 1-3. Karolo eno e tobile Kgweditharo 1 Beke 10: Go Ranola Tshedimosetso.

## Karolo 1 Thadiso ya diteng: Go Ranola Tshedimosetso

Lebelela Karoloteng ya Go Ranola Tshedimosetso mo ditsebeng 136-137 tsa *Kaedi ya Mogopolo*.



### Tirwana 2

Mo ditlhopheng tsa lona, buisanang ka:

1. Ke diteng dife tsa Go Ranola Tshedimosetso tse di dirilweng mo Kgweditharong ya 1?

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2. Lenaneo la Dipalo le tlaelelsa ka eng mo diteng tse di tswang mo PPKT?

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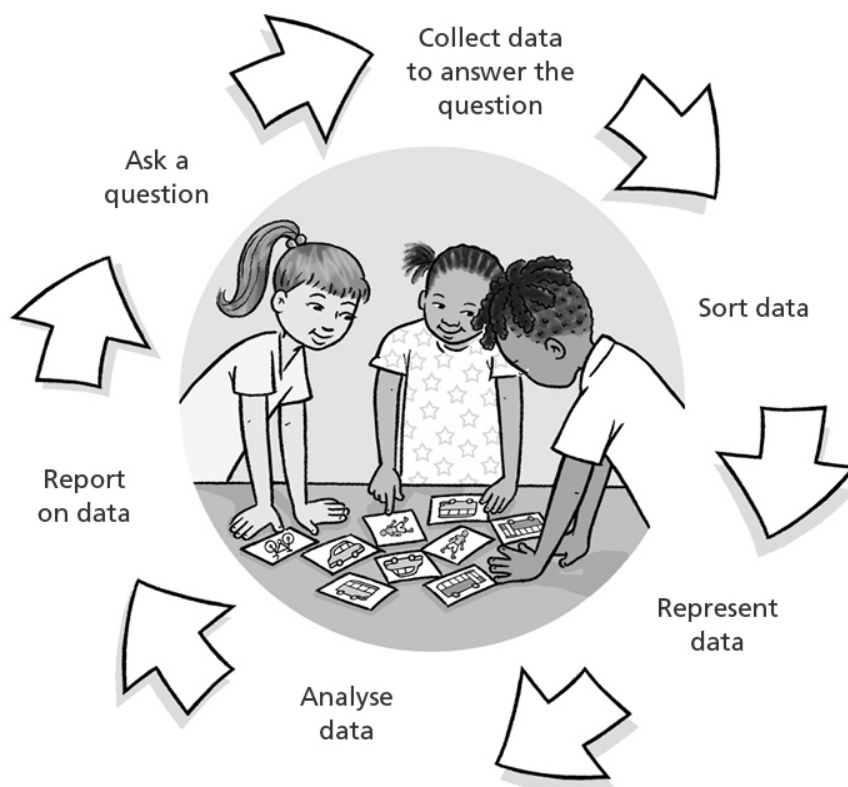
## Go dira ka dinewa

### Dintlha tsa mofatlhosi

- ◆ Simolola karolo eno ka tirwana e e latelang.  
Kopa batsayakarolo ba ba rweleng diteki tsa go ikatisa go ema mmogo  
Kopa batsayakarolo ba ba rweleng diphathaphatha go ema mmogo  
Kopa batsayakarolo ba ba rweleng dikwaekwae go ema mmogo  
Kopa batsayakarolo ba ba rweleng ditlhako tse di tswalegileng go ema mmogo  
(ELA TLHOKO: Fetola tirwana eno go latela setlha le mofuta wa ditlhako tse di rweleng ke batsayakarolo.) Fa batsayakarolo ba eme ka ditlhophha, buisanelang dipotso tse di latelang:  
*Ke setlhophha sefe se se nang le batho ba bantsi?*  
*Ke setlhophha sefe se se nang le batho ba le mmalwanyana?*  
*Ke ditlhophha dife tse di nang le palo e e lekanang ya batho?*

- ◆ Explain that what participants have done is to sort/classify according to one particular attribute that is the same and that this is a very important part of Data Handling.
- ◆ Emphasise the importance of sorting and classification in Grade R.
- ◆ Discuss the kinds of sorting activities that learners could do in Grade R.
- ◆ PPT: Data Handling cycle and summarise content from the *Participant's Workbook*.
- ◆ Discuss each of the six steps in the Data Handling cycle.

In this session, you will learn about the Data Handling cycle as a process for solving problems. Data Handling in Grade R focuses on collecting, sorting, organising, representing and analysing information about people or things. The main reason we collect data is to answer a question or to solve a problem.

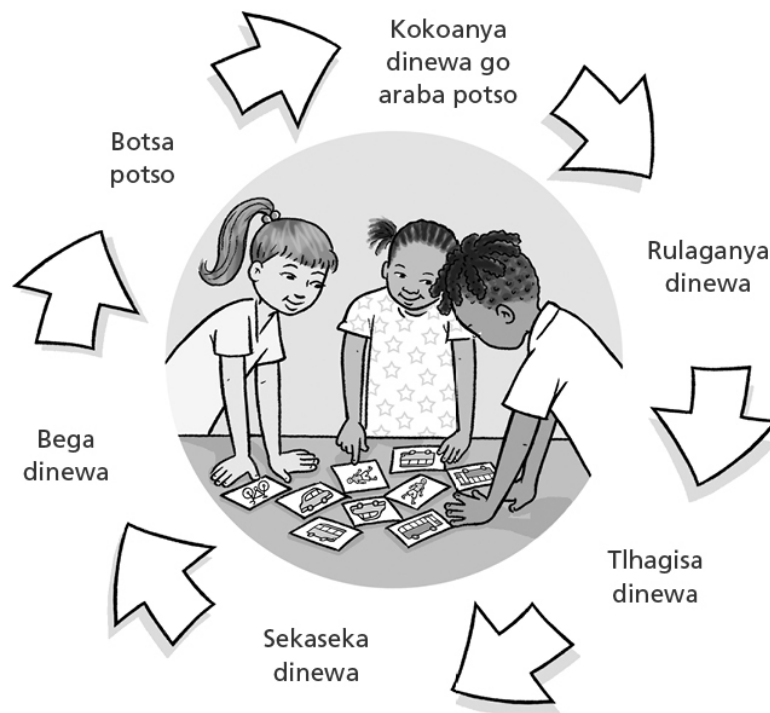


People often refer to the process of Data Handling as a cycle because the events or activities that are involved are repeated in the same sequence for each new question that is to be answered.

1. **Ask a question:** Learners decide what they want to find out about. This is the reason for collecting specific data or information.
2. **Collect data:** Learners decide they want to collect data based on the question or problem.

- ◆ Tlhalosa gore se batsayakarolo ba se dirileng ke go rulaganya/arologantsha go ya ka ponagalo e e rileng e le nngwe mme e bile e tshwana le gore seno ke karolwana e e bothokwa ya Go Ranola Tshedimosetso.
- ◆ Gatelela bothokwa jwa go rulaganya le karologantsho mo Mophatong wa R.
- ◆ Buisanang ka ga mefuta ya ditirwana tsa go rulaganya tse barutwana ba ka di dirang mo Mophatong wa R.
- ◆ PPT: Tshoko ya Go Ranola Tshedimosetso le diteng tse di khutshwafaditsweng go tswa mo *Bukatirong ya Batsayakarolo*.
- ◆ Buisanang ka ga kgato e nngwe le e nngwe ya di le thataro mo Tshokong ya Go Ranola Tshedimosetso.

Mo karolong eno, o tlaa ithuta ka ga Tshoko ya Go Ranola Tshedimosetso jaaka tsela ya tharabololo ya dipalo. Go Ranola Tshedimosetso mo Mophatong wa R go tobile go kokoanya, go tlaola, go rulaganya, go tthagisa le go tthatlhoa tshedimosetso ka ga batho kgotsa dilo. Lebakalegolo la go kokoanya dinewa ke go araba potso kgotsa go rarabolola palo.



Go le gantsi batho ba lebelela tsamao ya Go Ranola Tshedimosetso jaaka tshoko gonne ditiragalo kgotsa ditirwana tse di dirwang di boelediwa mo tatelanong e e tshwanang mo potsong e nngwe le e nngwe e ntšhwa e e arabiwang.

1. **Botsa potso:** Barutwana ba swetsa gore ba batla go batlisisa ka ga eng. Leno ke lona lebaka la go kokoanya dinewa kgotsa tshedimosetso e e rileng.
2. **Kokoanya dinewa:** Barutwana ba swetsa gore ba tlaa kokoanya jang dinewa ba ikaegile ka potso kgotsa bothata.

3. **Sort data:** Learners organise and sort data into groups according to the attribute. In order to answer questions and decide how to represent data that have been collected, decisions need to be made about how things could be sorted.
4. **Represent data:** Learners explore different ways of showing or displaying the information they have collected.
5. **Analyse data:** Learners describe and compare the data that is represented.
6. **Report on data:** Learners answer the question that was initially asked.

Objects can be sorted and classified (grouped) according to their similarities, such as colour, animals, plants. The more learners know about the properties of objects, and their similarities and differences, the more they are able to form different classification groups.



