Luhlelo Lwekwenta Kancono
Tibalo TeLibanga R
Grade R Mathematics
Improvement Programme

Umhlanganosikolo 2 ● Workshop 2
Inkhombandlela Yemfundzisi ● Facilitator's Guide

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Overview

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Overview

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.

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 ugcile 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 ngalokuhlatiyako, 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)

Kulungiselela

♦ PPT kwemukela nemiphumela
♦ Kopa uphindze usike ukhiphe imichilo yeSengeto B bese uyifaka emvilophini yinye licembu ngalinye.
♦ Yenta sihibe lesilula endzaweni levulekile.
♦ Lungiselela ematafula lanemamethiriyeli ngembi kwekucala 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

Emamethiriyeli

- Liphepha lefliphushadi, emakhokhi
- Tisimisi (emaphrophu) esihibe
- *Inkhombandlela Yemcondvo*
- *Incwadzi Yemaphosta*
- *Inkhombandlela Yemsebenti: Ithemu 1*
- Emabhokisi, emabhola nemaremphu litafula ngalinye
- Emaphepha lamakhulu emaphephandzaba (ekutreysa batungelete umuntfu)
- Emaphephandzaba nemakhrayoni elitafula ngalinye
- Emabhlokhi e-athribhuyithi elitafula ngalinye

Opening and reflection

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?

   _____
   _____
   _____

Kuvula nekubuyeketa

Emanotsi emfundzisi
♦ PPT: Vula iseshini, yemukela bahlanganyeli bese ufundza yonkhe imiphumela yemhlanganosikolo.
♦ Khumbuta bahlanganyeli *Umsebenti wekubuyisela emuva esikolweni* weMhlanganosikolo 1. Cela bahlanganyeli basebente ngemacembu babuyekete ithaskhi bente bacedze **Umsebenti 1**.
♦ Emacembu abelana emaphuzu labalulekile nelicembu lelikhulu.
♦ Yenta luhlu lwalokwentiwako lokukahle kumaphephandzaba bese ugcugcutela bahlanganyeli kutsi bakubhale phasi loku noma batsatse sitfombe seliphephandzaba njengelirekhodi.
♦ Phasi, beka intsambo lelingana nebudze beliklasi. Bhala luphawu ekugcineni kwalentsambo: 1 = Luhlelo Lwetibalo lwente umehluko lomkhulu ekufundziseni kwami. Bhala luphawu ngakulesi lesinye sihloko salentsambo: 10 = loLuhlelo Lwetibalo kute umehluko loluwentile ekufundziseni kwami.
♦ Mema bahlanganyeli labambalwa ngesikhatsi sinye kutsi beme etukwalentsambo bakhombise kutsi bangena kuphi kulesikali baphindze futsi bachaze kutsi kungani bakhetse kuma lapho beme khona.

Kumsebenti wekubuyisela emuva esikolweni weMhlanganosikolo ucelwe kutsi wente imisebenti leminyenti. Singatsandza kutsi ucitse emaminitsi lambalwa ubuyekete inchubekelembili 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. Share how and when you applied the guiding principles of teaching in your daily programme Mathematics focus time?

_____

_____

_____

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.

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

_____

_____

_____

📹 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. Tfola 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:

Iseshini 1: Sibutsetelo salokucuketfwe

Emanotsi emfundzisi

♦ Tjela bafundzi kutsi bafundze emakhasi 126–131 e*Nkhombandlela Yemcondvo*. Khumbuta bahlanganyeli kutsi lelithebula liniketa luhlakamsebenti lwako konkhe lokuhlelelwe tibalo futsi lutawusetjentiselwa kuphindze futsi kubhekiswe kuko konkhe kuceceshwa.

♦ Cela bahlanganyeli basebente ngemacembu babhale **Umsebenti 3**. Cela umuntfu welicembu ngalinye kutsi babelane imibono yabo.

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).

Emanotsi emfundzisi

♦ Buta bahlanganyeli: Uma ngitsi 'sikhala nabunjwa' ngumaphi emagama lafika engcondvweni?

♦ Bhala luhlu lwalamagama lababelana wona kuliphepha lefliphushadi.

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. 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. Buka sihloko ngasinye bese ukhuluma ngalokucuketfwe nenchubekelembili yekutfutfuka kuwo onkhe lamathemu omane.

