REPUBLIC OF KENYA
MINISTRY OF EDUCATION

PRIMARY SCHOOL CURRICULUM DESIGN

MATHEMATICAL ACTIVITIES

GRADE 3

FOR LEARNERS WITH PHYSICAL IMPAIRMENT

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT
A Skilled and Ethical Society

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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 instill 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-fulfillment**
   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 AT LOWER PRIMARY

S/No	Learning Area	Number of Lessons Per Week
1.	Indigenous Language Activities	2
2.	Kiswahili Language Activities / Kenya Sign Language Activities	4
3.	English Language Activities	5
4.	Mathematical Activities	5
5.	Religious Education Activities	3
6.	Environmental Activities	4
7.	Creative Activities	7
	Pastoral Instruction Programme	1
Total		**31**

LEVEL LEARNING OUTCOMES FOR PRIMARY EDUCATION

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

a) Communicate appropriately using verbal and or non-verbal modes in a variety of contexts.
b) Apply acquired knowledge, skills, values and attitudes in everyday life.
c) Demonstrate social skills, moral and religious values for positive contribution to society.
d) Exploit one's talents for individual development and self-fulfillment.
e) Explore, manipulate, manage and conserve the environment for learning and sustainable development.
f) Use digital literacy skills for learning and enjoyment.
g) Value Kenya's rich and diverse cultural heritage for harmonious living.
h) Appreciate the need for, and importance of interdependence of people and nations.

ESSENCE STATEMENT

Mathematics is a learning area that involves computation in numbers and arithmetic, shapes, spatial relations and information processing in the form of data. It is a vehicle of development and improvement of a country's economic development. By learning mathematics, learners develop a understanding of numbers, logical thinking skills and problem solving skills. Mathematics is applied in business, social and political worlds. At this level mathematics will build on the competencies acquired by the learner in the early years of education. Learning mathematics will also enhance the learner' competencies in numeracy as a foundation of STEM at the higher levels of Education cycle. Mathematics is also a subject of enjoyment and excitement a it gives learners opportunities for creative work and fun.

SUBJECT GENERAL LEARNING OUTCOMES

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

1) Demonstrate mastery of number concepts by working out problems in day-to-day life.
2) Apply measurement skills to find solutions to problems in a variety of contexts.
3) Apply properties of geometrical shapes and spatial relationships in real life experiences.
4) Apply data handling skills to solve problems in day-to-day life.
5) Analyze information using algebraic expressions in real life situations.
6) Apply mathematical ideas and concepts to other learning areas or subjects and in real life contexts.
7) Develop confidence and interest in mathematics for further learning and enjoyment.
8) Develop values and competencies for a cohesive harmonious living in the society.
9) Manage pertinent and contemporary issues for enhanced inter-personal relationships.

SUMMARY OF STRANDS AND SUB STRANDS

Strands	Sub Strands	Suggested Number of Lessons
1.0 Numbers	1.1 Number Concept	8
	1.2 Whole Numbers	20
	1.3 Addition	25
	1.4 Subtraction	20
	1.5 Multiplication	10
	1.6 Division	8
	1.7 Fractions	10
2.0 Measurements	2.1 Length	6
	2.2 Mass	6
	2.3 Capacity	8
	2.4 Time	10
	2.5 Money	10
3.0 Geometry	3.1 Position and Direction	5
	3.2 Shapes	4
Total Number of Lessons		**150**
Note: The suggested number of lessons per Sub Strand may be less or more depending on the context		

STRAND 1.0: NUMBERS

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.1 Number Concept** (8 lessons)	By the end of the sub strand, the learner should be able to: use ordinal numbers to a) order objects according size, b) identify position of objects from 1^{st} to 20^{th}, c) write the position of objects in numbers symbols and in words, d) appreciate use of positions of items in real life situations.	• In purposive pairs or groups, learners are appropriately positioned/ seated and guided to discuss/ share ideas and arrange real objects collected from the environment according to size starting with the smallest to the largest and also from the largest to the smallest using any functional part of the body and/ appropriate Assistive technology for manipulation. • Learners are guided to name the position of an object from a reference point using 1^{st}, 2^{nd} up to 20^{th}	How do we tell our positions in a competition?

			orally (through residual speech)/ by pointing/ writing/ stamping or mounting. • In purposive groups of 20, learners are guided to race/ move on their mobility devices with physical support for a distance and assign each other the correct position using the words 'first, second up to twentieth position depending on when they finish the race/ movement. Learners then write/ type/ stamp or mount their positions in symbols and in words depending on when they finish the race/ movement. • In purposive pairs or groups, learners are guided to relate numbers 1 –20 to positions first, second up to	

			20th and relate to real-life situations orally (through residual speech)/ by writing/ stamping/ mounting or pointing on a theme-based multi-purpose communication board. For example, birth number in a family; 1st born, 2nd born, etcetera. ● Learners are guided to play games involving position 1st -20th using adapted digital devices with special accessibility features/ software and with screen glare/ light and volume appropriately adjusted vis-a-vis individual learner's unique abilities/ needs.	
Core Competencies to be developed: ● Communication and collaboration: learner discusses and arranges real objects collected from the environment according to size. ● Digital literacy: learner plays games involving position of items from 1 to 20 using digital devices.				

Values: ● Integrity: learner displays honesty as they assign each other the rightful positions after a timed race. ● Unity: learner plays games involving position of items from 1 to 20 using digital devices.
Pertinent and Contemporary Issues (PCIs): ● Sports and games: learner participates in a race and assign each other the correct position. ● Friendship formation: learner plays games involving position 1 to 20 using digital devices and other resources with peers.
Link to other learning areas: The learner is able to relate the skills used in writing the position of objects in numbers symbols and in words to functional writing in English Language Activities.

