GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

GGT 2030
GROWING GAUTENG TOGETHER

IsiNdebele/English

IHlelo lokuThuthukisa iimBalo zeGreyidi R
Grade R Mathematics Improvement Programme

Isifundobandulo 2 ● Workshop 2

INcwadi yokuSebenzela yomHlanganyeli ● Participant's Workbook

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

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

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

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

ACKNOWLEDGEMENTS

Special thanks to:

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

Programme conceptualisation and management: Cally Kuhne and Tholisa Matheza
Translation and publishing project management: Arabella Koopman
Translation co-ordination (Nguni languages): Pumeza Ngobozana
Translation: Nomsa Mtsweni
Editing (isiNdebele): Nomvula Masimula
Illustrations: Jiggs Snaddon-Wood

IPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R imuzamo wom**Nyango wezeFundo weGauteng (Gauteng Department of Education)** nombambisani wayo oqakathekileko, i-**Gauteng Education Development Trust**.

Ukwenziwa nokukhiqizwa kweensetjenziswa zebandulo nezetlasi zePhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R kukghonakele ngomusa wokusekelwa ngemali yephrojekthi ebuya ku-**United States Agency for International Development** kunye ne-**Zenex Foundation**.

IPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R ilawulwa yi-**JET Education Services** ne-**Schools Development Unit** ye-**UCT** kunye ne-**Wordworks** njengababambisani kezobuqharhaqharha.

I**Schools Development Unit** (SDU) ye-**University of Cape Town** (UCT) imbambisani kezobuqharhaqharha beembalo kuPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R. I-SDU iyiyunithi ngaphakathi kwe-School of Education ye-UCT eqalene nokuthuthukiswa kobukghwari babotitjhere beemBalo, iSayensi, ilwazi lokuTlola nokuFunda/iLimi namaKghono wePilo ukusukela kwaGreyidi R ukuya kwaGreyidi 12. I-SDU inikela abotitjhere iziqu zokufundisa neemfundo ze-UCT ezifitjhani eziphasisiweko, umsebenzi onzinze esikolweni, ukwenziwa kwemethiriyeli nerhubhululo ukusekela ukufundisa nokufunda kibo boke ubujamo beSewula Afrika.

AMAGAMA WOKUTHOKOZA

Ukuthokoza okukhethekileko:

- Iinkhulu zePhiko labaNqophisi leKharikhyulamu, iPhiko labaNqophisi laboTitjhere bezeFundo nePhiko labaNqophisi leFundo eKhethekileko yomNyango wezeFundo weGauteng, ekutjhugululweni kwemetheriyali yethu.
- Abasebenzi nabotitjhere be-Western Cape Education Department (WCED) ngokufaka kwabo isandla epumelelweni yokusetjenziswa kwe-Grade R Mathematics Programme (R-Maths) eTjhingalanga Kapa phakathi komnyaka we-2016 nowe-2019.
- Isiqhema sokutlola se-R-Maths: Abasebenzi nabathintanisi be-SDU.

Ukulawulwa nokutlanywa kwehlelo: Cally Kuhne noTholisa Matheza
Ukulawulwa kwephrojekthi yokutjhugulula nokukhutjhwa: Arabella Koopman
Ukuthintanisa okutjhugululwako (amalimi wesiNguni): Pumeza Ngobozana
Ukutjhugululela: Nomsa Mtsweni
Ukulungisa (isiNdebele): Nomvula Masimula
Iinthombe: Jiggs Snaddon-Wood

Contents

Overview

Workshop content

Okumumethweko

Isirhunyezo

Okumumethweko kwesifundobandulo

Overview

Purpose

This is the second 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. 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)

Isirhunyezo

Umnqopho

Lesi sifundobandulo sesibili kezilitjhumi nambili zeHlelo lokuThuthukisa iimBalo zeGreyidi R, eliyingcenye yomNyango wezeFundo weGauteng (Gauteng Department of Education (GDE)) iPhrojekthi yokuThuthukiswa kweemBalo namaLimi kwaGreyidi R.

