

Luhlelo Lwekwenta Kancono Tibalo TeLibanga R Grade R Mathematics Improvement Programme



Umhlanganosikolo 2 • Workshop 2

Incwadzi Yekusebentela Yemhlanganyeli • Participant's Workbook

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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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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)

Sibutsetelo

Inhloso

Lona ngumhlanganosikolo wesibili walelishumi nakubili yeLuhlelo Lwekwenta Kancono Tibalo TeLibanga R (Luhlelo Lwetibalo), loyincenye yeLitiko Letemfundvo laseGauteng (Gauteng Department of Education (GDE) Umklamo Wetibalo TeLibanga R Nekwenta Kancono Lulwimi.

Inhloso yalomhlanganosikolo kusita bothishela kutsi bafezekise Luhlelo Lwetibalo emaklasini abo. Lomhlanganosikolo ugicile kuSikhala naBunjwa (Ijomethri). Bahlanganyeli batawucinisa lwati nekuvisisa kwabo kufundzisa nekufundza kuloMkhakha Walokucuketfwe, balungiselele kufundzisa imisebenti yeSikhala naBunjwa (Ijomethri) emaklasini abo baphindze futsi babuyekete imitsetfosimiso leyikhombindlela lekunguyona yesekela kufundzisa.

Imiphumela yekufundza

- ◆ Kubuyeketa kufezekiswa kweThemu 1 Emaviki 1-2
- ◆ Kwehlwaya emasubuciko ekwesekela kufundzisa tibalo kuLibanga R (sib. kusombulula inkinga, kuphenya, kucwaninga, kubuta imibuto, kucabanga ngalokuhlaliyako, kulalela ngalokuphapheme, kubukisisa (kucaphela)
- ◆ Kusebenta ngeLuhlelo Lwetibalo lwalokucuketfwe kuThemu 1 Emaviki 3-5 (Sikhala naBunjwa (Ijomethri))
- ◆ Kusebentisa imitsetfosimiso yeLuhlelo Lwetibalo ekuhleleni kwangeliviki

Lokucuketfwe kwemhlanganosikolo

- ◆ Kuvula nekubuyeketa (1 li-awa)
- ◆ Iseshini 1: Sibutsetelo salokucuketfwe (1 li-awa)
LITIYA
- ◆ Iseshini 2: Sikhala naBunjwa (Ijomethri) (2 ma-awa)
KUDLA KWASEMINI
- ◆ Iseshini 3: Kuhlelela kufundzisa (2 ma-awa)

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?

Kuvula nekubuyeketa

1 li-awa

Kumsebenti wekubuyisela emuva esikolweni weMhlanganosikolo ucelwe kutsi wente imisebenti leminyenti. Singatsandza kutsi ucitse emaminitsi lambalwa ubuyekete inchubekelebili yakho loyentile kute kube ngumanje.

Emacenjini enu, cabangani ngendlela yenu lenifundzise ngayo tibalo kulamaviki lamabili lendlulile nekutsi niyifezekise kahle kanjani Ithemu 1 Emaviki 1-2.



Umsebenti 1

Ecenjini lakho, khuluma ngemphumelelo netinsayeya takho ngekufezekisa Ithemu 1 Emaviki 1-2 eLuhlelo Lwetibalo. Vumela umuntfu ngamunye kutsi atfole litfuba lekwetfula loko labakubuyeketile.

1. Chaza kafisha kutsi ulihlele kanjani liklasi lakho nekutsi ukulungiselele kanjani kufundza lamaviki lamabili.

2. Cocani ngekutsi ngukuphi lokusebente kahle nekutsi ngukuphi lokutfole kumatima. Ukhona yini lonemibono lelusito?

3. Yabelana ngekutsi uyisebentise kanjani futsi nini imitsetfosimiso leyinkhombandlela yekufundzisa kuluhlelo lwemalanga onkhe lweTibalo lwesikhatsi sekugcila?



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

Bukela ividiyo yemsebenti loholwa nguthishela lofaka ekhatsi licembu lelincane lebafundzi.

Ucabanga kutsi yini inhloso yalomsebenti? Nakisisa kutsi thishela ubagcugcutela kanjani bafundzi ngemibuto nekutsi umfundzi ngamunye umbukisisa kanjani.

