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MINISTRY OF EDUCATION

UPPER PRIMARY LEVEL DESIGNS

VOLUME THREE

GRADE 4

MARCH 2019

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

REPUBLIC OF KENYA

MINISTRY OF EDUCATION

UPPER PRIMARY LEVEL DESIGNS

VOLUME THREE

SUBJECTS:
MATHEMATICS, SCIENCE AND TECHNOLOGY, AGRICULTURE, HOME SCIENCE & PHYSICAL AND HEALTH EDUCATION (PHE)

KENYA INSTITUTE OF CURRICULUM DEVELOPMENT

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FOREWARD

The Basic Education Curriculum Framework (BECF) in Kenya outlines the vision and mission of the curriculum reforms.
The vision of the curriculum reform is to develop:

"An engaged, an empowered and ethical citizen".

The Mission is:

"To nurture the potential of every learner".

The country has made a shift towards a competency based curriculum. Seven core competencies have been identified for Basic Education namely: Communication and Collaboration, Critical Thinking and Problem Solving, Creativity and Imagination, Citizenship, Digital Literacy, Learning to learn and Self Efficacy. Learners will be provided with opportunities to participate and excel in learning and nurturing of their talents.

Curriculum designs have been developed to aid the implementation of the Basic Education Curriculum Framework. They outline the National Goals of Education, The Middle School General learning outcomes as well as the Subject General and Specific learning outcomes. The curriculum designs also outline suggested learning experiences, key inquiry questions, assessment rubrics, pertinent and contemporary issues to be infused and integrated and community service learning activities among others.

It is our hope that all educators in Middle School level (Upper Primary) will anchor their delivery of the curriculum on the Basic education Curriculum Framework and the curriculum designs.

Amb. (Dr.) Amina Mohamed
CABINET SECRETARY
MINISTRY OF EDUCATION

INTRODUCTION

The Upper Primary curriculum designs are meant for learners in Grade 4 to 6. They have taken cognisance of the various aspects of development of learners of that age cohort. The designs are comprehensive enough to guide the teachers to effectively deliver the curriculum.

Curriculum designs are the core documents for teachers to use in the teaching process. The teacher must make constant reference to them in the learning process as they outline the learning outcomes to be achieved. Learning shall be assessed as per the learning outcomes given. The designs also give suggestions on the learning experiences to achieve the learning outcomes. The teacher can vary the learning experiences as long as the substitute learning experiences target the learning outcomes. The experiences must engage the learners in form of activities or other practical experiences that will enhance learning and achievement of the core competencies.

The curriculum designs are very critical and teachers must make reference to them consistently.

LEARNING AREAS TIME ALLOCATION

#	**Learning Area**	**Lessons Per Week**
1.	Kiswahili Language or KSL for learners who are deaf	4
2.	English language	4
3.	Other Languages	2
4.	Science and Technology	4
5.	Social Studies (Citizenship, Geography, History)	3
6.	Mathematics	5
7.	Home science	3
8.	Agriculture	3
9.	Religious Education (CRE/IRE/ HRE)	3
10.	Creative Arts (Art, Craft, Music)	3
11.	Physical and Health Education	5
12.	Pastoral Programmes and Instruction	1
	TOTAL	40

NATIONAL GOALS OF EDUCATION

1. **Foster nationalism, patriotism, and promote national unity**
   Kenya's people belong to different communities, races and religions and should be able to live and interact as one people. Education should enable the learner acquire a sense of nationhood and patriotism. It should also promote peace and mutual respect for harmonious co-existence.

2. **Promote social, economic, technological and industrial needs for national development**
   Education should prepare the learner to play an effective and productive role in the nation.

   a) **Social Needs**
   Education should instil social and adaptive skills in the learner for effective participation in community and national development.

   b) **Economic Needs**
   Education should prepare a learner with requisite competences that support a modern and independent growing economy. This should translate into high standards of living for every individual.

   c) **Technological and Industrial Needs**
   Education should provide the learner with necessary competences for technological and industrial development in tandem with changing global trends.

3. **Promote individual development and self-fulfilment**
   Education should provide opportunities for the learner to develop to the fullest potential. This includes development of one's interests, talents and character for positive contribution to the society.

4 **Promote sound moral and religious values**
   Education should promote acquisition of national values as enshrined in the Constitution. It should be geared towards developing a self-disciplined and ethical citizen with sound moral and religious values.

5. Promote social equity and responsibility

Education should promote social equity and responsibility. It should provide inclusive and equitable access to quality and differentiated education; including learners with special educational needs and disabilities. Education should also provide the learner with opportunities for shared responsibility and accountability through service learning.

6. Promote respect for and development of Kenya's rich and varied cultures

Education should instil in the learner appreciation of Kenya's rich and diverse cultural heritage. The learner should value own and respect other people's culture as well as embrace positive cultural practices in a dynamic society.

7. Promote international consciousness and foster positive attitudes towards other nations

Kenya is part of the interdependent network of diverse peoples and nations. Education should therefore enable the learner to respect, appreciate and participate in the opportunities within the international community. Education should also facilitate the learner to operate within the international community with full knowledge of the obligations, responsibilities, rights and benefits that this membership entails.

8. Good health and environmental protection

Education should inculcate in the learner the value of physical and psychological well-being for self and others. It should promote environmental preservation and conservation, including animal welfare for sustainable development.

GENERAL LEARNING OUTCOMES FOR MIDDLE SCHOOL

By end of middle school, the learner should be able to:

1. Communicate effectively in diverse contexts.
2. Apply literacy, numeracy skills and logical thinking appropriately in self-expression.
3. Demonstrate social skills, spiritual and moral values for peaceful co-existence.
4. Explore, manipulate, manage and conserve the environment effectively for learning and sustainable development.
5. Practise hygiene, appropriate sanitation and nutrition to promote health.
6. Apply digital literacy skills appropriately for communication and learning.
7. Demonstrate ethical behaviour and exhibit good citizenship as a civic responsibility.
8. Demonstrate appreciation of the country's rich and diverse cultural heritage for harmonious coexistence
9. Manage pertinent and contemporary issues in society effectively.

MATHEMATICS

Essence Statement

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

General Learning Outcomes

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

1) Demonstrate mastery of number concepts by working out problems in day to day life.
2) Apply measurement skills to find solutions to problems in a variety of contexts.
3) Describe properties of geometrical shapes and spatial relationships in real life experiences.
4) Collect, represent and analyze data to solve problems.
5) Analyze information using algebraic expressions in real life situations.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
1.0 NUMBERS	**1.1 WHOLE NUMBERS (20 Lessons)**	By the end of the sub strand, the learner should be able to: a) use place value and total value of digits up to tens of thousands in daily life situations, b) read and write numbers up to 10,000 in symbols in real life situations, c) read and write numbers up to 1,000 in words in day to day activities, d) order numbers up to 1,000 in different situations, e) round off numbers up to 1,000 to the nearest ten in different situations, f) identify factors/divisors of numbers up to 50 in different contexts, g) identify multiples of numbers up to 100 in different situations, h) use even and odd numbers up to 100 in different situations, i) represent Hindu Arabic numerals using Roman numerals up to 'X' in different situations, j) make patterns involving even and odd numbers in day to day life experiences, k) use IT devices for learning and leisure, l) appreciate use of numbers in real life situations.	• Learners in pairs/groups to identify place value of up to tens of thousands using place value apparatus. • Learners in pairs/groups to identify total values of digits up to ten thousand. • Learners in pairs/groups/ individually to read numbers up to 10,000 in symbols in real life situations. • Learners in pairs/groups/ individually to read and write numbers up to 1,000 in words from a number chart. • Learners in pairs to arrange numbers up to 1,000 in order from smallest to largest and largest to smallest using number cards and share with other groups. • Learners in pairs/groups/individually round off numbers up to 1,000 to the nearest ten and share with other groups. • Learners in pairs/groups/individually to identify factors/divisors of numbers up to 50 and share with other groups. • Learners in pairs/groups to identify multiples of numbers up to 100 and share with other groups. • Learners in pairs/groups to identify	1. What do you consider when writing numbers in words? 2. How can you find the place value of a digit in a number? 3. How can you find the total value of a digit in a number?

			even and odd numbers up to 100 and share with other groups. • Learners in pairs/groups to represent Hindu Arabic numerals using Roman numerals up to 'X' using number charts. • Learners in pairs/groups to make patterns involving even and odd numbers and share with other groups. • Learners in pairs/groups to visit mathematical sites in IT devices and play digital games.	

Core Competencies to be developed:

- Critical thinking and problem solving: as learners identify place value, order numbers and round off numbers.
- Learning to learn: as learners read and write numbers.
- Digital literacy: as learners use IT devices to learn and play digital games.

PCIs:	**Values:**
• Social Cohesion as learners work in groups irrespective of their backgrounds. • Financial literacy when learners order and group different denominations e.g. coins in groups of tens, hundreds.	• Respect as learners work in pairs/groups. • Unity as learners work towards achieving goal.
Link to other subjects	**Suggested Community Service Learning Activities**
• Languages as learners discuss in pairs/groups.	• Learners to assist in sharing edible and non-edible items in multiples ir community functions.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Use place value up to ten thousand	Uses place value up to ten thousand and beyond correctly.	Uses place value up to ten thousand correctly.	Inconsistently uses place value up to ten thousand.	Little evidence in use of place value up to ten thousand.
Use total values up to ten thousand	Uses total values up to ten thousand and beyond correctly.	Uses total values up to ten thousand correctly.	Inconsistently uses total values up to ten thousand.	Little evidence in use of total values up to ten thousand.
Read and write numbers in symbols up to 10,000	Reads and write numbers in symbols up to 10,000 and beyond correctly.	Reads and write numbers in symbols up to 10,000 correctly.	Inconsistently reads and writes numbers in symbols up to 10,000.	Little evidence in reading and writing numbers in symbols up to 10,000.
Read and write numbers in words up to 1,000	Reads and writes numbers in words up to 1,000 and beyond correctly.	Reads and writes numbers in words up to 1,000 correctly.	Inconsistently reads and writes numbers in words up to 1,000.	Little evidence in reading and writing numbers in words up to 1,000.
Order numbers up to 1,000	Orders numbers up to 1,000 and beyond correctly.	Orders numbers up to 1,000 correctly.	Inconsistently orders numbers up to 1,000.	Little evidence in ordering numbers up to 1,000.
Round off numbers up to 1,000 to the nearest ten	Rounds off numbers up to 1,000 to the nearest ten and beyond correctly.	Rounds off numbers up to 1,000 to the nearest ten correctly.	Inconsistently rounds off numbers up to 1,000 to the nearest ten.	Little evidence in rounding off numbers up to 1,000 to the nearest ten.
Identify divisors and factors of numbers up to 50	Identifies divisors and factors of numbers up to 50 and beyond correctly.	Identifies divisors and factors of numbers up to 50 correctly.	Inconsistently identifies divisors and factors of numbers up to 50.	Little evidence in identifying divisors and factors of numbers up to 50.
Identify multiples of numbers up to 100	Identifies multiples of numbers up to 100 and beyond correctly.	Identifies multiples of numbers up to 100 correctly.	Inconsistently identifies multiples of numbers up to 100.	Little evidence in identifying multiples of numbers up to 100.
Make patterns involving even and odd numbers up to 100	Makes patterns involving even and odd numbers up to 100 and beyond correctly.	Makes patterns involving even and odd numbers up to 100 correctly.	Inconsistently makes patterns involving even and odd numbers up to 100.	Little evidence in making patterns involving even and odd numbers up to 100.
Use IT devices for learning and leisure	Uses IT devices for learning and leisure fast and	Uses IT devices for learning and leisure	Inconsistently uses IT devices for learning and	Little evidence in using IT devices for learning and

	correctly.	correctly.	leisure.	leisure.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
	1.2 ADDITION (8 Lessons)	By the end of the sub strand, the learner should be able to: a) add up to two 4-digit numbers with single regrouping up to a sum of 10,000 in different situations, b) add up to two 4-digit numbers with double regrouping up to a sum of 10,000 in real life situations, c) estimate sum by rounding off numbers to the nearest ten in different situations, d) create patterns involving addition up to a sum of 10,000 in real life situations, e) use IT devices for learning and enjoyment, f) appreciate application of addition of numbers in real life situations.	• Learners in pairs/groups to add up to two 4-digit numbers with single regrouping up to a sum of 10,000 in different situations. • Learners in pairs/groups add up to two 4-digit numbers with double regrouping up to a sum of 10,000 in real life situations. • Learners in pairs/groups to estimate sum by rounding off numbers to be added to the nearest ten in different situations. • Learners in pairs/groups to create patterns involving addition up to a sum of 10,000. • Learners in pairs/groups to play digital games involving addition.	1. When do you use addition in real life? 2. What do you consider when estimating answers in addition? 3. How do you form number patterns in addition?

Core Competencies to be developed:

- Self-efficacy: as learners make reports in their groups.
- Critical thinking and problem solving: as learners add numbers, estimate and round off numbers and in making patterns.
- Creativity and imagination: as learners make patterns.
- Digital literacy: as learners use IT devices to learn and play games on addition.

PCIs:	Values:
• Social cohesion as learners work in pairs/groups. • Peer education as learners support one another while working in groups. • Environmental education as learners get the total of a variety of trees in the school compound.	• Respect as learners appreciate others. • Unity as learner work towards achieving expected results. • Responsibility as learners work in groups.
Link to other subjects	**Suggested Community Service Learning Activities**
• Languages as learners discuss in groups.	• Learners to assist in working out number of items or people in community functions like weddings or funerals.

• Home Science as learner's mix ingredients. • Agriculture as learners add items like seedlings/seeds/fertilizer.	

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Add up to two 4-digit numbers with single regrouping	Adds up to two 4-digit numbers with single regrouping and beyond correctly.	Adds up to two 4-digit numbers with single regrouping correctly.	Inconsistently Adds up to two 4-digit numbers with single regrouping.	Little evidence in adding up to two 4-digit numbers with single regrouping.
Add up to two 4-digit numbers with double regrouping.	Adds up to two 4-digit numbers with double regrouping and beyond correctly.	Adds up to two 4-digit numbers with double regrouping correctly.	Inconsistently adds up to two 4-digit numbers with double regrouping.	Little evidence in adding up to two 4-digit numbers with double regrouping.
Estimate answers by rounding off.	Estimates answers by rounding off numbers to the nearest ten and beyond correctly.	Estimates answers by rounding off correctly	Inconsistently estimates answers by rounding off.	Little evidence in estimating answers by rounding off.
Create patterns involving addition up to sum of 10,000.	Creates patterns involving addition up to sum of 10,000 and beyond correctly.	Creates patterns involving addition up to sum of 10,000 correctly.	Inconsistently creates patterns involving addition up to sum of 10,000.	Little evidence in creating patterns involving addition up to sum of 10,000.
Use IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and correctly.	Uses IT devices for learning and enjoyment correctly.	Inconsistently uses IT devices for learning and enjoyment uses.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions

	1.3 SUBTRACTION (8 Lessons)	By the end of the sub strand, the learner should be able to: • subtract up to 4-digit numbers without regrouping in real life situations, • subtract up to 4-digit numbers with regrouping in real life situations, • estimate difference by rounding off numbers to the nearest ten in real life situations, • create patterns involving subtraction from up to 10,000, • use IT devices for learning and enjoyment, • appreciate application of subtraction of numbers in real life situations.	• Learners in pairs/groups to subtract numbers up to 4-digit numbers without regrouping in real life situations. • Learners in pairs/groups/ individually to subtract up to 4-digit numbers with regrouping in real life situations. • Learners in pairs/groups to estimate and work out difference by rounding off the numbers to the nearest ten in real life situations. • Learners in pairs/groups to create patterns involving subtraction of numbers from up to 10,000. • Learners in pairs/groups/ individually to play digital games involving subtraction.	1. When do you use subtraction in real life? 2. How do you estimate the difference of given numbers? 3. How do you create patterns involving subtraction?

Core Competencies to be developed:

- Creativity and imagination: as learners make patterns involving subtraction.
- Critical thinking and problem solving: as learners estimate answers in subtraction.
- Digital literacy: as learners play digital games involving subtractions.

PCIs: • Social cohesion as learners work in groups and pairs in making patterns. • Environmental education as learners help sort maize in the school farm and subtract the number of good maize in a given quantity of maize.	**Values:** • Responsibility as learners undertake their tasks in groups. • Respect as learners come up with common solutions.
Link to other subjects • Languages as learners discuss in groups and in pairs.	**Suggested Community Service Learning Activities** • Learners to assist in distribution of items in community services or functions.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations

Subtract up to 4-digit numbers without regrouping.	Subtracts up to 4-digit numbers without regrouping and beyond correctly.	Subtracts up to 4-digit numbers without regrouping correctly.	Inconsistently subtracts up to 4-digit numbers without regrouping.	Little evidence in subtracting up to 4-digit numbers without regrouping.
Subtract up to 4-digit numbers with regrouping.	Subtracts up to 4-digit numbers with regrouping and beyond correctly.	Subtracts up to 4-digit numbers with regrouping correctly.	Inconsistently subtracts up to 4-digit numbers with regrouping.	Little evidence in subtracting up to 4-digit numbers with regrouping.
Estimate difference by rounding off numbers to the nearest ten.	Estimates difference by rounding off numbers to the nearest ten and beyond correctly.	Estimates difference by rounding off numbers to the nearest ten correctly.	Inconsistently estimates difference by rounding off numbers to the nearest ten.	Little evidence in estimating difference by rounding off numbers to the nearest ten.
Create patterns involving subtraction from up to 10,000.	Creates patterns involving subtraction from up to 10,000 and beyond correctly.	Creates patterns involving subtraction from up to 10,000 correctly.	Inconsistently creates patterns involving subtraction from up to 10,000.	Little evidence in creating patterns involving subtraction from up to 10,000.
Use IT for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	**Sub Strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Key Inquiry Questions**
	1.4 MULTIPLICATION (8 Lessons)	By the end of the sub strand, the learner should be able to: a) multiply up to a 2-digit number by	g) Learners in pairs/groups to multiply up to a 2-digit number by multiples of 10 in different	1. When do you use multiplication in real life?

		multiples of 10 in different situations, b) multiply up to a 2-digit number by a 2-digit number without and with regrouping in real life situations, c) estimate products by rounding off numbers to the nearest ten in real life situations, d) Create patterns involving multiplication with product not exceeding 100 in real life situations, e) use IT devices for learning and enjoyment, f) appreciate application of multiplication of numbers in real life.	situations. • Leaners in pairs/groups to multiply up to a 2-digit numbers by a 2-digit number without and with regrouping in real life situations. • Learners pairs/groups/ individually to estimate and work out answers by rounding off numbers to the nearest ten with product not exceeding 1,000 in real life situations. • Learners in pairs/groups to create patterns involving multiplication with product not exceeding 100. • Learners pairs/groups/ individually to play digital games on multiplication.	2. How do you create patterns involving multiplication?