_____
_____
_____
_____

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

_____
_____
_____
_____

Buka umbhalo lomnyama. Lokukhulu lokwengetwe ku-CAPS nguloku:
- sikhala sesimo semntfwana mayelana nesimondzawo sakhe
- kutfolisisa ngema-objekthi langema-3-D: labobunjwa labasicaba, labayimbulunga, labatikwele noma lababocalantsatfu
- calandze (loshiwo ngalokungahloswa kuThemu 1 waphindze futsi wafundziswa kuThemu 3)
- kubona, kukhomba kanye nekusho emagama abobunjwa lababo-2-D
- kucatsanisa bocalandze netikwele
- imigca legobile (lenemajika) nalecondzile.

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

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_____
_____
_____

Kuvisisa kabanti ngendzawo yabo – konkhe lokusitungeletile kunabunjwa. Kufundza lulwimi lolungilo kwenta bafundzi bakwati kukhuluma nekuchaza bobunjwa.
Emagama lamanyenti aphindze futsi asebente ekuvisiseni sikhala senombolo ekulandzelaneni kwekubala noma kulandzelana kwetintfo kuphethini. Emakhono ami ekuphila eyeme ekwatini indzawo nemakhono, sib. kulandzela indlela noma kufundza libalave, kupakisha tintfo kusimumatsi, njll.

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

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_____
_____
_____

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: Sikhala naBunjwa (Ijomethri)

2 ema-awa

Imicondvo yendzawo

(30 emaminitsi)

Bafundzi bacala kufundza ngemicondvo yendzawo 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.

Emanotsi emfundzisi

♦ Yenta sihibe usebentise titulo, emahulahuphu, emapulango, ematafula nemabhokisi.

♦ Sibonelo seticondziso longatisebentisa:
- Hamba tinyatselo letimbili uye embili.
- Zuba ungene kuhulahuphu.
- Zuba uphume kuhulahuphu.
- Mani kuhulahuphu ngemlente munye.
- Khasa uye embili uphume emkhatsini wemilente yelitafula.
- Sukuma ume bese uyagucuka.
- Hamba tinyatselo letintsatfu uye emuva.
- Faka munye umlente ngekhatsi kuhulahuphu.
- Zuba wece libhokisi.
- Hamba emkhatsini wetitulo.
- Mani ebhokisini.

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**

Emanotsi emfundzisi

PPT: Iphosta 9: Buta imibuto ledzinga timphendvulo letisebentisa emagama esikhundla 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 netindzawo 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.

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 …?

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

◆ Cela bafundzi bente bacedze **Umsebenti 5** kumacembu abo lamancane. Yenta kutsi licembu ngalinye letfule umbiko mayelana nalomsebenti.

◆ Khumbuta bahlanganyeli ngemibuto yesikhundla nendlela kanye nesilulumagama lesetfuliwe hhayi-nje kuphela ngetikhatsi tekugcila kuTibalo, kepha iphindze futsi yafakwa kuluhlelo lwemalanga onkhe lilanga lonkhe lesikolo. Bakhumbute futsi kutsi thishela udlala indzima lebalulekile ekukhombiseni silulumagama lesifanele.

👥 Umsebenti 5

Ecenjini lakho, buka Iphosta 9 bese ukhuluma nganaku lokulandzelako:

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

_____

_____

_____

Sikhundla: ngetulu kwe (etukwe), ngemuva, ngembi kwe, ngekhatsi, ngetulu, ngaphasi, eceleni kwa/e.
Indlela: jika, condza, embili, kuya ku, suka, sencele, sekudla, ku, buya e/ku, tungeleta, kuhamba ngekungantjintji, phuma ekhatsi (kudzabula).

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

_____

_____

_____

Tibonelo:
- Uphi ...?
- Yini lengembi/ngemuva/ngaphasi/ecele kwe ...?
- Malusi utawufika kanjani ...?

◆ Yenta banake Malusi uma avilitisa sandla avalelisa Gogo. Buta bahlanganyeli:
 - Ubonani kulesitfombe?
 - Ucabanga kutsi Malusi uya kuphi?
 - Ucabanga kutsi utawufika kanjani lapho?

◆ Bhala luhlu lwemagama ekukhomba indlela ngesikhatsi bawasho, sib. jika, condza, embili, kuya ku, suka, sencele, sekudla, ku, buya ku, tungeleta, hamba ngekungantjintji, phuma ekhatsi (dzabula).

