KENYA INSTITUTE OF CURRICULUM DEVELOPMENT
A skilled and Ethical Society

PRIMARY SCHOOL EDUCATION CURRICULUM DESIGN

MATHEMATICS

GRADE 6

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FOREWORD

The Government of Kenya (GoK) 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 2018, 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 Kenya Institute of Curriculum Development (KICD) reviewed the curriculum and rationalised the number of learning areas in 2024. The review and rationalisation process was informed by several factors, among them, the recommendations of the Presidential Working Party on Education Reforms (PWPER) and reports of the continuous curriculum monitoring and evaluation activities.

The reviewed curriculum designs build on competencies attained earlier by learners. The designs prepare the learner for smooth transition to the next level. The designs will also afford the learner opportunities for developing requisite competencies and enable them to interact with other people and the environment around them.

The key components of the curriculum designs include the National Goals of Education, the essence statement, general and specific learning outcomes as well as the strands and sub strands. Suggested learning experiences, key inquiry questions, core competencies, Pertinent and Contemporary Issues (PCIs), values and assessment rubrics are also outlined in the curriculum designs.

It is expected that all Government agencies and other stakeholders in Education will use the designs to plan for the effective and efficient implementation of the Competency Based Curriculum.

Thank you.

HON. EZEKIEL OMBAKI MACHOGU, CBS
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PREFACE

The Ministry of Education (MoE) rolled out the Competency Based Curriculum (CBC), nationally in 2019, following a national convention in 2017 where the *Basic Education Curriculum Framework* (BECF) was adopted by stakeholders and a national pilot of the curriculum in the Early Years of Education (EYE) in 2018. According to the UNESCO IBE requirements, a curriculum should be reviewed every five years. So, the review of CBC was due from 2023. In view of this, the reviewed curriculum designs will enhance the implementation of CBC since it corporates the lessons learnt from the implementation of CBC so far.

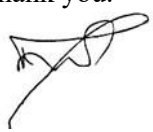
Consistent periodical review of the curriculum is also critical in the realisation of the Vision and Mission of the on-going curriculum reforms as enshrined in the Sessional Paper No. I of 2019 whose title is: *Towards Realizing Quality, Relevant and Inclusive Education and Training for Sustainable Development* in Kenya. The Sessional Paper explains the shift from a content-focused curriculum to a focus on producing an engaged, empowered and ethical citizen.

Therefore, the reviewed curriculum designs will facilitate the inculcation of core competencies in CBC, which are identified as: 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 strands and sub strands and other aspects of the CBC. The designs also outline suggested learning resources and varied assessment techniques. It is expected that the use of these designs will lead to enhanced learning outcomes at various levels, prepare the learner for smooth transition to subsequent grades and make learning enjoyable.

The MoE requests all stakeholders to keep giving feedback on the curriculum designs to inform the review during the next cycle.

Thank you.



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ACKNOWLEDGEMENT

The Kenya Institute of Curriculum Development (KICD) Act Number 4 of 2013 (Revised 2019) mandates the Institute to develop and review curricula and curriculum support materials for basic and tertiary education and training. The curriculum development process is guided by research, international best practices as well as stakeholder engagement. The Institute conceptualised the Competency Based Curriculum (CBC) in consultation with the Ministry of Education and other stakeholders. According to the *Basic Education Curriculum Framework* (KICD, 2017) the conceptualisation of CBC was informed by 21st Century learning needs, the Constitution of Kenya 2010, the Kenya Vision 2030, the East African Community Protocol, the International Bureau of Education (IBE) Guidelines and the United Nations Sustainable Development Goals (SDGs).

KICD is funded by the Kenya Government to discharge its mandate. The institute also receives support from development partners targeting specific programmes. The reviewed curriculum designs were developed with the support of the World Bank through the Kenya Primary Education Equity in Learning Programme (KPEELP) - a project coordinated by MoE. KICD wishes to most sincerely thank the Government of Kenya, through the MoE and other development partners. More specifically, KICD appreciates the Cabinet Secretary - MoE and the Principal Secretary – State Department of Basic Education,

Additionally, the Institute expresses gratitude to all the KICD staff members, teachers, university lecturers, MoE staff, Semi-Autonomous Government Agencies (SAGAs) and representatives of various stakeholders; among others, for their contributions to the development of the reviewed curriculum designs. Finally, KICD acknowledges the Chief Executive Officers of the Teachers Service Commission (TSC) and the Kenya National Examinations Council (KNEC) as well as the KICD Council for supporting the curriculum review process.

May God bless all the individuals and respective institutions who in one way or another supported the curriculum review process. Indeed, these designs will effectively guide the implementation of the CBC at Primary level, thereby preparing the learner to transition to the Junior School.

Best wishes to all learners and curriculum implementers.

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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 UPPER PRIMARY

S/No	Learning Area	Number of Lessons
1.	English	5
2.	Kiswahili / Kenya Sign Language	4
3.	Mathematics	5
4.	Religious Education	3
5.	Science & Technology	4
6.	Agriculture	4
7.	Social Studies	3
8.	Creative Arts	6
9.	Pastoral/Religious Instruction Programme	1
Total		**35**

LEVEL LEARNING OUTCOMES FOR PRIMARY SCHOOL EDUCATION

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

a) Use verbal and or non-verbal cues to convey information in varied contexts.
b) Demonstrate mastery of number concepts to solve problems in day to day life.
c) Use appropriate social skills, moral and religious values to positively impact the society.
d) Develop individual talents and interests for self-efficacy.
e) Make informed decisions as local and global citizens of a diverse, democratic society in an interdependent world.
f) Devise innovative strategies for environmental conservation and sustainability.
g) Apply digital literacy skills for learning and enjoyment.
h) Appreciate Kenya's rich and diverse cultural heritage for harmonious living.