Strand	**Sub strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Suggested Key Inquiry Question(s)**
1.0 Numbers	**1.2 Whole Numbers** (20 lessons)	By the end of the sub strand, the learner should be able to: a) count numbers forward up to 1000 starting from any point, b) count numbers backward in multiples of 100 from 1000, c) identify the place value of numbers	● In purposive pairs/ groups, learners are strategically positioned/ seated and guided to count forward in 1's, 10's, and 100's starting from any point up to 1000 using rope skipping game in a safe environment (an open and non-slippery ground preferably on grass/ carpeted ground) with physical support. Learners who may not skip could hold/ swing the rope using	1. How would you get the total number of people in a group? 2. How do you tell the place value of a digit in a number?

		up to hundreds, d) read numbers 1 to 1000 in symbols, e) read and write numbers 1 to 100 in words, f) identify missing numbers in number patterns up to 1000, g) play games involving number patterns up to 1000.	any alternative functional part of the body or appropriate Assistive technology for grip/ positioning or clap/ tap/ call out/ point the successive numbers in the sequence as peers skip or play an alternative "Counting Bingo game", where they mark off the numbers on the 'Bingo' number cards or put aside the cards with numbers as they are called out in a given sequence. • Learners are guided in purposive pairs/ groups to practise through play using number cards made of heavy gauge paper/ plastic, counting numbers backward in multiples of 100 from 1000. They could handle the cards using any functional parts of the body and/ appropriate Assistive technology for manipulation with physical support.	

			• In purposive pairs/groups, learners are guided to discuss/ share ideas on place value up to hundreds using adapted place value apparatus with wider marbles and wooden spikes in class. • In purposive pairs/ groups, learners are guided to read numbers 1-1000 in symbols starting from any point orally (through residual speech)/ by pointing the numbers as they are read. • Learners are guided in purposive pairs and taking turns to read orally (through residual speech)/ point the numbers as they are read and write/ mount/ stamp/ type numbers 1-100 in words using number cards or a theme based multi-purpose communication board using any functional part of the body/	

			appropriate Assistive technology for writing/ stamping or manipulation with physical support. • In purposive pairs/groups, learners are guided to create number patterns up to 1000 by writing/ mounting/ stamping and share with other groups orally (through residual speech)/ through total communication. • Learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and guided to play games involving whole numbers up to 1000 using adapted digital devices with special accessibility features/ software with suitably adjusted screen light/ glare/ volume and other resources which they handle using any functional part of the body/ appropriate	

			Assistive technology for manipulation.	

Core Competencies to be developed:

- Learning to learn**:** learner counts numbers backward in multiples of 100 from 1000.
- Creativity and Imagination: learners create patterns of numbers up to 1000.

Values:

- Respect: learner gives peers equal opportunity as they take turns to read and write numbers.
- Unity: learner plays games involving whole numbers up to 1000 using digital devices and other resources with peers.

Pertinent and Contemporary Issues (PCIs):

- Friendship formation: learner plays games involving whole numbers up to 1000 using digital devices and other resources with peers.
- Social cohesion: learner discusses place value up to hundreds using place value apparatus in class.

Link to other learning areas:

The learner is able to relate discussion skills to speaking and listening skills in English and Kiswahili Language Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.3 Addition** (25 lessons)	By the end of the sub strand, the learner should be able to: a) add a 3-digit number to up to a 2-digit number without regrouping with sum not exceeding 1000,	• Learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and guided to add a 3- digit number to up to 2- digit number without regrouping with sum not exceeding 1000 using	1. How do you arrange numbers when adding downwards? 2. How can you get the next

		b) add a 3-digit number to up to a 2-digit number with single regrouping with sum not exceeding 1000, c) add two 3-digit numbers without regrouping, d) add two 3-digit numbers with single regrouping with sum not exceeding 1000, e) create number patterns involving addition up to 1000, f) practice addition of numbers using digital devices or other resources.	adapted place value apparatus which they operate using any functional part of the body/ suitable Assistive technology for manipulation. Learners could write/ mount/ stamp/ type/ arrange number and operation sign cards on a theme based multi-purpose communication board to give their responses or give their responses to assessment tasks orally with physical support. • Individually, learners are appropriately positioned/ seated and guided in turns to practise adding horizontally and vertically using adapted place value apparatus. Improvise adapted abacus with wider marbles and wooden spikes, larger place value tins or pockets, all of which are firmly secured on the table/ worktops. Learners could write/ fill in their answers on provided	number in a given pattern?

			worksheets by mounting/ typing/ stamping or give their responses orally as they are given physical support. • In purposive pair/ groups or individually, learners are appropriately positioned/ seated and guided to practise adding a 3-digit number to up to a 2- digit number with single regrouping with sum not exceeding 1000. They could write/ fill in their answers on provided worksheets by mounting/ typing/ stamping or give their responses orally as they are given physical support. • Learners are appropriately positioned/ seated and guided to practise adding two 3- digit numbers without regrouping with sum not exceeding 1000 using place value tins which they handle by any functional part of the body/ Assistive technology for	

			manipulation then write/ type/ mount/ stamp or give their responses orally. • Individually/ in purposive groups, learners are appropriately positioned/ seated and guided to add two 3- digit numbers with single regrouping with sum not exceeding 1000 using adapted abacus, and write/ stamp/ mount/ type or give their responses orally. • Learners are appropriately positioned/ seated and guided to create and work out missing numbers in patterns involving addition up to 1000 by writing/ stamping/ mounting/ typing or giving their responses orally. • Learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and guided to use adapted digital devices or	

			other resources which are handled using any functional part of the body/ appropriate Assistive technology with physical support for activities involving additions.	

Core Competencies to be developed:

- Imagination and creativity: learner creates patterns involving addition up to a sum of 1000.
- Learning to learn: learner practises addition horizontally and vertically using place value apparatus.

Values:

Respect: learner portrays patience as he/she works with peers to practise addition horizontally and vertically using place value apparatus.

Pertinent and Contemporary Issues (PCIs):

Sustainable consumption: learner improvises place value apparatus such as abacus, place value tins or pockets using locally available materials.

Link to other learning areas:

The learner is able to relate the skills used in creating patterns to the pattern making skills in Creative Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.4 Subtraction** (20 lessons)	By the end of the sub strand, the learner should be able to: a) subtract a 2-digit number from a 3-digit number without regrouping, b) Subtract a 2-digit number from a three-digit number with single regrouping, c) subtract a 3-digit number from a 3-digit number with single regrouping, d) subtract up to 3-digit numbers involving missing numbers with single regrouping, e) work out missing numbers in number patterns involving subtraction up to 1000, f) appreciate subtraction in real life situations.	• In purposive groups, learners are guided to work out subtraction of up to 3- digit numbers without regrouping using large place value pockets and share findings with others orally/ by writing/ typing/ stamping by any functional part of the body/ appropriate Assistive technology. • Individually, learners are guided in turns to work out subtraction of up to 3- digit numbers with single regrouping using place value chart by the use of appropriate Assistive technology for manipulation and adapted writing/ typing/ stamping materials.	1. When do you regroup during subtraction? 2. How do you identify the missing number in a number pattern involving subtraction?

