



**REPUBLIC OF KENYA
MINISTRY OF EDUCATION**

EARLY YEARS CURRICULUM DESIGN

**MATHEMATICS ACTIVITIES
FOR LEARNERS WITH HEARING IMPAIRMENT**

PRE PRIMARY ONE



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

First Published in 2017

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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 in 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. I 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 one 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 one and prepare them for smooth transition to pre primary two. 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 panelists; the Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders for their roles in the development and adaptation of the Pre-Primary one 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 one and preparation of learners for transition to Pre primary two.

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NATIONAL GOALS OF EDUCATION

Education in Kenya should:

1 Foster nationalism and patriotism and promote national unity.

Kenya's people belong to different communities, races and religions, but these differences need not divide them. They must be able to live and interact as Kenyans. It is a paramount duty of education to help young people acquire this sense of nationhood by removing conflicts and promoting positive attitudes of mutual respect which enable them to live together in harmony and foster patriotism in order to make a positive contribution to the life of the nation.

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

Education should prepare the youth of the country to play an effective and productive role in the life of the nation.

a) Social Needs

Education in Kenya must prepare children for changes in attitudes and relationships which are necessary for the smooth progress of a rapidly developing modern economy. There is bound to be a silent social revolution following in the wake of rapid modernization. Education should assist our youth to adapt to this change.

b) Economic Needs

Education in Kenya should produce citizens with the skills, knowledge, expertise and personal qualities that are required to support a growing economy. Kenya is building up a modern and independent economy which needs an adequate and relevant domestic workforce.

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 fullest development of individual talents and personality. It should help children to develop their potential interests and abilities. A vital aspect of individual development is the building of character.

4 Promote sound moral and religious values.

Education should provide for the development of knowledge, skills and attitudes that will enhance the acquisition of sound moral values and help children to grow up into self-disciplined, self-reliant and integrated citizens.

- 5 Promote social equality and responsibility.**
Education should promote social equality and foster a sense of social responsibility within an education system which provides equal educational opportunities for all. It should give all children varied and challenging opportunities for collective activities and corporate social service irrespective of gender, ability or geographical environment.
- 6 Promote respect for and development of Kenya's rich and varied cultures.**
Education should instil in the youth of Kenya an understanding of past and present cultures and their valid place in contemporary society. Children should be able to blend the best of traditional values with the changing requirements that must follow rapid development to build a stable and modern society.
- 7 Promote international consciousness and foster positive attitudes towards other nations.**
Kenya is part of the international community. It is part of the complicated and interdependent network of peoples and nations. Education should therefore lead the youth of the country to accept membership of this international community with all the obligations and responsibilities, rights and benefits that this membership entails.
- 8 Promote positive attitudes towards good health and environmental protection.**
Education should inculcate in young people the value of good health for them to avoid indulging in activities that will lead to physical or mental ill health. It should foster positive attitudes towards environmental development and conservation. It should lead the youth of Kenya to appreciate the need for a healthy environment.

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 the 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 the society.

ESSENCE STATEMENT

Mathematics is the science of numbers and shapes and what they mean. It is the science of logic, quantity, structure, order and arrangement. 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 school readiness. 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 OUTCOME

- 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 physical and social world,
- d) demonstrate basic geometrical concepts as a basis for future learning.

SUGGESTED THEMES

MYSELF

- My body
- My clothes
- My friends
- My play objects.

1. FAMILY

- Family members
- Clothes worn by family members.
- Foods eaten.

2. MY HOME

- Our house
- Buildings at home
- Utensils
- Furniture
- Animals
- Plants found at home
- Work done at home

3. MY NEIGHBOURHOOD

- My neighbour
- Families in the neighbourhood
- Importance of neighbour

5. MY SCHOOL

- Teacher
- Class
- Things in my class
- Buildings and structures at school
- People at school
- Things at school
- Work done in school

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	8
		1.2 Matching and Pairing	8
		1.3 Ordering	8
		1.4 Patterns	8
2	2.0 Numbers	2.1 Rote Counting	8
		2.2 Number Recognition	10
		2.3 Counting Concrete Objects	10
		2.4 Number Sequencing	10
		2.5 Number Writing	10
3	3.0 Measurement	3.1 Sides of Objects	10
		3.2 Mass (Heavy and Light)	10
		3.3 Capacity (how much a container can hold)	10
		3.4 Time (Daily Routines)	10
		3.5 Money (Kenyan currency -Ksh.1 coins)	10
		3.6 Area (Surface of Objects)	10
4	4.0 Geometry	4.1 Lines	4
		4.2 Shapes	6
Total Number of Lessons			150
Note: Suggested number of lessons per Sub Strand may be less or more depending on the context.			

THEME:1.0 MY SELF				
Strand	Sub-Strand	Suggested Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 PRE- NUMBER ACTIVITIES	1.1 Sorting & grouping (8 lessons) <ul style="list-style-type: none"> ● <i>Colour</i> ● <i>Size,</i> ● <i>Shape</i> 	By the end of the sub strand, the learner should be able to: <ol style="list-style-type: none"> a) sign words related to attributes of objects in the environment, b) Identify similarities and differences among play objects in the environment for distinguishing one object from the other by colour, shape or size, c) sort and group play objects by given attributes, d) enjoy sorting and grouping play objects in the environment by colour, shape and size, e) appreciate the materials in the environment for their uniqueness and diversity. 	<ul style="list-style-type: none"> ● In groups, learners are guided to perform activities on finger dexterity, such as scribbling in the air, modelling, waving to each other, and beckoning to each other. ● The learner is guided to sign names of different attributes of objects such as colour, shape or size. ● Learners are guided to watch animated or captioned video on various attributes such as color, size and shapes. ● The learner is guided to observe and sign different types of colours on teacher illustration charts, learners' uniforms, flag and any other learning resources in the classroom. ● In groups, learners are guided to observe and sign describing their play 	<ol style="list-style-type: none"> 1. How are objects different? 2. Why have you grouped these objects together?

			<p>objects by colour, shape or size.</p> <ul style="list-style-type: none"> ● In pairs, learners are guided to sign or say about their play objects of different colours, shapes or sizes such as wood blocks, balls, toys and bottle tops. ● In pairs, learners are guided to identify similarities of play objects by colour, shape or size. ● In pairs or groups, learners are guided to identify the differences in play objects by color, shape or size. ● Learners are guided to demonstrate sorting and grouping play objects by one attribute (colour, shape or size). ● In groups learners are guided to place small boxes and large boxes on the floor to be filled with different objects of different shapes, any objects that can't fit in the small box go into the big box. ● In pairs, learners are guided to use digital devices to demonstrate 	
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			<p>sorting and grouping of play objects by one attribute such as colour, shape or size.</p> <ul style="list-style-type: none"> ● In purposive groups, learners are guided to share play objects then sort and group them according to one attribute. ● Individually learners are guided to relate 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, learners are guided to collect and safely store play objects in their respective learning corner according to their unique attributes. ● In groups, learners are guided to use digital devices to play sorting and grouping games or sort and group objects according to one attribute. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> ● Communication and Collaboration: Teamwork; the learner recognises the value of others as they sort, and group play materials in groups or in pairs. 				

