REPUBLIC OF KENYA
MINISTRY OF EDUCATION

LOWER PRIMARY SCHOOL CURRICULUM DESIGN

MATHEMATICAL ACTIVITIES

GRADE 2

FOR LEARNERS WITH VISUAL IMPAIRMENT

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT
A Skilled and Ethical Society

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FOREWORD

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

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

The reviewed Grade one curriculum designs for learners with visual impairment build on competencies attained by learners at Pre-primary level. Emphasis at this grade is the development of basic literacy, numeracy and skills for interaction with the environment.
The curriculum designs present National Goals of Education, essence statements, general and specific expected learning outcomes for the subjects as well as strands and sub strands. The designs also outline suggested learning experiences, key inquiry questions, core competencies, Pertinent and Contemporary Issues (PCIs), values, and assessment rubric.
It is my hope that all Government agencies and other stakeholders in Education will use the designs to plan for effective and efficient implementation of the CBC.

HON. EZEKIEL OMBAKI MACHOGU, CBS
CABINET SECRETARY,
MINISTRY OF EDUCATION

PREFACE

The Ministry of Education (MoE) nationally implemented Competency Based Curriculum (CBC) in 2019. Grade one is the first grade of Primary education level while Grade Six is the final grade of the level in the reformed education structure.

The reviewed Grade one curriculum furthers implementation of the CBC from Pre Primary level. The curriculum provides opportunities for learners to focus in a field of their choice to form a foundation for further education and training and/or gain employable skills. This is very critical in the realisation of the Vision and Mission of the on-going curriculum reforms as enshrined in the Sessional Paper No. I of 2019 whose title is: *Towards Realizing Quality, Relevant and Inclusive Education and Training for Sustainable Development* in Kenya. The Sessional Paper explains the shift from a content-focused curriculum to a focus on **nurturing every learner's potential.**

Therefore, the Grade one curriculum designs for learners with visual impairment are intended to enhance the learners' development in the CBC core competencies, namely: Communication and Collaboration, Critical Thinking and Problem Solving, Creativity and Imagination, Citizenship, Digital Literacy, learning to Learn and Self-efficacy.

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

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ACKNOWLEDGEMENT

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

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

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

I assure all teachers, parents and other stakeholders that this curriculum design will effectively guide the implementation of the CBC at Grade one and preparation of learners with visual impairment for transition to Grade two.

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KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

TABLE OF CONTENTS

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.

   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 instill 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 LOWER PRIMARY (GRADE 1-3)

S/ No.	Learning Area	No. of Lessons
1	Mathematical Activities for Learners with Visual Impairment	5
2	English Language Activities for Learners with Visual Impairment	5
3	Environmental Activities for Learners with Visual Impairment	4
4	Creative Activities for Learners with Visual Impairment	7
5	Religious Education Activities	3
6	Kiswahili language activities for Learners with Visual Impairment	4
7	Braille Literacy Activities	2
8.	Pastoral/ Religious Instruction Programme	1
	Total	**31**

LEVEL LEARNING OUTCOMES FOR PRIMARY EDUCATION

By the end of the Primary Education, the learner with visual impairment 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 with visual impairment develop an 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 as it gives learners opportunities for creative work and fun.

SUBJECT GENERAL LEARNING OUTCOME

By the end of primary education, the learner with visual impairment 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 relationship.

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	20
	1.4 Subtraction	20
	1.5 Multiplication	12
	1.6 Division	8
	1.7 Fractions	12
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 Lines	5
	3.2 Shapes	5
Total Number of Lessons		**150**

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: a) identify numbers 1 to 100 in symbols in different situations, b) represent numbers 1to 100 using concrete objects from the environment, c) play number games using number cards or digital devices with assistive technology. d) appreciate the use of numbers in real life situations.	• Learners with low vision are guided to recognize and read numbers 1- 100 from number cards or charts while learners with blindness are guided to recognize and read numbers 1-100 from braille number cards. • Learners collect safe concrete objects from the environment. Learners with blindness are given one on one orientation to the environment and be guided to collect concrete objects. • Learners with low vision are guided to count concrete objects of given numbers in symbols while learners with blindness are guided to manipulate concrete objects in the environment and count the objects of given numbers in braille number symbols. • Leaners are guided to match a group of objects to their number value. • In groups, learners discuss, choose and play number games in turn using print or braille number cards or use digital devices assistive technology.	1. How can we tell the number of objects in a group? 2. How numbers are represented using concrete objects from the environment?

Core Competencies to be developed:

- **Digital literacy**: Learner effectively and responsibly use digital devices with assistive technology to play number games.
- **Learning to learn:** Learner discovers own ways of representing numbers as they match a group of objects to their number value.

Values:

- **Unity:** learner respects peers' opinion as they in turn discuss, choose and play number games.

- **Responsibility:** Learner observes safety practices as they collect concrete objects for learning from the environment.

Pertinent and Contemporary Issues (PCIs):

- **Social cohesion:** learner discusses, chooses and plays number games in turns.
- **Safety issues:** learner observes safety as they collect concrete objects for learning from the environment.