Kumhlanganosikolo 1 sikhulume ngemitsetfosimiso leyinkhombandlela lesiphohlongo yekufundzisa tibalo kuLibanga R. Umsebenti 2 udzinga kutsi umatanise lemitsetfosimiso leyinkhombandlela ngamunye netitatimende letimbili letiyichaza kahle kakhulu.



Umsebenti 2

1. Licembu ngalinye linikwe imvilopho lenemichilo leminyenti. Tfolo lemitsetfosimiso leyinkhombandlela lesiphohlongo bese uyibeka etafuleni lakho yente umugca.
2. Khuluma ngasinye saletitatimende bese uncuma kutsi ngumuphi umtsetfosimiso lohambisana nawo kahle kakhulu. Beka lesitatimende ngaphasi kwemtsetfosimo ngamunye.

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.

Iseshini 1: Sibutsetelo salokucuketfwe

1 li-awa

Ithemu 1 Sibutsetelo salokucuketfwe: Sikhala naBunjwa (Ijomethri)

Lokucuketfwe kwekufundzisa nekufundza kuMaviki 3–5 kugcila kakhulu kuMkhakha Walokucuketfwe we-CAPS , Sikhala naBunjwa (Ijomethri). Loku lokucuketfwe kufaka ekhatsi lokungetulu kwekufundzisa bafundzi kutsi bakhone kubona bobunjwa bejomethri. Kuvisisa kwabo sikhala nabunjwa kweyeme kakhulu ekutseni mhlawumbe bayavisisa futsi bayakwati kubeka silulumagama kuchaza lapho lentfo ikhonakhona (sib. ngetulu, ekhatsi, eceleni kwe, ngemuva, ngembi kwe). Bafundzi futsi badzinga kutsi bakwati kubona bobunjwa etikhundleni letehlukene (sib. ngetulu, ngaphasi, babhekiswe eceleni, babhekiswe phasi).

Fundza sibutsetelo salokucuketfwe seSikhala naBunjwa (Ijomethri) kumakhasi 126–131 e*Nkhombandlela Yemcondvo*. Aniketa sibutsetelo salokucuketfwe seLuhlelo Lwetibalo lokutawufundziswa kuthemu ngayinye yeLibanga R.

- ◆ Lebhalwe ngalokuluhlata njengesibhakabhaka ngulokucuketfwe lokusuka kuTibalo teLibanga R te-CAPS.
- ◆ Letheksti lechazako kanye nalokucuketfwe lokubhalwe ngalokumnyama kwengetelwe kwelula nekwakhela ku-CAPS.
- ◆ Letihloko tilandzelaniswe kukhombisa inchubekelaphambili yentfutfuko kusuka kusinye sihloko kuye kulesinye.



Umsebenti 3

Buka 3.1–3.4 wesibutsetelo salokucuketfwe kweSikhala naBunjwa (Ijomethri) kumakhasi 126–131 e*Nkhombandlela Yemcondvo*. Ecenjini lenu, yentani naku lokulandzelako:

1. Buka sihloko ngasinye bese ukhuluma ngalokucuketfwe nenchubekelebili yekutfufuka kuwo onkhe lamathemu omane.

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. Buka lombhalo lomnyama bese nicoca ngaloko lokwengetwa Luhlelo Lwetibalo kuloku lokucuketfwe lokuphuma ku-CAPS.

3. Kungani ucabanga kutsi kukala Sikhala naBunjwa (Ijomethri) kwesibili lokuphakeme kakhulu kweTinkhundla Talokucuketfwe kuLibanga R?

4. Ubukene njani nekufundzisa Sikhala naBunjwa (Ijomethri) eklasini lakho? Niketa tibonelo tetifundvo nemisebenti loyisebentisile esikhatsini lesendlulile.

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.

Iseshini 2: Sikhala naBunjwa (Ijomethri)

2 ema-awa

Imicondvo yenzawo

(30 emaminitsi)

Bafundzi bacala kufundza ngemicondvo yenzawo njengesikhundla, indlela, kuhlobanisa (imibono leyehlukene) kanye nekubukeka kwetintfo natikhashane ngesikhatsi basebentisa imitimba yabo kwehlwaya noma-ke kutfolisisa budlelwane emkhatsini wabo, labanye bantfu kanye nema-objekthi.