Umnqopho wesifundobandulwesi kusiza abotitjhere ekusebenzisa iHlelo leemBalo ngematlasinabo. Isifundobandulwesi sinqophene nesiKhala neBumbeko (IJiyomethri). Abahlanganyeli bazakuqinisa ilwazi nokuzwisisa kwabo ukufundisa nokufunda kilesi isiGaba sokuMumethweko, bazilungiselela ukufundisa imisebenzi yesiKhala neBumbeko (iJiyomethri) ngematlasini wabo begodu bazindle ngemithethokambiso ehlahla ukufundisa.

Imiphumela yokufunda

- Ukuzindla ngokusetjenziswa kweThemu 1 iimVeke 1–2
- Ukuhlola amaqhinga wokusekela ukufundisa iimbalo zeGreyidi R (isib. ukurarulula umraro, ukuphenya, ukuhlola, ukubuza, ukucabangisisa, ukulalela ngokumajadu, ukubukela)
- Ukuzibandakanya nokumumethweko kweHlelo leemBalo zeThemu 1 iimVeke 3–5 (IsiKhala neBumbeko (IJiyomethri))
- Ukusebenzisa imithethokambiso yeHlelo leemBalo ekuhleleni kwaqobe yiveke

Okumumethweko kwesifundobandulo

- Ukuvula nokuzindla (I-iri 1)
- Isetjhini 1: Isirhunyezo sokumumethweko (I-iri 1)

ITIYE

- Isetjhini 2: IsiKhala neBumbeko (IJiyomethri) (Ama-iri 2)

ISIDLO SEMINI

- Isetjhini 3: Ukuhlelela ukufundisa (Ama-iri 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?

_____
_____
_____

Ukuvula nokuzindla

I-iri 1

Ku*Msebenzini obuyiselwa esikolweni* wesiFundobandulo 1 ubawiwe bonyana wenze imisebenzi embalwa. Singathanda bonyana uthathe imizuzu eembalwa uzindle ngeragelophambili lakho bekube lapha.

Eenqhemeni zenu, cabangani ngokufundisa kwenu iimbalo eemvekeni ezimbili ezidlulileko nokobana uphumelele kangangani ukusebenzisa iThemu 1 iimVeke 1–2.

Umsebenzi 1

Esiqhemeni sakho, khulumisanani ngokuphumelela neentjhijilo zokusebenzisa iThemu 1 iimVeke 1–2 zeHlelo leemBalo. Vumela umuntu ngamunye kobana abenedlhego lokwethula imicabango yakhe.

1. Hlathulula ngobufitjhani bonyana uyihlele njani itlasi yakho nokobana ukulungiselele njani ukufundisa eemvekeni ezimbilezi.

_____
_____
_____

2. Khulumisanani ngokobana khuyini okusebenze kuhle nalokho okuthole kunzima ukukusebenzisa. Ingabe kukhona oneemphakamiso ezingasiza?

_____
_____
_____

3. Yabelana ngokobana uyisebenzise nini nanjani imithethokambiso ehlahlako yokufundisa ehlelweni lakho langamalanga lesikhathi sokunqophana neemBalo?

_____
_____
_____

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.

Ividiyo 1

Bukelani ividiyo yomsebenzi ohlahlwa ngutitjhere obandakanya isiqhema esincani sabafundi.

Ucabanga bonyana khuyini ihloso yomsebenzi lo? Yelela khulu bonyana utitjhere ubakhuthaza njani ngemibuzo nokobana umtjheja njani umfundi ngamunye.

_____
_____
_____

Kusifundobandulo 1 sikhulumisene ngemithethokambiso ehlahlako ebunane yokufundisa iimbalo kwaGreyidi R. Umsebenzi 2 ufuna bonyana ukhambelanise umthethokambiso ngamunye webunane neentatimende ezimbili eziwutlhadlhula kangcono.

Umsebenzi 2

1. Isiqhema ngasinye sinikelwe imvilobhu enemitletle eembalwa. Thola imithethokambiso ehlahlako yokufundisa bese uyibeka ngereyi etafuleni yakho.
2. Khulumisanani ngesitatimende ngasinye bese nithatha isiqunto sokobana ngimuphi umthethokambiso esikhambelana nawo ngcono. Beka isitatimende ngaphasi komthethokambiso lo.

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.

