



**REPUBLIC OF KENYA
MINISTRY OF EDUCATION**

**EARLY YEARS CURRICULUM DESIGN
PRE PRIMARY TWO
MATHEMATICS ACTIVITIES
FOR LEARNERS WITH HEARING IMPAIRMENT**



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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FOREWORD

The Government of Kenya is committed to ensuring that policy objectives for Education, Training and Research meet the aspirations of the Constitution of Kenya 2010, the Kenya Vision 2030, National Curriculum Policy 2019, the United Nations Sustainable Development Goals (SDGs) and the Regional and Global conventions to which Kenya is a signatory. Towards achieving the mission of Basic Education, the Ministry of Education (MoE) has successfully and progressively rolled out the implementation of the Competency Based Curriculum (CBC) at Pre-Primary, Primary and Junior School levels.

The implementation of Competency Based Curriculum involves monitoring and evaluation to determine its success. After the five-year implementation cycle, a summative evaluation of the primary education cycle was undertaken to establish the achievement of learning outcomes as envisaged in the Basic Education Curriculum Framework. The Government of Kenya constituted a Presidential working Party on Education Reforms (PWPER) in 2022 to address salient issues affecting the education sector. PWPER made far reaching recommendations for basic education that necessitated curriculum review. The recommendations of the PWPER, monitoring reports, summative evaluation, feedback from curriculum implementers and other stakeholders led to rationalisation and review of the basic education curriculum.

The reviewed Pre-Primary Two curriculum designs for learners with Hearing Impairment build on competencies attained by learners at Pre-Primary one. Emphasis at this level is the development of Pre literacy, Pre numeracy and social skills.

The curriculum design presents National Goals of Education, essence statement, general and specific expected learning outcomes for the learning area as well as strands and sub strands. The design also outlines suggested learning experiences, suggested key inquiry questions, core competencies, Pertinent and Contemporary Issues (PCIs), values, and assessment rubric.

It is my hope that all Government agencies and other stakeholders in Education will use the design to plan for effective and efficient implementation of the CBC.

HON. EZEKIEL OMBAKI MACHOGU, CBS
CABINET SECRETARY,
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PREFACE

The Ministry of Education (MoE) nationally implemented Competency Based Curriculum (CBC) in 2019. Pre-Primary Two is the second class of pre- primary level in the reformed education structure.

The reviewed Pre-Primary Two curriculum for learners with Hearing Impairment furthers implementation of the CBC from Pre-Primary One. The curriculum provides opportunities for learners to focus on a field of their choice to form a foundation for further education at higher grades. This is very critical in the realisation of the Vision and Mission of the on-going curriculum reforms as enshrined in the Sessional Paper No. 1 of 2019 whose title is: Towards Realising Quality, Relevant and Inclusive Education and Training for Sustainable Development in Kenya. The Sessional Paper explains the shift from a content-focused curriculum to a focus on **nurturing every learner’s potential**.

Therefore, the Pre-Primary Two curriculum designs for learners with Hearing Impairment are intended to enhance the learners’ development in the CBC core competencies, namely: Communication and Collaboration, Critical Thinking and Problem Solving, Creativity and Imagination, Citizenship, Digital Literacy, learning to Learn and Self-efficacy.

The curriculum designs provide suggestions for interactive and differentiated learning experiences linked to the various sub strands and the other aspects of the CBC. They also offer several suggested learning resources and a variety of assessment techniques. It is expected that the designs will guide teachers to effectively facilitate learners to attain the expected learning outcomes for Pre-Primary Two and prepare them for smooth transition to primary level. Furthermore, it is my hope that teachers will use the adapted designs to make learning interesting, exciting and enjoyable.

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ACKNOWLEDGEMENT

The Kenya Institute of Curriculum Development (KICD) Act Number 4 of 2013 (Revised 2019) mandates the Institute to develop and review curricula and curriculum support materials for basic and tertiary education and training. The curriculum development process for any level of education involves thorough research, international benchmarking and robust stakeholder engagement. Through a systematic and consultative process, the KICD conceptualised the Competency Based Curriculum (CBC) as captured in the Basic Education Curriculum Framework (KICD 2017), that responds to the demands of the 21st Century and the aspirations captured in the Constitution of Kenya 2010, the Kenya Vision 2030, East African Community Protocol, International Bureau of Education Guidelines and the United Nations Sustainable Development Goals (SDGs).

KICD receives its funding from the Government of Kenya to facilitate successful achievement of the stipulated mandate and implementation of the Government and Sector (Ministry of Education (MoE) plans. The Institute also receives support from development partners targeting specific programmes. The revised Pre-Primary Two curriculum designs for learners with Hearing Impairment were developed and adapted with the support of the World Bank through the Kenya Primary Education Equity in Learning Programme (KPEELP); a project coordinated by MoE. Therefore, the Institute is very grateful for the support of the Government of Kenya, through the MoE and the development partners for policy, resource and logistical support. Specifically, special thanks to the Cabinet Secretary-MoE and the Principal Secretary – State Department of Basic Education.

I also wish to acknowledge the KICD curriculum developers and other staff, all teachers, educators who took part as panellists; the Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders for their roles in the development and adaptation of the Pre-Primary Two curriculum designs for learners with Hearing Impairment. In relation to this, I acknowledge the support of the Chief Executive Officers of the Teachers Service Commission (TSC) and the Kenya National Examinations Council (KNEC) for their support in the process of developing and adapting the designs. Finally, I am very grateful to the KICD Council Chairperson and other members of the Council for very consistent guidance in the process.

I assure all teachers, parents and other stakeholders that this curriculum design will effectively guide the implementation of the CBC at Pre-Primary Two and preparation of learners for transition to primary level.

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NATIONAL GOALS OF EDUCATION

1. **Foster nationalism, patriotism, and promote national unity**

Kenya's people belong to different communities, races and religions and should be able to live and interact as one people. Education should enable the learner to acquire a sense of nationhood and patriotism. It should also promote peace and mutual respect for harmonious co- existence.

2. **Promote social, economic, technological and industrial needs for national development**

Education should prepare the learner to play an effective and productive role in the nation.

a) **Social Needs**

Education should instil social and adaptive skills in the learner for effective participation in community and national development.

b) **Economic Needs**

Education should prepare a learner with requisite competencies that support a modern and independent growing economy. This should translate into high standards of living for every individual.

c) **Technological and Industrial Needs**

Education should provide the learner with necessary competences for technological and industrial development in tandem with changing global trends.

3. **Promote individual development and self-fulfilment**

Education should provide opportunities for the learner to develop to the fullest potential. This includes development of one's interests, talents and character for positive contribution to the society.

- 4. Promote sound moral and religious values**
Education should promote acquisition of national values as enshrined in the Constitution. It should be geared towards developing a self- disciplined and ethical citizen with sound moral and religious values.

- 5. Promote social equity and responsibility**
Education should promote social equity and responsibility. It should provide inclusive and equitable access to quality and differentiated education; including learners with special educational needs and disabilities. Education should also provide the learner with opportunities for shared responsibility and accountability through service learning.

- 6. Promote respect for and development of Kenya’s rich and varied cultures**
Education should instil in the learner appreciation of Kenya’s rich and diverse cultural heritage. The learner should value, own and respect other people’s culture as well as embrace positive cultural practices in a dynamic society.

- 7. Promote international consciousness and foster positive attitudes towards other nations**
Kenya is part of the interdependent network of diverse peoples and nations. Education should therefore enable the learner to respect, appreciate and participate in the opportunities within the international community. Education should also facilitate the learner to operate within the international community with full knowledge of the obligations, responsibilities, rights and benefits that this membership entails.

- 8. Good health and environmental protection**
Education should inculcate in the learner the value of physical and psychological well-being for self and others. It should promote environmental preservation and conservation, including animal welfare for sustainable development.

LESSON ALLOCATION FOR PRE-PRIMARY

S/ No.	Activity Learning Area	No of Lessons
1.	Language Activities for Learners with Hearing Impairment	5
2.	Mathematical Activities for Learners with Hearing Impairment	5
3.	Creative Activities for Learners with Hearing Impairment	6
4.	Environmental Activities for Learners with Hearing Impairment	5
5.	Religious Activities	3
6.	Pastoral /Religious Instruction Programme	1
	Total	25

LEVEL LEARNING OUTCOMES

By end of Pre Primary Education, the learner should be able to:

- a) Demonstrate basic literacy and numeracy skills for learning
- b) Apply creative and critical thinking skills in problem solving
- c) Practise appropriate etiquette for interpersonal relationships
- d) Explore the immediate environment for learning and enjoyment
- e) Demonstrate acquisition of physical, emotional, spiritual, aesthetic and moral development
- f) Demonstrate appreciation of the country and its rich, diverse cultural heritage for harmonious living
- g) Develop interests, talents and character for positive contribution to society.