Umsebenti 4

Umfundzisi wente sihibe lesilula. Ukanye nemlingani nikanani ematfuba ekukhombana indlela niphume kulesihibe. Sebentisa lulwimi lwesikhundla nendlela kute unikete ticondziso leticacile.

Sebentisa *Incwadzi Yemaphosta* ukhulume ngesikhundla nendlela

Incwadzi Yemaphosta yeLuhlelo Lwetibalo iniketa ematfuba ekusebentisa tingcikitsi temphilo mbamba kwehlwaya imicondvo. KuPhosta 9 ye*Ncwadzi Yemaphosta* uyabona lapho Malusi ahlala khona ngekuhlobana nalabanye bantfu netinzawo emmangweni wakhe. Lephosta ingasetjentiselwa kuvusa ingcogco mayelana nesikhundla sebantfu nema-objekthi ngekuhlobana nakunye nalokunye kanye nekukhutsata bafundzi kutsi basebentise baphindze futsi batayele lulwimi loluchaza sikhala, sikhundla kanye nendlela. Bafundzi bachumanisa tibalo netimphilo tabo temalanga onkhe ngesikhatsi bacocisana futsi basombulula tinkinga.



Umsebenti 5

Ecenjini lakho, buka Iphosta 9 bese ukhuluma nganaku lokulandzelako:

1. Ngumaphi emagama etikhundla nendlela longawetfula kubafundzi uphindze futsi ubakhutsate bafundzi kutsi bawasebentise?

2. Nguyiphi leminye imibuto longayibuta bafundzi lengabasita bafundze ngesikhundla, indlela, kuma (kubukeka) nekubukeka kwetintfo natikhashane?

Buka emakhasi 172–177 e*Nkhombandlela Yemcondvo* kufundza kabanti 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 inner, 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.

1. List the words that are used to describe the objects in the video.

2. What questions does the teacher ask to prompt the learners to describe the objects?

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.

Kungenisa bobunjwa

(1 li-awa)

KuLibanga R bafundzi bagcila kukubona, kukhomba kanye nekusho emagama ema-objekthi lanetihlangotsi letintsatfu (labangu-3-D) nabobunjwa labanetihlangotsi letimbili (labangu-2-D).

- ◆ 3-D usho kutsi i-objekthi inetihlangotsi letintsatfu: budze, bubanti (kuvundla) nebudzekuphakama.
- ◆ 2-D usho kutsi bunjwa unetihlangotsi letimbili: budze nebubanti (kuvundla).

Kubona, kukhomba nekucatsanisa ema-objekthi lanetihlangotsi letintsatfu

KuLibanga R bafundzi bahlwaya emaphrophathi ema-objekthi emalanga onkhe. Bakha takhiwo basebentisa tintfo tasekhaya lesetisetjentsiwe kwenta umkhicito lomusha njengemabhokisi, tikotela, emashubhu, kwangekhatsi kweroli yeliphepha lasendlini yangasese, emabhola njalonjalo. Bayaphenya baphindze futsi bachaze ema-objekthi labumbeke njengemabhokisi nemabhola. Bayacatsanisa futsi bahlunge ema-objekthi baphindze futsi bakhulume ngekufanana nekwehluka kwawo.



Ividiyo 2

Buka levidiyo yathishela lokhuluma nebafundzi labahlunga ligcogco lema-objekthi. Lalela kutsi ubagcugcutela kanjani kutsi bachaze kutsi bawahlunga kanjani lama-objekthi nekutsi bawasebentise kanjani emagama langiwo ekuchaza lama-objekthi.

1. Bhala luhlu lwemagama lasetjentiswa kuchaza lama-objekthi lakulevidiyo.

2. Nguyiphi imibuto lebutwa nguthishela kugcugcutela bafundzi kutsi bachaze le-objekthi?

Fundza emakhasi 178–181 e*Nkhombandlela Yemcondvo* mayelana nema-objekthi langu-3-D.

Kusuka kuma-objekthi langu-3-D kuya kubobunjwa labangu-2-D

KuLibanga R, kugcilwa kumaphrophathi ema-objekthi newabobunjwa. Bafundzi bafundza kukhomba nekuchaza ema-objekthi nabobunjwa.



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 four sides that are exactly the same.
- ◆ 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.



Umsebenti 6

Hlwaya uphindze futsi uchaze emaphrophathi elibhokisi.