			• Learners are guided to work out missing numbers in subtraction of up to 3- digit numbers with single regrouping using a variety of strategies. Learners could write/ type/ mount/ stamp their responses. • In purposive pairs/ individually, learners are guided to play games involving subtraction using adapted digital devices with special accessibility features/ software and whose screen light/ glare or volume is suitably adjusted and other resources which they handle using any functional part of the body/ appropriate Assistive technology for manipulation. • In purposive groups, learners are guided to discuss/ share ideas on how to work out	

			missing numbers in patterns involving subtraction up to 1000 orally/ by writing/ typing/ stamping or using any functional part of the body and/ appropriate Assistive technology.	

Core Competencies to be developed:

- Digital literacy: learner plays games involving subtraction using digital devices.
- Creativity and imagination: learner comes up with ideas to create number patterns involving subtraction.

Values:

- Unity: learner jointly works out subtraction of up to 3-digit numbers without regrouping using place value pockets.
- Respect: learner accommodates diverse opinions as they discuss how to work out missing numbers in patterns.

Pertinent and Contemporary Issues (PCIs):

Problem solving skills: learner works out missing numbers in subtraction of up to 3-digit numbers with single regrouping using a variety of strategies.

Link to other learning areas:

The learner is able to relate skills used in discussion to speaking and listening skills in English and Kiswahili Language Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.5 Multiplication** (10 lessons)	By the end of the sub strand, the learner should be able to: a) model multiplication as repeated addition using numbers 1,2,3,4 and 5 by 4 and 5, b) multiply a single digit number by a single digit number, c) multiply single digit numbers by 10, d) appreciate multiplication of numbers as repeated addition.	• In purposive pairs/ groups, learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and guided to model multiplication as repeated addition of numbers 1, 2, 3, 4 and 5 by 4 and 5 using large non-slippery counters which they handle by the use of Assistive technology for manipulation/ grip and write/ mount/ type or stamp the formed multiplication sentences or give oral responses as they are audio-visually recorded and the recorded clip saved in their e-portfolio as evidence of task performance.	1. How can you work out multiplication using repeated addition? 2. How do model multiplication as repeated addition?

			• In purposive pairs/ groups, learners are appropriately positioned/ seated and guided to multiply a single digit number by a single digit number using multiplication chart and write/ mount/ type or stamp or present the product orally. • Individually, learners are guided in turns to practise multiplication of single digit numbers by 10 using multiplication tables, and write/ mount/ type or stamp or present the product orally. • Learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and guided to play digital games involving multiplication on adapted digital devices with special accessibility features/	

			software, and whose screen light/ glare or volume is suitably adjusted and which they operate using appropriate Assistive technology for manipulation.	

Core Competencies to be developed:

- Learning to learn: learner discovers the connection between repeated addition of numbers and multiplication.
- Creativity and imagination: learner models multiplication as repeated addition of numbers.

Values:

- Respect: learner appreciates others as they take turns to practise multiplication of a single digit numbers by 10 using multiplication tables.
- Social justice: learner fosters fairness and justice among peers as they play games involving multiplication.

Pertinent and Contemporary Issues (PCIs):

Environmental conservation: learner re-uses improvised learning materials and objects such as charts and counters.

Link to other learning areas:

The learner is able to relate skills used in playing games to performance skills in Creative Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.6 Division** (8 lessons)	By the end of the sub strand, the learner should be able to: a) represent division of numbers up to 50 by 4 and 5 as repeated subtraction b) divide a 2-digit number by a single digit number without a remainder, c) divide a 2-digit number by 10 without a remainder, d) appreciate division as repeated subtraction in real life situations.	• In purposive groups, learners are appropriately positioned/ seated and guided to take away from a group, a specific number of objects at a time until all are finished using appropriate Assistive technology for manipulation and then count the number of small groups formed and share their findings with others orally/ write/ type/ mount/ stamp. • In purposive groups, learners appropriately positioned/ seated and guided to discuss/ share ideas orally/ by writing/ typing or through total communication and model division as repeated subtraction of numbers up to 50 by 4 and 5 using large	1. How can you represent division as repeated subtraction? 2. How can we use the multiplication table to work out division questions?

			non-slippery counters which are handled by suitable Assistive technology for manipulation (grip) and share their findings with others orally/ write/ type/ mount/ stamp. • In purposive pairs/ groups, learners are appropriately positioned/ seated and guided to practise division of multiples of ten from 90 by 10 using multiplication tables which they handle using any functional part of the body and/ appropriate Assistive technology for manipulation (writing and grip) with physical support. • Extended activity: Learners can participate in feeding animals which involves subtraction of feeds using appropriate Assistive	

			technology for manipulation and movement with physical support. Tasks should be assigned vis-a-vis individual learner's unique characteristics/ needs for safety.	

Core Competencies to be developed:

- Communication and collaboration: learner discusses division as repeated subtraction of numbers.
- Learning to learn: learner discovers the connection between repeated subtraction and division.

Values:

- Social justice: learner shares objects equitably by repeatedly taking away from a group a specific number of objects at a time until all are finished.
- Unity: learner plays videos games involving division with peers.

Pertinent and Contemporary Issues (PCIs):

Critical thinking: learner models division as repeated subtraction of numbers up to 50 by 4 and 5 using counters.

Link to other learning areas:

The learner is able to relate skills used in discussion to listening and speaking skills in English and Kiswahili Language Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.7 Fractions** (10 lessons)	By the end of the sub strand the learner should be able to: a) identify $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ as part of a whole, b) identify $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ as part of a group, c) appreciate fractions as part of a whole in daily activities.	• In purposive pairs/ groups, learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and guided to safely make circular cut-outs from heavy gauge Manila papers/ other locally available materials using any functional part of the body and/ appropriate Assistive technology for grip/ manipulation, cutting tools with padded handles and with physical support. Caution should be taken while using cutting/ piercing tools and tasks be assigned vis-a-vis individual learner's unique characteristics/ needs.	How can you represent a half, a quarter or an eighth of a group?