### Video 1

*Activity Guide: Term 1, Week 10, Day 4 #5-9 (pages 180-183)*

Watch the video of the class creating and analysing a pictograph to represent the weather.

Discuss how the teacher presents each of the steps in the lesson. Notice the types of questions she uses and how she reinforces the use of correct vocabulary.

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### Facilitator's notes

- ◆ Highlight the importance of using the same size pieces of paper, starting at the bottom and placing each piece of paper right against the previous one. Make sure there is enough height for the longest column.
- ◆ PPT: Photos of correctly placed pieces of paper in a pictograph as well as examples of incorrectly structured pictographs.  
After the activity, explain that:  
Pictographs – always organise the data from the bottom to the top.  
Construct a grid so that there is a one-to-one correspondence between each item in the grid. This makes it easier for learners to compare the quantities in each column.
- ◆ Reflect on the different steps of the Data Handling cycle the participants have gone through.
- ◆ Refer participants to **Activity 3**.



3. **Rulaganya dinewa:** Barutwana ba rulaganya dinewa le go di baya ka ditlhopha go latela ponagalo. Gore ba kgone go araba dipotso le go swetsa gore ba tlhagisa jang dinewa tse ba di kokoantseng, ditshwetso tsa gore dilo di ka rulagannngwa jang.
4. **Go tlhagisa dinewa:** Barutwana ba tlhotlhomisa ditsela tse di farologaneng tsa go bontsha kgotsa go supa tshedimosetso e ba e kokoantseng.
5. **Sekaseka dinewa:** Barutwana ba tlhalosa le go bapisa dinewa tse di tlhagisitsweng.
6. **Bega ka dinewa:** Barutwana ba araba potso e e boditsweng pele.

Dilo di ka rulagannngwa le go arologannngwa (kokoannngwa) go ya ka ditshwano tsa tsona, jaaka mmala, diphologolo, dimela. Fa barutwana ba itse go le gontsi ka ga diponagalo tsa dilo, le ditshwano le dipharologano tsa tsona, ba ka kgona go tlhama ditlhopha botoka ka dipharologantsho tse di farologaneng.



### Video 1

*Kaedi ya Ditirwana: Kgweditharo 1, Beke 10, Letsatsi 4 #5-9 (ditsebe 180-183)*

Lebelela video ya phaposiborutelo e tlhama le go sekaseka kerafotshwantsho go tlhagisa bosa.

Tlhalosa ka moo morutabana o tlhagisang kgato e nngwe le e nngwe mo kamusong. Ela tlhoko mefuta ya dipotso tse a di dirisang le gore o gatelela jang tiriso e e nepagetseng ya tlotlofoko.

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### Dintlha tsa mofatlhosi

- ◆ Gatelela botlhokwa jwa go dirisa manathwana a a tshwanang ka bogolo a pampiri, o simolola kwa tlase le go baya lenathwana le lengwe le le lengwe la pampiri mo godimo ga la pele. Netefatsa gore go na le bogolo jo bo lekanang kholomo e telele thata.
- ◆ PPT: Ditshwantsho tsa manathwana a pampiri a a beilweng ka nepagalo mo kerafotshwantshong mmogo le dikao tsa dikerafotshwantsho tse di sa thadiwang ka nepagalo.  
Morago ga tirwana, tlhalosa gore:  
Dikerafotshwantsho – ka gale di rulaganya dinewa go simolola kwa tlase go ya kwa godimo.  
Aga keriti gore go nne le tsamaelano ya nngwe ka nngwe mo gare ga dilwana tse dingwe le tse dingwe mo keriting. Seno se dira gore barutwana ba bapise bokaakang jwa dilo bonolo mo kholomong e nngwe le e nngwe.
- ◆ Akanya ka ga dikgato tse di farologaneng tsa tshoko ya Go Ranola Tshedimosetso tse batsayakarolo ba fetileng mo go tsona.
- ◆ Kopa batsayakarolo go dira **Tirwana 3**.

This next activity will take you through the six stages of the Data Handling cycle.



### Activity 3

Take the following animal counters from the Maths Programme *Resource Kit*: three ducks, two chickens and one horse.

1. Consider this question: Are there more ducks or more chickens in the group?
2. Sort and collect data: Organise your animals into groups and then discuss the following with a partner:
  - ◆ Can you see if there are more ducks than chickens now?
  - ◆ How can you check?
3. Represent data: Turn to the grid on page 20. Place animals of the same kind one above the other in a column starting at the bottom of the grid.
4. Analyse and report on data: Look at your columns and discuss with a partner:
  - ◆ Are there more ducks or more chickens? How do you know?
  - ◆ Which column has more animals?
  - ◆ Which column has fewer animals?
  - ◆ Are there the same number of any kind of animal?

Refer to pages 184–187 of *Activity Guide: Term 1* and discuss how this activity is introduced to learners. Refer to pages 212–219 of the *Concept Guide* to read more about Data Handling. Notice the appropriate questions and vocabulary related to the teaching and learning of Data Handling in Grade R.

Tirwana e e latelang eno e tlaa go tshagisetsa dikgato tse thataro tsa tsheko ya Go Ranola Tshedimosetso.



### Tirwana 3

Tsaya dibalaphologolo tse di latelang go tswa mo *Kgetsaneng ya Didiriswa* tsa Lenaneo la Dipalo: dipidipidi di le tharo, dikoko di le pedi le pitse e le nngwe.

1. Tsaya potso eno tsia: A dipidipidi kgotsa dikoko di dintsi go feta mo setlhopheng?
2. Tlhaola le go kokoanya dinewa: Rulaganya diphologolo tsa gago ka ditlhopha mme morago lo buisanele tse di latelang le molekane:
  - ◆ A jaanong o kgona go bona fa go na le dipidipidi tse dintsi go feta dikoko?
  - ◆ O ka netefatsa jang?
3. Tlhagisa dinewa: Lebelela keriti mo tsebeng 21. Baya diphologolo tsa mofuta o le mongwe ka go di tthatlaganya mo kholomong o simolola kwa tlase ga keriti.
4. Sekaseka le go neela pegelo tebang le dinewa: Lebelela dikholomo tsa gago mme lo buisane le molekane
  - ◆ A dipidipidi ke tsona tse dintsi go feta kgotsa ke dikoko? O itse jang?
  - ◆ Ke kholomo efe e e nang le diphologolo tse dintsi?
  - ◆ Ke kholomo efe e e nang le diphologolo di le mmalwanyana?
  - ◆ A go na le palo e e lekanang ya mofuta mongwe wa diphologolo?

Lebelela ditsebe 184–187 tsa *Kaedi ya Ditirwana: Kgweditharo 1* mme lo buisane ka moo tirwana eno e tshagiseditsweng barutwana ka teng. Lebelela ditsebe 212–219 tsa *Kaedi ya Mogopolo* go buisa go le gontsi ka ga Go Ranola Tshedimosetso. Lemoga dipotso tse di maleba le tlotlofoko e e amanang le go ruta le go ithuta Go Ranola Tshedimosetso mo Mophatong wa R.



# Session 2: Numbers, Operations and Relationships

1 hour

## Facilitator's notes

- ◆ Explain that the focus of Term 2 Weeks 1 and 2 is Numbers, Operations and Relationships. This session aims to deepen participants' knowledge and understanding of number and how it is taught and learnt in Term 2.
- ◆ Refer participants to pages 114–123 of the *Concept Guide*.
- ◆ Have participants work in groups to complete **Activity 4**. Ask one person from each group to share their ideas.

The focus of Term 2 Weeks 1 and 2 is Numbers, Operations and Relationships.

## Term 2 Content overview: Numbers, Operations and Relationships



### Activity 4

Refer to the Numbers, Operations and Relationships Content Area on pages 114–123 of the *Concept Guide*.

1. What concepts are covered in Term 2?

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2. What does the Maths Programme add to the content of CAPS?

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## Activity Guide: Term 2

### Facilitator's notes

- ◆ Hand out copies of *Activity Guide: Term 2* to all participants.
- ◆ Ask participants to look at the Contents page and pages 6–17 to see that the 'Introduction' in Term 2 is the same as in Term 1.
- ◆ Refer participants to 'Content overview: Term 2' (pages 18–21).
- ◆ Participants complete **Activity 5**.

# Karolo 2: Dinomore, Ditiro le Dikamano

Ura e le 1

## Dintlha tsa mofatlhosi

- ◆ Tlhalosa gore Kgweditharo 2 Dibeke 1 le 2 e tobile Dinomore, Ditiro le Dikamano. Karolo eno e ikaelela go tiisa kitso ya batsayakarolo mmogo le go tlhologanya ga bona dinomore le gore di rutiwa le go ithutiwa jang mo Kgweditharong 2.
- ◆ Kopa batsayakarolo go lebelela ditsebe 114–123 tsa *Kaedi ya Mogopolo*.
- ◆ A batsayakarolo ba dire ka ditlhophha go wetsa **Tirwana 4**. Kopa motho a le mongwe go tswa mo setlhopheng se sengwe le se sengwe go arogana dikakanyo tsa bona.

Kgweditharo 2 Dibeke 1 le 2 e tobile Dinomore, Ditiro le Dikamano.