- ◆ Beka libhokisi etukweliphepha.
- ◆ Threyisa utungelete sisekelo selibhokisi.
- ◆ Chaza imigca yemdvwebo wakho.
- ◆ Shano ligama labunjwa lomdvwebile.
- ◆ Wati ngani kutsi sikwele/calandze?
- ◆ Unemacala lamangaki?
- ◆ Unemakona lamangaki?
- ◆ Yini umehluko lokhona emkhatsini welibhokisi nesikwele/calandze?

Kubona, kuchaza kanye nekucatsanisa bobunjwa labanetihlangotsi letimbili

Bafundzi badzinga kubukisisa baphindze futsi bakhulumisane ngabobunjwa lababo-2-D labanyenti labehlukene kutfola emaphrophathi latayelekile abunjwa lotsite, sib. nanoma-nje bonkhe bocalantsatfu bangabukeka bangafanani ncamashi, bonkhe banetihlangotsi nemakona lamatsatfu; bonkhe bocalandze banemacala lamane ngekunganaki kuma nekubukeka kwabo.

Sebentisa emabhlokhi e-athribhuyithi lasetafuleni lakho kwehlwaya bobunjwa labangu-2-D.



Umsebenti 7

Ecenjini lenu, khulumani ngabunjwa welingetulu lebhlokhi ye-athribhuyithi ngayinye.

- ◆ Funa bunjwa lonemacala emacala lamane.
- ◆ Sebentisa umunwe wakho kuthreyisa utungele lobunjwa. Lobunjwa ubitwa ngekutsi yini?
- ◆ Funa bunjwa longenamacala lacondzile.
- ◆ Sebentisa umunwe wakho kuthreyisa utungelete lobunjwa. Lobunjwa ubitwa ngekutsi yini?
- ◆ Funa bunjwa lonemacala lamane lofanana ncamashi.
- ◆ Sebentisa umunwe wakho kuthreyisa utungelete lobunjwa. Lobunjwa ubitwa ngekutsi yini?
- ◆ Funa bunjwa lonemacala lamatsatfu lafanana ncamashi.
- ◆ Sebentisa umunwe wakho kuthreyisa utungelete lobunjwa. Lobunjwa ubitwa ngekutsi yini?
- ◆ Cabanga umbuto munye lotawukhutsata bafundzi kutsi bacabange futsi banome.

Buka emakhasi 182–189 e*Nkhombandlela Yemcondvo* kute ufundze kabanti ngabobunjwa labangu-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

(30 emaminitsi)

I-objekthi noma bunjwa unesimethri uma ngabe angehlukani noma abe tincenye letimbili letilinganako (fananako) emgceni loyinkhaba. Emaphethini layisimethri ayatfolakala nasemitimbeni yetfu, emvelweni, kusimondzawo sekwakha kanye nasetitfombeni. Umugca wesimethri wehlukani lobunjwa abe tincenye letimbili letifananako. Lomugca ungaba ngulovundlile noma lomile-mpo.

Buka emakhasi 188–191 e*Nkhombandlela Yemcondvo* kute ufundze kabanti ngesimethri.

Umtsetfosimiso wekutetayeta: Bafundzi bafanele kutsi babe nesikhatsi lesinyenti sekutetayeta emakhono nelwati lolusha. Uma ngabe bafundzi batetayeta njalo-nje loko lesebakufundzile, baba nelwati kakhulu futsi batetsembe kakhulu. Bafundzi bajabulela kuphindzaphindza nekutetayeta. Thishela weLibanga R ufanele ente kutsi kube nematfuba laphindzaphindziwe ebafundzi ekutsi batetayete baphindze futsi bente kancono emakhono abo.

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?			

Iseshini 3: Kuhlela kufundzisa

2 ema-awa

Sibutsetelo Salokucuketfwe SeThemu 1 (3–5 Emaviki) (40 emaminitsi)

Sengeto A: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 3–5) sibeka emabalengwe eKugcila Kwemkhakha Walokucuketfwe lokukhulu kweliviki ngalinye, tihloko lekutawukhulunywa ngato, lwati lolusha nekutetayeta kugcila kweliviki ngalinye, uphindze futsi wente tincomo temisebenti yeliklasi lonkhe, leholwa nguthishela kanye nemisebenti welicembu lelitimele.