_____
_____
_____
_____

Isetjhini 1: Isirhunyezo sokumumethweko **I-iri 1**

Ithemu 1 Isirhunyezo sokumumethweko: Isikhala neBumbeko (IJiyomethri)

Okumumethweko kokufundisa nokufunda iimVeke 3–5 kunqophe khulu esiGabeni sokuMumethweko kwe-CAPS, isiKhala neBumbeko (IJiyomethri). Okumumethweko lokhu kubandakanya okunengi kunokufundisa abafundi ukufanisa amabumbeko wejiyomethri. Ukuzwisisa kwabo isikhala nebumbeko kuyame khulu phezu kobana bayezwisisa begodu bangasebenzisa ilwazimagama lesikhundla ukutlhadlhula indawo lapho kunento khona (isib. phezu kwe-, ngaphakathi, eduze ne-, ngemuva, ngaphambi kwe-). Abafundi godu kufanele bakwazi ukubona izinto eenkhundleni nofana ekubonakaleni okuhlukileko (ngaphezulu, ngenzasi, iphendulelwe ngemahlangothini, iphendulwe yaqaliswa phasi).

Funda isirhunyezo sesiKhala neBumbeko (IJiyomethri) emakhasini 126–131 *womHlahlandlela womQondo.* Unikela isirhunyezo sokumumethweko kweHlelo leemBalo ekufanele kufundiswe kuthemu ngayinye yeGreyidi R.

- Umtlolo ohlaza-samkayi ngilokho okumumethweko kweemBalo okubuya ku-CAPS yakwaGreyidi R.
- Iinhlathululo zomtlolo nokumumethweko okutlolwe ngokunzima kufakelwe ukunabisa nokwakhela phezu kwe-CAPS.
- Iinhloko zilandelanisiwe ukukhombisa iragelophambili ethuthukako ukusuka kesinye isihloko ukuya kesinye.

Umsebenzi 3

Qala ku-3.1–3.4 wesirhunyezo sokumumethweko kwesiKhala neBumbeko (IJiyomethri) emakhasini 126–131 *womHlahlandlela womQondo*. Esiqhemeni sakho, yenzani okulandelako:

1. Qalani isihloko ngasinye bese nikhulumisana ngokumumethweko neragelophambili letuthuko emathemini womane.

_____
_____
_____
_____

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. Qalani umtlolo otlolwe ngokunzima bese nikhulumisana ngalokho okungezelelwa liHlelo leemBalo kokumumethweko kwe-CAPS.

_____
_____
_____
_____

3. Kubayini ucabanga bonyana isilinganiso sesiKhala neBumbeko (IJiyomethri) kungokwesibili okuphezulu khulu eenGabeni zokuMumethweko kwaGreyidi R?

_____
_____
_____
_____

4. Usifundise njani isiKhala neBumbeko (IJiyomethri) ngetlasinakho? Nikela iimbonelo nemisebenzi oyisebenzisileko ngesikhathi esidlulileko.

_____
_____
_____
_____

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.

Isetjhini 2: Isikhala neBumbeko (IJiyomethri)

Ama-iri 2

Imiqondo ephathelene nesikhala (Imizuzu 30)

Abafundi bathoma ukufunda ngemiqondo ephathelene nesikhala enjengesikhundla, ikombatjhuba, ubujamo (ukuqaleka ngokuhlukileko) nombono lokha nabasebenzisa imizimba yabo ukuhlola ubudlelwana phakathi kwabo, abanye abantu nezinto.

Umsebenzi 4

Umkghonakalisi uhlele umdlalo osiqabo olula. Dlhegana nomlingani ukuhlahlana emdlalweni osiqabo. Sebenzisani ilimi lesikhundla nelekombatjhuba ukunikela imilayelo ecacileko.

Ngokusebenzisa *iNcwadi yamaPhosta* khulumani ngesikhundla nekombatjhuba

INcwadi yamaPhosta yeHlelo leemBalo inikela amathuba wokusebenzisa ubujamo bepilo yamambala ukuhlola imiqondo. KuPhosta 9 *yeNcwadi yamaPhosta* uyakghona ukubona bonyana uMalusi uhlalaphi mayelana nabanye abantu neendawo lapho ahlala khona. Iphosta le ingasetjenziselwa ukuhlahlambisa imikhulumiswano emayelana nesikhundla sabantu nezinto ezimayelana nomunye nomunye nokukhuthaza abafundi basebenzise bebajayela ilimi elitlhadlhula isikhala, isikhundla nekombatjhuba. Abafundi bahlobanisa iimbalo nepilo yabo yangamalanga lokha nabakhulumisanako bararulula nemiraro.