			• In purposive pairs/ groups, learners are appropriately positioned/ seated and guided to fold circular cut-outs into 2 equal parts using any functional part of the body/ appropriate Assistive technology for manipulation and/ adapted cutting tools and identify one part as $\frac{1}{2}$ of the whole. Learners are guided to observe safety precaution while using cutting/ piercing tools and tasks assigned vis-a-vis individual learner's unique characteristics/ needs. • Learners are appropriately positioned/ seated and guided in purposive pairs /groups to make rectangular cut-outs and fold them into 4 equal parts to get a quarter of a whole using any functional part of the body	

			and/ appropriate Assistive technology for manipulation/ adapted cutting and drawing tools and identify each part as $\frac{1}{4}$ of the whole. ● In purposive pairs/ groups, learners are guided to make rectangular cut-outs and fold to get 8 equal parts using any functional part of the body and/ appropriate Assistive technology for manipulation/ adapted cutting and drawing tools and identify one part as $\frac{1}{8}$ of the whole. ● Learners are appropriately positioned/ seated and guided in purposive pairs/ groups to divide a number of objects into 2 equal groups using any functional part of the body and/ appropriate Assistive technology for	

			manipulation and identify each of the small groups as $\frac{1}{2}$ of the whole group. ● In purposive pairs/ groups, learners are guided to divide a number of objects into 4 equal groups using any functional part of the body and/ appropriate Assistive technology for manipulation and identify each of the small groups as $\frac{1}{4}$ of the whole group. ● Learners are appropriately positioned/ seated and guided in purposive pairs/ groups to divide a number of objects into 8 equal groups using any functional part of the body and/ appropriate Assistive technology for manipulation and identify each of the small groups $\frac{1}{8}$ of	

			the whole group. ● Individually or in purposive pairs/ groups, learners are guided to play games involving $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ using adapted digital devices with special accessibility features/ software with suitably adjusted screen light/ glare/ volume or other resources which are handled using any functional part of the body/ appropriate Assistive technology for manipulation with physical support.	
Core Competencies to be developed: ● Critical thinking and problem solving: learner divides a number of objects into 8 equal groups and identify each of the small groups as an eighth of a whole. ● Learning to learn: learner folds circular cut-outs into 2 equal parts and identify one part as $\frac{1}{2}$ of the whole.				
Values: Unity: learner plays games involving $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ using digital devices or other resources with peers.				

Pertinent and Contemporary Issues (PCIs): Safety issues: learner safely makes circular cut-outs from manila papers.
Link to other learning areas: The learner is able to relate folding and cutting of manilla papers to pattern making in Creative Activities.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to identify position of objects from 1st to 20th and write the position in number symbols and in words.	The learner identifies and writes the position of objects from 1st to 20th in number symbols and in words correctly and fluently.	The learner identifies and writes the position of objects from 1st to 20th in number symbols and in words correctly.	The learner identifies and writes the position of objects between 1st to 15th in number symbols or in words correctly.	The learner identifies and writes the position of objects between 1st to 10th in number symbols or in words correctly.
Ability to count numbers forward up to 1000 starting from any point and backward from 1000 in multiples of 100.	The learner counts numbers forward up to 1000 starting from any point and backward from 1000 in multiples of 100 correctly and fluently.	The learner counts numbers forward up to 1000 starting from any point and backward from 1000 in multiples of 100 correctly.	The learner counts numbers forward up to 700 starting from any point or backward from 700 in multiples of 100.	The learner counts numbers forward up to 500 starting from any point or backward from 500 in multiples of 100.

Ability to identify place value of numbers up to hundreds.	The learner identifies the place value of numbers up to hundreds accurately and fluently.	The learner identifies the place value of most of the numbers up to hundreds accurately.	The learner identifies place value of numbers up to ten accurately.	The learner identifies place value of numbers up to ones.
Ability to read numbers 1 to 1000 in symbols and read and write numbers 1 to 100 in words.	The learner reads numbers 1 to 1000 in symbols and reads and writes numbers 1 to 100 in words accurately and fluently.	The learner reads numbers 1 to 1000 in symbols and reads and writes numbers 1 to 100 in words accurately.	The learner reads numbers from 1 to 700 in symbols or reads and writes some numbers from 1 to 70 in words.	The learner reads numbers 1 to 500 in symbols or reads and writes numbers 1 to 50 in words.
Ability to add two 3-digit numbers with single regrouping with sum not exceeding 1000.	The learner adds two 3-digit numbers with single regrouping with sum not exceeding 1000 correctly and proficiently.	The learner adds two 3-digit numbers with single regrouping with sum not exceeding 1000 correctly.	The learner adds two 3-digit numbers with single regrouping with sum not exceeding 700 correctly.	The learner adds two 3-digit numbers without regrouping with sum not exceeding 500.
Ability to subtract up to 3-digit numbers with single regrouping.	The learner subtracts up to 3-digit numbers with single regrouping correctly and proficiently.	The learner subtracts up to 3-digit numbers with single regrouping correctly.	The learner subtracts up to 2-digit numbers with single regrouping correctly.	The learner subtracts up to 2-digit numbers without regrouping correctly.
Ability to multiply a single digit number by a single digit	The learner multiplies a single digit number by a single digit number and by 10 correctly and	The learner multiplies a single digit number by a single digit number and by 10	The learner multiplies a single digit number by a single digit number or by 10 correctly	The learner multiplies a single digit number by a single digit number correctly

number and by 10.	proficiently.	correctly		
Ability to divide a 2-digit number by a single digit number and by 10 without a remainder.	The learner divides a 2-digit number by a single digit number and by 10 without a remainder correctly and proficiently.	The learner divides a 2-digit number by a single digit number and by 10 without a remainder correctly.	The learner divides a 2-digit number by a single digit number or by 10 without a remainder correctly.	The learner divides a 2-digit number by a single digit number without a remainder correctly.
Ability to create number patterns involving addition, subtraction, multiplication and division of numbers up to 1000.	The learner creates number patterns involving addition, subtraction, multiplication and division of numbers up to 1000 correctly and creatively.	The learner creates number patterns involving addition, subtraction, multiplication and division of numbers up to 1000 correctly.	The learner creates number patterns involving any 3 of; addition, subtraction, multiplication or division of numbers up to 700.	The learner creates number patterns involving any 2 of; addition, subtraction, multiplication or division of numbers up to 500.
Ability to identify $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ as part of a whole and as part of a group.	The learner identifies $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ as part of a whole and as part of a group correctly and proficiently.	The learner identifies $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ as part of a whole and as part of a group correctly.	The learner identifies 2 of; $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{8}$ as part of a whole and as part of a group correctly.	The learner identifies either $\frac{1}{2}$ or $\frac{1}{4}$ or $\frac{1}{8}$ as part of a whole or part of a group correctly.