## Karolo 2 Thadiso ya diteng: Dinomore, Ditiro le Dikamano



### Tirwana 4

Lebelela Karoloteng ya Dinomore, Ditiro le Dikamano mo ditsebeng 114–123 tsa *Kaedi ya Mogopolo*.

1. Ke megopolo efe e e tobiwang mo Kgweditharong ya 2?

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2. Lenaneo la Dipalo le tlaleletsa ka eng mo PPKT?

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## Kaedi ya Ditirwana: Kgweditharo 2

### Dintlha tsa mofatlhosi

- ◆ Neela batsayakarolo dikhophi tsa *Kaedi ya Ditirwana: Kgweditharo 2*
- ◆ Kopa batsayakarolo go leba tsebe ya Diteng le ditsebe 6–17 go bona gore 'tlhagiso' mo Kgweditharong
- ◆ Kopa batsayakarolo go lebelela 'Thadiso ya diteng: Kgweditharo 2' (ditsebe 18–21).
- ◆ A batsayakarolo ba dire **Tirwana 5**.

*Activity Guide: Term 2* provides teachers with weekly suggestions for teaching and learning Mathematics.

Look at the Contents page and pages 6–17 of *Activity Guide: Term 2*. You will see that the ‘Introduction’ in Term 2 is the same as in Term 1.

In Activity 4 you identified the number concepts to be covered in Term 2. In Activity 5 you will make links between these concepts and the New knowledge for the first two weeks of *Activity Guide: Term 2*.



### Activity 5

Refer to ‘Content overview: Term 2’ (*Activity Guide: Term 2*, pages 18–21).

1. What new knowledge is introduced to learners in the Numbers, Operations and Relationships Content Area?

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2. Go back to Activity 4 and highlight or circle the concepts covered.

## Understanding numbers

### Facilitator’s notes

- ◆ Review the routine that the participants have used to introduce numbers 1, 2 and 3 to learners in their classes.
- ◆ Ask participants to reflect on their experiences in the classroom and to complete **Activity 6**.
- ◆ Explain that in Term 2 they will be focusing on numbers 4 and 5, using this same routine to introduce the numbers.
- ◆ Read through the whole class activities that focus on number 4 in Week 1: *Activity Guide: Term 2*: page 24 (Day 1 #4), page 26 (Day 2 #5), page 28 (Day 3 #4), page 30 (Day 4 #4 and Day 5 #4).

In Term 1, the numbers 1, 2 and 3 were taught. You used the same routine for each number taught, adding one more to the number each time a new number was introduced. In Term 2 Week 1, the focus is on the concept of number again. Learners are introduced to the number 4, using the same routine as for numbers 1, 2 and 3.



*Kaedi ya Ditirwana: Kgweditharo 2* e tlamela barutabana ka ditshikhinyo tsa beke le beke tsa go ruta le go ithuta Dipalo.

Lebelela tsebe ya Diteng le ditsebe 6–17 tsa *Kaedi ya Ditirwana: Kgweditharo 2*. O tlaa bona gore ‘Tlhagiso’ mo Kgweditharong ya 2 e tshwana le mo Kgweditharong 1.

Mo Tirwaneng 4 o tlaotse megopolopalo e e tshwanetseng go lejwa mo Kgweditharong ya 2. Mo Tirwaneng 5, o tlaa dira dikgolagano magareng ga megopolo eno le Kitso e ntšhwa mo dibekeng tse pedi tsa ntlha tsa *Kaedi ya Ditirwana: Kgweditharo 2*.



### Tirwana 5

Lebelela ‘Thadiso ya diteng: Kgweditharo 2’ (*Kaedi ya Ditirwana: Kgweditharo 2*, ditsebe 18–21).

1. Ke kitso efe e ntšhwa e e tlhagiseditsweng barutwana mo Karoloteng ya Dinomore, Ditiro le Dikamano?

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2. Boela kwa Tirwaneng 4 mme o bonalatse kgotsa o sekele megopolo e e lebilweng.

### Go tlhaloganya dipalo

#### Dintlha tsa mofatlhosi

- ◆ Leba moetlo o batsayakarolo ba o dirisitseng go tlhagisetsa barutwana mo diphaposiborutelong dinomore 1, 2 le 3 sešwa.
- ◆ Kopa batsayakarolo go sedisisa maitemogelo a bona mo phaposiborutelong le go dira **Tirwana 6**.
- ◆ Tlhalosa gore mo Kgweditharong ya 2 ba tlaa toba dinomore 4 le 5, ba dirisa ona moetlo ono go tlhagisa dinomore.
- ◆ Buisa ditirwana tsa phaposiborutelo yotlhe tse di tobileng nomore 4 mo Bekeng 1: *Kaedi ya Ditirwana: Kgweditharo 2*: tsebe 25 (Letsatsi 1 #4), tsebe 27 (Letsatsi 2 #5), tsebe 29 (Letatsi 3 #4), tsebe 31 (Letsatsi 4 #4 le Letsatsi 5 #4).

Mo Kgweditharong ya 1, dinomore 1, 2 le 3 di rutilwe. O dirisitse moetlo o o tshwanang mo nomoreng nngwe le nngwe e e rutilweng, o oketsa ka nngwe fela mo nomoreng nako le nako fa go tlhagisiwa nomore e nngwe. Mo Kgweditharong ya 2 Beke 1, go tobilwe gape mogopolopalo. Barutwana ba tlhagisetswa nomore 4, ka go dirisa moetlo o o tshwanang le o o dirisitsweng mo dinomoreng 1, 2 le 3.



## Activity 6

Refer to the whole class activities that focus on number 4 in Week 1: *Activity Guide: Term 2*: page 24 (Day 1 #4), page 26 (Day 2 #5), page 28 (Day 3 #4), page 30 (Day 4 #4 and Day 5 #4).

1. Discuss how the number '4' is introduced.

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2. Think about your own classroom practice and how this routine has been working so far. Complete the table.

Activity	What worked well?	What did not work so well?
Telling the story and building up the number frieze		
Dramatising the story		
Collecting objects for the maths area		
Matching objects to pictures, dot cards, number symbols and number words		
Using the <i>Poster Book</i>		



## Tirwana 6

Lebelela ditirwana tsa phaposiborutelo yotlhe tse di tobileng nomore 4 mo Bekeng 1: Kaedi ya Ditirwana: Kgweditharo 2: tsebe 25 (Letsatsi 1 #4), tsebe 27 (Letsatsi 2 #5), tsebe 29 (Letsatsi 3 #4), tsebe 31 (Letsatsi 4 #4 le Letsatsi 5 #4).

1. Buisanang gore nomore '4' e ka tlhagisiwa jang.

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2. Akanya ka ga moetlo wa phaposiborutelo ya lona le ka moo moetlo ono o ntse o dira ka teng go fitlha ga jaana. Tlatsa papetla eno.

<b>Tirwana</b>	<b>Ke eng se se dirileng sentle?</b>	<b>Ke eng se se sa dirang sentle?</b>
Anaanela kanelo le go aga nomorekgabisi		
Go diragatsa kanelo		
Go kokoanyetsa lefelo la dipalo dilo		
Go nyalanya dilo le ditshwantsho, dikarataronho, matshwaopalo le mafokopalo		
Go dirisa <i>Buka ya Diphousetara</i>		

## Maths vocabulary

### Facilitator's notes

- ◆ Discuss how the participants model using the correct maths vocabulary in the classroom.
- ◆ Point out that this is an important part of the **interaction principle**, and that by using it themselves, they encourage learners to use maths vocabulary.

Part of learning new concepts involves new language. Learners need the vocabulary to talk and think about maths concepts (**interaction principle**). You can encourage learners to use maths vocabulary by using it yourself when you speak to them about maths concepts and by rephrasing what they say into maths language.

## Money

### Facilitator's notes

- ◆ Discuss what learners in Grade R need to learn about money. Emphasise that the focus in Grade R is on developing an awareness of what South African coins look like, but not on the value of the coins.
- ◆ Invite participants to share the kinds of activities they provide in their Grade R classrooms to help learners understand the purpose of money in their everyday lives.
- ◆ After **Activity 7**, discuss the kinds of open-ended questions that teachers can ask to help learners learn the purpose of money such as:  
*What do we use money for?*  
*Do we always pay with money? How else could we pay for things that we buy?*

In Term 2 Week 2 learners are introduced to money. Learners in Grade R are developing an awareness about the features of money and they need opportunities to explore what real South African coins look like.

Activity 7 focuses on helping learners to recognise the similarities and differences between coins: their size, shape and the animals on the coins.



### Activity 7



1. What questions could you ask learners to help them recognise the different features of these coins?

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## Tlotlofoko ya dipalo

### Dintlha tsa mofatlhosi

- ◆ Buisanang ka moo batsayakarolo ba nnang dikai ka go dirisa tlotlofoko e e nepagetseng ya dipalo mo phaposiborutelong ka teng.
- ◆ Supa gore seno ke karolwana e e botlhokwa ya **molawana wa tirisano**, le gore go o dirisa ka bobona, ba rotloetsa barutwana go dirisa tlotlofoko ya dipalo.