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 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 OUTCOMES

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

a) Demonstrate mastery of number concepts by working out problems in day-to-day life.
b) Apply measurement skills to find solutions to problems in a variety of contexts.
c) Apply properties of geometrical shapes and spatial relationships in real life experiences.
d) Apply data handling skills to solve problems in day-to-day life.
e) Analyze information using algebraic expressions in real life situations.
f) Apply mathematical ideas and concepts to other learning areas or learning areas: and in real life contexts.
g) Develop confidence and interest in mathematics for further learning and enjoyment.
h) Develop values and competencies for a cohesive harmonious living in the society.
i) 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 Whole Numbers	20
	1.2 Multiplication	6
	1.3 Division	6
	1.4 Fractions	12
	1.5 Decimals	12
	1.6 Inequalities	8
2.0 Measurement	2.1 Length	14
	2.2 Area	6
	2.3 Capacity	6
	2.4 Mass	14
	2.5 Time	10
	2.6 Money	8
3.0 Geometry	3.1 Lines	6
	3.2 Angles	6
	3.3 3-D Objects	6
4.0 Data Handling	4.1 Bar Graphs	10
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 LearningExperiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.1 Whole Numbers** (20 Lessons) • *Place value and total value* • *Numbers in symbols and words* • *Rounding off numbers* • *Squares and square roots of numbers*	By the end of the sub-strand, the learner should be able to: a) use place value and total value of digits up to millions in real life, b) use numbers up to millions in symbols in real life, c) read and write numbers up to 100,000 in words in real life, d) order numbers up to 100,000 in real-life situations, e) round off numbers up to 100,000 to the nearest thousand in different situations, f) apply squares of whole numbers up to 100 in different situations,	The learner is guided to: • work with peers to identify place value of digits up to millions using place value apparatus, • work in teams to read numbers up to millions insymbols from number charts/ cards, • read and write numbers up to hundred thousand in words from number charts/ cards, • discuss and read numbers up to millions insymbols from number charts or cards, • discuss with peers and form different numbers by rearranging digits of a number up to 100,000, • discuss in teams and round off numbers up to hundred thousand to the nearest 1,000 from number cards and share with other groups, • multiply a given number by itself and	How do we read and write numbers in symbols and in words?

		g) apply square roots of perfect squares up to 10,000 in different situations, h) appreciate use of whole numbers in real-life situations.	identify the answer as the square of the number, • work out the square root of a given number and recognise the value which when multiplied by itself results in the given number, • play games involving whole number using digital devices or other resources, • create number charts involving number of road users to and from school or home. This will create awareness on the level of congestion of traffic on the road and help to address road safety issues.	
Core competencies to be developed: Critical thinking and problem solving: learners form different numbers by rearranging digits of a given number.				
Values: Unity: learners, in pairs or groups, harmoniously identify total value of digits up to millions using place value apparatus.				
Pertinent and Contemporary Issues (PCIs): Social cohesion: learners work cohesively with peers and identify the square root of a given number as a value which when multiplied by itself results in the given number. Safety: leaners work together to create awareness on the levels of congestion on the roads using charts and discuss how to address road safety issues				
Link to other learning areas: Learners read and write numbers in words which is enhanced from skills in Languages.				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested LearningExperiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.2 Multiplication** **(**6 Lessons**)** • *Multiplication of numbers* • *Making patterns*	By the end of the sub-strand, the learner should be able to; a) multiply up to a 4-digit number by a 2-digit number in real-life situations, b) estimate products by rounding off numbers being multiplied to the nearest ten in real-life situations, c) make patterns involving multiplication of numbers not exceeding 1,000 in different situations, d) appreciate use of multiplication in reallife.	The learner is guided to: • multiply up to a 4-digit number by a 2-digit number using; - *fact families* - *skip counting* - *multiplication chart* - *expanded form* - *digital devices*, - estimate products using; - *rounding off factors* - *compatibility ofnumbers*, - make patterns involvingmultiplication with products not exceeding 1,000 using number cards, - work with peers and play games involving multiplication using digital devices or other resources such as number cards.	How do we multiply numbers?

Core Competencies to be developed: Creativity and imagination: learner makes patterns involving multiplication with products not exceeding 1,000 using number cards.
Values: Integrity: Learner multiplies up to a 4-digit number by a 2-digit number using skip counting and demonstrates honesty in their results.
Pertinent and Contemporary Issues (PCIs): Self-esteem: Learner develops confidence as they estimate products using rounding off factors which builds self-esteem.
Link to other learning areas: Learner estimates quantities of seeds or fertiliser required for planting different crops as learnt from Agriculture.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.3 Division (**6 Lessons**)** • *Division of numbers* • *Combined operations*	By the end of the sub-strand the learner should be able to; a) divide up to a 4-digit number by up to a 3-digit number where the dividend is greater than the divisor in real-life situations, b) estimate quotients by rounding off the dividend and divisor to the nearest ten in real-life situations, c) perform combined operations involving addition, subtraction, multiplication and division up to 3-digit number, d) appreciate use of division of whole numbers in real life.	The learner is guided to: - divide up to a 4-digit number by up to a 3-digit number and share the answers where the dividend is greater than the divisor using; - relationship between multiplication and division - long method, - work out quotients by rounding off the dividend and divisor to the nearest ten, - work out questions involving two, three orfour operations up to 3-digit numbers, - divide whole numbers using digital devices or other resources.	Where is division used in real life?