Umsebenzi 5

Esiqhemeni sakho, qalani iPhosta 9 bese nikhulumisana ngokulandelako:

1. Ngiwaphi amagama wesikhundla newekombatjhuba ongawethula ebafundini bese ubakhuthaza bonyana bawasebenzise?

_____
_____
_____

2. Ngiyiphi eminye imibuzo ongayibuza abafundi engabasiza ukufunda ngesikhundla, ikombatjhuba, ubujamo (ukuqaleka kwento) nobunjalo bokubonakala kwezinto?

_____
_____
_____

Qala emakhasini 172–177 *womHlahlandlela womQondo* ukufunda ngokunabileko ngesikhala.

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 inners, 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.

Ukwethula amabumbeko (I-iri 1)

KwaGreyidi R abafundi baqalana nokukhumbula, ukufanisa nokutjho izinto ezibusontathu (3-D) namabumbeko abusombili (2-D).

- Ukuthi 3-D kutjho ukuthi into enobuso obuthathu: ubude, ububanzi nokuphakama.
- Ukuthi 2-D kutjho ukuthi ibumbeko elinobuso obubili: ubude nobubanzi.

Ukukhumbula, ukufanisa nokumadanisa izinto ezibusontathu
KwaGreyidi R abafundi bahlola amatshwayo wezinto zangamalanga. Bakha imakhiwo ngokusebenzisa imatheriyeli yemakhaya eyenziwe kabutjha njengamabhoksi, amabhlege, iinkhafthini, irolo yangaphakathi kwephepha lendlwaneni, iimbholo, njalonjalo. Bayaphenya bebatlhladlhule izinto zebumbeko lebhoksi nelebholo. Bayamadanisa bebahlele izinto ngamananeko bese bakhuluma ngokufana nangomehluko.

Qalani amakhasi 178–181 *womHlahlandlela womQondo* ukufunda ngokunabileko mayelana nezinto ze-3-D.

Ukusuka ezintweni ze-3-D ukuya kumabumbeko we-2-D
KwaGreyidi R, umnqopho uphezu kwamatshwayo wezinto namabumbeko. Abafundi bafunda ukufanisa nokutlhdlhula amatshwayo wezinto namabumbeko.

 **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.

Umsebenzi 6

Hlola bese utlhadlhula amatshwayo webhoksi.

- Beka ibhoksi phezu kwesiquntu sephepha.
- Gadangisa mazombe ingaphasi lebhoksi.
- Tlhadlhula imida yomdwebo wakho.
- Yitjho ibumbeko olidwebileko.
- Wazi njani bonyana sikwere/nguncamane?
- Inamahlangothi amangaki?
- Inamakhona amangaki?
- Khuyini umehluko phakathi kwebhoksi nesikwere/uncamane?

Ukukhumbula, ukutlhadlhula nokumadanisa amabumbeko abusombili

Abafundi kufanele babukele begodu bakhulumisane ngemihlobohlobo yamabumbeko we- 2-D ukuthola bonyana ngimaphi amatshwayo avamileko webumbeko elithileko, isib. nanyana aboncantathu boke bangekhe bafane patsi, boke banamahlangothi amathathu namakhona amathathu; boke aboncamane banamahlangothi amane ubujamo obunye nobunye.

Sebenzisa amabhlogo wama-athribhuthi etafuleni yakho ukuhlola amabumbeko we-2-D.

Umsebenzi 7

Esiqhemeni sakho, khulumani ngebumbeko lengaphandle lebhlogo le-athribhuthi ngalinye.

- Qala ibumbeko elinamakhona amane.
- Sebenzisa umunwakho ukugadangisa uzombe ibumbeko. Libizwani ibumbeko lelo?
- Qala ibumbeko elinganamahlangothi anqophileko.
- Sebenzisa umunwakho ukugadangisa uzombe ibumbeko. Libizwani ibumbeko lelo?
- Qala ibumbeko elinamahlangothi amathathu afana patsi.