- Digital literacy: Interacting with technology skills as the learners use digital devices to play matching and sorting games.

Values:

- Love: The learner shows compassion while sharing play materials in groups or pairs.
- Unity: Learners cooperate while working in pairs or groups.
- Responsibility: Accountability as learners collect and store play objects in their respective learning corner.

Pertinent and contemporary issues (PCIs):

Safety and security: Personal safety and security; learner demonstrates basic safety habits collects and stores play objects in their respective learning corner.

Link to other activity areas:

The learner is able to relate the skills used to name the colours of objects identified and grouped in Mathematical activities, Language activities and Creative activities.

Suggested Learning Resources

- Locally available materials of different colours, and sizes such as flowers, pebbles, shells, paper cut outs, bottle tops, seeds, feathers, fruits, shapes, digital devices, computers, tablets.

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) <ul style="list-style-type: none"> ● <i>sameness/ likeness,</i> ● <i>use.</i> 	By the end of the sub-strand, the learner should be able to: <ol style="list-style-type: none"> a) sign names related to attributes used to describe different clothes, b) identify different clothes worn every day, c) state similarities among clothes worn every day, d) state differences among clothes worn every day, e) match clothes worn every day, f) Pair clothes worn every day, g) appreciate the use of different clothes worn every day. 	<ul style="list-style-type: none"> ● In groups or pairs, learners are guided to carry out activities that help to develop finger dexterity and eye-hand coordination such as finger painting and drawing on sand. ● Learners are guided to sign words related to attributes used to describe different clothes, related to matching and pairing. ● In pairs, learners are guided to state clothes they wear daily in the classroom or identify them using digital devices and then describe their similarities (sameness). ● In pairs learners who are hard of hearing are guided to simultaneously sign and list similarities among clothes worn daily. ● In pairs, learners collect clothes or use digital devices or picture cut-outs of clothes they wear on daily basis to help them identify the differences. 	<ol style="list-style-type: none"> 1. Why do you match similar clothes that you wear? 2. How do you pair similar clothes that you wear?

			<ul style="list-style-type: none"> ● In purposive groups, learners are guided to display the picture cut-out of the clothes on the floor for pairing. ● The teacher demonstrates matching and pairing clothes based on one attribute (sameness/likeness or use). For example, mixing up pairs of differently coloured socks in a basket and guiding learners to find matching pairs and tie them together. ● In pairs, learners demonstrate matching and pairing clothes based on one attribute (sameness/likeness or use). ● In groups or pairs, learners match and pair clothes based on likeness/sameness or use. ● In groups, learners are guided to sign sing songs or recite poems about the relationship of the clothes they wear or the use of clothes they wear on a daily basis. ● In groups, learners are guided to match and pair 	
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			<p>clothes based on one attribute using digital devices or other resources.</p> <ul style="list-style-type: none"> ● In pairs learners collect the in pairs or groups learners are guided to collect the cut-out pictures from the floor and safely store them in their learning corner. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> ● Communication and collaboration: Signing/speaking skills; the learner signs/speaks clearly and effectively with others to express their own ideas in groups or in pairs while matching and pairing of different clothes. 				
<p>Values: Unity: Cooperation; The learner works in groups to accomplish the task of matching and pairing clothes.</p>				
<p>Pertinent and contemporary issues (PCIs): Self-care: Learners relate clothes to their use in daily life (sweater to keep one warm so that they don't become sick).</p>				
<p>Link to other activity areas: The learner is able to relate the skills used in signing songs or sign poems in Mathematics activities to Language activities.</p>				
<p>Suggested Learning Resources</p> <ul style="list-style-type: none"> ● Different types of clothes (shorts, shirts, dresses, socks, sweater), digital devices picture of different types of clothes. 				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 PRE-NUMBER ACTIVITIES	1.3 Ordering (8 lessons) <ul style="list-style-type: none"> ● small, ● big, ● short, ● long, ● tall. 	By the end of the sub-strand, the learner should be able to: <ol style="list-style-type: none"> a) sign words and attributes related to ordering in the environment, b) identify play objects of different sizes, c) arrange play objects in ascending order, d) arrange play objects in descending order, e) appreciate different play objects in the immediate environment. 	<ul style="list-style-type: none"> ● In groups or pairs, learners are guided to perform activities that promote eye-hand coordination such as tossing, catching, and rolling balls of different sizes and building with blocks. Learner is guided to identify similar play items and arrange them in order. They can play a simple digital picture puzzle game, attempting to join the correct shapes to create a complete image. ● Individually, learner is guided to sign words related to ordering such as (small, big, short, long, tall). ● In pairs, the learners are guided to demonstrate ordering play objects according to size (small, big, short, long, tall) with up to five objects. ● In groups, pairs, or individually, learners are guided to arrange play objects according to size (small, big, short, long, tall) with up to five objects. 	How can you arrange play objects according to size?

			<ul style="list-style-type: none"> ● In groups, learners are guided to compare play objects of different sizes with up to five. ● In pairs, learners are guided to draw big and small objects on different surfaces. (piece of paper, ground, chalk board). ● In groups, learners are 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/speaking skills; Learners can reason show opinion as they work with each other in groups or in pairs while ordering play objects. ● Digital Literacy: Skill of interacting with technology as the learner uses digital devices to arrange objects. 				
<p>Values:</p> <ul style="list-style-type: none"> ● Responsibility: Diligence; Learner works together in groups to accomplish the task of ordering play objects. 				
<p>Pertinent and contemporary issues (PCIs):</p> <ul style="list-style-type: none"> ● Safety: Learner takes precaution as they manipulate concrete objects while ordering. 				
<p>Link to other activity areas: Learner is able to relate skills used in manipulation of play objects while ordering in Mathematics activities and Creative activities.</p>				
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> ● Sticks, wood blocks, plastic bottles, bottle tops, Manual alphabet number chart. 				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>1.0</p> <p>PRE-NUMBER ACTIVITIES</p>	<p>1.4 Patterns</p> <p>8 lessons</p>	<p>a) By the end of the sub-strand, the learner should be able to:</p> <p>b) sign words related to attributes of patterns in the environment,</p> <p>c) identify similarities among play objects in the immediate environment,</p> <p>d) identify differences among play objects in the immediate environment,</p> <p>e) make patterns using play objects according to a given attribute,</p> <p>f) enjoy making patterns with different play objects found in the immediate environment.</p>	<ul style="list-style-type: none"> ● In pairs or groups, learners are provided with play dough to roll into balls, snakes, or other shapes. This helps in developing fine motor skills and hand strength. as they prepare to sign. ● Individually, the learner is guided to sign words related to patterns in the environment. ● The learner collects, observes captioned video on patterns and signs (hard of hearing learners talk) about different shapes of play objects in the environment. ● Individually, the learner is guided to stick the shapes on the wall for observation. ● In pairs, learners are guided to demonstrate arranging play objects to make a pattern. ● In small groups or pairs, learners are guided to arrange objects to make a pattern. (pattern blocks, bead snakes' pattern). 	<ol style="list-style-type: none"> 1. Why do objects look alike? 2. How do you arrange objects in an alternating manner to make a pattern?