Core Competencies to be developed: Communication and collaboration: learner discusses with peers the relationship between multiplication and division using examples.
Values: Unity: learner works together with others amicably to divide up to a 4-digit number by up to a 3-digit number and shares answers.
Pertinent and Contemporary Issues (PCIs): Learner divides whole numbers using digital devices or other resources as they observe safety.
Link to other learning areas: Learner divides quantities such as ingredients for cooking as learnt from Agriculture.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.4 Fractions** (12 Lessons) • *Addition and subtraction of fractions* • *Reciprocals* • *Squares of fractions* • *Fractions as percentages*	By the end of the sub-strand the learner should be able to: a) add fractions using LCM in different situations, b) subtract fractions using LCM in different situations, c) add mixed numbers in different situations, d) subtract mixed numbers in different situations, e) identify reciprocal of proper fractions up to a 2-digit number in different situations, f) work out squares of fractions with a numerator of one digit and denominator of a 2-digit number in	The learner is guided to: • identify LCM of numbers given from number cards, • add and subtract fractions using LCM by listing multiples, • add and subtract mixed fractions by converting the fractions to improper fractions, • add and subtract mixed fractions by adding and subtracting whole number and fraction parts separately, • list the inverse of numbers between 1 and 10, • calculate the reciprocal of a number by dividing 1 (one) by the number. *Always start by working out the reciprocal of whole numbers before solving the reciprocal of proper fractions up to a 2-digit number*, • discuss the various reciprocals of a proper fraction, • calculate squares of fractions through multiplication or practically,	1. 1. How do we add or subtract fractions? 2. 2. Where is percentage used in day-to-day life?

		different situations, g) express a fraction as a percentage in different situations, h) convert percentage to fractions in different situations, i) appreciate use of fractions in real life.	• change fractions to equivalent fractions with denominator 100 through multiplication, • identify a percentage as a fraction with denominator 100, • work with peers on how to change fractions to percentages and vice versa, • play digital games involving fractions.	
Core Competencies to be developed: Learning to learn: learner works out the reciprocal of whole numbers before solving the reciprocal of proper fractions.				
Values: Unity: learner works harmoniously with peers and discusses reciprocals of proper fractions.				
Pertinent and Contemporary Issues (PCIs): Learner cohesively works together with others to calculate squares of fractions through multiplication to enhance social cohesion.				
Link to other learning areas: Learner uses fractional parts of a canvas or drawing materials to draw different patterns as learnt from Creative Arts.				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.5 Decimals** **(**12 Lessons**)** • *Decimals up to ten thousandths* • *Rounding off decimals* • *Conversions in decimals* • *Addition and subtraction in decimals*	By the end of the sub-strand, the learner should beable to; a) identify decimals up to ten thousandths indifferent situations, b) round off decimals up to 3 decimal places indifferent situations, c) convert decimals to fractions and fractions to decimals in different situations, d) convert decimals to percentages and percentages to decimals in differentsituations, e) add decimals up to 4-decimal places indifferent situations, f) subtract decimals up to 4-decimal places in different situations, a) g) appreciate use of decimals in real-life situations.	The learner is guided to: • work out place value of decimals up to ten thousandths using place value apparatus, • relate place value of decimals up to ten thousandths to the number of decimal places, • discuss and round off decimals up to 3 decimal places, • change decimals to fractions using a square/rectangular grid, • change fractions to decimals using a square/rectangular grid, • add decimals up to 4-decimal places using shared place value apparatus, • subtract decimals up to 4- decimal places using place value apparatus, • play games involving decimals using digital devices or other resources.	Where are decimals applicable in real life?

Core Competencies to be developed: Communication and collaboration: learner discusses and relates place value of decimals up to ten thousandths to the number of decimal places.
Values: Responsibility: learner adds decimals up to 4-decimal places using place value apparatus and shows responsibility by taking care of the apparatus.
Pertinent and Contemporary Issues (PCIs): Learner adds decimals up to 4-decimal places using place value apparatus and share answers or working strategies with one another as part of Peer education.
Link to other learning areas: Learner acquires new mathematical terms as they discuss and round off decimals up to 3 decimal places as acquired from Languages.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
1.0 Numbers	**1.6 Inequalities** (8 Lessons) *Forming, simplifying and solving simple inequalities*	By the end of the sub-strand, the learner should be able to; a) form simple inequalities in one unknown involving real-life situations, b) simplify inequalities in one unknown involving real-life situations, c) solve simple inequalities in one unknown involving real-life situations, d) appreciate use of inequalities in real-life situations.	The learner is guided to: • discuss meaning of inequality symbols '> 'and '< ', • form inequalities in one unknown using different operations, • simplify inequalities in one unknown using cards or charts, • work out simple inequalities involving one unknown, • play games involving inequalities using digital devices or other resources.	How do we solve simple inequalities?
Core Competencies to be developed: Self-efficacy: learner confidently works out simple inequalities involving one unknown.				
Values: Responsibility: as learner works with peers to use IT devices carefully to simplify inequalities.				
Pertinent and Contemporary Issues (PCIs): Social cohesion: Learner works together with others harmoniously to form inequalities in one unknown to enhance social cohesion.				
Link to other learning areas: Learner uses new terms used in inequalities to enhance vocabulary in Languages.				