Core Competencies to be developed:

- Critical thinking and problem solving: as learners estimate answers in multiplication tasks.
- Creativity and imagination: as learners make patterns involving multiplication of numbers.
- Digital literacy: as learners play games involving multiplication.

PCIs:	**Values:**
• Social cohesion as learners work in pairs and in groups. • Environmental education as learner, collect and re-use waste/refuse in the compound to make patterns e.g. bottle tops used in multiplication.	• Unity and respect as learners work in groups. • Love as learners discuss in groups. • Responsibility as learners undertake their tasks in the groups.
Link to other subjects	**Suggested Community Services Learning Activities**
• Languages as learners discuss in groups and in pairs. • Agriculture as learners work out number of rows and number of seedlings in each row.	• Learners to assist farmers in finding out total number of items for instance the total number of seedlings given the rows and number in each row.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations

Multiply up to a 2-digit number by multiples of 10.	Multiplies up to a 2-digit number by multiples of 10 and beyond correctly.	Multiplies up to a 2-digit number by multiples of 10 correctly.	Inconsistently multiplies up to a 2-digit number by multiples of 10.	Little evidence in multiplying up to a 2-digit number by multiples of 10.
Multiply up to a 2-digit number by a 2-digit number.	Multiplies up to a 2-digit number by a 2-digit number and beyond correctly.	Multiplies up to a 2-digit number by a 2-digit number correctly.	Inconsistently multiplies up to a 2-digit number by a 2-digit number.	Little evidence in multiplying up to a 2-digit number by a 2-digit number.
Estimate products in multiplication by rounding off numbers to the nearest ten.	Estimates products in multiplication by rounding off numbers to the nearest ten and beyond correctly.	Estimates products in multiplication by rounding off numbers to the nearest ten correctly.	Inconsistently estimates products in multiplication by rounding off numbers to the nearest ten.	Little evidence in estimating products in multiplication by rounding off numbers to the nearest ten.
Create patterns involving multiplication with products not exceeding 100.	Creates patterns involving multiplication with products not exceeding 100 and beyond correctly.	Creates patterns involving multiplication with products not exceeding 100 correctly.	Inconsistently creates patterns involving multiplication with products not exceeding 100.	Little evidence in creating patterns involving multiplication with products not exceeding 100.
Use IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	**Sub Strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Key Inquiry Questions**
	1.5 DIVISION (8 Lessons)	By the end of the sub strand, the learner should be able to: a) divide up to a 2-digit number by a 1-digit number without remainder in different situations, b) divide up to a 2-digit number by a 1-digit number with remainder in real life situations,	• Learners in pairs/ groups to divide up to a 2-digit number by 1-digit number without remainder using counters. • Learners in pairs/groups to divide a 2-digit number by a 1-digit number with remainder using counters. • Learners in pairs/groups to divide a 2-digit number by a 1- digit number	1. When do you use division in real life? 2. How can you estimate quotient?

		c) use relationship between multiplication and division to work out problems in real life situations, d) use IT devices for learning and leisure, e) appreciate application of division of numbers in real life situations.	using the long form of division. • Learners in pairs/groups to divide a 2-digit number by a 1-digit number using own strategies. • Learners in pairs/groups to use relationship between multiplication and division in working out problems. • Learners pairs/groups/ individually to play digital games involving division.	

Core Competencies to be developed:

- Critical thinking and problem solving: as learners estimate quotient in division and as they relate multiplication to division.
- Digital literacy: as learners play digital games involving division.

PCIs:	**Values:**
• Peer education as learners help each other in group work. • Social cohesion as learners work in groups to come up with common solutions.	• Responsibility as learners work individually for the common goal of the group. • Respect as learners accommodate each other's opinion in the group. • Unity as learners work out in groups for a common purpose.
Link to other subjects	**Suggested Community Service Learning Activities**
• Languages as learners enhance communication skills.	• Learners to assist in sharing out items in equal groups during social functions in the community.

Assessment Rubrics

Indicators	**Exceeds Expectations**	**Meets Expectations**	**Approaches Expectations**	**Below Expectations**
Divide up to a 2-digit number by a 1- digit number without remainder.	Divides a 2-digit number and beyond by a 1- digit number without remainder correctly.	Divides up to a 2-digit number by a 1- digit number without remainder correctly.	Inconsistently divides up to a 2-digit number by a 1-digit number without remainder.	Little evidence in dividing up to a 2-digit number by a 1- digit number without remainder.
Divide up to a 2-digit by a 1-digit number with remainder.	Divides a 2-digit number and beyond by a 1-digit number with remainder	Divides up to a 2-digit by a 1-digit number with remainder correctly.	Inconsistently divides up to a 2-digit by a 1-digit number with remainder.	Little evidence in dividing up to a 2-digit number by a 1- digit number with

	correctly.			remainder.
Estimate quotient by rounding off dividend to the nearest ten.	Estimates quotient by rounding off numbers accurately.	Estimates quotient by rounding off dividend to the nearest ten accurately.	Inconsistently estimates quotient by rounding off numbers.	Little evidence in estimating quotient by rounding off numbers.
Use relationship between multiplication and division to work out problems in real life situations	Uses relationship between multiplication and division to work out problems correctly and with ease.	Uses relationship between multiplication and division to work out problems correctly.	Inconsistently uses relationship between multiplication and division to work out problems.	Little evidence in using relationship between multiplication and division to work out problems
Use IT devices for learning and leisure.	Uses IT devices for learning and leisure fast and efficiently.	Uses IT devices for learning and leisure efficiently.	Inconsistently uses IT devices for learning and leisure.	Little evidence in using IT devices for learning and leisure.

Strand	**Sub Strand**	**Specific Learning Outcome**	**Suggested Learning Experiences**	**Key Inquiry Questions**
	1.6 FRACTIONS (6 Lessons)	By the end of the sub strand, the learner should be able to: a) represent a fraction with denominators not exceeding 12 as part of a whole and as part of a group in real life situations, b) represent and write fractions whose denominators do not exceed 12 in real life situations, c) identify the numerator and	• Learners in pairs/groups to represent fractions as part of a whole and as part of a group using concrete objects. • Learners in pairs/groups to discuss the top and bottom numbers in a fraction and share with other groups. • Learners in pairs/groups to write fractions represented as part of	1. When do you use fractions in real life? 2. How can you represent fractions?

		denominator in a fraction in real life situations, d) identify different types of fractions in real life, e) convert improper fractions to mixed fractions in different situations, f) convert mixed fractions to improper fractions in different contexts, g) use IT devices for learning and enjoyment, h) appreciate application of fractions in real life situations.	whole or part of a group. • Learners in pairs/groups to represent fractions as part of a whole or part of a group using cut outs, counters or clock face. • Learners in pairs/groups/ individually to represent proper, improper and mixed fractions as part of a whole or as part of a group using paper cut outs or counters. • Learners in pairs/groups to convert improper fractions to mixed fractions. • Learners in pairs/groups to convert mixed fractions to improper fractions. • Learners in pairs/groups /individually to play digital games involving fractions.	

Core Competencies to be developed:

- Critical thinking and problem solving: as learners convert fractions to mixed numbers.
- Digital literacy: as learners play digital games on fractions.
- Learning to learn: as learners explore fractions in daily life e.g. sharing fruits.

PCIs:	**Values:**
• Peer education as learners help each other in group work. • Safety as learners handle counters and concrete objects. • Social cohesion as learners appreciate ethnic groups in Kenya as part of a whole nation.	• Responsibility as learners work for the common goal of the group. • Respect as learners come up with common solutions in a group.
Link to other subjects	**Suggested Community Service Learning Activities**
• Languages as leaners discuss in pairs and in groups.	• Learners may assist in allocating time for different activities/tasks in a day at home and community. • Learners may assist in sharing out whole items divided into equal parts at home or in community functions.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Represent fractions as part of a whole.	Represents fractions as part of a whole correctly and with ease.	Represents fractions as part of a whole correctly.	Inconsistently represents fractions as part of a whole.	Little evidence in representing fractions as par of a whole.
Represent and write fractions with denominators up to 12.	Represents and writes fractions with denominators up to 12 correctly and with ease.	Represents and writes fractions with denominators up to 12 correctly.	Inconsistently represents and writes fractions with denominators up to 12.	Little evidence in representing and writing fractions with denominators up to 12.
Identify numerator and denominator.	Identifies numerator and denominator correctly and with ease.	Identifies numerator and denominator correctly.	Inconsistently identifies numerator and denominator.	Little evidence in identifying numerator and denominator.
Represent fractions as part of a group.	Represents fractions as part of a group correctly and with ease.	Represents fractions as part of a group correctly.	Inconsistently represents fractions as part of a group.	Little evidence in representing fractions as par of a group.
Identify types of fractions.	Identifies types of fractions correctly and with ease.	Identifies types of fractions correctly.	Inconsistently identifies types of fractions.	Little evidence in identifying types of fractions.
Convert improper fractions to mixed fractions.	Converts improper fractions to mixed fractions correctly and with ease.	Converts improper fractions to mixed fractions correctly.	Inconsistently converts improper fractions to mixed fractions.	Little evidence in converting improper fractions to mixed fractions.
Convert fractions from mixed fractions to improper fractions.	Converts mixed fractions to improper fractions correctly and with ease.	Converts mixed fractions to improper fractions correctly.	Inconsistently converts mixed fractions to improper fractions.	Little evidence in converting mixed fractions to improper fractions.
Use IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
	1.7 DECIMALS	By the end of the sub strand, the learner	• Learners in pairs/groups to	How can you use

	(10 Lessons)	should be able to: a) identify a tenth and a hundredth in real life situations, b) represent decimals using decimal notation in given situations, c) identify place value of decimals up to hundredths in real life, d) order decimals up to hundredths in computation e) use IT devices for learning and leisure, f) appreciate use of decimals in real life situations.	discuss where tenths and hundredths are used in real life situations. • Learners in pairs/groups to represent decimals using place value charts. • Learners in pairs/ groups to represent tenths and hundredths using place value charts. • Learners in pairs/groups / individually to write tenths and hundredths using decimal notation on a place value chart. • Learners in pairs/groups /individually to order given decimals in ascending and descending order. • Learners in pairs/groups/ individually to play digital games involving decimals.	decimals in real life situations?

Core Competencies to be developed:

- Creativity and imagination: as learners represent decimals on place value chart.
- Critical thinking and problem solving: as learners order decimals.
- Digital literacy: as learners play digital games involving decimals.

PCIs: • Social cohesion as learners work in a group for a common purpose. • Financial literacy as learners group money in different denominations.	**Values:** • Social justice as learners from different backgrounds work together in groups. • Respect as learners accommodate diverse views from the group members in discussions. • Unity as learners work out tasks together in the group.
Link to other subjects • Languages as learners discuss in pairs or groups.	**Suggested Community Service Learning Activities** • Learners may assist in reading measurements in decimals during games or in sports meets.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Identify a tenth and a hundredth.	Identifies a tenth and a hundredth and beyond correctly.	Identifies a tenth and a hundredth correctly.	Inconsistently identifies a tenth and a hundredth.	Little evidence in identifying a tenth and a hundredth.
Represent decimals using decimal notation.	Represents decimals using decimal notation correctly and with ease.	Represents decimals using decimal notation correctly.	Inconsistently represents decimals using decimal notation.	Little evidence in representing decimals using decimal notation.
Identify place value of decimals up to hundredths.	Identifies place value of decimals up to hundredths and beyond correctly.	Identifies place value of decimals up to hundredths correctly.	Inconsistently identifies place value of decimals up to hundredths.	Little evidence in identifying place value of decimals up to hundredths.
Order decimals up to hundredths.	Orders decimals to hundredths and beyond correctly.	Orders decimals up to hundredths correctly.	Inconsistently orders decimals up to hundredths.	Little evidence in ordering decimals up to hundredths.
Use IT devices for learning and leisure.	Uses IT devices for learning and leisure fast and efficiently.	Uses IT devices for learning and leisure efficiently.	Inconsistently uses IT devices for learning and leisure.	Little evidence in using IT devices for learning and leisure.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry

				Questions
2.0 MEASUREMENT	**2.1 LENGTH (10 Lessons)**	By the end of the sub strand, the learner should be able to: a) identify the centimetre as a unit of measuring length in real life situations, b) measure length in centimetres in real life situations, c) estimate and measure length in centimetres in real life situations, d) establish the relationship between metres and centimetres practically, e) convert metres to centimetres and centimetres to metres in real life situation, f) work out perimeter of plane figures in different contexts, g) work out addition involving length in metres and centimetres in real life situations, h) work out subtraction involving length in metres and centimetres in real life situations, i) work out multiplication involving metres and centimetres in real life situations, j) work out division involving metres and centimetres in real life situations, k) use IT devices for learning and enjoyment, l) appreciate use of metres and centimetres in measuring distance in real life.	• Learners in pairs/groups to identify the centimetre and mark out lengths of 1centimetre using a ruler. • Learners in pairs/groups to measure the length of a given object in centimetres using a metre ruler or a tape measure. • Learners in pairs/groups / individually to estimate the length of a given object in centimetres. • Learners to measure actual length of the estimated length in centimetres. • Learners in pairs/groups to measure length in metres and centimetres and establish the relationship between the units. • Learners in pairs/groups use the relationship between centimetres and metres in real life situations. • Learners in pairs/groups/individually to convert metres into centimetres and centimetres into metres in real life situations. • Learners in pairs/groups to work out perimeter of plane figures in different contexts. • Learners in pairs/groups to work out addition and subtraction involving metres and centimetres in real life situations. • Learners in pairs/groups to work out multiplication involving metres and centimetres in real life situations. • Learners in pairs/groups to work out division involving metres and	1. How can you measure distance? 2. Why do we measure distance in real life?

			centimetres in real life situations. • Learners in pairs/groups to play digital games involving length.	

Core Competencies to be developed:

- Self-efficacy: as learners report their estimates.
- Critical thinking and problem solving: as learners estimate and confirm distances/lengths.
- Digital literacy: as learners play digital games.

PCIs:	**Values:**
• Self-awareness as learners estimate distance/length. • Integrity as learners related their estimates to actual measurement and when measuring heights of seedlings in school to monitor growth.	• Responsibility as learners report accuracy of their measurements. • Respect as learners accommodate different answers from each other in the group. • Integrity as learners read own measurements.

Link to other subjects	Suggested Community Service Learning Activities
• Languages as learners participate in group discussions. • Home science as learners measure length of different items for example clothing materials.	• Learners may assist in measuring length of items that require accuracy in the community. • Learners may assist in measuring and marking community playing fields in metres and centimetres.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Identify the Centimetre as a unit of measuring length.	Identifies the centimetre as a unit of measuring length accurately and with ease.	Identifies the centimetre as a unit of measuring length accurately.	Inconsistently identifies the centimetre as a unit of measuring length.	Little evidence in identifying the centimetre as a unit of measuring length.
Measure length in centimetres.	Measures length in centimetres accurately and with ease.	Measures length in centimetres accurately.	Inconsistently measures length in centimetres.	Little evidence in measuring length in centimetres.
Estimate length in centimetres.	Estimates length in centimetres accurately and with ease.	Estimates length in centimetres accurately.	Inconsistently estimates length in centimetres.	Little evidence in estimating length in centimetres.
Establish the relationship between metres and centimetres.	Establishes the relationship between metres and centimetres correctly and with ease.	Establishes the relationship between metres and centimetres correctly.	Inconsistently establishes the relationship between metres and centimetres.	Little evidence in estimating the relationship between metres and centimetres.
Convert metres to centimetres.	Converts metres to centimetres and beyond correctly.	Converts metres to centimetres correctly.	Inconsistently converts metres to centimetres.	Little evidence in converting metres to centimetres.
Convert centimetres to metres.	Converts centimetres to metres and beyond correctly.	Converts centimetres to metres correctly.	Inconsistently converts centimetres to metres.	Little evidence in converting centimetres to metres.
Work out perimeter of plane shapes.	Works out perimeter of plane shapes correctly and with ease.	Works out perimeter of plane shapes correctly.	Inconsistently works out perimeter of plane shapes.	Little evidence in working out perimeter of plane shapes.
Add length in centimetres	Adds length in centimetres	Adds length in centimetres	Inconsistently adds length	Little evidence in adding

and metres.	and metres correctly and with ease.	and metres correctly.	in centimetres and metres.	length in centimetres and metres.
Subtract length in centimetres and metres.	Subtracts length in centimetres and metres correctly and with ease.	Subtracts length in centimetres and metres correctly.	Inconsistently subtracts length in centimetres and metres.	Little evidence in subtracting length in centimetres and metres.
Multiply length in centimetres and metres.	Multiplies length in centimetres and metres correctly and with ease.	Multiplies length in centimetres and metres correctly.	Inconsistently multiplies length in centimetres and metres.	Little evidence in multiplying length in centimetres and metres.
Divide length in centimetres and metres.	Divides length in centimetres and metres correctly and with ease.	Divides length in centimetres and metres correctly.	Inconsistently divides length in centimetres and metres.	Little evidence in dividing length in centimetres and metres.
Use IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	**Sub Strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Key Inquiry Questions**

	2.2 AREA **(8 Lessons)**	By the end of the sub strand, the learner should be able to: a) compare area of given surfaces by direct comparison, b) calculate area of squares and rectangles by counting unit squares, c) calculate area of squares and rectangles as a product of number of rows and columns, d) use IT devices for learning and enjoyment, e) appreciate use of rows and columns in calculating area of squares and rectangles in real life situations.	• Learners in pairs/groups to compare area of two surfaces directly by placing one surface on the other. • Learners in pairs/groups to use different unit square cut outs to cover a given surface. • Learners in pairs/groups to count the number of unit square cut outs used to cover the surface. • Learners in pairs /groups to establish that area of a rectangle or a square is same as number of rows multiplied by number of columns. • Learners in pairs/groups to work out area of squares and rectangles by multiplying number of rows by number of columns. • Learners in pairs/groups play digital games involving area of rectangles and squares.	How can you work out area of different surfaces?