			<ul style="list-style-type: none"> ● In groups, learners are guided to arrange play objects in an alternating manner to make a pattern (bead snakes, pattern-beans and maize, beads of 2 or 3 different colours). ● The learner is guided to stick the patterns on the wall for observation. ● Individually, the learner is guided to fill in the missing objects in a series to make a pattern. ● In small groups, the learners are guided to discuss patterns made of the same shape with two different colours. ● In small groups or pairs, learners make patterns with play objects of the same type with two different colours. ● Individually learners are guided to display the patterns they have made in the classroom or are kept in their portfolios. ● In groups learners are guided to play digital games or draw patterns using digital devices. ● Individually, the learner is guided and monitored to safely collect the patterns made and 	
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			store them in the learning corner.	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Communication and collaboration: Observing skills; Learner observes keenly and shows understanding of concepts and comes up with missing objects in a series to make a pattern. • Digital literacy: interacting with digital technology; Learners adopt new technology as they manipulate and use digital devices to arrange 2 different objects in alternating manner to make patterns. 				
<p>Values:</p> <ul style="list-style-type: none"> • Love: Sharing as learners use play materials while working together in groups. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Safety: Learners observe safety as they collect play objects for making patterns in the environment. 				
<p>Link to other activity areas:</p> <p>Learner is able to relate the skills used in creating patterns using different play objects in Mathematics activities and Creative activities.</p>				
<p>Suggested Learning Resources:</p> <p>Flash cards, wood blocks, bottle tops, bottles, sticks, beads, Manual alphabet number chart.</p>				

Suggested Assessment Rubrics:

<p>Level Criteria</p>	<p>Exceeds Expectation</p>	<p>Meets Expectation</p>	<p>Approaches Expectation</p>	<p>Below Expectation</p>
<p>Signing words related to attributes of grouping in the environment.</p>	<p>Signing words related to attributes of grouping in the environment keenly and demonstrates a clear understanding of objects in the environment.</p>	<p>Signing words related to attributes of grouping in the environment understands and can sign objects in the environment.</p>	<p>Signing words related to attributes of grouping in the environment, lack clarity and have challenges.</p>	<p>Signing words related to attributes of grouping in the environment with frequent corrections.</p>
<p>Identifying similarities and differences among play objects in the environment for distinguishing one object from the other.</p>	<p>Identifies similarities and differences among play objects in the environment based on colour/shape or size or texture communicating clearly and concisely.</p>	<p>Identifies similarities and differences among play objects in the environment based on colour/shape or size or texture.</p>	<p>Identifies similarities and differences among play objects in the environment based on colour/shape or size or texture with significant inconsistencies.</p>	<p>Identifies similarities and differences among play objects in the environment based on colour/shape or size or texture with major inaccuracies in the context of sorting and grouping.</p>
<p>Sorting and grouping play objects by given attributes.</p>	<p>Sorts and groups objects based on colour/shape, size or texture with a clear understanding of terms related to sorting and grouping with clear and articulate signs</p>	<p>Sorts and groups objects based on either colour/shape or size as guided understands and identifies the given attributes.</p>	<p>Sorts and groups objects based on colour and size with occasional inaccuracies or omissions.</p>	<p>Unable to sort and group objects based on any attribute struggles with signs and self-expression.</p>

	demonstrating a clear understanding of the task.			
Matching and pairing similar clothes they wear on a daily basis	Matches and pairs similar clothes they wear on a daily basis demonstrating clear understanding signs terms on marching well.	Matches and pairs similar clothes they wear on a daily basis and can sign terms on matching clothes.	Matches and pairs of similar clothes they wear on a daily basis can sign terms on matching but with inconsistencies.	Identifies attribute but cannot match or pair similar clothes they wear on a daily basis cannot sign terms not clear
Arranging play objects according to ascending and descending order	Arranges play objects according to ascending and descending order and demonstrates a clear understanding of ascending and descending.	Arranges play objects according to ascending and descending order demonstrates generally accurate arrangement, with occasional errors	Arranges play objects according to ascending and descending order arrangement is somewhat accurate, but there are noticeable errors that affect the overall sequencing	Arranges play objects according to ascending and descending order and struggles to grasp the concept of ascending and descending order, resulting in frequent errors
Making patterns using play objects according to a given attribute	Makes patterns using play objects according to a given attribute and demonstrates a clear understanding of the concept of patterns, accurately creating complex and varied patterns	Makes patterns using play objects according to a given attribute understands the concept of patterns, creating patterns that are generally accurate	Makes patterns using play objects according to a given attribute and has partial understanding of the concept, with noticeable errors in pattern creation	Makes patterns using play objects according to a given attribute but struggles to grasp the concept, resulting in frequent errors in pattern creation

THEME: 2.0 MY FAMILY				
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 words and terms related to counting, b) rote count numbers 1-10 for developing numeracy skills, c) rote count numbers 1-10 using actions for development of numeracy skills, d) enjoy rote counting in daily life.	<ul style="list-style-type: none"> ● In groups learners are guided to open and close their own palms, throw and catch the tennis ball or bean bags prepared to improve on their motor skills. ● In groups the learners are guided to observe teacher's illustration charts or captioned videos on rote counting manual numbers (1-10). ● In pairs, learners are guided to sign manual numbers 1-10, Learners who are hard of hearing can voice as they sign. ● In groups learners are guided to sign numbers 1-10 using actions such as (walk, clap, nod, tap, hop or stamp) as they sign family members and mention family members (for hard hearing learners) 	<ol style="list-style-type: none"> 1. How can you count as you jump, walk, clap, nod, tap, hop or stamp? 2. How else can you count numbers 1-10?

			<ul style="list-style-type: none"> ● In groups learners are guided to sign sing songs on family members as they rote count 1-10. (Hard of hearing learners can mention by talking, family members as they sign). ● In groups or pairs, learners perform dancing games related to rote counting. ● In groups learners are guided to play digital games on rote counting with actions Captioned in sign or teacher to guide - walk, clap, nod, tap, hop or stamp. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> ● Communication and collaboration: Signing skills; the learner signs clearly and effectively to and work in groups while performing singing games on numbers. ● Digital Literacy: skill of interacting with technology as learners watch captioned video clip on rote counting. 				
<p>Values:</p> <ul style="list-style-type: none"> ● Respect: Patience as learner rote count numbers 1-10. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> ● Safety: The learner observes safety as they rote count numbers 1-10 using actions. 				
<p>Link to other activity areas: The learner is able to relate skills used in performing singing games or rhymes related to rote counting in Mathematics and Creative activities.</p>				
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> ● Written chart, video on counting, chart showing manual numbers. 				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.2 Number recognition 10 lessons	By the end of the sub-strand, the learner should be able to: a) sign words and attributes related to number recognition, b) identify numerals 1-9 for development of numeracy skills, c) arrange number flash cards 1-9 for development of symbolic representation of number, d) appreciate use of numbers in day-to-day life experiences.	<ul style="list-style-type: none"> ● Learner is guided to perform activities that develop finger dexterity, eye hand coordination such as finger paint, drawing on sand or the blackboard. ● Individually, the learner is guided to sign manual numbers 1-10. ● Individually, the learner is guided to observe and sign as the teacher demonstrates signs on numbers. ● In groups, learners are guided to identify and sign about numbers found on objects in their environment. ● In groups, learners are guided to identify numbers on flash cards or charts. ● In pairs, learners are guided to point at a number as the partner identifies numbers on flash cards or charts by signing the number. ● Learners' signs sing and dance to songs related to numbers 1-9 while holding number cards. 	<ol style="list-style-type: none"> 1. Why do we identify numbers? 2. How do you arrange numbers?