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to use place value and total value of digits up to millions	The learner uses place value and total value of digits up to millions correctly and systematically	The learner uses place value and total value of digits up to millions correctly	The learner uses place value or totalvalue of digits up to millions correctly	The learner uses place value or total value of digits up to hundreds of thousands correctly
Ability to read and write numbers in symbols and in words	The learner reads and writes numbers in symbols and in words accurately and fluently.	The learner reads and writes numbers in symbols and in words accurately	The learner reads or writes numbers in symbols or in words accurately	The learner reads or writes numbers in symbols or in words partially accurately
Ability to order and round off numbers up to 100,000	The learner orders and rounds off numbers up to 100,000 correctly and systematically.	The learner orders and rounds off numbers up to 100,000 correctly	The learner orders or rounds off numbers up to 100,000 correctly	The learner orders or rounds off numbers up to 50,000 correctly
Ability to apply squares and square roots of whole numbersup to 100	The learner applies squares and square roots of whole numbers up to 100 correctly and consistently	The learner applies squares and square roots of whole numbers up to 100 correctly	The learner applies squares or square roots of whole numbers up to 100 correctly	The learner applies squares or square roots of whole numbers up to 70 correctly
Ability to Multiply up to a 4-digit number by a 2-digit number	The learner multiplies up to a 4 digit number by a 2 digit number correctly and consistently	The learner multiplies up to a 4-digit number by a 2 digit number correctly	The learner multiplies up to a 3-digit number by a 2 digit number correctly	The learner multiplies up to a 2-digit number by a 1 digit number correctly

Ability to round off decimals up to 3 decimal places	The learner rounds off decimalsup to 3 decimal places correctly and logically	The learner rounds off decimals up to 3 decimal places correctly	The learner rounds off decimals up to 2 decimal places correctly	The learner rounds off decimals to 1 decimal place correctly
Ability to create patterns involving addition, subtraction and multiplication	The learner creates patterns involving addition, subtraction and multiplication accurately and creatively.	The learner creates patterns involving addition, subtraction and multiplication accurately.	The learner creates patterns involving any two of; addition, subtraction or multiplication accurately	The learner creates patterns involving any one of; addition, subtraction or multiplication accurately
Ability to divide up to a 4-digit number by up to a 3-digit number	The learner divides up to a 4-digit number by upto a 3 digit number correctly and consistently	The learner divides up to a 4-digit number by upto a 3 digit number correctly	The learner divides upto a 4-digit number by up to a 2-digit number correctly	The learner divides up to a 3-digit number by a 1-digit number correctly
Ability to add and subtract fractions using LCM	The learner adds and subtracts fractions using LCM correctly and proficiently	The learner adds and subtracts fractions using LCM correctly	The learner adds or subtracts fractions using LCM correctly	The learner Adds or subtracts fractions using LCM partially correctly
Ability to convert fractions to percentages and percentages to fractions	The learner converts fractions to percentages and percentages to fractions correctly and systematically	The learner converts fractions to percentages and percentages to fractions correctly	The learner converts fractions to percentages or percentages to fractions correctly	The learner Converts fractions to percentages correctly

Ability to identify decimals up to ten thousandths	The learner identifies decimals up to ten thousandths correctly and fluently	The learner identifies decimals up to ten thousandths correctly	The learner identifies decimals upto thousandths correctly	The learner identifies decimals up to hundredths correctly
Ability to convert decimals to fractions and fractions to decimals	The learner converts decimals to fractions and fractions to decimals correctly and logically	The learner converts decimals tofractions and fractions todecimals correctly	The learner converts decimals to fractions or fractions to decimals correctly	The learner converts decimals to fractions or fractions to decimals partially correctly
Ability to convert decimals to percentages and percentages to decimals	The learner converts decimals to percentages and percentages to decimals correctly and logically	The learner converts decimals topercentages and percentages to decimals correctly	The learner converts decimals to percentages or percentages to decimals correctly	The learner converts decimals to percentages or percentages to decimals partially correctly
Ability to add and subtract decimals up to 4-decimal places	The learner adds and subtracts decimals up to 4- decimal places correctly and logically	The learner adds and subtracts decimals upto 4- decimal places correctly	The learner adds or subtracts decimals up to 4-decimal places correctly	The learner adds or subtracts decimals up to 4-decimal places partially correctly
Ability to form, simplify and solve inequalities in one unknown	The learner forms, simplifies and solves inequalities in one unknown accuratelyand logically	The learner forms, simplifies and solves inequalities in one unknown accurately	The learner forms, simplifies or solves inequalities in one unknown accurately	The learner forms inequalities in one unknown accurately

STRAND 2.0: MEASUREMENT

Strand	Sub -Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.1 Length** (14 Lessons**)** • *Millimetre (mm) as a unit of Measuring length* • *Conversions in length* • *Operations in length* • *Circumference of a circle*	By the end of the sub-strand, the learner should be able to; a) use the millimetre (mm) as a unit of measuring length in different situations, b) establish the relationship between the millimetre and centimetre in different situations, c) convert centimetres and millimetres to millimetres in different situations, d) add centimetres and millimetres in different situations, e) subtract centimetres and millimetres in different situations, f) multiply centimetres and millimetres by whole	The learner is guided to: • discuss and identify the millimetre as a unit of measuring length using a ruler, • measure length of objects in millimetres using a ruler, • measure a given length in cm and mm to establish the relationship between mm and cm, • convert mm to cm and cm to mm when measuring lengths of different objects and comparing results, • measure lengths of different objects in the environment, • determine lengths in mm and cm in addition, subtraction, multiplication and division and discuss the answers, • sketch the circumference,	1. 1. Why do we measure distances in day-to-day life? 2. 2. What do we use to measure length in real life?

