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Uhlelo Lokuthuthukisa Izibalo Zebanga R Grade R Mathematics Improvement Programme



**Umhlangano Wokucobelana Ngolwazi 2 • Workshop 2
Umhlahandlela Wabadidiyeli • Facilitator's Guide**

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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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Programme conceptualisation and management: Cally Kuhne and Tholisa Matheza

Translation and publishing project management: Arabella Koopman

Translation co-ordination (Nguni languages): Pumeza Ngobozana

Translation: Busisiwe Pakade

Editing (isiZulu): Bheki Ntuli

Illustrations: Jiggs Snaddon-Wood

Uhlelo Lokuthuthukisa Izibalo neziLimi ZeBanga R luyisinyathelo so**Mnyango WezeMfundo wesiFundazwe saseGauteng (Gauteng Department of Education)** kanye nomlingani wawo osemqoka, i-**Gauteng Education Development Trust**.

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Ukucatshangwa kanye nokuphathwa kohlelo: Cally Kuhne kanye noTholisa Matheza
Umphathi wokuhumusha kanye nokushicilela iphrojekthi: Arabella Koopman
Ukuhumusha nokuhlanganisa (Izilimi zesiNguni): Pumeza Ngobozana
Ukuhunyushwa kwesiZulu: Busisiwe Pakade
Ukuhlela nokuhloliswa kwesiZulu: Bheki Ntuli
Imifanekiso: Jiggs Snaddon-Wood

Contents

Overview

Purpose	page 6
Learning outcomes	page 6
Workshop content	page 6
Preparation	page 6
Materials	page 8

Workshop content

Opening and reflection	page 10
Session 1: Content overview	page 14
Session 2: Space and Shape (Geometry)	page 18
Session 3: Planning for teaching	page 30
Appendix A: Term 1 Weekly Content Summary (Weeks 3–5)	page 38
Appendix B: Maths Programme principles	page 42
Workshop 2 Evaluation Form	page 44

Okuqukethwe

Ukubuka ngelibanzi

Inhloso	ikhasi 7
Imiphumela yokufunda	ikhasi 7
Okuqukethwe komhlangano wokucobelelana ngolwazi	ikhasi 7
Ukulungiselela	ikhasi 7
Izinto zokusetshenziswa	ikhasi 9

Okuqukethwe komhlangano wokucobelelana ngolwazi

Ukuvula nokudlinza	ikhasi 11
Iseshini 1: Ukubuka ulwazi ngelibanzi	ikhasi 15
Iseshini 2: Indawo Nesimo (Ijyomethri).....	ikhasi 19
Iseshini 3: Ukuhlelela ukufundisa	ikhasi 31

Isithasiselo A: Ithemu 1 Iqoqa Lolwazi Lwesonto Ngalinye

(Amasonto 3-5)	ikhasi 39
Isithasiselo B: Imigomo elawulayo yoHlelo LweZibalo	ikhasi 43
Ifomu Lokuhlola Lomhlangano Wokucobelelana Ngolwazi 2	ikhasi 45

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)

Preparation

- ◆ PPT welcome and outcomes
- ◆ Copy and cut out the Appendix B strips and place them into one envelope per group.
- ◆ Set up a simple obstacle course in an open space.
- ◆ Prepare the tables with materials before each session.

Ukubuka ngelibanzi

Inhloso

Lo owesibili emihlanganweni yokucobelelana ulwazi eyishumi nambili ngaphansi kwesihloko: Uhlelo Lokuthuthukisa Izibalo ZeBanga R, eyingxenye YoMnyango WezeMfundo wesiFundazwe saseGauteng (Gauteng Department of Education (GDE)) Uhlelo Lokuthuthukisa Izibalo neziLimi ZeBanga R.

Inhloso yalo mhlango wokucobelelana ngolwazi ukusiza othisha ukuthi basebenzise Uhlelo Lwezibalo emakilasini abo. Lo Mhlango wokucobelelana ngolwazi uthinta kakhulu Indawo Nesimo (Ijyomethri). Ababambi-qhaza bazoqinisa ulwazi nokuqonda kwabo ukufundisa nokufunda kule Ngxenye Yolwazi, balungiselele ukufundisa imisebenzi Yendawo Nesimo (ijyomethri) emakilasini abo futhi bacabange ngezimiso eziqondisayo ezifundisa ukufundisa.

Imiphumela yokufunda

- ◆ Ukucabanga ngokusetshenziswa kweThemu yoku-1 Amasonto 1–2
- ◆ Ukuze kuhlolwe amasu okuxhumana okweseka ukufundisa izibalo Ebangeni R (isb. ukuxazulula izinkinga, uphenyo, ukuhlola, imibuzo, ukucabanga okujulile, ukubuka)
- ◆ Ukuzibandakanya nokuqokethwe Kohlelo Lwezibalo lweThemu 1 Amasonto 3–5 (Indawo Nesimo (Ijyomethri))
- ◆ Ukusebenzisa izimiso Zohlelo Lwezibalo ekuhleleni kwamasonto onke

Okuqokethwe komhlangano wokucobelelana ngolwazi

- ◆ Ukuvula nokuzindla (1 ihora)
- ◆ Iseshini 1: Ukubuka ulwazi ngelibanzi (1 ihora)

ITIYE

- ◆ Iseshini 2: Indawo Nesimo (Ijyomethri) (2 amahora)

ISIDLO SASEMINI

- ◆ Iseshini 3: Ukuhlelela ukufundisa (2 amahora)

Ukulungiselela

- ◆ PPT ukwemukelwa kanye nomphumela
- ◆ Kopisha bese usika imidweshu Yesithasiselo B bese uyibeka emvilophini eyodwa yeqembu ngalinye.
- ◆ Beka okuneziphazamiso okulula endaweni evulekile.
- ◆ Lungiselela amatafula ngezinsiza ngaphambi kweseshini ngayinye.

Materials

- ◆ Flipchart paper, kokis
- ◆ Props for obstacle course
- ◆ *Concept Guide*
- ◆ *Poster Book*
- ◆ *Activity Guide: Term 1*
- ◆ Boxes, balls and ramps for each table
- ◆ Large sheet of newsprint (for tracing around a person)
- ◆ Newsprint and crayons for each table
- ◆ Attribute blocks for each table

Izinto zokusetshenziswa

- ◆ Iphepha leshadi eliphenywayo, amakhokhi
- ◆ Amaphrophu okuneziphazamiso okulula
- ◆ *Umhlahlandlela Wokuqonda Isifundo*
- ◆ *Ibhuku Lamaphosta*
- ◆ *Umhlahlandlela Wemisebenzi: Ithemu 1*
- ◆ Amabhokisi, amabhola nemigwaqwana yetafula ngalinye
- ◆ Iphepha elikhulu lephephandaba (ukuze kudwetshwe kuzungezwe umuntu)
- ◆ Iphepha lephephandaba letafula ngalinye
- ◆ Amabhulokhi angama-athribhuthi etafula ngalinye

Opening and reflection

1 hour

Facilitator's notes

- ◆ PPT: Open the session, welcome participants and read through the outcomes for the workshop.
- ◆ Remind participants of the *Take back to school* task from the end of Workshop 1. Ask participants to work in groups to reflect on this task and to complete **Activity 1**.
- ◆ Groups share key points with the large group.
- ◆ List examples of good practice on newsprint and encourage participants to write these down or take a photograph of the newsprint as a record.
- ◆ On the ground, place a piece of string the length of the classroom. Mark one end of the string: 1 = the Maths Programme has made a big difference to my teaching. Mark the other end of the string: 10 = the Maths Programme has made no difference to my teaching.
- ◆ Invite a few participants at a time to stand on the string indicating where they fit on the scale and to explain why they chose to stand there.

