THE REVOLUTIONARY GOVERNMENT OF ZANZIBAR

MINISTRY OF EDUCATION AND VOCATIONAL TRAINING

SYLLABUS FOR PRIMARY EDUCATION

STANDARD I – III

MATHEMATICS

2022

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PREFACE

The Mathematics Syllabus for Standard I-III of 2022 is derived from the great changes in education that were conducted by the Ministry of Education and Vocational Training (MoEVT), that has included the curriculum review of Pre-primary and Primary Education in 2019. The aim of reviewing this syllabus is to make it go along with the development of science and technology, competitive in labor market with global economic changes as it has been explained in several governmental documents including Zanzibar Education Policy.

Due to Zanzibar Education Changes which led to return Standard Seven, as among the ways of strengthening Primary Education, currently Primary Education will take the duration of 7 years instead of 6 years as it was being practiced before. Regarding to those changes, MoEVT through the Zanzibar Institute of Education (ZIE) has prepared the Mathematics Syllabus in order to suit the subject's needs. Therefore, this syllabus contains all Mathematics topics that relate to the aim and context of the subject concerned. The writing of this syllabus has included several educational stakeholders in different levels especially in primary education. MoEVT through ZIE has ensured that Syllabus seriously considers the stakeholders' opinions together with the review of several documents from other countries that are similar geographically, number of citizens and educational system in general.

MoEVT sincerely provides thanks to all the stakeholders including members of ZIE Advisory Board, Management and ZIE Staff members, Technical Team, Curriculum Developers, Teachers as well as various Retired MoEVT professionals who participated in developing this standard I-III Syllabus from the starting to the completion.

The MoEVT hopes that, this Syllabus will be used for all private and Government Schools in Zanzibar, as well as other curriculum implementers at Primary Educational level.

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Finally, ZIE would like to extend its sincere gratitude to the Revolutionary Government of Zanzibar and other Development Partners especially Global Partnership for Education (GPE) for its technical and financial contribution for the completion of this task.

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INTRODUCTION

This Mathematics syllabus of 2022 for Lower primary has been prepared to meet the basic needs at the primary education level in Zanzibar. It is derived from the 2009 Curriculum which was reviewed in 2019. This introduction clarifies the Philosophy of Education in Zanzibar, the Goals and Objectives of the Primary Education in Zanzibar, the Reasons for Conducting the Primary Education Curriculum Review, The Importance of Writing a Mathematics Subject Syllabus followed by the list of the general outcomes expected to be achieved by the target learners. This introduction also indicates the Scope and Sequence together with the clarification of the Syllabi Matrix Components. The Syllabus also includes the selection of learning topics, the general learning outcomes for each class as well as the syllabus matrix.

1.1 Zanzibar Philosophy of Education

The Curriculum Framework for Pre-Primary and Primary Education is inline with Zanzibar's philosophy of education, values and principles of its education system. The philosophy of education in Zanzibar is the same as that of the United Republic of Tanzania which aims at the provision of Education for Self-reliance.

This philosophy is featured by self independence, confidence, progressiveness, possession of life skills, valuing equality, entrepreneurship, inventiveness, inquisitiveness, creativity, and the ability to assess/ evaluate/ reflect and analyse.

1.2 The Overall Goals of Education in Zanzibar

The Overall Goals of Education in Zanzibar are:

1. To promote and sustain the best cultural values, attitudes and customs of the peoples of Zanzibar/Tanzania for the purpose of enhancing unity and cultural identity.
2. To promote the acquisition of all forms of knowledge, skills and attitude that will fully enhance the people's individual and societal wellbeing.
3. To enable every citizen to understand and respect the principles of the Zanzibar and Tanzania Constitutions, Human Rights as well as civil rights, obligations and responsibilities.
4. To promote and enhance the proper use, management and conservation of the environment.
5. To instill appreciation and respect of civil service and self employed work, as well as observing accountability, discipline and quality performance at work.
6. To inculcate the attitude towards adhering to the principles and practices of tolerance, peace, love, justice, human rights and fundamental freedoms, national unity and international cooperation as enshrined in the international basic charters.

1.3 General Objectives of Primary Education

The general objectives of Primary Education in Zanzibar are as follows:-

1. To enable all children of school going age develop and sustain strong foundations of skills in reading, writing, counting, creating and communicating in Kiswahili, English and other foreign languages.
2. To enable learners understand the application of science and technology and recognize its contribution to national and international development.
3. To lay, develop and sustain in learners' strong foundations of thinking skills and inquisitiveness in order to understand their environment and social relationships.
4. To enable the learners, understand how past events influence the present as well as the future.
5. To discover learner's talents from their early age in order to sustain and develop them.
6. To lay strong foundations of skills of observation, thinking and co-operation in solving problems which hinder children's personal development and the development of their society.
7. To prepare learners for joining secondary education.
8. To enable the learners, develop mental abilities and interest in continuous search for knowledge.
9. To familiarize learners with productive vocational activities and promote their readiness to fulfil their social responsibilities.
10. To enable learners, recognize and uphold national unity as well as the cooperation between their nation and people of other nations.
11. To enable the learners, develop acceptable moral, cultural and ideological values in order to promote patriotism and understanding of their country's historical, political and social situations.
12. To develop and sustain learners' self – discipline, observance of gender equality and maintenance of personal and other peoples' health.
13. To enable the learners, develop habits of smartness, cleanliness and proper use of their leisure time.
14. To promote learners' love for their environment and interest in environmental conservation.

