



KENYA INSTITUTE OF CURRICULUM DEVELOPMENT
A skilled and Ethical Society

PRE PRIMARY SCHOOL CURRICULUM DESIGN

MATHEMATICAL ACTIVITIES

PRE PRIMARY I

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PRE PRIMARY ONE (LEVEL I)

Suggested Themes

1. Myself

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

2. My Family

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

3. My Home

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

4. My Neighbourhood

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

5. My School

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

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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 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 competences 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	Number of Lessons per week
1.	Language Activities	5
2.	Mathematical Activities	5
3.	Creative Activities	6
4.	Environmental Activities	5
5.	Religious Activities	3
	Pastoral 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) Practice 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 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 mental processes that enhance logical and critical thinking, accuracy and problem solving; all of which are important building blocks for school readiness. They also enhance the learner's development and acquisition of basic pre-number, number, measurement and geometry skills during early years. In addition, mathematical activities help learners develop core competencies, acquire values and, be aware of pertinent and contemporary issues. Learning of mathematical concepts and skills at Pre Primary is mainly play based, activity based, inquiry based and theme based. Learners are guided through varied, appropriate and meaningful group activities to enhance acquisition of basic mathematical skills and concepts. Themes provide contexts for learning basic mathematical concepts at Pre Primary. Mathematical concepts and skill learned at PP1 prepare learners to learn similar concepts at PP2.

SUBJECT GENERAL LEARNING OUTCOMES

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

- a) use acquired classroom skills to solve problems in daily life,
- b) demonstrate basic number concepts as a basis for future learning,
- c) develop interest in measurement and dispositions in physical and social world,
- d) utilize basic geometrical concepts acquired as a foundation for future learning,
- e) develop values and competencies for harmonious co-existence in the society,
- f) manage pertinent and contemporary issues for appropriate adjustment to daily life demands.

THEME: MY SELF

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
<p>1.0 Pre-Number Activities</p>	<p>1.1 Sorting and Grouping</p> <p>(8 lessons)</p>	<p>By the end of the Sub Strand, the learner should be able to:</p> <p>a) identify different play objects in the immediate environment,</p> <p>b) list similarities among play objects in the immediate environment,</p> <p>c) tell differences among play objects in the immediate environment,</p> <p>d) group play objects according to a given attribute,</p> <p>e) enjoy grouping play objects in the immediate environment.</p>	<p>The learner is guided to:</p> <ul style="list-style-type: none"> • collect play objects from the immediate environment as they observe safety, • talk about play objects of different colours sizes or shapes (wood blocks. balls, toys, bottle tops), • in groups, identify similarities of play objects by colour, size or shape, • in groups, identify differences among play objects by colour or size, • in groups, share play objects and, sort and group them according to a given attribute – colour, size or shape, • relate a given attribute to other objects in the immediate environment, • sing songs related to sorting and 	<ol style="list-style-type: none"> 1. Which objects do you play with at home? 2. How can we group objects we play with at home?

			<ul style="list-style-type: none"> grouping objects, collect and store play objects used in sorting and grouping in their respective learning corners as they observe safety, group pictures of objects according to one attribute using digital devices or other resources. 	
<p>Core Competencies to be developed: Critical Thinking and Problem Solving: learners sort and group play objects according to colour, size or shape.</p>				
<p>Values: Love: learners share play objects in as they work in groups or pairs.</p>				
<p>PCIs: Learners observe safety as they collect play objects to use in sorting and grouping.</p>				
<p>Link to Other Learning Areas: Learner relates names of colours of play objects to colour vocabulary in Language Activities.</p>				