ESSENCE STATEMENT

Mathematical activities at the Pre Primary level empower children to engage in basic analysis of problems and to develop appropriate solutions in day to day life. These activities help to develop cognitive processes that enhance logical and critical thinking, accuracy and problem solving; all of which are important building blocks for primary school readiness. They also enhance the learner's development and acquisition of basic pre-number, number, measurement and geometry skills during early years. Further, this design has been adapted to ensure that learners who are Deaf and those with Hard of Hearing learn effectively. The adaptations include suggestions for provision of sign interpretation on aspects that require use of sound, use of digital devices with assistive technology, use of visual aids such as charts, maps and diagrams, use of hands-on activities, guided demonstrations, purposeful pairing and use of adapted learning resources. The design has also incorporated alternative learning outcomes and activities to enhance the acquisition of sign language vocabulary to learners with Hearing Impairments.

SUBJECT GENERAL LEARNING OUTCOMES FOR PRE-PRIMARY EDUCATION

- a) Use acquired classroom skills to solve problems in daily life.
- b) Demonstrate basic number concepts as a basis for future learning.
- c) Demonstrate interest in measurement and dispositions in the physical and social world.
- d) Demonstrate basic geometrical concepts as a basis for future learning.

PRE-PRIMARY TWO (LEVEL II)

1. OUR NEIGHBOURHOOD

- Work done by our neighbours
- Things in our neighbourhood
 - structures
 - shops/kiosks/markets
 - animals
 - Physical features
 - Plants

1. OUR SCHOOL

- Our teachers
- People in our school
- Our school compound
- Buildings in our schools
- Ways/road to our school

1. OUR MARKET

- Things found in the market
- Buying and selling
- People found at the market

1. ANIMALS

- Domestic animals
- Wild animals
- Importance/use of animals

1. WEATHER CONDITIONS

- Sunny
- Cloudy
- Rainy
- Windy

WATER

- Sources of water
- Uses of water
- Storage of water

HOSPITAL

- People in the hospital
- Buildings in the hospital
- Activities in the hospital
- Clothes worn by people in the hospital
- Tools and items used in the hospital

TIME

- Telling time through daily routine
- Days of the week
- Popular public holidays

TRANSPORT

- By foot
- By bicycles
- By boat/ship
- By motorcycles
- By animals
- By motor vehicles
- By train
- By aeroplane

SUMMARY OF STRANDS AND SUB STRANDS

S. No.	Strand	Sub Strands	Suggested Number of Lessons
1	1.0 Pre-Number Activities	1.1 Sorting and Grouping	7
		1.2 Matching and Pairing	7
		1.3 Ordering	8
		1.4 Patterns	8
2	2.0 Numbers	2.1 Rote Counting	6
		2.2 Number Recognition	8
		2.3 Counting Concrete Objects	8
		2.4 Number Sequencing	8
		2.5 Number Value	8
		2.6 Number Writing	8
		2.7 Putting Together	10
		2.8 Taking Away	8
3	3.0 Measurement	3.1 Sides of Objects	8
		3.2 Mass (Heavy and Light)	8

		3.3 Capacity (how much a container can hold)	8
		3.4 Time (Daily Routines)	8
		3.5 Money (Kenyan currency – coins)	8
		3.6 Area (Surface of Objects)	8
4	4.0 Geometry	4.1 Lines	3
		4.2 Shapes	5
Total Number of Lessons			150

Note:

The suggested number of lessons per Sub Strand may be less or more depending on the context.

THEME: OUR NEIGHBOURHOOD				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 PRE-NUMBER ACTIVITIES	1.1 Sorting & grouping 8 lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to sorting and grouping, b) identify play objects in the school c) identify similarities among play objects in their school neighbourhood, d) identify differences between play objects found in the school neighbourhood, e) group play objects according to a given attribute f) appreciate the materials in the	<ul style="list-style-type: none"> • In groups, learners are guided to identify and collect safe objects of varied sizes, colour, shape and use from the neighbourhood. • In groups, learners are guided to watch captioned videos, labelled charts, illustrations or sample models on sorting and grouping of concrete objects according to different attributes such as size, colour, shape or texture. • In purposive groups, learners are guided to sign words related to sorting and grouping such as size, colour, shape. • In groups, learners are guided in small groups to observe and identify similarities of objects from the neighbourhood with different colour, size, use or 	<ul style="list-style-type: none"> • How are objects similar and different to each other? • Why have you grouped these objects together?

		<p>neighbourhood for their uniqueness and diversity.</p>	<p>texture. (toys, wood blocks, bottle tops, plastic bottles).</p> <ul style="list-style-type: none"> • Learners are guided in pairs to sign and describe objects from the neighbourhood with different colour, size, use, or texture. • In groups, learners are guided to sort objects from the neighbourhood with more than one attribute (colour, size, shape, texture, use or type). • In groups, learners demonstrate sorting and grouping objects from the neighbourhood by more than one attribute (colour, size, texture or use). • Individually, the learner relates specific attributes to other objects in the environment. • In groups, learners are guided to sign sing songs related to sorting and grouping objects. • In pairs or groups, learners are guided to collect and store 	
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			<p>materials in their respective corners as they observe safety.</p> <ul style="list-style-type: none"> • In pairs or groups, Learners are guided to sort and group objects according to more than one attribute using digital devices. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Creativity and imagination: Learners will develop communication and self-expression as they communicate ideas, while undertaking tasks involving manipulating different objects found in the neighbourhood according to colour, size and texture for familiarisation. • Self efficacy: Learner will develop self identity as they talk about similar or different items from their neighbourhood 				
<p>Values:</p> <ul style="list-style-type: none"> • Love: Learners enhance caring as they portray a caring attitude for peers by sharing materials in groups while sorting and grouping objects. 				
<p>Pertinent and Contemporary Issues (PCIs): Safety and security: personal safety: The learners demonstrate basic safety habits as they collect and store materials in the respective corners as they observe safety.</p>				
<p>Link to other activity areas: Creative Activities: The learner manipulate objects they use in sorting and grouping for development of fine motor skills</p>				
<p>Suggested Learning Resources; Locally available materials of different colours, texture, use, types and sizes such as leaves, flowers, pebbles, shells, paper cut outs.</p>				

THEME: OUR NEIGHBOURHOOD				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 PRE-NUMBER ACTIVITIES	1.2 Matching and pairing 8 lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to matching and pairing, b) identify similarities among play objects from the school neighbourhood, c) identify differences among objects from the neighbourhood, d) match objects from the neighbourhood according to likeness/sameness or use, e) pair objects from the neighbourhood according to sameness/ likeness or use,	<ul style="list-style-type: none"> • Learners are guided to sign terms related to matching and pairing such as same, equal, different, small, big, put together. • Learners are guided to watch a captioned video, labelled chart illustrations, sample models and pictures on matched /paired objects with different attributes of sorting and colours. • In pairs, learners are guided to collect a variety of objects from the neighbourhood and identify differences among them. • The learner is guided to sign the names and attributes of the objects collected. 	<ol style="list-style-type: none"> 1. Why have you matched objects? 2. How can we care for these objects?

		<p>f) appreciate the use of different objects from the neighbourhood.</p>	<ul style="list-style-type: none"> • In groups, Learner is guided to demonstrate how to match and pair objects from the neighbourhood according to likeness, sameness colour, size and use. • In groups, learners match and pair objects according to more than one attribute (likeness/ sameness or use) as they observe safety. • In groups, learners are guided to, sign sing songs/recite/sign poems on relationship/use of objects from the neighbourhood. • The learner can match and pair objects according to more than one attribute using digital devices. • The learner is guided to wash the hands after collecting and matching objects. 	
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Core Competencies to be developed:

- Communication and collaboration: Signing and observation skills; the learner develops signing and observation skills as they work with each other in matching and pairing objects.
- Creativity and imagination: The learner develops networking skills as they undertake matching and pairing activities in groups and gains new perspectives on matching and pairing.