Qala amakhasi 182–189 *womHlahlandlela womQondo* ukufunda ngokunabileko ngamabumbeko we-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.

Isimethri **(Imizuzu 30)**

Into nofana ibumbeko linesimethri lokha nalingahlukaniseka libe ziinquntu ezimbili ezilinganako emdeni obandula phakathi. Amaphetheni wesimethri angatholakala emizimbeni yethu, imvelo, ibhoduluko elakhiweko neenthombeni. Umuda wesimethri uhlukanisa ibumbeko libe ziinquntu ezimbili ezifanako. Umuda ungavundla nofana ujame rwe.

Qala amakhasi 188–191 *womHlahlandlela womQondo* ukufunda ngokunabileko mayelana nesimethri.

Umthethokambiso wokujayeza: Abafundi kufanele babe nesikhathi esaneleko sokuzijayeza amakghono nelwazi elitjha. Lokha abafundi nabanande bazijayeza kilokho esele bakufundile, baba nekghono nokuzithemba ngcono. Abafundi bathabela ukubuyelela nokuzijayeza. Utitjhere wakwaGreyidi R kufanele anikele amathuba wokuzijayeza abuyelelweko ukuthuthukisa amakghono amatjha.

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?			

Isetjhini 3: Ukuhlelela ukufundisa **Ama-iri 2**

Ithemu 1 Isirhunyezo sokuMumethweko (Iimveke 3–5) **(Imizuzu 40)**

Isithasiselo A: Ithemu 1 Isirhunyezo sokuMumethweko kwaQobe yiVeke (Iimveke 3–5) kuhlathulula umNqopho wesiGaba sokuMumethweko oqakathekileko weveke ngayinye, iinhloko ekufanele zifundiswe, ilwazi elitjha nomnqopho wokujayeza weveke ngayinye, nemisebenzi yetlasi loke ephakanyisiweko , umsebenzi weveke ohlahlwa ngutitjhere newesiqhema esizijameleko.

Funda imisebenzi yetlasi yoke, imisebenzi ehlahlwa ngutitjhere neengaba zemisebenzi yesitetjhi sokusebenzela bese uqedelela **Umsebenzi 8**.

Umsebenzi 8

Qala Isithasiselo B: Ithemu 1 isiRhunyezo sokuMumethweko kwangeVeke (iimVeke 3–5). Phendula imibuzo.

Imibuzo	Iveke 3	Iveke 4	Iveke 5
Khuyini umNqopho wesiGaba sokuMumethweko weveke?			
Ngiyiphi imiqondo eqakathekileko ezakufundwa bafundi?			
Ngiliphi ilwazi elitjha elethuliweko?			
Ngimaphi amakghono ajayezwako?			

Activity Guide: Term 1: Weeks 3, 4 and 5 (60 minutes)

 **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.

UmHlahlandlela wemiSebenzi: Ithemu 1: Iimveke 3, 4 ne-5

(Imizuzu 60)

 **Ividiyo 3**

Bukelani ividiyo yabafundi nabakhuluma ngephosta.

1. Tlola imibuzo nemiraro yeembalo leyo utitjhere ayinikela abafundi ngesikhathi sokukhulumisana ngephosta.

_____
_____
_____

2. Tlola eminye imibuzo utitjhere ebekufanele ayibuze.

_____
_____
_____

Qala iimVeke 3, 4 ne-5 *umHlahlandlela wemiSebenzi: Ithemu 1*. Qedelela Umsebenzi 9 esiqhemeni sakho.

 **Umsebenzi 9**

1. Thola iimVeke 3, 4 ne-5 *kumHlahlandlela wemiSebenzi: Ithemu 1*. Phendula imibuzo.
- Khuyini umNqopho wesiGaba sokuMumethweko weveke ngayinye?
- Ngiziphi iinhloko nelwazi elitjha elifundiswako iveke ngayinye?
- Kuhlangana njani okumumethweko 'Ukujayeza' neveke edlulileko?
- Khuyini okudingako ukuzilungiselela ngaphambi kokufundisa iveke ngayinye?
- Funda imisebenzi yetlasi loke nemisebenzi yesiqhema esincani.
- Khulumisanani esiqhemeni senu esincani bonyana uzakuplana bewuyihlele njani itlasi yakho emvekeni lezi ezintathu zokufundisa.