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?

Amanothi omdidiyeli

- ◆ PPT: Vula iseshini, mukela ababambiqhaza bese ufunda imiphumela yomhlangano wokucobelelana ngolwazi.
- ◆ Khumbuza ababambiqhaza *Ngomsebenzi obuyela nawo esikoleni* ekupheleni Komhlangano Wokucobelelana Ngolwazi 1. Cela ababambiqhaza ukuthi basebenze ngamaqembu ukuze bacabange ngalo msebenzi futhi baqedele **Umsebenzi 1**.
- ◆ Amaqembu abelana ngamaphuzu abalulekile neqembu elikhulu.
- ◆ Faka ohlwini izibonelo zokuzijwayeza okuhle kwephephabhuku futhi ukhuthaze ababambiqhaza ukuthi bakubhale phansi noma bathathe isithombe sephephabhuku njengerekhodi.
- ◆ Phansi, beka umucu wentambo ongubude bekilasi. Maka isiphetho sentambo: 1 = Uhlelo Lwezibalo lwenze umehluko omkhulu ekufundiseni kwami. Maka isiphetho sentambo: 10 = Uhlelo Lwezibalo alwenzanga mehluko ekufundiseni kwami.
- ◆ Mema ababambiqhaza abambalwa ngesikhathi ukuthi beme entanjeni bakhombise lapho bengena khona esikalini futhi bachaze ukuthi kungani bekhetha ukuma lapho.

Emhlanganweni Wokucobelelana Ngolwazi 1 *Umsebenzi obuyela nawo esikoleni* wawucelwe ukuthi uqedele imisebenzi embalwa. Sithanda ukuthi uchithe imizuzu embalwa ucabanga ngenqubekelaphambili yakho kuze kube manje.

Emaqenjini enu, cabangani ngokufundisa kwenu izibalo emasontweni amabili edlule nokuthi nisebenzise ngempumelelo kangakanani ngeThemu 1 Amasonto 1–2.



Umsebenzi 1

Eqenjini lenu, xoxani ngempumelelo nezinsesele zenu ngokusebenzisa iThemu 1 Amasonto 1–2 Uhlelo Lwezibalo. Vumela umuntu ngamunye ukuthi abe nethuba lokwethula ukucabanga kwakhe.

1. Chaza kafushane ukuthi ulihlele kanjani ikilasi lakho nokuthi uzilungiselele kanjani ukufundisa kulawa masonto amabili.

2. Xoxa ngalokho okusebenze kahle nalokho okuthole kunzima ukukusebenzisa. Ngabe ukhona onanoma yiziphi iziphakamiso eziwusizo?

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

Facilitator's notes

- ◆ Wrap us this session with feedback from each group. Refer to specific activities in *Activity Guide: Term 1* to support what participants share.
- ◆ Discuss the video with a focus on how participants managed the teacher-guided activity in Week 2.



Video 1

Activity Guide: Term 1, Week 2, Teacher-guided activity #3 (page 46)

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.

Facilitator's notes

- ◆ Hand out one envelope containing the eight guiding principles of teaching and matching statements to each group.
- ◆ Explain that the participants need to match the principles with the statements to complete **Activity 2**.



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.

3. Yabelana nabanye ngokuthi uzisebenzise kanjani futhi nini izimiso eziqondisa uhlelo lwansuku zonke Lwezibalo ngesikhathi sokugxila?

Amanothi omdidiyeli

- ◆ Songa lesi sikhathi ngembuyisambiko evela eqenjini ngalinye. Bheka imisebenzi ethile *Kumhlahlandlela Wemisebenzi: Ithemu 1* ukweseka lokho ababambiqhaza ababelana ngakho.
- ◆ Xoxa ngevidiyo ugxile ekutheni ababambiqhaza bawengamele kanjani umsebenzi oholwa nguthisha kuSonto 2.



Ividiyo 1

Umhlahlandlela Wemisebenzi: Ithemu 1, Isonto 2, Umsebenzi oholwa uthisha #3 (ikhasi 47)

Buka ividiyo yomsebenzi oholwa nguthisha obandakanya iqenjana labafundi.

Ucabanga ukuthi iyini inhloso yalo msebenzi? Naka ngokukhethekile ukuthi uthisha ubabuza kanjani abafundi imibuzo kanye nendlela aqaphela ngayo umfundi ngamunye.

Kumhlangano Wokucobelelana Ngolwazi 1 sixoxe ngemigomo elawulayo eyisishiyagalombili yokufundisa izibalo Ebangeni R. Umsebenzi 2 udinga ukuthi uqondanise isimiso ngasinye nezitatimende ezimbili ezisichaza kangcono.

Amanothi omdidiyeli

- ◆ Nikeza imvilophu eyodwa equkethe imigomo eyisishiyagalombili yokufundisa nokumatanisa izitatimende eqenjini ngalinye.
- ◆ Chaza ukuthi ababambiqhaza badinga ukufanisa imigomo nezitatimende ukuze baqedele **Umsebenzi 2.**

Session 1: Content overview

1 hour

Facilitator's notes

- ◆ Refer participants to pages 126–131 of the *Concept Guide*. Remind participants that this table provides the framework for all maths planning and will be used and referenced throughout the training.
- ◆ Ask participants to work in groups to complete **Activity 3**. Ask one person from each group to share their ideas.

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).

Facilitator's notes

- ◆ Ask the participants: If I say 'space and shape' what words come to mind?
- ◆ List the words that they share on flipchart paper.

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:

Iseshini 1: Ukubuka ulwazi ngelibanzi

1 ihora

Amanothi omdidiyeli

- ◆ Bhekisa ababambiqhaza kumakhasi 126–131 *Omhlahlandlela Wemisebenzi*. Khumbuza ababambiqhaza ukuthi leli thebula lihlinzeka ngohlaka lokuhlelela izibalo futhi kuzosetshenziswa kuphinde kubhekiswe kulo ekuqeqeshweni konke.
- ◆ Cela ukuthi ababambiqhaza basebenze emaqenjini ukuze baqedele **Umsebenzi 3**. Cela umuntu oyedwa eqenjini ngalinye ukuthi abelane nabanye ngemicabango yakhe.

Ukubuka ulwazi ngelibanzi Ithemu 1: Indawo Nesimo (Ijijomethri)

Okuqokethwe kokufundisa nokufunda Emasontweni 3–5 kugxile kakhulu ku-CAPS Ingxenye Yolwazi, Isikhala Nesimo (Ijijomethri). Ingxenye Yolwazi ibandakanya okungaphezu kokufundisa abafundi ukubona izimo zejijomethri. Ukuqonda kwabo indawo nesimo kuncike kakhulu ekutheni bayaqonda yini futhi bangasebenzisa ulwazimagama lwesikhundla ukuchaza indawo yento (isb., ku-, eceleni ne-, ngemuva, phambi kwe-). Abafundi badinga futhi ukuzibona izinto ezikhundleni noma ngokubuka ezindaweni ezahlukene (isib. ukusuka phezulu, ukusuka phansi, ukuphendukela emaceleni, ukuphendukiselwa phansi).