THEME: MY SELF

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
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) list different clothes worn every day, b) identify similarities among clothes worn every day, c) state differences among clothes worn every day, d) match clothes worn every day, e) appreciate the use of different clothes worn every day.	The learner is guided to: <ul style="list-style-type: none"> • collect clothes/picture cut outs of clothes worn every day and talk about the similarities, • in groups, talk about the differences of clothes worn every day, • in groups, match and pair clothes according to a given attribute (sameness, likeness or use), • relate clothes to their everyday use, • sing songs or recite poems on use of clothes worn every day, • match and pair pictures of clothes according to a given attribute using digital devices or other resources. 	<ol style="list-style-type: none"> 1. How can you match clothes worn every day? 2. How can you pair clothes worn every day?
<p>Core Competencies to be developed: Communication and collaboration: learners talk to and work with each other in groups or in pairs while matching and pairing pictures of different clothes.</p>				
<p>Values:</p>				

Unity: learners work amicably together in groups to accomplish the task of matching and pairing clothes and share with others.

PCIs:

Learners relate clothes to their use in everyday life for personal health (sweater to keep one warm so that they don't become sick).

Link to Other Learning Areas:

Learner relates matching and pairing of clothes worn every day to their uses as in Environmental Activities

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THEME: MY SELF

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
1.0 Pre-Number Activities	1.3 Ordering (8 lessons)	By the end of the sub strand, the learner should be able to: a) identify play objects of different sizes, b) arrange play objects according to size in ascending order, c) arrange play objects according to size in descending order, d) appreciate different play objects in the immediate environment.	The learner is guided to: • talk about different play objects in the immediate environment, • arrange play objects according to size (small, big, short, long, tall) up to five objects, • in groups, arrange play objects according to size in ascending order, • in groups, arrange play objects according to size in descending order, • arrange pictures of play objects in ascending and descending order using digital devices or other resources.	How can we order play objects in the immediate environment?
<p>Core competencies to be developed: Critical thinking and problem solving: learners order play objects according to size in ascending and descending order.</p>				
<p>Values: Responsibility: learners work together harmoniously in groups to accomplish the task of ordering play objects.</p>				
<p>PCIs: Learners carefully manipulates concrete objects while ordering to ensure safety.</p>				
<p>Link to Other Learning Areas: Learner relates new vocabularies like big, small, tall, short acquired in ordering activities to their use in reading skills in Language</p>				

Activities.

THEME: MY SELF

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
1.0 Pre-Number Activities	1.4 Patterns (8 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify similarities among play objects in the immediate environment, b) state differences among play objects in the immediate environment, c) make patterns using play objects according to a given attribute, d) enjoy making patterns using different play objects found in the immediate environment.	The learner is guided to: <ul style="list-style-type: none">• collect play objects from the immediate environment,• observe and talk about play objects in the immediate environment,• in groups, arrange different play objects to make a pattern according to a given attribute (colour or shape),• fill in the missing play objects in a pattern,• make patterns using digital devices or other resources.	How can you arrange play objects to make a pattern?

Core Competencies to be developed:

Creativity and imagination: learners arrange different play objects creatively to make patterns.

Values:

Love: learners share play materials while working together harmoniously in groups.

PCIs:

Learners observe safety as they collect and use play objects in the environment to make

patterns.

Link to Other Learning Areas:

Learner relates making patterns to picture and pattern making in Creative Activities.

Assessment Rubrics

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to identify similarities and differences among play objects.	Identifies similarities and differences among play objects correctly and accurately.	Identifies similarities and differences among play objects correctly.	Identifies similarities or differences among play objects correctly.	Identifies similarities or differences among play objects with continuous support.
Ability to group play objects according to given attributes.	Groups play objects according to three attributes correctly and consistently.	Groups play objects according to three attributes correctly.	Groups play objects according to two attributes correctly.	Groups play objects according to one attribute.
Ability to match clothes worn every day.	Matches clothes worn everyday correctly and systematically.	Matches clothes worn everyday correctly.	Matches clothes worn everyday correctly.	Matches clothes worn everyday correctly with continuous support.