Core Competencies to be developed:

- Communication and collaboration: as learners use unit squares to cover a given surface.
- Digital literacy: as learners play digital games.
- Learning to learn: as learners explore areas of different shapes in their homes.
-

PCIs: • Social cohesion as learners work out area of plain figures in pairs/ groups. • Environmental education as learners calculate area of their flower gardens in school and estimate the number of flowers in them.	**Values:** • Respect, love and unity as learners work in pairs/groups in placing and counting square cut outs. • Integrity as learners calculate area.
Link to other subjects • Languages as learners discuss in group activities.	**Suggested Community Service Learning Activities** • Learners may assist in working out number of tiles to be used to cover the floor in their home or community hall. • Learners may visit a farmer in the neighborhood and help work out area of land under different crops or livestock.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Compare area of surfaces.	Compares area of surfaces correctly and with ease.	Compares area of surfaces correctly.	Inconsistently compares area of surfaces.	Little evidence in comparing area of surfaces.
Calculate area of squares and rectangles through counting.	Calculates area of squares and rectangles through counting correctly and with ease.	Calculate area of squares and rectangles through counting correctly.	Inconsistently calculates area of squares and rectangles through counting.	Little evidence in calculating area of squares and rectangles through counting.
Calculate area of squares and rectangles as product of number of rows and columns.	Calculates area of squares and rectangles as product of number of rows and columns correctly and with ease.	Calculates area of squares and rectangles as product of number of rows and columns correctly.	Inconsistently calculates area of squares and rectangles as product of number of rows and columns.	Little evidence in calculating area of squares and rectangles as product of number of rows and columns.
Use IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
	2.3 MASS (6 Lessons)	By the end of the sub strand, the learner should be able to: a) use a kilogram mass to measure	• Learners in pairs/groups to use one kilogram masses to measure masses of given objects using a beam balance.	How can you measure mass in kg?

		masses of different objects practically, b) use ½ kg and ¼ kg masses to measure masses of different objects practically, c) add mass involving kilograms in real life situations, d) subtract mass involving kilograms in real life situations, e) use IT devices for learning and enjoyment, f) appreciate measuring mass of different objects.	• Learners in pairs/groups make a ½ kg mass and use it to measure mass of given objects using a beam balance. • Learners in pairs/groups make a ¼ kg mass and use it to measure mass of given objects using a beam balance and an electronic balance. • Learners in pairs/groups add mass involving kilograms (kg) in real life situations. • Learners in pairs/groups subtract mass involving kilograms (kg) in real life situations. • Learners in pairs/groups play digital games involving mass.	

Core Competencies to be developed:

- Communication and collaboration: as learners measure mass in ½ kg and ¼ kg.
- Digital literacy: as learners plays digital games involving mass.
- Critical thinking and problem solving: as learners prepare ½ kg and ¼ kg masses from 1 kg mass.

PCIs:	**Values:**
• Social cohesion as learners work in pairs/groups in measuring mass in ½ kg and ¼ kg. • Animal welfare as learners document mass of animal feeds consumed by each animal in school /home. • Safety and security as learners play with different objects in the school compound.	• Respect as learners work in groups/pairs in measuring mass. • Honesty as learners report on their measurements.
Link to other subjects	**Suggested Community Service Learning Activities**
• Home Science as learners measure different ingredients. • Agriculture as learners feed livestock.	• Learners may assist in measuring mass of food stuffs in community functions. • Learners may assist farmers in feeding animals with different masses of feeds.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Use a Kilogram mass to measure mass of different objects.	Uses a Kilogram mass to measure mass of different objects accurately and with ease.	Uses a Kilogram mass to measure mass of different objects accurately.	Inconsistently uses a Kilogram mass to measure mass of different objects.	Little evidence in using a Kilogram mass to measure mass of different objects.
Use ½ kg and ¼ kg masses to measure mass of different objects.	Use ½ kg and ¼ kg masses to measure mass of different objects accurately and with ease.	Use ½ kg and ¼ kg masses to measure mass of different objects accurately.	Inconsistently uses ½ kg and ¼ kg masses to measure mass of different objects.	Little evidence in using ½ kg and ¼ kg masses to measure mass of different objects.
Add mass in kg.	Adds mass in kg correctly and with ease.	Adds mass in kg correctly.	Inconsistently adds mass in kg.	Little evidence in adding mass in kg.
Subtract mass in kg.	Subtracts mass in kg correctly and with ease.	Subtracts mass in kg correctly.	Inconsistently subtracts mass in kg.	Little evidence subtracting mass in kg.
Use IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
	2.4 VOLUME (6 Lessons)	By the end of the sub strand, the learner should be able to: a) work out volume of cubes and cuboids in real life situations, b) use IT devices for learning and	• Learners in pairs/groups/individually to pile cubes. • Learners in pairs/groups/individually to count the piles of cubes to determine the volume.	How can you work out volume of cubes and cuboids?

		enjoyment, c) appreciate use of pilling method in working out volume in real life.	• Learners in pairs/groups to pile cuboids. • Learners in pairs/groups/individually to count the piles of cuboids to determine the volume. • Learners in pairs/groups /individuals to use IT devices to play games.	

Core Competencies to be developed:

- Communication and collaboration: as learners pile cubes and cuboids.
- Digital literacy: as learners play digital games.
- Learning to learn: as learners explore objects of different volumes at home/ school/environment.

PCIs:	**Values:**
• Environmental education as learners make the environment clean and neat. • Safety as learners pile objects.	• Honesty and integrity as learners measure volume accurately.
Links to other subjects	**Suggested Community Services Learning Activities**
• Language as learners discuss in groups. • Agriculture as learners learn how to stock hay in a store.	• Learners to be involved in stocking hay in a store and in arranging boxes in a store or shop.

Assessment Rubrics

Indicators	**Exceeds Expectations**	**Meets Expectations**	**Approaches Expectations**	**Below Expectations**
Work out volume of cubes and cuboids.	Works out volume of cubes correctly and with ease.	Works out volume of cubes correctly.	Inconsistently works out volume of cubes.	Little evidence in workin out volume of cubes.
Work out volume of	Works out volume of cuboids	Works out volume of	Inconsistently works out	Little evidence in workin

cuboids.	correctly and with ease.	cuboids correctly.	volume of cuboids.	out volume of cuboids.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using I devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
	2.5 CAPACITY (6 Lessons)	By the end of the sub strand, the learner should be able to: a) measure capacity in litres in real life situations, b) measure capacity in ½ litres and ¼ litres in real life situations, c) Add and subtract capacity involving litres in real life situations, d) use IT devices for learning and enjoyment, e) appreciate use of the litre as a unit of measuring capacity in real life situations.	• Learners in pairs/groups to measure capacity of containers using a 1 litre container in real life situations. • Learners in pairs/groups/individually to make ½ litre and ¼ litre containers through filling and emptying using a 1 litre container. • Learners in pairs/groups to use ½ litre and ¼ litre containers to measure capacity of other containers. • Learners in pairs/groups to add capacity involving litres in real life situations. • Learners in pairs/groups to subtract capacity involving litres in real life situations. • Learner in pairs/groups to play digital games involving capacity.	How can you measure capacity in real life situations?

Core Competencies to be developed:

- Communication and collaboration: as learners discuss and learn from one another.
- Critical thinking and problem solving: as learners make ½ litre and ¼ litre containers.
- Digital literacy: as learners play digital games.

PCIs:	Values:
• Safety as learners prepare ½ litre and ¼ litre containers. • Environmental education as learners make the environment clean and neat by avoiding spillage and wastage.	• Honesty and integrity as learners measure capacity accurately.

Link to other subjects	Suggested Community Service Learning Activities
• Languages as learners discuss in groups. • Home Science as learners conduct practical activities involving measurement of liquids.	• Learners may assist in measuring capacity of containers in social functions

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Measure capacity in litres by filling and emptying.	Measures capacity in litres by filling and emptying accurately and with ease.	Measures capacity in litres by filling and emptying accurately.	Inconsistently measures capacity in litres by filling and emptying.	Little evidence in measuring capacity in litres by filling and emptying.
Measure Capacity using ½ litres and ¼ litres.	Measures capacity using ½ litres and ¼ litres accurately and with ease.	Measures capacity using ½ litres and ¼ litres accurately.	Inconsistently measures capacity using ½ litres and ¼ litres.	Little evidence in measuring capacity using ½ litres and ¼ litres.
Add Capacity in litres.	Adds capacity in litres correctly and with ease.	Adds capacity in litres correctly.	Inconsistently adds capacity in litres.	Little evidence in adding capacity in litres.
Subtract Capacity in litres.	Subtracts capacity in litres correctly and with ease.	Subtracts capacity in litres correctly.	Inconsistently subtracts capacity in litres.	Little evidence in subtracting capacity in litres.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
	2.6 TIME **(10 Lessons)**	By the end of the sub strand, the learner should be able to: a) read and tell time in a.m. and p.m. in real life situations,	• Learners in pairs/groups to read and tell time in a.m. and p.m. using digital and analogue clocks in real life situations. • Learners in pairs/groups to estimate time of the day using the shadow.	1. How can you tell time? 2. How can you find out time taken to do an activity?

		b) estimate time using a.m and p.m. in real life situations, c) convert units of time in real life situations, d) record time durations in hours and minutes in real life situations, e) work out time duration in real life situations, f) use IT devices for learning and enjoyment, g) appreciate time in real life situations.	• Learners in pairs/groups to convert hours to minutes and minutes to hours in real life situations. • Learners in pairs/groups to convert hours to days and days to hours in real life situations. • Learners in pairs/groups to convert days to weeks and weeks to days in real life situations. • Learners in pairs/groups to measure and record duration of events in hours and minutes using digital and analogue clocks. • Learners in pairs/groups to work out addition involving units of time in real life situations. • Learners in pairs/groups to work out subtraction involving units of time in real life situations. • Learners in pairs/groups/individually to play digital games involving time.	

Core Competencies to be developed:

- Imagination and creativity: as learners estimate time using shadows.
- Learning to learn: as learners convert different units of time.
- Digital literacy: as learners play digital games.

PCIs: • Life skill as learners manage time. • Sports and games as learners observe time.	**Values:** • Honesty and integrity as learners tell time.
Link to other subjects • Physical and Health Education as learners time activities. • Languages as learners participate in discussions. • Agriculture as learners observe time for feeding animals. • Science and Technology as learners use sun as source of light and also in estimating time duration of experiments.	**Suggested Community Service Learning Activities** • Learners may assist in maintaining correct time for taking medicine at home/school. • Learners to observe time at home and community activities. • Learners can assist farmers in planting, weeding or harvesting during the different seasons.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations

Read time in a.m and p.m.	Reads time in a.m and p.m. correctly and with ease.	Reads time in a.m and p.m. correctly.	Inconsistently reads time in a.m and p.m.	Little evidence in reading time in a.m and p.m.
Tell time in a.m and p.m.	Tells time in a.m and p.m. correctly and with ease.	Tells time in a.m and p.m. correctly.	Inconsistently tells time in a.m and p.m.	Little evidence in telling time in a.m and p.m.
Estimate time using a.m and p.m.	Estimates time accurately and with ease.	Estimates time accurately.	Inconsistently estimates time.	Little evidence in estimating time.
Convert units of time.	Converts units of time correctly and with ease.	Converts units of time correctly.	Inconsistently converts units of time.	Little evidence in converting units of time.
Measure and record time durations in hours and minutes.	Measures and records time durations in hours and minutes accurately and with ease.	Measures and records time durations in hours and minutes accurately.	Inconsistently measures and records time in hours and minutes.	Little evidence in measuring and recording time in hours and minutes.
Work out addition involving units of time.	Adds units of time correctly and with ease.	Adds units of time correctly.	Inconsistently adds units of time.	Little evidence in adding units of time.
Work out subtraction involving units of time.	Subtracts units of time correctly and with ease.	Subtracts units of time correctly.	Inconsistently subtracts units of time.	Little evidence in subtracting units of time.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	**Sub Strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Key Inquiry Questions**
	2.7 MONEY (8 Lessons)	By the end of the sub strand, the learner should be able to: a) convert shillings into cents and cents into shillings in different contexts,	• Learners in pairs/groups/individually to convert shillings into cents and cents into shillings using real/ imitation money in different contexts.	How can you save money?

		b) participate in shopping activities involving money practically, c) determine needs and wants in real life situations, d) practice savings in real life, e) work out questions involving money in real life situations, f) identify money people pay to the county government for provision of services, g) use IT devices for learning and enjoyment, h) appreciate the use of money in real life.	• Learners in pairs/group to role play shopping activities involving giving change and balance using real/ imitation money. • Learners in pairs/groups to discuss and prioritize needs and wants. • Learners in pairs/groups to discuss meaning of saving. • Learners in pairs/groups to discuss savings at home. • Learners in pairs/groups to discuss how to work out questions involving money in real life situations. • Learners in pairs/groups to discuss market fee, cess, parking fee and business permit as money people pay to county government for provision of services. • Learners in pairs/groups/ individually to play digital games involving money.	

Core Competencies to be developed:

- Communication and collaboration: as learners do shopping activities, giving change and balance.
- Self-efficacy: as learners discuss and report on needs and wants.
- Creativity and critical thinking: as learners learn how to spend money using a simple budget.

PCIs:	**Values:**
• Patriotism as learners use money in coins and notes. • Financial literacy as learners shop and discuss needs, wants and savings.	• Honesty as learners spend/withdraw money as directed by parents. • Responsibility as learners handle money given by parents.
Link to other subjects	**Suggested Community Service Learning Activities**
• Home Science as learners purchase ingredients. • Languages as learners discuss in groups.	• Learners to assist family members in shopping activities that involve giving change and balance. • Learners to work with family members in making home money banks.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Convert shillings to cents.	Converts shillings to cents correctly and with ease.	Converts shillings to cents correctly.	Inconsistently converts shillings to cents.	Little evidence in converting shillings to cents.
Convert cents to shillings.	Converts cents to shillings correctly and with ease.	Converts cents to shillings correctly.	Inconsistently converts cents to shillings.	Little evidence in converting cents to shillings.
Shopping activities.	Role plays shopping activities correctly and efficiently.	Role plays shopping activities correctly.	Inconsistently role plays shopping activities.	Little evidence in role playing shopping activities.
Needs and Wants.	Prioritizes needs and wants correctly and with ease.	Prioritizes needs and wants correctly.	Inconsistently prioritize needs and wants.	Little evidence in prioritizing needs and wants.
Practice saving.	Practices saving consistently.	Practices saving.	Inconsistently practices saving.	Little evidence in practicing saving.
Work out questions involving money.	Works out questions involving money correctly and with ease.	Works out questions involving money correctly.	Inconsistently works out questions involving money.	Little evidence in working out questions involving money.
Identify money people pay to county government for provision of services. .	Identifies money people pay to county government for provision of services correctly and with ease.	Identifies money people pay to county government for provision of services correctly.	Inconsistently identifies money people pay to county government for provision of services. .	Little evidence in identifying money people pay to county government for provision of services.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Questions
3.0 GEOMETRY	**3.1 POSITION AND DIRECTION (4 Lessons)**	By the end of the sub strand, the learner should be able to: a) demonstrate a clockwise and an anti-clockwise turn in the environment, b) demonstrate a quarter turn, half	• Learners in groups/pairs/individually to demonstrate a clockwise turn. • Learners in groups/pairs/individually to demonstrate an anti-clockwise turn. • Learners in groups/pairs/ individually	How can you change your position?

		turn and full turn in the environment, c) identify quarter, half and full turns in the environment, d) use IT devices for learning and enjoyment, e) appreciate use of position and direction in real life situations.	to demonstrate a quarter turn in both directions. • Learners in groups/pairs/individually to demonstrate a half turn. • Learners in groups/pairs/individually to demonstrate a full turn. • Learners in groups/pairs/individually to play digital games involving position and direction.	

Core Competencies to be developed:

- Imagination and creativity: as learners discuss in groups.
- Imagination and creativity: as learners make turns in given positions.
- Learning to learn: as learners make turns from previously observed parades.
- Digital literacy: as learners play digital games.