Values:

- Love: The learners enhance caring as they portray a caring attitude towards one another while moving in the environment in pairs with sighted peers to pair and match different objects.

Pertinent and Contemporary Issues (PCIs):

Health promotion issues: Learner wash the hands after collecting and matching objects

Link to other learning areas:

The learner is able to relate the skills in signing songs, recite rhymes and use actions to signing numbers in Mathematical activities and Creative activities.

Suggested Learning Resources:

Locally available materials (Pens, books, sticks, shapes, cut-outs, blocks, clothing, utensils, pebbles, balls, flash cards).

THEME: OUR NEIGHBOURHOOD				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 PRE-NUMBER ACTIVITIES	1.3 Ordering 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to ordering, b) identify play objects of different sizes in the school neighbourhood, c) arrange play objects in ascending order, d) arrange objects from the neighbourhood according to size in descending order, e) appreciate different objects or materials from the neighbourhood.	<ul style="list-style-type: none"> • Learners are guided identify and sign terms related to ordering such as first, next, last, big, medium, small, more, less, much, few, ascending and descending order • Learners are guided to watch a captioned video on ordering of objects. • Learners are guided to collect different objects from their school neighbourhood as they observe safety. • Learners are guided to sign names and attributes of materials collected from the neighbourhood. • . 	<ol style="list-style-type: none"> 1. Why do you arrange objects according to size? 2. How can you arrange objects according to size?

			<ul style="list-style-type: none"> • In groups, learners are guided to demonstrate ordering of objects according to size up to five objects in descending order. • The learner individually is guided to demonstrates ordering of objects according to size up to five objects in descending order according to size. • Individually, the learners are guided to draw big and small objects using digital devices. • In purposive groups learners be guided to arrange objects in ascending and descending order using digital devices or other resources. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and collaboration: Signing; The learner signs effectively the terms related to ordering. 				
<p>Values:</p>				

- Unity: Learners work together in groups to accomplish the task of ordering play objects.

Pertinent and Contemporary Issues (PCIs):

- Safety and security: personal safety: Learners observe safety as they collect play objects to order from the neighbourhood.

Link to other activities areas:

The learner is able to relate the skills in signing songs, recite rhymes and use actions to signing numbers in Mathematical activities and Creative activities.

Suggested Learning Resources

Flash cards, blocks, bottle tops, bottles, sticks, beads, straws, cut outs, pebbles Flash cards, blocks, bottle tops, bottles, sticks, beads, straws, cut outs, pebbles.

THEME: OUR NEIGHBOURHOOD				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 PRE-NUMBER ACTIVITIES	1.4 Patterns 8 lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to patterns, b) observe objects from the neighbourhood for the purpose of identifying patterns (clothes, animals, seeds, leaves), c) identify similarities among objects in the neighbourhood, d) identify differences and similarities among objects in the neighbourhood,	<ul style="list-style-type: none"> • The learner is guided to sign terms related to patterns such as repeat, match, same/equal and different. • The learner is guided to observe captioned videos, chart illustrations and pictures on signs and patterns of (different objects in the neighbourhood. • The learners in pairs are guided to demonstrate arranging objects to make a pattern. • In pairs, learners are guided to arrange objects to make patterns using (shape, colour) to demonstrate differences and similarities among objects. 	<ol style="list-style-type: none"> 1. How do we arrange objects to make a pattern? 2. Why do you arrange the objects to make a pattern?

		<p>e) arrange objects from the neighbourhood to make a pattern,</p> <p>f) enjoy making different patterns with objects from the neighbourhood,</p>	<ul style="list-style-type: none"> • In small groups, pairs or individually, learners arrange objects to make patterns (shape, colour). • The learner fills in the missing objects in a series to make a pattern. • Learners observe and sign about different patterns on their clothes, footprints, buildings, flower gardens. • The learner is guided to play video games on different patterns using digital devices. • Individually, learners are guided to draw different shapes using digital devices to make patterns. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and Collaboration: Observation and signing; The learner observes keenly and understands different patterns 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Safety: Learners to arrange safe objects to make patterns. 				
<p>Values:</p> <ul style="list-style-type: none"> • Respect: Patience as learners work together making patterns. 				

Link to other activity areas: The learner is able to relate making patterns using different play objects to pattern making in Creative Activities.

Suggested Learning Resources

Pencils, books, crayons, paint, paper cut-outs, leaves.

Suggested Assessment Rubrics

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Signing terms related to grouping and sorting	Signs terms related to sorting and grouping, names of different colours, shapes sign the terms clearly with appropriate facial expression.	Signs terms related to sorting and grouping, names of different colours, shapes clearly.	Signs of the terms related to sorting and grouping with noticeable errors.	Signs terms related to sorting and grouping with frequent correction.
Identifying differences and similarities between objects found in the neighbourhood for distinguishing one object from the other by colour	Identifies differences and similarities between objects found in the neighbourhood while giving articulate additional relevant details	Identifies differences and similarities between objects found in the neighbourhood with clarity of the attributes	Identifies differences and similarities between objects found in the neighbourhood but lacks clarity of attributes	Identifies differences and similarities between objects found in the neighbourhood while sighting irrelevant attributes

Matching objects from the neighbourhood according to likeness/sameness or use.	Matches similar play objects in the neighbourhood according to sameness likeness or use while demonstrating unique pairing techniques with additional relevant details.	Matches similar play objects in the neighbourhood according to sameness likeness or use with clarity of the attributes.	Matches similar play objects in the neighbourhood according to sameness likeness or use with occasional discrepancies.	Matches similar play objects in the neighbourhood according to sameness likeness or use with multiple incorrect matches leading to a misrepresentation of intended result.
Arranges objects from the neighbourhood according to size in descending order.	Arranges different objects in an alternating manner to make patterns to come up with complex patterns.	Arranges different objects in an alternating manner to make patterns while displaying good organisation skills.	Arranges objects in an alternating manner to make patterns while displaying partial detail to organisation.	Arranges objects to make patterns while displaying little attention to organisation or order in a manner that distorts the intended outcome.
Identifying differences and similarities among objects in the neighbourhood.	Identifies differences in different complex play objects from the neighbourhood with exceptional display of attention to details.	Identifies existing differences in different play objects from the neighbourhood with display of basic clarity to details.	Identifies existing differences in different play objects from the neighbourhood while displaying partial observation of details	Identifies existing difference in different play objects from the neighbourhood while displaying minimal attention to details

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.1 Rote counting 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign numbers by 1-30 for developing numeracy skills, b) rote count by signing numbers 1-30 for developing numeracy skills, c) rote count by signing numbers using actions up to 30 for enhancing acquisition of numeracy,	<ul style="list-style-type: none"> • Guide the learner to rote count in sign language (learner who is deaf learners with hard of hearing) to use voice while signing numbers 1-30. • The learner is guided to rote count numbers in sign 1-30 using actions ;(clapping, nodding, jumping, skipping, hopping). 	<p>1.How can you count as your clap, nod, jump, skip, hop?</p> <p>2.How else Can you count 1 – 30 using actions?</p>

		<p>d) enjoy rote counting in their daily life.</p>	<ul style="list-style-type: none"> • Learners are guided to rote count counters (sticks, bottle tops, cards) by signing manual numbers for mastery. • The learner is guided to collect and keep safely the counters after is through with the counting. • In groups or pairs, learners rote count numbers 1-30 using actions (clapping, nodding, jumping, skipping, and hopping). • In groups or pairs, Learners perform singing games or rhymes related to rote counting. • The learner with hearing impairment can sing singing game songs. • Learners to listen to radio (hard of hearing) or observe videos in televised educational 	
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			<p>programmes on rote counting with sign language prompts or captions educational programmes on rote counting.</p> <ul style="list-style-type: none"> • Learners to watch video clips on rote counting with actions and captioned in sign language. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and collaboration: The learner develops teamwork as they contribute to group discussion by participating in clapping activities on cue from one member. 				
<p>Values:</p> <ul style="list-style-type: none"> • Love: Sharing as the learner puts the interest of others first by allowing them to take lead roles in signed singing. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Safety and security: The learner enhances their personal safety as they avoid violent behaviour with peers when counting using actions. 				
<p>Link to other activity areas:</p> <p>The learner is able to relate the skills in signing songs, recite rhymes and use actions while signing numbers in Mathematical activities and Creative activities.</p>				
<p>Suggested Learning Resources;</p> <p>Number flash cards/charts/calendar, clay, plasticine, number lines, number bags, number cut outs, fishing basket and rod, flannel boards, bottles, manual alphabet number charts.</p>				

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.2 Number recognition 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign manual alphabet numbers 1-20, b) identify numerals 1-20 for enhancement of acquisition of formation of number symbols, c) arrange number flash cards 1-20 for development of symbolic	<ul style="list-style-type: none"> • The learner is guided to observe and sign, reads the number numeral displayed on flash card/number card and identifies the number. • The learner is guided to observe and read/sign manual numerals on number flash cards or number charts. • Guide the learner to identify numbers on flashcards or charts. • Guide the learner in identifying numbers found on different objects in the school. 	<ul style="list-style-type: none"> • How do you arrange number flash cards? • How do you identify numerals?