Amanothi omdidiyeli

- ◆ Buza ababambiqhaza: Uma ngithi 'indawo nesimo' yimaphi amagama afikayo engqondweni?
- ◆ Faka ohlwini amagama ababelane ngawo ephepheni leshadi eliphenywayo.

Funda uhlaka lokubuka ngelibanzi Lwendawo Nesimo (Ijijomethri) kumakhasi 126–131 *Omhlahlandlela Wokuqonda Isifundo*. Uhlinzeka ngokubuka ngelibanzi Uhlelo Lwezibalo okumele lufundiswe ethemini ngayinye yeBanga R.

- ◆ Umbhalo oluhlaza okwesibhakabhaka ulwazi oluphuma ku-CAPS LweZibalo Zebanga R.
- ◆ Incazelo yemibhalo nolwazi olumnyama lwengezezelwe ukunweba nokwakhela ku-CAPS.
- ◆ Izihloko zilandelanise ukuze zikhombise inqubekela phambili yokuthuthuka kwesihloko esisodwa kuya kwesinye.



Umsebenzi 3

Bheka u-3.1–3.4 ukubuka ngelibanzi okuqokethwe Kwendawo Nesimo (Ijijomethri) emakhasini 126–131 *Omhlahlandlela Wokuqonda Isifundo*. Eqenjini lakho, yenza lokhu okulandelayo:

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

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

Refer to the black text. Main additions to CAPS are:

- position of child in relation to their surroundings
- exploring 3-D objects: flat, round, square or rectangular shape
- rectangle (referred to incidentally in Term 1 and taught in Term 3)
- recognise, identify and name 2-D shapes
- comparing rectangles and squares
- curved and straight lines.

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

Understanding more about their world – everything around us has a shape. Learning the correct language enables learners to talk about and describe shapes.

Many of the terms also apply to understanding the position of number in the counting sequence or the sequence of items in a pattern. Many life skills depend on spatial awareness and skills, e.g. following directions or reading a map, packing things into a container, etc.

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.

1. Bheka isihloko ngasinye bese uxoxa ngokuqukethwe kanye nenqubekelaphambili yokuthuthuka kuwo wonke amathemu amane.

2. Bheka umbhalo obhalwe ngokumnyama bese uxoxa ngokuthi Uhlelo LweziBalo lwengezani kulwazi oluvela kuCAPS.

Bheka umbhalo omnyama. Izengezo eziyinhloko kuCAPS yilezi:

- isikhundla sengane maqondana nendawo eyizungezile
- ukucubungula izinto ezingu-3-D: izimo eziyisicaba, indilinga, isikwele noma unxande
- unxande (okubhekiselwa kukho ngokwehla kuThemu 1 futhi wafundiswa ngeThemu 3)
- bona, hlonza bese uqamba izimo ezingu-2-D
- ukuqhathanisa onxande nezikwele
- imigqa egobile neqondile.

3. Kungani ucabanga ukuthi ukukala Indawo Nesimo (Ijyomethri) kungokwesibili ukuphakama ngokuphathelene Nezingxenye Zolwazi Ebangeni R?

Ukuqonda kabanzi ngomhlaba wabo – yonke into esizungezile inesimo. Ukufunda ulimi olufanele kwenza abafundi bakhulume ngezimo futhi bazichaze.

Amagama amaningi ayasebenza futhi ekuqondeni isikhundla senombolo ngokulandelana kokubala noma ukulandelana kwezinto ephethinini. Amakhono amaningi empilo ancike ekuqapheleni indawo namakhono, isb. ukulandela izikhombisi-ndlela noma ukufunda ibalazwe, ukupakisha izinto esitsheni, njll.

4. Ukwenze kanjani ukufundisa Indawo Nesimo (Ijyomethri) ekilasini lakho? Nikeza izibonelo zezifundo nemisebenzi oye wayisebenzisa esikhathini esidlule.

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.

Facilitator's notes

- ◆ Set up an obstacle course using chairs, hula hoops, planks, tables and a box.
- ◆ Examples of instructions to use:
 - Take two steps forward.
 - Jump into the hula hoop.
 - Jump out of the hula hoop.
 - Stand with one leg in the hula hoop.
 - Crawl forwards through the legs of the table.
 - Stand up and turn around.
 - Take three steps backwards.
 - Put one leg inside the hula hoop.
 - Jump over the box.
 - Walk between the chairs.
 - Stand in the box.



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

Facilitator's notes

PPT: Poster 9: Ask questions that require answers that use position and direction words.

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.

Iseshini 2: Indawo Nesimo (Ijijomethri) 2 amahora

Imiqondo yendawo

(30 imizuzu)

Abafundi baqala ukufunda mayelana nemiqondo yendawo njengokuthi isikhundla, inkomba, isimo (imibono ehlukeni) yokubuka kube njengoba besebenzisa imizimba yabo ukuhlola ubudlelwano phakathi kwabo, abanye abantu nezinto.

Amanothi omdidiyeli

- ◆ Setha okuneziphazamiso okulula usebenzisa izihlalo, amahulahuphu, amapulangwe, amatafula kanye nebhokisi.
- ◆ Izibonelo zemiyalelo okufanele isetshenziswe:
 - Thatha izinyathelo ezimbili ukuya phambili.
 - Gxumela phakathi kwehulahuphu.
 - Gxuma uphume kuhulahuphu.
 - Yima ngomlenze owodwa phakathi kwehulahuphu.
 - Khasa uye phambili phakathi kwemilenze yetafula.
 - Sukuma bese uphenduka.
 - Thatha izinyathelo ezintathu eziya emuva.
 - Faka umlenze owodwa phakathi kwehulahuphu
 - Gxuma weqe ibhokisi.
 - Hamba phakathi kwezihlalo.
 - Yima ebhokisini.



Umsebenzi 4

Umdidiyeli usethe umsebenzi olula wesithiyo. Shintshanani nophathina ukuze niqondisane emsebenzini wezithiyo. Sebenzisa ulimi lwesikhundla nokuqondisa ukuze unikeze imiyalelo ecacile.

Besebenzisa *Ibhuku Lamaphosta* ukukhuluma ngesikhundla kanye nesiqondiso

Amanothi omdidiyeli

PPT: Iphosta 9: Buza imibuzo edinga izimpendulo ezisebenzisa amagama esikhundla nokukhomba indlela.

Ibhuku Lamaphosta Lohlelo LweziBalo lunikeza amathuba okusebenzisa izimo ezingokoqobo ukuze uhlale imiqondo. KuPhosta 9 *Yebhuku Lamaphosta* ungabona lapho uMalusi ehlala khona maqondana nabanye abantu nezindawo ezingomakhelwane bakhe. Le phosta ingasetshenziselwa ukugqugquzela ingxoxo ngesikhundla sabantu nezinto maqondana nokunye okukhuthaza abafundi ukuthi basebenzise futhi bajwayelane nolimi oluchaza indawo, isikhundla kanye nokukhomba indlela. Abafundi baxhumanisa izibalo nempilo yabo yansuku zonke njengoba bexoxa futhi bexazulula izinkinga.