Fundza tigaba temisebenti yeliklasi lonkhe, leholwa nguthishela neyenzawo yekusebentela bese uyenta ucedza Umsebenti 8.



Umsebenti 8

Buka Sengeto A: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 3–5). Phendvula lemibuto.

Imibuto	Liviki 3	Liviki 4	Liviki 5
Ngumuphi Umkhakha Walokucuketfwe Wekugcila kuleliviki?			
Nguyiphi imicondvo lebalulekile letawufundvwa bafundzi?			
Nguluphi lwati lolusha lolwetfuliwe?			
Ngumaphi emakhono lotawetayetwa?			

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.

Inkhombandlela Yemsebenti: Ithemu 1:

Emaviki 3, 4 kanye nele-5

(60 emaminitsi)



Ividiyo 3

Bukela ividiyo yebafundzi bakhulumisana ngephosta.

1. Caphela imibuto netinkinga tetibalo bothishela labatetfulela bafundzi ngesikhatsi sengcogco yephosta.

2. Bhala phasi leminye imibuto lengabe thishela uyibutile.

Buka Emaviki 3, 4 nele-5 ku*Nkhombandlela Yemsebenti: Ithemu 1*. Yenta ucedze Umsebenti 9 ecenjini lakho.



Umsebenti 9

1. Tfola Emaviki 3, 4 nele-5 ku*Nkhombandlela Yemsebenti: Ithemu 1*. Phendvula imibuto.
 - ◆ Yini Kugcila Kumkhakha Walokucuketfwe kweliviki ngalinye?
 - ◆ Ngutiphi tihloko nelwati lolufundziswa ngeliviki ngalinye?
 - ◆ Lokucuketfwe kwa'Tetayete' kuchumana kanjani neliviki leliphelile?
 - ◆ Yini lodzinga kukulungiselela ngembi kwekufundzisa liviki ngalinye?
 - ◆ Fundza yonkhe imisebenti yeliklasi lonkhe nemisebenti yemacembu lamancane.
 - ◆ Cocisanani emacenjini enu lamancane kutsi utawenta lisu uphindze futsi ulihlele kanjani liklasi lakho kulamaviki lamatsatfu ekufundzisa.
2. Buka Sengeto A: Ithemu 1 Sibutsetelo Salokucuketfwe Seliviki (Emaviki 3–5). Matanisa imisebenti yeliklasi lonkhe neyemacembu lamancane kuMaviki 3, 4 nele-5 e*Nkhombandlela Yemsebenti: Ithemu 1* kuSibutsetelo Salokucuketfwe seliviki ngalinye.



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 kutsi luhlolo lweLibanga R luhlolo lolungakahleleki kantsi futsi luyachubeka. Sidzinga kubukisisa bafundzi lilanga lonkhe, ngekhati nangaphandle kweliklasi. Loluphawu lweliso lusikhumbuta kutsi sidzinga kubukisisa bantwana ngesikhatsi basematasatasa, futsi sidzinga kulalelisisa ngesikhatsi bakhuluma natsi nabontsanga babo.

LoLuhlelo Lwetibalo lwentiwe lwamisela ekujikeliseni emacembu lamancane ekuhambeni kweliviki futsi thishela unaka licembu linye ngelilanga, abuke futsi alalele bafundzi ngesikhatsi benta imisebenti yabo. Manje nika bafundzi litfuba lekubukisisa umfundzi ngamunye bese ugcogca lwatiso ngenchubekembili yabo.

Buka lebhlokhi lehlikhiwe ekugcineni kwemsebenti loholwa nguthishela: **'Hlola kutsi bafundzi bayakhona ku'**. Thishela ubhala emanotsi akhe engcondvweni ngemfundzi ngamunye futsi kutawutsi bafundzi bangacedza umsebenti welusuku bahambe utawubese ubhala phasi konkhe lakubukisisile encwadzini yakhe yemsebenti wekubukisisa lenenzawo yemanotsi yemfundzi ngamunye.

Imisebenti yekuvala

(20 emaminitsi)



Umsebenti 10

Sifundvo lesifundziwe: Cabanga ngaloko lokufundzile kumhlanganosiko bese ugcwalisa lelithebula.

Tintfo lesengivele ngitenta letisebenta kahle	Imibono lemisha lengitayetama



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.