		<p>representation of numbers,</p> <p>d) Appreciate use of numbers and develop curiosity for numbers in daily life experiences.</p>	<ul style="list-style-type: none"> • In groups or pairs, learners match numbers that look alike. • In pairs or groups, learners play number recognition games such as (fishing game, domino games, skittle game, snake and ladder games, treasure hand, post office game) learners are guided to sign names of different games. • The learner arranges flashcards 1-20. • The learner is guided to form numbers, type number symbols, identify number numerals using digital devices or other resources. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Digital literacy: The learner develops the skill of interacting with technology as they use digital devices to recognize numbers. 				
<p>Values:</p> <ul style="list-style-type: none"> • Unity: Learners in groups, take turns in recognizing numbers on flash cards. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Self-esteem: Learners in groups sing songs and recite rhymes on numbers. 				
<p>Link to other activity areas:</p> <ul style="list-style-type: none"> • The learner is able to relate the skill of number recognition to modelling numbers in Language activities. 				

Suggested Resources:

- Number flash cards/charts/calendar, clay, plasticine, number lines, number bags, number cut outs, fishing basket and rod, flannel boards, bottles

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.3 Counting concrete objects 8 lessons	By the end of the sub-strand, the learner should be able to: a) sign manual numbers 1-20 for mastery, b) count concrete objects found in school 1-20 for developing numeracy skills, c) demonstrate one to one correspondence while counting concrete objects found in school, d) appreciate the use of one-to-one correspondence in real life.	<ul style="list-style-type: none">• Learners to sign numbers 1-20.• Guide the learner to count concrete objects using the manual number chart found in school 1-20.• The learner is guided to count concrete objects found in school for numbers 1-20 and match the manual sign with concrete objects.• In groups or pairs, learners count concrete objects in their class up to 20.	<ol style="list-style-type: none">1. How do we count objects?2. Why do we match objects?

			<ul style="list-style-type: none"> • Learners play counting games involving counting objects found in school 1-20. • Learners match numerals with concrete objects found in school for numbers 1-20. • Learners count concrete objects found in school from 1-20 using digital devices or other resources. • Learners watch video games on counting concrete objects. 	
Core Competencies to be developed:				
<ul style="list-style-type: none"> • Communication and collaboration: The learner develops observing and signing skills while reading the manual alphabet. 				
Values:				
<ul style="list-style-type: none"> • Unity: The learner cooperates with others while taking turns in counting concrete objects. 				
Pertinent and Contemporary Issues (PCIs):				
<ul style="list-style-type: none"> • Mental Health: Hygiene; learners not to lick concrete objects they are using to count because they are dirty. 				
Link to other activity areas:				
The learner is able to relate the skills used in counting to manipulating concrete objects as they count 1-20 in Creative Arts and Sports.				
Suggested Learning Resources				
<ul style="list-style-type: none"> • Bottle tops, pencils, books, sticks, pebbles, tables, rubbers, wood/block blocks. 				

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.4 Number sequencing 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign manual numbers 1-20 for mastery, b) identify number symbols 1-20 for acquisition of numeracy skills, c) arrange number cards in sequence 1-20 for appreciation of increase in value, d) arrange number cards 1-20 in sequence by completing missing numbers, e) enjoy arranging numbers in	<ul style="list-style-type: none"> • The learner is guided to sign numbers 1-20. • The learner randomly picks number cut outs or number cards from a pile and identifies the number 1-20 by signing the number. • The learner is guided to demonstrate arranging of numbers 1-20 in sequence by placing the appropriate number cards or cut outs. • In pairs or groups, learners share number cards/cut-outs and complete missing numbers in sequence by placing the appropriate number cards or cut-outs. • Learners' signs sing songs in a sequence of numbers 1-20. • Learners to complete number puzzles using digital devices. 	<ol style="list-style-type: none"> 1. How can we write numbers? 2. Why do we write numbers? 3. Why do we prepare to write?

		sequence in day-to-day experiences.	<ul style="list-style-type: none"> • The learner is guided to arrange numbers in sequence from 1-20 using digital devices. • The learner is guided to find the missing number in given sets of numbers using digital devices. 	
Core Competencies to be developed: <ul style="list-style-type: none"> • Critical thinking and problem solving: The learner develops reflection skills as they observe number cards arranged sequentially. 				
Values: <ul style="list-style-type: none"> • Love: The learner develops self-sacrifice while sharing number cut-out and cards in groups while sequencing numbers. 				
Pertinent and Contemporary Issues (PCIs): <ul style="list-style-type: none"> • Self-esteem: learners sing songs on number sequence. 				
Link to other subjects: The learner is able to relate the skills used to sing songs on number sequence comprising numbers 1-20 in Mathematical activities and Creative Activities.				
Suggested Learning Resources <ul style="list-style-type: none"> • Flash cards, charts, number cut outs, calendars, number lines. 				

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.5 Number Value 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign manual numbers 1-20 for signing skills, b) collect objects from the school environment, c) count groups of objects in the school environment and select the corresponding number symbol, d) relate the number value of groups of objects in the school environment, e) appreciate the value of numbers in their daily life experiences.	<ul style="list-style-type: none"> • The learner is guided to sign and manual numbers 1-20. • The learner observes safety while collecting concrete objects from the school environment. • The learner is guided to relate number symbols and their values. • • In groups, learners count concrete objects and relate them to the number symbol. • In groups or pairs, learners complete number value puzzles. • Learners to match and pair number symbols 	<ol style="list-style-type: none"> 1. How are our items counted? 2. How can we group items?

			with corresponding quantities of objects using digital devices or other resources.	
Core Competencies to be developed:				
<ul style="list-style-type: none"> ● Critical thinking and problem solving: The learner demonstrates the skill of following simple instructions while matching the objects to its correspondence number symbol. 				
Value:				
<ul style="list-style-type: none"> ● Responsibility: The learner enriches determination as they collect materials from the school environment. 				
Pertinent and Contemporary Issues (PCIs):				
<ul style="list-style-type: none"> ● Safety: Learners observe safety while handling concrete objects. 				
Link to other activity areas:				
The learner is able to relate the skill used to clean the school compound as they collect materials in Mathematical activities and Environmental activities.				
Suggested Learning Resources				
<ul style="list-style-type: none"> ● Flash cards, charts, number cut outs, calendars, number lines. 				

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.6 Number writing 8 lessons	By the end of the sub-strand, the learner should be able to: a) sign manual numbers and associate with numeric value, b) identify number symbols up to 20 for association of spoken or signed number and its symbolic representation, c) form numbers of symbols 1-20 on a surface for representing quantities of objects, d) write number symbols 1-20 on a surface for enjoyment, e) form number symbols 1-20 using digital	<ul style="list-style-type: none"> • Guide learners to model numbers and associate the models with numeric value objects. • Teacher demonstrates number formation from number cut outs up to 20. • In groups or pairs, learners trace, model, thread, join dots or colour number cut-outs up to 20. • The learner writes number symbols 1-20 on a surface. • Learners use number symbols found on materials in their school environment such as calendar to tell date and clock to tell time. • Learners use digital devices or other resources to form number symbols 1-20. 	1. How do we form number symbols

		devices for digital literacy, f) appreciate the use of numbers within their school environment.	<ul style="list-style-type: none"> Learners to type number symbols from 1-20 using digital devices. 	
Core Competencies to be developed: <ul style="list-style-type: none"> Creativity and Imagination: The learners develop decision making skills as they choose modelling materials that would best form numbers or pegs. 				
Values: <ul style="list-style-type: none"> Respect (patience): Learners work in groups or pairs forming numerals 1-20. 				
Pertinent and Contemporary Issues (PCIs): <ul style="list-style-type: none"> Safety and Security: Personal safety as the learner observes safety while using digital devices in different ways. 				
Link to other activity areas: The Learner is able to relate the skills used in tracing, model, thread, join dots or colour number cut-outs up to 20 in Mathematics activities to Creative activities.				
Suggested Learning Resources Calendar, plasticine, pebbles, clock face, number charts, number flashcards.				