PCIs:	**Values:**
• Safety as learners observe vehicles while crossing roads. • Patriotism as learners match while singing patriotic songs.	• Unity as learners perform the turns in groups. • Responsibility as learners cross roads.
Link to other subjects	**Suggested Community Service Learning Activities**
• Science and Technology as learners study directions. • Social Studies as learners study position in maps. • Music while matching to beats of a song.	• Learners to guide participants on how to make different turns during walks and parades in National days community celebrations.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Clockwise and anti-clockwise turn.	Turns clockwise and anti-clockwise accurately and with ease.	Turns clockwise and anti-clockwise accurately.	Inconsistently turns clockwise and anti-clockwise.	Little evidence in turning clockwise and anti-clockwise.
Quarter, half and full turn.	Demonstrates quarter, half and full turn accurately and with ease.	Demonstrates quarter, half and full turn accurately.	Inconsistently Demonstrates quarter, half and full turn.	Little evidence in demonstrating quarter, half and full turn accurately.
Identify turns.	Identifies quarter, half and full turn correctly and with ease.	Identifies quarter, half and full turn correctly.	Inconsistently identifies quarter, half and full turn.	Little evidence in identifying quarter, half and full turn.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question

	3.2 ANGLES (4 Lessons)	By the end of the sub strand, the learner should be able to: • identify angles in the environment, • identify different types of angles in the environment, • compare angles practically, • use IT devices for learning and enjoyment, • appreciate use of angles in real life situations.	• Learners in pairs/groups /individually to identify angles in the environment. • Learners in pairs/groups to identify right angles in the environment. • Learners in pairs/groups to identify acute angles in the environment. • Learners in pairs/groups to identify obtuse angles in the environment. • Learners in pairs/groups to identify reflex angles in the environment. • Learners in pairs/groups to compare angles using a right angle. • Learners in pairs/groups/individually to play digital games and learn more about angles.	Where can you find angles in the environment?
Core competencies to be developed: • Communication and collaboration: as learners compare angles. • Learning to learn: as learners identify angles. • Digital literacy: as learners play digital games.				
PCIs: • Environmental education as learners plant flowers and trees to demonstrate angles and shapes. • Social cohesion as learners work in groups.			**Values:** • Responsibility and respect as learners make accurate measurements.	
Link to other subjects: • Creative Art as learners draw angles. • Agriculture as learners plant seeds at angles and in parallel rows.			**Suggested Community Service Learning Activities:** • Learners to assist in making of furniture and house construction in the community.	

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Identify Angles.	Identifies angles correctly and with ease.	Identifies angles correctly.	Inconsistently identifies angles.	Little evidence in identifying angles.
Identify Right angles.	Identifies right angles correctly and with ease.	Identifies right angles correctly.	Inconsistently identifies right angles.	Little evidence in identifying right angles.
Identify Acute angles.	Identifies acute angles correctly and with ease.	Identifies acute angles correctly.	Inconsistently identifies acute angles.	Little evidence in identifying acute angles.
Identify Obtuse angles.	Identifies obtuse angles correctly and with ease.	Identifies obtuse angles correctly.	Inconsistently identifies obtuse angles.	Little evidence in identifying obtuse angles.
Identify Reflex angles.	Identifies reflex angles correctly and with ease.	Identifies reflex angles correctly.	Inconsistently identifies reflex angles.	Little evidence in identifying reflex angles.
Compare angles.	Compares angles correctly and with ease.	Compares angles correctly.	Inconsistently compares angles.	Little evidence in comparing angles.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question

	3.3 2-D SHAPES (6 Lessons)	By the end of the sub strand, the learner should be able to: a) identify different shapes in the environment, b) identify line of symmetry, practically c) make patterns using different shapes, d) identify properties of 2-D shapes practically, e) use IT devices for learning and enjoyment, f) appreciate using shapes in real life situations.	• Learners in pairs/groups/individually to identify shapes in the environment. • Learners in pairs/groups to identify line of symmetry by folding the shape into two equal parts and identify the fold line as line of symmetry. • Learners in pairs/groups/individually to make patterns using squares, rectangles and triangles. • Learners in pairs/groups to identify properties of a square practically. • Learners in pairs/groups to identify properties of a rectangle practically. • Learners in pairs/groups to identify properties of a triangle practically. • Learners in pairs/groups to use IT devices to learn more about 2-D shapes and make patterns.	1. How can you identify a 2-D shape? 2. How can you make patterns using shapes?

Core competencies to be developed:

- Communication and collaboration: as learners identify different shapes.
- Learning to learn: as learners identify properties of different shapes.
- Digital literacy: as learners play digital games.

PCIs: • Financial literacy as learners make patterns for commercial use. • Patriotism as learners make shapes of Kenya, national flag by arranging themselves in rows and columns.	**Values:** • Responsibility and respect: as learners report on properties of 2-D shapes.
Link to other subjects: • Creative activities as learners identify objects of different shapes in the environment for making structures like animal cages. • Languages as learners participate in discussions.	**Suggested community service Learning activities:** • Learners may assist farmers in identifying 2-D shapes in the environment for making animal cages.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Identify different shapes in the environment.	Identifies different shapes in the environment correctly and with ease.	Identifies different shapes in the environment correctly.	Inconsistently identifies different shapes in the environment.	Little evidence in identifying different shapes in the environment.
Identify lines of symmetry.	Identifies lines of symmetry correctly and with ease.	Identifies lines of symmetry correctly.	Inconsistently identifies lines of symmetry.	Little evidence in identifying lines of symmetry.
Make patterns using different shapes.	Makes patterns using different shapes fast and effectively.	Identifies patterns using different shapes effectively.	Inconsistently identifies patterns using different shapes.	Little evidence in making patterns using different shapes.
Identify properties of squares.	Identifies properties of squares correctly and with ease.	Identifies properties of squares correctly.	Inconsistently identifies properties of squares.	Little evidence in identifying properties of squares.
Identify properties of rectangles.	Identifies properties of rectangles correctly and with ease.	Identifies properties of rectangles correctly.	Inconsistently identifies properties of rectangles.	Little evidence in identifying properties of rectangles.
Identify properties of triangle.	Identifies properties of triangles correctly and with ease.	Identifies properties of triangles correctly.	Inconsistently identifies properties of triangles.	Little evidence in identifying properties of triangles.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
4.0 DATA HANDLING	**4.1 DATA (8 Lessons)**	By the end of the sub strand, the learner should be able to: a) represent data involving real life situations using frequency tables, b) work out questions involving frequency tables representing real life situations, c) identify where frequency tables are used in real life, d) use IT devices for learning and enjoyment, e) appreciate use of frequency tables in representing data in real life situations.	• Learners in groups to collect and record data involving real life situations using tally marks. • Learners in pairs/groups/ individually to represent data collected from real life situations using frequency tables. • Learners in pairs/ groups/individually to interpret frequency tables representing real life situations. • Learners in pairs/groups/individually to work out questions involving frequency tables representing real life situations. • Learners in pairs/ groups to discuss where frequency tables are used. • Learners in pairs/groups/individually to use IT devices and learn more on data collection.	How can you represent data?

Core competencies to be developed:

- Communication and collaboration: as learners collect data.
- Learning to learn: as learners identify how to represent data.
- Digital literacy: as learners play digital games.

PCIs: • Health related issues as learners collect data on patients. • Environment as learners collect data on environmental issues e.g. number of trees in schools.	**Values:** • Love and respect as learners collect data in groups. • Responsibility and integrity as learners collect data.
Link to other subjects: • Languages as learners are involved in group discussions.	**Suggested community service Learning activities:** Learners may assist in collecting data on attendance/number of items in community functions.

• Agriculture and Science and Technology as learners collect data.	

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Represent data using frequency tables.	Represents data using frequency tables correctly and with ease.	Represents data using frequency tables correctly.	Inconsistently represents data using frequency tables.	Little evidence data in using frequency tables.
Interpret frequency tables.	Interprets frequency tables correctly and with ease.	Interprets frequency tables correctly.	Inconsistently interprets frequency tables.	Little evidence in interpreting frequency tables.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question

5.0 ALGEBRA	**5.1 USE OF LETTERS (6 Lessons)**	By the end of the sub strand, the learner should be able to: a) represent the unknown in real life situations using letters, b) form algebraic expressions to represent real life situations, c) simplify algebraic expressions representing real life situations, d) use IT devices for learning and enjoyment, e) appreciate the use of algebraic expressions.	• Learners in pairs/groups/individually to represent the unknown in real life situations using letters. • Learners in pairs/groups/individually to form algebraic expressions to represent real life situations. • Learners in pairs/groups/individuals to simplify algebraic expressions representing real life situations. • Learners in pairs/groups/individually to play digital games involving algebraic expressions.	How can you simplify algebraic expressions?
Core competencies to be developed: • Learning to learn: as learners represent the unknown using letters. • Communication and collaboration: as learners form algebraic expressions. • Digital literacy: as learners play digital games.				

PCIs: • Self- esteem as learners represent the unknown using letters in real life situations. • Social cohesion as learners work in pairs/groups. • Environmental education as learners group objects /litter from the environment using letters.	**Values:** • Responsibility as learners represent the unknown using letters. • Love as learners work in groups.
Link to other subjects: • Languages as learners represent the unknown using letters.	**Suggested Community Service Learning Activities:** • Learners may assist in sorting litter in the community.

Assessment Rubrics

Indicators	Exceeds Expectations	Meets Expectations	Approaches Expectations	Below Expectations
Represent unknown using letters.	Represents unknown using letters correctly and with ease.	Represents unknown using letters correctly.	Inconsistently represents unknown using letters.	Little evidence in representing unknown using letters.
Form algebraic expressions.	Forms algebraic expressions correctly and with ease.	Forms algebraic expressions correctly.	Inconsistently forms algebraic expressions.	Little evidence in forming algebraic expressions.
Simplify algebraic expressions.	Simplifies algebraic expressions correctly and with ease.	Simplifies algebraic expressions correctly.	Inconsistently simplifies algebraic expressions.	Little evidence in simplifying algebraic expressions.
Uses IT devices for learning and enjoyment.	Uses IT devices for learning and enjoyment fast and efficiently.	Uses IT devices for learning and enjoyment efficiently.	Inconsistently uses IT devices for learning and enjoyment.	Little evidence in using IT devices for learning and enjoyment.

Suggested Assessment

Assessment may be through oral, written or observation following the assessment rubrics.

SUGGESTED RESOURCES

STRAND	SUB STRAND	SUGGESTED RESOURCES
NUMBERS	Whole numbers	Place value apparatus, number charts, number cards, multiplication table
	Addition	Place value chart, Abacus
	Subtraction	Place value chart, Abacus
	Multiplication	Multiplication tables
	Division	Multiplication tables
	Fractions	Equivalent fraction board, Circular and rectangular cut outs, counters, clock face
	Decimals	100 square grid, rectangular paper strips, Place value charts, number cards
MEASUREMENT	Length	Metre rule, 1metre sticks, tape measure
	Area	Square cut outs, paper cut outs
	Mass	1kg mass, soil or sand, manual/electronic weighing machine, beam balance
	Volume	Cubes, cuboids
	Capacity	1 liter containers, containers of different sizes, water, sand ,soil
	Time	Analogue and digital clocks, digital watches, am /pm chart
	Money	Real / imitation money, price list
GEOMETRY	Position and direction	Clock face
	Angles	Representation of different angles
	2-D shapes	Cut outs of rectangles, circles, and triangles of different sizes
DATA HANDLING	Data	Data from different sources
ALGEBRA	Use of letters	Information from different sources

NOTE

The following ICT devices may be used in the teaching/learning of mathematics at this level:
Learner digital devices (LDD),Teacher digital devices(TDD),Mobile phones, Digital clocks, Television sets, Videos, Cameras, Projectors, Radios, DVD players, CD's, Scanners, Internet among others.

SUGGESTED NON-FORMAL ACTIVITIES

STRAND	SUB STRAND	SUGGESTED NON-FORMAL ACTIVITIES
Numbers	Whole Numbers	Learners to play number games and count items in the environment.
	Addition	Learners to work out total scores in a game.
	Subtraction	Learners to work out the difference in scores for various teams during play.
	Multiplication	Learners to work out the number of flowers in a flower bed by considering the number of rows and columns.
	Division	Learners to distribute themselves into teams during play activities e.g. football.
	Fractions	Learners to share items during play.
	Decimals	Learners to represent decimals using paper cut outs during play.
Measurement	Length	Learners to mark play areas.
	Area	Learners to mark their areas of operation in different games e.g. netball.
	Mass	Learners to play games using a sea saw.
	Volume	Learners to pile up same items during play.
	Capacity	Learners to fill and empty containers during play.
	Time	Learners to observe shadows and relate them to different times of the day.
	Money	Learners to practice shopping activities during play.
Geometry	Position and Direction	Learners to make different turns during singing games.
	Angles	Learners to make toys of cars or dolls during play.
	2-D Shapes	Learners to make different shapes for use during play.
Data Handling	Data	Learners to represent different number of items using sticks as tallies practically.
Algebra	Use of letters	Learners to represent items using letters during play.

SCIENCE AND TECHNOLOGY

Essence Statement

Science and Technology is a learning area which engages in the human pursuit to understand the relationships between the living and non-living universe Science is a discipline that deals with explanations and predictions about nature and the universe while Technology is the application of science to creat devices that can solve problems and do tasks.

The achievement of Vision 2030 greatly depends on Science, Technology and Innovation. Sessional Paper No.1 of 2005 highlights the fact that for breakthrough towards industrialisation, achievement of the desired economic growth targets and social development, a high priority needs to be placed o the development of human capital through education and training by promoting the teaching of sciences and information technology. This is also highlighted in the Sessional Paper 14, 2012 which stresses the need for sustainable basic and higher education, with an emphasis on Science, Technology and Innovation (ST&I). This makes it necessary for Science and Technology to be taught in Upper Primary Education level.

This learning area builds on the competencies introduced at the lower primary under the learning area of Environmental Activities and equips the learne with pre-requisite skills which are required in Integrated Science and Pre-technical and Pre-career studies at the lower secondary level. These enabl learners prepare for Science, Technology, Engineering and Mathematics (STEM) in subsequent levels of education cycle. Inquiry based learning (IBL) Project based learning (PBL), Problem based learning (PBL) and Social Scientific Issue learning (SSI) approaches will be employed throughout th learning experiences in this area as advocated for by John Dewey's social constructivist theory which emphasizes the learner should be given a opportunity to learn through hands-on activities. Engineering design shall be used as a pedagogical strategy to bridge science concepts with other learning areas to solve simple open-ended problems, develop creative thinking and analytical skills among learners, make decisions, and consider alternativ solutions to address a variety of situations.

Learning outcomes

By the end of upper primary the learner should be able to::

- Interact with the environment for learning and sustainable development.
- Apply digital literacy skills appropriately for communication, learning and enjoyment.
- Appreciate the contribution of science and technology in the provision of innovative solutions.
- Use scientific knowledge to observe, explain the natural world,
- Mke functional discoveries that impact individuals and the wider society.
- Use innovative approaches as well as critical thinking and problem solving skills to stimulate scientific inquiry, at the local, national and global levels for lifelong learning.

Strands

1. Living things
2. Environment
3. Digital Technology
4. Matter
5. Force and Energy
6. Earth and Space

Strand	Sub-Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry question
1.0 Living things	**1.1Plants** **1.0.1 1.1.1Characteristics of plants.** **(5 lessons)**	By the end of the sub strand the learner should be able to: a) Identify living and non-living things in the environment b) Identify the characteristics of plants as living things. c) Observe characteristics of plants in the environment. d) Demonstrate responsibility while handling plants. e) Grow some plants found in the locality	a) Learners take a walk in the school compound and the neighbourhood to observe, discuss and record evidence that plants: feed, grow, breathe, reproduce, remove waste, move, respond to changes in their environment and die. b) Learners use digital devices to observe, discuss and record evidence that plants: feed, grow, breathe, reproduce, remove waste materials, move, respond to changes in their environment and die. c) In groups, learners are guided to observe safety precautions when handling plants (Examples: practise use of gloves, forceps, goggles, tongs, overcoats) **Project:** With the help of parents, learners' plant seeds, observe as they grow and record the changes taking place as the plants grow to maturity.	What makes plants living things?
Core competencies to be developed: Critical thinking as they identify plants; Communication and Collaboration as they work in groups and share information; Digital literacy as they use digital devices to take pictures and observe the characteristics of plants.				
PCIs: Environmental sustainability by taking care of plants as they handle and observe parts of plants; Disaster risk reduction while handling different types of plants (poisonous and non-poisonous).			**Values:** Demonstrate responsibility by taking care of plants Respect and love for one another as they work in groups.	
Links to other Learning areas: Agriculture as they observe plants as crops			**Suggested Community Service Learning Activities:** Identifying plants in his/her environment; Taking care of plants in the community.	

Suggested Assessment Rubric

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Identifying the characteristics of plants as living things in his/her environment.	Correctly and consistently identifies characteristics of plants that make them living things.	Correctly identifies characteristics of plants that make them living things.	Identifies some characteristics of plants that make them living things.	Unable to identify characteristics of plants that make them living things.
Demonstrating responsibility while handling plant materials.	Consistently and correctly demonstrates responsibility when handling plant materials	Consistently demonstrates responsibility when handling plant materials	Sometimes demonstrates responsibility when handling plant materials	Rarely demonstrates responsibility when handling plant materials
Growing of plants	Consistently cares for and observes plants	Cares for and observes plants	Sometimes cares for and observes plants	Does not care for and observe plants

Strand	**Sub-Strand**	**Specific learning outcomes**	**Suggested learning experiences**	**Key inquiry questions**
1.0 Living things	**1.1 Animals** **1.1.1 Characteristics of animals.** **1.1.2** **(8 lessons)**	By the end of the sub strand the learner should be able to: a) Identify the characteristics of animals as living things. b) Observe characteristics of animals in the r environment. c) Distinguish between vertebrates and invertebrates. d) Demonstrate responsibility while handling animals. e)	a) Learners take a walk in the school compound and the neighbourhood to observe, discuss and record evidence that animals: feed, grow, breathe, reproduce, remove waste, move, respond to changes in their environment and die. b) Learners use digital devices to observe, discuss and record evidence that animals: feed, grow, breathe, reproduce, remove waste materials, move, respond to changes in their environment and die. c) In groups, learners discuss the main difference between vertebrates and invertebratescts. d) In groups, learners are guided to observe safety precautions when handling animals (Examples: practise use of gloves, forceps, goggles, tongs, overcoats) **Project:** With the help of parents, learners make a portfolio of vertebrate and invertibrates animals	1. What makes animals living things? 2. Which ways do animals differ from each other?