Karolo nngwe ya go ithuta megopolo e mešwa e akaretsa puo e ntšhwa. Barutwana ba tlhoka tlotlofoko go bua le go akanya ka ga megopolo ya dipalo (**molawana wa tirisano**). O ka rotloetsa barutwana go dirisa tlotlofoko ya dipalo ka go e dirisa fa o bua le bona ka ga megopolopalo le go bua se ba se buang o dirisa puo ya dipalo.

## Madi

### Dintlha tsa mofatlhosi

- ◆ Buisanang ka ga se barutwana ba Mophato R ba se tlhokang go ithuta ka ga madi. Gatelela gore go tobilwe Mophato R mo go godiseng temoso ya ka moo dikhoene tsa Aforikaborwa di bonalang ka teng, mme e seng mo boleng jwa dikhoene.
- ◆ Kopa batsayakarolo go arogana mefuta ya ditirwana tse ba tlamelang ka tsona mo diphaposiborutelong tsa Mophato wa R go thusa barutwana go tlhaloganya maitlhome a madi mo matshelong a bona a letsatsi le letsatsi.
- ◆ Morago ga **Tirwana 7**, buisanang ka ga mefuta ya dipotso tse di bulegileng tse barutabana ba ka di botsang go thusa barutwana go ithuta maitlhome a madi jaaka:  
*Re dirisetsang madi?*  
*A re duela ka madi ka gale? Re ka duela dilo tse re di rekang ka eng gape?*

Mo Kgweditarong ya 2 Beke 2 barutwana ba simolola go rutiwa ka madi. Barutwana ba Mophato R ba simolola go lemoga diponagalo tsa madi mme e bile ba tlhoka ditšhono go tlhotlhomisa gore dikhoene tsa nnete tsa Aforikaborwa di ntse jang.

Tirwana 7 e tobile go thusa barutwana go lemoga ditshwano le dipharologano magareng ga dikhoene: bogolo jwa tsona, popego le diphologolo mo dikhoeneng.



### Tirwana 7



1. O ka botsa barutwana dipotso dife go ba thusa go lemoga diponagalo tse di farologaneng tsa dikhoene tseno?

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2. What new vocabulary will you introduce?

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### Facilitator's notes

- ◆ Refer participants to the whole class activities and small group activities on pages 40–51 of *Activity Guide: Term 2*.
- ◆ Have participants work in groups to complete **Activity 8**. Ask one person from each group to report back on their discussion.
- ◆ Draw attention to the money templates (*Activity Guide: Term 2*, pages 216–217). Ask for suggestions of how these could be used.

Learners first need to be able to identify and name coins before they are ready to understand their value.

Learners need to be exposed to the purpose of money. Teachers can help learners understand that money is used to buy things like food and clothes and to do different things like travelling by taxi or bus. Expose learners to money and its purpose by setting up a play-shop with pretend coins and notes and items that can be bought.

Refer to the whole class activities and small group activities that focus on money on pages 40–51 of *Activity Guide: Term 2*. In your group, complete Activity 8.



### Activity 8

1. What money concepts are being taught and learnt in the whole class activities?

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Recognising and matching South African coins, sorting according to colour and size.

2. How are learners encouraged to explore the purpose of money?

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The shopping table teaches learners that we pay money for items.

3. How does the teacher consolidate this new knowledge in the small group activities?

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Sorting and matching coins, drawing pictures of the coins.

2. O tlaa tlhagisa tlotlofoko efe e ntšhwa?

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### Dintlha tsa mofatlhosi

- ◆ Kopa batsayakarolo go lebelelela ditirwana tsa phaposiborutelo yotlhe le tsa ditlhophha tse dinnye mo ditsebeng 40–51 tsa *Kaedi ya Ditirwana: Kgweditharo 2*.
- ◆ A batsayakarolo ba dire mo ditlhophheng go dira **Tirwana 8**. Kopa motho a le mongwe go tswa mo setlhophheng se sengwe le se sengwe go neela pegelo ya dipuisano tsa bona.
- ◆ Ba kope go lebelelela dithempoleite tsa madi (*Kaedi ya Ditirwana: Kgweditharo 2*, ditsebe 216–217). Kopa ditshikhinyo tsa gore di ka dirisiwa jang.

Barutwana ba tlhoka go tlaola le go neela maina a dikhoene pele ga ba ipaakanyetsa go tthaloganya boleng jwa tsona.

Barutwana ba tlhoka go tlhagisetswa maitlhommo a madi. Barutabana ba ka thusa barutwana go tthaloganya gore madi a dirisetswa go reka dilo jaaka dijo le diaparo le go dira dilo tse di farologaneng jaaka go tsamaya ka thekesi kgotsa bese. A barutwana ba tlhagisetswe madi le maitlhommo a ona ka go aga lebenkele la go tshameka ka dikhoene tsa maitirelo le madi a pampiri le dilwana tse di ka rekiwang.

Lebelelela ditirwana tsa phaposiborutelo yotlhe le tsa ditlhophha tse dinnye tse di tobileng madi mo ditsebeng 40–51 tsa *Kaedi ya Ditirwana: Kgweditharo 2*. Mo setlhophheng sa gago, dirang Tirwana 8.



### Tirwana 8

1. Ke megopolo efe ya madi e e rutiwang le go ithutiwa mo ditirwaneng tsa phaposiborutelo yotlhe?

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Go lemoga le go nyalanya dikhoene tsa Aforikaborwa, go di tlaola go ya ka mmala le ka bogolo.

2. Barutwana ba rotloediwa jang go tthothomisa maitlhommo a madi?

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Papetla ya go reka e ruta barutwana gore re duelela dilwana ka madi.

3. Morutabana o tsolotanya jang kitso e ntšhwa eno mo ditirwaneng tsa ditlhophha tse dinnye?

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Go tlaola le go nyalanya dikhoene, go thala ditshwantsho tsa dikhoene.

# Session 3: Space and Shape (Geometry)

1 hour

## Facilitator's notes

- ◆ This session extends the discussion on Space and Shape (Geometry) from Workshop 3 and should not take longer than the suggested time as this is not new knowledge.
- ◆ Explain that the focus of Term 2 Week 3 is Space and Shape (Geometry).
- ◆ Refer participants to pages 126–131 of the *Concept Guide*.
- ◆ Have participants work in groups to complete **Activity 9**. Ask one person from each group to share their ideas.

The focus of Term 2 Week 3 is Space and Shape (Geometry).

## Term 2 Content overview: Space and Shape (Geometry)

Refer to pages 126–131 of the *Concept Guide*.



### Activity 9

1. What Space and Shape (Geometry) concepts are covered in Term 2?

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2. What does the Maths Programme add to the content of CAPS?

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## Triangles

### Facilitator's notes

- ◆ Refer participants to Day 2 #4 on page 58 of *Activity Guide: Term 2*.
- ◆ Ask participants to complete **Activity 10** in their small groups. Participants share their responses in the large group.
- ◆ Discuss the importance of giving learners opportunities to sort and group different shapes to help them learn about the properties of triangles, e.g. the number of sides, whether the sides are straight or curved, and the number of corners.

In Term 2 Week 3, learners continue their exploration of two-dimensional shapes as they describe, sort and compare them. In this session you will deepen your understanding of the properties of triangles.



# Karolo 3: Boalo le Popego (Jeometeri)

Ura e le 1

## Dintlha tsa mofatlhosi

- ◆ Karolo eno e atolosa dipuisano ka ga Boalo le Popego (Jeometeri) go tswa mo Thutanong ya 3 mme ga e a tshwanela go feta nako e e tshikhintsweng ka jaana seno e se kitso e ntšhwa.
- ◆ Tlhalosa gore Kgweditharo 2 Beke 3 e tobile Boalo le Popego (Jeometeri).
- ◆ Kopa batsayakarolo go lebelela 126–131 tsa *Kaedi ya Mogopolo*. A batsayakarolo ba dire mo ditlhopheng go dira **Tirwana 9**. Kopa motho a le mongwe go tswa mo setlhopheng se sengwe le se sengwe go arogana dikakanyo tsa bona.

Kgweditharo 2 Beke 3 e tobile Boalo le Popego (Jeometeri).

## Karolo 2 Thadiso ya diteng: Boalo le Popego (Jeometeri)

Lebelela ditsebe 126–131 tsa *Kaedi ya Mogopolo*.



### Tirwana 9

1. Ke megopolo efe ya Boalo le Popego (Jeometeri) e e lebiwang mo Kgweditharong ya 2?

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Lenaneo la Dipalo le tlaleletsa ka eng mo ditennyeng tsa PPKT?

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## Dikhutlotharo

### Dintlha tsa mofatlhosi

- ◆ Kopa batsayakarolo go lebelela Letsats\*1 2 #4 mo tsebeng ya 59 ya *Kaedi ya Ditirwana: Kgweditharo 2*.
- ◆ Kopa batsayakarolo go dira **Tirwana 10** mo ditlhopheng tsa bona tse dinnye. A batsayakarolo ba arogane dikarabo tsa bona mo setlhopheng se segolo.
- ◆ Buisanang ka ga bothokwa jwa go neela barutwana ditšhono go tlhaola le go baya dipopego tse di farologaneng ka ditlhopha go ba thusa go ithuta ka ga diponagalo tsa dikhutlotharo, sk. palo ya matlhakore, gore a matlhakore a tlhamaletse kgotsa a digoro, le palo ya dikhutlo.