THEME: OUR SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.7 Putting together 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign words related to putting together, b) identify groups of similar objects in school environment for counting, c) put similar objects together with a sum not exceeding 9, d) enjoy the activities of putting together objects in their day-to-day life experiences.	<ul style="list-style-type: none"> • Learners are guided to sign words related to putting together, group together, join, mix. • The learner observes and talks/signs about similar objects within the school environment. • The teacher demonstrates putting similar objects together with a sum not exceeding 9 and counts. • Two learners demonstrate putting similar objects together with a sum not exceeding 9 and count. • In small groups, learners put objects together with a sum not exceeding 9 and count. • Learners sing songs related to putting together sums not 	<ol style="list-style-type: none"> 1. How many objects are there altogether? 2. How do we put together objects?

			<p>exceeding 9 e.g. 1 little brown bird sitting on a wall along came another one and that made two.</p> <ul style="list-style-type: none"> • The learner can count and put together objects to get sums of not more than nine (9) using digital devices or other resources. • Learners to listen to and watch video programmes on the concept of putting together. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> • Collaboration and communication: Observation skills are developed as learners in groups or pairs, talk/sign to each other in group activities involving putting objects together with a sum not exceeding 9 and count. 				
<p>Values:</p> <ul style="list-style-type: none"> • Respect: The learners exercise patience while putting together. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Safety and security: personal as learners manipulate concrete objects while putting together 				
<p>Link to other activity areas:</p> <ul style="list-style-type: none"> • Environmental activities: The learner is able to relate the skills used to collect concrete objects from the environment which they use to put together in Mathematics activities and Creative activities. 				
<p>Suggested Learning Resources Number cut outs, number charts, puzzle pieces, counters, sticks and wood/plastic blocks.</p>				

THEME: OUR SCHOOL

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.8 Taking away 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign words and terms related to taking away, b) identify different groups of similar concrete objects from the school environment, c) take away concrete objects from groups not more than 9, d) enjoy the activities of taking away concrete objects and counting the remainders in the day-to-day life experiences.	<ul style="list-style-type: none"> • The learner signs words and terms related to taking away. • The learner counts concrete objects in different groups. • The teacher demonstrates taking away not more than 9 objects from different groups. • Learners are guided to take away not more than 9 objects from different groups. • In pairs or groups, learners take away not more than 9 objects from groups and count the remainder. • The learner is guided to take away all objects in each group and notice “nothing” remains (zero). • Learners are guided to sign songs or poems related to taking away. 	<ol style="list-style-type: none"> 1. How many objects are in the groups? 2. How many objects are left after taking them away?

			<ul style="list-style-type: none"> • The learners are guided to count and take away objects from sets of objects not more than nine (9) using digital devices. • Learners to observe and watch video programmes (captioned in sign language or the teacher to sign) on the concept of taking away and guide learners on activities observed. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Collaboration and communication: Observation skills are developed as learners in groups or pairs sign to each other in group activities involving putting objects together with a sum not exceeding 9 and count. 				
<p>Values:</p> <ul style="list-style-type: none"> • Respect (Patience): Learners exercise patience as they take away objects from groups. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Safety: Learners collect objects (non-poisonous objects and those that cannot hurt them) to use in taking away activity. 				
<p>Link to other activity areas: Environmental activities as learners collect different groups of similar objects from the environment.</p>				
<p>Suggested Learning Resources Counters (sticks; blocks, pebbles, bottle tops).</p>				

Suggested Assessment Rubrics

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Signing terms related to number and number operations.	Signs all terms related to number concepts including less common terms with precision and correct non manual signals.	Signs all terms related to number concepts including less common terms.	Signs terms related to number concepts with some specific categories or miss less obvious terms.	Signs terms related to number concepts with frequent corrections.
Counting numbers in sign 1-20 for developing numeracy skills.	Counts numbers 1-20 accurately and precisely in sign language with appropriate facial expressions and body language.	Counts numbers 1-20 accurately in sign language conveying numbers clearly.	Counts numbers 1-20 in sign language but with occasional errors.	Counts numbers in sign language 1-20 but experience significant disruptions in counting flow.
Demonstrating one to one correspondence while counting concrete objects found in school.	Demonstrates one to one correspondence while counting concrete objects 1- 20 and beyond.	Demonstrates one to one correspondence while counting concrete objects 1- 20.	Demonstrates one to one correspondence while counting concrete objects 1- 10.	Demonstrates one to one correspondence while counting concrete objects 1- 5.

Identifying number symbols 1-20.	Identifies number symbols 1-20 showing deep understanding of the quantity represented by each number symbol and can relate it to real-world objects or illustration.	Identifying number symbols 1-20 demonstrates a good understanding of the quantity associated with most number symbols.	Identifies number symbols 1-20 exhibits some difficulty in connecting number symbols to their corresponding quantities and may not collaborate 1-20 but 1-10.	Identifies number symbols 1-20 and struggles to understand the quantity represented by number symbols, showing significant misconception.
Relating the number value of groups of objects in the school environment.	Relates up to 20 and beyond objects to its corresponding number symbol and provides numerous other examples.	Relates up to 20 objects to its corresponding number symbol with clarity of the attributes.	Correctly relates up to 20 objects to its corresponding number symbol lacks clarity in discussing.	Correctly relates up to 20 objects to its corresponding number symbol but displays significant difficulty in expression.
Writing number symbols 1-20.	Write number symbols 1-20 neatly and beyond.	Writes number symbols 1-20 neatly	Writes number symbols 1-20 with noticeable corrections.	Writes number symbols 1-20 with frequent corrections and erasures.
Putting similar objects together with a sum not exceeding 9.	Putting similar objects together with a sum exceeding 9 demonstrates a	Puts similar objects together with a sum up to 9 and	Puts similar objects together with a sum up to 5 displays a	Putting similar objects together with a sum up to 2 lacks a

	comprehensive understanding of grouping similar objects.	communicates the solution with clarity.	basic understanding of grouping similar objects but struggles with consistent accuracy.	clear understanding of grouping similar objects, resulting in frequent inaccuracies.
Taking away concrete objects from groups not more than 9.	Takes away concrete objects from groups exceeding 9.	Takes away concrete objects from groups up to 9.	Takes away concrete objects from groups up to 5.	Takes away concrete objects from groups up to 2.

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.1 Sides of objects 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign terms and words related to sides of objects and shapes, b) identify concrete objects/models of concrete objects found in the market for purpose of identifying their sides, c) count different sides of concrete objects/ models identified, d) compare different sides of objects/models	<ul style="list-style-type: none"> • The learner is guided to sign words related to shapes and sides of objects. • The learner is guided to sign about different sides of objects/ models of concrete objects found in the market (tables, books, chairs). • Learners are guided to compare objects/ models of concrete objects found on the market with different sides (long, short). • In groups, learners are guided to fold cut-outs of different shapes (circles, ovals, rectangles, squares) so as to match the sides. • Learners are guided to compare sides of objects/ models of objects found in the market. • The learner demonstrates comparing sides of 	<ul style="list-style-type: none"> • How will you tell which side is longer or shorter? •

		<p>found in the market (long, short),</p> <p>e) enjoy measuring sides of objects/models using arbitrary units.</p>	<p>objects/models of objects found in the market.</p> <ul style="list-style-type: none"> • In groups or pairs, learners measure sides of objects/models of objects found in the market using arbitrary units (hand - span, foot, sticks). • Learners are guided to watch a video clip (interpreted by the teacher) on measuring sides of objects using arbitrary units. 	
<p>Core Competencies to be developed:</p> <p>Communication and collaboration: The learner develops observation and signing skills as they fingerspell and sign terms related to sides of objects.</p>				
<p>Values:</p> <p>Love: Learners share arbitrary units and take turns as they measure sides of objects</p>				
<p>Pertinent and Contemporary Issues (PCIs):</p> <p>Safety: Learners observe safety as they manipulate concrete objects while counting their sides.</p>				
<p>Link to other activity areas:</p> <p>Language activities: The learner acquires vocabularies such as long or short.</p>				
<p>Suggested Learning Resources</p> <p>Objects of different lengths such as sticks, chairs, tables, books, pencils, pieces of paper, objects in the class, models of objects found on the market.</p>				

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
3.0 MEASUREMENT	3.2Mass (heavy and light) 8 lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to mass, b) identify concrete objects found in the market, c) lift different concrete objects found in the market, d) comparing heavy and light concrete objects found in the market, e) appreciate objects found on the market of different masses.	<ul style="list-style-type: none"> • Learners are guided to sign terms related to mass (heavy, light). • The learner identifies objects found in the market. • Learners collect objects that vary in weight (ball, paper, nail, toy car, book, pencil). • In groups, learners sort out and categorise the heavy and light objects. • The learner is guided to drop two objects into the water and observe which one is heavy and light. (The one which is heavy will sink and the one which is lighter will float). • In pairs, learners demonstrate lifting different heavy and light objects. 	How can you tell the object is heavy or light?