1.4 Reasons for the Reviewing of Primary Education Curriculum

In 2019, the Revolutionary Government of Zanzibar through ZIE conducted a review of the curriculum for Pre-primary and Primary Education for its improvement so as to conform to the science and technology advancements,

employment market competitiveness and the global economic reform, as stated in various Government documents including the Zanzibar Education Policy. The policy seeks to improve and promote the quality and relevance of the Zanzibar primary education by continuing to establish a meaningful linkage from nursery, primary and secondary levels in order to meet the demands and expectations of the target learners and their community at large. Among the recommended changes is the restoration of seven (7) years of primary education instead of the six (6) years that were formerly practiced.

1.5 Importance of Learning Mathematics Subject

According to the 2019 educational review it was realized that the Mathematics subject provides knowledge and skills which promotes significant cognitive maturity, ability to apply the acquired skills and knowledge, analysis of variable issues in real situations and making meaningful decisions. This subject also develops the learner's ability to rationalize logically and thus helps him/her to apply the acquired knowledge and skills in his/her daily life experiences.

1.6 General Subject Learning Outcomes

After studying Mathematics at primary school level the pupils shall demonstrate ability to:

1. Apply the knowledge and skills acquired in Mathematics subject to solve the everyday problems
2. Perform simple activities / actions related to Mathematical operations (Additions, subtraction, multiplications and divisions)
3. Understand the basic principles of financial profession.

2.0 STRUCTURE OF THE SYLLABUS

This syllabus consists of two main sections: the preliminary pages and the teaching and learning tables/matrix.

2.1 Preliminary Matters

This section consists of the introduction of syllabus, Zanzibar Philosophy of Education, goals and objectives of Zanzibar Primary Education, reasons for reviewing Mathematics Syllabus and importance of learning Mathematics. Also, there is the general learning outcomes of Mathematics for Standards I-III. Other aspects are: explanations on items from the syllabus matrix as well as the scope and sequence of the topics therein.

2.2 Teaching and Learning Table/Matrix

This section shows the learning procedures clarified in the three tables which carries the content of learning from Standard I-III. Each table starts with the list of general learning outcomes for the specific class. After the general learning outcomes, follows the table of matrix with six columns with topics: Topics, specific learning outcomes, learning techniques, learning resources, assessment, and number of periods for each subtopic. The following are explanations for each item from the teaching and learning tables/matrix.

2.2.1 Topics

The topics focus on the scope of teaching and learning of specific topic.

2.2.2 Specific Learning Outcomes

Each Subtopic shows specific learning outcomes. Those learning outcomes describe knowledge, skills, and attitude that each learner is supposed to gain from the subtopic. Specific learning outcomes are used in assessment that demonstrates indicators of the competence. Normally, pupil begins to show some indicators while learning. So each learner is supposed to attain the mentioned specific learning outcomes.

2.2.3 Learning Techniques

This column consists of some recommended learning techniques for the topics of this subject. Such techniques are: questions and answers, brainstorming, demonstration, role-play, gallery walks, discovering, think- pair- share, problem - based learning, circus activities, and discussion. These techniques have been recommended as they prove to enhance participatory learning among learners. The teacher is advised to use other participatory techniques as he/she finds relevant and useful according to his/her teaching/ learning environment.

2.2.4 Learning Resources

Learning resources relate to learning techniques, specific learning outcomes, subtopic and the requirements of each subtopic. However the listed resources are the proposed samples, the teacher is advised to be creative in improvising resources from real environment or local raw materials. Also, teacher should cooperate with the learners to create and design learning resources by using local raw materials available in their environment.

2.2.5 Assessment

In this column, assessment techniques and tools are suggested to assess if the learners achieve the intended specific learning outcomes of the targeted topic. Assessment should be done daily, weekly, monthly, at the end of the term and year. Teacher is insisted to assess each learner's progress using various techniques. Those techniques are such as self-assessment, observation, portfolio, checklist, question and answers and exercises. While using those techniques, it is better for a teacher to focus on the proposed techniques and tools of assessment addressed in the syllabus and consider needs of every pupil.

2.2.6 Periods

This column shows the number of periods for the topics to be taught. That total has been reached after working out the total number of periods for this subject in each academic year (210) days for each class. Such total is divided by the number of sub-topics contained in the Syllabus so as to get the average number of periods for each sub-topic. This estimation can be altered by the teacher according to the teaching/learning circumstances of the topic concerned. However, such changes should not exceed the standard number of periods recommended to be used in the learning process for each learner per academic year. The mathematics subject has been allocated 8 periods per week for standard I to III. From Monday to Thursday the duration of one period is forty (40) minutes in the morning session and thirty-five (35) minutes in the afternoon session.