			<ul style="list-style-type: none"> ● The learner model numbers 1-9. ● In pairs or small groups, learners play number recognition games (fishing game). ● In pairs learners are guided to form numbers, type number symbols, identify number numerals. using digital devices. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> ● Communication and collaboration: Observing skills; learners observe keenly to each other while playing number recognition games in groups or pairs. ● Learning to learn as the sign numbers 1-10 independently. 				
<p>Values: Love: Learners work together in small groups while playing number games.</p>				
<p>Pertinent and Contemporary Issues (PCIs): Developmental perspectives: learner is guided to sign the manual alphabet.</p>				
<p>Link to other activity areas: Learner is able to relate the skills used in singing by signing number songs and sign manual numbers in mathematics activities, creative activities and Language activities.</p>				
<p>Suggested Learning Resources:</p> <ul style="list-style-type: none"> ● Number flash cards, charts, calendar, clay, plasticine. 				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
<p>2.0 NUMBERS</p>	<p>2.3 Counting concrete objects.</p> <p>10 lessons</p>	<p>By the end of the sub-strand, the learner should be able to:</p> <p>a) sign words and terms related to counting 1-9),</p> <p>b) identify concrete objects used by family members,</p> <p>c) count concrete objects 1-9 used by family members,</p> <p>d) demonstrate one to one number correspondence while counting concrete objects used by family members,</p> <p>e) enjoy counting concrete objects used by family members.</p>	<ul style="list-style-type: none"> ● In groups, learners are guided to undertake pre-signing activities to be ready for signing. (throwing and catching tennis balls, bean bags). ● Learners are guided to collect and sign the manual numbers 1-9 and concrete objects used by family members such as members (<i>Plates, spoons, cups/mugs, sufuria, jugs, dishes, basins</i>). ● In pairs, the learners are guided to sign count concrete objects around the environment. ● In pairs, learners are guided to demonstrate counting objects 1 to 9. ● Individually, learners are guided to count concrete objects (1 to 9) by family members (<i>Plates, spoons, cups/mugs, sufuria, jugs, dishes, basins</i>). ● In groups, learners are guided to play counting games by signing involving 	<ol style="list-style-type: none"> 1. How many objects are these? 2. How many learners are in your group? 3. How many boys or girls are in your group?

			<p>counting objects used by 1 to 9.</p> <ul style="list-style-type: none"> ● In groups or pairs, learners are guided to match numerals with concrete objects used by family members for numbers 1 to 9. ● Individually, a learner is guided to count family members at home and reports the number. ● Individually, learner counts objects from 1 to 9 using digital devices. ● In groups, learners are guided to play video games on counting using digital devices. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> ● Communication and collaboration: Signing; learner signs clearly and effectively while signing and observing to each other as they count concrete objects accurately and match to the corresponding numerals in groups or pairs. ● Digital Literacy: skill of interacting with technology as learners play video games and counts objects using digital devices. 				
<p>Values:</p> <ul style="list-style-type: none"> ● Unity: Learners work together harmoniously in groups to complete the task of matching concrete objects to numerals. 				
<p>Pertinent and Contemporary Issues (PCIs): Safety: Learners observe safety as they count concrete objects.</p>				

Link to other activity areas:

- Learner is able to relate counting games to singing games in Creative Activities.

Suggested Learning Resources:

- Plates, spoons, cups/mugs, sufuria, jugs, dishes, basins.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	2.4 Number sequencing 10 lessons	By the end of the sub-strand, the learner should be able to: a) sign terms related to sequence and ordering, b) identify number symbols 1-9 for number ordering, c) arrange number cards in sequence 1-9, d) enjoy arranging numbers in sequence in their day-to-day life.	<ul style="list-style-type: none"> ● In groups learners are guided to undertake pre-signing activities, catching and releasing motions to improve their signing skills. ● In groups learners are guided to sign manual numbers of symbols 1-9. ● Individually a learner is guided to randomly pick a number cut outs or number card in turns from a pile and identify the number. ● In pairs, learners are guided to demonstrate arranging number cards in sequence 1-9. ● Individually, learner is guided to complete missing numbers in sequence by placing the appropriate number cards or cut outs. ● In groups, learners are guided to sign sing songs on a number sequence comprising numbers 1-9 as they mention/ by signing their family members. 	<ol style="list-style-type: none"> 1. How do you identify number symbols? 2. How do you arrange number cards in sequence? 3. Why do you arrange numbers in sequence?

			<ul style="list-style-type: none"> • Individually, learner is guided to complete number sequencing puzzles using digital devices. • In pairs, learners are guided to arrange numbers in sequence from 1-9 using digital devices. 	
<p>Core Competencies to be developed:</p> <ul style="list-style-type: none"> • Creativity and imagination: communication and self-expression; Learner communicates ideas with confidence while working in pairs or in groups as they arrange numbers in sequence and using the sequencing skills to complete number puzzles. • Digital Literacy: the skill of interacting with technology as learners uses digital devices to arrange numbers in sequence. 				
<p>Values:</p> <ul style="list-style-type: none"> • Peace: learner harmoniously sign sing songs on a number sequence comprising numbers 1-9. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> • Hygiene: The learner observes hygiene while sequencing number cards by not putting the cards in the mouth because they are dirty. 				
<p>Link to other activity areas: The learner is able to relate the concept of sequencing in mathematics to patterns in Creative Activities.</p>				
<p>Suggested Learning Resources</p> <ul style="list-style-type: none"> • Number cards, number chart, number cut out. 				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 NUMBERS	<p data-bbox="436 334 716 367">2.5 Number writing</p> <p data-bbox="436 407 575 440">10 lessons</p>	<p data-bbox="779 334 1157 399">By the end of the sub-strand, the learner should be able to:</p> <p data-bbox="779 407 1157 513">a) sign terms related number and number writing,</p> <p data-bbox="779 537 1157 643">b) identify number symbols 1-9 for symbolic representation,</p> <p data-bbox="779 667 1157 732">c) form number symbols 1-9 on a surface,</p> <p data-bbox="779 756 1157 821">d) write number symbols 1-9 on a surface,</p> <p data-bbox="779 846 1157 919">e) appreciate the use of numbers in the family.</p>	<ul style="list-style-type: none"> <li data-bbox="1178 334 1562 553">● In pairs learners are guided to do the pre-signing activities, i.e. picking seeds, beads from the floor and putting on a plate. <li data-bbox="1178 561 1562 667">● Learners are guided to sign manual numbers 1-9. <li data-bbox="1178 675 1562 821">● The teacher demonstrates number formation from number cut outs. <li data-bbox="1178 829 1562 1008">● In groups learners are guided to observe number cut outs and sign about number formation. <li data-bbox="1178 1016 1562 1162">● In groups or pairs, learners are guided to trace number cut-outs 1-9. <li data-bbox="1178 1170 1562 1317">● In pairs learners are guided to Join dots to form number symbols 1-9. <li data-bbox="1178 1325 1562 1390">● In groups or pairs, learners are guided to 	<ol style="list-style-type: none"> <li data-bbox="1583 334 1885 399">1. How can we make a number? <li data-bbox="1583 440 1885 586">2. How do we form these number symbols (1, 2, 3, 4, 5, 6, 7, 8, 9)?