			<ul style="list-style-type: none"> • In groups or pairs, learners compare heaviness of different objects found on the market. • In groups/pairs, learners play games involving lifting of heavy and light objects. (Play on a seesaw; back-to-back lifting). • The teacher distributes picture sketches of objects found in the market (pumpkin and apple, chair and pencil, book and ruler showing attributes (heavy/light) for the learner to circle/colour/point heavier objects.) • The learner watches a video on comparison of heavy and light objects. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Learning to learn: The learner develops relationships as they play games and lift different objects sharing what they have learnt. 				

Values:

- Respect (patience): Learners lift objects found on the market in turns to determine their mass.

Pertinent and Contemporary Issues (PCIs):

- Safety: Learners observe safety as they lift heavy and light objects.

Link to other activity areas:

Creative activities: Learners play games and lift different objects.

Suggested Learning Resources

Sand, bottles of water, stones, woodblocks, chairs, tables, fruits

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.3 Capacity (how much a container can hold) 8 Lessons	By the end of the sub-strand, the learner should be able to: a) Sign terms related to capacity, b) fill and empty different containers using water or sand, c) identify how many small containers fill a big one. (up to 20 counts), d) compare containers according to how many small ones can fill a big one, e) enjoy filling and emptying containers in the environment.	<ul style="list-style-type: none"> • Learners are guided to sign terms related to capacity (full, empty, half full, more, less,). • The learner can observe several bottles, cups, and any other containers. • Guide the learner to have the containers put in order from what would hold the least to most amount of water, juice, milk. • Guide the learner in filling and emptying small and large containers using sand or water. • The learner demonstrates comparing big and small containers by telling how 	How many of the small containers can fill the big container?

			<p>many small ones fill the big ones and vice.</p> <ul style="list-style-type: none">• In pairs, learners demonstrate comparing big and small containers and tell how many small ones can fill a big one and vice versa.• In groups or pairs, learners tell how much a container can hold compared to another one of a different size.• Guide the learner to watch a video on filling and emptying containers of different sizes.• Guide the learner to work with a peer in pouring from one container to another filling to the top so no more can fit to see if it fills it completely or if there is an overflow.	
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			<ul style="list-style-type: none"> • The learner is guided to empty containers so there is nothing inside. • The learner is guided to use a detergent scoop, plastic jar, or a cup to fill a bucket counting how many scoops were needed. • The learner is guided to fill up cups with water, sand, rice, beans, and maize. • The learner can draw and label something that would hold more water than their water bottle; bucket, pot, sufuria, water tank. • The learner is guided to clear his/her table and floor by use of towels/moppers. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Critical thinking and problem solving: The learner acquires observation and communication skills as they follow simple instructions to solve and seek help, when need be, to complete tasks. 				
<p>Values:</p> <ul style="list-style-type: none"> • Integrity: The learner develops reliability as they fill and empty containers using water and sand not to let it spill off and owning up if they do so. 				

Pertinent and Contemporary Issues (PCIs):

- Hygiene: Learners observe hygiene as they do empty and filling activities (not to drink dirty water)

Link to other activity areas:

- Environmental activities: Learners learn about water and soil as they play filling and emptying containers

Suggested Learning Resources

Containers of various sizes, water sand, seeds

THEME: OUR MARKET

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>3.0 MEASUREMENT</p>	<p>3.4 Time (Daily routines) 8 lessons</p>	<p>By the end of the sub-strand, the learner should be able to:</p> <ul style="list-style-type: none"> a) Sign terms related to time, b) compare sizes of shadows at different times of the day, c) identify vocabulary related to time for effective communication, d) name tools used for telling time, e) arrange flashcards of the days of the week in a sequence, f) arrange flashcards of the months of the year in a sequence, g) appreciate the use of tools for telling time. 	<ul style="list-style-type: none"> • The learner is guided to sign terms related to time (morning, noon, evening, night, clock, calendar, watch). • Guide the learner to compare sizes of shadows at different times of the day (morning, noon, evening). • Guide the learner to use everyday activities to learn about time (coming to school in the morning, taking the meals at noon, going back home in 	<p>How can you tell the object is heavy or light?</p>

			<p>the evening, sleeping at night).</p> <ul style="list-style-type: none">• Guide the learner to sign about vocabulary related to time (morning, noon, evening).• Guide the learner to sign sing songs related to time.• Guide the learner to talk/sign about tools used to tell time such as clock, calendar, and watches.• The learner is guided to make a paper clock, make and wear paper watches, model clocks, watches.• Guide the learner in naming days of the week and months of the year.	
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			<ul style="list-style-type: none">• Learner is guided to sign what she/he is doing and what day it is (Today is Monday and we have assemblies) for connections that different days have different activities.• Learners are guided to sign sing songs that name each day.• In groups or pairs, learners arrange flashcards of days of the week and months of the year.• Guide the learner to observe a classroom calendar.• Learners are guided to incorporate a calendar within the classroom in different ways (building a birthday	
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			<p>display-birthday crowns displayed on birthday-on-birthday walls in calendar order.</p> <ul style="list-style-type: none"> • Learners take photos holding a sign with the date on his/her birthday and add to the birthday wall. • Learners to watch a video on activities in a market 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Citizenship: The learner develops responsible, ethical and socially connected individuals when they work in groups to talk about times of the day and respect other activities during different times. 				
<p>Values:</p> <ul style="list-style-type: none"> • Social Justice: The learner develops equity as they share flashcards of days of the week while arranging equitably. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Learner Support Programme: The learner develops time management as they sign about the usefulness of the activities they do at different times of the day. 				
<p>Link to other activity areas:</p> <ul style="list-style-type: none"> • Language activities: Learners sign about vocabulary related to time (morning, noon, evening). 				
<p>Suggested Learning Resources Timetables, clockface, old calendars,</p>				

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.5 Money (Kenyan currency) coins. 8 Lessons	By the end of the sub-strand, the learner should be able to: <ul style="list-style-type: none"> a) Sign terms related to money, b) identify different one Kenyan currency coin used in the market, c) count money in one Kenyan shilling coins up to 20, d) appreciate the use of Kenyan currency in everyday life. 	<ul style="list-style-type: none"> • Guide the learner to sign terms related to money. • Guide the learner to look at and talk/sign about different coins in Kenyan currency. (sh.1, sh.5, sh.10, sh.20) • Learners work with peers to identify Kenyan coins. • The learner is guided to draw and shade coins to internalise the aspect of a coin (head and tail). • Guide the learner to count Ksh.1 coins up to 20. • Learners work in pairs to count Ksh.1 coins up to 20. • Guide the learner to create a coin caterpillar by lining up coins and tracing 	How do you count money in one Kenyan shilling coin?

			<p>them on paper to look like a caterpillar.</p> <ul style="list-style-type: none"> • The learner counts them and writes down the total value of their caterpillar. • In groups or pairs, learners identify numbers on the coins as 1,5,10 or 20 in symbols. • Learners to watch a video of different Kenyan currency coins using digital devices or other resources. • Learner's role plays with the peers in the classroom using coins to buy chips so as to practise counting money. • The learner is guided to make her/his own saving banks by crafting water bottles to use for savings. 	
Core Competencies to be developed:				

- Communication and collaboration: Teamwork; the learner develops teamwork while working with peer to identify Kenyan coins

Values:

- Responsibility: The learner develops compassion as they take turns as they count Kenyan currency coin

Pertinent and Contemporary Issues (PCIs):

Financial literacy: The learner develops financial literacy while identifying Kenyan currency coins for distinguishing one coin from the other.