		numbers in real-life situations, g) divide centimetres and millimetres by whole numbers in real-life situations, h) determine the circumference of acircle practically, i) identify the relationship between circumference and diameter in different situations, j) appreciate use of length in real-lifesituations.	diameter and radius of a circle practically, • measure the circumference of a circle practically, • divide circumference by diameter to get pi (π), • play games involving length in centimetres and millimetres using digital devices or other resources.	
Core Competences to be developed: **Creativity and imagination**: learner sketches the circumference, diameter and radius of a circle practically.				
Values: **Unity**: learner works amicably with peers to determine lengths in centimetres and millimetres in addition, subtraction, multiplication and division and discuss the answers.				
Pertinent and Contemporary Issues (PCIs): Learner chooses appropriate units for measuring lengths of different objects in the environment as enhanced from Environmental Education.				
Link to other learning areas: Learner handles objects with care when measuring lengths of different objects in the school compound for play activities in Creative Arts.				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.2 Area (**6 Lessons**)** *Area of triangles and combined shapes*	By the end of the sub-strand, the learner should be able to; a) work out area of triangles in square centimetres (cm^2), b) work out area of combined shapes involving squares, rectangles and triangles in cm^2, c) estimate the area of circles by counting squares, d) appreciate the use of cm^2 in working out area in real life.	The learner is guided to: • establish that the area of a triangle is equal to a half of the area of a rectangle or a square when the rectangle or the square is divided by a diagonal, • work out the area of triangles in cm^2 using the relationship between a rectangle and a triangle (*Area of a triangle is equal to ½ area of a rectangle or square.* *A = ½ (Lx W)*, • sketch a circle on a unit square grid and count the full squares to estimate the area of circles and compare answers, • prepare own combined shapes involving rectangles, squares, triangles and ask peers to determine the area, • play games involving area using digital tools or other resources.	Where is area used in real life?

Core Competencies to be developed: **Creativity and imagination**: learner works out the area of triangles in cm^2 using the relationship between a rectangle and a triangle.
Values: **Love**: learner sketches a circle on a unit square grid and counts the full squares to estimate the area of circles and compare answers with one another.
Pertinent and Contemporary Issues (PCIs): Learner confidently establishes that the area of a triangle is equal to a half of the area of a rectangle or a square when the rectangle or the square is divided by a diagonal to enhance self-esteem.
Link to other learning areas: Learner explores their environment to calculate area of different places such as play fields within the community as learnt in Social Studies.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.3 Capacity** (6 Lessons) • *Capacity in centimetres (cm^3), millilitres and litres* • *Conversions in capacity*	By the end of the sub-strand, the learner should be able to; a) identify the relationship among cubic centimetres (cm^3), millilitres and litres in real life, b) convert litres to millilitres in different situations, c) convert capacity in millilitres to litres in different situations, d) appreciate use of cm^3 and litres in measuring capacity in real life.	The learner is guided to: • work out the relationship between cm^3, mililitres and litres through measuring practically, • measure capacity in millilitres and litres, discuss answers and share with others, • change capacity in litres to millilitres using containers from the environment by comparing sizes of different containers, • work out conversions of capacity of millilitres to litres, • play games involvingcapacity using containers of different capacities.	1. How can we measure capacity? 2. Where is capacity applicable in real life?

Core Competencies to be developed: Critical thinking and problem solving: learner works out the relationship between cm^3, millilitres and litres through measuring capacities practically.
Values: Peace: learner works together with others harmoniously to measure capacity in millilitres and litres and agree on answers.
Pertinent and Contemporary Issues (PCIs): Learner changes capacity in litres to millilitres using containers from the environment as part of Environmental education.
Links to other learning areas: Learner takes accurate measurements of liquids using different containers from the immediate environment as part of Science and Technology.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurement	**2.4 Mass** **(**14 Lessons**)** • *Tonne as a unit for measuring mass* • *Conversions in mass* • *Operations in mass*	By the end of the sub-strand, the learner should be able to; a) identify the tonne as a unit for measuring mass in real life, b) identify items measured in tonnes in real life, c) identify the relationship between the kilogramme and the tonne, d) estimate mass in tonnes in different situations, e) convert kilogrammes totonnes and tonnes to kilogrammes in real-lifesituations, f) add tonnes and kilogrammes in real lifesituations,	The learner is guided to: • discuss tonne as a unit of measuring mass • discuss items in the environment such as loaded lorries, whose mass may be measured in tonnes • establish the relationshipbetween the kilogramme and the tonne (*1000kg =1 tonne*). • estimate mass in tonnes of various objects found in the environment. • change kilogrammes to tonnes and tonnes to kilogrammes. • determine mass of items in tonnes and	1. How can we measure large amounts of mass? 2. In what situations would the tonnes be more applicable to use when measuring mass?

		g) subtract tonnes and kilograms in real-life situations, h) multiply tonnes and kilogrammes by whole numbers in real-life situations, i) divide tonnes and kilogrammes by whole numbers in real-life situations, j) appreciate use of the kilogramme and tonne inmeasuring mass.	kilogrammes using different operations involving addition, subtraction, multiplication and division. • use digital weighing machines to measure mass of different items.	
Core Competencies to be developed: **Digital literacy**: learner uses digital weighing machines to measure mass of different items.				
Values: **Integrity**: learner honestly determines mass of items kilogrammes using different operations involving addition, subtraction, multiplication and division.				
Pertinent and Contemporary Issues (PCIs): Learner discusses with others items in the environment such as loaded lorries, whose mass may be measured in tonnes and their impact on roads as learnt in Environmental education.				
Link to other learning areas: Learner discusses with others transit trucks that carry grains in tonnes to different places as learnt in Social Studies.				

