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GROWING GAUTENG TOGETHER

Sepedi/English

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



Thutofatlhošo ya 2 • Workshop 2
Pukutšhomo ya Motšeakarolo • 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**.

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

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

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

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

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

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

DITEBOGO

Di lebišwa go:

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



Lenaneokaonafatšo la Thuto ya Dipalo Mphatong wa R le theilwe go tšwa lenaneong la *R-Maths*, leo le gatišitšwego la mathomo ka 2017 ke Schools Development Unit, University of Cape Town. Tokelo ya ngwalollo (copyright) *R-Maths* e laolwa ke University of Cape Town.

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Overview

Purpose

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

The purpose of this workshop is to assist teachers to implement the Maths Programme in their classrooms. The focus of this workshop is Space and Shape (Geometry).

Participants will strengthen their knowledge and understanding of teaching and learning in this Content Area, prepare for teaching Space and Shape (Geometry) activities in their classrooms and reflect on the guiding principles that inform teaching.

Learning outcomes

- ◆ To reflect on the implementation of Term 1 Weeks 1–2
- ◆ To explore strategies to support teaching maths in Grade R (e.g. problem solving, investigation, exploration, questioning, critical thinking, active listening, observation)
- ◆ To engage with the Maths Programme content of Term 1 Weeks 3–5 (Space and Shape (Geometry))
- ◆ To apply the Maths Programme principles in weekly planning

Workshop content

- | | |
|---|-----------|
| ◆ Opening and reflection | (1 hour) |
| ◆ Session 1: Content overview | (1 hour) |
| TEA | |
| ◆ Session 2: Space and Shape (Geometry) | (2 hours) |
| LUNCH | |
| ◆ Session 3: Planning for teaching | (2 hours) |

Kakaretšo

Morero

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

Morero wa thutofatlhošo ke go thuša barutiši go phethagatša Lenaneo la Dipalo ka diphapošing tša bona. Nepišo ya thutofathlošo ye ke Sekgoba le Sebopego (Tšeometri). Batšeakarolo ba tlo tiišetša tsebo ya bona le kwešišo ya go ruta le go ithuta Karolo ya Diteng, ba beakanyetša go ruta mešongwana ya Sekgoba le Sebopego (Tšeometri) ka diphapošing tša bona le go naganiša ka ga ditheo tša go ruta.

Dineo tša thuto

- ◆ Go naganiša ka phethagatšo ya Kotara ya 1 Dibeke tša 1–2
- ◆ Go hlohlomiša maano a go thekga go ruta dipalo ka Mphatong wa R (mohl. tharollo ya mathata, nyakišišo, tlhohlomišo, go botšiša dipotšišo, go nagana kudu, go theeletša, tlhokomelo)
- ◆ Go šomana le diteng tša Lenaneo la Dipalo tša Kotara ya 1 Dibeke tša 3–5 (Sekgoba le Sebopego (Tšeometri))
- ◆ Go diriša ditheo tša go ruta tša Lenaneo la Dipalo peakanyong ya beke ka beke

Diteng tša thutofatlhošo

- ◆ Pulo le go naganiša (Iri e 1)
- ◆ Thuto ya 1: Kakaretšo ya diteng (Iri e 1)

TEYE

- ◆ Thuto ya 2: Sekgoba le Sebopego (Tšeometri) (Diiri tše 2)

MATENA

- ◆ Thuto ya 3: Go beakanyetša go ruta (Diiri tše 2)

Opening and reflection

1 hour

In your Workshop 1 *Take back to school* task you were asked to complete several activities. We would like you to spend a few minutes reflecting on your progress so far.

In your groups, think about your maths teaching over the past two weeks and how successfully you have implemented Term 1 Weeks 1–2.



Activity 1

In your group, discuss your successes and challenges with implementing Term 1 Weeks 1–2 of the Maths Programme. Allow each person to have a turn to present their reflections.

1. Briefly describe how you organised your classroom and how you prepared for teaching these two weeks.

2. Discuss what worked well and what you found difficult to implement. Does anyone have any helpful suggestions?

3. Share how and when you applied the guiding principles of teaching in your daily programme Mathematics focus time?

Pulo le go naganiša

Iri e 1

Mošomong wo o tlo boelago le wona sekolong ka go Thutofathhošo ya 1 o kgopetšwe go tlatša mešongwana ye mmalwa. Re kgopela gore o tšee metsotso ye mmalwa o naganiša ka tšwelopele ya gago go fihla ga bjale.

Ka dihlopha, naganang ka fao le rutilego dipalo dibeke tše pedi tša go feta le ka fao le phethagaditšego Kotara ya 1 Dibeke tša 1–2 ka katlego.



Mošongwana wa 1

Ka dihlopha, ahlaahlang tše le atlegilego go tšona le ditlhohlo ge le be le phethagatša Kotara ya 1 Dibeke tša 1–2 Lenaneong la Dipalo. Dumelela motho yo mongwe le yo mongwe go ba le sebaka sa go bega ka ga tše a di naganišago.