Ability to arrange play objects in ascending and descending order.	Arranges play objects in ascending and descending order correctly and accurately.	Arranges play objects in ascending and descending order correctly.	Arranges play objects in ascending or descending order correctly.	Arranges play objects in ascending or descending order with continuous assistance.
Ability to make patterns using play objects according to a given attribute.	Makes patterns using play objects according to two attributes creatively and correctly.	Makes patterns using play objects according to two attributes creatively.	Makes patterns using play objects according to two attributes creatively and partially correctly.	Makes patterns using play objects according to two attributes with continuous support.

THEME: MY FAMILY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
2.0 Numbers	2.1 Rote Counting (8 lessons)	By the end of the Sub Strand, the learner should be able to: a) rote count numbers 1-10 for developing numeracy skills, b) rote count numbers 1-10 using actions, c) enjoy rote counting in everyday life.	The learner is guided to: <ul style="list-style-type: none"> • rote count numbers 1-10, • in groups, rote count numbers 1-10 using actions (walk, clap, nod, tap, hop or stamp) as they mention family members, • in groups, perform singing games or rhymes related to rote counting, • listen to radio and television educational programs on rote counting, • watch video clips on rote counting using actions. 	How can you count numbers 1-10?
Core Competencies to be developed: Self-efficacy: learners sing songs and recite poems on rote counting numbers 1-10 using actions.				
Values: Respect: learners take turns while rote counting numbers 1-10.				
PCIs: Learners carefully do rote counting numbers 1-10 using actions to ensure safety				
Link to Other Learning Areas: Learner relates singing and reciting rhymes on rote counting numbers 1-10 using actions to singing games in Creative Activities.				

THEME: MY FAMILY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
2.0 Numbers	2.2 Number Recognition (10 lessons)	By the end of the sub strand, the learner should be able to: a) identify number symbols 1-9 for developing numeracy skills, b) arrange number flash cards 1-9 for developing symbolic representation of numbers, c) appreciate use of numbers in everyday life experiences.	The learner is guided to: <ul style="list-style-type: none"> • observe and talk about numbers on number flash cards or number charts, • talk about numbers found on objects in the home environment, • in groups, identify numbers on flash cards or charts, • sing and dance to songs related to numbers 1- 9 while holding number cards, • model numbers 1- 9, • in groups, play number recognition games (fishing game), • identify and type number symbols using digital • devices or form number symbols using other devices. 	Which number is shown on the flashcard?
<p>Core competencies to be developed: Communication and collaboration: learners talk to and listen to each other while playing number recognition games in groups or pairs.</p>				
<p>Values: Love: learners share materials and work together in small groups while playing number games.</p>				

PCIs:

Learners self-esteem is enhanced as they sing and dance to songs related to number recognition.

Link to Other Learning Areas:

Learner relates the names of number symbols to reading similar vocabulary in Language Activities.

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THEME: MY FAMILY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
2.0 Numbers	2.3 Counting Concrete Objects (10 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify concrete objects found at home, b) count concrete objects 1-9, c) match number symbols 1-9 with a group of concrete objects, d) enjoy counting concrete objects in everyday life.	The learner is guided to: <ul style="list-style-type: none"> • Collect concrete objects found at home, • talk about concrete objects used by family members, • count concrete objects (1 to 9) used by family members (Plates, spoons, cups/mugs, sufuria, jugs, dishes, basins), • play counting games involving counting objects used by family members for numbers 1 to 9, • in groups, match numerals with concrete objects used by family members for numbers 1 to 9, • count family members at home and report the number, • count pictures of concrete objects from 1 to 9 using digital devices or other resources, • play video games on counting. 	<ol style="list-style-type: none"> 1. How many objects are these? 2. Which number matches these objects?

Core competencies to be developed:

Critical thinking and problem solving: learners count concrete objects and match it to the corresponding number symbol.

Values:

Unity: learners work together harmoniously in groups to match concrete objects to number symbol.

PCIs:

Learners observe safety as they collect concrete objects from home environment.

Link to Other Learning Areas:

Learner relates counting games to singing games in Creative Activities.