Each period will take only thirty (30) minutes on Fridays.The school management is required to compensate the learning time lost due to excuses related to religious festivals and Government official holidays.

2.3 Scope and Sequence

The topics have been sequenced in accordance with the learner's cognitive, physical and moral development, their capacity to learn and the importance of the subject in economic and social activities as well as the interdependence of the topics concerned. The topics have also been considered in terms of their differing levels of learning difficulty and complexity as the learner's progress at high levels of study.

The teacher is advised to teach these topics by taking into consideration the learning environment and the appropriate logic. The suggested sequence of topics in the Syllabus is as seen in the following matrix/ table.

SN.	SEQUENCES OF THE TOPICS PER CLASS			
	TOPIC	**STANDARD I**	**STANDARD II**	**STANDARD III**
1.	WHOLE NUMBERS	√	√	√
2.	MATHEMATICAL OPERATIONS	√	√	√
3.	FRACTIONS	√	√	√
4.	SHAPES	√	√	
5.	MEASUREMENTS	√	√	√
6.	TIME AND HOURS	√	√	√
7.	GEOMETRY			√
8.	CURRENCY	√	√	√
TOTAL		**7**	**7**	**7**

STANDARD - I

General Learning Outcome for Standard One

Learning mathematics subject in Standard one the pupils shall demonstrate ability to: -

1. Read, count and write numbers correctly
2. Use numbers to perform arithmetic operations
3. Develop skills of making shapes and using them in identifying fraction.
4. Acquire skills of using traditional measurement.
5. Understand Tanzania currency and its uses.
6. Understand time and hours of the day.

STANDARD ONE

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
1. WHOLE NUMBERS 1.1 Counting objects (1 to 200)	**Pupil should demonstrate the ability to:** i. Identify objects by counting. ii. Count by arranging objects according to their properties. iii. Count different objects.	• Games • Songs • Question and answers • Practices • ICT Presentation	• Sticks • Bottle caps • Pebble • Pencils • Pens • Abacus cards • Video clips of counting	• Question and answer • Observation • Portfolio • Reference cards	21
1.2 Reading numbers (1 to 200)	**Pupil should demonstrate the ability to:** i. Specify shapes of numbers. ii. Arrange numbers in order. iii. Read numbers correctly.	• Games • Group discussion • Songs • Gallery walk • ICT Presentation	• Basket of numbers • Number cards • Number charts • Abacus of cards • Number plates • Number tree • Number books • Television • Flash/DVD player • Video clips of reading numbers	• Question and answer • Observation • Portfolio • Peer assessment	21

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
			(Ubongo kids)		
1.3 Writing numbers (1 to 200)	**Pupil should demonstrate the ability to:** i. Write numbers in steps. ii. Differentiate patterns of writing numbers. iii. Write numbers correctly.	• Games • Gallery walk • Jig-saw • Instructive graphics • Story • Boasting • Puzzle • ICT Presentation	• Sticks • Pencils • Slates • Books • Chalks • Number cards • Number charts • Sticks • Pencils • Television • Flash/DVD • Video Player	• Question and answer • Self-assessment • Check list • Portfolio	22
2. MATHEMATICAL OPERATIONS 2.1 Addition of numbers answers should not exceed 200	**Pupil should demonstrate the ability to:** i. Add the objects to find the sum. ii. Use addition sign to add the objects. iii. Add numbers using addition sign.	• Games • Gallery walk • Jig-saw • Jig-saw • Instructive graphics • Story • Boasting • Jig-saw • ICT Presentation	• Counters (Sticks, Bottle caps, Pebble, Pencils, Pens, Abacus of cards) • Flash/DVD • Television • Video Player	• Question and answers • Observation • Portfolio	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
2.2 Subtraction of numbers between 1 and 200	**Pupil should demonstrate the ability to:** i. Reduce objects to get the number of items remain. ii. Use subtraction sign to reduce the number of objects. iii. Subtract numbers using subtraction signs.	• Games • Gallery walks • Instructive graphics • Story • Boasting • Jig-saw ICT Presentation	• Counters (Sticks, Bottle caps, Pebble, Pencils, Pens, Abacus of cards) • Flash/DVD • Television • Video Player • Number cards Number charts	• Question and answers • Observation • Self-assessment • Peer assessment Portfolio	20
2.3 Simple word problems on addition (answer should not exceed 200) and subtraction of numbers (between 1 and 200)	**Pupil should demonstrate the ability to:** i. Change words to numbers. ii. Specify the addition and subtraction signs in simple word problems. iii. Solve simple word problems.	• Discussion • Question and answers • Story • Demonstration • ICT Presentation • Gallery walk • Songs	• Counters (Sticks, Bottle caps, Pebble, Pencils, Pens, Abacus of cards) • Number cards • Number charts	• Question and answers • Peer assessment • Instant questions • Portfolio • Observation of chain thought	22