◆ Buta bahlanganyeli: Malusi angababhacela kuphi laba labanye bafundzi kulenkundla yekudlala?

◆ Bhala luhlu lwemagama esikhundla, sib. Ngetulu kwe, ngemuva, ngekhatsi, ngetulu, ngaphasi, lingaphasi, eceleni kwe, bheke phasi.

◆ PPT: Chaza kafushane ngemicondvo yesikhundla, indlela, kuma (kubukeka) nekubukeka kwetintfo natikhashane. Khuluma ngekucala kwebafundzi kusebentisa imitimba yabo kuveta imicondvo yendzawo.

◆ Buta bahlanganyeli kutsi nguyiphi imisebenti labatayisebentisa kutinhlelo tabo temalanga onkhe letitawusita bafundzi batfutfukise kuvisisa imicondvo lekumicondvo yendzawo.

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

Introducing shapes (1 hour)

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.

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

_____
_____
_____

Emanotsi emfundzisi

♦ KuLibanga R bafundzi bakhona kubona, kukhomba kanye nekusho emagama ema-objekthi lanetinhlangotsi leti-3 (3-D) nabunjwa lonetinhlangotsi leti-2 (2-D).
♦ Buka emakhasi 178–189 e*Nkhombandlela Yemcondvo*.
♦ Khuluma ngalamagama 'bobunjwa labangu-2-D' kanye 'nema-objekthi langu-3-D'
♦ Sebentisa ema-objekthi laphatsekako kukhombisa ngesikhatsi umehluko emkhatsini walamagama.

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

♦ 3-D usho kutsi i-objekthi inetinhlangotsi letintsatfu: budze, bubanti (kuvundla) nebudzekuphakama.
♦ 2-D usho kutsi bunjwa unetinhlangotsi letimbili: budze nebubanti (kuvundla).

Kubona, kukhomba nekucatsanisa ema-objekthi lanetinhlangotsi letintsatfu

Emanotsi emfundzisi

♦ Khuluma ngekutsi bafundzi batawubukana njani nemaphrophathi ema-objekthi langu-3-D ngesikhatsi bahlwaya emamethiriyeli emalanga onkhe njengemabhokisi, tikotela, kwangekhatsi kweroli yeliphepha lasendlini yangasese.
♦ Buta bahlanganyeli kutsi yini lababa nayo emaklasini abo kusita bafundzi kukhuluma, kucatsanisa kanye nekuhlunga ema-objekthi. Chaza kutsi umsebenti lolandzelako utawukhombisa kutsi ubasita kanjani bafundzi kutsi babone emaphrophathi ema-objekthi.
♦ Khombisa ividiyo bese ucela bahlanganyeli kutsi bente bacedze imisebenti ngemacembu.

KuLibanga R bafundzi bahlwaya emaphrophathi ema-objekthi emalanga onkhe. Bakha takhiwo basebentisa tintfo tasekhaya lesetisetjentisiwe 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**

Inkhombandlela Yemsebenti: Ithemu 1, Liviki 3, Lilanga 1 #4 (likhasi 55)

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

How many sides does it have?
How many corners does it have?
How many edges does it have?
Are all the sides the same length?
Which ones are longer?
Which ones are shorter?
Are the sides straight or curved?
Does the ball have corners?
How does the ball move? Why do you think it moves in that way?
How does the box move? Why do you think it moves in that way?

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.

> Straight, four, two long and two short/all the same

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

_____

_____

_____

Le-objekthi inetinhlangotsi letingaki?
Inemakona lamangaki?
Inemingcengcema lemingaki?
Tinhlangotsi tayo tilingana tonkhe yini?
Ngutiphi letindze kakhudlwana?
Ngutiphi letimfisha kakhudlwana?
Letinhlangotsi ticondzile yini noma tigobile?
Lebhola inawo yini emakona?
Lebhola ihamba kanjani? Ucabanga kutsi yentiwa yini kuhamba ngaleyo ndlela?
Lelibhokisi lihamba kanjani? Ucabanga kutsi lentiwa yini kuhamba ngaleyo ndlela?

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

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

Emanotsi emfundzisi

♦   Cela umuntfu longatinikela akujoyine. Cela bahlanganyeli kutsi babuke lomuntfu kusuka ngembili, ngetulu kanye nasemaceleni, futsi bachaze loko labakubonako. Chaza kutsi lomuntfu singambuka ngasetikhundleni letinyenti letehlukene uma sihamba noma uma simgucula.