STRAND 2.0: MEASUREMENT

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.1 Length** (6 lessons)	By the end of the sub strand, the learner should be able to: a) measure length in metres, b) add length in metres, c) subtract length in metres, d) estimate length up to 10 metres, e) appreciate measuring length in metres in real life situations.	• In purposive pairs/ groups, learners are guided to use metre sticks to measure various distances using appropriate Assistive technology for movement with physical support and record their results by writing/ stamping/ mounting/ typing on adapted digital devices using appropriate Assistive technology and physical support. • Learners are appropriately positioned/ seated on devices whose worktops are at a suitable height and guided in purposive pairs/ groups to prepare 5 metres long strings with knots at intervals of one	1. How can the length of a chalkboard be measured using a metre stick? 2. How can the distance between the flag post and the staffroom be measured using a 5 metres long string?

			metre using appropriate Assistive technology for manipulation and movement with physical support to measure long distances. ● In purposive pairs/ groups, learners are guided to measure the lengths of the 4 walls in their classroom using any alternative functional part of the body and/ appropriate Assistive technology for movement and manipulation and add the lengths which they record by writing/ typing/ mounting/ stamping with physical support. ● In purposive pairs/ groups, learners are guided to measure the length of the chalkboard and the teacher's table using suitable Assistive technology for manipulation and movement as well as	

			adapted measuring tools with enhanced grip in metres and work out the difference in length, which they record by writing/ typing/ mounting/ stamping using adapted tools with physical support. ● Learners are appropriately positioned/ seated on devices with worktops at a suitable height and guided to work out questions involving addition of length in real life situations by writing/ typing/ mounting/ stamping using adapted tools with physical support. ● In purposive pairs/ groups, learners are appropriately positioned/ seated and guided to work out subtraction of length in metres based on real life situations by writing/ typing/	

			mounting/ stamping using adapted tools with physical support. ● In purposive pairs/ groups, learners are appropriately positioned/ seated and guided to estimate distances around the school up to 10 metres orally/ write/ stamp/ type and measure using suitable Assistive technology for manipulation and movement as well as adapted measuring tools with enhanced grip and compare results. ● Learners are strategically positioned/ seated and supported to take videos of others measuring length then play back using appropriate Assistive technology for manipulation and adapted digital devices with appropriate	

			accessibility features and discuss/ share ideas on their results orally (through residual speech)/ by writing/ typing/ stamping/ mounting.	

Core Competencies to be developed:

- Digital literacy: learner uses digital devices to record videos of classmates measuring length.
- Critical thinking and problem solving: learner works out questions involving addition of length in real life situations

Values:

Unity: learner appreciates peers' effort as they measure the lengths of various objects in and around the classroom.

Pertinent and Contemporary Issues (PCIs):

- Self-efficacy: learner estimates distances around the school compound up to 10 metres, measure the actual distances and compare results.
- Social cohesion: learner works harmoniously with peers to estimate distances around the school compound.

Link to other learning areas:

The learner is able to relate skills used in preparing 5 metres long strings with knots at intervals of one metre to weaving skills in Creative Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.2 Mass** (6 lessons)	By the end of the sub strand, the learner should be able to: a) measure mass in kilograms,	• In purposive pairs/ groups or individually, learners are guided to collect safe materials to be used to	How can you make a 1kg mass using a beam balance?

		b) add mass in kilograms, c) subtract mass in kilograms, d) estimate mass up to 5 kilograms, e) appreciate measuring mass of objects in kilograms.	measure mass in their immediate environment using appropriate Assistive technology for movement and manipulation (grip) and appropriate protective gear for safety. Learners should be assigned tasks according to individual unique characteristics/ needs. ● Learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and supported physically to make masses of 1kg using sand/ soil by measuring against the kilogram standard unit by the use of appropriate Assistive technology for manipulation. Learners whose bones may break easily or those with weak	

			muscles could be guided to handle less mass/ scoop small quantities of sand used to make 1kg masses with physical support. ● In purposive pairs/ groups or individually, learners are appropriately positioned/ seated and supported physically to measure mass of different objects in kilograms using a beam balance suspended to a suitable operation level and firmly secured on the worktops/ table tops and share their findings with others orally/ by writing/ typing/ stamping. ● In purposive pairs/ groups, learners are strategically positioned and supported physically to role play addition of mass in	

			kilograms using items in the classroom model shop. Those who may not move could use appropriate Assistive technology for movement while others use Assistive technology for manipulation. ● Learners are guided to estimate mass up to 5kg and measure to confirm using appropriate Assistive technology for manipulation. Learners should be assigned tasks according to individual unique characteristics/ needs for safety. ● Learners are appropriately positioned/ seated on devices with work tops at a suitable height and guided to measure the masses of items to confirm their actual	

			mass, using adapted measuring scales and appropriate assistive technology for manipulation and compare the masses up to 5 kg mass in the classroom model shop. Learners with weak limbs and bones should be given ability level tasks and supported physically execute them. ● In purposive groups/ pairs or individually, learners are appropriately positioned/ seated and supported physically to play digital games involving mass on adapted digital devices with appropriate accessibility features/ software and whose screen light/ glare or volume is suitably adjusted, which they operate using any	

			functional part of the body or appropriate Assistive technology for manipulation with physical support.	

Core competencies to be developed:

- Self-efficacy: learner role plays addition of mass in kilograms using items in the classroom model shop.
- Critical thinking and problem solving: learner makes masses of 1kg using sand or soil by measuring against the kilogram standard unit.