Facilitator's notes

- ◆ Ask participants to complete **Activity 5** in their small groups. Have each group report back on the activity.
- ◆ Remind participants that position and direction questions and vocabulary are introduced not only during Mathematics focus times, but are also woven into the daily programme throughout the school day. Also remind them that the teacher plays an important role in modelling appropriate vocabulary.



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?

Position: on top of, behind, in front of, in, on, under, next to.

Direction: turn, straight, forwards, towards, away from, left, right, to, from, around, along, through.

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

Examples:

- Where is ...?
- What is in front/behind/under/next to the ...?
- How will Malusi get to ...?

Facilitator's notes

- ◆ Draw attention to Malusi waving goodbye to Granny. Ask the participants:
 - What do you see in the picture?
 - Where do you think Malusi is going?
 - How do you think he will get there?
- ◆ List the direction words as they are called out, e.g. turn, straight, forwards, towards, away from, left, right, to, from, around, along, through.
- ◆ Ask the participants: Where in the playground could Malusi hide from the other learners?
- ◆ List the position words, e.g. top of, behind, in, on, under, bottom, next to, upside down.
- ◆ PPT: Briefly define the spatial concepts of position, direction, orientation (views) and perspective. Discuss how learners first use their own bodies to explore spatial concepts.
- ◆ Ask participants what kinds of activities in their daily programmes will help learners develop the understanding of these spatial concepts.

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

Amanothi omdidiyeli

- ◆ Cela ababambiqhaza ukuthi baqedele **Umsebenzi 5** amaqenjini abo amancane. Yenza iqembu ngalinye libike ngomsebenzi.
- ◆ Khumbuza ababambiqhaza ukuthi imibuzo yesikhundla nokukhomba indlela kanye nesilulumagama kwethulwa, hhayi nje kuphela ngezikhathi zokugxila Ezibalweni, kodwa futhi kulukwa kuhlelo lwansuku zonke usuku lonke lwesikole. Bakhumbuze nokuthi uthisha udlala indima ebalulekile ekuboniseni ulwazimagama olufanele.



Umsebenzi 5

Eqenjini lakho, bheka Iphosta 9 bese nixoxa ngalokhu okulandelayo:

1. Yisiphi isikhundla namagama ezinkomba ongawethula kubafundi futhi ubakhuthaze ukuthi bawasebenzise?

Isikhundla: phezu kwe-, ngemuva, ngaphambi kwe-, phakathi, ngaphezu, ngaphansi, eceleni kwe-.

Isikhombisi-ndlela: phenduka, uqonde, uye phambili, uqonde, kude, kwesokunxele, kwesokudla, ukuya, ukusuka, ukuzungeza, ukudlula.

2. Yimiphi eminye imibuzo ongayibuza abafundi engabasiza ukuba bafunde mayelana nesikhundla, isikhombisi-ndlela, ukuma (imibono) kanye nendlela yokubuka izinto?

Izibonelo:

- Kuphi ...?
- Yini engaphambili/ngemuva/ngaphansi/eduze kwe...?
- UMalusi uzofika kanjani ...?

Amanothi omdidiyeli

- ◆ Yenza banake uMalusi ethathazela uGogo. Buza ababambiqhaza:
 - Ubonani esithombeni?
 - Ucabanga ukuthi uMalusi uyaphi?
 - Ucabanga ukuthi uzofika kanjani lapho?
- ◆ Faka ohlwini amagama akhombayo njengoba ebizwa, isib. jika, uqonde, uye phambili, ubheke, kude, kwesokunxele, kwesokudla, ukuya, ukusuka, ukuzungeza, eduze, ukudlula.
- ◆ Buza ababambiqhaza: Kukuphi ebaleni lokudlala lapho uMalusi engacashela khona abanye abafundi?
- ◆ Faka ohlwini amagama esikhundla, isib. phezu kwe-, ngemuva, phakathi, phezu, ngaphansi, phansi, eduze, kubheke phansi.
- ◆ PPT: Chaza kafushane imiqondo yendawo yesikhundla, ukukhomba indlela, umumo (ukubuka) nendlela yokubuka izinto. Xoxani ngokuthi abafundi basebenzisa kanjani imizimba yabo kuqala ukuze bahlole imiqondo yendawo.
- ◆ Buza ababambiqhaza ukuthi yiziphi izinhlobo zemisebenzi ezinhlelweni zabo zansuku zonke ezizosiza abafundi bathuthukise ukuqonda le mibono yendawo.

Bheka amakhasi 172–177 *Umhlahandlela Wokuqonda Isifundo* ukuze ufunde kabanzi mayelana nendawo.

Facilitator's notes

- ◆ In Grade R learners recognise, identify and name three-dimensional (3-D) objects and two-dimensional (2-D) shapes.
- ◆ Refer to pages 178–189 of the *Concept Guide*.
- ◆ Discuss the terms '2-D shapes' and '3-D objects'.
- ◆ Use real objects to demonstrate as you explain the difference between these terms.

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

Facilitator's notes

- ◆ Discuss how learners engage with the properties of 3-D objects as they explore everyday materials such as boxes, cans, toilet roll inners, balls and so on.
- ◆ Ask participants what they provide in their classrooms that helps learners to discuss, compare and sort objects. Explain that the next activity will demonstrate how to help learners recognise the properties of objects.
- ◆ Show the video and ask participants to complete the activity in their groups.

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

Activity Guide: Term 1, Week 3, Day 1 #4 (page 54)

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.

Amanothi omdidiyeli

- ◆ Abafundi beBanga R babona, bahlonze bese besho igama lezinto ezinhlangothi ntathu (3-D) nezimo ezinezinhlangothi ezimbili (2-D): ubude kanye nobubanzi
- ◆ Bheka amakhasi 178–189 *Umhlahandlela Wokuqonda Isifundo*.
- ◆ Xoxani ngamagama athi 'izimo ezingu-2-D' nelithi 'izinto ezingu-3-D'.
- ◆ Sebenzisa izinto zangempela ukukhombisa njengoba uchaza umehluko phakathi kwala magama.

KuBanga R abafundi bagxila ekwazini, ekuboneni nasekubizeni izinto ezinhlangothi-ntathu (3-D) nezimo ezinhlangothi-mbili (2-D).

- ◆ U-3-D uchaza ukuthi into inezinhlangothi ezintathu: ubude, ububanzi kanye nokuphakama
- ◆ U-2-D uchaza ukuthi isimo sinezinhlangothi ezimbili: ubude kanye nobubanzi.