			<p>model number symbols 1-9.</p> <ul style="list-style-type: none"> ● In groups learners are guided to write number symbols 1-9 on a surface. ● Individually learners are guided to write the number of their family members. ● In pairs, learners use digital devices to form number symbols 1-9. ● The learner types of number symbols from 1-9 using digital devices. 	
<p>Core competencies to be developed:</p> <ul style="list-style-type: none"> ● Imagination and creativity: Exploration; The learner's imagination is enhanced while associating number symbols with different items in the environment. ● Communication and collaboration: teamwork skill as the learner work together in pairs and groups to model number symbols. 				
<p>Values:</p> <ul style="list-style-type: none"> ● Respect: The learner exercises patience and persistence during the process of learning to write the number symbols as they work in pairs and in groups to form numbers. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> ● Safety: The learner observes safety while exploring the writing surface and writing materials using hands and being careful not to eat plasticine or clay as they model number symbols. 				
<p>Link to other activity areas: The learner is able to relate the skill of modelling numbers to modelling using lay in Creative Activities.</p>				
<p>Suggested Learning Resources</p> <ul style="list-style-type: none"> ● Plasticine, pebbles, number charts, number flashcards, dice, writing surfaces, chalk, counters(sticks). 				

Suggested Assessment Rubrics:

Level Criteria	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Signing words related to number and number writing.	Signs words related to number and number writing, accurately within the signing space and correct handshape.	Signs words related to number and number writing, with right handshapes.	Signs words related to number and number writing, correctly misses some handshapes.	Signs words related to number and number writing but has not mastered the signing space and handshape in signing.
Rote counting numbers 1-10	Rote counts numbers 1-10 and beyond accurately without any errors or omissions.	Rote counts numbers 1-10 accurately with only minor errors that do not affect the overall sequence.	Rote counts numbers up to 6 with some accuracy but with noticeable errors that affect the overall sequences.	Rote counts numbers up to 3 but with omissions that affect the overall sequences.
Identifying numerals 1-9	Correctly identifies numerals 1-9 and beyond and points out clearly each of the numbers.	correctly identifies numerals 1-9 with ease.	correctly identifies numerals 1-6 and has inconsistencies.	correctly identifies numerals 1-3.
Counting concrete objects 1-9	Counts concrete objects 1-9 and beyond numbers are neatly presented, demonstrating an organised and visually appealing work.	Counts concrete objects 1-9 with confidence and clear signs.	Counts concrete objects 1-9 with weak sign hand shapes not clear.	Counts concrete objects 1-9 with weak hand signs and distorted hand shape.
Arranging number cards in sequence 1-9	Arrange number cards in sequence 1-9 and beyond in the right order.	Arrange number cards in sequence 1-9 Correctly.	Arranges number cards in sequence 1-9 but has inconsistencies in sequence.	Arranges number cards in sequence 1-9 but arrangement has omissions on sequence.
Writing number symbols 1-9	Writes number symbols 1-9 and beyond and talks/signs	Writes number symbols 1-9 and	Writes number symbols 1-9 but lacks	Writes number symbols 1-9 having no

	about them clearly and orderly and uses space effectively.	talks/signs about them generally and consistently.	concept of space and number shapes.	recognition of number, scribbles and draws lines.
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THEME: 3.0 MY HOME				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.1 Sides of objects (10 lessons) <ul style="list-style-type: none"> ● Long ● Short 	By the end of the sub-strand, the learner should be able to: <ol style="list-style-type: none"> a) sign words related to measurement, sides of objects, b) identify concrete objects found at home, c) identify sides of concrete objects found at home, d) compare sides of concrete objects found at home. (long, short), e) enjoy identifying sides of concrete objects at home as long or short. 	<ul style="list-style-type: none"> ● In groups, learners are guided to observe, fingerspell and sign words related to the sides of objects such as table, chair, stool, bed, desk, board (short, long). ● Individually, learner is guided to sign about concrete objects found at home. ● Individually, a learner is guided to observe, pick out, fingerspell and sign about concrete objects found at home. ● In groups, learners are guided to identify sides of concrete objects found at home such as box, table, bar soap and chair. ● In pairs, learners are guided to compare sides of concrete objects found at home as long or short. ● In pairs, learners demonstrate comparing 	<ol style="list-style-type: none"> 1. How do we identify concrete objects? 2. How do we compare sides of concrete objects?