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
3. FRACTIONS 3.1 Concept of fractions	**Pupil should demonstrate the ability to:** i. Explain the concept of fractions by using shapes. ii. Specify fractions by using real objects. iii. Differentiate fraction by using different objects.	• Role play • Demonstration • Question and answers • Practices • Boasting • ICT Presentation	• A4 papers • Pair of scissors • Sticks • Manila cards • Fraction cards • Wall of fractions • Flash/DVD • Television • Video Player	• Question and answers • Observation • Portfolio • Peer assessment • Reference cards	20
3.2 Structure of fractions	**Pupil should demonstrate the ability to:** i. Specify structure of fraction. ii. Read fractions $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$ *and* $\frac{1}{8}$ using figures and	• Role play • Gallery walk • Question and answers • Exercises • Practices • Story • ICT Presentation	• A4 papers • Pair of scissors • Sticks • Manila cards • Fraction cards • Charts of wall of fraction • Flash/DVD • Television • Video Player	• Question and answers • Observation • Portfolio • Self-assessment • Peer assessment	21

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	numerals. iii. Write fraction $\frac{1}{2}, \frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{1}{6}$ and $\frac{1}{8}$ by using figures and numerals.				
4. SHAPES 4.1 Concept of flat shapes	**Pupil should demonstrate the ability to:** i. Identify flat shapes. ii. Arrange flat shapes. iii. Relate concept of flat shapes in a real environment.	• Songs • Demonstration • Games • ICT Presentation • Gallery walk • Jig-saw • Study visits	• A4 papers • Manila cards • Chart of flat shape • Pair of scissors • Pieces of woods • Boxes • Flash/DVD • Television • DVD player	• Question and answers • Observation • Self-assessment • Portfolio • Peer assessment	21

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
4.2 Flat Shapes (square, rectangle, triangles and circles.)	**Pupil should demonstrate the ability to:** i. Relate similar objects with flat shapes. ii. Draw types of flat shapes. ii. Make various flat shapes objects	• Demonstration • Songs • ICT Presentation • Practice • Instructive graphics	• A4 papers • Manila cards • Figures of flat shapes • Scissors • Marker pen • Flash/DVD • Television • DVD player • Rulers • Pencils • Eraser	• Question and answers • Observation of chain thoughts • Peer assessment • Portfolio • Check list	21
5. MEASUREMENTS 5.1 Traditional measurement of length (Hand span, cubits, arm span and pace)	**Pupil should demonstrate the ability to:** i. Specify Traditional measurement of length. ii. Compare traditional measurement of length. ii. Measure length by using traditional measurement.	• Demonstration • ICT Presentation • Songs • Games • Question and answers • Exercises	• Rope • Chart that shows measurement of length • Thread • Television • Flash/DVD • Video Player	• Question and answers • Portfolio • Observation • Self-assessment • Peer assessment	21

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
5.2 Traditional measurements of Volume	**Pupil should demonstrate the ability to:** i. Specify traditional measurements of volume. ii. Compare traditional measurements of volume iii. Measure volume by using traditional measurements	• Demonstration • ICT Presentation • Songs • Games • Practices • Exercise	• Bottles • Can of water • Glass • Cups • Basin • Bucket • Water • Sand • Films that show measurements of volume • Television • Flash/DVD • Video Player	• Question and answers • Observation • Portfolio • Self-assessment • Peer assessment	21
6. TIMES AND HOURS 6.1 Times	**Pupil should demonstrate the ability to:** i. Specify time in a day. ii. Compare activities with time of day iii. Solve word problems leading to times.	• Songs • Games • Brainstorm • Demonstration • Exercises • Question and answers • ICT Presentation • Gallery walks	• Chart that shows activities and time of the day • Calendar • Picture that shows events of the day • Film that shows activities done in a particular time	• Question and answers • Observation • Portfolio • Self-assessment • Peer assessment	21

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
			in a day • Television • Flash/DVD • Video Player		
6.2 Hours	**Pupil should demonstrate the ability to:** i. Specify types of clocks. ii. Read the hour (complete and half) in twelve hours o'clock. iii. Draw a clock face. (analog and digital) iv. Solve word problems leading to hours.	• Songs • Games • Brainstorm • Demonstration • Practice • Question and answers • ICT Presentation	• Model of analogue and digital watch • Digital watch • Flash/DVD • Television • Video Player • Analog watch	• Question and answers • Observation • Portfolio • Self-assessment • Peer assessment	21
7. CURRENCY 7.1 Tanzania	**Pupil should demonstrate the ability to:** i. Specify symbols in	• Songs • Role play • ICT Presentation • Observation	• Coins • Bank notes • Number cards • Note	• Question and answers • Portfolio • Observation	21