Values:

- Respect: learner shares experiences on measuring mass of different objects.
- Unity: learner shares resources amicably as they make masses of objects to use in learning.

Pertinent and Contemporary Issues (PCIs):

Safety: learner safely collects materials needed for learning from their immediate environment.

Link to other learning areas:

The learner is able to relate skills used in preparing mass of different object to moulding in Creative Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.3 Capacity** (8 lessons)	By the end of the sub strand, the learner should be able to: a) measure capacity in litres, b) add capacity in litres,	The learner is guided to: ● Learners are guided in purposive pairs/ groups to collect safe materials in their immediate environment for use in measuring capacity	How can the capacity of a container be measured?

		c) subtract capacity in litres, d) estimate capacity up to 5 litres, e) appreciate measuring capacity of containers in litres.	using appropriate Assistive technology for movement and manipulation as well as protective gear. Learners are guided to observe safety precautions during the exercise. ● In purposive pairs or groups, learners are appropriately positioned/ seated on devices whose table tops/ worktops are at a suitable height and guided to discuss and measure capacity of different containers using a 1 litre containers with handles. ● In turns, practice addition of capacity in litres in real life situations. They could write/ stamp/ type or mount to record the capacities in turns, practice subtraction of capacity in litres in real life situations, ● Estimate capacity of containers	

			up to 5 litres, ● Measure the actual capacity of the containers to confirm their capacity in litres. Tasks in the activity should be given according to the individual and unique needs of the learners. ● Learners are appropriately positioned/ seated and physically supported to play digital games involving capacity on the adapted digital devices in real life situations with peers.	
Core Competencies to be developed: ● Self-efficacy: learner estimates the capacity of containers up to 5 litres, measure the actual capacities of the containers and compare the measurements. ● Communication and collaboration: learners discuss and measure capacity of different containers using 1 litre containers.				
Values: ● Unity: learners in turns practice addition of capacity in litres in real life situations. ● Responsibility: learners care of the items for measuring capacity.				
Pertinent and Contemporary Issues (PCIs): Social cohesion: learners play digital games involving capacity in real life situations with peers.				

Link to other learning areas: The learner is able to relate collection of safe materials in their immediate environment for learning to waste management in Environmental Activities.

Strand	**Sub strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Suggested Key Inquiry Question(s)**
2.0 Measurement	**2.4 Time** (10 lessons)	By the end of the sub strand, the learner should be able to: a) identify the minute as a unit of measuring time, b) read and tell time using 'past' and 'to' the hour using the clock face, c) read and tell time using the digital clock or analogue clock, d) write time using 'past' and 'to' the hour,	• In purposive pairs / individually, learners are appropriately positioned and guided using appropriate Assistive devices to draw/ trace a clock face on a manila paper or any other resource, divide the clock face into two equal parts using a line passing through the centre, and discuss what each division represents, • Learners are guided in purposive pairs/groups to discuss the divisions on the clock face. Those with speech difficulties could use Alternative and	How do we read and tell time using digital and analog clocks?

		e) estimate time in hours, add time involving hours and minutes without conversion in real life situations, f) subtract time involving hours and minutes without conversion in real life situations, g) appreciate reading and telling time using digital and analogue clocks.	Augmentative modes of Communication-AAC. ● In purposive pairs/groups, learners locate a minute on the clock face and discuss it as a unit of measuring time. ● Learners are guided in purposive groups to discuss how to tell time on the clock face using "past" and "to" the hour, ● In turns, read and tell time on an analogue clock. ● Discuss in purposive pairs or groups how the digital clock operates and share their findings with others. Learners with speech difficulties could use residual speech as they are lip read by peers/ teacher or point on theme based multipurpose board/ write/ use speech synthesizer software or type to contribute in the discussion.	

			• In turns, read and tell time on a digital clock. • Team up to estimate time in hours, • Add time in hours and minutes without conversion, • Subtract time in hours and minutes without conversion, • Discuss in purposive pairs or groups the importance of keeping time in real life situations.	
Core Competencies to be developed: • Communication and collaboration: learner discusses how to tell time on the clock face using "past" and "to" the hour. • Learning to learn: learner reads and tells time on analog and digital clocks.				
Values: • Respect: learner accommodates diverse opinions as they discuss the importance of keeping time in real life situations. • Peace: learner displays tolerance as they in turns read and tell time on a digital clock.				
Pertinent and Contemporary Issues (PCIs): Social cohesion: learner takes turn in activities and conversations as they read and tell time on analog and digital clocks.				
Link to other learning areas: The learner is able to relate the skills used in drawing the clock face to drawing skills in Creative Activities.				

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.5 Money** (10 lessons)	By the end of the sub strand, the learner should be able to: a) identify Kenyan currency notes up to sh.1000, b) count money in different denominations up to sh.1000, c) add money involving different denominations up to a sh.1000, d) subtract money involving different denominations up to a sh.1000, e) represent the same amount of money in different denominations, f) convert money into different denominations, g) use money to buy up to 3 items involving balance,	• In purposive pairs/ groups, learners use locally available materials to model Kenyan currency denominations for use in learning using appropriate Assistive technology for movement and/ manipulation. • In purposive pairs/ groups, learners are appropriately positioned/ seated on devices whose worktops/ table tops are at a suitable height and physically supported to sort out Kenyan currency notes according to their value up to sh. 1000 using any functional part of the body and/ appropriate Assistive technology for manipulation. • In purposive pairs/ groups, learners are guided to count	How can money be represented in different denominations?

		h) appreciate spending and saving money in real life situations.	Kenyan currency notes in different denomination up to sh1000using imitation money made of heavy gauge paper/ plastic which they handle using appropriate Assistive technology for manipulation with physical support. • In purposive pairs/ groups, learners are guided to practise subtraction of money in real life situations up to sh. 1000 by writing/ typing/ mounting/ stamping or mentioning their responses orally. • Learners are appropriately positioned/ seated and physically supported in purposive pairs/ groups to practise addition of money in real life situations up to sh. 1000 by writing/ typing/ mounting/ stamping or	

			mentioning their responses orally. • In purposive pairs/ groups, learners are appropriately positioned and guided to role play in the shop corner how to represent same amount of money in different denominations up to sh. 1000 using appropriate Assistive technology for movement and/ manipulation. • Learners are appropriately positioned and guided in purposive pairs/ groups to role play buying up to 3 items involving balance using imitation money up to sh. 1000 in shopping activities using appropriate Assistive technology for movement and/ manipulation.	