Link to other activity:

Language activities: Learners acquire new vocabulary related to different coins in Kenyan currency. (sh.1, sh.5, sh.10, sh.20)

Suggested Learning Resources

(Realia)different values of coins, 20,10,5,1, Crayons.

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.6 Area (surfaces of objects) 8 Lessons	By the end of the sub-strand, the learner should be able to: a) sign terms relating to different surfaces of objects found in the market, b) identify surfaces of different objects found in the market, c) cover surfaces of different objects by using not more than 20 smaller similar objects, d) count small similar objects that cover a given surface of concrete object found in the market,	<ul style="list-style-type: none"> • The learner signs words related to surfaces of objects found in the market. • The learner observes different surfaces of objects found in the market. (books, tables, chairs, stools, pencil, ball, bucket, cup). • The learner identifies surfaces of different objects found in the market as large or small. • Learners in pairs, model different objects found in the market with different surfaces. (tables, chairs, ball, cup, tire). • In groups, learners draw and colour different objects with 	<ul style="list-style-type: none"> • How many small pieces can cover a given surface? • Why do we cover a given surface? •

		<p>e) appreciate different surfaces of objects found in the market.</p>	<p>different surfaces found in the market (bucket, cup, table, stool, chair, box, ball, ice cream).</p> <ul style="list-style-type: none"> • Learners display the drawn pictures on the wall for observation. • In groups, learners talk/sign pictures of objects she/he has drawn in her own word/sign (ball is round). • In small groups or pairs, learners compare different surfaces of objects found in the market. • Learners cover surfaces of objects found in the market using small objects and count the number of small objects used (objects not exceeding 20). • Learners to shade or colour surfaces of different objects using digital devices or other resources. 	
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Core competencies to be developed:

- Critical thinking and problem solving: The learner develops self-reflection as they cover different surfaces and find out pieces that can cover a surface and compare their findings.

Values:

- Love: The learner develops hospitality while materials as they cover surfaces of different objects and allow others in their working area.

Pertinent and Contemporary Issues (PCIs):

- Safety: The learner develops safety and security in the playground as they use smaller objects safely.

Link to other activity areas:

- Environmental activities: learners use small objects from the environment to cover surfaces of objects.

Suggested Learning Resources

Pieces of paper, bottle tops, hands, feet, wood/plastic blocks

Suggested Assessment Rubrics

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Signing terms and words related	Signs terms and words related to measurement clearly, well-formed, and easily distinguishable. Communication is highly effective.	Signs terms and words related to measurements; signs are generally accurate.	Signs terms and words related to measurements; signs are somewhat accurate, with noticeable errors.	Signs terms and words related to measurements; signs are frequently inaccurate, hindering comprehension.
Comparing different sides of concrete objects found in the market.	Compares sides of objects found in the market and provides additional relevant details.	Compares sides of objects found in the market accurately with clarity of the attributes.	Compares sides of objects found in the market but lacks clarity of the attributes.	Compares sides of objects found in the market but misses to point out key attributes.
Lifting objects and identifying heavy and light objects.	Lifts concrete objects and identifies heavy and light objects correctly and signs about them.	Lifts concrete objects and identifies heavy and light objects correctly.	Lifts concrete objects and identifies heavy or light objects correctly with corrections.	Lifts concrete objects but cannot identify heavy or light objects correctly.
Arranging flashcards of days of the week and the	Arrange flash cards of days of the week and	Arranges flashcards of days of the week	Arranges flash cards of days of the week	Arranges some flashcards of days of

months of the year correctly.	months of the year correctly and talk/sign about them.	and months of the year correctly.	or months of the year with noticeable errors.	the week or months of the year with frequent corrections.
Identifying objects found in the market.	Identifies objects found in the market providing detailed descriptions including size, colour and other relevant attributes.	Identifies objects found in the market showing basic observation skills.	Identifies objects found in the market showing basic observation skills, missing many relevant details.	Identifies objects found in the market, lacking basic observation skills resulting in a limited conception of objects.
filling and emptying containers and identify how many small containers fill a big one.	Fills and empty different containers using water or sand demonstrating precision and accuracy with no spills nor wastage.	Fills and empty different containers using water or sand.	Fills and empty different containers using water or sand demonstrating lack of precision and accuracy with minor spills.	Fills and empty different containers using water or sand demonstrating lack of precision and very major accuracy in filling.
Comparing sizes of shadows at different times of the day to determine their sizes.	Compares sizes of shadows at different times of the day to determine their sizes with extensive and	Compares sizes of shadows at different times of the day to determine their sizes with clarity.	Compares sizes of shadows at different times of the day to determine their sizes with inconsistent	Compares sizes of shadows at different times of the day to determine their sizes

	accurate descriptions of the shadows.		description of the shadows.	with frequent corrections.
Interacting with 4 types of Kenyan currency for familiarity (ksh.1, ksh.5, ksh.10, ksh.20).	Interacts with more than 4 types of Kenyan currency for familiarity (ksh.1, ksh.5, ksh.10, ksh.20).	Interacts with 4 types of Kenyan currency for familiarity (ksh.1, ksh.5, ksh.10, ksh.20).	Interacts with 2 to 3 types of Kenyan currency for familiarity (ksh.1, ksh.5, ksh.10, ksh.20).	Interacts with 1 or none types of Kenyan currency for familiarity (ksh.1, ksh.5, ksh.10, ksh.20).
Covering surfaces of different objects by using not more than 20 smaller similar objects.	Cover surfaces of different objects by using not more than 20 smaller similar objects neatly.	Cover surfaces of different objects by using not more than 20 smaller similar objects.	Cover surfaces of different objects by using not more than 20 smaller similar objects with noticeable errors.	Cover surfaces of different objects by using not more than 20 smaller similar objects with frequent corrections.

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 GEOMETRY	4.1 Lines 3 lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to lines, b) identify lines on concrete objects found in the market, c) form lines using concrete objects, d) enjoy forming lines using concrete objects found in the market.	<ul style="list-style-type: none"> ● Guide learners to sign terms related lines. ● Guide learners to observe concrete objects (books, charts, woodblocks, string/ropes) /models of objects found in the market and sign about lines found in them. ● Learners work with the peer to demonstrate forming lines - straight, wavy and zigzag (arranging up to 20 concrete objects one after the other, modelling, joining dots). ● The learner is guided to display the lines which have been modelled in class for observation. ● The learner is guided to place two small objects at either 	How do we form lines using concrete objects?

			<p>side of a large sheet of paper and draw a horizontal line between them. The learner is guided again to move the objects to the top and bottom of the paper so as to practise a vertical line.</p> <ul style="list-style-type: none"> ● Learners work with the peer to form lines- straight, wavy and zig zag (arranging up to 20 concrete objects one after the other, modelling or joining dots). ● In pairs, learners’ model different lines (straight, wavy, zigzag) using clay dough by using paper and maker (drawing different lines and following the pattern using clay dough). ● Learners to watch videos of children singing while moving on straight, wavy and zig zag lines (with signed prompts from the teacher). 	
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			<ul style="list-style-type: none"> ● Learners work in groups to form different lines (straight, wavy, zigzag) by aligning themselves to form those different lines. ● The learner observes the different lines formed. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> ● Communication and collaboration: The learner will develop teamwork as they contribute to group decision making by recognising values of others' ideas during discussions as they form wavy lines 				
<p>Values:</p> <ul style="list-style-type: none"> ● Unity: The learner enriches cooperation as they work together in forming lines 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> ● Environmental education: The learner appreciates the gift of nature as they use available resources and spaces to form patterns. 				
<p>Link to other activity areas: Language activities: Learners acquire and use new vocabulary related to lines (straight, wavy and zig zag).</p>				
<p>Suggested Learning Resources books, charts, chalk boards, ropes, strings.</p>				

THEME: OUR MARKET				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 GEOMETRY	4.2 Shapes 5 Lessons	By the end of the sub-strand, the learner should be able to: a) identify shapes on objects found in the market, b) sign the different shapes found in the market, c) form shapes using concrete objects, d) colour within the boundaries drawn pictures of shapes,	<ul style="list-style-type: none"> • The learner is guided to observe models of objects in the market and sign about shapes in the objects (fruits, eggs, utensils, chairs, tables). • Learners work with a peer to demonstrate forming shapes - rectangle, circle, triangle, square and ovals by arranging concrete objects one after the other, modelling or joining dots. • Learners work in groups to form shapes -rectangle, circle, triangle, square and ovals by arranging concrete objects one after the other, modelling or joining dots. • Learners display the modelled shapes in class for observation. 	<ol style="list-style-type: none"> 1) What do these objects look like? 2) Why do we form shapes using concrete objects?