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
currency value (1 to 2000 shillings)	coins and bank notes. ii. Explain the values of coins and bank notes. iii. Scribble coins of different values.	• Sports • Boasting • Question and answers	• Flash/DVD • Television • Video Player	• Self-assessment • Peer assessment	
7.2 Uses of Tanzania currencies	**Pupil should demonstrate the ability to:** i. Discuss ways of saving money. ii. Keep and save money. iii. Spend money in selling and buying goods.	• Role play • Songs • Games • Boasting • Question and answers • Study visits • ICT Presentation	• Saving box • Items used in role play • Various goods from shop • Flash/DVD • Television • Video Player • Receipts	• Question and answers • Observation of chain thought • Exit card • Portfolio • Observation • Self-assessment • Peer assessment	21

DARASA LA II

STANDARD II

General Learning Outcomes for Standard Two

In learning Mathematics subject in Standard two, the pupils shall demonstrate the ability to:

1. Count, read and write numbers correctly.
2. Use number to perform arithmetic operations
3. Draw diagrams related to fractions, comparing, reading and writing fractions.
4. Compare and measure length, volume and mass.
5. Perform mathematical operations on currency.
6. Identify months and the number of days in each month.
7. Compare, make and draw two and three-dimensional figures.

STANDARD TWO

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
1. WHOLE NUMBERS 1.1 Counting numbers (1 to 2,999)	**Pupil should demonstrate the ability to:** i. Estimate the amount of objects. ii. Count numbers in groups. iii. Count numbers in order.	• Songs • Observation • Games • Prediction, Investigation and Explanation. • ICT Presentation	• Sticks • Bottle caps • Pebble • Pencils • Pens • Abacus of cards • Bundle of Sticks • Videos that show counting numbers	• Question and answers • Observation • Thumb up thumb down • Exit card • Self-assessment • Portfolio	20
1.2 Reading numbers (1 to 2,999)	**Pupil should demonstrate the ability to:** i. Specify place values of numbers. ii. Match numbers in numerals and in words. iii. Read numbers correctly.	• Songs • Games • Gallery walk • Question and answers • Role play • ICT Presentation	• Abacus of cards • Number charts • Number cards in numerals • Number cards in words • Flash/DVD • Television • Video Player	• Question and answers • Observation • Exit card • Self assessment • Checklist • Peer assessment	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
1.3 Writing numbers (1 to 2,999)	**Pupil should demonstrate the ability to:** i. Write numbers in expanded form. ii. Relate writing of numbers in numerals and words. iii. Write numbers in order.	• Songs • Games • Gallery walk • Questions and answers • Boasting • Role play • ICT Presentation	• Abacus of cards • Number charts • Number cards in numerals and in words • Flash/DVD • Television • Video Player	• Question and answers • Observation • Self-assessment • Exit card • Portfolio	20
2. MATHEMATICAL OPERATIONS 2.1 Addition of numbers (sum should not exceed 2,999)	**Pupil should demonstrate the ability to:** i. Add numbers in expanded form. ii. Add numbers in vertical and horizontal ways. iii. Solve word problems related to addition of numbers.	• Practice • Games • Jigsaw • ICT Presentation	• Sticks • Bottle caps • Pebble • Pencils • Pens • Abacus of cards • Flash/DVD • Television • Video Player Number plates • Slates of numbers	• Question and answers • Observation • Exit card • Portfolio • Peer assessment • Reflection cards	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
2.2 Subtraction of numbers (between 1 to 2,999)	**Pupil should demonstrate the ability to:** i. Subtract numbers in expanded form. ii. Subtract numbers in vertical and horizontal ways. iii. Solve word problems related to subtraction.	• Practice • Games • Jig-saw • ICT Presentation	• Sticks • Bottle caps • Pebble • Pencils • Pens • Bundle of Sticks • Abacus cards • Flash/DVD • Television • Video Player • Number plates	• Question and answers • Observation • Peer assessment • Exit card • Portfolio • Thumb up thumb down	20
2.3 Multiplications of numbers (Products should not exceed 100)	**Pupil should demonstrate the ability to:** i. Specify the relationship between multiplication and addition. ii. Read the first to sixth multiplication tables. iii. Perform horizontal and vertical multiplications of numbers. iv. Solve word problems	• Practices • Games • Jig-saw • Discussion • Demonstration • Story • ICT Presentation	• Sticks • Bottle caps • Pebble • Pencils • Pens • Bundle of Sticks • Table of multiplication • Flash/DVD • Television • Video Player	• Question and answers • Observation • Exit card • Portfolio	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	related to multiplication of numbers.				
3. FRACTIONS 3.1 Types of fractions	**Pupil should demonstrate the ability to:** i. Specify types of fractions. ii. Distinguish types of fractions. iii. Write fractions.	• Discussion • Jig-saw • Story • Riddles • Demonstration • Practical works • Puzzles • ICT Presentation	• Manila cards • A4 papers • Wall of fraction • Breads • Oranges • Potatoes • Eggs • Tomatoes • Flash/DVD • Television • Video Player	• Question and answers • Observation • Exit card • Portfolio • Project	19
3.2 Size of fractions	**Pupil should demonstrate the ability to:** i. Compare fractions using diagrams and real objects. ii. Arrange fractions in ascending order iii. Draw the diagrams which show fractions of the same	• Jig-saw • Riddles • Discussion • Games • Puzzles • ICT Presentation	• Manila cards • A4 papers • Real objects • Wall of fraction • Oranges • Marker pens • Potatoes • Tomatoes • Flash/DVD • Video Player	• Question and answers • Observation • Exit card • Portfolio • Peer assessment • Self-assessment	19