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurements	**2.5 Time** (10 Lessons) • *Time in a.m. and p.m* • *Conversions in time* • *Interpreting travel timetables*	By the end of the sub-strand, the learner should be able to; a) identify time in a.m. and p.m. in day-to-day life experiences, b) write time in a.m. and p.m. in day-to-day life, c) relate time in a.m. and p.m. to the 24h clock system, d) convert time from 12h to 24h and 24h to 12h system, e) interpret travel timetable in different situations, f) appreciate use of time in both 12h and 24h systems.	The learner is guided to: • discuss time in a.m. and p.m. from digital and analogue clocks. • determine time in a.m. and p.m. from digital and analogue clocks. • equate time in a.m. and p.m.to the 24h clock system using a chart. • change time from the 12h to 24h system and 24h to 12h using a chart. • interpret travel timetables to create travel schedules for different events. • determine time durations of travelling using travel timetables within the country. • check local time using digital clock or analogue in 12h and 24h systems.	How do we read and tell time?

Core Competencies to be developed: **Learning to learn**: learner determines time in a.m. and p.m. from digital and analogue clocks.
Values: **Integrity**: learner observes time in various activities and is punctual.
Pertinent and Contemporary Issues (PCIs): Learner discusses the transit trucks that carry grains in tonnes to different places as learnt from Social Studies. Learners determine time durations of travelling using travel timetables within the country as enhanced in Citizenship.
Link to other learning areas: Learner records time taken to perform in different games such as athletics as done in Creative Arts.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
2.0 Measurements	**2.6 Money** (8 lessons) • *Simple budget* • *Buying and selling prices* • *Profit and loss* • *taxes*	By the end of the sub-strand, the learner should be able to; a) prepare simple budget in different situations, b) determine buying and selling prices of different items in the community, c) work out profit from sales of different items in the community, d) calculate loss realised from sales of different items in the community, e) identify types of taxes in different situations, f) appreciate use of money in real-life situations.	The learner is guided to: • identify different shopping items in the community or at home especially food items and prepare a simple budget, • discuss the meaning of buying and selling price, • determine buying and selling prices of different items in the community, • discuss the meaning of profit and loss in real-life situations and share with peers, • discuss and determine profit and loss by practising buying and selling from the classroom model shop, • discuss income and value added tax (VAT) from receipts issued by shops and retailers as a form of tax,	How can you make profit ina business?

			• use IT devices or other resources to explore more on money.	
Core Competencies to be developed: **Communication and collaboration**: Learner discusses with others the meaning of profit and loss in real-life situations and shares with peers.				
Values: **Integrity**: Learner honestly determines buying and selling prices of different items in their classroom model shop.				
Pertinent and Contemporary Issues (PCIs): Learner discusses with others income and value added tax (VAT) as a form of tax as part of financial literacy.				
Links to other learning areas: Learner participates in making budgets for buying food at home as learnt from Agriculture.				

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to convert centimetres to millimetres and millimetres to centimetres	The learner converts centimetres to millimetres and millimetres to centimetres correctly and proficiently	The learner converts centimetres to millimetres and millimetres to centimetres correctly	The learner converts centimetres to millimetres or millimetres to centimetres correctly	The learner converts centimetres to millimetres correctly
Ability to add, subtract, multiply and divide centimetres and millimetres	The learner adds, subtracts, multiplies and divides centimetres andmillimetres correctly and proficiently	The learner adds, subtracts, multiplies and divides centimetres andmillimetres correctly	The learner adds, subtracts, multiplies or divides centimetres or millimetres correctly	The learner adds or subtracts centimetres or millimetres correctly
Ability to measure the circumference of a circle	The learner measures the circumference of a circle correctly and efficiently	The learner measures the circumference of a circle correctly	The learner measures the circumference of a circle less efficiently	The learner measures the circumference of a circle partially correctly
Ability to work out area of triangle and combined shapes	The learner works out area of triangle and combined shapes correctly and systematically	The learner works out area of triangle and combined shapes correctly	The learner works out area of triangle or combined shapes correctly	The learner works out area of triangle correctly
Ability to identify the relationship among cm^3, millilitres and litres	The learner identifies the relationship among cm^3, millilitres andlitres correctly and logically	The learner identifies the relationship among cm^3, millilitres and litres correctly	The learner identifies the relationship between millilitres and litres correctly	The learner Identifies the relationship between millilitres and litres partially correctly

Ability to convert litres to millilitres and millilitres to litres	The learner converts litres to millilitres and millilitres to litres correctly and logically	The learner converts litres to millilitres and millilitres to litres correctly	The learner converts litres to millilitres or and millilitres to litres correctly with help	The learner converts litres to millilitres correctly
Ability to identify the relationship between the kilograms and the tonne and converts tonnes to kilograms and kilograms to tonnes	The learner identifies the relationship between the kilograms and the tonne and converts tonnes to kilograms and kilograms to tonnes correctly and logically	The learner identifies the relationship between the kilograms and the tonne and converts tonnes to kilograms and tonnes to kilograms correctly	The learner identifies the relationship between the kilograms and the tonne or converts tonnes to kilograms or tonnes to kilograms correctly	The learner identifies the relationship between the kilograms and the tonne correctly
Ability to add, subtract, multiply and divide tonnes and kilograms	The learner adds subtracts, multiplies and divides tonnes and kilograms accurately and proficiently	The learner adds subtracts, multiplies and divides tonnes and kilograms accurately	The learner adds subtracts, multiplies or divides tonnes or kilograms accurately	The learner adds or subtracts tonnes or kilograms accurately
Ability to identify and write time in a.m. and p.m.	The learner identifies and writes time in a.m.and p.m. accurately and consistently	The learner identifies and writes time in a.m. and p.m.accurately	The learner identifies or writes time in a.m. or p.m.accurately	The learner identifies time in a.m. or p.m. accurately
Ability to convert time from 12h to 24hand 24h to 12h system and interpret traveltimetables	The learner converts time from 12h to 24h and 24h to 12h system and Interprets travel timetables accurately and logically	The learner converts time from 12h to 24h and 24h to12h system and Interprets travel timetables accurately	The learner converts time from 12h to 24h or 24h to12h system or Interprets travel timetables accurately	The learner converts time from 12h to 24h system or Interprets travel timetables partially accurately