Mo Kgweditharong ya 2, Beke 3, barutwana ba tswelela ka ditlhotlhomiso tsa bona tsa dipopego tsa tlhakore-pedi fa ba di tlhalosa, ba di tlhaola le go di bapisa. Mo karolong eno o tlaa tiisa go tlhaloganya diponagalo tsa dikhutlotharo.

Refer to Day 2 #4 on page 58 of *Activity Guide: Term 2* and then complete Activity 10 in your group.



### Activity 10

'How is the triangle different to other shapes in the classroom?' What answers would you expect from your learners?

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It has three sides/lines/corners.

When learners are given opportunities to sort and group different shapes, they need to focus on the properties of the shapes to make their decisions, e.g. the number of sides, whether the sides are straight or curved and the number of corners.

### Facilitator's notes

- ◆ Explain that the Maths Programme uses stories to teach maths concepts in a meaningful way.
- ◆ Dramatise the story, *They pulled and they pulled*, from Week 3 (*Activity Guide: Term 2*, pages 62 and 198).
- ◆ Ask participants to complete **Activity 11** in their groups.
- ◆ As each group reports back, list the questions they suggest on flipchart paper.

Stories are a great way to introduce shape concepts to learners. Listen to the story, *They pulled and they pulled*, from Week 3 (*Activity Guide: Term 2*, pages 62 and 198) as told by your facilitator and then complete Activity 11 in your group.



### Activity 11

1. What questions could you ask learners to help them learn more about the properties of triangles?

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Examples:

What can you tell me about the lines/corners/points of this shape?

How do you know it is a triangle?

What is the same/different about the triangle and the square?

Lebelele Letsatsi 2 #4 mo tsebeng ya 59 ya *Kaedi ya Ditirwana*: Kgweditharo 2 mme morago o dire Tirwana mo ditlhopheng tsa lona.



### Tirwana 10

*'Khutlotharo e farologana jang le dipopego tse dingwe mo phaposiborutelong?'* O solofetse mofuta ofe wa dikarabo go tswa mo barutwaneng ba gago?

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E na le matlhakore/mela/dikhutlo di le tharo

Fa barutwana ba neelwa ditšhono go tlaola le go kgobokanya dipopego tse di farologaneng, ba tlhoka go tota diponagalo tsa dipopego go tsaya ditshwetso, sk. palo ya matlhakore, gore a matlhakore a tlhamaletse kgotsa a digoro le palo ya dikhutlo.

#### Dintlha tsa mofatlhosi

- ◆ Tlhalosa gore Lenaneo la Dipalo le dirisa dikanelo go ruta megopolo ya dipalo ka tsela e e utlwalang.
- ◆ Diragatsa kanelo, *Ba gogile ba boa ba goga*, go tswa mo Bekeng ya 3 (*Kaedi ya Ditirwana: Kgweditharo 2*, ditsebe 63 le 199).
- ◆ Kopa batsayakarolo go dira **Tirwana 11** mo ditlhopheng tsa bona.
- ◆ Fa setlhophahlela sengwe le sengwe se neela pegelo, kwala lenane la dipotso tse ba di tshikhintseng mo pampiring ya tšhatphetogi.

Dikanelo ke mokgwa o o maleba go tlhagisetsa barutwana megopolo ya dipopego. Reetsa kanelo, *Ba gogile, ba boa ba goga*, go tswa mo Bekeng ya 3 (*Kaedi ya Ditirwana: Kgweditharo 2*, ditsebe 63 le 199) jaaka se anegiwa ke mofatlhosi wa gago mme morago o dire Tirwana 11 mo setlhopheng sa gago.



### Tirwana 11

1. Ke dipotso dife tse o neng o ka di botsa barutwana go ba thusa go le gontsi ka ga diponagalo tsa dikhutlotharo?
- 
- 

Dikao:

O ka mpolelela eng ka ga mela/dikhutlo/dintlhana tsa popego eno?

O itse jang gore ke khutlotharo?

Ke eng se se tshwanang/farologaneng ka khutlotharo le khutlonne?

2. Are most of these questions open-ended or closed questions?

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**Note:** Use *Activity Guide: Term 1* and *Term 2* to help you plan for teaching these weeks. The ideas and activity suggestions are a guide and resource. Set up the maths area with the content focus for each week.

2. A bontsi jwa dipotso tseno ke dipotso tse di bulegileng kgotsa tse di tswalegileng?

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**Ela tlhoko:** Dirisa *Kaedi ya Ditirwana: Kgweditharo 1* le *Kgweditharo 2* go go thusa go rulaganyetsa go ruta mo dibekeng tseno. Dikakanyo le ditshikhinyo tsa ditirwana ke kaedi le didiriswa. Baakanyetsa lefelo la dipalo diteng tse di tobilweng mo bekeng nngwe le nngwe.

# Session 4: Planning for teaching

2 hours

## Facilitator's notes

- ◆ Refer participants to Appendix A: Term 1 and 2 Weekly Content Summary: Term 1 (Week 10) and Term 2 (Weeks 1–3).
- ◆ Read the whole class, teacher-guided and workstation activities sections.
- ◆ Have participants work in groups to complete **Activity 12**.



## Video 2

*Activity Guide: Term 2, Week 1 (page 32)*

Watch the video of the teacher-guided activity. Observe how the teacher uses questions to prompt and guide the learners during the activity.

Discuss how you have managed your teacher-guided activities in Term 1. Have you faced any challenges? If so, what strategies have you used to resolve them?

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## Terms 1 and 2 Content Summary (Term 1 (Week 10) and Term 2 (Weeks 1–3))

Appendix A: Term 1 and 2 Weekly Content Summary: Term 1 (Week 10) and Term 2 (Weeks 1–3) outlines the main Content Area Focus for each week, the topics to be covered, the new knowledge and practise focus for each week, and suggested activities for whole class, teacher-guided and independent group work for the week.



## Activity 12

Look at Appendix A: Term 1 and 2 Weekly Content Summary: Term 1 (Week 10) and Term 2 (Weeks 1–3). Answer the questions.

# Karolo 4: Go ithulaganyetsa go ruta

Diura di le 2

## Dintlha tsa mofatlhosi

- ◆ Kopa batsayakarolo go lebelela Mametlelelo A: Kgweditharo 1 le 2 Khutshwafatso ya Diteng tsa Beke le Beke: Kgweditharo 1 (Beke 10) le Kgweditharo 2 (Dibeke 1–3).
- ◆ Buisa dikarolwana tsa ditirwana tsa phaposiborutelo yotlhe, tse di kaelwang ke morutabana le tsa seteišenetiro.
- ◆ A batsayakarolo ba dire ka ditlhopha go dira **Tirwana 12**.



## Video 2

*Kaedi ya Ditirwana: Kgweditharo 2, Beke 1 (tsebe 32)*

Lebelela video ya tirwana e e kaelwang ke morutabana. Ela tlhoko gore morutabana o dirisa dipotso jang go tlotlheletsa le go kaela barutwana ka nako ya tirwana.

Buisanang ka moo lo kgonneng ditirwana tse di kaelwang ke morutabana ka teng mo Kgweditharong ya 1.

A lo kopane le dikgwetlho dingwe? Fa go le jalo, lo dirisitse ditogamaano dife go di rarabolola?

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## Dikgweditharo 1 le 2 Khutshwafatso ya Diteng (Kgweditharo 1 (Dibeke 10 le Kgweditharo 2 (Dibeke 1–3))

Mametlelelo A: Kgweditharo 1 le 2 Khutshwafatso ya Diteng tsa Beke le Beke:

Kgweditharo 1 (Beke 10) le Kgweditharo 2 (Dibeke 1–3) di thadisa Dikaroloteng tse di Lebeletsweng tsa botlhokwa mo bekeng nngwe le nngwe, ditlhogo tse di tshwanetseng go rutiwa, kitso e ntšhwa le ikatiso e e totilweng mo bekeng nngwe le nngwe, le ditirwana tse di tshikhintsweng tsa phaposiborutelo yotlhe, ditirwana tse di kaelwang ke morutabana le tsa ditlhopha tse di ikemetseng tsa beke.



## Tirwana 12

Lebelela Mametlelelo A: Kgweditharo 1 le 2 Khutshwafatso ya Diteng tsa Beke le Beke: Kgweditharo 1 (Beke 10) le Kgweditharo 2 (Dibeke 1–3). Araba dipotso.