1. Ka bokopana hlaloša ka fao o rulagantšego phapoši le ka fao o breakanyeditšego go ruta dibekeng tše pedi tše.

2. Bolelang ka tše di phethagetšego gabotse le tše di bilego bothata go phethagala. Go na le yo a nago le ditšhišinyo tše di ka thušago?

3. Abelana gore o dirišitše ditheo tša go ruta bjang le gona neng nakong ya nepišo ya lenanephethagatšo la tšatši ka tšatši la Dipalo?



Video 1

Watch the video of the teacher-guided activity which involves a small group of learners.

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.

In Workshop 1 we discussed the eight guiding principles of teaching maths in Grade R. Activity 2 requires that you to match each of the eight principles with two statements that best describe it.



Activity 2

1. Each group has been given an envelope containing a number of strips. Find the eight guiding principles of teaching and place them in a row on your table.
2. Discuss each of the statements and decide with which principle it fits best. Place the statement under this principle.



Bideo ya 1

Bogelang bideo ya mošomo wa go hlahlwa ke morutiši wa sehlopha se sennyane sa barutwana.

O nagana gore maikemišetšo a mošongwana ke afe? Šetša ka fao morutiši a botšišago barutwana dipotšišo le ka fao a hlokomelago barutwana ka moka.

Ka go Thutofatlhošo 1 re boletše ka ditheo tša go ruta dipalo tše seswai Mphatong wa R. Mošongwana wa 2 o nyaka gore o tswalanye se sengwe le se sengwe sa ditheo tša go ruta dipalo tše seswai le ditatemente tše pedi tša go se hlaloša.



Mošongwana wa 2

1. Sehlopha se sengwe le se sengwe se hweditše onflopo ya go ba le meseto ye mmalwa. Hwetša ditheo tša go ruta tše seswai gomme o di be ka molokoloko tafoleng ya gago.
2. Ahlaahlang ditatemente ka moka le bolele gore di tswalana bokaonekaone le ditheo dife tša go ruta. Bea setatemente ka tlase ga setheo se sa go ruta.

Session 1: Content overview

1 hour

Term 1 Content overview: Space and Shape (Geometry)

The content for teaching and learning in Weeks 3–5 focuses mainly on the CAPS Content Area, Space and Shape (Geometry). This content involves more than teaching learners to identify geometric shapes. Their understanding of space and shape depends to a large extent on whether they understand and can use position vocabulary to describe the location of an object (e.g. on, in, next to, behind, in front of). Learners also need to be able to see objects from different positions or views (e.g. from the top, from the bottom, turned sideways, flipped upside down).

Read the content overview for Space and Shape (Geometry) on pages 126–131 of the *Concept Guide*. It provides an overview of the Maths Programme content to be taught in each term of Grade R.

- ◆ The text in blue is the content from the Grade R CAPS for Mathematics.
- ◆ The text descriptions and content in black have been added to extend and build on CAPS.
- ◆ The topics are sequenced to show a developmental progression from one topic to another.



Activity 3

Look at 3.1–3.4 of the content overview for Space and Shape (Geometry) on pages 126–131 of the *Concept Guide*. In your group, do the following:

1. Look at each topic and discuss the content and developmental progression across the four terms.

Thuto ya 1: Kakaretšo ya diteng

Iri e 1

Kotara ya 1 Kakaretšo ya diteng: Sekgoba le Sebopego (Tšeometri)

Diteng tša go ruta le go ithuta Dibekeng tša 3–5 di nepiša kudu Karolo ya Diteng tša SEPHOLEKE, Sekgoba le Sebopego (Tšeometri). Diteng tše di akaretša go feta go ruta bana go hlatha dibopego tša tšeometri. Kwešišo ya bona ya sekgoba le sebopego e laolwa ke kwešišo ya bona le go diriša tloltlontšu ya boemo go hlaloša lefelo leo selo se lego go lona (mohl, go, ka gare, kgaušwi le, ka morago, pele ga). Barutwana a swanetše go kgona go bona dilo boemong le ponong ya go fapano (mohl, go tšwa godimo, go tšwa tlase, retološitšwe ka mathoko, bokafase bo tlie ka godimo).

Bala kakaretšo ya diteng tša Sekgoba le Sebopego (Tšeometri) matlakaleng a 126–131 ka go *Pukutlhahlo ya Mareo*. E neelana ka kakaretšo ya diteng tša Lenaneo la Dipalo tše di tlogo rutwa kotara ka kotara Mphatong wa R.

- ◆ Tsebišo yeo e ngwadilwego ka botalalerata e tšwa go SEPHOLEKE sa Dipalo Mphatong wa R.
- ◆ Tlhalošo le diteng tše di ngwadilwego ka boso ke tsebo ya tlaleletšo yeo e thekgago dithuto gomme di hlamilwe ka SEPHOLEKE.
- ◆ Dihlogo di latelantšwe ka mokgwa woo di thušago go godiša tsebo go hlogo ye nngwe go ya go ye nngwe.