			• In purposive pairs/ groups, learners are appropriately positioned/ seated and guided to share own experiences in relation to shopping activities orally/ by writing/ typing/ stamping/ total communication. • Learners are appropriately positioned/ seated and physically supported to play digital games involving money on adapted digital devices with special accessibility features/ software whose screen light/ glare or volume is suitably adjusted vis-a-vis individual learner's unique characteristics/ needs.	
Core Competencies to be developed: • Citizenship: learner counts Kenyan currency notes in different denominations up to sh. 1000. • Digital literacy: learner uses digital devices to play games involving money.				

Values:

- Patriotism: learner exhibits honesty as they sort out Kenyan currency notes according to their value up to sh.1000.
- Responsibility: learner engages in assigned roles and duties as they role play buying and selling in the classroom model shop.

Pertinent and Contemporary Issues (PCIs):

Financial literacy: learner role plays buying and selling items in the classroom model shop.
Sustainable consumption: learner uses locally available materials from the environment to model Kenyan currency.

Link to other learning areas:

The learner is able to relate the skills used in modelling the Kenyan currency denominations to modelling skills in Creative Activities.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to add and subtract length in metres.	The learner adds and subtracts length in metres accurately and proficiently.	The learner adds and subtracts length in metres accurately.	The learner adds or subtracts length in metres accurately.	The learner adds or subtracts length in metres partially accurately.
Ability to add and subtract mass in kilograms.	The learner adds and subtracts mass in kilograms accurately and proficiently.	The learner adds and subtracts mass in kilograms accurately.	The learner adds or subtracts mass in kilograms accurately.	The learner adds or subtracts mass in kilograms partially accurately
Ability to add and subtract capacity in litres.	The learner adds and subtracts capacity in litres accurately and proficiently.	The learner adds and subtracts capacity in litres accurately.	The learner adds or subtracts capacity in litres accurately.	The learner adds or subtracts capacity in litres partially accurately.
Ability to read and write time using ‘past’ and ‘to’	The learner reads and writes time using ‘past’ and ‘to’ accurately and fluently.	The learner reads and writes time using ‘past’ and ‘to’ accurately.	The learner reads or writes time using ‘past’ and ‘to’ accurately.	The learner reads or writes time using ‘past’ or ‘to’ partially accurately.
Ability to add and subtract time involving hours and minutes without conversion	The learner adds and subtracts time involving hours and minutes without conversion accurately	The learner adds and subtracts time involving hours and minutes without conversion	The learner adds or subtracts time involving hours and minutes without conversion accurately.	The learner adds or subtracts time involving hours or minutes without conversion partially

	and proficiently.	accurately.		accurately.
Ability to identify Kenyan currency notes up to sh.1000	The learner identifies Kenyan currency notes up to sh.1000 correctly and consistently.	The learner identifies Kenyan currency notes up to sh.1000 correctly.	The learner identifies Kenyan currency notes up to sh.500 correctly	The learner identifies Kenyan currency notes up to sh.200 correctly.
Ability to count money in different denominations up to sh.1000.	The learner counts money in different denominations up to sh.1000 correctly and consistently.	The learner counts money in different denominations up to sh.1000 correctly.	The learner counts money in different denominations up to sh.700 correctly.	The learner counts money in different denominations up to sh.500 correctly.
Ability to add and subtract money involving different denominations up to sh.1000.	The learner adds and subtracts money involving different denominations up to sh.1000 correctly and consistently.	The learner adds and subtracts money involving different denominations up to sh.1000 correctly.	The learner adds or subtracts money involving different denominations up to sh.700 correctly.	The learner adds or subtracts money involving different denominations up to sh.500 correctly.
Ability to represent money in different denominations.	The learner represents sh.1000. in different denominations correctly.	The learner represents sh. 500 in different denominations correctly.	The learner represents sh. 200 in different denominations correctly.	The learner represents sh. 100 in different denominations correctly.

STRAND 3.0: GEOMERY

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Geometry	**3.1 Position and Direction** (5 lessons)	By the end of the sub strand, the learner should be able to: a) move along a straight line from a point, b) identify the right and left side from a point, c) turn to the right from a point, d) turn to the left from a point, e) appreciate use of directions in real life situations.	• In purposive pairs or groups, learners team up to move along a straight line from a given point outside the classroom. Learners with manipulation difficulties could use alternative functional parts of the body, appropriate assistive devices or be assisted by peers or teacher to perform the task. • In purposive pairs or groups, learners play a game of moving to the right and left sides from a point with peers. Those with speech difficulties could use Alternative and Augmentative modes of Communication-AAC (residual speech/ digital devices with text-to-speech	What is the importance of directions in real life situations?

			application/ point/sign/write) during the activity. • In purposive pairs or groups, learners team up to move straight outside the classroom then turn to the right. Observe safety precaution for learners such as those with brittle bones against fractures. • In purposive pairs or groups, learners team up to move straight outside the classroom then turn to the left. Give the learners roles according to their functional level of ability. • In purposive pairs or groups, learners play games involving moving along a straight line and turning left or right with peers. • In purposive pairs or groups, learners play digital games involving movement on straight lines and turning to the	

			left and right with peers. Adjust light/ glare on the screens of the digital devices appropriately for learners who are sensitive to light.	

Core Competencies to be developed:

- Digital literacy: learner uses digital devices to play games involving movement on straight lines, to the right and left.
- Collaboration: learner teams up with others to move along a straight line from a given point outside the classroom.

Values:

- Unity: learner plays games involving moving along a straight line then turning left or right peers.
- Respect: learner takes turn in activities as they move straight outside the classroom then turn to the left.

Pertinent and Contemporary Issues (PCIs):

- Positive discipline: learner follows laid down procedures to carry out activities as they move along a straight line from a given point outside the classroom.
- Social cohesion: learner gives others equal opportunities in sharing responsibilities as they play games.

Link to other learning areas:

The learner is able to relate the concept of position and direction to the concept of location in Environmental Activities.