Questions	Week 10 Term 1	Week 1 Term 2	Week 2 Term 2	Week 3 Term 2
What is the Content Area Focus for the week?	Data Handling	Numbers, Operations and Relationships	Numbers, Operations and Relationships	Space and Shape (Geometry)
What are the key concepts that learners will be learning?	Collecting, sorting and classifying data Representing data Reporting on data	Number symbols and number words Ordering numbers	Money Ordinal numbers Equal groups Counting objects	Position, direction and views 2-D shapes
What new knowledge is introduced?	Collect, sort and represent collections of objects Discuss and report on sorted collections of objects	More than, fewer than, equal to Number 4	South African coins Ordinal numbers first to fourth Making equal groups the same to 4 Counting objects 1-6	Oral counting 1-15 Counting objects 1-7 Position: underneath
What skills are being practised?	Oral counting 1-10 Counting objects 1-5 Sequencing numbers 1-3 Number concept 1-3 Before and after Copying patterns Problem solving	Oral counting 1-10 and 5-1 Counting objects 1-5 Sequencing numbers 1-3 Reinforcing number concept 1-3	Oral counting 1-10 and 5-1 Counting objects 1-5 Sequencing numbers 1-4 Reinforcing number concept 1-4 Biggest to smallest, smallest to biggest	Position: next to, between, in front of, behind, on top Direction: forwards, backwards Number concept 1-4 Sequencing numbers 1-4 Count backwards 5-1 Shapes: circle, square, triangle

### Activity Guide: Term 1: Week 10 and Activity Guide: Term 2: Weeks 1-3

Refer to Week 10 in *Activity Guide: Term 1* and Weeks 1, 2 and 3 in *Activity Guide: Term 2*. Complete Activity 13 in your group.



<b>Dipotso</b>	<b>Beke 10 Kgweditharo 1</b>	<b>Beke 1 Kgweditharo 2</b>	<b>Beke 2 Kgweditharo 2</b>	<b>Beke 3 Kgweditharo 2</b>
Karoloteng e e Lebeletsweng mo bekeng eno ke efe?	Go Ranola Tshedimosetso	Dinomore, Ditiro le Dikamano	Dinomore, Ditiro le Dikamano	Boalo le Popego (Jeometri)
Barutwana ba tlaa bo ba ithuta megopolo efe ya botlhokwa?	Kokoanya, rulaganya, le go arologantsha tshedimosetso Go tthagisa tshedimosetso Go bega ka tshedimosetso	Matshwaopalo le mafokopalo Go latedisanya dinomore	Madi Dipalokemotatelano Ditlhophha tse di lekanang Go bala dilo	Maemo, tlwaetso le tebo Dipopego tsa 2-D
Go tlaa tthagisiwa kitso efe e ntšhwa?	Kokoanya, rulaganya le go tthagisa kokoanyo ya dilo Buisanang ka ga dilo tse di kokoantsweng mme di rulagantswe le go bega ka ga tsona	Feta, tlase ga, lekana le Nomore 4	Dikhoene tsa Aforikaborwa Dipalokemotatelano ntlha go ya go bone Go dira ditlhophha tse lekanang go tshwana le 4 Go bala dilo 1-6	Go balela kwa godimo 1-15 Go bala dilo 1-7 Maemo: ka fa tlase
Ke dikgono dife tse di diragadiwang?	Go balela kwa godimo 1-10 Go bala dilo 1-5 Go latedisanya dinomore 1-3 Mogopolopalo 1-3 Kwa pele le kwamorago Go kopolola dipaterone Tharabololo ya dipalo	Go balela kwa godimo 1-10 le 5-1 Go bala dilo 1-5 Go latedisanya dinomore 1-3 Go gatelela nomore ya mogopolo 1-3	Go balela kwa godimo 1-10 le 5-1 Go bala dilo 1-5 Go latedisanya dinomore 1-4 Go gatelela nomore ya mogopolo 1-4 Go tswa go kgolo thata go ya go nnye thata, go tswa go nnye thata go ya go kgolo thata	Maemo: go bapa le, magareng ga, fa pele ga, morago ga, mo godimo Ntlhakaelo: kwa pele, kwa morago Mogopolopalo 1-4 Go latedisanya dinomore 1-4 Go balela kwa morago 5-1 Dipopego: sediko, khutlonne, khutlotharo

### **Kaedi ya Ditirwana: Kgweditharo 1: Beke10 le Kaedi ya Ditirwana: Kgweditharo 2: Dibeke 1-3**

Lebelela Beke 10 mo *Kaeding ya Ditirwana: Kgweditharo 1* le Dibeke 1, 2 le 3 mo *Kaeding ya Ditirwana: Kgweditharo 2*. Dira Tirwana 13 mo sethlopheng sa gago.



### Activity 13

Find Week 10 in *Activity Guide: Term 1*. Answer the questions.

1. What is the Content Area Focus for the week?
2. What topics and new knowledge are taught in this week?
3. How does the 'Practise' content link to the previous week?
4. What do you need to get ready before teaching this week?
5. Read the whole class activities and small group activities.
6. Discuss in your small group how you will plan and organise your class for this week of teaching.
7. In your small group refer back to Week 10 in Appendix A. Match the whole class activities and small group activities in Week 10 of *Activity Guide: Term 1* to the Weekly Content Summary in Appendix A.



### Activity 14

Find Weeks 1, 2 and 3 in *Activity Guide: Term 2*. Answer the questions.

1. What is the Content Area Focus for each week?
2. What topics and new knowledge are taught in each week?
3. How does the 'Practise' content link to the previous week?
4. What do you need to get ready before teaching each week?
5. Read the whole class activities and small group activities.
6. Discuss in your small group how you will plan and organise your class for these three weeks of teaching.
7. In your small group refer back to Weeks 1–3 in Appendix A. Match the whole class activities and small group activities in Weeks 1–3 of *Activity Guide: Term 2* to the Weekly Content Summary in Appendix A.



Remember that the eye in the shaded block at the end of the teacher-guided activities (**Check that learners are able to**) reminds us that we need to observe the learners while they are busy, and we need to listen carefully while they are talking to us and to their peers.

Make a mental note of each learner and once the learners have left for the day, write down your observations in a dedicated observation book that has space for each learner's notes.



### Tirwana 13

Batla Beke 10 mo *Kaeding ya Ditirwana: Kgweditharo 1*. Araba dipotso.

1. Karoloteng e e Lebeletsweng mo bekeng eno ke efe?
2. Ke ditlhogo le kitso efe e ntšhwa tse di rutiwang mo bekeng eno?
3. Diteng tsa 'Ikatise' di golagana jang le beke e e fetileng?
4. O tlhoka go baakanyang pele ga o ruta mo bekeng eno?
5. Buisa ditirwana tsa phaposiborutelo yotlhe le tsa ditlhopha tse dinnye.
6. Buisanang mo ditlhopheng tsa lona tse dinnye, gore mo phaposiborutelo ya lona lo ya go rulaganyetsa thuto ya beke eno jang.
7. Mo ditlhopheng tsa lona tse dinnye, lebelelang kwa morago mo Bekeng ya 10 mo Mametlelelong A. Nyalanya ditirwana tsa phaposiborutelo yotlhe le tsa ditlhopha tse dinnye mo Bekeng ya 10 tsa *Kaedi ya Ditirwana: Kgweditharo 1* le Khutshwafatso ya Diteng tsa Beke le Beke mo Mametlelelong A.



### Tirwana 14

Batla Dibeke 1, 2 le 3 mo *Kaeding ya Ditirwana: Kgweditharo 2*. Araba dipotso.

1. Karoloteng e e Lebeletsweng mo bekeng nngwe le nngwe ke efe?
2. Ke ditlhogo le kitso efe e ntšhwa tse di rutiwang mo bekeng nngwe le nngwe?
3. Diteng tsa 'Ikatise' di golagana jang le beke e e fetileng?
4. O tlhoka go baakanyang pele ga o ruta mo bekeng eno?
5. Buisa ditirwana tsa phaposiborutelo yotlhe le tsa ditlhopha tse dinnye.
6. Buisanang mo ditlhopheng tsa lona tse dinnye, gore mo phaposiborutelo ya lona, lo ya go rulaganyetsa thuto ya dibeke tse tharo tseno jang.
7. Mo ditlhopheng tsa lona tse dinnye, lebelelang kwa morago mo Dibekeng tsa 1–3 mo Mametlelelong A. Nyalanya ditirwana tsa phaposiborutelo yotlhe le tsa ditlhopha tse dinnye mo Dibekeng tsa 1–3 tsa *Kaedi ya Ditirwana: Kgweditharo 2* le Khutshwafatso ya Diteng tsa Beke le Beke mo Mametlelelong A.



Gopola gore leitlho le le mo bolokong jo bo ntshofaditsweng kwa bokhutlong jwa ditirwana tse di kaelwang ke morutabana (**Ela tlhoko gore barutwana ba kgona go**) le re gopotsa gore re tshwanetse go ela barutwana tlhoko fa ba semeletse ba dira, le gore re tlhoka go reetsa ka kelotlhoko fa ba bua le rona le balekane ba bona.

Tshwarelela morutwana mongwe le mongwe ka tlhogo, le gore fa barutwana ba ile, kwala tse o di etseng tlhoko ka ga bona mo bukaneng e e totileng dikelotlhoko mme e na le sebaka se o ka kwalang ka ga morutwana mongwe le mongwe mo go sona.