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	denominators.		• Television		
4. SHAPES 4.1 Concept of three-dimensional figures	**Pupil should demonstrate the ability to:** i. Clarify three dimensional figures. ii. Arrange three dimensional figures from various figures. iii. Explain the main characteristics of three-dimensional figures.	• Circus activities • Observation • ICT Presentation • Discussion • Role play.	• A4 papers • Sand • Flat figures • Pair of scissors • Wooden blocks • Books • Flash/DVD • Television • Video Player	• Question and answers • Observation of chain thought • Exit card • Portfolio • Project • Self-assessment	19
4.2 Types of three-dimensional figures (Rectangular prism, Square, triangular prism, circular prism and truncated cone)	**Pupil should demonstrate the ability to:** i. Distinguish types of three-dimensional figures. ii. Explain different types of three-dimensional figures. ii. Create three dimensional figures.	• Demonstration • Songs • ICT Presentation • Practical work • Circus activities • Boasting • Games	• A4 papers • Manila cards • Scissors • Marker pen • Boxes • Bottles • Flash/DVD • Television • Video Player	• Question and answers • Observation • Instant questions • Gallery walk • Filling in the blanks • Exit card • Portfolio	19
5.	**Pupil should**	• Discussion	• Measuring wheel	• Question and	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
MEASUREMENT 5.1 Units of length (mm, cm, m and km)	**demonstrate the ability to:** i. Identify modern units of length. ii. Clarify modern length measuring devices. iii. Measure length by using modern devices.	• Demonstration • Practices • Question and answers • Brainstorming • ICT Presentation	• Rulers • Tape measure • Chart of length units • Flash/DVD • Television • Video Player	answers • Observation • Exit card • Portfolio	
5.2 Units of volume (milliliter and liter)	**Pupil should demonstrate the ability to:** i. Identify units of volume. ii. Clarify modern devices for measuring volume. iii. Measure volume by using modern devices.	• Discussion • Demonstration • Practice • Question and answers • Brainstorm • ICT Presentation	• Measuring bottles • Liquids • Chart of units of volume • Syringe • Flash/DVD • Television • Video Player	• Question and answers • Observation • Exit card • Portfolio • Observation of chain thought • Peer assessment	20
5.3 Units of mass (milligram, centigram, gram and kilogram)	**Pupil should demonstrate the ability to:** i. Identify modern units of mass. ii. Clarify modern	• Discussion • Demonstration. • Practice • Question and answers • Brainstorming	• Balance • Measuring scale • Sand • Rice • Flour • Chart of mass	• Question and answers • Observation • Exit card • Peer assessment	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	devices of measuring mass. ii. Measure mass by using modern devices.	• ICT Presentation	units • Flash/DVD • Video Player • Television	• Self-assessment	
6. TIMES AND HOURS 6.1 Times	**Pupil should demonstrate the ability to:** i. Identify number of months in a year. ii. Analyze number of days of each month in a year. ii. Solve word problems related to time by using pictures.	• Songs • Games • Brainstorm • Demonstration • Practice • Question and answers • Group discussion • ICT Presentation	• Calendar • Clock chart • Digital clocks • Analogue watch • Flash/DVD • Television • Video Player	• Question and answers • Observation • Fill in the blanks • Exit card • Self-assessment • Portfolio	20
6.2 Hours (A quarter past, Half past and a quarter to)	**Pupil should demonstrate the ability to:** i. Read time on analogue clock/watch. ii. Read time on digital clock/watch. ii. Solve word problems	• Songs • Games • Brainstorming • Demonstration • Practice • Question and answers • ICT Presentation	• Model of analogue clock • Analogue clock • Clock chart • Digital clocks • Flash/DVD • Video Player • Television	• Question and answers • Observation of chain thought • Exit card • Portfolio • Self assessment	20

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	related to time				
7. CURRENCY 7.1 Value of Tanzanian currency (1 to 5,000 shillings)	**Pupil should demonstrate the ability to:** i. Identify symbols in legal coins and bank notes. ii. Compare the value of legal coins and bank notes. ii. Discuss the importance of currency.	• Role play • Observation • Songs • Games • Boasting • Question and answers • ICT Presentation	• Coins • Number cards • Bank Notes • Role play materials • Flash/DVD • Television • Video Player	• Question and answers • Observation • Exit card • Portfolio • Self-assessment	20
7.2 Income and the use of Tanzanian currency	**Pupil should demonstrate the ability to:** i. Identify the legal means of earning money. ii. Explain the budget planning procedures. iii. Spend money according to the budget.	• Role play • Study visit • Songs • Games • Question and answers • Discussion Demonstration • ICT Presentation	• Saving boxes • Role play materials • Flash/DVD • Video Player • Television • Different commodities from shop	• Question and answers • Observation • Exit card • Portfolio • Peer assessment	20