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THEME: MY FAMILY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
2.0 Numbers	2.4 Number Sequencing (10 lessons)	By the end of the sub strand, the learner should be able to: a) identify number symbols 1-9 for number ordering, b) arrange number cards in sequence 1-9, c) enjoy arranging numbers in sequence in day to day life experiences.	The learner is guided to: <ul style="list-style-type: none"> • randomly pick number cut outs/number cards in turns from a pile and identify the number, • arrange numbers in sequence 1-9 , • In groups, complete missing numbers in sequence by placing the appropriate number cards or cut outs, • sing songs on number sequence comprising numbers 1-9 as they mention their family members, • complete, number sequencing puzzles, • arrange numbers in sequence from 1-9 using digital devices or other resources. 	<ol style="list-style-type: none"> 1. Which number can you see on this card I am holding? 2. Which number comes after this number?
<p>Core Competencies to be developed: Critical thinking and problem solving: learners arrange numbers in sequence and complete number puzzles.</p>				
<p>Values: Peace: learners harmoniously sing songs in groups on number sequence 1-9.</p>				

PCIs:

Learners observe hygiene as they sequence number cards; not put cards in the mouth because they may be dirty.

Link to Other Learning Areas:

Learner relates singing songs to singing games in Creative Activities.

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THEME: MY FAMILY

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
2.0 Numbers	2.5 Number Writing (10 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify number symbols 1- 9 for symbolic representation, b) form number symbols 1-9 on a surface, c) write number symbols 1-9 on a surface, d) appreciate the use of numbers in the family.	The learner is guided to: <ul style="list-style-type: none"> • observe number cut-outs and talk about number formation, • in groups, learners trace number cut-outs 1- 9 • join dots to form number symbols 1- 9 • in groups, model number symbols 1-9 • write number symbols 1-9 on a surface, • write the number of their family members, • use digital devices or other resources to form number symbols 1-9, • type number symbols 1-9 using a digital device . 	How do we form these number symbols (1, 2, 3, 4, 5, 6, 7, 8, 9)?
Core Competencies to be developed: Creativity and imagination: learners use different ways like modelling and tracing to form numbers symbols.				
Values: Respect: learners take turns while writing number symbols on surfaces.				
PCIs: Learners observe hygiene as they use plasticine /clay to model number symbols.				
Link to Other Learning Areas: Learner relates modelling of number symbols to modelling object in Creative Activities.				

Assessment Rubric

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to rote count numbers 1-10.	Rote counts numbers 1-10 correctly and consistently.	Rote counts numbers 1-10 correctly.	Rote counts numbers 1-5 correctly.	Rote counts numbers 1-5 while skipping other numbers.
Ability to identify number symbols 1-9 for developing numeracy skills.	Identifies number symbols 1-9 correctly and accurately.	Identifies number symbols 1-9 correctly.	Identifies number symbols 1-5 correctly.	Identifies number symbols 1-3 correctly.
Ability to count concrete objects 1-9 used by family members.	Counts concrete objects 1-9 correctly and accurately	Counts concrete objects 1-9 correctly	Counts concrete objects 1-5 correctly	Counts concrete objects 1-3 correctly
Ability to arrange number cards in sequence 1-9.	Arranges number cards in sequence 1-9 correctly and accurately.	Arranges number cards in sequence 1-9 correctly.	Arranges number cards in sequence 1-5 correctly.	Arranges number cards in sequence 1-3 correctly.
Ability to write number symbols 1-9 on a surface.	Writes number symbols 1-9 accurately and correctly	Writes number symbols 1-9 correctly.	Writes number symbols 1-5 correctly.	Writes number symbols 1-3 correctly.