Umsebenti wekubuyisela emuva esikolweni

1. Fundza emakhasi e*Nkhombandlela Yemcondvo* lekubhekiswe kuwo ngesikhatsi semhlanganosikolo.
2. Lungiselela indzawo yetibalo Sikhala naBunjwa (Ijomethri). Yishuthe sitfombe bese uta naso kumhlanganosikolo lolandzelako.
3. Sebentisa *Inkhombandlela Yemsebenti: Ithemu 1* kuhlela nekufezekisa Emaviki 3–5 eLuhlelo Lwetibalo. Uma ngabe uhlela, cabanga ngekutsi lemitsetfomgomo yalengkombandlela kutawuniketa sakhiwo sakho sekuhlela nekufundzisa:
 - Ukutfole kanjani loko bafundzi lesebawkwati futsi bakuvisisa?
(umtsetfosimiso welizinga)
 - Utawakhela kanjani kulwati lwaphambilini bantfu labeta nalo emakhaya?
(umtsetfosimiso wengcikitsisimo)
 - Utawucinisekisa kanjani kutsi lemisebenti lehleliwe isho lokutsite kubafundzi?
(umtsetfosimiso wengcikitsisimo)
 - Utawukwakha kanjani kulalela nekufundza ngalokunemdladla emisebentini yakho lehleliwe?
(umtsetfosimiso wekuhlangana)
4. Bhala lubuyeketo lwaloko lokwente kahle kakhulu futsi ngukuphi lokungakenteki kahle. Wota nemanotsi akho ekubuyeketa netibonelo temsebenti lowentiwe bafundzi kumhlanganosikolo lolandzelako.

Kuhlolisisa

Gcwalisa leLifomu Lekuhlolisisa.

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.			

SENGETO A: ITHEMU 1 SIBUTSETELO SALOKUCUKETFWE SELIVIKI (EMAVIKI 3-5)

Ithemu 1: Luhlelolisu Lwemsebenti

Liviki 3				
INKHUNDLA YALOKUCUKETFWE: SIKHALA NABUNJWA (IJOMETHRI)				
SIHLOKO: Kubona, kukhomba kanye nekusho emagama ema-objekthi labo-3-D chaza, hlunga uphindze futsi ucatsanise ema-objekthi labo-3-D (emabhokisi nemabhola); sikhundla, kuma nekubukeka: ngekhatsi nangaphandle				
YETFULA LWATI LOLUSHA: Kubala ema-objekthi ekubala 1-5, emaphrophathi emabhokisi nemabhola, ema-objekthi lagicikako noma lantjumako, sikhundla: ngekhatsi nangaphandle, khulu/ncane, khulu kakhulu/ncane kakhulu				
TETAYETE: Kubala ngemlomo 1-5, gcizelela umcondvo wenombolo (1), kuhlunga				
Umsebenti weliklasi lonkhe		Umsebenti loholwa nguthishela	Imisebenti yenzawo yekusebenteka	
Lusuku 1	Hlwaya emaphrophathi emabhokisi nemabhola.	Kubala kucondzana kwakunye nakunye 1-5. Umdlalo walokukhulu nalokuncane. Emaphrophathi emabhokisi nemabhola. Catsanisa emabhokisi nemabhola. Hlunga ema-objekthi lashelelako nalagicikako.	Umsebenti 1	Yakha ema-objekthi ngemabhokisi.
Lusuku 2	Catsanisa emasayizi emabhokisi nemabhola.		Umsebenti 2	Emabhola enhlama yekudlala lamakhulu nalamancane - kuhlunga.
Lusuku 3	Hlwaya kutsi ngusiphi sikotela lesishelelako, ngusiphi lesigicikako; khulu/khulu kakhulu kanye nancane/ncane kakhulu.		Umsebenti 3	Penda lokubhaliwe ngemabhokisi noma emabhlokhi.
Lusuku 4	Khulumisanani ngekutsi kungani ema-objekthi agicika futsi ashelela.		Umsebenti 4	Yakha tindzawo tekukhosela tetilwane taseplazini ngemabhlokhi ekwakha.
Lusuku 5	Sikhala: ngekhatsi nangaphandle.			
Liviki 4				
INKHUNDLA YALOKUCUKETFWE: SIKHALA NABUNJWA (IJOMETHRI)				
SIHLOKO: Kubona, kukhomba kanye nekusho bobunjwa lababo-2-D (indingilizi); catsanisa ema-objekthi langu-3-D nabobunjwa labangu-2-D; isimethri				
YETFULA LWATI LOLUSHA: Indingilizi, isimethri, yetfula inombolo 2				
TETAYETE: Kubala ngemlomo 1-5, kubala ema-objekthi 1-5, inombolo 1				
Umsebenti weliklasi lonkhe		Umsebenti loholwa nguthishela	Imisebenti yenzawo yekusebentela	
Lusuku 1	Ngenisa 2; indzaba yefrizi yenombolo.	Kusho bunjwa nemibala yetibali ku <i>Khithi Yetinsita</i> . Umsebenti wendingilizi - emaphrophathi. Emakhadi emacashati, etitfombe kanye newetimphawu lu-1 na 2.	Umsebenti 1	Ithemplethi yenhlama yekudla yekwakha yakha - 2.
Lusuku 2	Yini bunjwa? Yetfula indingilizi.		Umsebenti 2	Lokubhaliwe lokuyindingilizi - pende netimumatsi.
Lusuku 3	Tfola tindingilizi eklasini.		Umsebenti 3	Ithemplethi 'yeLipuleti' - sika bese unamatsisela titfombe tekudla.
Lusuku 4	Bala tincenye temtimba letehlukene; bahlwaya emasimethri emitimbeni yabo.		Umsebenti 4	Emaphazili etitfo temtimba.
Lusuku 5	Faka indingilizi (sebentisa ungasusa lephosta) kane nesimethri kulesitfombe.			