Mošongwana wa 3

Lebelela 3.1–3.4 go kakaretšo ya diteng tša Sekgoba le Sebopego (Tšeometri) matlakaleng a 126–131 ka go *Pukutlhahlo ya Mareo*. Sehlopheng sa gago, dirang tše di latelago:

1. Lebelela hlogotaba ye nngwe le ye nngwe le ahlaahle diteng le tšwelopele dikotareng tše nne.

2. Look at the text in black and discuss what the Maths Programme adds to the content from CAPS.

3. Why do you think that the weighting of Space and Shape (Geometry) is the second highest of the Content Areas in Grade R?

4. How have you approached teaching Space and Shape (Geometry) in your classroom? Give examples of lessons and activities that you have used in the past.

2. Lebelela sengwalwa sa boso gomme le ahlaahle seo se tsenywago ke Lenaneo la Dipalo ka go diteng go tšwa go SEPHOLEKE.

3. Ke ka lebaka la eng o nagana gore boima bja Sekgoba le Sebopego (Tšeometri) ke Karolo ya Diteng ye e lego maemong a bobedi ka bogolo ka Mphatong wa R?

4. O rutile Sekgoba le Sebopego (Tšeometri) bjang ka phapošing ya gago? Efa mehlala ya dithuto le mešongwana ye o e dirišitšego.

Session 2: Space and Shape (Geometry)

2 hours

Spatial concepts

(30 minutes)

Learners start to learn about spatial concepts such as position, direction, orientation (different views) and perspective as they use their own bodies to explore the relationship between themselves, other people and objects.



Activity 4

The facilitator has set up a simple obstacle course. With a partner take turns to guide each other through the obstacle course. Use positional and directional language to give clear instructions.

Using the *Poster Book* to talk about position and direction

The Maths Programme's *Poster Book* provides opportunities to use real-life contexts to explore concepts. On Poster 9 of the *Poster Book* you can see where Malusi lives in relation to other people and places in his neighbourhood. This poster can be used to stimulate discussion about the position of people and objects in relation to one another and to encourage learners to use and become familiar with the language that describes space, position and direction. Learners link maths to their everyday lives as they discuss and solve problems.



Activity 5

In your group, look at Poster 9 and discuss the following:

1. What position and direction words could you introduce to learners and encourage them to use?

2. What other questions could you ask learners that would help them to learn about position, direction, orientation (views) and perspective?

Refer to pages 172–177 of the *Concept Guide* to read more about space.

Thuto ya 2: Sekgoba le Sebopego (Tšeometri)

Diiri tše 2

Mareo a sekgoba

(Metsotso ye 30)

Barutwana ba thoma go ithuta ka mareo a sekgoba a bjalo ka boemo, tšhupetšo, peakanyo (dikgopoloo tša go fapano) le tebego ge ba diriša mebele ya bona go hlohlomiša tswalano magareng ga bona, batho ba bangwe le dilo.



Mošongwana wa 4

Monolofatši o beakantše lepatlelo la ditšhitiso le bonolo. Wena le modirišanimmogo wa gago šiedišanang ka go hlahlana lepatlelong la ditšhitiso. Efang ditaelo tša go hlaka le diriša leleme la boemo le tšhupetšo.

Diriša Puku ya Diphoustara go bolela ka boemo le tšhupetšo

Puku ya Diphoustara ya Lenaneo la Dipalo e neelana ka menyetla ya go diriša dikamano tša kgontho go hlohlomiša mareo. Mo Phoustareng ya 9 ka go Puku ya Diphoustara o ka bona fao Malusi a dulago malebana le batho ba bangwe le mafelo a mo motseng wa gabu. Phoustara ye e ka dirišwa go hlohlleletša poledišano ka ga boemo bja batho malebana le dilo le go hlohlleletša barutwana go diriša le go tlwaela leleme la go hlaloša sekgoba, boemo le tšhupetšo. Barutwana ba tswalanya dipalo le bophelo bja bona bja ka mehla ge ba ahlaahla le go rarolla mathata.



Mošongwana wa 5

Sehlopheng sa gago, lebelelang Phoustara ya 9 gomme le ahlaahle tše di latelago:

1. O ka tsebiša barutwana mantšu afe a boemo le tšhupetšo le go hlohlleletša gore ba a diriše?

2. O ka botšiša barutwana dipotšišo dife tše dingwe tše di ka ba thušago go ithuta boemo, tšhupetšo, peakanyo (dipono) le tebego?

Lebelela matlakala a 172–177 ka go Pukutlhahlo ya Mareo go bala ka ga sekgoba.

Introducing shapes

(1 hour)

In Grade R learners focus on recognising, identifying and naming three-dimensional (3-D) objects and two-dimensional (2-D) shapes.

- ◆ 3-D means that an object has three dimensions: length, breadth (width) and height.
- ◆ 2-D means that a shape has two dimensions: length and breadth (width).

Recognising, identifying and comparing three-dimensional objects

In Grade R learners explore the properties of everyday objects. They build constructions using recycled household materials such as boxes, cans, tubs, toilet roll innards, balls and so on. They investigate and describe box- and ball-shaped objects. They compare and sort objects and talk about similarities and differences.



Video 2

Watch the video of a teacher talking to learners who are sorting a collection of objects. Listen to how she prompts the learners to explain how they are sorting the objects and how to use the correct terms to describe each object.

Refer to pages 178–181 of the *Concept Guide* to read more about 3-D objects.