## Closing activities

### Facilitator's notes

- ◆ **Lessons learnt:** Ask participants to think about what they have learnt during the workshop and to complete **Activity 15** individually.
- ◆ **Take back to school task:** Read through this task. Ask if there is anything that is not clear and that requires more explanation. Draw attention to how observation and assessment records and systems must be in place by this stage of the year. Ask how participants are filing these. Ask for examples to be brought to Workshop 5.
- ◆ **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 15

**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

## Ditirwana tsa tswalelo

### Dintlha tsa mofatlhosi

- ◆ **Se o se ithutileng:** Kopa batsayakarolo go akanya ka ga se ba se ithutileng mo thutanong le go dira **Tirwana 15** ya motho ka nosi.
- ◆ **Tirwana e o e busetsang kwa sekolong:** Buisa tirwana eno. Botsa gore a go na le sengwe se se sa tlhakang mme se tlhoka go tshalosiwa gape. Tsepamisa mogopolo wa bona ka moo direkoto tsa dikelotlhoko le tlhatlhobo mmogo le matlhamaganyane a a tshwanetseng go bo a le gona mo nakong eno ya ngwaga. Botsa batsayakarolo gore ba faela tseno jang. Ba kope go tla ka dikao mo Thutanong 5.
- ◆ **Tlhatlhobo:** Ntsha dikhophi tsa Foromo ya Tlhatlhobo ya Thutano mme o kope batsayakarolo go e tlatsa.
- ◆ **Thutano e e latelang:** Neela matlha a thutano e e latelang mme o khutlise thutano.



### Tirwana 15

**Se o se ithutileng:** Akanya ka ga se o se ithutileng ka nako ya thutano mme o tlatse papetla.

Dilo tse ke setseng ke di dira mme di dira sentle	Dikakanyo tse dišwa tse ke ratang go di lekeletsa



### **Take back to school task**

1. Continue with your observations to build up a complete picture of each learner.
2. During the teacher-guided activities complete the *Check that learners are able to* section (after the teacher-guided activity in each week) for each learner being observed.
3. Make a copy of the Exemplar Record of Continuous Assessments in *Activity Guide: Term 1* (pages 190–193).
4. Use the information collected in your observation notes to date and record each learner's development. (Remember that patterns of development need to be recorded over time.)
5. Use *Activity Guide: Term 1* (Week 10) and *Activity Guide: Term 2* (Weeks 1–3) to plan and implement Term 1 Week 10 and Term 2 Weeks 1–3 of the Maths Programme, including creating a maths area with a focus on the concept for each week.
6. Write an evaluation of what worked well, what did not work so well and what you could do differently to improve teaching and learning. Bring your evaluation report to the next workshop.

### **Evaluation**

Complete the Evaluation Form.



### **Tirwana e o e busetsang kwa sekolong**

1. Tswelela pele ka dikelotlhoko tsa gago go itse morutwana mongwe le mongwe ka botlalo.
2. Ka nako ya ditirwana tse di kaelwang ke morutabana, dira karolwana ya *Ela tlhoko gore barutwana ba kgona go* (morago ga tirwana e e kaelwang ke morutabana mo bekeng nngwe le nngwe) ya morutwana mongwe le mongwe yo o etsweng tlhoko.
3. Dira khophi ya Sekai sa Rekoto ya Tlhatlhobotsweledi mo *Kaeding ya Ditirwana: Kgweditharo 1* (ditsebe 190–193).
4. Dirisa tshedimose tso e e kokoantsweng mo dintlheng tsa gago tsa boelotlhoko go fitlha gajaana mme o rekote kgolo ya morutwana mongwe le mongwe. (Gopola gore dipaterone tsa kgolo di tlhoka go rekotiwa mo nakong e e rileng.)
5. Dirisa *Kaedi ya Ditirwana: Kgweditharo 1* (Beke 10) le *Kaedi ya Ditirwana: Kgweditharo 2* (Dibeke 1–3) go rulagnya le go diragatsa *Kgweditharo 1* (Beke 10 le *Kgweditharo 2* Dibeke 1–3 tsa Lenaneo la Dipalo, go akaretsa go tlhama lefelo la dipalo go tobilwe mogopolo wa beke nngwe le nngwe.
6. Kwala tshekatsheko ya gore ke eng se se atlegileng, ke eng se se sa tsamayang sentle le gore o ka dirang ka tsela e e farologaneng go tokafatsa go ruta le go ithuta. Tlaya ka pegelo ya gago ya tshekatsheko mo thutanong e e latelang.

### **Tlhatlhobo**

Tlatsa Foromo ya Tlhatlhobo.

## APPENDIX A: TERM 1 AND 2 WEEKLY CONTENT SUMMARY: TERM 1 (WEEK 10) AND TERM 2 (WEEKS 1-3)

### Term 1: Activity Plan

Week 10				
<b>CONTENT AREA:</b> DATA HANDLING				
<b>TOPIC:</b> Collect and sort objects, represent sorted collections of objects, discuss and report on sorted collections of objects				
<b>INTRODUCE NEW KNOWLEDGE:</b> Collect, sort and represent collections of objects (weather); discuss and report on sorted collections; create own pattern				
<b>PRACTISE:</b> Oral counting 1-10, counting backwards from 5, sequencing numbers 1-3, counting objects 1-5, number concept 1-3, copy patterns, problem-solving techniques				
Whole class activities		Teacher-guided activity	Workstation activities	
<b>Day 1</b>	Sorting and classifying, waste items.	Oral counting.	<b>Activity 1</b>	Sorting waste.
<b>Day 2</b>	Data collection, sorting clothing items.	Touch and count – one-to-one	<b>Activity 2</b>	Sorting colours.
<b>Day 3</b>	Sorting and classifying, group game.	correspondence.	<b>Activity 3</b>	Sorting tray, natural items.
<b>Day 4</b>	Use data collected from the weather discussions, represent and analyse how many days were sunny, raining etc.	Sorting and classifying activities – animals.	<b>Activity 4</b>	Copy pattern using concrete objects and then create own pattern.
<b>Day 5</b>	Weather data collection, representing and analysing.	Representing and interpreting data.		

### Term 2: Activity Plan

Week 1				
<b>CONTENT AREA:</b> NUMBERS, OPERATIONS AND RELATIONSHIPS				
<b>TOPIC:</b> Recognise number symbols and number words, describe, order and compare numbers				
<b>INTRODUCE NEW KNOWLEDGE:</b> More than/fewer than/equal to, introduce number 4				
<b>PRACTISE:</b> Oral counting 1-10, sequencing numbers 1-3, counting objects 1-5, reinforce number concept 1-3				
Whole class activities		Teacher-guided activity	Workstation activities	
<b>Day 1</b>	Introduce 4 (giraffes).	Counting objects 1-5.	<b>Activity 1</b>	Playdough mat 4 (as for previous numbers).
<b>Day 2</b>	Introduce more than/less than/equal to, maths table.	Matching objects to number dot, symbol and word cards 1-4.	<b>Activity 2</b>	Number ordering puzzle activity to 4 (forms a picture).
<b>Day 3</b>	Reinforce 1-4, dot cards and ordering.	Arrange counters to match dot cards.	<b>Activity 3</b>	Matching number symbols, words and concrete objects to 4.
<b>Day 4</b>	Reinforce 1-4, Unifix blocks and hoops.	Practise more than, fewer than, equal.	<b>Activity 4</b>	Number puzzles (no number words).
<b>Day 5</b>	Reinforce number 4, Poster 6.	Write number 4 (as with numbers 1 to 3).		



**MAMETLELELO A: KGWEDITHARO 1 LE 2 KHUTSHWAFATSO YA DITENG TSA BEKE LE BEKE: KGWEDITHARO 1 (BEKE 10) LE KGWEDITHARO 2 (DIBEKE 1-3)**

**Kgweditharo 1: Thulaganyo ya Ditirwana**

Beke 10			
<b>KAROLOTENG:</b> GO RANOLA TSHEDIMOSETSO			
<b>SETLHOGO:</b> Kokoanya le go rulaganya dilo, go tthagisa dilo tse di kokoantsweng, go buisana le go bega ka ga dilo tse di kokoantsweng mme di rulagantswe <b>TLHAGISA KITSO E NTŠHWA:</b> Kokoanya, rulaganya le go tthagisa dilo tse di kokoantsweng (bosa); buisanang le go bega ka ga dilo tse di kokoantsweng; tlhama paterone ya gago <b>IKATISE:</b> Go balela kwa godimo 1-10, go balela kwa morago go tloga ka 5, go latedisanya dinomore 1-3, go bala dilo 1-5, mogopolopalo 1-3, kopolola dipaterone, malepa a go rarabolola dipalo			
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana	Ditirwana tsa Seteišenetiro
<b>Letsatsi 1</b>	Go rulaganya le go arologanya, go latlha dilo.	Go balela kwa godimo.	<b>Tirwana 1</b>
<b>Letsatsi 2</b>	Go kokoanya dinewa, go rulaganya dilwana tsa diaparo.	Go kgoma le go bala – tsamaelano ya nngwe ka nngwe.	<b>Tirwana 2</b>
<b>Letsatsi 3</b>	Go rulaganya le go arologanya, motshameko wa ditlhopho.	Go rulaganya le go arologanya ditirwana – diphologolo.	<b>Tirwana 3</b>
<b>Letsatsi 4</b>	Dirisa dinewa tse di kokoantsweng go tswa mo dipuisano ka ga bosa, go tthagisa le go sekaseka gore malatsi a letsatsi le neng le tshabile ke a le makae, a pula e neng e na ke a makae, j.j.	Go tthagisa le go ranola dinewane.	<b>Tirwana 4</b>
<b>Letsatsi 5</b>	Kokoanyo ya dinewa tsa bosa, go tthagisa le go sekaseka.		