Link to other learning areas:

- The learner relates the concept of using concrete objects from the environment to represent numbers to the concept of resources in the environment in Environmental Activities.

Suggested learning Resources:

Bottle tops, marbles, sticks, stones, grains, number cards, braille number cards, braille and print charts, digital devices with assistive technology such as screen readers, screen magnifiers and tactile keyboards.

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 100 in different situations, b) count numbers backward from number 50, c) read numbers 1-100 in symbols in different situations, d) identify the place value of numbers in ones and tens, e) read and write numbers 1-20 in words, f) work out missing numbers in number patterns up to 100, g) appreciate number patterns in playing number games.	• Learners with low vision are guided to count numbers forward up to 100 starting from any point by taking steps forward. Learners with blindness are paired with their sighted peers to engage them in kinaesthetic activities by physically taking steps forward as they count the numbers forward up to 100 starting from any point. • Learners with low vision are guided to count numbers backward from 50 starting from any point by taking steps backwards. Learners with blindness are paired with their sighted peers to engage them in kinesthetic activities by physically taking steps backward as they count the numbers backward from 50 starting from any point. • Learners with low vision are guided to recognize and read numbers 1-100 in symbols from number cards or charts in appropriate font and colour contrast while learners with blindness are guided to feel the braille numbers, recognize and read braille numbers 1-100 in symbols from braille number cards or tactile number line. • Learners with low vision are guided to use number cards and discuss digits in numbers	1. How do we get the next number in a pattern? 2. Why do we count numbers?

			to tell or write place value in ones and tens. Learners with blindness are given one on one orientation to familiarise with an abacus and proper setting and clearing of beads in the ones and tens place value. ● Learners with low vision are guided to discuss the place value of digits written on the number cards in appropriate font and colour contrast. Leaners with blindness are guided to discuss place value of digits set on the abacus or braille charts. ● Learners read and write numbers 1 to 20 in words. ● Learners work out missing numbers in number patterns up to 100. Learners with blindness are guided to explore created simple tactile number patterns, to feel the known numbers and the gaps, with verbal description of the number sequence and allow the learners to physically place missing numbers in the correct sequence. ● Learners make number patterns and share with peers. Learners with blindness are given a verbal description on the concept of number patterns describing how numbers follow a specific order as they manipulate tactile numbers placing them in a specific order to create a pattern. ● Learners play adapted games involving whole numbers using digital devices with assistive technology or other resources. ● Leaners improvise place value tins and pockets from locally available materials. Learners with blindness	

			are supported to assemble locally available materials for the activity. • Learners play a game of putting number cards in place value tins or pockets (ones and tens) according to the place value of digits.	

Core Competencies to be developed:

- **Creativity and imagination:** learner improvises place value tins and pockets from locally available materials.
- **Communication and collaboration:** learner discusses in groups the place value of digits written on the number cards.

Values:

- **Unity:** learner in turn, plays a game of putting number cards in place value tins or pockets according to the place value of digits.
- **Responsibilit**y: learner observes safety precautions as they use locally available materials to improvise place value tins and pockets.

Pertinent and Contemporary Issues (PCIs):

- **Effective communication:** learner reads and writes numbers 1 to 100 in symbols in different situations.
- **Creative thinking:** learner improvises place value tins and pockets from locally available materials.

Link to other learning areas:

- The learner relates the skills used in reading and writing numbers in symbols to reading and writing skills in English Language Activities.
- The learner relates the skills used in making number patterns to the concept of patterns in Creative Activities.

Suggested Learning Resources:

Bottle tops, marbles, sticks, stones, grains, a braille/ number line drawn on the ground/floor, number cards, braille cards, digital devices, braille equipment's and materials, print and braille charts.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.3 Addition (20 lessons)**	By the end of the sub-strand, the learner should be able to: a) add a 2- digit number to a 1- digit number without and with regrouping with sum not exceeding 100, b) add a 2-digit number to a 2- digit number without and with regrouping, with sum not exceeding 100, c) add two multiples of 10 with sum not exceeding 100, d) work out missing numbers in patterns involving addition of whole numbers up to 100, e) appreciate the addition of	• Learners with low vision are guided to write addition sentences given in horizontal form or vertically according to place value. Learners with blindness are reminded of the braille addition sign as dot 5,6 and dot 2,3,5 (lower F) and are guided to arrange figures horizontally and vertically in braille according to place value. • Learners with low vision practice adding a 2-digit number to a 1- digit number without regrouping. Learners with blindness are guided to practice adding a 2- digit number to a 1- digit number without regrouping. Use an abacus to add numbers observing the place value concept. • Learners with low vision practice adding a 2-digit number to a 1- digit number with regrouping. Carry out the regrouping process keenly. Learners with blindness are guided to practice adding a 2- digit number to a 1- digit number with regrouping. Use an abacus to add numbers observing the place value concept. Carry out the regrouping process keenly. • Learners discuss and come up with different ways of adding two 2-digit numbers without and with regrouping. • Learners with low vision are guided to practise adding 2 multiples of ten with a sum not exceeding 100. Learners with blindness are paired with	1. How do we align numbers when adding? 2. Why do we do regrouping of numbers?

		numbers in real life situations.	sighted peer to practise adding 2 multiples of ten using an abacus with a sum not exceeding 100 • In groups, learners play addition games using digital devices with assistive technology and other resources. • Learners make patterns using numbers up to 100 and share their work with other groups.	