Core competencies to be developed: Critical thinking while identifying animals; Communication and Collaboration as they work in groups; Digital literacy as they use digital devices to observe animals.	
PCIs: Environmental sustainability by taking care of animals; Disaster risk reduction by avoiding dangerous animals.	**Values:** Demonstrate responsibility by handling for animals in his/her environment; Respect for one another as they work in groups.
Links to other learning areas: Agriculture (taking care of animals); Mathematics (grouping animals based on their characteristics); Home Science (Hygiene – washing hands changing clothes after interacting with animals).	**Suggested Community Service Learning Activities:** Identifying animals in his/her environment;.

Suggested Assessment Rubric

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Identifying the characteristics of animals as living things.	Correctly and consistently identifies characteristics of animals that make them living things.	Correctly identifies characteristics of animals that make them living things.	Identifies some characteristics of animals that make them living things.	Unable to identify characteristics of animals that make them living things.
Observing the characteristics of animals as living things.	Accurately and consistently observes characteristics of animals that make them living things.	Accurately observes characteristics of animals that make them living things.	Observes some characteristics of animals that make them living things.	Unable to observe characteristics of animals that make them living things.
Classifying animals according whether they are vertebrates or invertebrates	Accurately and consistently classifies animals according to their products	Accurately classifies animals according to their products	Classifies animals according to their products.	Unable to classify animals according to their products.
Taking care and Observing safety while interacting with animals.	Consistently and correctly takes care and observes safety while interacting with animals.	Consistently takes care and observes safety while interacting with animals.	Sometimes takes care and observes safety while interacting with animals.	Rarely takes care and observes safety while interacting with animals.

Strand	Sub-Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry questions
1.0 Living things	**1.2 Human body** **1.2.1 Human body system** **1.2.1 Digestive system** **12 lessons**	By the end of the sub strand the learner should be able to: a) Identify parts of the digestive system. b) Describe functions of the different parts of the digestive system c) Develop curiosity about taking care of the teeth d) Model the four different types of teeth.	a) In groups, learners are guided to use digital devices and visual aids to observe and identify parts of the digestive system (mouth, teeth, oesophagus, stomach, small intestines, liver, pancreas, large intestines, rectum, anus) b) In groups, learners are guided to use digital devices and visual aids to discuss the functions of parts of the digestive system (the mouth, oesophagus, stomach, small intestines, large intestines, rectum, anus) c) In groups learners are guided to demonstrate the use of different types of teeth (Incisors, Canines, Pre-molars and Molars) using locally available food items (e.g. sugar cane, carrots, fruits, tubers), and digital devices. d) In groups learners are guided to draw/model the four types of teeth using locally available materials.	1. How are the different parts of the digestive system suited to their functions? 2. How do teeth differ?
Core competencies to be developed: Critical thinking while identifying different parts of the digestive system and the four types of teeth; Communication and Collaboration as they work in groups; Digital literacy as they use digital devices to observe and identify functions of parts of the digestive system/ the four types teeth.				
PCIs: Environmental sustainability as they collect materials for modelling; Disaster risk reduction by taking care as they model the teeth.			**Values:** Demonstrate responsibility by caring for the models and materials; Respect for one another as they work in groups.	
Links to other learning areas: Art and craft when modelling; Mathematics (grouping teeth based on their structure and functions); Home Science (taking care of their teeth).			**Suggested Community Service Learning Activities:** Advocate for the right use of teeth in their community.	

Suggested Assessment Rubric

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Identifying the external parts of the digestive system and external parts of a tooth	Correctly and consistently identifies parts of the digestive system and the external parts of a tooth.	Correctly identifies parts of the digestive system and the external parts of a tooth.	Identifies some parts of the digestive system and some external parts of a tooth.	Unable to identify parts of the digestive system and external parts of a tooth.
Describing functions of parts of the digestive system	Accurately and consistently describes functions of parts of the digestive system.	Accurately describes functions of parts of the digestive system	Describes functions of some parts of the digestive system	Unable to describe functions of parts of the digestive system
Drawing the external structure of a tooth	Accurately and consistently draws the external structure of a tooth.	Accurately draws the external structure of a tooth.	Draws some parts of the external structure of a tooth.	Unable to draw the external structure of a tooth.
Identifying the four types of teeth.	Consistently and correctly identifies the four types of teeth.	Consistently identifies the four types of teeth.	Identifies some types of teeth.	Unable to identify the four types of teeth.
Identifying the functions of the four types of teeth	Consistently and correctly identifies the functions of the four types of teeth.	Consistently identifies the functions of the four types of teeth.	Identifies some functions of teeth.	Unable to identify the functions of the four types of teeth.
Showing curiosity as he/she observes the different types of teeth	Consistently shows curiosity as he/she observes the different types of teeth.	Shows curiosity as he/she observes the different types of teeth.	Sometimes shows curiosity as he/she observes the different types of teeth.	Does not show curiosity as he/she observes the different types of teeth.
Modelling the four types of teeth	Accurately and consistently models the four types of teeth.	Accurately models the four types of teeth.	Models some types of teeth	Unable to model the four types of teeth.

Strand	Sub-Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry questions

2.0 Environment	**2.0 Air Pollution** **(12 lessons)**	By the end of the sub strand the learner should be able to: a) State the meaning of the terms "pollution" and "air pollution". b) Identify air pollutants in his/her environment. c) Distinguish between clean and polluted air in his/her environment. d) Identify effects of air pollution on living things. e) Appreciate the importance of clean air in his/her environment. f) Identify ways of reducing air pollution. g) Make a functional air pollution detector. h) Make a functional dust mask using locally available materials.	a) In groups, learners are guided to discuss the meaning of the terms "pollution" and "air pollution". b) Learners to be guided as they use visual aids and digital devices to explore the meaning of "pollution" and "air pollution". c) In groups, learners walk around the school and neighbourhood to observe, identify and record air pollutants (bad smell, dust, smoke). d) Learners to be guided as they use visual aids and digital devices to identify and record air pollutants. e) In groups, learners walk around the school and neighbourhood to observe and identify clean and polluted air (toilets, dusty area, smoky areas and decomposing matter). f) Learners to be guided as they use visual aids and digital devices to differentiate between clean and polluted air. g) In groups, learners walk around the school and neighbourhood to observe, identify and record the effects of air pollution on living things (breathing problems, irritation of eyes, visibility and growth of plants) h) In groups, learners to use visual aids and digital devices to identify the effects of air pollution on living things. i) Learners are guided to identify and discuss ways of reducing air pollution (proper disposal of waste; Ventilation; Use of Ventilation Improved Pit latrines; sprinkling ash in pit latrines; Sprinkling water on dusty grounds). j) In groups, learners are guided to observe safety precautions when working in air polluted environment (Example: practise use of dust masks, goggles, overcoats).	1. What causes air pollution? 2. What are the effects of air pollution? 3. How can you reduce air pollution?

			Project 1: In groups, learners are guided to make a simple air pollution detector using a clean white piece of cloth. **Project 2:** Learners are guided to make a functional dust mask using locally available materials.	

Core competencies to be developed: Citizenship when reducing air pollution in his/her environment; Digital literacy as he/she searches for information about air pollution; Critical thinking when deciding on ways of reducing air pollution; Problem solving when reducing air pollutants in his/her environment.

PCIs: Environmental conservation as he/she reduces air pollution; Health Education as he/she identifies health problems associated with air pollution; Safety as he/she makes the dust masks.	**Values:** Responsibility as he/she reduces air pollution; Love and respect for each other as they work in groups.
Links to other Learning areas: Agriculture: Use of compost pits to dispose waste matter which turns into manure; Home Science: Use of dust masks when cleaning the compound; Mathematics: measurements when making pollution detectors and functional dust masks.	**Suggested Community Service Learning Activities:** Planting trees and grass to reduce dust; Proper disposal of waste in his/her environment.

Suggested Assessment Rubric

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Distinguishing between clean and polluted air.	Correctly and consistently distinguishes between clean and polluted air.	Correctly distinguishes between clean and polluted air.	Occasionally distinguishes between clean and polluted air.	Unable to distinguish between clean and polluted air.
Identifying air pollutants in his/her environment.	Correctly and consistently identifies air pollutants.	Correctly identifies air pollutants.	To some extent identifies air pollutants.	Unable to identify air pollutants.
Identifying effects of air pollution on living things.	Correctly and consistently identifies the effects of air pollution on living things.	Correctly identifies the effects of air pollution on living things.	To some extent identifies the effects of air pollution on living things.	Unable to identify the effects of air pollution on living things.
Appreciating the importance of clean air in his/her environment.	Consistently shows appreciation for the importance of clean air in his/her environment.	Shows appreciation for the importance of clean air in his/her environment.	Sometimes shows appreciation for the importance of clean air in his/her environment.	Does not show appreciation for the importance of clean air in his/her environment.
Making a simple air pollution detector.	Correctly and neatly makes a simple air pollution detector.	Correctly makes a simple air pollution detector.	Inaccurately makes a simple air pollution detector.	Unable to make a simple air pollution detector.
Making a functional dust	Correctly and consistently	Correctly makes a functional	Inaccurately makes a	Unable to make a functional

mask using locally available materials.	makes a functional dust mask using locally available materials**.**	dust mask using locally available materials.	functional dust mask using locally available materials.	dust mask using locally available materials.

Strand	**Sub Strand**	**Specific learning outcomes**	**Suggested learning experiences**	**Key inquiry questions**
2.0 Environment	**2.2 Water Pollution** **(11 lessons)**	By the end of the sub strand the learner should be able to: a) State the meaning of the term "water pollution". b) Identify water pollutants in his/her environment. c) Distinguish between clean and polluted water in his/her environment. d) Identify effects of water pollution on living things. e) Appreciate the importance of clean water in his/her environment. f) Identify ways of reducing water pollution. g) Make a functional water filter using locally available materials.	a) In groups, learners are guided to discuss the meaning of the term "water pollution". b) Learners to be guided as they use visual aids and digital devices to explore the meaning of the term "water pollution". c) In groups, learners walk around the school and neighbourhood to observe, identify and record water pollutants (soil and waste). d) Learners to be guided as they use visual aids and digital devices to observe, identify and record water pollutants. e) In groups, learners walk around the school and neighbourhood to observe and identify clean and polluted water (water in a pit, open pools, ponds, rivers, sewers and watering troughs). f) Learners to be guided as they use visual aids and digital devices to differentiate between clean and polluted water. g) In groups, learners walk around the school and neighbourhood to observe, identify and record the effects of water pollution on living things (waterborne diseases, death of plants and animals that live in water). h) In groups, learners to use visual aids and digital devices to identify the effects of water pollution	1. What causes wate pollution? 2. What are the effects of water pollution? 3. How can water pollution be reduced?

			on living things. i) Learners are guided to identify and discuss ways of reducing water pollution (proper disposal of waste; proper disposal of dirty water). j) In groups, learners are guided to observe safety precautions when working in water polluted environment (Example: practise use of gumboots and gloves). **Project:** In groups, learners are guided to make a functional water filter using locally available materials.	

Core competencies to be developed: Citizenship when reducing water pollution in the environment; Digital literacy as he/she searches for information about water pollution; Critical thinking when deciding on ways of reducing water pollution; Problem solving when reducing water pollutants in his/her environment.

PCIs: Environmental conservation as he/she reduces water pollution; Health Education as he/she identifies health problems associated with water pollution; Safety as he/she makes a water filter.	**Values:** Responsibility as he/she reduces water pollution; Love and respect for each other as they work in groups.
Links to other Learning areas: Home Science: Use of water filter to obtain clean water for domestic use.	**Suggested Community Service Learning Activities:** Proper disposal of waste in his/her environment. Use of water filter to obtain clean water for domestic use in the community.

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Distinguishing between clean and polluted water.	Correctly and consistently distinguishes between clean and polluted water.	Correctly distinguishes between clean and polluted water.	To some extent distinguishes between clean and polluted water.	Unable to distinguish between clean and polluted water.
Identifying water pollutants in his/her environment.	Correctly and consistently identifies water pollutants his/her environment.	Correctly identifies water pollutant in his/her environment.	To some extent identifies one water pollutants in his/her environment.	Unable to identify water pollutants in his/her environment.
Identifying effects of water pollution in his/her environment.	Correctly and consistently identifies the effects of water pollution on living things.	Correctly identifies the effects of water pollution on living things.	To some extent identifies the effect of water pollution on living things.	Unable to identify the effect o water pollution on living things.
Appreciating the importance of using clean water in his/her	Consistently shows appreciation for the importance of using clean water in his/her	Shows appreciation for importance of using clean water in his/ her	Sometimes shows appreciation for importance of using clean water in	Does not show appreciation for the importance of using clean water in his/her

environment.	environment.	environment.	his/her environment.	environment.

Strand	Sub Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry questions
3.0 Digital Technology	**3.1 Digital devices (7 lessons)**	By the end of the sub strand the learner should be able to: a) Define the term "digital device". b) Identify the various digital	a) In groups, learners are guided to discuss the meaning of the term "digital device". b) In groups, learners are guided to observe and identify the various digital devices in their locality (Desk top computer, Laptop, Mobile	1. What are the main parts of a digital device? 2. What are the functions of the

		devices in his/her locality. c) Identify different parts of digital devices in his/her locality. d) State the functions of the various parts of a digital device. e) Demonstrate proper connection of parts of digital devices. f) Demonstrate proper use of digital devices in their day to day life. g) Model external parts of a digital device using locally available materials.	phone, TVs, Radios, Tablets, iPads). c) In groups, learners are guided to observe and identify the various parts of digital devices using real objects and/or visual aids (for example: key board/touch pad, mouse, monitor, CPU, cables) d) In groups, learners to discuss the functions of the various parts a digital device. e) In groups, learners are guided to connect parts of the digital devices in their locality. f) Learners to practice proper use of digital devices (typing, taking photos, play stations, recording videos and audios). **Project:** In groups, learners to model external parts of a digital device using locally available materials.	main parts of a computer?
Core competencies to be developed: Digital literacy as they use digital devices; Critical thinking and Problem solving as they identify and connect the components of a digital device, Communication and Collaboration as they work in groups; Imagination and Creativity as they model parts of a digital device; Learning to learn by properly connecting the different parts for use.				
PCIs : Safety when handlings digital devices			**Values:** Responsibility as they handle digital devices.	
Links to other Learning Areas: Art and Craft when modelling; Mathematics when matching parts of the digital devices			**Suggested Community Service Learning Activities:** connection of digital devices for use in the community.	

Suggested Assessment Rubrics				
	4	**3**	**2**	**1**
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Definition of the term "digital device".	Correctly and consistently defines the term "digital device".	Correctly defines the term "digital device".	To some extent defines the term "digital device".	Unable to define the term "digital device".
Identification of the	Correctly and consistently	Correctly identifies digital	To some extent identifies	Unable to identify digital

various digital devices.	identifies digital device.	device.	digital device.	device.
Identification of different parts of a computing device in his/her school.	Accurately identifies all computing devices and their parts in his/her school.	Identifies some computing devices and their parts in his/her school.	Identifies some computing devices in his/her school.	Unable to identify computing devices and their parts in his/her school.
Stating the functions of the various parts of a computing device	Correctly and consistently states the functions of all the parts of a computing device.	Correctly states the functions of some parts of a computing device.	Sometimes states the functions of parts of a computing device.	Unable to state any function of parts of a computing device.
Demonstrating proper connection of parts of computing devices	Accurately and consistently demonstrates proper connection of parts of computing devices.	Correctly demonstrates proper connection of parts of computing devices.	Sometimes demonstrates proper connection of parts of computing devices.	Unable to demonstrate proper connection of parts of computing devices.
Demonstrating proper use of computing devices in their day to day life.	Accurately and consistently demonstrates proper use of computing devices in his/her day to day life.	Correctly demonstrates proper use of computing devices in his/her day to day life.	Sometimes demonstrates proper use of computing devices in his/her day to day life.	Unable to demonstrate proper use of computing devices in their day to day life.
Modelling external parts of a computer using locally available materials.	Correctly models all external parts of a computer using locally available materials.	Correctly model some external parts of a computer using locally available materials.	Attempts to model external parts of a computer using locally available materials.	Unable to model external parts of a computer using locally available materials.

Strand	Sub Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry question
3.0 Digital Technology	**3.2 Coding (5 lessons)**	By the end of the sub strand the learner should be able to: a) State meaning of the term "coding". b) Identify coded patterns. c) Play simple puzzle games.	a) In groups, learners are guided to discuss the meaning of the term "coding". b) In groups, learners are guided to observe, identify and discuss locally available coded patterns (for example: arrangement of leaves, how birds make nests, arrangement of shapes on a football and tennis ball, Sudoku in	1. What is coding?

			Mathematics, Word puzzle in English). c) Use digital devices to observe, identify and discuss different coded pattern d) s (for example: fun and games). e) In groups, learners are guided to play simple puzzle games (for example: fitting in missing parts to complete the whole; re-assembling dismantled parts to complete the whole, word puzzles). f) Use digital devices to solve simple patterns (for example: computer games and puzzles).	
Core competencies to be developed: Digital literacy as they use digital devices; Critical thinking and Problem solving as they play puzzle games, Communication and Collaboration as they work in groups; Imagination and Creativity as they play puzzle games; Learning to learn by using digital devices to play puzzle games.				
PCIs : Safety when handlings digital devices			**Values:** Responsibility as they handle digital devices and other learning aids.	
Links to other Learning Areas: Art and Craft when modelling; Mathematics when sorting and matching, English as they solve word puzzles.			**Suggested Community Service Learning Activities:** Connecting and operating digital devices at school and community functions.	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Definition of the term "coding".	Correctly and consistently defines the term "coding".	Correctly defines the term "coding".	To some extent defines the term "coding".	Unable to define the term "coding".
Identifying coded patterns.	Accurately and consistently identifies coded patterns.	Identifies coded patterns.	To some extent identifies coded patterns.	Unable to identify coded patterns.