Moving from 3-D objects to 2-D shapes

In Grade R, the focus is on the properties of objects and shapes. Learners learn to identify and describe the properties of both objects and shapes.

Go tsebiša dibopego

(Iri e 1)

Barutwana ba Mphato wa R ba nepiša go lemoga, go hlatha le go bolela maina a dilo tša mahlakore a mararo (3-D) le dibopego tša mahlakore a mabedi (2-D).

- ◆ 3-D e ra gore dilo tsa mahlakore a mararao: botelele, bophara le bogodimo.
- ◆ 2-D e ra gore sebopego sa mahlakore a mabedi: botelele le bophara.

Go lemoga, go hlatha le go bapetša dilo tša mahlakore a mararo

Ka Mphatong wa R barutwana ba hlohlomiša dipharologantšho tša dilo tša ka mehla. Ba aga dikago ka didirišwa tša ka gae tša go dirišwa gape tše bjalo ka mapokisi, dikane, diswaro, diteng tša rolo ya pampiri ya tshwamare, dibolo, bjalo le bjalo. Ba nyakišiša le go hlaloša mapokisi-le-dilo-tša-sebopego-sa-bolo. Ba bapetša le go hlaola dilo gomme ba bolela ka dilo tša go swana le tša go fapano.

Lebelela matlakala a 178–181 ka go *Pukutlhahlo ya Mareo* go bala ka ga dilo tša 3-D.

Go tšwa go dilo tša 3-D go ya go dibopego tša 2-D

Mphatong wa R, go nepišwa dipharologantšho tša dilo le dibopego. Barutwana ba ithuta go hlatha le go hlaloša dipharologantšho tša dilo le dibopego.



Activity 6

Explore and describe the properties of a box.

- ◆ Place a box on a piece of paper.
- ◆ Trace around the base of the box.
- ◆ Describe the lines of your drawing.
- ◆ Name the shape you have drawn.
- ◆ How do you know it's a square/rectangle?
- ◆ How many sides does it have?
- ◆ How many corners does it have?
- ◆ What is the difference between the box and the square/rectangle?

Recognising, describing and comparing two-dimensional shapes

Learners need to observe and discuss a variety of 2-D shapes to find out what the common properties of a particular shape are, e.g. even though all triangles may not look exactly the same, they all have three sides and three corners; all rectangles have four sides regardless of the orientation.

Use the attribute blocks on your table to explore 2-D shapes.



Activity 7

In your group, talk about the shape of the surface of each attribute block.

- ◆ Look for a shape that has four corners.
- ◆ Use your finger to trace around the shape. What is the shape called?
- ◆ Look for a shape that has no straight sides.
- ◆ Use your finger to trace around the shape. What is the shape called?
- ◆ Look for a shape that has three sides that are exactly the same.

Refer to pages 182–189 of the *Concept Guide* to read more about 2-D shapes.



Mošongwana wa 6

Hlohlomiša le go hlaloša dipharologantšho tša lepokisi.

- ◆ Bea lepokisi seripeng sa pampiri.
- ◆ Thala mothaladi go dikologa botlase bja lepokisi.
- ◆ Hlaloša methaladi ya sethalwa sa gago.
- ◆ Bolela leina la sebolepego se o se thadilego.
- ◆ O tseba bjang gore ke sekwere/khutlonnethwii?
- ◆ Se na le mahlakore a makae?
- ◆ Se na le dikhutlo tše kae?
- ◆ Phapano ke eng magareng ga lepokisi le sekwere/khutlonnethwii?

Go lemoga, go hlaloša le go bapetša dibopego tša mahlakore a mabedi

Barutwana ba hloka go lebelela le go bolela ka mehutahuta ya dibopego tša 2-D go hwetša gore dipharologantšho tša ka mehla tša sebolepego ke dife, mohl, le ge dikhutlo haro di ka se bonale di swana, ka moka di na le mahlakore a mararo le dikhutlo tše tharo; dikhutlonnethwii ka moka di na le mahlakore a mane go sa ye le peakanyo.

Diriša dipoloko tše di dirišwago go hlaola tafoleng ya gago go hlohlomiša dibopego tša 2-D.



Mošongwana wa 7

Sehlopheng sa gago, bolelang ka sebolepego sa bokagodimo bja dipoloko ka moka tša go dirišwa go hlaola.

- ◆ Lebelela sebolepego sa go ba le dikhutlo tše nne.
- ◆ Dikološa sebolepego ka menwana ya gago. Sebolepego seo se bitšwa eng?
- ◆ Lebelela sebolepego sa go hloka mahlakore a thwii.
- ◆ Dikološa sebolepego ka menwana ya gago. Sebolepego seo se bitšwa eng?
- ◆ Lebelela sebolepego sa go sa go ba le mahlakore a mararo a go swana.

Lebelela matlakala a 182–189 ka go *Pukutlhahlo ya Mareo* go bala ka ga dibopego tša 2-D.

Symmetry

(30 minutes)

An object or shape has symmetry when it can be divided into two equal halves along a central line. Symmetrical patterns can be found on our bodies, in nature, in the built environment and in pictures. Line symmetry divides the shape into two identical parts. The line can be horizontal or vertical.