THEME: MY HOME

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
3.0 Measurement	3.1 Sides of Objects (10 lessons)	By the end of the sub strand, the learner should be able to: a) identify concrete objects found at home, b) tell sides of concrete objects found at home, c) compare sides of concrete objects found at home, d) enjoy comparing sides of concrete objects at home.	The learner is guided to: <ul style="list-style-type: none"> • talk about concrete objects found at home, • identify sides of concrete objects found at home (box, ruler, chair) as they observe safety, • compare sides of concrete objects found at home as long or short, • in groups, compare sides of concrete objects found at home as long or short, • play with concrete objects with different sides found at home, • watch a video clip of pictures of concrete objects with long and short sides. 	Which are the sides of these concrete objects?
<p>Core Competencies to be developed: Communication and collaboration: learners talk to each other and work together in groups while comparing sides of objects.</p>				
<p>Values: Love: learners share play objects while counting sides of objects in groups.</p>				
<p>PCIs: Learners observe safety while identifying sides of concrete objects.</p>				
<p>Link to Other Learning Areas: Learner relates use vocabularies like long and short acquired to similar words in Language Activities.</p>				

THEME: MY HOME

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
3.0 Measurement	3.2 Mass (Heavy and Light) (10 Lessons)	By the end of the Sub Strand, the learner should be able to: a) identify concrete objects found at home, b) differentiate heavy and light concrete objects found at home, c) appreciate effects of lifting heavy or light concrete objects found at home on their health.	The learner is guided to: • talk about concrete objects found at home • lift heavy and light concrete objects found at home (spoon, pans, cups, plates, sufuria), • in groups or pairs, identify heavy and light concrete objects found at home, • in groups or pairs, play games involving lifting of heavy and light concrete objects carefully (play on a see saw; back-to-back lifting), • learners to watch a video on lifting heavy and light concrete objects .	Which object is heavy or light?

Core competencies to be developed:

Learning to learn: learners lift heavy and light concrete objects and learn that they have different mass (heavy/light).

Values:

Unity: learners harmoniously work in groups and take turns in lifting concrete objects.

PCIs:

Learners observe safety as they play games involving lifting of heavy and light objects.

Link to other Learning Areas:

Learner relates use new vocabularies like heavy and light to their use in Language Activities.

THEME: MY HOME

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
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: a) identify containers of different sizes, b) compare containers of different sizes, c) appreciate sizes of different containers in the immediate environment.	The learner is guided to: <ul style="list-style-type: none"> • observe and talk about container of different sizes, • fill and empty small and big containers using sand or water, • fill and empty big and small containers and tell how many small ones can fill a big one (up to 9 counts), • in groups, learners fill and empty big and small containers and tell how many small containers fill a big one, • watch a video on filling and emptying containers. 	How many small containers can fill the big container?
Core competencies to be developed: Critical thinking and problem solving: learners find out how many small containers can fill a big one.				
Values: Responsibility: learners fill and empty containers without spilling over water or sand. They also work in groups to accomplish filling and emptying activities.				

PCIs:

Learners observe hygiene as they do emptying and filling activities (not to drink dirty water).

Link to Other Learning Areas:

Learner relates water and soil to natural resources in Environmental Activities.

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THEME: MY HOME

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
3.0 Measurement	3.4 Time (Daily Routines) (10 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify daily routine activities done before going to school, b) arrange pictures of daily activities in order, c) enjoy arranging pictures of daily activities in order.	The learner is guided to: <ul style="list-style-type: none"> • talk about daily routine activities done at home before going to school, • talk about activities related to time (morning, noon, evening), • arrange pictures of activities done every day, • in groups, arrange pictures of activities done every day, • sing songs on activities done every day, and the need not to be late for home, • watch a video on activities of the daily routine. 	What do you do in the morning before you go to school?
<p>Core competencies to be developed: Communication and collaboration: learners talk to and work with each other in groups as they arrange pictures of various daily activities.</p>				
<p>Values: Respect: learners take turn to arrange pictures of different daily activities in sequence.</p>				
<p>PCIs: Learners sing songs on the need of not to be late for home for safety.</p>				

Link to Other Learning Areas:

Learner relates arranging of pictures on daily activities in sequence to pre-writing skills in Language Activities.