2. Qala Isithasiselo A: Ithemu 1 Isirhunyezo sokuMumethweko kwaQobe yiVeke (IimVeke 3–5). Khambelanisa imisebenzi yetlasi yoke nemisebenzi yesiqhema esincani eemVekeni 3,4 ne-5 zom*Hlahlandlela wemiSebenzi: Ithemu 1* nesirhunyezo sokuMumethweko kweveke ngayinye.

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


Khumbula bonyana kwaGreyidi R ukuhlola akukahleleki begodu kuragela phambili. Kufanele sitjheje abafundi ilanga loke, ngaphakathi nangaphandle kwetlasi. Itshwayo lelihlo lisikhumbuza bonyana kufanele sitjheje abafundi lokha nabamajadu, begodu kufanele silalele kuhle lokha nabakhuluma nathi nalokha nabakhuluma nabangani babo.

IHlelo leemBalo litlanywe ngokudlhegana kweenqhema ezincani phakathi kweveke notitjhere utlhogomela isiqhema esisodwa ngokukhethekileko ngelanga, uyabukela abe alalele lokha abafundi nabenza imisebenzi ethileko. Isikhathi lesi sinikela utitjhere ithuba lokutjheja umfundi ngamunye ngokuyelela okukhulu bese ubuthelela ilwazi mayelana neragelo phambili lakhe.

Qala ibhlogo elitshetlha ekupheleni komsebenzi ohlahlwa ngutitjhere: '**Tjheja bonyana abafundi bayakwazi uku**'. Utitjhere wenza inothi lengcondo ngomfundi ngamunye bese lokha abafundi nasele bakhambile utlola phasi lokho akutjhejileko ngencwadini yokutlola okutjhejiweko enesikhala samanothi womfundi ngamunye.

Imisebenzi yokuvala **(Imizuzu 20)**


Umsebenzi 10

Iimfundo ezifundiweko: Cabanga ngalokho okufundileko ngesikhathi sesifundobandulo bese uqedelela ithebula.

Izinto engizenzako ezisebenza kuhle	Imibono emitjha engingathanda ukuyizama

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.

Umsebenzi obuyiselwa esikolweni

1. Funda amakhasi wo*mHlahlandlela womQondo* lawo ebekaqaliwe ngesikhathi sesifundobandulo.
2. Lungisa indawo yeembalo zesiKhala neBumbeko (IJiyomethri). Thatha isithombe sayo bese uza nayo kusifundobandulo esilandelako.
3. Sebenzisa *Umhlahlandlela wemiSebenzi: Ithemu 1* ukuplana nokusebenzisa iHlelo leemBalo iimVeke 3–5. Lokha nawuplanako, cabanga ngokobana imithethokambiso ehlahlako ikhambisana njani nokufundisa nokufunda ngetlasini yakho.

   - Uzakuthola njani lokho abafundi esele bakwazi nabakuzwisisako? (**umthethokambiso wezinga.**)

   - Uzakwakhela njani phezu kwelwazi langaphambili abafundi ababuya nalo ekhaya? (**umthethokambiso wobujamo**)

   - Uzakuqinisekisa njani bonyana imisebenzi eplaniweko iyezwisiseka ebafundini? (**umthethokambiso wobujamo**)

   - Uzakwakha njani ukulalela nokukhuluma okumajadu emisebenzini yakho oyiplanileko? (**umthethokambiso wokukhulumisana**)

4. Tlola ukuzindla ngalokho okusebenze kuhle nalokho okungakasebenzi kuhle. Yiza namanothi wakho wokuzindla neembonelo eziimbalwa zomsebenzi loyo abafundi abawenzileko esifundobandulweni esilandelako.

Ukuhlunga

Zalisa iForomo lokuHlunga.