Refer to pages 188–191 of the *Concept Guide* to read more about symmetry.

The practice principle: Learners should have plenty of time to practise new skills and knowledge. When learners have regular practice in what they have already learnt, they become more competent and more confident. Learners enjoy repetition and practice. The Grade R teacher should provide repeated opportunities for learners to practise and improve new skills.

Tekanelo

(Metsotso ye 30)

Selo goba sebopego se na le tekanelo ge se kgora go arolega ka diripagare tša go lekana tše pedi go bapela le mothaladi wa gare. Dipatrone tša tekanelo di hwetšwa mebeleng ya rena, tlhagong, tikologong ya kago le diswantšhong. Tekanelo ya mothaladi e arola sebopego ka diripa tša go swana tše pedi. Mothaladi o ka rapama goba wa tsepama.

Lebelela matlakala a 188–191 ka go *Pukutlhahlo ya Mareo* go bala go gontši ka ga go lekanelo.

Setheo sa go itlwaetša: Barutwana ba hloka nako ye ntši ya go itlwaetša mabokgoni a maswa le tsebo. Ge barutwana ba itlwaetša seo ba ithutilego sona ka mehla, ba ba le bokgoni bjo bontši le boitshepo. Barutwana ba ipshina ka poeletšo le go itlwaetša. Morutiši wa Mphato wa R o swanetše go neelana ka menyetla ya poeletšo gore barutwana ba itlwaetše le go kaonafatša mabokgoni a maswa.

Session 3: Planning for teaching

2 hours

Term 1 Content Summary (Weeks 3–5)

(40 minutes)

Appendix A: Term 1 Weekly Content Summary (Weeks 3–5) 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.

Read the whole class, teacher-guided and workstation activities sections and complete Activity 8.



Activity 8

Look at Appendix A: Term 1 Weekly Content Summary (Weeks 3–5). Answer the questions.

Questions	Week 3	Week 4	Week 5
What is the Content Area Focus for the week?			
What are the key concepts that learners will be learning?			
What new knowledge is introduced?			
What skills are being practised?			

Thuto ya 3: Go breakanyetša go ruta

Diiri tše 2

Kakaretšo ya Diteng ya Beke ka Beke ya Kotara ya 1

(Dibeke tše 3–5)

(Metsotsye 40)

Mamatletšo ya A: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke ya (Dibeke tše 3–5) e laetša Nepišo ya Karolo ya Diteng ya beke ka beke, dihlogotaba, tsebo ye mpsha le nepišo ya go itlwaetša ya beke ka beke, le mešongwana ye e šišinyeditšwego barutwana ka moka, ya go hlahlwa ke morutiši le mešomo ya sehlopha ya go hloka tlhahlo ya beke.

Bala dikarolo tše mešongwana ya barutwana ka moka, ya go hlahlwa ke morutiši le ya mafelong a go šomela gomme o tlatše Mošongwana wa 8.



Mošongwana wa 8

Lebelela Mamatletšo ya A: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tše 3–5). Araba dipotšišo.

Dipotšišo	Beke ya 3	Beke ya 4	Beke ya 5
Nepišo ya Karolo ya Diteng ya beke ke efe?			
Barutwana ba tlo ithuta mareokgolo afe?			
Go tsebišwa tsebo efe ye mpsha?			
Go ikatišwa mabokgoni afe?			

 **Video 3**

Watch the video of learners discussing a poster.

1. Make a note of the questions and maths problems that the teacher presents to the learners during the poster discussion.

2. Write down other questions that the teacher could have asked.

Refer to Weeks 3, 4 and 5 in *Activity Guide: Term 1*. Complete Activity 9 in your group.

 **Activity 9**

1. Find Weeks 3, 4 and 5 in *Activity Guide: Term 1*. Answer the questions.
 - ◆ What is the Content Area Focus for each week?
 - ◆ What topics and new knowledge are taught in each week?
 - ◆ How does the ‘Practise’ content link to the previous week?
 - ◆ What do you need to get ready before teaching each week?
 - ◆ Read the whole class activities and small group activities.
 - ◆ Discuss in your small group how you will plan and organise your class for these three weeks of teaching.
2. Refer to Appendix A: Term 1 Weekly Content Summary (Weeks 3–5). Match the whole class and small group activities in Weeks 3, 4 and 5 of the *Activity Guide: Term 1* to the Content Summary for each week.

Pukutlhahlo ya Mešongwana: Kotara ya 1: Dibeke tša 3, 4 le 5

(Metsotso ye 60)



Bideo ya 3

Bogela bideo ya barutwana ba ahlaahla phoustara.

1. Ngwala dipotšišo le mathata a dipalo a go tšweletša ke morutiši barutwaneng ge ba ahlaahla phoustara.

2. Ngwala dipotšišo tšeо morutiši a ka bego a ka di botšiša.

Lebelela Dibeke tša 3, 4 le 5 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 1*. Tlatša Mošongwana wa 9 sehlopheng sa gago.