Play simple puzzle games.	Correctly and consistently plays puzzle games.	Correctly plays simple puzzle games.	To some extent plays simple puzzle games.	Unable to play simple puzzle games.

Strand	Sub Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry questions
4.0 Matter	**4.1 States of matter** **4.1.1 Understanding matter** **(6 lessons)**	By the end of the sub strand the learner should be able to: a) Identify the three states of matter. b) Investigate different states of matter to show their characteristics. c) Categorise substances in his/her environment into the three states of matter. d) Observe safety when working with different materials. e) Show curiosity while categorising different materials according to their states.	a) In groups, learners to observe and identify solids, liquids and the presence of air in their environment. b) Working in groups, learners to use visual aids and digital devices to identify the three states of matter (solids, liquids, gases). c) Learners to work in groups to investigate the characteristics of different states of matter (shape, volume and mass). d) Learners to manipulate different materials to show the characteristics of the three states of matter (filling balloons with air; filling containers of different shapes with water; filling containers with pebbles, soil and stones). e) Learners to observe different substances in the locality and group them into the three states of matter. f) Learners to use digitals devices to demonstrate the characteristics of the three states of matter. g) Learners are guided on how to take precautions when handling different substances.	1. What are the characteristics of matter? 2. How can we show that there is air around us?
Core competencies to be developed: Communication and collaboration as they work in groups; Digital literacy as they use digital devices to investigate and categorise different materials into the three states matter.				
PCIs: Safety as they work with different materials; Environmental Sustainability by caring for different materials while investigation the different states of matter; Disaster Risk Reduction: by taking precautions while manipulating different materials.			**Values:** Responsibility as they manipulate materials; Respect and love as they work in groups; Integrity by caring for the materials used in the learning process.	
Link to other learning area: Agriculture (where air a component of soil); Mathematics (volume, mass and shape); Home science in appreciating that furniture occupies space and washing hands after handling different materials.			**Recommended Community service learning activities:** With parental guidance, learners identify the uses of solids, liquids and gases at home.	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Identifying the three states of matter.	Correctly and consistently identifies the three states of matter.	Correctly identifies the three states of matter.	Identifies some states of matter.	Unable to identify the states of matter.
Investigating different states of matter to show their characteristics.	Correctly and consistently demonstrates characteristics of the three states of matter.	Correctly demonstrates characteristics of the three states of matter**.**	Demonstrates some characteristics of the states of matter.	Unable to demonstrate characteristics of the states of matter.
Categorising materials in his/her environment into the three states of matter.	Correctly and consistently categorises materials into the three states of matter.	Correctly categorises materials into the three states of matter.	Categorises some materials into the three states of matter.	Unable to categorise materials into the three states of matter.
Observing safety when working with different materials.	Correctly and consistently demonstrates safety measures when working with different materials.	Correctly demonstrates safety measures when working with different materials.	To some extent demonstrates safety measures when working with different materials.	Unable to demonstrate safety measures when working with different materials.
Show curiosity while categorising different materials according to their states.	Consistently shows curiosity while categorising different materials according to their states.	Shows curiosity while categorising different materials according to their states.	Sometimes shows curiosity while categorising different materials according to their states.	Does not show curiosity while categorising different materials according to their states.

Strand	**Sub Strand**	**Specific learning outcomes**	**Suggested learning experiences**	**Key inquiry questions**
4.0 Matter	**4.2 Properties of matter** **4.2.1 Floating and sinking** **(8 lessons)**	By the end of the sub strand the learner should be able to: a) Demonstrate sinking and floating using different materials. b) Identify objects that can float and those that can sink in water. c) Identify factors that affect	a) In groups, learners are guided to use objects to demonstrate sinking and floating of different materials. b) In groups, learners use visual aids and digital devices to observe and record sinking and floating of different materials. c) Learners are guided to observe and classify objects in their environment into those that float and those that sink in water.	1. Why do some materials float and others sink? 2. How are floaters useful in our lives?

		floating and sinking of objects in water. d) Make a floater using locally available materials. e) Appreciate use of floaters as life savers.	d) Learners are guided as they use digital devices in observing and classifying objects into those that float and those that sink in water. e) Learners are guided to investigate how shape and type of materials affects sinking or floating of an object (for example: normal bottle tops, crushed bottle tops, same quantity of plasticine in different shapes). f) In groups learners are guided on how to make floaters to sink and sinkers to float. g) Learners are guided to use digital devices to observe the use of floaters as life savers. h) In groups learners are guided to on how to use floaters as life savers. **Project**: In groups learners make floaters using locally available materials such as rubber tubes, wood or plastics.	

Core competencies to be developed: Critical thinking as they identify factors that affect floating and sinking of objects; Communication and collaboration as learners investigate and discuss observations; Imagination and creativity as they make floaters; Digital Literacy as they apply the digital devices to investigate floating and sinking of objects; Learning to learn as they work in groups.	
PCIs: Life skills while using floaters as life savers. Disaster risk reduction by using floaters to prevent drowning.	**Values:** Love and respect as they make floaters in groups. Responsibility when learning the use of floaters to save life
Link to other Learning Areas: Art and craft (making floaters); Physical and Health Education (swimming)	**Community service learning:** Where adults guide learners on how to use floaters as life savers.

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Demonstrating sinking and floating using different materials.	Correctly and consistently demonstrates sinking and floating using different materials.	Correctly demonstrates sinking and floating using different materials.	To some extent demonstrate sinking and floating using different materials.	Unable to demonstrate sinking and floating using different materials.
Identification of common objects that can float and those that can sink in water.	Correctly and consistently identifies common objects that can float and those that	Correctly identifies common objects that can float and those that can	To some extent identifies common objects that can float and those that can sink within	Unable to identify commor objects that can float and those that can sink within

	can sink within.	sink within		
Identification of factors that affect floating and sinking of objects in water**.**	Correctly and consistently identifies of factors that affect floating and sinking of objects in water.	Correctly identifies of factors that affect floating and sinking of objects in water.	To some extent identifies factors that affect floating and sinking of objects in water.	Unable to identify factors that affect floating and sinking of objects in water.
Making a usable floater using locally available materials**.**	Correctly and neatly makes a usable floater using locally available materials.	Correctly makes a usable floater using locally available materials.	Makes a floater using locally available materials.	Unable to make a floater using locally available materials.
Appreciation of using floaters as life savers.	Strongly demonstrates appreciation for use of floaters as life savers.	Demonstrates appreciation for use of floaters as life savers.	To some extent demonstrates appreciation for use of floaters as life savers.	Unable to demonstrate appreciation for use of floaters as life savers.

Strand	**Sub Strand**	**Specific learning outcomes**	**Suggested learning experiences**	**Key inquiry questions**
5.0 Force and Energy	**5.1 Force** **5.2 Force and its effects** **(4 lessons)**	By the end of the sub strand the learner should be able to: a) State the meaning of term "force". b) Demonstrate the effects of force on an object. c) Appreciate effects of force in everyday life. d) Observe safety precautions	a) In groups, learners are guided to carry out activities to show the meaning of the term "force". b) In groups, learners to demonstrate and observe the effect of a force on an object (for example: change of direction of movement, change of shape of an object, start and stop movement of an object). c) Learners to use digital devices to observe force at work (e.g. wheel barrow, tug of war, pulling and pushing a hand-cart, ox cart, pushing a bicycle)	1. What is force? 2. What are the effects of force in everyday life'

		when dealing with force.	d) Learners are guided to discuss safety precautions to observe when dealing with force.	
Core competencies to be developed: Communication and Collaboration as they carry out activities in groups; Digital literacy as they use computing devices to search, play and observe demonstrations of force; Critical thinking as they carry out activities to reveal the meaning of the term "force"; Creativity and imagination as they illustrate and demonstrate the meaning and effects of force.				
PCIs: Disaster Risk Reduction when they observe safety precautions while demonstrating the effects of force on objects; Health Education by cleaning hands after handling of objects when demonstrating the effect of force.			**Values:** Respect and love as well as Cooperation as they carry out activities in groups; Responsibility as they care for each other while demonstrating the effect of force; Unity as they carry out tasks together.	
Links to other Learning Areas: Agriculture (e.g. pulling cart. Pushing a bicycle, farm tools and equipment), Home science (kitchen appliances), Physical and Health Education (gym equipment)			**Suggested Community Service Learning Activities:** Participating in tug of war; Observing pulling and pushing a hand-cart, ox cart, pushing a bicycle in the locality.	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Stating the meaning of the term force.	Correctly and consistently states the meaning of the term force.	Correctly states the meaning of the term force.	To some extent states the meaning of the term force**.**	Unable to state the meaning of the term force**.**
Demonstration of the effects of force.	Correctly and consistently demonstrates the effects of force.	Correctly demonstrates the effects of force.	To some extent demonstrates the effects of force.	Unable to demonstrate the effects of force.

Appreciation of the effects of force in everyday life.	Strongly and consistently demonstrates appreciation for the effects of force.	Strongly demonstrates appreciation for the effects of force in everyday life	To some extent demonstrates appreciation for the effects of force in everyday life	Unable to demonstrate appreciation for the effects of force in everyday life
Observation of safety precautions when dealing with force	Correctly and consistently observes safety precautions when dealing with force	Correctly observes safety precautions when dealing with force	To some extent observes safety precautions when dealing with force	Unable to observe safety precautions when dealing with force

Strand	**Sub Strand**	**Specific learning outcomes**	**Suggested learning experiences**	**Key inquiry question**
5.0 Force and Energy	**5.3 Energy** **5.3.1 Sound energy (5 lessons)**	By the end of the sub strand, the learner should be able to: a) Demonstrate that sound travels in all directions from a source. b) Demonstrate that sound can be reflected. c) Make a sound	a) Learners are guided to carry out an activity to demonstrate that sound travels in all directions from the source. b) Learners to use audio aids and digital devices to observe and record the travelling of sound in all directions from a source. c) Learners go to a place where they can observe reflected sound or Echo (for example a cliff, a large hall, a forest, a valley, between tall buildings). d) Learners to use audio aids and digital devices to observe	How does sound travel?

		producing instrument from locally available materials.	and record the reflection of sound. **PROJECT**: In groups, learners to make a sound producing instrument from locally available materials (for example: bell, drum, guitar, wind instruments, etc.).	
Core competencies to be developed: Communication and Collaboration as they carry out activities in groups; Imagination and Creativity as they make sound producing instrument.				
PCIs: Safety when handling materials and objects.			**Values:** Responsibility by taking care of the equipment and tools; Love and respect as they work in groups.	
Links to other learning areas: Music as they make and use sound producing instruments; Home Science by washing hands after the learning activities.			**Suggested Community Service Learning Activities:** Learners to identify and operate use different sound producing instruments in their locality with parental guidance	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Demonstrating that sound travels in all directions from a source.	Correctly and consistently demonstrates giving examples to show that sound travels in all directions from a source	Correctly demonstrates that sound travels in all directions from a source	To some extent demonstrates that sound travels in all directions from a source	Unable to demonstrate that sound travels in all directions from a source
Demonstrating that sound can be reflected.	Correctly and consistently demonstrates and give examples to show that sound can be reflected	Correctly demonstrates that sound can be reflected	To some extent demonstrates that sound can be reflected	Unable to demonstrate that sound can be reflected

Making a sound producing instrument.	Correctly and neatly makes functional sound producing instrument.	Correctly makes functional sound producing instrument.	To some extent makes sound producing instrument.	Unable to make sound producing instrument.

Strand	Sub Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry question
5.0 Force and Energy	**5.3 Energy** **5.4.2. Light energy (6 lessons)**	By the end of the sub strand, the learner should be able to: a) Demonstrate that light travels in a straight line. b) Demonstrate the transmission of light through different materials. c) Classify materials into transparent, translucent and opaque.	a) Learners to carry out activities to show that light travels in a straight line. b) Learners to use visual aid and digital devices to observe and record the travelling of light in a straight line. c) Learners to demonstrate, observe and record the transmission of light through different materials. d) Learners to use visual aids and digital devices to observe and record the transmission of light through different materials. e) Learners to classify materials in their locality into: transparent, translucent or opaque. **Project:** Learners to make a screen for projection of still images.	1. How does light move from the source to its surroundings? 2. How does light behave when shone on different materials?
Core competences to be developed: Digital literacy learners interact with digital devices to observe different behaviour of light; Critical thinking as learners classify different objects into either transparent, translucent or opaque; Creativity and imagination as learners make a screen for projecting pictures; Communication and Collaboration by learners working together in groups.				
PCIs: Safety where learners use personal protection equipment as they make the screen; Personal hygiene is observed as they clean their hands after interacting with different objects from the environment.			**Values:** Unity by learners working together as they do their project; Responsibility by learners carrying out the assigned tasks in the respective groups; Respect and love by learners respecting each other's opinion as they work together in their groups.	
Links to other Learning areas: Home Science when lighting up the home; Mathematics when taking measurements of materials to make the screen.			**Suggested Community Service Learning Activities:** Learners guided by family members to classify locally available materials as either transparent, translucent or and opaque	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Demonstrating that light travels in a straight line.	Correctly and consistently demonstrates that light travels in a straight line.	Correctly demonstrates that light travels in a straight line.	To some extent demonstrates that light travels in a straight line.	Unable to demonstrate that light travels in a straight line.
Demonstration of transmission of light through different materials.	Correctly and consistently demonstrates the transmission of light through different materials.	Correctly demonstrates the transmission of light through different materials.	To some extent demonstrates the transmission of light through different materials.	Unable to demonstrate the transmission of light through different materials.

Classification of materials into transparent, translucent and opaque.	Correctly and consistently classifies materials into transparent, translucent and opaque.	Correctly classifies materials into transparent, translucent and opaque.	To some extent classifies materials into transparent, translucent and opaque.	Unable to classify materials into transparent, translucent and opaque.

Strand	**Sub Strand**	**Specific learning outcomes**	**Suggested learning experiences**	**Key inquiry question**
5.0 Force and Energy	**5.3 Energy** **5.3.1. Heat energy (7 lessons)**	By the end of the sub strand the learner should be able to: a) Demonstrate conduction of heat b) Identify poor and good conductors of heat c) Identify uses of poor and good conductors d) Make oven gloves and fireless cooker from locally available materials	a) Learners to perform experiments to demonstrate conduction of heat. b) Learners to use digital devices to observe and record how conduction of heat takes place c) Learners to investigate and identify poor good conductors of heat. d) Learners use digital devices to observe and record poor and good conductors of heat e) Learners to demonstrate and discuss the uses of good and poor conductors of heat f) Learners to use digital devices to observe and record the uses of good and poor conductors of heat	1. How does heat move from one point to another in solids?

			Project 1: Learners to make oven gloves using locally available materials **Project 2**: Learners to make a fireless cooker	
Core competences to be developed: Critical thinking and problem solving, Imagination and Creativity when making the gloves and fireless cooker; Communication and Collaboration as learners work in groups; Digital literacy in the use of digital media in demonstrating and observing conduction of heat.				
PCIs: Safety in the use of personal protective equipment (PPE) and taking care when using various objects during their demonstrations of conduction of heat; Environmental education in the use of fireless cooker made from locally available materials; Life skills: decision making and problem solving as they perform the projects for local use.			**Values:** Unity as they work in groups; Respect and love as they perform the experiments; Responsibility by being careful and diligent while carrying out experiments; Honesty and Integrity as they make a functional fireless cooker and gloves.	
Links to other Learning areas: Art & Craft in the use of tools and equipment to carry out the projects; Home Science in knitting the gloves as well as observing hygiene while working.			**Suggested Community Service Learning Activities:** Entrepreneurship as they acquire basic skills of selling and saving; Financial literacy through sale of fireless cookers and gloves; Simple research in heat transfer and its applications.	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Demonstrating conduction of heat	Correctly and consistently demonstrates conduction of heat	Correctly demonstrates conduction of heat.	To some extent demonstrates conduction of heat.	Unable to demonstrate conduction of heat.
Identification of poor and good conductors of heat	Correctly and consistently identifies poor and good conductors of heat	Correctly identifies poor and good conductors of heat	To some extent identifies poor and good conductors of heat	Unable to identify poor and good conductors of heat.
Identification of the uses of poor and good conductors	Correctly and consistently identifies uses of poor and good conductors	Correctly identify uses of poor and good conductors	To some extent identifies the uses of poor and good conductors	Unable to identify uses of poor and good conductors.