Ukubona, ukukhomba nokuqhathanisa izinto ezinezinhlangothi ezintathu**Amanothi omdidiyeli**

- ◆ Xoxani ngokuthi abafundi bazibandakanya kanjani nezimpawu zezinto ezi-3-D njengoba behlola izinto zansuku zonke ezifana namabhokisi, amathini, ingaphakathi lamaroli ephepha lendlu yangasese, amabhola nokunye.
- ◆ Buza ababambiqhaza ukuthi yini abayihlinzekayo emagumbini abo okufundela esiza abafundi ukuba baxoxe, baqhathanise futhi bahlele izinto. Chaza ukuthi umsebenzi olandelayo uzokhombisa ukuthi ungabasiza kanjani abafundi babone izakhiwo zezinto.
- ◆ Bonisa ividiyo bese ucela ababambiqhaza ukuthi baqedele umsebenzi emaqenjini abo.

Abafundi beBanga R bahlola izakhiwo zezinto zansuku zonke. Bakha izakhiwo besebenzisa izinto zasendlini ezigaywe kabusha njengamabhokisi, amathini, izindishi, ingaphakathi leroli yephepha lendlu yangasese, amabhola nokunye. Baphenya bachaze izinto ezimise okwebhokisi nebhola. Baqhathanisa futhi bahlele izinto futhi bakhulume ngokufana nokwehluka.

**Ividiyo 2**

Umhlahandlela Wemisebenzi: Ithemu 1, Isonto 3, Usuku 1 #4 (ikhasi 55)

Buka ividiyo kathisha ekhuluma nabafundi abahlela iqoqo lezinto. Lalela ukuthi ubakhuthaza kanjani abafundi ukuthi bachaze ukuthi bahlela kanjani izinto nokuthi asetshenziswa kanjani amagama afanele ukuchaza into ngayinye.

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

Facilitator's notes

- ◆ Ask a volunteer to join you. Ask participants to look at this person from the front, the top and the side, and to describe what they see. Explain that we can view this person from many different positions if we move or if we turn them.
- ◆ Ask the volunteer to lie flat on his/her back on a large sheet of paper and trace around him/her with a koki. Once the outline has been drawn, have the participant stand up.
- ◆ Ask participants what they see on the paper.
- ◆ Ask questions that focus on the person and on the shape or outline of the person, for example: Can you look at the drawing from different positions?
- ◆ Place a number of boxes, a large piece of paper and crayons on each group's table. Explain that the participants will explore the boxes in **Activity 6**.
- ◆ After the activity discuss what participants observed. Point out that this activity helps learners create shapes by tracing around the base of objects.

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.



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.

Bheka amakhasi 178–181 *Umhlahlandlela Wokuqonda Isifundo* ukufunda okwengeziwe ngezinto ezingu-3-D.

Ukusuka ezintweni ezingu-3-D uye ezimweni ezingu-2-D

Amanothi omdidiyeli

- ◆ Cela ivolontiya elizohlanganyela nawe. Cela ababambiqhaza ukuthi babheke lo muntu ophambi kwabo, phezulu kanye naseceleni, bese bechaza lokho abakubonayo. Chaza ukuthi singabona lo muntu ezinhlangothini eziningi ezahlukene uma sinyakaza noma siphenduka.
- ◆ Cela ivolontiya ukuthi lilale phansi ngomhlane bese ephepheni elikhulu nithreyisa nimzungeze ngamakoki. Uma sekudwetshwe ingaphandle lomdwebo, sukumisa umbambiqhaza.
- ◆ Buza ababambiqhaza ukuthi yini abayibonayo ephepheni.
- ◆ Buza imibuzo egxile kumuntu kanye nengaphandle lomdwebo womuntu, isibonelo: Ngabe ungawubuka umbhalo ezikhundleni ezahlukene?
- ◆ Beka amabhokisi ambalwa, iphepha elikhulu kanye namakhrayoni etafuleni leqembu ngalinye. Chaza ukuthi ababambiqhaza bazocubungula amabhokisi **Kumsebenzi 6**.
- ◆ Emva komsebenzi, xoxa ngokuthi yini ebonwe ababambiqhaza. Yisho ukuthi umsebenzi usiza abafundi ukuthi benze izimo ngokuthreyisa isisekelo sezinto.

Ebangeni R, kugxilwe ezimpawini zezinto kanye nezimo. Abafundi bafunda ukuhlonza nokuchaza izici zako kokubili, izinto kanye nezimo.



Umsebenzi 6

- ◆ Buka bese uchaza izakhiwo zebhokisi.
- ◆ Beka ibhokisi ephepheni.
- ◆ Threyisa isisekelo sebhokisi.
- ◆ Chaza imigqa yomdwebo wakho.
Kuqondile, kune, okubili kude nokubili okufushane/kuyalingana

- ◆ 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

Facilitator's notes

- ◆ Explain that learners also need opportunities to explore a variety of shapes to find out what the common properties of a particular shape are. Refer participants to **Activity 7** and ask them to use their attribute blocks and to follow the instructions.
- ◆ Point out that the attribute block is an object. (It has length, width and height.) If you focus on the surface of the attribute block by running your finger along the edges, you will follow the lines and trace the length and width of the shape, e.g. a square, rectangle, triangle or circle (the edge of the circle is curved).
- ◆ Ensure that participants understand the difference between 3-D and 2-D and can explain this to learners.
- ◆ Emphasise that in Grade R learners do not learn the terms 3-D and 2-D. They only talk about 'objects' and 'shapes', but they should use the correct vocabulary to describe the properties.
- ◆ Link **Activity 7** to Poster 8 and briefly discuss the shapes.
- ◆ Explain the term 'orientation'.

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.
- ◆ Use your finger to trace around the shape. What is the shape called?
- ◆ Think of a question that would encourage learners to think and reason.

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

- ◆ Yisho igama lesimo osidwebile.
- ◆ Wazi ngani ukuthi yisikwele/unxande?
- ◆ Zingaki izinhlangothi esinazo?
- ◆ Mangaki amakhona esinawo?
- ◆ Uyini umehluko phakathi kwebhokisi kanye nesikwele/unxande?

Ukubona, ukuchaza kanye nokuqhathanisa izimo ezinhlangothi-mbili

Amanothi omdidiyeli

- ◆ Chaza ukuthi abafundi nabo badinga amathuba okucubungula izimo ezahlukene ukuze bathole ukuthi zithini izakhi zesimo esithile. Bhokisa ababambiqhaza **Kumsebenzi 7** bese ubacela ukuthi basebenzise amabhulokhi abo ama-athribhuthi bese ulandela imiyalo.
- ◆ Yisho ukuthi ibhulokhi lama-athribhuthi liyinto. (Linobude, ububanzi nokuphakama.) Uma ugxila ngaphezulu kwebhulokhi lama-athribhuthi ngokuhambisa umunwe onqenqemeni, uzolandela imigqa bese uthreyisa ubude nobubanzi besimo, isb. isikwele, unxande, unxantathu noma indilinga (unqenqema lwendilinga lugobile).
- ◆ Qinisekisa ukuthi ababambiqhaza bayawuqonda umehluko phakathi kuka-3-D kanye no-2-D, futhi bayakwazi ukuchazela abafundi lokhu.
- ◆ Gcizelela ukuthi Ebangeni R abafundi abawafundi amatemu u-3D kanye no-2D. Basebenza kuphela 'ngezinto' kanye 'nezimo', kodwa kumele basebenzise ulwazimagama olufanele ukuze bachaze izakhiwo.
- ◆ Xhumanisa **Umsebenzi 7** nePhosta 8 bese udingida izimo ngamafuphi.
- ◆ Chaza itemu elithi 'isimo'.