Mošongwana wa 9

1. Hwetša Dibeke tša 3, 4 le 5 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 1*. Araba dipotšišo.
 - ◆ Nepišo ya Karolo ya Diteng ya beke ye nngwe le ye nngwe ke efe?
 - ◆ Beke ye nngwe le ye nngwe go rutwa dihlogotaba dife le tsebo ye mpsha?
 - ◆ Diteng tša 'Go itlwaetša' di tswalana bjang le beke ya go feta?
 - ◆ Beke ye nngwe le ye nngwe o ipeakanya bjang pele o ruta?
 - ◆ Bala mešongwana ya barutwana ka moka le mešongwana ya dihlopha tše dinnyane.
 - ◆ Sehlopheng se sennyane bolelang gore le tlo breakanya le go rulaganya diphapoši tša lena bjang dibekeng tše tharo tša go ruta.
2. Lebelela Mamatletšo ya A: Kotara ya 1 Kakaretšo ya Diteng ya Beke ka Beke (Dibeke tša 3–5). Bapetša mešongwana ya barutwana ka moka le ya dihlopha tše dinnyane ya Dibeke tša 3, 4 le 5 ka go *Pukutlhahlo ya Mešongwana: Kotara ya 1* le Kakaretšo ya Diteng ya beke ye nngwe le ye nngwe.



Remember that in Grade R assessment is informal and continuous. We need to observe learners throughout the day, inside and outside the classroom. The eye icon 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.

The Maths Programme is designed around the rotation of small groups during a week and the teacher pays special attention to one group a day, watching and listening as the learners complete specific tasks. This time gives the teacher the opportunity to carefully observe each learner and gather information on their progress.

Look at the shaded block at the end of the teacher-guided activity: '**Check that learners are able to**'. The teacher makes a mental note of each learner and once the learners have left for the day she writes down her observations in a dedicated observation book that has space for each learner's notes.

Closing activities (20 minutes)



Activity 10

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



O gopole gore ka Mphatong wa R tekolo ga se ya semmušo gomme e tšwela pele. Re swanetše go lebelela barutwana letšatši ka moka, ka gare le ka ntle ga phapoši. Aekhone ya leihlo e re gopotša gore re hloka go hlokomela barutwana ge ba šoma, ebile re hloka go ba theeletša ka hlokomelo ge ba bolela le rena le barutwana ba bangwe.

Lenaneo la Dipalo le diretšwe go fana sebaka ga dihlopha tše nnyane mo bekeng gomme morutiši o fa sehlopha se setee šedi ya go kgethega ka letšatši, a bogetše le go theeletša barutwana ge ba dira mošomo wo itšego. Nako ye e fa morutiši monyetla wa go lebelela morutwana yo mongwe le yo mongwe gabotse le go kgoboketša tshedimošo ya tšwelopele ya bona.

Lebelela poloko ya go fifatšwa mafelelong a mošongwana wa go hlahlwa ke morutiši: '**Lekola gore barutwana ba kgona go**'. Morutiši o swara tše a di bonago ka ga morutwana yo mongwe le yo mongwe ka hlogong gomme ge barutwana ba ile gae, o ngwala se a se bonego ka pukung ya temogo ya go ba le sekgoba sa morutwana yo mongwe le yo mongwe.

Mešongwana ya go tswalela

(Metsotsye 20)



Mošongwana wa 10

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

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



Take back to school task

1. Read the *Concept Guide* pages that were referred to during this workshop.
2. Prepare a Space and Shape (Geometry) maths area. Take a photograph of it and bring it to the next workshop.
3. Use *Activity Guide: Term 1* to plan and implement Weeks 3–5 of the Maths Programme. When planning, think about how the guiding principles will inform your planning and teaching:
 - How will you find out what learners already know and understand? (**level principle**)
 - How will you build on the prior knowledge that learners bring from home? (**context principle**)
 - How will you ensure that the planned activities are meaningful for learners? (**context principle**)
 - How will you build active listening and speaking into your planned activities? (**interaction principle**)
4. Write a reflection of what worked well and what did not work so well. Bring your reflection notes and some examples of work that the learners did to the next workshop.

Evaluation

Complete the Evaluation Form.



Mošomo wo o tlo boelago le wona sekolong

1. Bala matlakala a *Pukutlhahlo ya Mareo* ao a šupeditšwego ka thutofatlhošong ye.
2. Beakanya karolo ya dipalo ya Sekgoba le Sebopego (Tšeometri). Tšea senepe sa yona o tle le sona thutofatlhošong ya go latela.
3. Diriša *Pukutlhahlo ya Mešongwana: Kotara ya 1* go beakanya le go phethagatša Dibeke tša 3–5 tša Lenaneo la Dipalo. Ge o beakanya, naganiša ka fao ditheo di tlogo ba motheo wa peakanyo ya gago le go ruta:
 - O tlo hwetša bjang seo barutwana ba šetšego ba se tseba le go se kwešiša? (**setheo sa kgato ya maleba**)
 - O tlo aga bjang go seo barutwana ba šetšego ba se tseba go tšwa gae? (**setheo sa dikamano/sebaka**)
 - O tlo kgonthiša bjang gore mešongwana ya go beakanywa e ba bohlokwa barutwaneng? (**setheo sa dikamano/sebaka**)
 - O tlo aga go theeletša le go bolela bjang ka mešongwaneng ye o e beakanyago? (**setheo sa tswalano**)
4. Ngwala se o naganago gore se diragetšego gabotse le seo se sa diragalago gabotse. O tle le dinoutse tša gago tša go naganiša le mehlala ya mešomo ye e dirilwego ke barutwana thutofatlhošong ya go latela.