Core Competencies to be developed:

- **Communication and collaboration**: learner speaks and listens to peers as they discuss different ways of adding two 2-digit numbers without and with regrouping.
- **Learning to learn:** learner discovers ways of presenting addition as they write addition statements in horizontal and vertical forms.

Values:

- **Social justice:** learner accommodates others as they play games involving addition.
- **Unity:** learner discusses and comes up with different ways of adding two 2-digit numbers without and with regrouping.

Pertinent and Contemporary Issues (PCIs):

- **Critical thinking:** learner works out missing numbers in patterns involving addition.
- **Friendship formation:** learner plays games involving addition with peers.

Link to other learning areas:

- The learner relates the skills used in making patterns to the concept of patterns in Creative Activities.
- The learner relates the skills used in writing addition sentences in horizontal and vertical forms to functional writing in English Language Activities.

Suggested Learning Resources:

Bottle tops, marbles, sticks, stones, grains, abacus, number cards, braille cards, digital devices with assistive technology such as screen readers, screen m

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 1- digit number from a 2 digit number without regrouping, b) subtract a 2- digit number from a 2 digit number with and without regrouping, c) subtract a multiple of 10 from a multiple of 10, d) work out missing numbers in patterns involving subtraction up to 100, e) appreciate subtraction of numbers in real life situations.	● Learners are guided to subtract a single digit number from a 2 digit number without regrouping. ● Learners with low vision are guided to subtract a 2-digit number from a 2 digit number without regrouping using place value apparatus. Learners with blindness are guided to use concrete objects to represent 2 digit numbers involved in the subtraction and remove objects to visualise subtraction and count what remains. Learners can also use an abacus to move beads to represent numbers and perform the subtraction step by step using place value without regrouping. ● Learners with low vision share resources to subtract a 2 digit number from a 2 digit number with regrouping using place value apparatus. Practice regrouping. Learners with blindness to practise using an abacus to subtract a 2 digit number from a 2 digit number with regrouping using place value. ● Learners practise subtracting numbers involving multiples of 10 ● In groups, learners work out missing numbers in patterns involving subtraction up to 100.	1. How do you work out missing numbers in patterns involving subtraction? 2. Why is the concept of subtraction important in our daily activities?

Core Competencies to be developed:

- **Learning to learn:** learner discovers steps of subtracting a 2-digit number from a 2-digit number with regrouping using place value apparatus.
- **Critical thinking and problem solving**: learner discusses and works out missing numbers in patterns involving subtraction up to 100.

Values:

- **Unity:** learner collaborates as they discuss and work out missing numbers in patterns involving subtraction up to 100.
- **Social justice:** learner accommodates peers as they discuss and work out missing numbers in patterns involving subtraction.

Pertinent and Contemporary Issues (PCIs):

- **Social cohesion:** learner jointly with others discusses and works out missing numbers in patterns involving subtraction up to 100.
- **Critical thinking:** learner subtracts a 2-digit number from a 2-digit number with regrouping using place value apparatus.

Link to other learning areas:

- The learner relates the skills used in discussion to speaking and listening skills in English Language Activities.

Suggested Learning Resources: Bottle tops, marbles, sticks, stones, grains, abacus, number cards, braille cards, place value apparatus.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.6 Multiplication (12 lessons)**	By the end of the sub-strand, the learner should be able to: a) represent multiplication as repeated addition using numbers 1, 2, 3, by 2 and 3, b) write repeated addition sentences as multiplication, using '×' sign, c) multiply single digit numbers by 1, 2, 3, 4, and 5, d) multiply single digit numbers by 10, e) Play games involving multiplication using digital devices or other resources, f) appreciate arranging objects in groups of 3's , 4's, 5's and 10's in real life situations.	● Learners use counters or other concrete objects to represent multiplication as repeated addition. ● Learners model in turns multiplication as repeated addition using concrete objects. ● Learners with low vision are guided to use '×' sign in writing repeated addition sentences as multiplication. Learners with blindness are reminded of the braille multiplication sign as dot 5, 6 and dot 2, 3, 6 (Lower H) learners are given verbal descriptions and one on one demonstration on how to model the multiplication as repeated addition of numbers. ● Learners with low vision are guided to multiply single digit numbers by 1, 2, 3, 4, and 5 using number cards and prepare a multiplication chart. Learners with blindness are guided to multiply single digit numbers by 1, 2, 3, 4, and 5 using braille number cards and prepare an embossed multiplication chart.	1. How do you represent multiplication as repeated addition? 2. Why do we arrange objects in groups?

			• Learners multiply single digit numbers by 10 to form multiples of 10. • In groups, learners play games involving multiplication using number cards or digital devices with assistive technology. • Learners could visit the local market to see how different fruits and other items are arranged in groups of 3's, 4's, 5's or 10's for selling. Learners with blindness are paired with the sighted guide to visit the local market to manipulate and feel how different fruits and other items are arranged in groups of 3's, 4's, 5's or 10's for selling.	