		<p>e) appreciate shapes of objects found in the market.</p>	<ul style="list-style-type: none"> • In groups or pairs, learners sort objects/picture cut-outs of shapes. • The learner is guided to display the picture cut-outs of shapes for observation. • The learner is guided to glue the picture cut out to make artwork. • Learners are guided to colour and paint pictures of shapes using various colours. • Learners work in groups to colour and paint pictures of drawn shapes. • Learners display the coloured/painted pictures of drawn shapes. • Learners to watch videos clips of different shapes from digital devices or use other resources. 	
<p>Values:</p> <ul style="list-style-type: none"> • Integrity: The learner enhances discipline as they carry out forming shapes activity and give honest feedback to peers. 				

Pertinent and Contemporary Issues (PCIs):

- Hygiene: Learners observe hygiene as they form different shapes using different materials.

Link to other activity areas:

The Learner is able to relate the skills used to form shapes and patterns in Mathematics activities and Creative Activities.

Suggested Learning Resources

books, black board, roof, window frames/windowpanes, clock, pictures/models of objects found on the market.

Suggested Assessment Rubrics

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to sign the different shapes found in the market.	Sign terms relating to different shapes correctly with precision.	Sign terms relating to different shapes correctly.	Sign terms relating to different shapes correctly with limited clarity.	Sign terms relating to different shapes with frequent corrections.
Ability to form lines (straight, wavy and zig zag) using concrete objects found in the market.	Forms more than 3 lines using models/concrete objects found in the market and talk/sign about them.	Forms 3 lines using models/concrete objects found in the market.	Forms 2 lines using models/concrete objects found in the market.	Forms 1 line using models/concrete objects found in the market.
Ability to accurately colour drawn pictures of shapes (rectangle, circle, triangle, oval, square) within the boundaries.	Colours draw pictures of shapes (rectangle, circle, triangle, oval, square) within the boundaries and talk/sign about them.	Colours drawn pictures of shapes (rectangle, circle, triangle, oval, square) within the boundaries.	Colours drawn pictures of shapes (rectangle, circle, triangle, oval, square) within the boundaries with noticeable errors.	Colours drawn pictures of shapes (rectangle, circle, triangle, oval, square) within the boundaries with frequent corrections.

Appendices

Appendix 1: Suggested resources

THEME: OUR NEIGHBOURHOOD		
STRANDS	Sub-Strand	Suggested Resources
PRE-NUMBER ACTIVITIES	1.1 Sorting & grouping	Locally available materials of different colours, texture, use, types and sizes such as leaves, flowers, pebbles, shells, paper cut outs, bottle tops, seeds, feathers, fruits, beads, pictures, Computers.
	1.2 Matching and Pairing	Locally available materials (pens, books, sticks, shapes, cut-outs, blocks, clothing, utensils, pebbles, balls, flash cards)
	1.3 Ordering	Flash cards, blocks, bottle tops, bottles, sticks, beads, straws, cut outs, pebbles
	1.4 Patterns	Pencils, books, crayons, paint, paper cut-outs, leaves.
THEME: OUR SCHOOL		
2.0 NUMBERS	2.1 Rote counting (1-30)	
	2.2 Number recognition (1-20)	Number flash cards/charts/calendar, clay, plasticine, number lines, number bags, number cut outs, fishing basket and rod, flannel boards, bottles
	2.3 Counting concrete objects (1-20)	Bottle tops, pencils, books, sticks, pebbles, tables, rubbers, wood/block blocks
	2.4 Number sequencing (1-20)	Flash cards, charts, number cut outs, calendars, number line
	2.5 Number Value	Counters, realia classroom objects, flash cards, models, number charts, objects in the environment, toys

	2.6 Number writing- (1-20)	Calendar, plasticine, pebbles, clock face, number charts, number flashcards,
	2.7 Putting together	Number cut outs, number charts, puzzle pieces, counters, sticks and wood/plastic blocks.
	2.8 Taking away	Counters (sticks; blocks, pebbles, bottle tops)
THEME: OUR MARKET		
3.0 MEASUREMENT	3.1 Sides of objects (Long/short)	Objects of different lengths such as sticks, chairs, tables books, pencils, pieces of paper, strings, body parts, objects in the class, models of objects found on the market
	3.2 Mass (heavy and light)	Sand, bottles of water, stones, woodblocks, chairs, tables, fruits
	3.3 Capacity (how much a container can hold)	Containers of various sizes, water sand, seeds
	3.4 Time (Daily routines)	Clock face, pictures, picture cut outs, watch, radio, mobile phones, calendars, shadow positions at different times of the day
	3.5 Money (Kenyan currency) Coins	Coins (sh.1, sh.5, sh.10, sh.20), tins, boxes, papers pencils, shop corner
	3.6 Area (surfaces of objects)	Pieces of paper, bottle tops, hands, feet, wood/plastic blocks etc
THEME: OUR MARKET		
4.0. GEOMETRY	4.1 Lines (straight/wavy /zig zag)	books, charts, chalk boards, ropes, strings
	4.2 Shapes (rectangle, circle, triangle, oval, square)	books, black board, roof, window frames/windowpanes, clock, pictures/models of objects found on the market

Appendix 2: Community Service Learning Guidelines

CSL at Early Years Education (PP1&2 and Grade 1-3)

At this level, the goal of the CSL activity is to provide linkages between concepts learnt in the various Learning Activities and the real life experiences. Learners begin to make connections between what they learn and the relevance to their daily life. CSL is hosted in the Environmental Activities learning area. The class teacher is expected to identify and guide learners to undertake age-appropriate whole-class integrated CSL activity within the school. The safety of the learners should also be taken into account when selecting the CSL activity. The following steps for the integrated CSL activity should be staggered across the school terms:

Steps in carrying out the integrated CSL activity

1) Preparation

- Determine the activity for the learners
- Map out the targeted core competencies, values and specific learning areas skills for the CSL activity
- Identify resources required for the activity (locally available materials)
- Stagger the activities across the term (Set dates and time for the activities)
- Communicate to learners, parents/caregivers/guardians, school administration, teachers and other relevant stakeholders in the school community
- Identify and develop assessment tools

2) **Implementation of CSL Activity**

- Assigning roles to learners.
- Ensure every learner actively participates in the activity
- Observe learners as they carry out the CSL activity and record feedback.
- Use an appropriate assessment tool to assess both the process and the product (Assess learner's work from the beginning to the end product)
- Assess the targeted core competencies, values and subject skills.

3) **Reflection on the CSL Activity**

Conduct a self-evaluation session with learners on the integrated CSL activity undertaken by discussing the following:

- what went well and why
- what did not go well and why,
- what can be done differently next time
- what they have learnt.

There will be **one** integrated CSL activity that will be conducted **annually**. The thematic areas for the integrated CSL activity will be derived from the broader categories of the PCIs and concepts from the various Learning Areas. The teachers are expected to vary the themes yearly to allow learners to address different PCIs within their contexts. There should be a linkage between the skills from the learning areas and the themes.

The integrated CSL activity will take a Whole School Approach (WSA) where the entire school community is involved (learners, parents/caregivers/guardians, school administration, teachers). Parents/caregivers/guardians are key stakeholders in the planning and execution of the CSL activity. Although the teacher takes the lead role in the planning and integration of the CSL activity, learners will be expected to participate actively in the whole process.

The CSL activity provides an opportunity for the development of core competencies and the nurturing of various values. The teacher is expected to vary the core competencies and values emphasised in the activity yearly.

Assessment of the CSL Activity

Assessment of the integrated CSL activity will focus on 3 components namely: skills from various learning areas applied in carrying out the activity, and core competencies developed, and values nurtured. Assessment should focus on both the process and end product of the CSL activity. The teacher will assess learners in groups using various tools such as an observation schedule, checklist, rating scale or any other appropriate assessment tool.

NOTE

The following **digital devices** may be used in the teaching/learning of mathematics at this level:

Learner digital devices (LDD), Teacher digital devices (TDD), Mobile phones, Digital clocks, Television sets, Videos, Cameras, Projectors, Radios, Scanners, Internet among others.