♦   Cela umuntfu lotinikele kutsi alale phasi ephepheni lelikhulu ngemgogodla abuke bese uyadvweba, umthreyisa ngekoki uyamtungeleta. Uma sewuludvwebile loluhlaka, cela bahlanganyeli kutsi basukume.

♦   Buta bahlanganyeli kutsi babonani kuleliphepha.

♦   Buta imibuto legcile kulomuntfu nakulobunjwa noma luhlaka lwalomuntfu, sibonelo: Ungawubuka yini lomdvwebo ngasesikhundleni letehlukile?

♦   Beka emabhokisi lamanyenti, liphepha lelikhulu kanye nemakhrayoni etafuleni ngalinye. Chaza kutsi bahlanganyeli batewelwaya lamabhokisi **Umsebenti 6**.

♦   Ngemuva kwekwenta lomsebenti khulumani ngaloko bahlanganyeli labakucaphele. Shano kutsi lomsebenti usita bafundzi kwakha bobunjwa ngekutsi uthreyise batungelete ema-objekthi.

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

Umsebenti 6

Hlwaya uphindze futsi uchaze emaphrophathi elibhokisi.

♦   Beka libhokisi etukweliphepha.

♦   Threyisa utungelete sisekelo selibhokisi.

♦   Chaza imigca yemdvwebo wakho.

Icondzile, mine, mibili lemidze futsi mibili lemifisha/iyalingana yonkhe

- ♦ 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?

- 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 labanetinhlangotsi 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 banetinhlangotsi 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?

- ◆ 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.

Symmetry (30 minutes)

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.

- ♦ 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.

Isimethri (30 emaminitsi)

Emanotsi emfundzisi

- ♦ PPT: Bobunjwa nema-objekthi lanemasimethri nalete emasimethri. Buka emakhasi 188–191 e*Nkhombandlela Yemcondvo*.
- ♦ Khumbuta bahlanganyeli nge**mtsetfosimiso wekutetayeta** nekutsi bafundzi badzinga ematfuba lamanyenti ekutetayeta emakhono lamasha bese bawasebentisa etimeni letehlukene.

I-objekthi noma bunjwa unesimethri uma ngabe angehlukaniswa abe tincenye letimbili letilinganako (fananako) emgceni loyinkhaba. Emaphethini layisimethri ayatfolakala nasemitimbeni yetfu, emvelweni, kusimondzawo sekwakha kanye nasetitfombeni. Umugca wesimethri wehlukanisa 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?	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: 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 nemsebenti welicembu lelitimele.

Fundza tigaba temisebenti yeliklasi lonkhe, leholwa nguthishela neyendzawo 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 Walokucutketfwe Wekugcila kuleliviki?	Sikhala naBunjwa (Ijomethri)	Sikhala naBunjwa (Ijomethri)	Sikhala naBunjwa (Ijomethri)
Nguyiphi imicondvo lebalulekile letawufundvwa bafundzi?	Emaphrophathi e-objekthi lengu-3-D Imicondvo yekuma kwendzawo: ngekhatsi nangaphandle Lokukhulu nalokuncane	Emaphrophathi abobunjwa langu-2-D (indingilizi) Isimethri	Bobunjwa lababo-2-D: (sikwele) Embili, emuva Ngekhatsi, ngaphandle
Nguluphi lwati lolusha lolwetfuliwe?	Kubala ema-objekthi 1–5 Emaphrophathi emabhola nemabhokisi Ema-objekthi lagicikako noma lashelelako Sikhundla: ngekhatsi nangephandle Lokukhulu nalokuncane	Indingilizi Inombolo 2 Isimethri	Bobunjwa lababo-2-D: sikwele Indlela: embili, emuva Sikhundla: ngekhatsi, ngaphandle
Ngumaphi emakhono lotawetayetwa?	Kubala ngemlomo 1–5 Gcizelela nombolo 1 Kuhlunga	Kubala ngemlomo 1–5 Inombolo 1 Kubala ema-objekthi 1–5	Indingilizi Umcondvo wenombolo 1 na-2 Kubala ngemlomo 1–5 Kubala ema-objekthi 1–5

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.

👁   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.

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.