**Kgweditharo 2: Thulaganyo ya Ditirwana**

Beke 1			
<b>KAROLOTENG:</b> DINOMORE, DITIRO LE DIKAMANO			
<b>SETLHOGO:</b> Lemoga matshwaopalo le mafokopalo, tlhalosa, rulaganya le go bapisa dinomore <b>TLHAGISA KITSO E NTŠHWA:</b> Feta/mmalwanyana go/lekana le, tthagisa nomore 4 <b>IKATISE:</b> Go balela kwa godimo 1-10, go latedisanya dinomore 1-3, go bala dilo 1-5, go gatelela mogopolopalo 1-3			
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana	Ditirwana tsa Seteišenetiro
<b>Letsatsi 1</b>	Tthagisa 4 (dithutlwa).	Go bala dilo 1-5.	<b>Tirwana 1</b>
<b>Letsatsi 2</b>	Tthagisa papetla ya dipalo kgolo go/nnye go/lekana le,	Go nyalanya dilo le dikarata tsa dimonorerontho, tshwao le foko 1-4.	<b>Tirwana 2</b>
<b>Letsatsi 3</b>	Go gatelela 1-4, dikaratarontho le go rulaganya.	Rulaganya dibadi go nyalanya dikaratarontho. Go ikatisetsa kgolo go, mmalwa go, lekana. Kwala nomore 4 (fela jaaka dinomore 1 go 3).	<b>Tirwana 3</b>
<b>Letsatsi 4</b>	Go gatelela 1-4, Dibolokokogegedi le dihupu.		<b>Tirwana 4</b>
<b>Letsatsi 5</b>	Go gatelela 4, Phousetara 6.		

Week 2				
<b>CONTENT AREA:</b> NUMBERS, OPERATIONS AND RELATIONSHIPS				
<b>TOPIC: Money: develop an awareness of South African coins</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b> South African coins, ordinal numbers first to fourth, making equal groups the same to 4, counting objects 1–6				
<b>PRACTISE:</b> Oral counting 1–10 and 5–1, sequencing numbers 1–4, reinforce number concept 1–4, biggest to smallest/smallest to biggest				
Whole class activities		Teacher-guided activity	Workstation activities	
<b>Day 1</b>	Introduce South African coins (cents and rands), Poster 7.	Number concept 1–4. Estimation. Shake and break with 4. South African coins – match coins to ‘goods in shop’. Use cut-out coins; sorting, ordering, matching. Make equal groups to 4 – using counters.	<b>Activity 1</b>	Make own coin (give a circle shape).
<b>Day 2</b>	Maths table – shopping, ordinal numbers first to fourth.		<b>Activity 2</b>	Number caterpillar – sequencing numbers 1–4.
<b>Day 3</b>	Matching number/dot cards and number words.		<b>Activity 3</b>	Draw or paste objects to match numbers 1–4.
<b>Day 4</b>	Ordering number 1–4, shopping.		<b>Activity 4</b>	Posting activity using number and colour 1–4.
<b>Day 5</b>	Problem solving up to 4 (Poster 7).			

Week 3				
<b>CONTENT AREA:</b> SPACE AND SHAPE (GEOMETRY)				
<b>TOPIC: Position, orientation and views; describes sorts and compares 2-D shapes</b>				
<b>INTRODUCE NEW KNOWLEDGE:</b> Position: underneath, oral counting 1–15, counting objects 1–7, orientation and views				
<b>PRACTISE:</b> Oral counting 1–10 and 5–1; sequencing numbers 1–4; reinforce number concept 1–4; count backwards 5–1; shapes: circle, square, triangle; position: in front of, behind, on top, between, next to; direction: forwards, backwards				
Whole class activities		Teacher-guided activity	Workstation activities	
<b>Day 1</b>	Positions, shape game.	Counting. Use shapes to show correct number (1–4). Position: next to, between, in front of, behind, on top, underneath. Direction: forwards, backwards.	<b>Activity 1</b>	Colour triangles.
<b>Day 2</b>	Reinforce the triangle.		<b>Activity 2</b>	Carrot activity (cut out triangles and add correct number of leaves).
<b>Day 3</b>	Position (next to, between, in front of, behind, on top, underneath).		<b>Activity 3</b>	Sorting tray – according to colour, shape <b>or</b> size (one attribute).
<b>Day 4</b>	Reinforce all the shapes done, shape story.		<b>Activity 4</b>	Building towers with construction blocks.
<b>Day 5</b>	Following direction: How do I get to ...? Poster 9. Orientation and views using a toy car.			

Beke 2				
<b>KAROLOTENG:</b> DINOMORE, DITIRO LE DIKAMANO				
<b>SETLHOGO: Madi: go simolola temoso ya dikhoene tsa Aforikaborwa</b>				
<b>TLHAGISA KITSO E NTŠHWA:</b> Dikhoene tsa Aforikaborwa, dipalokemotatelano ya ntlha go ya go ya bone, ka go dira ditlhophha tse di lekanang go tshwana le 4, go bala dilo 1–6				
<b>IKATISE:</b> Go balela kwa godimo 1–10 le 5–1, go latedisanya dinomore 1–4, go gatelela mogopolopalo 1–4, kgolo go gaisa go ya go nnye go gaisa/ nnye go gaisa go ya go kgolo go gaisa				
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana		Ditirwana tsa Seteišenetiro
<b>Letsatsi 1</b>	Go tlhagisa dikhoene tsa Aforikaborwa (disente le diranta), Phousetara 7.	Mogopolopalo 1–4. Phopholetso.		<b>Tirwana 1</b>
<b>Letsatsi 2</b>	Papetla ya Dipalo – go reka, dipalokemotatelano ya ntlha go ya go ya bone.	Thskikhinya mme o tlhatlhamolole ka 4. Dikhoene tsa Aforikaborwa – nyalanya dikhoene le ‘dilo mo lebenkeleng’.		<b>Tirwana 2</b>
<b>Letsatsi 3</b>	Go nyalanya dikaratapalo/rontho le mafokopalo.	Dirisa dikhoene tse di segolotsweng; go rulaganya, go tthaola, go nyalanya.		<b>Tirwana 3</b>
<b>Letsatsi 4</b>	Go rulaganya noomore 1–4, go reka.	Dira ditlhophha tse di lekanang le 4 – ka go dirisa dibadi.		<b>Tirwana 4</b>
<b>Letsatsi 5</b>	Go rarabolola dipalo go fitlha ka 4 (Phousetara 7).			

Beke 3				
<b>KAROLOTENG:</b> BOALO LE POPEGO (JEOMETERI)				
<b>SETLHOGO: Boemo, tlwaetso le dipono; tlhalosa, rulaganya le go bapisa dipopego tsa 2-D</b>				
<b>TLHAGISA KITSO E NTŠHWA:</b> Boemo: fa tlase, go balela kwa godimo 1–15, go bala dilo 1–7, tlwaetso le dipono				
<b>IKATISE:</b> Go balela kwa godimo –10 le 5–1; go latedisanya dinomore 1–4; go gatelela megopolopalo 1–4; go balela kwa morago 5–1; dipopego: sediko, khutlonne, khutlotharo; boemo: fa pele ga, fa morago ga, mo godimo, magareng ga, gaufi le, ntlhakaelo: kwa pele, kwa morago				
Ditirwana tsa phaposiborutelo yotlhe		Tirwana e e kaelwang ke morutabana		Ditirwana tsa Seteišenetiro
<b>Letsatsi 1</b>	Maemo, motshameko wa dipopego.	Go bala.		<b>Tirwana 1</b>
<b>Letsatsi 2</b>	Gatelela khutlotharo.	Dirisa dipopego go bontsha nomore e e nepagetseng (1–4).		<b>Tirwana 2</b>
<b>Letsatsi 3</b>	Boemo (gaufi le, magareng ga, fa pele ga, fa morago ga, mo godimo, kwa tlase).	Boemo: gaufi le, magareng gafa pele ga, fa morago, mo godimo, kwa tlase.		<b>Tirwana 3</b>
<b>Letsatsi 4</b>	Gatelela dipopego tse di dirilweng, kanelo ka ga dipopego.	Ntlhakaelo: kwa pele, kwa morago.		<b>Tirwana 4</b>
<b>Letsatsi 5</b>	Go latela ntlhakaelo: Ke ya jang kwa ...? Phousetara 9. Tlwaetso le Dipono ka go dirisa koloi ya setshamekisi.			

# Workshop 4 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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# Foromo ya Tlhatlhubo ya Thutano 4

1. A thutano e kgonne go fitlhelela ditsholofelo tsa gago?

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2. Ke eng se o se ithutileng mo thutanong eno se se go thusitseng go gaisa?

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3. A go na le sengwe se o sa se ratang kgotsa se se neng se go thatafalela?

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4. O ya go diragatsa jang se o se ithutileng mo phaposiborutelong ya gago ya Mophato wa R?

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5. A go na le se o se tshikhinyang go ka thusa go tokafatsa dithutano tse di latelang?

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