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THEME: MY HOME

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
3.0 Measurement	3.5 Money (Kenyan currency) - Ksh.1 coins (10 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify Kenyan currency in one-shilling coin used at home, b) count money in one-shilling coin up to 9, c) enjoy counting money in sh.1-coin up to 9.	The learner is guided to: <ul style="list-style-type: none"> • look at and talk about the Kenyan sh.1 coin, • identify Kenyan sh.1 coins from a variety of Kenyan sh. coins, • in groups, count money in 1-shilling coin up to 9 in turns, • trace Kenyan sh.1 coin, • watch a video on pictures of Kenyan sh. Coins. 	What can you see on the coin?
<p>Core Competence to be developed: Communication and collaboration: learners talk and listen to each other while counting sh.1 coins in groups.</p>				
<p>Values: Respect: learners take turns while counting sh1. coins in groups.</p>				
<p>PCIs: Learners talk about Ksh.1 coin in groups to enhance financial literacy.</p>				
<p>Link to other activity areas: Learner relates tracing Ksh.1 coin to colouring in Creative Activities.</p>				

THEME: MY HOME

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
3.0 Measurement	3.6 Area (Surface of Objects) (10 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify surfaces of concrete objects found at home, b) count small similar objects that cover a given surface of concrete objects, c) appreciate different surfaces in the environment.	The learner is guided to: <ul style="list-style-type: none"> • observe and identify different surfaces of concrete objects found at home (tables, chairs, stools), • cover surfaces of concrete objects (stool, chair, table) found at home using smaller objects. (bottle tops, small blocks) • in groups, cover surfaces of concrete objects found at home (chair, table, stool) using smaller objects, • in groups, count small similar objects that cover a given surface of concrete objects, • shade or colour surfaces of drawn objects, • Shade or colour drawn pictures using digital devices or other resources. 	How many small Similar objects can cover a given surface?
<p>Core Competencies to be developed: Critical thinking and problem solving: learners cover surfaces of objects using small similar objects and count the number of small similar objects used to cover a given surface.</p>				

Values:

Love: learners share concrete objects in groups for covering surfaces.

PCIs:

Learners to avoid putting small objects used in covering surfaces in the mouth because they are dirty to ensure hygiene.

Link to Other Learning Areas:

Learner relates new vocabulary “big” and “small” acquired to reading and speaking in Language Activities.

Assessment Rubric

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to compare sides of concrete objects found at home and identify long and short sides.	Compares sides of concrete objects, identifies long and short sides correctly and accurately.	Compares sides of concrete objects and identifies long and short sides correctly.	Compares sides of concrete objects and identifies long or short sides correctly.	Compares sides of concrete objects and identifies long or short sides correctly with continuous support.
Ability to compare heavy and light concrete objects	Compares heavy and light concrete objects correctly and talk about them.	Compares heavy and light concrete objects correctly.	Compares heavy and light concrete objects partially correct.	Compares heavy and light concrete objects partially correct with continuous support.
Ability to compare containers of different sizes.	Compares containers of different sizes correctly and accurately.	Compares containers of different sizes correctly.	Compares containers of different sizes partially correct.	Compares containers of different sizes partially correct with continuous support.

Ability to identify daily routine activities done at home before going to school.	Identifies daily routine activities done at home before going to school correctly and systematically.	Identifies daily routine activities done at home before going to school correctly.	Identifies daily routine activities done at home before going to school partially correctly.	Identifies daily routine activities done at home before going to school with continuous support.
Ability to arrange pictures of daily activities in order.	Arranges pictures of daily activities in order systematically and correctly.	Arranges pictures of daily activities in order correctly.	Arranges some pictures of daily activities in order correctly.	Arranges some pictures of daily activities in order with continuous support.
Ability to identify Kenyan currency in one shilling coin and counts up to 9	Identifies Kenyan currency in one shilling coin and, counts up to 9 coins and beyond correctly.	Identifies Kenyan currency in one shilling coin and, counts up to 9 coins correctly.	Identifies Kenyan currency in one shilling coin and counts up to 5 coins correctly.	Identifies Kenyan currency in one shilling coin and counts up to 2 coins correctly.
Ability to count small similar objects used to cover given surfaces of concrete objects.	Counts small similar objects used to cover given surfaces of concrete objects correctly and talk about them.	Counts small similar objects used to cover given surfaces of concrete objects correctly.	Counts small similar objects used to cover given surfaces of concrete objects partially correct.	Counts small similar objects used to cover given surfaces of concrete objects partially correct with continuous support.