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

Term 1: Activity Plan

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

ISITHASISELO A: ITHEMU 1 ISIRHUNYEZO SOKUMUMETHWEKO KWAQOBE YIVEKE (IIMVEKE 3–5)

Ithemu 1: Ihlelo lomsebenzi

<table>
<tr><th colspan="5">Iveke 3</th></tr>
<tr><td colspan="5">ISIGABA SOKUMUMETHWEKO: ISIKHALA NEBUMBEKO (IJIYOMETHRI)</td></tr>
<tr><td colspan="5">ISIHLOKO: Ukukhumbula, fanisa nokutjho izinto ze-3-D, ukutlhadlhula, ukuhlela bese nokumadanisa izinto ze-3-D (amabhoksi neembholo); isikhundla, ubujamo nokuqaleka kwento: ngaphakathi nangaphandle
UKWETHULA ILWAZI ELITJHA: Ukubala izinto 1–5, amatshwayo wamabhoksi neembholo, izinto ezigedekeko nofana ezitjhelelako, isikhundla: ngaphakathi nangaphandle, khulu/ncani, kulu khulu/ncani khulu
UKUJAYEZA: Ukubala ngomlomo 1–5, ukugandelela umqondo wenomboro (1), ukuhlela ngamananeko</td></tr>
<tr><th colspan="2">Imisebenzi yetlasi yoke</th><th>Umsebenzi ohlahlwa ngutitjhere</th><th colspan="2">Imisebenzi yesitetjhini sokusebenzela</th></tr>
<tr><td>Ilanga 1</td><td>Hlola amatshwayo wamabhoksi neembholo.</td><td rowspan="5">Ukubala kunye kokunye okukhambelanako 1–5.
Umdlalo wekhulu no ncani.
Amatshwayo wamabhoksi neembholo.
Madanisa amabhoksi neembholo.
Hlela izinto ezitjhelelako nezigedekako ngamananeko.</td><td>Umsebenzi 1
Umsebenzi 2

Umsebenzi 3

Umsebenzi 4</td><td>Yakha izinto ngamabhoksi.
Iimbholo zehlama yokudlalisa ezikulu nezincani – ukuhlela ngamananeko.
Imigadangiso yepende yamabhoksi nofana yamabhlogo.
Yakha ubusithelo beenlwana zeplasini ngamabhlogo wokwakha.</td></tr>
<tr><td>Ilanga 2</td><td>Madanisa ubukhulu bamabhoksi nebeembholo.</td></tr>
<tr><td>Ilanga 3</td><td>Hlola bonyana ngiziphi ezingatjhelela, ngiziphi ezingagedeka; khulu/kulu khulu nokuncani/okuncani khulu.</td></tr>
<tr><td>Ilanga 4</td><td>Khulumisanani ngokobana kubayini izinto zigedeka begodu zitjhelela.</td></tr>
<tr><td>Ilanga 5</td><td>Isikhundla: ngaphakathi nangaphandle</td></tr>
<tr><th colspan="5">Iveke 4</th></tr>
<tr><td colspan="5">ISIGABA SOKUMUMETHWEKO: ISIKHALA NEBUMBEKO (IJIYOMETHRI)</td></tr>
<tr><td colspan="5">ISIHLOKO: Ukukhumbula, ukufanisa nokutjho amabumbeko we-2-D (indulungu); madanisa izinto ze-3-D namabumbeko we-2-D; isimethri
UKWETHULA ILWAZI ELITJHA: Indulungu, isimethri, ukwethula inomboro 2
JAYEZA: Ukubala ngomlomo 1–5, ukubala izinto 1–5, inomboro 1</td></tr>
<tr><th colspan="2">Imisebenzi yetlasi yoke</th><th>Umsebenzi ohlahlwa ngutitjhere</th><th colspan="2">Imisebenzi yesitetjhini sokusebenzela</th></tr>
<tr><td>Ilanga 1</td><td>Yethula u-2; indatjana yomhlobiso wenomboro.</td><td rowspan="5">Ukutjho ibumbeko nemibala yeembalisi zeKhidi yeenSetjenziswa.
Umsebenzi wendulungu – amatshwayo.
Amakarada weqatjhazi, weenthombe namatshwayo weenomboro 1 naku-2.</td><td>Umsebenzi 1
Umsebenzi 2
Umsebenzi 3