Ability to prepare a simple budget and determine buying and selling prices	The learner prepares a simple budget and determines buying and selling price accurately and comprehensively	The learner prepares a simple budget and determines buying and selling price accurately	The learner prepares a simple budget or determines buying or selling price accurately	The learner prepares a simple budget or determines buying or selling price partially accurately
Ability to work out profit and loss from sales and identify types of taxes	The learner works out profit and loss from sales and identifies types of taxes accurately and consistently	The learner works out profit and loss from sales and identifies types of taxes accurately	The learner works out profit or loss from sales or identifies types of taxes accurately	The learner works out profit or loss from sales or Identifies types of taxes partially accurately

STRAND 3.0: GEOMETRY

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Geometry	**3.1 Lines** (6 Lessons) • *Parallel lines* • *Bisecting lines* • *Perpendicular lines*	By the end of the sub-strand, the learner should be able to; a) draw parallel lines in different situations, b) bisect lines by construction, c) construct perpendicular lines in different situations, d) appreciate use of lines in daily life.	The learner is guided to: • construct parallel lines using geometrical instruments and other writing materials, • bisect lines using geometrical instruments, • draw perpendicular lines using geometrical instruments, • share digital devices and other resources to draw parallel lines.	Why do we need to draw lines?
Core Competencies to be developed: **Creativity and imagination**: as learner bisects lines using ruler and compasses.				
Values: **Responsibility**: Learner carefully shares digital devices and other resources to draw parallel lines.				
Pertinent and Contemporary Issues (PCIs): Learner exercises caution as they use geometrical instruments in construction of parallel lines as they observe safety measures.				
Link to other learning areas:: Learner constructs lines that can be used in creative drawing as part of Creative Arts.				

Strand	Sub-Strand	Specific Learning outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Geometry	**3.2 Angles** (6 Lessons**)** • *Angles on a straight line* • *Measure angles* • *Sum of angles* • *Equilateral, right-angled and isosceles triangles* • *Interior angles*	By the end of the sub-strand, the learner should be able to; a) identify angles on a straight line at a point in different situations, b) measure angles on a straight line at a point in different situations, c) work out sum of angles on a straight line in different situations, d) determine the sum of angles in rectangles and triangles, e) construct equilateral, right-angled and isosceles triangles, f) measure the interior angles of equilateral, right-angled and isosceles triangles, g) appreciate use of angles in real life.	The learner is guided to: • discuss angles on a straight line using concrete objects that have straight edges, • draw a line that cuts the straight line to form an angle. Measure and write the size(s) of angles formed. Compare the sizes of angles with your classmates, • work out the sizes of various angles on a straight line, • practically establish the sum of angles in a triangle and rectangles using different objects in the environment, • identify and draw equilateral, right-angled and isosceles triangles using geometrical instruments, • practically establish the sum of the interior angles in a rectangle and triangle, • use geometrical instruments or digital resources to practise drawing different lines and angles.	Where can you use angles in real life?

Core Competencies to be developed: Self-efficacy: Learner confidently and practically establishes sum of the interior angles in a rectangle and triangle.
Values: Unity: Learner works harmoniously with others to compare the sizes of angles.
Pertinent and Contemporary Issues (PCIs): Learner practically establishes the sum of angles in a triangle and rectangles from different objects in the environment as enhanced in Environmental education.
Link to other learning areas: Learner draws lines and angles that can be used in drawing and painting in Creative Art.

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
3.0 Geometry	**3.3 3-D Objects** (6 Lessons**)** • *Vertices, faces and edges* • *Plane figures in 3-D objects*	By the end of the sub-strand, the learner shouldbe able to; a) identify vertices, faces and edges in cuboids and cubes in different situations, b) identify faces and edges of cylinders in different situations, c) describe plane figures in 3-D objects in the environment, d) appreciate use of 3-D objects in real life.	The learner is guided to: • discuss and collect 3-D objects and safely keep them as part of their role in environmental conservation, • identify and relate cuboids and cylinders in the environment, • open up nets of cuboids, cubes and cylinders and sketch the layout, • discuss the rectangular, square and circular shapes on the nets, • manipulate 3-D objects using containers or digitally using IT devices.	How do we use containers in daily life?
Core Competencies to be developed: Creativity and imagination: Learner opens up nets of cuboids, cubes and cylinders.				

Values: Learner discusses with others and collect 3-D objects and safely keep them as part of their role in environmental conservation to enhance Patriotism.
Pertinent and Contemporary Issues (PCIs): Learner discusses with others rectangular, square and circular shapes on the nets and respect each other's views as part of social cohesion.
Link to other learning areas: Learner discusses with others the differences between 3-D objects in terms of faces, edges and vertices in drawing and improves language skills.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to construct parallel and perpendicular lines	The learner constructs parallel and perpendicular lines accurately and systematically	The learner constructs parallel and perpendicular lines accurately	The learner constructs parallel or perpendicular lines correctly	The learner constructs parallel lines correctly
Ability to bisect lines through construction, identify and measure angles on a straight line at a point	The learner bisects lines through construction, identifies and measures angles on a straight line at a point correctly and consistently	The learner bisects lines through construction, identifies and measures angles on a straight line at a point correctly	The learner bisects lines through construction, identifies or measures angles on a straight line at a point correctly	The learner bisects lines through construction or Identifies angles on a straight line at a point correctly
Ability to work out sum of angles on a straight line, rectangles and triangles	The learner works out sum of angles on a straight line, rectangles and triangles accurately and correctly	The learner works out sum of angles on a straight line, rectangles and triangles accurately	The learner works out sum of angles on a straight line, rectangles or triangles accurately	The learner works out sum of angles on a straight line accurately
Ability to construct equilateral, right-angled and isosceles triangles and measure their interior angles	Constructs equilateral, right-angled and isosceles triangles and measures their interior angles accurately and systematically	Constructs equilateral, right-angled and isosceles triangles and measures their interior angles accurately	Constructs equilateral, right-angled or isosceles triangles or measure their interior angles accurately	Constructs equilateral, right angled or isosceles triangles accurately.