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.			

Liviki 5			
INKHUNDLA YALOKUCUKETFWE: SIKHALA NABUNJWA (IJOMETHRI)			
SIHLOKO: Kubona, kukhomba kanye nekusho bobunjwa lababo-2-D (sikwele); catsanisa ema-objekthi langu-3-D kanye nabobunjwa labangu-2-D (emabhokisi); indlela: embili/emuva; sikhundla: ngekhatsi/ngephandle			
YETFULA LWATI LOLUSHA: Sikwele, phatsene nendlela (embili/emuva), sikhundla (ngekhatsi/ngaphandle)			
TETAYETE: Indingilizi, kubala ngemlomo 1-5, ema-objekthi ekubala 1-5, umcondvo wetinombolo 1 na 2			
Umsebenti weliklasi lonkhe		Umsebenti loholwa nguthishela	Imisebenti yenzawo yekusebentela
Lusuku 1	Yetfula sikwele (silulumagama).	Kubala ngemlomo/kumatanisa emacashati, emakhadi etinombolo 1 na-2. Tsintsa emabhlokhi e-Yunifiksi, yakha imibhoshongo ye-Yunifiksi. Emaphrophathi elibhokisi newesikwele. Ifilibhegi (emabhokisi). Umsebenti wetikwele te-2-D – kuthreyisa utungelete libhokisi. Sikhundla (ngekhatsi/ngephandle).	Umsebenti 1
Lusuku 2	Emaphrophathi esikwele; umehluko losemkhatsini wendingilizi nesikwele.		Umsebenti 2
Lusuku 3	Tinkinga temagama (<i>Incwadzi Yemaphosta</i>) – sikwele; tfolela tikwele eklasini.		Umsebenti 3
Lusuku 4	Mayelana nendlela (embili nasemuva).		Umsebenti 4
Lusuku 5	Yakha emapheni ngesikwele, ngemibala.		
			Inhlama yekudlala nekwekusika emakukisi layindingilizi nalasikwele kwenta imodeli (sibonelo). Tikwele letisikwele takhishwa nepheyisti kwakha sitfombe. Kuhlunga bobunjwa labatikwele kanye nema-objekthi latindingilizi. Emaphazili (tincenye telizingancane letisitfupha).

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?

Lifomu Lekuhlolisisa Umhlanganosikolo 2

1. Lomhlanganosikolo ufinyelele yini ezingeni lebewulilindzele?

2. Yini lokufundzile kulomhlanganosikolo lokubalulekile lokukusite kakhulu?

3. Kukhona yini longakakutsandzi noma lokutfole kulukhuni?

4. Utakusebentisa kanjani eklasini leLibanga R loku lokufundzile?

5. Ikhona yini imibono lonayo yekwenta kancono imihlanganosikolo lechubekako?