Core Competencies to be developed:

- **Digital literacy:** learner uses digital devices to play games involving multiplication.
- **Critical thinking and problem solving**: learner uses locally available materials to model a multiplication chart.

Values:

- **Responsibility:** learner shares resources amicably as they model a multiplication chart.
- **Patriotism:** learner participates in community activities as they visit the local market and assist in grouping items for sale.

Pertinent and Contemporary Issues (PCIs):

- **Financial literacy:** learner visits the local market to see how fruits and other items are arranged in groups for selling.
- **Community involvement:** learner visits the local market to assist in grouping items for sale.

Link to other learning areas:

The learner relates the skills used in improvising learning materials to waste management skills in Environmental Activities.

Suggested Learning Resources:

Bottle tops, marbles, stones, grains, number line drawn on the ground/floor, multiplication table, number cards, and digital devices with assistive technology such as adapted keyboards, screen readers and screen magnifiers, goods in the market like fruits.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggest Key Inquiry Question(s)
1.0 Numbers	**1.7 Division (8 lessons)**	By the end of the sub-strand, the learner should be able to: a) represent division as equal sharing up to number 20 by 2, b) represent division as equal grouping of numbers up to 25 by 3, c) use ' ÷ 'sign in writing division sentences, d) divide numbers up to 25 by 4 and 5 without a remainder, e) Play games involving division using Digital devices or other resources.	• Learners share a given number of objects equally by each picking one object at a time until all the objects are finished. Each learner counts how many objects every learner got. • Learners pick an equal number of objects at a time from the main group and count the number of small equal groups formed. Learners with blindness are oriented to the objects tactually prior to the activity for familisiation. • Learners with low vision are guided to use the '÷'sign in writing division sentences. Learners with blindness are reminded of the braille multiplication sign as dot 5, 6 and dot 2, 5, 6 (Lower D). Learners are given one on one demonstration with clear verbal descriptions on how to model the division as repeated subtraction of numbers and share their findings with others. • Learners with low vision are guided to divide numbers up to 25 by 4 and 5 without a remainder using number cards in appropriate colour contrast. Learners with blindness are guided to divide numbers up to 25 by 4 and 5 without a remainder using braille number cards or braille counters.	1. How can you share a given number of objects equally? 2. How is division related to subtraction?

			• In groups, learners play games involving division using digital devices with assistive technology or number cards.	

Core Competencies to be developed:

- **Learning to learn:** learner learns to organise numbers up to 25 into groups of 4 or 5 without a remainder,
- **Digital literacy:** learner uses digital devices to play games involving division.

Values:

- **Love:** learner shares a given number of objects equally by each picking one object at a time until all the objects are finished.
- **Unity:** learner works harmoniously in teams as they place objects together.

Pertinent and Contemporary Issues (PCIs):

- **Positive discipline:** learner works harmoniously in teams as they place and share objects together.

Link to other learning areas:

- The learner relates the skills of writing division statements to functional writing in English Language Activities.
- The learner relates the concept of equal sharing to the concept of values in Religious Activities.

Suggested Learning Resources:

Bottle tops, marbles, stones, grains, number line drawn on the ground/floor, multiplication table, digital devices with assistive technology such as adapted keyboards, screen readers and screen magnifiers, number cards

Strand	Sub-strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.7 Fractions (12 lessons)**	By the end of the sub-strand, the learner should be able to: a) identify a $\frac{1}{2}$ as part of a whole in different situations, b) identify a $\frac{1}{4}$ as part of a whole in different situations, c) use fractions in day-to-day activities, d) appreciate the application of fractions in daily life activities. .	• Learners with low vision make circular paper cut- outs using papers, pencils and pairs of scissors. Learners to be careful when using scissors. • Learners with blindness are provided with tactile representation of circular paper cut- outs or embossed circles, the learner uses the sense of touch to feel the line of the whole circle for familiarisation. The learner is guided to use a string to create a tactile representation of a circle with verbal explanation. • Learners with low vision are guided to fold the circular paper cut outs into two equal parts and identify one of the parts as a half of the whole written as ½. Learners with blindness are guided to fold the circular paper cut outs into two equal parts feel the lines and identify one of the parts as a half of the whole written as 1/2. • Learners with low vision are guided to make rectangular paper cut-outs and fold them into two equal parts to get a half of a whole written • As 1/2 while the learners with blindness are given a tactile representation of rectangular paper cut- outs or embossed rectangles to touch and feel the lines of the whole rectangle, the learners are then guided to fold the rectangular paper cut outs into two equal parts,	1. How do we get a fraction from a whole? 2. Why do we use fractions in day-to-day activities?

			feel the lines and identify one of the parts as a half of the whole written as 1/2. ● Learners with low vision to fold circular paper cut outs to get 4 equal parts and identify one of the parts as a ¼ of whole while learners with blindness are paired with sighted peers to fold circular paper cut outs to get 4 equal parts and identify one of the parts as a ¼. ● Learners are guided to practise making halves and quarters of a whole from paper cut outs. ● In groups, learners play games involving fractions using digital devices with assistive technology or other resources.	