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Geometry	**3.2 Shapes** (4 lessons)	By the end of the sub strand, the learner should be able to: a) identify the shapes in a combined shape made of two different shapes, b) draw a combined shape made of 2 shapes, c) model a combined shape made of two shapes, d) appreciate the use of combined shapes in the environment.	• In purposive pairs or groups, learners are guided to make paper cut-out of different shapes. Learners with manipulation difficulties could use alternative functional parts of the body, appropriate assistive devices or be assisted by peers or teacher to perform the task. • In purposive pairs or groups, learners are guided to sort out the paper cut-outs according to their shapes in purposive pairs or groups. • In purposive pairs or groups, learners are guided to name the different shapes made from the paper cut-outs. Those with speech difficulties could use Alternative and Augmentative modes of	What shapes can you identify in your school?

			Communication-AAC. ● In purposive pairs/ groups, learners are guided to name and discuss shapes in their immediate environment. ● Learners are appropriately positioned and guided draw/ mount/ trace/ stamp combined shapes found in the environment that are made of 2 different shapes, e.g. The hut using adapted drawing tools/ assistive technology for manipulation or copy and paste in the adapted digital devices. ● Use locally available materials to model a combined shape made of 2 different shapes. ● Play digital games involving shapes with peers. Regulate the screen resolution or light intensity to support learners who are sensitive to light.	

Core Competencies to be developed: ● Creativity: learner draws combined shapes found in the environment that are made of 2 different shapes. ● Digital literacy: learner plays digital games involving shapes with peers.
Values: ● Social justice: learner accommodates peers opinion as they name the different shapes made from the paper cut-outs. ● Responsibility: learner uses locally available resources sparingly as they model a combined shape made of 2 different shapes.
Link to PCIs: Creative thinking: learner uses locally available materials to model combined shapes.
Link to other learning areas: The learner is able to relate the skills used in drawing combined shapes to drawing skills in Creative Activities.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to identify the right and left side from a point.	The learner identifies the right and left side from a point accurately and consistently.	The learner identifies the right and left side from a point accurately.	The learner identifies the right and left side from a point partially accurately.	The learner identifies the right or left side from a point partially accurately.
Ability to turn to the right and to the left from a point.	The learner turns to the right and to the left from a point accurately and consistently.	The learner turns to the right and to the left from a point accurately.	The learner turns to the right and to the left from a point partially accurately.	The learner turns to the right or to the left from a point partially accurately.

Ability to identify shapes from a figure made of two different shapes	The learner identifies shapes from a figure made of two different shapes accurately and proficiently.	The learner identifies shapes from a figure made of two different shapes accurately.	The learner identifies shapes from a figure made of two different shapes partially accurately.	The learner identifies one shape from a figure made of two different shapes partially accurately.
Ability to draw and model a combined shape made of 2 shapes.	The learner draws and models a combined shape made of 2 shapes accurately and creatively.	The learner draws and models a combined shape made of 2 shapes accurately.	The learner draws and models a combined shape made of 2 shapes partially accurately.	The learner draws or models a combined shape made of 2 shapes partially accurately.

APPENDIX I: COMMUNITY SERVICE LEARING (CSL) GUIDELINES FOR 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 LEARNING RESOURCES

STRANDS	SUB -STRANDS	RESOURCES
NUMBERS	NUMBER CONCEPT	Counters such as marbles, sticks, stones, grains
	WHOLE NUMBERS	A number line drawn on the ground/floor, place value chart
	ADDITION	Place value chart, abacus, basic addition facts table
	SUBTRACTION	Basic addition facts table, place value chart
	MULTIPLICATION	Bottle tops, marbles, stones, grains, number line drawn on the ground/floor, multiplication tables
	DIVISION	Bottle tops, marbles, stones, sticks, grains, multiplication tables
	FRACTIONS	Circular and rectangular cut outs, marbles, bottle tops, sticks, grains, stones
MEASUREMENT	LENGTH	Books, pencils, rulers, sticks, bottles, metre rule, metre sticks
	MASS	Masses of 1kg, soil, sand, beam balance
	CAPACITY	Containers of different sizes, 1litre containers, sand soil water,5 litre containers
	TIME	Clock face both analogue and digital
	MONEY	Kenyan currency coins and notes/imitations up to sh.1000, classroom shop
GEOMETRY	POSITION AND DIRECTION	Charts showing a straight line, a turn to the left and a turn to the right
	SHAPES	Cut- outs of rectangles, circles, triangles, ovals and squares of different sizes

NOTE

The following **ICT** 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,
- DVD players,
- CD's,
- Scanners,
- Internet among others

APPENDIX III: SUGGESTED ASSESSMENT METHODS AND TOOLS

1. Written tests and quizzes
2. Rating scales
3. Projects
4. Observation Schedules
5. Portfolio
6. Assessment Rubric
7. Questionnaire

NOTE: Assessment methods may be modified to accommodate a learner's diverse needs so that he/she can participate and achieve the learning outcomes. The table below shows how modes of assessment may be adapted for learners with physical impairment:

S/No	**Assessment Methods/Modes And Suggested Adaptations**	
	Methods	**Suggested Adaptations**
1.	Written assessment	• Typing, stamping or signing • Description of the task as a scribe or learner support assistant writes Audio visual recording of the learner as he/she makes oral responses • Provision of Adapted digital devices and writing/drawing resources • Adjustment of time according to individual needs • Providing illustrations to be interpreted for activities that involve drawing • Use of worksheets
2.	Oral or Aural assessment	• Written responses • Use of AAC (*Augmentative and Alternative modes of Communication) e.g. talking books, gestures, body movement, sign language, alphabet cards, facial expressions* • Adjustment of time according to individual needs

3.	Portfolio	• Use of E-Portfolio • Provision of physical support • Use of assistive technology • Provision of Adapted digital devices and writing/drawing resources • Adjustment of time according to individual needs • Description of how to carry out a practical activity while being audio/video recorded
4.	Practical assessment/ Experiments	• Provision of physical support • Provision of Adapted resources (learner specific) • Description of how to carry out a practical activity while being audio/video recorded • Adjustment of time according to individual needs • Rest intervals according to individual needs • Environmental adaptation
5.	Project	• Provision of physical support • Provision of Adapted resources (learner specific) • Description of how to carry out a practical activity while being audio/video recorded • Adjustment of time according to individual needs • Environmental adaptation