Ability to identify vertices, faces and edges in cuboids and cubes	The learner identifies vertices, faces and edges in cuboids and cubes correctly and systematically	The learner identifies vertices, faces and edges in cuboids and cubes correctly	The learner identifies any two of; vertices, faces or edges in cuboids or cubes correctly	The learner identifies any one of; vertices or faces or edges in cuboids or cubes correctly
Ability to identify faces and edges of cylinders	The learner identifies and edges of cylinders correctly and systematically	The learner identifies faces and edges of cylinders correctly	The learner identifies faces or edges of cylinders correctly	The learner identifies faces or edges of cylinders partially correctly.

STRAND 4.0: DATA HANDLING

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Suggested Key Inquiry Question(s)
4.0 **Data Handling**	**4.1** **Bar Graphs (**10 Lessons**)** • *Frequency table* • *Pictographs, Piling and bar graphs* • *Interpreting bar graphs*	By the end of the sub-strand, the learner should be able to; a) draw a frequency table of real-life situation data, b) represent data from real-life situations using pictographs c) represent data from real-life situation through piling, d) represent data from real-life situations using bar graphs, e) interpret information from bar graphs, f) appreciate use of bar graphs in real life.	The learner is guided to: • discuss with peers and collect data on identified topic from immediate environment and organise the data in a frequency table, • collect data, discuss and organise it in pictographs, • pile similar objects such as match boxes vertically to represent data, • discuss and organise data in form of bar graphs, • discuss information represented on bar graphs and explain what it represents, • use digital devices or other resources to draw bar graphs and other charts to present data.	How can bar graphs be used in real-life situations?

Core Competencies to be developed: **Creativity and imagination**: as learner discusses with others and collects data and organises it using pictographs.
Values: **Integrity**: Learner piles similar objects such as match boxes vertically to honestly represent data.
Pertinent and Contemporary Issues (PCIs): Learner collects data on identified topic from immediate environment to address community issues as part of non-formal education.
Link to other learning areas: Learner gathers information on any items in the environment that will enhance learning in Science and technology.

Suggested Assessment Rubric

Level / Indicator	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Ability to draw a frequency table	The learner draws a frequency table accurately with all details	The learner draws a frequency table accurately	The learner draws a frequency table accurately with most details	The learner draws a frequency table with minimal details
Ability to represent data using pictographs, piling and bar graphs	The learner represents data using pictographs, piling and bar graphs correctly and accurately	The learner represents data using pictographs, piling and bar graphs correctly	The learner represents data using pictographs, piling andor bar graphs correctly	The learner represents data using pictographs or piling partially correctly
Ability to interpret information from bar graphs	The learner interprets information from bar graphs correctly and comprehensively	The learner interprets information from bar graphs correctly	The learner interprets information from bar graphs with most details	The learner interprets information from bar graphs with minimal details

APPENDICES

APPENDIX I: SUGGESTED RESOURCES

Strand	Sub-Strand	Resources
NUMBERS	Whole numbers	Place value apparatus, number charts, number cards, multiplication tables
	Multiplication	Multiplication tables
	Division	Multiplication tables
	Fractions	Equivalent fraction board, circular and rectangular cut-outs, counters
	Decimals	Place value charts, number cards
MEASUREMENT	Length	Metre rule, 1metre ticks, tape measure
	Area	Square cut outs, 1cm squares, 1m squares
	Capacity	Tea spoons, containers of different sizes, water, sand, soil
	Mass	Tea spoons, soil or sand, manual/electronic weighing machine, beam balance
	Time	Analogue and digital clocks, digital watches, stopwatches
	Money	Price list, classroom shop, electronic money tariff charts

GEOMETRY	Lines	Chalkboard ruler, 30cm ruler, straight edges
	Angles	Unit angles, protractors, rulers
	3-D objects	Cubes, cuboids, cylinders, pyramids, spheres, cut-outs of rectangles, circles, and triangles of different sizes
DATA HANDLING	Bar graphs	Bar graph worksheets, data graph worksheets, data samples from different sources
ALGEBRA	Inequalities	Digital inequality worksheets; greater than, less than or equal to, sorting cards.

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, CDs, scanners, internet among others.

APPENDIX II: SUGGESTED ASSESSMENT METHODS AND TOOLS

a) Written tests and quizzes
b) Rating scales
c) Projects
d) Observation schedules
e) Portfolios
f) Assessment rubric
g) Questionnaires

APPENDIX III: CSL GUIDELINES FOR UPPER PRIMARY (GRADE 4-6)

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 Social studies learning area. The implementation of the CSL activity is a collaborative effort where the class teacher coordinates and works with other subject teachers to design and implement the integrated CSL activity. Though they are teacher-guided, the learners should progressively be given more autonomy to identify problems and come up with solutions. 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 ● 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 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. 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 and values demonstrated. 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 or rating scale or any other appropriate tool.