Core Competencies to be developed:

- **Learning to Learn:** learner identifies halves and quarters as part of a whole in different situations.
- **Self-efficacy**: learner practises making halves and quarters of a whole from paper cut-outs.

Values:

- **Responsibility:** learner observes safety as they use scissors to make circular paper cut-outs.
- **Unity**: learner collaborates with peers as they use digital devices to play games involving fractions.

Pertinent and Contemporary Issues (PCIs):

- **Life skills:** learner uses fractions in day-to-day activities.
- **Self-esteem:** learner practises making halves and quarters of a whole from paper cut-outs.

Link to other learning areas:

The learner is able to relate the skills of making halves and quarters of a whole from paper cut-outs to pattern and modelling skills in Creative Activities.

Suggested Learning Resources:

Circular and rectangular cut outs, pair of scissors, pencil, papers, digital devices with assistive technology such as adapted keyboards, screen readers and screen magnifiers, embossed circles and tactile circles

Suggested Assessment Rubrics

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to: a) identify numbers 1 to 100 in symbols, b) count numbers forward up to 100 and backward from number 50, c) to identify the place value of numbers in ones and tens, d) work out missing numbers in number patterns up to 100, e) add a 2-digit number to a 2-digit number without and with regrouping, with sum not exceeding 100, f) work out missing numbers in patterns involving addition and subtraction of whole numbers up to 100, g) subtract a 2-digit number from a 2-digit number without and with regrouping, h) multiply 1-digit numbers by 1, 2, 3, 4, 5 and 10, i) represent division as equal sharing and grouping up to number 20 by 2, j) divide numbers up to 25 by 4 and 5 without a remainder, k) identify a $\frac{1}{2}$ and a $\frac{1}{4}$ as part of a whole	The learner demonstrates all the 12 skills.	The learner demonstrates 6 to 11 skills.	The learner demonstrates two to four skills.	The learner demonstrates 1 or no skills.

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 using fixed units, b) identify the metre as a unit of measuring length, c) measure length in metres, d) appreciate measuring length using fixed units in real life situations.	● Learners with low vision are guided to use sticks of equal length to measure lengths of different objects, record and discuss the results. Learners with blindness are given one on one demonstration to use sticks of equal length to measure objects by aligning the sticks appropriately on the objects to be measured. ● Learners with low vision measure length using sticks of different lengths, including 1-metre sticks. Learners with blindness are given one on one demonstration to align the stick on the length to be measured. ● Learners with low vision make 1-metre sticks and use them in measuring length of various objects within the classroom, record correctly and discuss the results. Learners with blindness are guided to identify appropriate stick from the environment and use it to make 1- metre stick. Learners are supported to explore different objects in the classroom and appropriately align the 1-metre stick to determine its measurement. ● Learners measure the length of different objects at home, record the measurements and discuss with peers in school.	1. How can you measure different lengths? 2. Why is measurement of length important?

Core Competencies to be developed:

- **Critical thinking and problem solving:** learner makes 1-metre sticks and uses them in measuring length of various objects.
- **Self-efficacy**: learner measures the length of different objects at home, records the measurements and discusses with peers in school.

Values:

- **Responsibility:** learner uses locally available materials to make 1-metre sticks and use them to measure the length of various objects.
- **Unity:** learner works in teams to make 1-metre sticks and use them to measure the length of various objects.

Pertinent and Contemporary Issues (PCIs):

- **Self-esteem:** learner measures the length of different objects at home, record the measurements and discuss with peers in school.
- **Creative thinking:** learner uses locally available materials to make 1-metre stick.

Link to Other Learning Areas:

- The learner is able to relate the concept of using objects within the classroom and at home for learning to the concept of resources in the environment in Environmental Activities.

Suggested Learning Resources:

Pencils, 1-m sticks, rulers, strings, rope, sticks of different lengths. Other Objects in the classroom.

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 using fixed units, b) identify the kilogram as a unit of measuring mass, c) measure mass of different objects in kilograms, d) appreciate measuring mass using fixed units in real life situations.	• Learners with low vision are guided to collect safe materials from the environment for measuring mass. Learner with blindness is paired with the sighted guide to explore the environment and safely collect a set of tactile materials of different masses for measuring mass. • Learners use locally available materials to improvise a beam balance. Learners with blindness guided to manipulate a model beam balance and be supported assemble materials for making a beam balance. • Learners use items of the same mass and an improvised beam balance to measure different masses, record and discuss the results. • Learners with low vision use an item equivalent to a 1-kilogram mass and a beam balance to measure mass of different objects in Kilogram accurately. Learners with blindness are given one on one demonstration with clear verbal description on how to use weights equivalent to a 1-kilogram mass and an improvised beam balance to measure mass of different objects in Kilogram accurately. • In groups, learners with low vision are guided to visit a shop or market and help vendors measure items	1. How can we measure mass? 2. Why is measurement of mass important?

			such as beans, maize, rice, flour using fixed units, for example an empty 1-Kg container. ● Learners practise measuring mass in kilograms using a 1- kilogram mass. ● Learners play adapted digital games involving mass in kilograms using digital devices with assistive technology.	