Umsebenzi 4</td><td>Umfuziselo wehlama yokudlalisa – yenza u-2.
Imigadangiso yendulungu – ipende neemphathi.
Umfuziselo ‘wepleyidi’ – sika unamathisele iinthombe zokudla.
Amaphazili womzimba.</td></tr>
<tr><td>Ilanga 2</td><td>Khuyini ibumbeko? Yethula indulungu.</td></tr>
<tr><td>Ilanga 3</td><td>Thola iindulungu ngetlasini.</td></tr>
<tr><td>Ilanga 4</td><td>Bala izitho zomzimba ezihlukileko; hlola isimethri emizimbeni yabo.</td></tr>
<tr><td>Ilanga 5</td><td>Indulungu (sebenzisa iphosta) nesimethri esithombeni.</td></tr>
</table>

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

<table>
<tr><th colspan="5">Iveke 5</th></tr>
<tr><td colspan="5">ISIGABA SOKUMUMETHWEKO: ISIKHALA NEBUMBEKO (IJIYOMETHRI)</td></tr>
<tr><td colspan="5">ISIHLOKO: Ukukhumbula, ukufanisa nokutjho amabumbeko we-2-D (isikwere); madanisa izinto ze-3-D namabumbeko we-2-D; (ibhoksi nesikwere); ikombatjhuba: ukuya phambili/ukuya emuva; isikhundla: ngaphakathi/ngaphandle
UKWETHULA ILWAZI ELITJHA: Isikwere, ikombatjhuba (ukuya phambili/ukuya emuva), isikhundla (ngaphakathi/ngaphandle)
UKUJAYEZA: Indulungu, ukubala ngomlomo1–5, ukubala izinto 1–5, umqondo wenomboro 1 naku-2</td></tr>
<tr><th colspan="2">Imisebenzi yetlasi loke</th><th>Umsebenzi ohlahlwa ngutitjhere</th><th colspan="2">Imisebenzi yesitetjhini sokusebenzela</th></tr>
<tr><td>Ilanga 1</td><td>Ukwethula isikwere (ilwazimagama).</td><td rowspan="5">Ukubala ngomlomo/ukukhambelanisa amakarada wamaqatjhazi, wenomboro 1 naku-2.
Thinta amabhlogo we-Unifix wokubala, yakha umbhotjhongo wamabhlogo we-Unifix.
Amatshwayo webhoksi newesikwere.
Umgodla wokuzwelela (amabhoksi neembholo).
Imisebenzi yesikwere se-2-D – gadangisa mazombe nebhoksi.
Isikhundla (ngaphakathi/ngaphandle).</td><td>Umsebenzi 1</td><td>Ihlama yokudlalisa neensikihlama zendulungu nezesikwere ukwenza umfuziselo.</td></tr>
<tr><td>Ilanga 2</td><td>Amatshwayo wesikwere; umehluko phakathi kwendulungu nesikwere.</td><td>Umsebenzi 2</td><td>Sika iinkwere bese uyazinamathisela ukwenza isithombe.</td></tr>
<tr><td>Ilanga 3</td><td>Umraro wamagama (INcwadi yamaPhosta) – isikwere; thola iinkwere ngetlasini.</td><td>Umsebenzi 3</td><td>Ukuhlela ngamananeko izinto zebumbeko lesikwere nezebumbeko lendulungu.</td></tr>
<tr><td>Ilanga 4</td><td>Ikombatjhuba (ukuya phambili nokuya emuva).</td><td>Umsebenzi 4</td><td>Amaphazili (iinquntu ezisithandathu ubuncani).</td></tr>
<tr><td>Ilanga 5</td><td>Yenza amaphetheni ngeenkwere, ngemibala.</td><td></td><td></td></tr>
</table>

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?

_____
_____
_____
_____

Isifundobandulo 2 Iforomo lokuHlunga

1. Ingabe isifundobandulo sibe ngilokho ebegade ukulindele?

_____
_____
_____
_____

2. Khuyini okufundileko kilesisifundobandulo okukusize khulu?

_____
_____
_____
_____

3. Ikhona into nofana khuyini ongakhange uyithande nofana obenobudisi ukuyizwisisa?

_____
_____
_____
_____

4. Uzokusebenzisa njani lokho okufundileko ngetlasini yakho yakwa-Greyidi R?

_____
_____
_____
_____

5. Kukhona imibono onayo emayelana nokwenza iimfundobandulo ezizako zibe ngcono?

_____
_____
_____
_____