Abafundi kumele babheke bese bedingida izinto eziningi eziyizimo ezingu-2-D ukuze bathole ukuthi yiziphi izakhi ezifanayo esimweni esithile, isb. nanoma onxantathu bengabukeka bengafani ncimishi, bonke banezinhlangothi ezintathu kanye namakhona; bonke onxande banezinhlangothi zesimo.

Sebenzisa amabhulokhi angama-athribhuthi asetafuleni lakho ukucubungula ngezimo ezingu-2-D.



Umsebenzi 7

Eqenjini lakho, khulumani ngesimo sobuso bebhulokhi elingama-athribhuthi.

- ◆ Bheka isimo esinamakhona amane.
- ◆ Sebenzisa umunwe wakho ulandele isimo. Sibizwa ngani lesi simo?
- ◆ Bheka isimo esingenazo izinhlangothi eziqondile.
- ◆ Sebenzisa umunwe wakho ulandele isimo. Sibizwa ngani lesi simo?
- ◆ Bheka isimo esinezinhlangothi esintathu ezifana ncamashi.

Bheka amakhasi 182–189 *Umhlahlandlela Wokuqonda Isifundo* ukuze ufunde kabanzi mayelana nezimo ezingu-2-D.

Facilitator's notes

- ◆ PPT: Symmetrical and non-symmetrical shapes and objects. Refer to pages 188–191 of the *Concept Guide*.
- ◆ Remind participants about the **practice principle** and that learners need many opportunities to practise new skills and apply them in different contexts.

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.

Amanothi omdidiyeli

- ◆ PPT: Izimo nezinto ezivumelanayo nezingavumelani. Bheka amakhasi 188–191 *Omhlahlandlela Wokuqonda Isifundo*.
- ◆ Khumbuza ababambiqhaza **ngomgomo wokwenza** nokuthi abafundi badinga amathuba amaningi okuzejwayeza amakhono amasha nokuwasebenzisa ezimeni ezahlukene.

Into noma isimo sinokuvumelanisa lapho singahlukaniswa sibe izingxenye ezimbili ezilinganayo emgqeni ophakathi. Amaphethini anokuvumelanisa angatholakala emizimbeni yethu, emvelweni, endaweni eyakhelweyo nasezithombeni. Umugqa ovumelanisayo uhlukanisa usimo sibe izingxenye ezimbili ezifanayo. Umugqa ungaba ngovundlile noma oqondile.

Bheka amakhasi 188–191 *Umhlahlandlela Wokuqonda Isifundo* ukuze ufunde kabanzi mayelana nokuvumelanisa.

Umgomo wokuzejwayeza: Abafundi kufanele babe nesikhathi esiningi sokuzejwayeza amakhono nolwazi olusha. Uma abafundi bezejwayeza njalo lokho asebekufundile, baba ngcono kukho, futhi bayazethemba nakakhulu. Abafundi bajabulela ukuphindaphinda nokuzejwayeza. Othisha beBanga R kufanele bahlinzeke ngamathuba aphindaphindayo okuthi abafundi bazejwayeze futhi bathuthukise amakhono amasha.

Session 3: Planning for teaching

2 hours

Facilitator's notes

- ◆ Refer participants to Appendix A: Term 1 Weekly Content Summary (Weeks 3–5).
- ◆ Read the whole class, teacher-guided and workstation activities sections.
- ◆ Have participants work in groups to complete **Activity 8**.

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?	Space and Shape (Geometry)	Space and Shape (Geometry)	Space and Shape (Geometry)
What are the key concepts that learners will be learning?	Properties of 3-D objects Spatial concepts: in and out Big and small	Properties of 2-D shapes (circle) Symmetry	Properties of 2-D shapes (square) Backwards, forwards inside, outside
What new knowledge is introduced?	Counting objects 1–5 Properties of boxes and balls Objects that roll or slide Position: in and out Big and small Biggest and smallest	Circle Symmetry Number 2	2-D shape: square Direction: forwards and backwards Position: inside and outside
What skills are being practised?	Oral counting 1–5 Reinforce number 1 Sorting	Oral counting 1–5 Number 1 Counting objects 1–5	Circle Number concept 1 and 2 Oral counting 1–5 Counting objects 1–5

Iseshini 3: Ukuhlelela ukufundisa

2 amahora

Amanothi omdidiyeli

- ◆ Bhekisa ababambiqhaza Kusithasiselo A: Ithemu 1 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 3-5)
- ◆ Funda imisebenzi yekilasi lonke, eholwa uthisha kanye neyesiteshi sokusebenzela.
- ◆ Yenza ababambiqhaza basebenze ngamaqembu ukuze baqedele **Umsebenzi 8**.

Ithemu 1 Iqoqa Lolwazi (Amasonto 3-5)

(40 imizuzu)

Isithasiselo A: Ithemu 1 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 3-5), iveza okubalulekile Iyingxenywe Yolwazi Okugxilwe Kuyo isonto ngalinye, izihloko zokufanele kudingidwe, ulwazi olusha nokuzijwayeza kugxilwe kulo isonto ngalinye, kanye nemisebenzi esikiselwe ekilasini lonke, umsebenzi weqembu olawulwa nguthisha kanye nozimele wesonto lonke.

Funda imisebenzi yekilasi lonke, eholwa uthisha kanye neyesiteshi sokusebenzela bese uqedela **Umsebenzi 8**.



Umsebenzi 8

Bheka Isithasiselo B: Ithemu 1 Iqoqa Lokuqokethwe Lamasonto Onke (Amasonto 3-5). Phendula imibuzo.

Imibuzo	Isonto 3	Isonto 4	Isonto 5
Iyiphi Ingxenywe Yolwazi Okugxilwe kuyo yesonto?	Indawo Nesimo (Ijijomethri)	Indawo Nesimo (Ijijomethri)	Indawo Nesimo (Ijijomethri)
Yiluphi ulwazi (umqondo) olusemqoka oluzofundwa abafundi?	Izimpawu zezinto ezingu-3-D Umqondo wendawo: ngaphakathi nongaphandle Okuncane nokukhulu	Izimpawu zezimo ezingu-2-D (indilinga) Ukuvumelanisa	Izimpawu zezimo ezingu-2-D: (isikwele) Ukuya emuva, ukuya phambili, ngaphakathi, ngaphandle
Yiluphi ulwazi olusha olwethulwayo?	Ukubala izinto 1-5 Izimpawu zamabhola namabhokisi Izinto ezingqikayo noma ezishelelayo Isikhundla: ngaphakathi nangaphandle Okukhulu nokuncane Okukhulu kakhulu nokuncane kakhulu	Indilinga Ukuvumelanisa Inombolo 2	Isimo esingu-2-D: isikwele Inkomba: ukuya phambili, ukuya emuva Isikhundla: ngaphakathi, ngaphandle
Imaphi amakhono asetshenziswayo?	Ukubala ngomlomo 1-5 Gxilisa kunombolo 1 Ukuhlunga	Ukubala ngomlomo 1-5 Inombolo 1 Ukubala izinto 1-5	Indilinga Umqondo wezinombolo 1 no-2 Ukubala ngomlomo 1-5

Activity Guide: Term 1: Weeks 3, 4 and 5

(60 minutes)



Video 3

Activity Guide: Term 1, Week 5, Day 3 #4 (page 90)

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.