Core Competencies to be developed:

- **Communication and collaboration**: learner in groups, uses items of the same mass and an improvised beam balance to measure different masses and discuss results.
- **Digital literacy:** learner plays digital games involving mass in kilograms.

Values:

- **Patriotism:** learner assists vendors to measure the masses of items such as beans, maize, rice, flour using fixed units.
- **Responsibility:** learner improvises beam balance to measure different masses.

Pertinent and Contemporary Issues (PCIs):

- **Creative thinking:** learner improvises beam balance to measure different masses.
- **Community involvement:** learner visits a shop or market and assist vendors measure the masses of items such using fixed units.

Link to Other Learning Areas:

- The learner is able to relate the concept of visiting a shop or market to the concept of our market in Environmental Activities.
- The learner is able to relate the skills of using locally available materials to improvise a beam balance to the skills of identifying resources in the environment in Environmental Activities.

Suggested Learning Resources: Items of different masses such as books, stones, pieces of wood, items of same mass, beam balance, shop items, digital devices with assistive technology such as screen readers, adapted keyboards and screen magnifiers, 1 kg container, tactile materials.

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 using fixed units, b) identify the litre as a unit of measuring capacity, c) measure capacity in litres, d) appreciate measuring capacity in litres using improvised containers in real life situations.	● Learners are guided to collect containers of different sizes for use in measuring capacity. Learners with blindness are orientated into the environment and guided to explore containers of different sizes. ● Learners use small containers of equal capacity to fill bigger containers of same capacity but different shapes with water, count the number of small containers used to fill the big containers. Learners with blindness are guided to manipulate and identify containers their sizes and be supported on note the level of water in the containers. ● Learner with low vision is guided to use 1 litre containers to fill big containers with water and count the number of litres used to fill the big containers. Use water properly to avoid wetting floors. Learners with blindness are given one on one demonstration to fill big containers with water and count the number of litres used to fill the big containers. ● In teams, discuss and measure the capacity of different containers in litres accurately. ● Learners participate in activities involving measuring liquids such as milk and water using 1 litre bottles.	1. How can we measure the capacity of different containers? 2. Why is measurement of capacity important?

Core Competencies to be developed:

- **Self-efficacy**: learner uses 1 litre containers to fill bigger containers with water and count the number of litres used to fill the bigger containers.
- **Communication and collaboration:** learner in teams, discusses and measures the capacity of different containers in litres.

Values:

- **Unity:** learner participates in activities involving measuring liquids such as milk and water using 1 litre bottles.
- **Responsibility**: learner collects containers of different sizes for use in measuring capacity.

Pertinent and Contemporary Issues (PCIs):

- **Safety issues:** learner uses water carefully to avoid wetting floors as they use 1 litre containers to fill big containers with water.

- **Self-esteem:** learner discusses and measures the capacity of different containers in litres confidently.

Link to Other Learning Areas:

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

Suggested Learning Resources:

Containers of different sizes and shapes, 1-litre containers, water, soil, sand, milk

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) relate the months of the year with special occasions, b) recite the number of days in each month of the year, c) read the calendar in terms of day and date, d) measure time using arbitrary units, e) identify the clock face with minute and hour hand, f) read time by the hour from clock face, g) write time by the hour shown by an analogue and digital clock, h) appreciate keeping time in day-to-day activities.	• Learners discuss special occasions that take place in different months of the year. • Learners sing songs and rhymes related to the number of days in the months of the year. • Learners with low vision are guided to discuss how to read, tell and write dates using the calendar. Learners with blindness are guided on how to read and write dates in braille. • Learners are guided to discuss and relate time by hour using the length of a shadow of an object such as a tree in the environment. Learners with blindness are given verbal descriptions of the length of the shadow and its relation to the hour of the day. • Learners are guided to discuss places where clocks are displayed as well as how they look or feel. • Learners with low vision are guided to observe a clock face and discuss the minute hand and the hour hand. Learners with blindness are provided with a tactile clock with embossed markings for hour and minute hand to explore the movable hands and discuss the minute hand and the hour hand. • Learners are guided to discuss how to read, tell and write time by the hour using both the	1. How do we tell time? 2. Why is keeping time necessary?

			analogue and digital clock with assistive technology. Discuss the importance of keeping time in different activities.	

Core Competencies to be developed:

- **Citizenship**: learner discusses special occasions that take place in different months of the year.
- **Self-efficacy:** learner reads the calendar in terms of day and date, and measure time using arbitrary units.

Values:

- **Patriotism:** learner discusses special occasions that take place in different months of the year.
- I**ntegrity**: learner discusses the importance of keeping time in different activities.

Pertinent and Contemporary Issues (PCIs):

- **Global citizenship**: learner discusses special occasions that take place in different months of the year.
- **Life skills:** learner discusses and relates time by hour using the length of a shadow of an object such as a tree in the environment.

Link to other learning areas:

- The learner is able to relate the skills of telling time to the concept of weather and sky, and day and night in Environmental Activities.