DARASA LA III

STANDARD III

General Learning Outcomes for Standard Three

In learning Mathematics subject in Standard three, the pupils shall demonstrate the ability to:

1. Count, read and write numbers in a specific order.
2. Use mathematical signs to perform mathematical operations
3. Apply mathematical operations related to fractions.
4. Measure and perform mathematical operations of measurements.
5. Perform mathematical operations on Tanzania currency.
6. Perform mathematical operations of times by showing days and weeks.
7. Use geometrical instruments effectively.

STANDARD III

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
1. WHOLE NUMBERS 1.1 Counting numbers (1 to 99,999)	**Pupil should demonstrate the ability to:** i. Identify numerical place values. ii. Count numbers based on numerical place value. iii. Count numbers by using abacus.	• Songs • Discovery • Games • Practice • Demonstration • Question and answers	• Bottle caps • Pebble • Pencils • Pens • Abacus of cards • Bundle of Sticks • Rubber band • Thread	• Question and answers • Discovery • Self assessment • Portfolio • Peer assessment	17
1.2 Reading numbers (1 to 99,999)	**Pupil should demonstrate the ability to:** i. Identify periods of numbers. ii. Use periods of numbers to read numbers written in numerals iii. Read numbers written in words.	• Songs • Games • Gallery walk • Question and answers • Boasting • Role play • ICT Presentation	• Abacus of cards • Charts of Number • Number cards in numerals • Number cards in words • Flash/DVD • Video Player • Television	• Question and answers • Thumb up thumb down • Portfolio • Reflection cards • Checklist	17