👁 Khumbula kutsi luhlolo lweLibanga R luluhlolo lolungakahleleki kantsi futsi luyachubeka. Sidzinga kubukisisa bafundzi lilanga lonkhe, ngekhatsi nangaphandle kweliklasi. Loluphawu lweliso lusikhumbuta kutsi sidzinga kubukisisa bantfwana ngesikhatsi basematasatsa, futsi sidzinga kulalelisisa ngesikhatsi bakhuluma natsi nabontsanga babo.

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)

Facuiilitator'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

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 ngenchubekelembili yabo.

Buka lebhlokhi lehlikihliwe 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 lenendzawo yemanotsi yemfundzi ngamunye.

Imisebenti yekuvala   (20 emaminitsi)

Emanotsi emfundzisi

♦   **Sifundvo lesifundziwe:** Cela bahlanganyeli bacabange ngaloko labakufundzile kulomhlanganosikolo nekutsi babhale **Umsebenti 10** ngamunye.

♦   **Umsebenti wekubuyela emuva esikolweni:** Fundza wonkhe lomsebenti. Babute kutsi kukhona yini lokungacaci futsi lokudzinga kuchazwa kabanti.

♦   **Kuhlolisisa:** Banike emakhophi eLifomu Lekuhlolisisa Umhlanganosikolo futsi yenta bahlanganyeli baligcwalise lelifomu.

♦   **Umhlanganosikolo lolandzelako:** Niketa tinsuku temhlanganosikolo lolandzelako.

👪 Umsebenti 10

Sifundvo lesifundziwe: Cabanga ngaloko lokufundzile kumhlanganosiko bese ugcwalisa lelithebula.

Tintfo lesengivele ngitenta letisebenta kahle	Imibono lemisha lengitayetama

❶ 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 yalenkhombandlela kutawuniketa sakhiwo sakho sekuhlela nekufundzisa:

   - Ukutfola kanjani loko bafundzi lesebakwati 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 ngalokunemdlandla 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)

Ithemu 1: Activity Plan

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

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 yendzawo yekusebenteka**	
Lusuku1	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** **Umsebenti 2**	Yakha ema-objekthi ngemabhokisi. Emabhola enhlama yekudlala lamakhulu nalamancane – kuhlunga.
Lusuku 2	Catsanisa emasayizi emabhokisi nemabhola.		**Umsebenti 3**	Penda lokubhaliwe ngemabhokisi noma emabhlokhi.
Lusuku 3	Hlwaya kutsi ngusiphi sikotela lesishelelako, ngusiphi lesigicikako; khulu/khulu kakhulu kanye nancane/ncane kakhulu.		**Umsebenti 4**	Yakha tindzawo tekukhosela tetilwane taseplazini ngemabhlokhi ekwakha.
Lusuku 4	Khulumisanani ngekutsi kungani ema-objekthi agicika futsi ashelela.			
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 ngemlomo1–5, kubala ema-objekthi 1–5, inombolo 1				
Umsebenti weliklasi lonkhe		**Umsebenti loholwa nguthishela**	**Imisebenti yendzawo yekusebentela**	
Lusuku 1	Ngenisa 2; indzaba yefrizi yenombolo.	Kusho bunjwa nemibala yetibali ku*Khithi Yetinsita*. Umsebenti wendigilizi – 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.			
Lusuku 4	Bala tincenye temtimba letehlukene; bahlwaya emasimethri emitimbeni yabo.		**Umsebenti 3**	Ithemplethi 'yeLipuleti' – sika bese unamatsisela titfombe tekudla.
Lusuku 5	Faka indingilizi (sebentisa ungasusa lephosta) kane nesimethri kulesitfombe.		**Umsebenti 4**	Emaphazili etitfo temtimba.

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.
Day 2 Properties of the square; difference between circle and square.		**Activity 2** Cut out squares and paste to make a picture.
Day 3 Word problem (*Poster Book*) – square; find squares in the class.		**Activity 3** Sorting square-shaped and circle-shaped objects.
Day 4 Directionality (forwards and backwards).		**Activity 4** Puzzles (minimum six pieces).
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 yendzawo 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** Inhlama yekudlala nekwekusika emakukisi layindingilizi nalasikwele kwenta imodeli (sibonelo).
Lusuku 2 Emaphrophathi esikwele; umehluko losemkhatsini wendingilizi nesikwele.		**Umsebenti 2** Tikwele letisikwe takhishwa nepheyisti kwakha sitfombe.
Lusuku 3 Tinkinga temagama (*Incwadzi Yemaphosta*) – sikwele; tfola tikwele eklasini.		**Umsebenti 3** Kuhlunga bobunjwa labatikwele kanye nema-objekthi latindingilizi.
Lusuku 4 Mayelana nendlela (embili nasemuva).		**Umsebenti 4** Emaphazili (tincenye telizingancane letisitfupha).
Lusuku 5 Yakha emapheni ngesikwele, ngemibala.		