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.

Umhlahlandlela Wemisebenzi: Ithemu 1: Amasonto 3, 4 no-5

(60 imizuzu)



Ividiyo 3

Umhlahlandlela Wemisebenzi: Ithemu 1, Isonto 5, Usuku 3 #4 (ikhasi 91)

Buka ividiyo yabafundi abaxoxa ngephosta.

1. Bhala imibuzo kanye nezinkinga zezibalo uthisha azethula kubafundi ngesikhathi sokuxoxa ngephosta.

2. Bhala phansi eminye imibuzo okungenzeka ukuthi uthisha uyibuzile.

Bheka Isonto 3, 4 no-5 *kumhlahlandlela Wemisebenzi: Ithemu 1*. Qedela Umsebenzi 9 eqenjini lakho.



Umsebenzi 9

1. Thola Isonto 3, 4 kanye nele-5 *Kumhlahlandlela Wemisebenzi: Ithemu 1* Phendula imibuzo.

- ◆ Iyiphi Ingxenye Yolwazi Okugxilwe Kuyo yesonto?
- ◆ Yiziphi izihloko nolwazi olusha okufundiswa isonto ngalinye?
- ◆ Ngabe okuqukethwe okuku-‘Zejwayeze’ kuxhumana kanjani nesonto eledlule?
- ◆ Yini okudingeka uyilungiselele ngaphambi kokufundisa isonto ngalinye?
- ◆ Funda imisebenzi yekilasi lonke kanye nemisebenzi yamaqembu amancane.
- ◆ Xoxani eqenjini lenu elincane ukuthi nizoba namaphi amasu futhi nilihlele kanjani ikilasi lenu kulawa masonto amathathu okufundisa.

2. Bheka Isithasiselo A: Ithemu 1 Iqoqa Lolwazi Lwesonto Ngalinye (Amasonto 3–5). Qondanisa ikilasi lonke nemisebenzi yeqembu elincane kuSonto 3, 4 no-5

Umhlahlandlela Wemisebenzi: Ithemu 1 Iqoqa Lengxenye Yolwazi yesonto ngalinye.



Khumbula ukuthi ukuhlola Kwebanga R akuhleliwe futhi kuyaqhubeka. Kumele sibheke abafundi usuku lonke, ngaphakathi nangaphandle kwekilasi. Isithonjana sehlo sisikhumbuza ukuthi kufanele sibheke abafundi ngenkathi bematasa, futhi sidinga ukulalelisisa lapho bekhuluma nathi kanye nozakwabo.

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)

Facilitator's notes

- ◆ **Lessons learnt:** Ask participants to think about what they have learnt during the workshop and to complete **Activity 10** individually.
- ◆ **Take back to school task:** Read through this task. Ask if there is anything that is not clear and that requires more explanation.
- ◆ **Evaluation:** Hand out copies of the Workshop Evaluation Form and have participants complete the form.
- ◆ **Next workshop:** Give dates for the next workshop and close the workshop.



Activity 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

Uhlelo LweZibalo lwenzelwe ukushintshana kwamaqembu amancane esontweni kanti uthisha unaka kakhulu iqembu elilodwa ngelanga, ebukela futhi elalela ngesikhathi abafundi beqeda imisebenzi ethile. Lesi sikhathi sinika uthisha ithuba lokuqaphela ngokucophelela umfundi ngamunye abuye aqoqe ulwazi ngenqubekelaphambili yakhe.

Bheka ibhulokhi ehlikihlwe ngombala ekupheleni komsebenzi oholwa nguthisha: **'Hlola ukuthi abafundi bayakwazi uku-'**. Uthisha ubhala engqondweni ngomfundi ngamunye futhi uma abafundi sebegodukile, ubhala phansi akuqaphele encwadini yokuqaphela enendawo yamanothi omfundi ngamunye.

Imisebenzi yokuvala

(20 imizuzu)

Amanothi omdidiyeli

- ◆ **Izifundo ezifundiwe:** Cela ababambiqhaza ukuthi bacabange ngalokho abakufundile ngesikhathi somhlangano bese ngamunye eqedela Umsebenzi 10.
- ◆ **Umsebenzi obuyela nawo esikoleni:** Funda lo msebenzi. Buza ukuthi kukhona yini okungacacile futhi okudinga incazelo eyengeziwe.
- ◆ **Ukuhlola:** Nikeza amakhophi eFomu Lokuhlola Lomhlangano Wokucobelelana Ngolwazi bese ucela ababambiqhaza ukuthi bagcwalise leli fomu.
- ◆ **Umhlangano wokucobelelana ngolwazi olandelayo:** Nikeza izinsuku zomhlangano wokucobelelana ngolwazi olandelayo.



Umsebenzi 10

Izifundo ezifundiwe: Cabanga ngalokho okufundile ngesikhathi somhlangano wokucobelelana ngolwazi bese uqedela ithebhula.

Izinto esengivele ngizenza ezisebenza kahle	Ulwazi olusha engingathanda ukuluzama



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 obuyela nawo esikoleni

1. Funda *Umhlahlandlela Wokuqonda Isifundo* amakhasi okubhekiswe kuwo ngesikhathi salo mhlango wokucobelelana ngolwazi.
2. Lungiselela indawo yezibalo yeNdawo Nesimo (Ijyomethri). Thatha isithombe sayo usilethe emhlanganweni olandelayo wokucobelelana ngolwazi.
3. Sebenzisa *Umhlahlandlela Wemisebenzi: Ithemu 1* ukuhlela nokusebenzisa Amasonto 3–5 oHlelo Lwezibalo. Lapho uhlela, cabanga ngokuthi imigomo eqondisayo izokwazisa kanjani ukuhlela kwakho nokufundisa:
 - Uzokuthola kanjani lokho abafundi asebekwazi vele nabakuqondayo? (**umgomo wamazinga**)
 - Uzokwakhela kanjani phezu kolwazi lwaphambilini olulethwa abafundi beluthole ekhaya? (**umgomo wesimo**)
 - Uzoqinisekisa kanjani ukuthi imisebenzi ehleliwe ibalulekile kubafundi? (**umgomo wesimo**)
 - Uzokwakha kanjani ukulalela nokukhuluma okumatasa emisebenzini yakho oyihlelile? (**umgomo wokuxhumana**)
4. Bhala umzindo walokho okusebenze kahle nalokho okungasebenzanga kahle. Letha amanothi akho okuzindla kanye nezibonelo zomsebenzi owenziwe ngabafundi emhlanganweni olandelayo wokucobelelana ngolwazi.

Ukuhlola

Gcwalisa Ifomu Lokuhlola.