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TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
99,999)					
2.2 Subtraction of numbers (between 1 and 99,999)	**Pupil should demonstrate the ability to:** i. Subtract numbers in expanded form ii. Subtract numbers in horizontal and vertical ways. iii. Solve word problems related to subtraction.	• Practices • Games • Jig-saw • Songs • ICT Presentation	• Abacus of cards • Number plates • Flash/DVD • Television • Video Player • Slates of numbers	• Question and answers • Discovery • Portfolio • Reflection cards	17
2.3 Multiplication of numbers (The products should not exceed 1000)	**Pupil should demonstrate the ability to:** i. Read from the first to the twelfth multiplication tables. ii. Multiply numbers in short and long methods. iii. Solve word problems related to multiplication.	• Practices • Games • Jig-saw • Songs • Discussion • ICT Presentation	• Counters • Abacus of cards • Number charts • Fingers • Sticks • Flash/DVD • Television • Video Player	• Question and answers • Discovery • Peer assessment • Portfolio	18
2.4 Division of numbers with single digit	**Pupil should demonstrate the ability to:** i. Clarify the relationship	• Practices • Games • Jig-saw	• Counters • Abacus of cards	• Question and answers • Project	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
numbers (Dividend should not exceeds 1000)	between division and subtraction. ii. Divide numbers with single digit numbers. iii. Solve word problems related to division.	• Songs • ICT Presentation	• Number charts • Flash/DVD • Television • Video Player	• Reflection cards • Self-assessment	
3. FRACTIONS 3.1 Mathematical operations in fractions with the same denominators	**Pupil should demonstrate the ability to:** i. Add fractions with the same denominators. ii. Subtract fractions with the same denominators. ii. Solve word problems related to addition and subtraction of fractions with the same denominators.	• Jig-saw • Using picture • Story • Discussions • Role play • ICT Presentation	• Manila cards • A4 papers • Real objects • Fractions wall • Flash/DVD • Television • Video Player	• Question and answers • Reflection cards • Self-assessment • Portfolio	18
3.2 Mathematical operations in fractions with different denominators	**Pupil should demonstrate the ability to:** i. Add fractions with different denominators. ii. Subtract fractions with different denominators. iii. Solve word problems of addition and	• Jig-saw • Discussion • Games • Story • Riddles • ICT Presentation	• Manila cards • Potatoes • Tomatoes • Marker pens • A4 papers • Pencils • Scissors • Oranges	• Questions and answers • Discovery • Portfolio • Self-assessment	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	subtraction in fractions with different denominators.				
4. GEOMETRY 4.1 Concept of geometry	**Pupil should demonstrate the ability to:** i. Identify geometrical shapes. ii. Clarify geometrical figures. iii. Draw various geometrical shapes using compasses and rulers. .	• Boasting • Games • Discussion • Practices • ICT Presentation • Boasting • Games	• Pencils • Rulers • A4 papers • Geometry box tools • Pens • Flash/DVD • Video Player • Television	• Questions and answers • Discovery • Portfolio • Checklist • Reflection cards	17
4.2 Concept of angles	**Pupil should demonstrate the ability to:** i. Identify various angles. ii. Read angles. iii. Measure the angles.	• Games • Observation • Short lecture • Demonstration • ICT Presentation	• Rulers • Protractors • Chart of angles • Pencils • A4 papers • Set squares • Flash/DVD • Television • Video Player	• Question and answers • Discovery • Reflection cards • Checklist • Project	17
5. MEASURE	**Pupil should demonstrate the ability to:**	• Practices	• Charts of different units	• Question and answers	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
MENTS 5.1 Mathematical operation in units of length (addition and subtraction)	i. Clarify units of lengths and their relationships. ii. Add units of length. iii. Subtract units of length. iv. Solve word problems related to addition and subtraction of units of length.	• Demonstration • Question and answers • Songs • Discussion • ICT Presentation	of measuring length. • Abacus of cards • Tools for measuring length • Flash/DVD • Television • Video Player	• Discovery • Brainstorming • Reflection card • Checklist	
5.2 Mathematical operation in volume units	**Pupil should demonstrate the ability to:** i. Clarify units of volume and their relationships. ii. Add the units of volume. iii. Subtract the units of volume. iv. Solve word problems leading to addition and subtraction of units of volume.	• Practices • Demonstration • Question and answers • Songs • Story • Boasting • ICT Presentation	• Charts of units of volume • Scaled medicine bottle cap • Syringe • Flash/DVD • Science kit • Television • Video Player	• Question and answers • Discovery • Brainstorming • Reflection card • Self assessment	18
5.3 Mathematical operations in	**Pupil should demonstrate the ability to:**	• Practices • Demonstration	• Charts show units of mass	• Question and answers	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
units of mass (Addition and subtraction)	i. Clarify the units of mass and their relationships. ii. Add the units of mass. iii. Subtract the units of mass. iv. Solve words problems leading to addition and subtraction of units mass.	• Question and answers • Boasting • Songs • Story • ICT Presentation	• Beam balance • Scientific tool kit • Mathematical kit • Flash/DVD • Television • Video Player	• Observation • Brainstorming • Reflection cards • Portfolio	
6. TIME AND HOURS 6.1 Word problems of time.	**Pupil should demonstrate the ability to:** i. Clarify the relationship of days, weeks and months in a year. ii. Explain the number of hours in a day, week and month in a year. iii. Solve word problems related to time.	• Songs • Practices • Discussion • Brainstorming • Demonstration • ICT Presentation	• Calendar • Class time table • Transport schedule • Flash/DVD • Television • Video Player	• Question and answers • Discovery • Reflection cards • Checklist	18
6.2 Mathematical operations of hours	**Pupil should demonstrate the ability to**:	• Demonstration • Practices • Brainstorming	• Model of clock • Chart of clock • Watch/clock	• Question and answers • Observation	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
(Addition and subtraction)	i. Clarify relationship between hours and minutes. ii. Add hours and minutes. iii. Subtract hours and minutes. iv. Solve word problems related to addition and subtraction of hours and minutes.	• Discussion • ICT Presentation	• Abacus of cards • Flash/DVD • Video Player • Television	• Brainstorming • Reflection cards • Self-assessment	
7. CURRENCY 7.1 Value of Tanzanian currency (1 to10,000 shillings)	**Pupil should demonstrate the ability to:** i. Identify the symbols in coins and notes. ii. Clarify the value of coins and notes. iii. Analyse the value of money according to the amount of currency. iv. Write currency	• Role play • Observation • Songs • Games • Boasting • Question and answers • Demonstration • Practices • ICT Presentation	• Coins • Number cards • Notes • Flash/DVD • Television • Video Player • Role play materials	• Question and answers • Observation • Thumb up thumb down • Checklist • Reflection cards • Self-assessment	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	according to their value.				
7.2 Mathematical operations on Tanzanian currency	**Pupil should demonstrate the ability to:** i. Add the values of currency. ii. Subtract the values of currency. iii. Multiply the values of currency. iv. Divide the values of currency. v. Solve simple word problems on currency.	• Role play • ICT Presentation • Songs • Games • Question and answers	• Saving box • Role play materials • Commodities • Flash/DVD • Television • Video Player	• Question and answers • Discovery • Exit card • Peer assessment • Project	18
7.3 Goals of saving money	**Pupil should demonstrate the ability to:** i. Set the goals in spending money. ii. Set short term goals	• Question and answers • Boasting • Games • Songs • Role play • ICT	• Manila cards • Coins • Number cards • Bank notes • Flash/DVD • Television • Video Player	• Question and answers • Discovering • Project • Portfolio • Checklist	18

TOPICS	SPECIFIC LEARNING OUTCOMES	LEARNING TECHNIQUES	LEARNING RESOURCES	ASSESSEMENT	PERIODS
	for spending money. iii. Set long term goals for spending money.	Presentation	• Role play materials		