Suggested Learning Resources:

Tactile charts or charts with number of days in each month and months of the year in order, clock face both analogue and digital, calendar.

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 coins and notes up to sh.100, b) count the number of sh.20 and sh.40 coins in different situations, c) count the number of sh.50 and sh.100 notes in different situations, d) add 2 denominations of money with sum not exceeding Sh. 100, e) use money in buying up to 3 items without balance, f) appreciate the use of money in buying items.	• Learners with low vision are guided to recognize and sort out Kenyan currency coins and notes up to sh.100, while learners with blindness are given one on one demonstration with clear and detailed verbal description of the physical characteristics of the coins and notes. • Learners with low vision are guided to sort, separate and count the number of sh.20 and sh.40 coins using improvised materials such as paper cut out pictures of coins. Learners with blindness are provided with a variety of created tactile embossed representations of sh.20 and sh.40 coins highlighted with their unique features. Learners are engaged in hands -on sorting activities to separate and count the number of sh.20 and sh.40 coins using paper the improvised embossed paper cut out. • Learners with low vision are guided to sort, separate and count the number of sh.50 and sh.100 notes using improvised materials such as paper cut out pictures of coins. Learners with blindness are	1. How can you identify different Kenyan currencies? 2. Why is money given in different denominations?

			provided with a variety of created tactile embossed representations of sh.50 and sh.100 notes highlighted with their unique features. Learners are engaged in hands -on sorting activities to separate and count the number of sh.50 and sh.100 notes using the improvised embossed paper cut outs. ● Learners with low vision are guided to add 2 denominations of money with a sum not exceeding sh. 100. Learners with blindness are provided with a variety of created tactile embossed representations of coins and notes highlighted with their unique features. Learners are guided to count the tactile coins and notes and add 2 denominations of money with a sum not exceeding sh. 100. ● In groups, learners role play buying up to 3 items without balance from the model shop in the classroom. ● Learners are assisted to record a video during a role play of classroom shopping activities for replay and discussion later.	

Core Competencies to be developed:

- **Communication and Collaboration**: learner in teams, makes sh. 10 and sh. 20coins paper cut-outs, sorts and counts the number of sh. 10 and sh. 20 coins paper cut-outs.
- **Digital literacy**: learner records a video during a role play of classroom shopping activities.

Values:

- **Patriotism:** learner recognizes and sorts out Kenyan currency coins and notes up to sh.100.

● **Responsibility:** learner takes up assigned roles as they role play classroom shopping activities.
Pertinent and Contemporary Issues (PCIs): ● **Financial Literacy:** learner role plays buying up to 3 items without balance from the model shop in the classroom. ● **Citizenship**: learner recognizes and sorts out Kenyan currency coins and notes.
Link to other learning areas: ● The learner is able to relate the skills of using money to buy items to the concept of our market in Environmental Activities.
Suggested Learning Resources: Money in coins and notes sh.1, sh.5, sh.10, sh.20, sh.40, sh.50, sh.100, Model classroom shop, tactile embossed representations of coins and notes, digital devices with assistive technology such as screen readers, screen magnifiers and tactile keyboards.

LEVEL / **INDICATOR**	**Exceeds Expectations**	**Meets Expectations**	**Approaches Expectations**	**Below Expectations**
Ability to: a) measure length in metres, mass in kilograms and capacity in litres. b) read the calendar in terms of day and date. c) read and write time by the hour from the clock face. d) identify Kenyan currency coins and notes up to sh.100. e) to count the number of sh.10 and sh.20 coins and sh.50 and sh.100 notes. f) to add 2 denominations of money with sum not exceeding sh. 100.	The learner demonstrates ability to perform all the 6 skills.	The learner demonstrates ability to perform 4 to 5 skills.	The learner demonstrates ability to perform 2 to 3 skills.	The learner demonstrates ability to perform 1 or no skill.

STRAND 3.0 GEOMETRY

Strand	Sub-strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0Geometry	**3.1 Lines (5 lessons)**	By the end of the sub-strand, the learner should be able to: a) model straight lines in different ways, b) draw straight lines in different ways, c) model curved lines in different ways, d) draw curved lines in different situations, e) appreciate the use of lines in real life situations.	• Learners safely model straight lines using sticks, plasticine or clay or papier Mache and strings. Learners with blindness are given one on one demonstration on how to model lines using different materials. • Learners safely model curved lines using plasticine or clay or papier mache and strings. Learners with blindness are given one on one demonstration on how to model lines using different materials. • Learners model straight and curved lines by holding their hands in different ways; upward, horizontal, diagonal. Learners with blindness are given one on one demonstration on how to model lines using different materials. • Learners with low vision draw straight and curved lines in charts and books using pencils, crayons and rulers or sticks. Learners with blindness are guided to explore embossed representation of straight and curved lines and recreate the lines using clay or plasticine on a flat surface. • Learners practise drawing or recreating straight and curved lines using learner digital devices with assistive technology or other resources.	1. How do we create straight and curved lines? 2. How are lines important in geometry?

Core Competencies to be developed:

- **Self-efficacy:** learner draws straight and curved lines on manila papers and books.
- **Digital literacy:** learner uses digital devices to draw lines.