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. Big and small game. Properties of boxes and balls. Compare boxes and balls. Sort objects that slide and roll.	Activity 1	Construct objects with boxes.
Day 2	Compare sizes of boxes and balls.		Activity 2	Big and small playdough balls – sorting.
Day 3	Explore which can slide, which can roll; big/biggest and small/smallest.		Activity 3	Paint prints with boxes or blocks.
Day 4	Discuss why objects roll and slide.		Activity 4	Build animal shelters for the farm animals with building blocks.
Day 5	Position: in and out.			
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> . Circle activity – properties. Number dot cards, pictures and symbols 1 and 2.	Activity 1	Playdough template – make 2.
Day 2	What is a shape? Introduce the circle.		Activity 2	Circle prints – paint and containers.
Day 3	Find circles in the classroom.		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.			

ISITHASISELO A: ITHEMU 1 IQOQA LOLWAZI LWESONTO NGALINYE (AMASONTO 3-5)

Ithemu 1: Uhlelo Lomsebenzi

Isonto 3			
INGXENYE YOLWAZI: INDAWO NESIMO (IJIYOMETHRI)			
ISIHLOKO: Bona, khomba bese uqamba izinto ezingu-3-D; chaza, hlunga futhi uqhathanise izinto ezingu-3-D (amabhokisi namabhola); isikhundla, umumo nokubukwa: ngaphakathi nangaphandle			
YETHULA ULWAZI OLUSHA: Ukubala izinto 1-5, izakhiwo zamabhokisi namabhola, izinto ezigingqikayo noma ezishelelayo, indawo: ngaphakathi nangaphandle, enkulu/encane, enkulu/encane kunazo zonke.			
ZEJWAYEZE: Ukubala ngomlomo 1-5, gcizelela umqondo wenombolo (1), ukuhlela			
Imisebenzi yekilasi lonke		Umsebenzi oholwa nguthisha	Imisebenzi yesiteshi sokusebenzela
Usuku 1	Hlola izakhiwo zamabhokisi namabhola.	Ukubala ukuqondana kuka-1-5. Umdlalo omncane nomkhulu. Izakhiwo zamabhokisi namabhola. Qhathanisa amabhokisi namabhola. Hlunga izinto ezishelelayo nezizingqikayo	Umsebenzi 1
Usuku 2	Qhathanisa ubukhulu bamabhokisi namabhola.		Umsebenzi 2
Usuku 3	Hlola ukuthi yikuphi okungashelela, okungagingqika; enkulu/enkulu nencane/encane kakhulu.		Umsebenzi 3
Usuku 4	Xoxa ngokuthi kungani izinto zizingqika futhi zishelela.		Umsebenzi 4
Usuku 5	Isikhundla: ngaphakathi nangaphandle.		
Isonto 4			
INGXENYE YOLWAZI: INDAWO NESIMO (IJIYOMETHRI)			
ISIHLOKO: Bona, khomba bese usho ngegama izimo ezingu-2-D (indilinga); qhathanisa izinto ezingu-3-D nezimo ezingu-2-D; ukuvumelanisa			
YETHULA ULWAZI OLUSHA: Indilinga, ukuvumelanisa, yethula inombolo 2			
ZEJWAYEZE: Ukubala ngomlomo 1-5, ukubala izinto 1-5, inombolo 1			
Imisebenzi yekilasi lonke		Umsebenzi oholwa nguthisha	Imisebenzi yesiteshi sokusebenzela
Usuku 1	Yethula u-2; indaba yefrizi yezinombolo.	Isho igama lesimo nombala wezinto zokubala eziku <i>Khithi Yezinsiza</i> . Umsebenzi wendilinga – izakhiwo. Amakhadi amachashazi ezinombolo, izithombe nezimpawu 1 no-2.	Umsebenzi 1
Usuku 2	Siyini isimo? Yethula indilinga.		Umsebenzi 2
Usuku 3	Thola izindilinga ekilasini.		Umsebenzi 3
Usuku 4	Bala izingxenye ezahlukene zomzimba; hlola ukuvumelanisa emizimbeni yabo.		Umsebenzi 4
Usuku 5	Kokelezela (sebenzisa iphosta) nokuvumelanisa esithombeni.		

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. 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).	Activity 1	Playdough with circle and square cookie cutter to make model. Cut out squares and paste to make a picture. Sorting square-shaped and circle-shaped objects. Puzzles (minimum six pieces).
Day 2	Properties of the square; difference between circle and square.		Activity 2	
Day 3	Word problem (<i>Poster Book</i>) – square; find squares in the class.		Activity 3	
Day 4	Directionality (forwards and backwards).		Activity 4	
Day 5	Make patterns with squares, colours.			

Isonto 5				
INGXENYE YOLWAZI: INDAWO NESIMO (IJIYOMETHRI)				
ISIHLOKO: Bona, khomba bese uqamba umumo ongu-2-D (isikwele); qhathanisa izinto ezi-3-D nezimo ezi-2-D (ibhokisi nesikwele); isiqondiso: phambili/emuva; isikhundla: ngaphakathi/ngaphandle				
YETHULA ULWAZI OLUSHA: Isikwele, isiqondiso (phambili/emuva), isikhundla (ngaphakathi/ngaphandle)				
ZEJWAYEZE: Indilinga, ukubala ngomlomo 1-5, ukubala izinto 1-5, umqondo wenombolo 1 no-2				
Imisebenzi yekilasi lonke		Umsebenzi oholwa nguthisha		Imisebenzi yesiteshi sokusebenzela
Usuku 1	Yethula isikwele (isilulumagama).	Ukubala ngomlomo/ichashazi lokuqhathanisa, amakhadi ezinombolo 1 kanye no-2. Thinta ukubala amabhulokhi axhumekayo, yakha imibhoshongo ngawo. Izakhiwo zebhokisi nesikwele. Isikhwama sokuzwa (amabhokisi namabhola). Umsebenzi wesikwele esingu-2-D – ukulandelela eduze kwebhokisi. Isikhundla (ngaphakathi/ngaphandle).		Umsebenzi 1
Usuku 2	Izakhiwo zesikwele; umehluko phakathi kwendilinga nesikwele.			Umsebenzi 2
Usuku 3	Inkinga yamagama (<i>Ibhuku Lamaphosta</i>) – isikwele; thola izikwele ekilasini.			Umsebenzi 3
Usuku 4	Ukuqondisa (phambili nangemuva).			Umsebenzi 4
Usuku 5	Yenza amaphethini ngezikwele, imibala.			
<p>Inhlama yokudlala enendilinga kanye nesisiki-makhekhe esiyisikwele ukuze wenze imodeli. Sika izikwele bese unamathisela ukuze wenze isithombe. Ukuhlunga izinto ezimise okwesikwele nezimise okwendilinga. Amaphazili (angekho ngaphansi kwezingcezu eziyisithupha).</p>				

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?

Ifomu Lokuhlola Lomhlangano Wokucobelana Ngolwazi 2

1. Ngabe umhlangano wokucobelana ngolwazi uhlangabezene nalokho obukulindele?

2. Yini oyifundile kulo mhlangano wokucobelana ngolwazi ekusize kakhulu?

3. Ngabe kukhona ongakuthandanga noma okuthola kunzima ukukuqonda?

4. Uzokusebenzisa kanjani lokho okufundile ekilasini lakho leBanga R?

5. Ngabe unazo iziphakamiso zokuthuthukisa eminye imihlangano yokucobelana ngolwazi?