Tekolo

Tlatša Foromo ya Tekolo.

APPENDIX A: TERM 1 WEEKLY CONTENT SUMMARY (WEEKS 3-5)

Term 1: Activity Plan

Week 3				
CONTENT AREA: SPACE AND SHAPE (GEOMETRY) TOPIC: Recognise, identify and name 3-D objects; describe, sort and compare 3-D objects (boxes and balls); position, orientation and views: in and out INTRODUCE NEW KNOWLEDGE: Counting objects 1–5, properties of boxes and balls, objects that roll or slide, position: in and out, big/small, biggest/smallest PRACTISE: Oral counting 1–5, reinforce number concept (1), sorting				
Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Explore properties of boxes and balls.	Counting one-to-one correspondence 1–5.	Activity 1	Construct objects with boxes.
Day 2	Compare sizes of boxes and balls.	Big and small game.	Activity 2	Big and small playdough balls – sorting.
Day 3	Explore which can slide, which can roll; big/biggest and small/smallest.	Properties of boxes and balls.	Activity 3	Paint prints with boxes or blocks.
Day 4	Discuss why objects roll and slide.	Compare boxes and balls.	Activity 4	Build animal shelters for the farm animals with building blocks.
Day 5	Position: in and out.	Sort objects that slide and roll.		
Week 4				
CONTENT AREA: SPACE AND SHAPE (GEOMETRY) TOPIC: Recognise, identify and name 2-D shapes (circle); compare 3-D objects and 2-D shapes; symmetry INTRODUCE NEW KNOWLEDGE: Circle, symmetry, introduce number 2 PRACTISE: Oral counting 1–5, counting objects 1–5, number 1				
Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Introduce 2; number frieze story.	Naming the shape and colour of counters from the <i>Resource Kit</i> .	Activity 1	Playdough template – make 2.
Day 2	What is a shape? Introduce the circle.	Circle activity – properties.	Activity 2	Circle prints – paint and containers.
Day 3	Find circles in the classroom.	Number dot cards, pictures and symbols 1 and 2.	Activity 3	‘Plate’ template – cut and paste pictures of food.
Day 4	Count different body parts; explore symmetry in their own body.		Activity 4	Body puzzles.
Day 5	Circle (use poster) and symmetry in a picture.			

MAMATLETŠO YA A: KOTARA YA 1 KAKARETŠO YA DITENG YA BEKE KA BEKE (DIBEKE TŠA 3–5)

Kotara ya 1: Peakanyo ya Mošongwana

Beke ya 3

KAROLO YA DITENG: SEBOPEGO LE SEKGOBA (TŠEOMETRI)

HLOGOTABA: Lemoga, hlatha le go bolela dilo tša 3-D; hlaola, hlaola o be o bapetše dilo tša 3-D (mapokisi le dibolo); boemo, peakanyo le pono: ka gare le ka ntle

TSEBIŠA TSEBO YE MPSHA: Go bala dilo 1–5, dipharologantšo tša mapokisi le dikgwele, dilo tša go kgokologa goba go thetha, boemo: ka gare le ka ntle, kgolo/nnyanne, kgolo ka go fetiša/nnyanne ka go fetiša

GO IKATIŠA: Go balela godimo 1–5, go tiišetša lereo la nomoro (1), go hlaola

Mešongwana ya barutwana ka moka	Mošomo wa go hlahlwa ke morutiši	Mešongwana ya mafelong a go šomela		
Letšatši la 1	Hlohlomiša dipharologantšo tša mapokisi le dikgwele.	Go bala tee-ka-tee tša go swana 1–5. Moraloko o mogolo le o monnyane. Dipharologantšo tša mapokisi le dikgwele.	Mošongwana wa 1 Mošongwana wa 2	Aga dilo ka mapokisi. Dikgwele tša tlhama tše dikgolo le tše dinnyane – go hlaola.
Letšatši la 2	Bapetša bogolo bja mapokisi le dikgwele.	Bapetša mapokisi le dikgwele.	Mošongwana wa 3 Mošongwana wa 4	Penta dikgatišo tša mapokisi le dipoloko. Agela diphoofolo tša polaseng mašaka ka dipoloko tša go aga.
Letšatši la 3	Hlohlomiša gore ke dife tša go thetha, ke dife tša go kgokologa; kgolo/kgolo ka go fetiša le nnyane/nnyanne ka go fetiša.	Bapetša dilo tša go thetha le go kgokologa.		
Letšatši la 4	Ahlahlang gore ke ka lebaka la eng dilo di kgokologa goba di thetha.			
Letšatši la 5	Boemo: ka gare le ka ntle.			