Making a functional fireless cooker and oven gloves	Correctly and neatly makes a functional fireless cooker and oven gloves	Correctly makes a functional fireless cooker and oven gloves	To some extent makes a fireless cooker and oven gloves	Unable to make a fireless cooker and oven gloves

Strand	Sub Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry question
5.0 Force and Energy	**5.4 Machines** **5.4.1 Levers (8 lessons)**	By the end of the sub strand the learner should be able to: a) Identify the lever as a machine used in everyday life. b) Identify levers used in the locality. c) Identify parts of a lever. d) Make a see saw e) Show curiosity to use levers to make work easier f) Make a functional beam	a) Learners are guided to demonstrate levers as simple machines b) Learners are guided to use visual aids and digital devices to demonstrate levers as simple machines c) Learners are guided to identify different levers used in the locality d) Learners use digital devices to observe and record different levers (For example: see saw, beam balance, wheel barrow, spade, spoon, fishing rod and scissors). e) In groups, learners are guided to identify and record parts of a lever. f) Learners use digital devices to observe and identify parts of a lever	1. How are levers useful in our everyday life?

		balance using the locally available materials	g) In groups, learner are guided to make and use a see saw **Project**: In groups, learners are guided to make and use a functional beam balance using locally available materials.	
Core competencies to be developed: Critical thinking as they identify levers in the community; Communication and collaboration as they work in groups; Imagination and creativity as they make a beam balance and a see saw				
PCIs: Safety; taking care as they make and use levers.			**Values:** Responsibility and Respect for each other as they work in groups and handle levers.	
Link to other learning areas: Agriculture (Farm tools); Home Science (Use of cutlery; spoons, bottle openers); Physical and Health Education as they play on the see saw.			**Suggested Community Service Learning Activities:** Guided identification and safe use of levers in the community	

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Identification of the lever as a machine	Correctly and consistently identifies the lever as a machine	Correctly identifies the lever as a machine	To some extent identifies the lever as a machine	Unable to identify the lever as a machine
Identifying levers used in the locality	Correctly and consistently identifies levers used in the locality	Correctly identifies levers used in the locality	To some extent identifies levers used in the locality	Unable to identify levers used in the locality
Identification of parts of a lever	Correctly and consistently identifies parts of a lever	Correctly identifies parts of a lever	To some extent identifies parts of a lever	Unable to identify parts of a lever
Making and using a see saw	Correctly and neatly makes and uses a see saw	Correctly makes and uses a see saw	To some extent makes and uses a see saw	Unable to make and use a see saw
Showing curiosity while using levers to make work easier	Strongly shows curiosity while using levers to make work easier	Shows curiosity while using levers to make work easier	To some extent shows curiosity while using levers to make work easier	Does not show curiosity while using levers to make work easier
Making a functional	Correctly and neatly makes a	Correctly makes a functional	To some extent makes a	Unable to make a beam

beam balance	functional beam balance	beam balance	beam balance	balance

Strand	Sub Strand	Specific learning outcomes	Suggested learning experiences	Key inquiry questions
6 Earth and Space	**6.3 Weather and Sky** **6.3.1. Weather conditions** **(8 lessons)**	By the end of the sub strand, the learner should be able to: a) Identify bodies observed in the sky during day and night. b) Record types of clouds in the sky during the day. c) Identify activities done during different weather conditions d) Appreciate the importance of weather conditions within the locality e) Make a weather clock. f) Make a weather chart.	a) Observe and record features of the sky at day time and during the night. b) Learners are guided to observe the sky and record types of clouds (Cumulus, Nimbus Cirrus, and Stratus). c) Learners to use visual aids and digital devices to observe and identify different types of clouds. d) Learners are guided to compare activities carried out during different weather conditions (drying, winnowing, flying kites, growing crops, harvesting crops) e) Learners use digital devices to observe and compare activities carried out during different weather conditions. **Project 1:** In groups, learners are guided to make weather clock to record changes of weather **Project 2**: Learners are guided to develop a weather chart for recording changes of weather on a daily basis.	1. What can be observed in the sky during the day? 2. Which are the activities done in the locality during wet and dry weather conditions?
Core competencies to be developed: Digital literacy as they search for information about other conditions of weather; Critical thinking as learners think of activities which can be done during different weather conditions; Creativity and imagination as learners fill the weather chart and make predictions				
PCIs : Life skills when identifying different activities for different weather conditions; Environmental education while identifying conditions of weather		**Values:** Responsibility and patriotism by taking care of the environment; Respect for other people's opinion as learners work in groups; unity when learners carry out tasks in groups.		
Links to other learning areas: Social studies – weather; Art and craft - making weather charts and weather clock. Agriculture as they record farm activities during different weather conditions		**Suggested Community Service Learning Activities:** Predicting weather with guidance of family members to identify activities to do at home and the clothes to wear		

Suggested Assessment Rubrics

	4	3	2	1
Indicators	**Exceeds expectation**	**Meets expectation**	**Approaches expectation**	**Below expectation**
Recording weather conditions in the locality	Correctly and consistently records weather conditions in the locality	Correctly records weather conditions in the locality	Occasionally records weather conditions the locality	Unable to record weather conditions in the locality
Identification of types of clouds in the sky during the day.	Correctly and consistently identifies types of clouds in the sky during the day	Correctly identifies types of clouds in the sky during the day	Occasionally identifies types of clouds in the sky during the day	Unable to identify types of clouds in the sky during the day
Recording types of clouds in the sky during the day.	Correctly and consistently records types of clouds in the sky during the day	Correctly records types of clouds in the sky during the day	Occasionally records types of clouds in the sky during the day	Unable to record types of clouds in the sky during the day
Identification of activities carried out in different weather conditions	Correctly and consistently identifies activities carried out in different weather conditions	Correctly identifies activities carried out in different weather conditions	Occasionally identifies activities carried out in different weather conditions	Unable to identify activities carried out in different weather conditions
Appreciation for the importance of weather conditions within the locality	Strongly demonstrates appreciation for the importance of weather conditions within the locality	Demonstrates appreciation for the importance of weather conditions within the locality	To some extent demonstrates appreciation for the importance of weather conditions within the locality	Unable to demonstrate appreciation for the importance of weather conditions within the locality
Making a weather clock	Correctly and neatly makes a weather clock	Correctly makes a weather clock	To some extent makes a weather clock	Unable to make a weather clock
Making a weather chart	Correctly and neatly makes a weather chart	Correctly makes a weather chart	To some extent makes a weather chart	Unable to make a weather chart

LIST OF NON-FORMAL ACTIVITIES AND LEARNING RESOURCES

No	Strand	Sub strand	Sub-sub strand	Suggested Non-formal Activities	Suggested learning resources
1	**Living things**	**Plants**	Characteristics of Plants	Learners visit a forest in the locality to observe assorted trees. Learners prepare tree nurseries and watch and record plants grow in the school compound	Protective clothing, gloves, forceps, goggles, tongs, overcoats videos, digital devices, internet, textbooks, tree nurseries, real assorted plants
		Animals	Characteristics of Animals Farm animals and their products	Learners visit and observe animals in the locality, collect animal waste, identify and collect samples of the food they eat and the products made from animals	Gloves, forceps, goggles, tongs, overcoats, videos, digital devices, internet, textbooks, assorted animals
		Human body	Digestive system	Learners to look at other's teeth and identify the four types of teeth. Learners to draw and model the digestive system and types of teeth	Sugar cane, carrots, fruits, tubers
2	**Environment**	**Pollution in the environment**	Air pollution	Learners to establish the difference between clean and polluted air in the school compound Digging of pits for litter disposal. Plating of trees in the school compound to clean the air	Dust masks, goggles, overcoats, piece of white cloth, digital devices, internet, textbooks
			Water pollution	Learners visit the school kitchen, bathrooms or sewage. They explain the differences between this water and water from the school tank, or from the water taps They prepare trenches to drain dirty water in the school. They clean gutters of their classrooms to harvest clean water.	Gumboots, gloves, digital devices digital devices, internet, textbooks

No	Strand	Sub strand	Sub-sub strand	Suggested Non-formal Activities	Suggested learning resources
3	**Digital Technology**	**Digital devices**	Digital devices	Learners assemble all the school computers in the school computer laboratory and test them to confirm that they are working	Computers, tablets, Ipads, laptop, radios, TV, mobile phone, cameras, internet, textbooks
			Coding	Learners are guided to fill the puzzle in the children's pull out of the local newspapers. Learners to practice coding games on the play station in the school computer	Prototypes, Computers, tablets, Ipads, laptop, radios, TV, mobile phones, cameras, internet, textbooks, newspapers
4	**Matter**	**States of matter**	Understanding matter	Learners to put water in a bucket, fill the same bucket with soil and balloons inflated with air. Learners then compare the 3 states of matter in terms of their shape, volume and mass	Filling containers with pebbles, soil and stones, balloons, digital devices, internet,
		Properties of Matter	Floating and sinking	Learners put water in a drum in the school compound and collect assorted materials to test whether they sink or float in the water	Rubber tubes, wood or plastics, plasticine, bottle tops, digital devices, internet, floaters, sinkers
5	**Force and Energy**	**Force**	Force and its Effects	Learners to practice tug of war in the field to demonstrate force and its effects	Wheel barrow, tug of war, a hand-cart, ox cart, a bicycle, digital devices, internet, and assorted objects.
		Energy	Sound energy	Learners create an empty classroom and practice reflection of sound (echo)	Sound producing instrument, textbooks, internet, digital devices
			Light energy	Learners drill holes through 3 cardboards, arrange them in line then shine a candle light at the hole of one carton at night to show light travels in a straight line	Transparent, translucent or opaque objects, textbooks, internet, digital devices, card boards, source of light eg a torch

No	Strand	Sub strand	Sub-sub strand	Suggested Non-formal Activities	Suggested learning resources
				Learners use a torch at night to show that light travels in a straight line	
			Heat energy	Learners use metal rod with candle wax fitted at different positions, then heat the rod at one end to illustrate conduction of heat Learners make fireless cookers and use it to keep their packed lunch warm	Good and bad conductors of heat, digital devices, internet, textbooks, source of heat eg a candle, match box, metal bars, wooden bars, plastic material
		Machines	Levers	Learners go out to the field and demonstrate levers by using a wooden bar to roll a drum full of water from one point to another	See saw, beam balance, wheel barrow, spade, spoon, fishing rod and scissors, textbooks, digital devices, internet
6	**Earth and Space**	**Weather and sky**	Weather conditions	Learners use weather charts and weather clocks to measure changes of weather in the school over a period of one term	Weather clock, weather chart, textbooks, internet, and digital devices.

AGRICULTURE

Essence Statement

Kenya requires competent manpower for its agro-based economy. Agriculture as a learning area will build on competencies introduced in lower primary Early Years Education under environmental activities in an effort to contribute to human capacity development. The learning experiences will involve active learner participation conducted through practical and experiential learning activities to develop applicable competencies for sustainable agriculture. The curriculum will focus on developing skills for production of indigenous and exotic crops and domestic animals through innovative agricultural practices and use of limited resources to enhance food security. The acquired knowledge, skills and attitudes will form a foundation for development of agricultural competencies for lower secondary and beyond.

General learning outcomes

By the end of upper primary, the learner should be able to:

1. Participate actively in agricultural activities for environmental conservation.
2. Use scarce agricultural resources through innovative practices to contribute towards food security.
3. Rear small domestic animals as profitable agricultural enterprise for self-sustainability and economic development.
4. Apply technological skills, digital and media resources to enhance sustainable agricultural practices.
5. Appreciate agriculture as a worthy niche for hobby, career development, further education and training.

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving our Environment	**1.1. Soil (9 lessons)** **1.1.1. Soil particles**	By the end of the sub strand the learner should be able to: a) Distinguish types of soil based on particle sizes b) Investigate the ability of different types of soil to hold water c) Relate particle sizes to ability of soil to hold water d) Develop curiosity in investigating physical properties of different types of soil.	• Learners to collect soil samples from their local environment. • In groups, learners to conduct experiment to observe particle sizes of different soils *(sand, clay and loam)* using a sieve. • Learners to share experiences on observations made in the experiment on particle sizes of different soils. • In groups, learners to conduct experiment to observe ability of soils to hold water *(sand, clay and loam)* using porous containers (containers with small holes at the base). • Learners to share experiences on observations made in the experiment on ability of soil to hold water. • Learners to relate particle sizes to ability of soil to hold water.	How can we determine the ability of different soils to hold water?
	1.1.2. Uses of soil in Farming	By the end of the sub strand the learner should be able to: a) Determine the ability of different soils to hold water b) Explain the uses of sand, loam and clay in farming c) Appreciate the relationship between water holding capacity of clay, sand and loam soils to their uses.	• Learners visit nearby farms and explore the uses of different types of soil. • In groups, learners discuss ability of sand, clay and loam to hold water. • Learners to watch a video clip on crops growing on different types of soil *(sand, clay and loam)*. • In groups, learners to discuss the uses of soils *(loam, sand and clay)* in farming.	How can we use sand, clay and loam soils in farming?
	1.1.3. Compost manure	By the end of the sub strand the learner should be able to: a) Identify suitable materials for making compost manure	• Learners observe stimulus materials such as video, photos, and pictures on preparation and use of compost manure using compost heap method.	1. What is compost manure? 2. What can we use

		b) Prepare compost manure for farming c) Explain the meaning of compost manure for farming d) Appreciate importance of compost manure in farming.	• Learners to collect suitable materials for making compost manure. • In groups, learners to prepare compost manure using heap method. • In groups, learners discuss the meaning of compost manure. • Learners practice the learnt skills in making compost manure in kitchen garden at home.	to prepare compost manure? 3. How can we make compost manure using the heap method?
Core competencies to be developed: Communication and collaboration through group activity; Critical thinking and problem solving in determining organic wastes and using it to solve soil fertility problems.				
PCIs: Environmental awareness: Soil as a resource in the environment and organic wastes as useful products in agriculture.			**Values:** Cooperation and respect in group activities while making compost heaps.	
Links to other subjects: Science (experiments) and Mathematics (measurements).			**Suggested community service learning activities:** Learners to collaborate with their parents or guardians to make compost manure for use in their farms or kitchen gardens.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Distinguishing soil types based on particle sizes	Consistently and correctly determines types of soil based on particle sizes	Correctly determines types of soil based on particle sizes	Sometimes determines types of soil based on particle sizes	Rarely determines types of soil based on particle sizes
Ability to investigate water holding capacity of different soil types	Consistently and correctly determines water holding capacity of different soil types	Correctly determines water holding capacity of different soil types	Sometimes determines water holding capacity of different soil types	Rarely determines water holding capacity of different soil types
Ability to relate particle sizes to water holding capacity of different soils	Consistently and correctly relates particle sizes to water holding capacity of different soils	Correctly relates particle sizes to water holding capacity of different soils	Sometimes relates particle sizes to water holding capacity of different soils	Rarely relates particle sizes to water holding capacity of different soils
Relating different types of soils to their uses	Consistently and correctly relates different types of soil to their uses	Correctly relates different types of soils to their uses	Sometimes relates different types of soils to their uses	Rarely relates different types of soils to their uses
Choice of suitable materials for making	Consistently and correctly chooses suitable materials for	Correctly chooses suitable materials for	Sometimes chooses suitable materials for	Rarely chooses suitable materials for making

compost manure	making compost manure	making compost manure	making compost manure	compost manure
Procedure for making compost using heap method	Consistently and correctly applies the procedure for making compost using heap method	Correctly applies the procedure for making compost using heap method	Sometimes applies the procedure for making compost using heap method	Rarely applies the procedure for making compost using heap method
Participation in making compost manure	Consistently and actively participates in making compost manure	Actively participates in making compost manure	Sometimes participates in making compost manure	Rarely participates in making compost manure

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving our Environment	**1.2. Water** **(5 lessons)** **1.2.1 Uses of water in farming**	By the end of the sub strand the learner should be able to: a) Water plants and domestic animals in the immediate environment b) Identify different uses of water in farming c) Appreciate importance of water in farming.	• In groups, learners to make various Agricultural uses of water in school (*watering flower beds, plants, seed bed and watering animals*). • Learners to visit the neighbouring farms to observe how water is used for farming purposes. • Learners to observe a video clip on uses of water in the farm. • In pairs, learners to brainstorm or share experiences on uses of water in the farm for agricultural activities.	What are the uses of water in farming?
	1.2.2 Water conservation in farming	By the end of the sub strand the learner should be able to: a) Carry out drip irrigation to water plants b) Describe drip irrigation as a way of conserving water c) Appreciate use of drip irrigation in conserving water in farming.	• Learners watch a video clip on irrigation of crops through drip irrigation. • In groups, learners to carry out drip irrigation in school using bottles. • In groups, learners to carry out drip irrigation in the school using a 5 to 10 metre long perforated plastic pipe.	1. What are the different ways drip irrigation is used to conserve water in farming? 2. What is drip

			• Learners visit nearby farms and explore the use of drip irrigation method. • In groups, learners discuss meaning and innovative ways of drip irrigation for conserving water • Learners to innovate and use drip irrigation in gardening practices at home.	irrigation?
Core competencies to be developed: Communication and collaboration during group work in irrigation activities; Critical thinking in use of locally available material and problem solving in conserving scarce water resource for irrigation.				
PCIs: Environmental awareness: Water as a scarce resource in the environment; re-use of waste bottles.			**Values:** Unity, cooperation, respect and responsibility in group activities while caring for plants.	
Links to other subjects: Science and technology (use of innovations in drip irrigation).			**Suggested community service learning activities:** Learners to collaborate with their parents or guardians to irrigate plants using drip irrigation method to conserve water.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Participation in watering plants and domestic animals	Consistently and actively participates in watering plants and domestic animals	Actively participates in watering plants and domestic animals	Sometimes participates in watering plants and domestic animals	Rarely participates in watering plants and domestic animals
Ability to identify different uses of water in farming	Consistently and correctly identifies different uses of water in farming	Correctly identifies different uses of water in farming	Sometimes identifies different uses of water in farming	Rarely identifies different uses of water in farming
Ability to use drip irrigation	Consistently and accurately demonstrates drip irrigation using bottle and perforated plastic pipes	Accurately demonstrates drip irrigation using bottle and perforated plastic pipes	Sometimes demonstrates drip irrigation using bottle and perforated plastic pipes	Rarely demonstrates drip irrigation using bottle and perforated plastic pipes

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving our Environment	**1.3. Living better with wild animals (7 lessons)**	By the end of the sub strand the learner should be able to: a) Identify small wild animals that destroy crops and domestic animals b) Explain damages caused by small wild animals in the farm c) Construct a scarecrow using locally available materials d) Use a scarecrow to keep off small wild animals from the farm e) Use digital resources to acquire information on small wild animals f) Store photos of small wild animals that destroy crops and domestic animals g) Appreciate the importance of living better with small wild animals.	• In pairs, learners to brainstorm and share experiences on small wild animals such as *birds, squirrels, monkeys, mongoose and moles* that destroy crops and domestic animals. • Learners to watch a video clip or listen to a resource person on small wild animals such as birds, squirrels, monkeys, mongoose and moles and the damages they cause on crops and domestic animals. • Learners to watch video clip or charts on varieties of scarecrow. • In groups, learners to discuss how they could make a scarecrow using locally available materials. • In groups, learners to construct a scarecrow using locally available materials. • In groups, learners to install the scarecrows in the immediate environment to keep off small wild animals. • In pairs, learners to use digital resources that have appropriate software to search for information on small wild animals that destroy crops and domestic animals.	1. What are the small wild animals that destroy crops and domestic animals? 2. What damage is caused by small wild animals in the farm? 3. How can you prevent reduce damage from small wild animals in the farm? 4. How is a scarecrow constructed?