APPENDIX B: MATHS PROGRAMME PRINCIPLES

The context principle
Learning takes place when a situation or context is meaningful to the learner.
Learners find it easier to explore solutions to problems that they are able to relate to because of their life experiences.

The activity principle
Learners should be actively involved in their own learning.
Activities should provide learners with opportunities to use their whole bodies and their senses.

The play principle
Learning take place during free play.
Guided-play activities facilitated by the teacher scaffold maths learning.

The level principle
Learners pass through various levels of understanding and development.
What you teach and the way in which you teach it needs to take the different abilities or developmental levels of your learners into account.

The interaction principle
Learning takes place when there is communication and sharing of ideas.
Learning maths language allows learners to follow instructions, ask questions and express their thinking and reasoning.

The guidance principle
Learning takes place when teachers guide learners in developing new knowledge.
Guided instruction involves teachers and learners working together to solve a problem or learn a new concept or skill.

The inclusivity principle
Learning takes place in an environment where everyone is welcomed, included, treated fairly, respected and can participate.
Many learners experience one or more barriers to learning and may need more practice and support than other learners.

The practice principle
Learning is consolidated through practising new skills and knowledge.
When learners get regular practice in what they have already learnt, they get better at it and become more confident.

SENGETO B: IMITSETFOSIMISO YELUHLELO LWETIBALO

Umtsetfosimiso wengcikitsisimo
Kufundza kwenteka ngesikhatsi simo noma ingcikitsisimo isho lokutsite lokwakhako kumfundzi.
Bafundzi batfola kumalula kwehlwaya tisombululo tetinkinga lebangakhona kutiyamanisa netimo labake bahlangana nato emphilweni.

Umtsetfosimiso wemsebenti
Bafundzi bafanele kutsi bahlangenyele ngemdlandla ekufundzeni kwabo.
Lemisebenti ifanele kutsi inikete bafundzi ematfuba ekusebentisa imitimba yabo yonkhe nemiva yabo.

Umtsetfosimiso wekudlala
Kufundza kwenteka ekudlaleni ngekukhululeka.
Imisebenti leholwako lechutjwa ngutishela yenta kufundza kwetibalo kube lula.

Umtsetfosimiso wekudlala
Bafundzi bendlula emazingeni lahlukene ekuvisisa nekutfutfuka.
Lokufundzisako kanye nendlela lokufundzisa ngayo kudzinga kucabangela noma kufanela.

Umtsetfosimiso wekuhlangana
Kufundza kwenteka uma ngabe kunekuchumana kanye nekwabelana imibono.
Kufundza lulwimi lwetibalo kuvumela bafundzi kutsi balandzele imiyalelo, buta imibuto uphindze futsi ukhombise kucabanga nekunoma kwabo.

Umtsetfosimiso wekukhombindlela
Kufundza kwenteka uma bothishela bakhomba bafundzi indlela ekutfutfukiseni lwati lolusha.
Imiyalelo lekhonjwindlela ifaka ekhatsi bothishela kanye nebafundzi labasebenta nabo kusombulula inkinga noma bafundzi bafundza umcondvo noma likhono lelisha.

Umtsetfosimiso wekufaka wonkhewonkhe ekhatsi
Kufundza kwenteka kusimondzawo lapho wonkhewonkhe emukeleka, afakwa ekhatsi, aphatfwa ngalokufanele, ahlonishwa futsi ahlanganyela.
Bafundzi labanyenti baba nesihibe sekufundza sinye noma ngetulu kwasinye futsi-ke bangadzinga kutetayeta lokunyenti nekwesekelwa kunalabanye bafundzi.

Umtsetfosimiso wekutetayeta
Kufundza kuhlanganiswa ngekutetayeta emakhono nelwati lolusha.
Uma bafundzi batfola kutetayeta njalonjalo ngaloko lesebakufundzile, batfola buncono kuko futsi babe nekutetsemba kakhulu.

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?

_____
_____
_____
_____