			<p>sides of concrete objects found at home.</p> <ul style="list-style-type: none"> ● Learners are guided to model different objects found at home and compare the sides of the objects such as table, sufuria, glass. plate. ● In groups, learners are guided to observe and sign about objects with different sizes. Learners who are hard of hearing can observe, talk, and sign about objects with different sizes. ● In pairs, learners are guided to draw objects with different sides found at home such as cup, glass, table and chair. Guide learner to fingerspell and sign the drawn objects). ● In groups, learners are guided to join dots of pictures of objects of different sizes found at home. ● In groups, learners are guided to colour pictures of objects found at home. 	
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			<ul style="list-style-type: none"> In groups, learners are guided to watch a captioned video clip of concrete objects with long and short sides. 	
<p>Core competencies to be developed: Communication and collaboration: signing; The learner signs to each other and works together in groups comparing sides of objects. Digital Literacy: Skill of interacting with technology as learner watch captioned video clip of concrete objects with long and short sides.</p>				
<p>Values:</p> <ul style="list-style-type: none"> Love: The learner shares play objects while counting sides of objects in pairs groups. 				
<p>Pertinent and Contemporary Issues (PCIs):</p> <ul style="list-style-type: none"> Safety: The learner observes safety as they identify sides of objects (be aware of sharp and rough sides) 				
<p>Link to other activity areas: The learner is able to relate the skills used in signing terms short and long in Mathematics activities and Language activities</p>				
<p>Suggested Learning Resources.</p> <ul style="list-style-type: none"> Carton, table, bar-soap, chair 				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.2 Mass (heavy and light) 10 Lessons	By the end of the subs strand, the learner should be able to: a) sign words and attributes related to mass (heavy/light), b) lift two different concrete objects found at home, c) Identify heavy and light concrete objects found at home, d) c) appreciate heavy or light concrete objects found at home.	<ul style="list-style-type: none"> ● In groups, learners are guided to observe and sign as the teacher demonstrates signs of words related to mass such as heavy and light. ● Individually, learner demonstrates lifting heavy and light concrete objects found at home such as spoon, pans, cups, plates and sufuria) ● In pairs, learners are guided to lift an object in each hand and try to decide which is heavier. ● In groups or pairs, learners identify heavy and light concrete objects found at home. ● In groups or pairs, learners carefully play games involving lifting of heavy and light concrete objects (play on a seesaw; back-to-back lifting). ● The learner to watch a captioned video on lifting heavy and light concrete objects 	<ul style="list-style-type: none"> ● How do we identify heavy and light objects? ● Why are objects heavy or light?
Core competencies to be developed: Learning to learn: Learner lifts objects and discovers heavy and light.				
Values: Unity: Cooperation; learners take turns in lifting objects.				
Pertinent and Contemporary Issues (PCIs): <ul style="list-style-type: none"> ● Safety: Learners carefully play games involving lifting of heavy and light objects. 				

Link to other activity areas:

The learner is able to relate use of new vocabularies like heavy and light to their use in Language Activities.

Suggested Learning Resources.

- Spoons, pans, cups, plates, sufuria, bar soap.

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) 10 lessons	By the end of the sub strand, the learner should be able to: <ol style="list-style-type: none"> a) sign words and attributes related to capacity, b) fill and empty big and small containers with water or sand, c) identify how many small containers fill a big one. (up to 9 counts), d) identify containers of different sizes, e) enjoy filling and emptying containers with water and sand. 	<ul style="list-style-type: none"> ● Individually, learner is guided to observe and sign as the teacher demonstrates signs of words related to capacity (different containers to hold liquids). ● Individually, learner is guided to sign words related to capacity. ● In groups, learners are guided to demonstrate filling and emptying small and big containers using sand or water. ● In pairs, learners are guided to demonstrate filling and emptying big and small containers and tell how many small ones can fill a big one (up to 9 counts) ● In groups or pairs, learners fill and empty big and small containers and tell how many small containers fill a big one. ● In groups, learners are guided to watch a captioned video on filling and emptying containers. captioned with sign language. 	How many small containers can fill the big container?
Core competencies to be developed: <ul style="list-style-type: none"> ● Communication and collaboration: Teamwork; learners fill and empty big and small containers in groups and tell how many small containers fill a big one. 				
Values: <ul style="list-style-type: none"> ● Responsibility: Accountability as learner fills and empty containers without spilling over water or sand. 				

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:

The learner is able to relate the skills used in filling empty containers in Mathematics activities and Environmental activities.

Suggested Learning Resources

Containers of various sizes, water sand.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.4 Time (Daily routines) 10 lessons <ul style="list-style-type: none"> ● Morning ● Noon ● Evening ● Night 	By the end of the sub-strand, the learner should be able to: <ol style="list-style-type: none"> a) sign words related to attributes of time (indicating routine), b) identify daily routine activities done before going to school, c) identify vocabulary related to time, d) arrange pictures of daily activities in order, e) enjoy arranging pictures of daily activities in order using digital devices of daily activities in order. 	<ul style="list-style-type: none"> ● Learner observes and signs, as the teacher demonstrates how to sign words related to time. ● Individually, learner is guided to identify and sign about three daily routine activities before and after going to school in appropriate order. ● In pairs, guide learners to role play the activities he/she does before and after school. ● In groups, learners demonstrate arranging pictures of daily activities in order. ● Learners' signs sing songs/ on daily routines. ● Learner to watch a captioned video on activities of the daily routine. 	<ol style="list-style-type: none"> 1. Why do we identify daily routine activities that we do before going to school? 2. How do you use digital devices to arrange pictures or items related to daily activities?
Core competencies to be developed: <ul style="list-style-type: none"> ● Communication and collaboration: Signing and observing skills; The learner signs and works with each other in groups as they arrange digital devices of various daily activities. 				
Values: <ul style="list-style-type: none"> ● Responsibility: Respect: learners take turns to arrange pictures of different daily activities in sequence. 				

Pertinent and Contemporary Issues (PCIs):

- Safety: Learners observe home arrival times (not to walk late in the evening alone).

Link to other activity areas: The Learner is able to relate the skills used to tell various daily activities relating it to the vocabulary; morning, noon and evening, in Mathematics activities and Language Activities.

Suggested Learning Resources.

Digital devices, picture cut outs showing children doing different activities at different times of the day (morning, noon and evening).

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.5 Money (Kenyan currency) Coins - Ksh. 1 coin 10 lessons	By the end of the sub-strand, the learner should be able to: <ol style="list-style-type: none"> sign words and attributes related to money, Identify Kenyan currency in one-shilling coin used at home, count money in one-shilling up to 9, trace one shilling Kenyan coin, enjoy counting money in sh.1-coin up to 9. 	<ul style="list-style-type: none"> In pairs or groups, learners guided to undertake pre-signing skills in readiness for signing. In groups learners are guided to sign words relating to money (money, shilling, coin, buy, sell). In groups learners are guided to watch/observe captioned videos, pictures, real notes and coins or teacher illustrations chat on Kenyan currency. In pairs learners are guided to identify Kenyan sh.1 coins from a variety of Kenyan shilling coins. In pairs or in groups, learners are guided to collaboratively count money in 1-shilling coin up to 9 in turns. In pairs learners are guided to traces Kenyan sh.1 coin and presents it in class. In pairs learners are guided to play digital games on Kenyan currency or visit a shop and use Kenyan coins in carrying out a purchase. 	1.How can you identify one-shilling coins in Kenyan currency? 2.Why do we count money?
Core Competence:				

- Communication and collaboration: Learner's sign and observe each other while counting sh.1 coins in groups.

Values:

- Unity: Learner takes turns while counting/count in sign language sh1. coins in their groups.

Pertinent and Contemporary Issues (PCIs):

- Financial literacy: Learner sign about Ksh.1 coin

Link to other activity areas:

- Creative activities: Learner trace Ksh.1 coin.