Beke ya 4

KAROLO YA DITENG: SEBOPEGO LE SEKGOBA (TŠEOMETRI)

HLOGOTABA: Lemoga, hlatha le go bolela dibopego tša 2-D (sediko); bapetša dilo tša 3-D le dibopego tša 2-D; lekanelo

TSEBIŠA TSEBO YE MPSHA: Sediko, lekanelo, tsebiša nomoro 2

GO IKATIŠA: Go balela godimo 1–5, go bala dilo 1–5, nomoro 1

Mešongwana ya barutwana ka moka	Mošomo wa go hlahlwa ke morutiši	Mešongwana ya mafelong a go šomela		
Letšatši la 1	Tsebiša 2; kanegelo ya tšhate ya tloltontšu le dinomoro.	Go fa leina la sebopego le mmala wa dibaledi tša ka gare ga <i>Dithušathuto tša Phapoši</i> .	Mošongwana wa 1 Mošongwana wa 2 Mošongwana wa 3	Thempholeiti ya tlhama – dira 2. Dikgatišo tša sediko – pente le dikotlolo. Thempoleiti ya ‘Poleiti’ – ripa o be o kgomaretše diswantšho tša dijo.
Letšatši la 2	Sebopego ke eng? Tsebiša sediko.	Dikološa dipharologantšo-tša-mešongwana.	Mošongwana wa 4	Marara a mmele.
Letšatši la 3	Hwetša didiko ka phapošing.	Dikarata tša marontho tša dinomoro,		
Letšatši la 4	Bala ditho tša mmele tša go fapano; hlolhomisa tekanelo mebeleng ya bona.	diswantšho le maswao a 1 le 2.		
Letšatši la 5	Sediko (diriša phoustara) le tekanelo seswantšhong.			

Week 5

CONTENT AREA: SPACE AND SHAPE (GEOMETRY)

TOPIC: Recognise, identify and name 2-D shapes (square); compare 3-D objects and 2-D shapes (box and square); direction: forwards/backwards; position: inside/outside

INTRODUCE NEW KNOWLEDGE: Square, directionality (forwards/backwards), position (inside/outside)

PRACTISE: Circle, oral counting 1–5, counting objects 1–5, number concept 1 and 2

Whole class activities		Teacher-guided activity	Workstation activities	
Day 1	Introduce the square (vocabulary).	Oral counting/matching dot, number cards 1 and 2.	Activity 1	Playdough with circle and square cookie cutter to make model.
Day 2	Properties of the square; difference between circle and square.	Touch counting Unifix blocks, build Unifix towers.	Activity 2	Cut out squares and paste to make a picture.
Day 3	Word problem (<i>Poster Book</i>) – square; find squares in the class.	Properties of a box and a square. Feely bag (boxes and balls).	Activity 3	Sorting square-shaped and circle-shaped objects.
Day 4	Directionality (forwards and backwards).	2-D square activity – tracing around a box.	Activity 4	Puzzles (minimum six pieces).
Day 5	Make patterns with squares, colours.	Position (inside/outside).		

Beke ya 5

KAROLO YA DITENG: SEBOPEGO LE SEKGOBA (TŠEOMETRI)

HLOGOTABA: Lemoga, hlatha le go bolela dilo tša (sekwere); bapetša dilo tša 3-D le dibopego tša (lepokisi le sekwere); tšhupetšo: pele/morago; boemo: ka gare/ka ntle

TSEBIŠA TSEBO YE MPSHA: Sekwere, tšhupetšo (pele/morago), boemo (ka gare/ka ntle)

GO IKATIŠA: Sediko, go balela godimo 1-5, go bala dilo 1-5, marello a dinomoro 1 le 2

Mešongwana ya barutwana ka moka ka phapošing		Mošomo wa go hlahlwa ke morutiši	Mešongwana ya mafelong a go šomela	
Letšatši la 1	Tsebiša sekwere (tlotlontšu).		Mošongwana wa 1	Tlhama le seripa-dikokisana sa sediko le sa sekwere go dira mottele.
Letšatši la 2	Dipharologantšo tša sekwere; phapano magareng ga sediko le sekwere.	Go balela godimo/lerontho la go tswalana, dikarata tša dinomoro 1 le 2. Kgoma dipoloko tša Unifix tša go balela, aga ditora tša Unifix.	Mošongwana wa 2	Ripa disekwere o di kgomaretše go dira seswantšho.
Letšatši la 3	Palo ya mantšu (<i>Puku ya Diphoustara</i>) – sekwere; hwetša disekwere ka phapošing.	Dipharologantšo tša lepokisi le sekwere. Mokotla wa go phopholwa (mapokisi le dibolo).	Mošongwana wa 3	Go hlaola dilo tša sebopego sa sekwere le sebopego sa sediko.
Letšatši la 4	Tšhupetšo (pele/morago).	Mošongwana wa sekwere sa 2-D – go gatiša go dikološa lepokisi.	Mošongwana wa 4	Marara (diripa tše tshela bonnyane).
Letšatši la 5	Dira dipatrone ka disekwere, mebala.	Boemo (ka gare/ka ntle).		

Workshop 2 Evaluation Form

1. Did the workshop meet your expectations?

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

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

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

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

Foromo ya Tekolo ya Thutofatlhošo ya 2

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

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

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

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

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