Values:

- **Responsibility:** learner takes care of materials used for drawing straight and curved lines.
- **Love:** learner portrays a caring attitude as they use digital devices to draw lines and share with peers.

Pertinent and Contemporary Issues (PCIs):

- **Creative thinking:** learner safely models curved lines using plasticine or clay or papier mache and strings.
- **Friendship formation**: learner uses digital devices or other resources to draw lines and share with peers.

Links to other learning areas:

- The learner is able to relate the skills used in drawing straight and curved lines to drawing skills in Creative Activities.

Suggested learning resources:

Sticks, plasticine or clay or papier mache and strings.

Strand	Sub-strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Geometry	**3.2 Shapes** **(5 lessons)**	By the end of the sub-strand, the learner should be able to: a) identify different shapes in the environment, b) model or draw shapes in different ways, c) draw patterns involving different shapes, d) appreciate the use of shapes in forming patterns in fabrics.	• Learners recognise and name different shapes in the environment (triangles, squares, circles and ovals). Learners with blindness are guided to explore the environment and identify different shapes. • In groups, learners discuss types of lines in different shapes (triangles, rectangles, squares, circles and ovals). • Learners with low vision are guided to recognise and name triangles, squares, circles and ovals. Learners with blindness are given verbal descriptions of each shape as they trace the outlines of shapes using their fingers on embossed shapes to recognise and name triangles, squares, circles and ovals. • Learners with low vision draw triangles, rectangles, squares, circles and ovals on manila papers and display in the learning environment. Leaners with blindness are guided to trace the outline of triangles, rectangles, squares, circles and ovals on braille papers using spar wheel. • Learners make patterns using triangles, rectangles, squares, circles and ovals, colour them and share with peers. • Learners play adapted games involving pattern making using digital devices with assistive technology or other resources with peers.	1. How can we make patterns using shapes? 2. How are patterns important in fabrics?

Core Competencies to be developed:

- **Creativity and Imagination:** learner makes patterns using triangles, rectangles, squares, circles, and ovals, and colour them.

● **Learning to Learn:** learner recognises and names different shapes in the environment
Values: ● **Unity:** learner discusses types of lines in different shapes and in turn, names different shapes of objects in their classroom. ● **Social justice:** learner gives others equal opportunity as they in turn name different shapes of objects in their classroom.
Pertinent and Contemporary Issues (PCIs): ● **Self-esteem**: learner draws triangles, rectangles, squares, circles and ovals on manila papers and display them in the learning environment. ● **Social cohesion:** learner plays games involving pattern making using digital devices or other resources with peers.
Link to other learning areas: ● The learner is able to relate the skills used in drawing shapes to drawing skills in Creative Activities.
Suggested learning Resources: Cut- outs of rectangles, circles, triangles, ovals and squares of different sizes, embossed shapes, charts, digital devices.

Suggested Assessment Rubrics

LEVEL / INDICATOR	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to a) model and draw straight and curved lines. b) Identify shapes in the environment. c) model or draw shapes (triangles, rectangles, squares, circles and ovals). d) draw patterns involving shapes (triangles, rectangles, squares, circles and ovals).	The learner demonstrates ability to perform all the four skills.	The learner demonstrates ability to perform three skills.	The learner demonstrates ability to perform two skills.	The learner demonstrates ability to perform one or no skill.

APPENDIX 1:

Suggested Learning Resources

STRANDS	SUB -STRANDS	RESOURCES
NUMBERS	NUMBER CONCEPT	Counters such as bottle tops, marbles, sticks, stones, grains
	WHOLE NUMBERS	Bottle tops, marbles, sticks, stones, grains, a number line drawn on the ground/floor
	ADDITION	Bottle tops, marbles, stones, sticks, grains, place value chart, abacus, basic addition facts table, a number line drawn on the ground/floor
	SUBTRACTION	Bottle tops, marbles, sticks, stones, grains, basic addition facts table, a number line drawn on the ground/floor
	MULTIPLICATION	Bottle tops, marbles, stones, grains, number line drawn on the ground/floor, multiplication table
	DIVISION	Bottle tops, marbles, sticks, stones, grains, multiplication tables
	FRACTIONS	Circular and rectangular cut outs, pair of scissors
MEASUREMENT	LENGTH	Pencils, sticks, rulers, strings, ropes
	MASS	Items of different masses such as books, stones, pieces of wood, items of same mass, beam balance
	CAPACITY	Containers of different sizes, 1 litre containers, water, soil, sand
	TIME	Charts with number of days in each month and months of the year in order, clock face both analogue and digital
	MONEY	Money in coins and notes sh.1, sh.5, sh.10, sh.20, sh.40, sh.50, sh.100, Model classroom shop
GEOMETRY	LINES	Sticks, clay, plasticine, strings, ropes
	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 2:

Suggested Assessment Methods and Tools

1. Written tests and quizzes in print or braille
2. Rating scales
3. Projects
4. Observation Schedules
5. Portfolios
6. Assessment Rubric
7. Questionnaire

APPENDIX 3:

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.