Suggested Learning Resources

Ksh.1 Coins, papers, pencils,

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 MEASUREMENT	3.6 Area (surface of objects) 10 lessons	By the end of the sub-strand, the learner should be able to: <ol style="list-style-type: none"> sign terms and attributes referring to flat surfaces or objects, identify surfaces of different objects found at home, cover surfaces of different objects concrete objects found at home, count small similar objects that cover a given surface of concrete objects, appreciate different surfaces in the environment. 	<ul style="list-style-type: none"> ● Individually, learner is guided to observe and sign as the teacher demonstrates signs of words related to the area such as the surface of object. ● In pairs, learners are guided to observe and identify different surfaces of models of objects found at home. Fingerspell and sign the terms of the surfaces, and tables, chairs, stools. ● The learner demonstrates covering surfaces of models of objects (stool, chair, table) found at home using smaller objects. (bottle tops, small blocks). ● In groups or pairs, learners cover surfaces of models of objects found at home (chair, table, stool) using smaller objects. ● In groups or pairs, learners cover surfaces of objects (tables, chairs, desks) in class using smaller objects (books, bottle tops, wood/plastic blocks). 	<ol style="list-style-type: none"> How many small pieces can cover this surface? Why do we need to identify surfaces of different models? How else can we cover these surfaces?

			<ul style="list-style-type: none"> ● In pairs, learners are guided to shade or colour surfaces of drawn objects using digital devices 	
Core Competencies to be developed: <ul style="list-style-type: none"> ● Creativity and imagination: Exploration; Learner’s cover and find out pieces that can cover a surface. ● Digital Literacy: learners shade and colour surfaces of drawn objects using digital devices. 				
Values: <ul style="list-style-type: none"> ● Love: Learners share materials while working in groups. 				
Pertinent and Contemporary Issues (PCIs): <ul style="list-style-type: none"> ● Hygiene: The learner is guided not to put small objects used in covering surfaces in the mouth because they are dirty. 				
Link to other activity areas: The learner is able to relate new vocabulary “big” and “small” to reading and speaking in Language Activities.				
Suggested Learning Resources <ul style="list-style-type: none"> ● Tables, chairs. Desks, stool, bottle tops. 				

Suggested Assessment Rubrics:

Level Criteria	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Signing words related to attributes of measurement, (mass, capacity, time, money, area).	Signs words related to measurement of objects Consistently identifies and compares objects accurately.	Signs words related to measurement of objects use related vocabulary.	Signs words related to measurement of objects with noticeable error.	Signs words related to measurement of objects but unable to distinguish between specific terms of measurement.
Comparing sides of concrete objects found at home.	Compares sides of concrete objects found at home (long, short, height) and talk/signs about them.	Compares sides of concrete objects found at home (long, short) and talk/signs about them.	Compares sides of concrete objects found at home (long, short) with guidance.	Unable to correctly compare sides of concrete objects found at home.
Lifting concrete objects and identifying heavy and light objects.	Lifts concrete objects and correctly identifies heavy or light objects and signs appropriately about them utilising correct and precise vocabulary when talking about them.	Lifts concrete objects and correctly identifies heavy and light objects accurately and identifies heavy or light objects utilising correct and precise vocabulary when signing about them.	Lifts objects and correctly identifies heavy and light objects with guidance but partially identifies heavy and light objects and uses basic terms with some accuracy when talking about them.	Lifts objects but cannot correctly identify heavy and light objects but demonstrate limited accuracy in distinguishing between heavy and light objects.
Filling and emptying containers and identifying how many small containers fill a big one (up to 9 counts).	Fills and empties containers accurately and efficiently and accurately identifies how many small containers fill a big one	Fills and empties containers accurately and identifies how many small containers fill a big one (up to 9 counts).	Fills and empties containers accurately and partially identifies how many small containers fill a	Fills and empties containers but with limited accuracy in filling and emptying containers with frequent errors that

	(up to 9 counts and beyond).		big one (up to 6 counts).	affect the number of small objects filling the bigger one. (up to 3 counts).
Identifying daily routine activities, they do before going to school.	Identifies daily routine activities they do before going to school accurately and demonstrates clear understanding of order and timing, clearly communicating the entire routine.	Identifies daily routine activities they do before going to school accurately and demonstrates clear understanding of order and timing communicates the routine with clarity.	Identifies daily routine activities they do before going to school accurately and demonstrates some understanding of order and timing communicates the routine with some clarity.	Identifies daily routine activity they do before going to school but demonstrates limited accuracy in understanding order and timing, struggles to articulate routine clearly.
Arranging pictures of daily activities in order using digital devices (morning, noon, evening)	sequentially arrange more than three digital devices pictures of daily activities (morning, noon, evening) and talk about them accurately, sequence the digital devices pictures and talk about the entire sequence clearly.	Sequentially pictures of daily activities in order using digital devices (morning, noon, evening) accurately sequences the digital devices pictures and talks on the entire sequence with clarity.	Sequentially arranges two digital devices pictures of daily activities (morning, noon, evening) on the entire sequence with some clarity.	sequentially arrange two digital devices pictures of daily activities (morning, noon, evening) with guidance but in an unclear sequence and articulation.
Tracing one shilling Kenyan coin.	Traces one shilling Kenyan coin with high accuracy maintaining clear lines, and clearly articulates understanding of the one-shilling coin.	Traces one shilling Kenyan coin with high accuracy maintaining clear lines, and clearly articulates understanding of the one-shilling coin with clarity.	Traces one shilling Kenyan coin but shows some accuracy in tracing. and talks about it with some clarity'	Trace one shilling Kenyan coin but shows little control and precision and fails to capture key details.

<p>Covering the surfaces of different objects found at home using smaller objects</p>	<p>Accurately covers the surfaces of different objects found at home using smaller objects with counts exceeding nine accurately by choosing suitable smaller objects for all surfaces covering them effectively and neatly.</p>	<p>Accurately covers the surfaces of different objects found at home using smaller objects with counts up to nine accurately by choosing suitable smaller objects for most surfaces covering them effectively and neatly.</p>	<p>Accurately covers the surfaces of different objects found at home using smaller objects with counts up to six selecting some suitable small objects and partially covers the surfaces.</p>	<p>Accurately covers the surfaces of different objects found at home using smaller objects with counts up to three but struggles to choose appropriate smaller objects and fails to cover surfaces effectively.</p>
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THEME: 4.0 MY SCHOOL				
Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 GEOMETRY	4.1 Lines 4 lessons	By the end of the sub-strand, the learner should be able to: a) sign words related to and attributes of lines, b) identify lines on objects found at school, c) form lines using concrete objects found in school, d) enjoy forming lines using concrete objects found in school,	<ul style="list-style-type: none"> ● In groups learners are guided to do the pre signing skill activities. ● In pairs learners are guided to sign the word line and other terms related to lines such as straight line, curved line, vertical lines, horizontal lines. ● In groups, learners are guided to observe teacher chart illustrations, captioned videos or pictures on varied objects then sign about lines on the objects found at school such as books, charts, chalk boards. at school. ● In groups, learners are guided to demonstrate forming straight lines by (arranging up to 9 concrete objects one after the other from left to right, modelling, joining dots). 	<ol style="list-style-type: none"> 1. Why do we form lines? 2. How do we form lines?