THEME: MY SCHOOL

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question
4.0 Geometry	4.1 Lines (4 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify lines on concrete objects found at school, b) form lines using concrete objects, c) enjoy forming lines using concrete objects.	The learner is guided to: <ul style="list-style-type: none"> • collect concrete objects found at school, • observe objects and talk about lines (straight and wavy) on the objects found at school. (books, charts, chalk boards) • in groups, form straight and wavy lines by (arranging up to 9 concrete objects one after the other from left to right, modelling, joining dots) as they observe hygiene, • watch videos of children singing while moving on a straight and wavy lines 	What can you see on these objects?
<p>Core competencies to be developed: Communication and collaboration: learners talk to and work with one another to form lines.</p>				
<p>Values: Unity: learners cooperate with one another while working in groups to form lines.</p>				
<p>PCIs: Learners not to put learning materials in their mouth while forming lines to enhance hygiene</p>				
<p>Link to Other Learning Areas: Learner relates joining dots to form lines to joining dots to form pictures in Creative Activities.</p>				

THEME: MY SCHOOL

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Questions
4.0 Geometry	4.2 Shapes (6 lessons)	By the end of the Sub Strand, the learner should be able to: a) identify shapes on concrete objects found at school, b) form shapes using concrete objects, c) appreciate shapes of concrete objects found at school.	The learner to be guided to: <ul style="list-style-type: none"> • observe objects in school and talk about shapes on the objects (books, black board, roof, window, clock, counting sticks, wood blocks), • in groups, form shapes (rectangle, circle, triangle) by arranging concrete objects one after the other, modelling or joining dots as they observe hygiene, • in groups, colour pictures of drawn shapes, • watch videos clips of shapes on digital devices or other resources. 	<ol style="list-style-type: none"> 1. What are these objects? 2. How do these objects look like?
<p>Core Competencies to be developed: Imagination and creativity: learners form different shapes by modelling and joining dots/counting sticks.</p>				
<p>Values: Responsibility: learners work in groups to form shapes.</p>				
<p>PCIs: Learners not to put learning materials in their mouth to enhance safety and hygiene.</p>				
<p>Link to Other Learning Areas: Learner relates colouring of pictures of shapes, joining dots to form shapes and modelling shapes to colouring, joining dots and modelling in Creative Activities.</p>				

Assessment Rubric

Level Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to identify and form lines using concrete objects.	Identifies and forms lines using concrete objects correctly and accurately.	Identifies and forms lines using concrete objects correctly.	Identifies and forms lines using concrete objects partially correct.	Identifies and forms lines using concrete objects with continuous support.
Ability to identify and form shapes.	Identifies and forms shapes using concrete objects accurately and neatly.	Identifies and forms shapes using concrete objects accurately.	Identifies and forms shapes using concrete objects partially accurate.	Identifies and forms shapes using concrete objects with continuous support.

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

- 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.

Appendix II: Suggested 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, pictures, Computers.
	1.2 Matching and Pairing	Different types of clothes (shorts, shirts, dresses, socks, sweater), pictures 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, 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)	Pictures and 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		
4.0. 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

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, Internet among others.

Appendix III: Suggested Assessment Methods and Tools

1. Written tests
2. Projects
3. Observation Schedules
4. Observation checklist
5. Portfolio
6. Assessment Rubric

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