			<ul style="list-style-type: none"> ● In groups learners are guided to form a straight line by aligning themselves in a line. ● In pairs learners are guided to demonstrate forming wavy lines by (arranging up to 9 concrete objects one after the other, modelling, joining dots). ● In groups learners are guided to play games or watch videos of children singing while moving on straight and wavy lines (Teacher to sign for the learners). 	
Core competencies to be developed:				
<ul style="list-style-type: none"> ● Communication and collaboration: Teamwork; learners work together in groups to form straight and wavy lines. 				
Values:				
<ul style="list-style-type: none"> ● Unity: Learners cooperate while working in groups to form straight and wavy lines. 				
Pertinent and Contemporary Issues (PCIs):				
<ul style="list-style-type: none"> ● Hygiene: Preventive health; learners forms lines using concrete objects they avoid chewing or placing in mouth for they can get infections 				
Link to other activity areas:				
<ul style="list-style-type: none"> ● Language activities: The learner is able to relate the skills used in acquiring new words -line, straight, wavy in Mathematical activities and Language activities. 				
Suggested Learning Resources				
Books, charts, chalk boards, ropes, strings				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 GEOMETRY	4.2 Shapes 6 lessons	By the end of the sub-strand, the learner should be able to: a) sign gesture words and attributes related to the different types of geometric shapes, b) identify shapes on concrete objects found in school (rectangle, circle, triangle), c) form shapes using concrete objects found in school, d) (rectangle, circle, triangle), e) colour digital devices pictures of drawn shapes (rectangle, circle, triangle), f) appreciate shapes identified in school.	<ul style="list-style-type: none"> ● In pairs or groups, learners are guided to throw a tennis ball or bean bag to each other for fine motor practice. ● In pairs learners are guided to sign or gesture about geometric shapes within the surrounding environment. ● In pairs, learners are guided to observe objects in school and sign about shapes in the objects such as books, black board, roof, window, clock, counting sticks. ● Individually, learner is guided to demonstrate forming shapes -rectangle, circle, triangle by (arranging concrete objects one after the other, modelling, joining dots). ● In groups or pairs, learners form shapes -rectangle, circle, triangle by (arranging concrete objects one after the other, modelling, joining dots). ● In groups or pairs, learners sort and group objects/ pictures cut out of shapes. 	<ol style="list-style-type: none"> 1. How do we identify lines? 2. How do we form shapes using concrete objects?

			<ul style="list-style-type: none"> ● Individually, learners are guided to colour and paint shapes. ● In groups, learners are guided to watch captioned videos clips of different shapes. 	
Core competencies to be developed: <ul style="list-style-type: none"> ● Imagination and creativity: The learner forms different shapes by modelling and joining dots/counting sticks. ● Digital Literacy: The learner develops the skill of interacting with technology as the watch captioned video clips of different shapes. 				
Values: <ul style="list-style-type: none"> ● Responsibility: Accountability; the learner works in groups to accomplish the given task. 				
Pertinent and Contemporary Issues (PCIs): <ul style="list-style-type: none"> ● Hygiene: Personal health; as learner work forming shapes and lines care for self and others 				
Link to other activity areas: <ul style="list-style-type: none"> ● Creative Activities: Learners use shapes to form patterns. 				
Suggested Learning Resources <ul style="list-style-type: none"> ● Books, black board, roof, window, clock, counting sticks. 				

Suggested Assessment Rubrics:

Level Criteria	Exceeds Expectation	Meets Expectation	Approaches Expectation	Below Expectation
Signing words and attributes related to the different types of geometric shapes.	Signs gesture words and attributes related to the different types of geometric shapes consistently and clearly and can explain the concept of the sign.	signs gesture words and attributes related to the different types of geometric shapes demonstrates consistent and accurate use of signs for shapes.	signs gesture words and attributes related to the different types of geometric shapes but recognises and recalls some signs.	signs gesture words and attributes related to the different types of geometric shapes have limited interest in signs and can only gesture terms that are not clear.
Identifying shapes on objects found in school (rectangle, circle, triangle)	Identifies shapes on objects found in school by consistently recognizing the shapes and provides a detailed description of all shapes.	Identifies shapes on objects found in school consistently recognizing the shapes and provides a detailed description of all shapes with clarity.	Identifies shapes on objects found in school partially and gives some description of the shapes.	Identifies shapes on objects found in school but with limited ability to recognize the shapes and provides incorrect description shapes.
Forming shapes using concrete objects found in school. (rectangle, circle, triangle)	Forms shapes using concrete objects found in school by choosing a range of concrete objects and uses them to accurately form the shapes.	Forms shapes using concrete objects found in the school. by choosing appropriate concrete objects for most shapes and using them to accurately form the shapes.	Forms shapes using concrete objects found in the school. by choosing concrete objects and using them to form the shapes with some accuracy.	Forms shapes using concrete objects found in the school, but the choice of concrete objects does not align well with the intended shapes.

APPENDIXES

Appendix I: 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	<ul style="list-style-type: none">● 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	<ul style="list-style-type: none">● 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.

Appendix 2: Suggested Learning Resources

THEME: MYSELF		
STRANDS	Sub-Strand	Resources
PRE-NUMBER ACTIVITIES	1.1 Sorting & grouping	Locally available materials of different colours, and sizes such as flowers, pebbles, shells, paper cut outs, bottle tops, seeds, feathers, fruits, beads, shapes, digital devices, Computers.
	1.2 Matching and Pairing	Different types of clothes (shorts, shirts, dresses, socks, sweater), digital devices of different types of clothes.
	1.3 Ordering	Sticks, wood blocks, plastic bottles, bottle tops
	1.4 Patterns	Flash cards, wood blocks, bottle tops, bottles, sticks, beads
THEME: MY FAMILY		
2.0 NUMBERS	2.1 Rote counting (1-10)	
	2.2 Number recognition (1-9)	Number flash cards, charts, calendar, clay, plasticine.
	2.3 Counting concrete objects (1-9)	Plates, spoons, cups/mugs, sufuria, jugs, dishes, basins
	2.4 Number sequencing (1-9)	Number cards, number chart, number cut out
	2.5 Number writing- (1-9)	Plasticine, pebbles, number charts, number flashcards, dice, writing surfaces, chalk, counters(sticks)
THEME: MY HOME		
3.0 MEASUREMENT	3.1 Sides of objects (Long/short)	Carton, table, bar-soap, chair
	3.2 Mass (heavy and light)	Spoons, pans, cups, plates, sufuria, bar soap
	3.3 Capacity (how much a container can hold)	Containers of various sizes, water sand
	3.4 Time (Daily routines)	Digital devices and digital devices picture cut outs showing children doing different activities at different times of the day (morning, noon & evening)
	3.5 Money (Kenyan currency) Coins	Ksh.1 Coins, papers, pencils,
	3.6 Area (surfaces of objects)	Tables, chairs. Desks, stool, bottle tops
THEME: MY SCHOOL		
.0. GEOMETRY	4.1 Lines (straight/wavy)	Books, charts, chalk boards, ropes, strings

	4.2 Shapes (rectangle, circle and triangle)	Books, black board, roof, window, clock, counting sticks
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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.