			• In groups, learners share information about small wild animals and store photographs using appropriate methods. • Learners to consult a resource person such as an ICT specialist to guide on various methods of storing photos. • Individual learners to make presentations on photos acquired and stored.	
Core competencies to be developed: Digital literacy in searching information on small wildlife and scarecrows; Critical thinking in use of locally available materials and problem solving in constructing scarecrows to keep off small wild animals; Self-efficacy in making individual presentations on small wildlife using digital photo albums; Creativity and imagination in constructing scarecrows.				
PCIs: Environmental awareness: Conservation of small wild animals in the environment; re-use of wastes such as cloths, wires, metals and plastic pipes in constructing scarecrows.			**Values:** Unity, cooperation, respect and responsibility in group activities and care for small wild animals	
Links to other subjects: Science and technology (re-use waste materials and innovations in keeping off wild animals).			**Suggested community service learning activities:** Learners to collaborate with their parents or guardians to care for small wild animals while keeping them off the farm.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify small wild animals	Consistently and correctly identifies small wild animals that destroy crops and domestic animals	Correctly identifies small wild animals that destroy crops and domestic animals	Sometimes identifies small wild animals that destroy crops and domestic animals	Rarely identifies small wild animals that destroy crops and domestic animals
Choosing suitable material for constructing a scarecrow	Consistently and correctly chooses suitable materials for constructing a scarecrow	Correctly chooses suitable materials for constructing a scarecrow	Sometimes chooses suitable materials for constructing a scarecrow	Rarely chooses suitable materials for constructing a scarecrow
Participation in construction of a scarecrow	Consistently and actively participates in construction of a scarecrow	Actively participates in construction of a scarecrow	Sometimes participates in construction of a scarecrow	Rarely participates in construction of a scarecrow
Creativity in	Demonstrates a unique level	Demonstrates high level of	Demonstrates some level of	Demonstrates low level of

construction of a scarecrow	of creativity in construction of a scarecrow	creativity in construction of a scarecrow	creativity in construction of a scarecrow	creativity in construction of a scarecrow

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving our Environment	**1.4. Growing Fruit Trees (14 lessons)** **1.4.1 Fruit Seed Collection**	By the end of the sub strand the learner should be able to: a) Identify places where fruit tree seeds could be obtained b) Collect fruit tree seeds from the local environment.	• In groups, learners to suggest various places where seeds of fruit trees such as *guava and tree tomato* could be obtained. • With help of the parents or guardians learners to collect seeds of fruits such as *guava and tree tomato*.	Where could we collect fruit seeds?
	1.4.2 Fruit Seed Preparation	By the end of the sub strand the learner should be able to: a) Prepare fruit seeds for planting b) Appreciate the importance of preparing seeds for planting.	• Learners to extract seeds from the fruits such as *guava and tree tomato* using appropriate means • Learners clean the extracted seeds in water. • Learners sort bad seeds for disposal and retain the good seeds. • Learners appropriately sun-dry the good clean seeds and protect them from birds.	How are fruit seeds prepared for planting?
	1.4.3 Fruit Tree Nursery Bed	By the end of the sub strand the learner should be able to: a) Prepare a nursery bed for establishing fruit seedlings b) Sow seeds into a nursery bed c) Manage a fruit tree nursery bed up to transplanting d) Select fruit tree seedlings for sale and transplanting purposes e) Sell fruit tree seedlings to earn income.	• In groups, learners to select a suitable site for establishing the fruit tree nursery bed *(container nursery or ground nursery bed).* • In groups, learners to prepare and set up the nursery bed • In groups, learners to sow the seeds such as *guava and tree tomato* in to the nursery bed • In groups, learners to care by carrying out practices such as *mulching, watering, thinning and weeding* in the nursery bed.	How are fruit seeds established in a nursery?

			• Learners to select appropriate fruit tree seedlings for the purposes of sale and transplanting. • Learners to sell surplus fruit tree seedlings to the school fraternity, parents and the neighbouring community. • In class, learners discuss and appropriately manage money obtained from sale of fruit tree seedlings.	
	1.4.4 Transplanting	By the end of the sub strand the learner should be able to: a) Prepare seedlings for transplanting. b) Transplant the seedlings to the seedbed.	• In groups, learners to prepare seedlings for transplanting *(reduce watering, remove shade)*. • In groups, learners to prepare planting holes. • Learners to transplant the seedlings from the nursery bed to the seedbed.	1. How can we prepare fruit seedlings for transplanting? 2. How are fruit seedlings transplanted from the nursery?

	1.4.5 Care for Young Fruit Trees	By the end of the sub strand the learner should be able to: a) Protect the fruit tree seedlings from damage b) Water the fruit tree seedlings to supplement moisture c) Apply mulch to the fruit tree seedlings to conserve water d) Carry out weeding for the seedlings.	• In groups, learners to construct shades to protect the fruit tree seedlings from damages. • In groups, learners to take turns to water the seedlings using drip irrigation method to conserve water. • In groups, learners to apply mulch material to the seedlings to conserve moisture. • Learners to weed for the growing seedlings. • Learners offer to supply surplus fruit tree seedlings to their parents, guardians and community.	How can we take care of fruit seedlings after transplanting?
Core competencies to be developed: Communication and collaboration in sharing and consulting on tasks in growing fruits; Self-efficacy while conducting selected activities in the project and earning income from sale of fruit tree seedlings.				
PCIs: Environmental conservation: Planting trees to conserve the environment. Financial literacy: selling of fruit tree seedlings and managing income.			**Values:** Unity, cooperation, respect and responsibility in group activities on managing fruit trees.	
Links to other subjects: Science and technology (use of technology to apply drip irrigation to water the transplanted seedlings).			**Suggested community service learning activities:** Learners to engage their parents, guardians and other community members by supplying surplus fruit tree seedlings.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Collection of fruit seeds	Appropriately and effectively collects fruit seeds	Appropriately collects fruit seeds	Sometimes collects fruit seeds	Rarely collects fruit seeds
Preparation of fruit seeds	Consistently and correctly applies the right procedure in preparing fruit seeds	Correctly applies the right procedure in preparing fruit seeds	Sometimes applies the right procedure in preparing fruit seeds	Rarely applies the right procedure in preparing fruit seeds
Establishment of a nursery bed	Consistently and correctly applies the right procedure in establishing a fruit tree nursery bed	Correctly applies the right procedure in establishing a fruit tree nursery bed	Sometimes applies the right procedure in establishing a fruit tree nursery bed	Rarely applies the right procedure in establishing a fruit tree nursery bed
Taking care of fruit tree seedlings in a nursery bed	Consistently and correctly takes care of fruit tree seedlings in a nursery bed	Correctly takes care of fruit tree seedlings in a nursery bed	Sometimes takes care of fruit tree seedlings in a nursery bed	Rarely takes care of fruit tree seedlings in a nursery bed
Selling fruit tree seedlings	Consistently and correctly identifies suitable fruit tree seedlings and offers them for sale	Correctly identifies a suitable fruit tree seedlings and offers them for sale	Sometimes correctly identifies suitable fruit tree seedlings and offers them for sale	Rarely able to correctly identify suitable fruit tree seedlings and offers them for sale
Ability to transplant fruit tree seedlings	Consistently and correctly transplants fruit tree seedlings	Correctly transplants fruit tree seedlings	Sometimes transplants fruit tree seedlings	Rarely transplants fruit tree seedlings
Ability to care for young fruit trees	Consistently and correctly takes care of young fruit trees	Correctly takes care of young fruit trees	Sometimes takes care of young fruit trees	Rarely takes care of young fruit trees

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
1.0 Conserving our Environment	**1.5. Conservation Project: Edible Crop Gardening (9 lessons)**	By the end of the sub strand the learner should be able to: a) Demonstrate care for growing fruit trees in the environment b) Identify right stage for harvesting fruits to avoid wastage c) Harvest fruits appropriately to reduce damages d) Manage growing fruit trees in school and the community e) Appreciate importance of consuming fruits for nutrition.	• In groups, learners to take care of the established fruit trees such as *guava and tree tomato* by carrying out appropriate activities (*watering, weeding, protection, manuring and removal of excess branches*). • In groups, learners share experiences on how to identify a ripe fruit such as *guava and tree tomato*. • In groups, learners to carry out harvesting of fruits such as *guava and tree tomato*. • Learners apply acquired skills to plant and care for fruit trees at home.	1. What activities are carried out in caring for fruit plants? 2. When are fruits ready for harvesting? 3. How are fruits harvested?
Core competencies to be developed: Communication and collaboration in group activities while taking care of growing fruits; Self-efficacy by being empowered to produce own food (fruits); Critical thinking and problem solving by participating in activities for own nutritional supplement.				
PCIs: Environmental conservation: Planting trees to conserve the environment; Nutrition (fruits production); Food security: contributing to community foods through fruits production; Health: taking care of their nutritional needs by consuming fruits.			**Values:** Unity, cooperation and respect in group activities on managing fruit trees. Responsibility as they show dedication and commitment in preparing, sowing, transplanting seedlings and caring for young fruit trees.	
Links to other subjects: Home Science (preparation of fruits for consumption and nutritional value of fruits).			**Suggested community service learning activities:** Learners to assist parents or guardians in the activities for planting and caring for fruit trees at home.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to care for established fruit trees	Consistently and correctly takes care of established fruit trees	Correctly takes care of established fruit trees	Sometimes takes care of established fruit trees	Rarely takes care of established fruit trees
Ability to harvest fruits	Consistently and correctly harvests fruits at the right stage	Correctly harvests fruits at the right stage	Sometimes harvests fruits at the right stage	Rarely harvests fruits at the right stage
Participation in edible crop gardening activities	Consistently and actively participates in edible crop gardening activities	Actively participates in edible crop gardening activities	Sometimes participates in edible crop gardening activities	Rarely participates in edible crop gardening activities

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question
2.0 Domestic Animals	**2.1. Domestic Animals and their Uses (8 lessons)**	By the end of the sub strand the learner should be able to: a) Identify types of domestic animals in the community b) Distinguish between a male and a female domestic animal c) Relate various domestic animals to their uses d) Source for information on types of domestic animals e) Appreciate the importance of domestic animals to human beings.	• Learners visit the neighbouring farms to explore various types of domestic animals and their uses and also distinguish male from female animals. • In groups, learners share experiences on the types of domestic animals found in their community and their uses. • Learners discuss differences between male and female animals. • Learners watch a video clip on various types of domestic animals and their uses. • In groups, learners match the domestic animals to their uses *(cattle, sheep, goat and poultry)*. • Learners play and share games on domestic animals and their uses. • Learners sketch diagrams of domestic animals explored in the activities. • In pairs, learners use digital devices that have appropriate software to search for information on types of domestic animals. • In groups, learners select and store photos on types of domestic animals using appropriate methods such as digital or physical photo albums. • Learners consult a resource person such as an ICT specialist to guide in various methods of storing	1. What domestic animals are kept by farmers? 2. What are the uses of domestic animals?

			photos. • Individual learners to make presentations on photos acquired and stored.	
Core competencies to be developed: Digital literacy in searching and storage of photos and information on domestic animals from digital devices; Communication and collaboration in sharing and consulting on access and storage procedures; Self-efficacy while presenting acquired information and photos to the class.				
PCIs: Animal welfare: Appreciating importance of domestic animals to humans.			**Values:** Unity, cooperation, respect and responsibility in group activities while exploring domestic animals, visiting and playing animal games.	
Links to other subjects: Science and technology (playing digital games and searching information on domestic animals); creative art (sketching animals); Languages (names of male and female animals).			**Suggested community service learning activities:** Learners to assist parents and guardians in some basic activities on caring for domestic animals.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to relate types of domestic animals to their uses	Consistently and correctly relates types of domestic animals to their uses	Correctly relates types of domestic animals to their uses	Sometimes relates types of domestic animals to their uses	Rarely relates types of domestic animals to their uses

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question

3.0 Gardening Practices	**3.1. Crops for Gardening (6 lessons)** **3.1.1 Vegetables**	By the end of the sub strand the learner should be able to: a) Give the meaning of a vegetable crop b) Identify main vegetable crops grown in Kenya c) Classify vegetable crops according to the part eaten d) Appreciate the importance of vegetable crops in the food we eat.	• Learners to watch a video clip or visit a farm to explore types of vegetables grown such as *carrots, spinach and tomatoes.* • In pairs, learners suggest the meaning of vegetable crops. • In groups, learners to identify various vegetable crops grown in Kenya *such as carrots, spinach, tomatoes.* • In groups, learners to classify vegetable crops according to parts eaten *such as parts for carrots, spinach, tomatoes.* • Learners apply acquired skills to prepare vegetables for consumption at home.	1. What are vegetable crops? 2. How can we classify vegetable crops?
	3.1.2 Cereals	By the end of the sub strand the learner should be able to: a) Give the meaning of a cereal crop b) Identify main cereal crops grown in Kenya c) Develop a display of various types of cereal grains in the classroom d) Appreciate the importance of cereal crops in the food we eat.	• Learners to watch a video clip or visit a farm growing cereal crops such as *wheat, maize, rice.* • In pairs, learners suggest the meaning of cereal crops. • In groups, learners to identify various cereal crops grown in Kenya such as *wheat, maize, rice.* • In groups, learners to collect, mount and label cereal grains such as *wheat, maize, rice* on a manila paper for display. • Learners to assist parents or guardians in activities for preparing cereals for consumption.	1. What are cereal crops? 2. Which cereal crops do you know?
	3.1.3 Legumes	By the end of the sub strand the learner should be able to: a) Give the meaning of a legume	• Learners to watch a video or visit a farm growing legumes such as *beans, peas, green grams.*	1. What are legume crops?

		crop b) Identify main legume crops grown in Kenya c) Develop a display of various types of legume seeds in the classroom d) Appreciate the importance of legume crops in the food we eat.	• In pairs, learners suggest the meaning of legume crops. • In groups, learners to identify various legume crops grown in Kenya such as *beans, peas, green grams.* • In groups, learners to collect, mount and label legume seeds such as *beans, peas, green grams* on a manila paper for display. • Learners to assist parents or guardians in the activities for preparing legumes for consumption. • Learners to carry out an activity of matching crops to their respective categories (vegetables, cereals and legumes).	2. Which legume crops do you know?
Core competencies to be developed: Communication and collaboration in group activities while classifying and identifying the vegetables, cereals and legumes; Critical thinking and problem solving by participating in activities for own nutritional supplement.				
PCIs: Nutrition (vegetables, cereals and legume production); Food security: contributing to community foods through selected food crops; Health: taking care of their nutritional needs through consumption of vegetables, cereals and legumes.			**Values:** Unity, cooperation, respect and responsibility in group activities on growing selected crops.	
Links to other subjects: Home Science (nutritional value of vegetables, cereals and legumes).			**Suggested community service learning activities:** Learners to assist parents or guardians in the activities for preparing vegetables, cereals and legumes for consumption.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Classification of crops into vegetables, cereals and legumes	Consistently and correctly able to classify crops into vegetables, cereals and legumes	Correctly able to classify crops into vegetables, cereals and legumes	Sometimes able to classify crops into vegetables, cereals and legumes	Rarely able to classify crops into vegetables, cereals and legumes

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry

				Question
3.0 Gardening Practices	**3.2. Selected Gardening Practices (13 lessons)** **3.2.1 Direct sowing of tiny seeds**	By the end of the sub strand the learner should be able to: a) Prepare a fine seedbed for crops with tiny seeds b) Sow tiny seeds directly into the seedbed.	• In groups, learners to brainstorm on crops with tiny seeds such as *carrots and sunflower* among others and how they can be grown in the locality. In this activity, learners to be guided to identify some tiny-seeded crops that are sown directly into the seedbed (*tiny-seeded crops that do not require transplanting*). • In pairs, learners to brainstorm on how the tiny seeds are sown in the seedbed. • Learners to watch a video clip on how to prepare a fine seedbed and sow tiny seeds such as *carrot or sunflower* seeds into the seedbed. • In groups, learners prepare a suitable seedbed for sowing any crop with tiny seeds that they may opt for. The crop should be suitable for direct sowing. • Learners to sow the tiny seeds in the prepared seedbed.	How can we plant tiny seeds in a seedbed?
	3.2.2 Care for tiny-seeded crops	By the end of the sub strand the learner should be able to: a) Identify the practices to care for directly sown tiny-seeded crops in a seedbed b) Carry out caring practices for the seedbed. c) Appreciate the value of caring for tiny-seeded crops in the seedbed.	• Learners to share experiences on appropriate gardening practices for a seedbed with directly sown tiny seeds such as *carrots and sunflower*. • Learners to watch a video clip on gardening practices carried out on directly sown tiny seeds in a seedbed. • In groups, learners to carry out	What care is needed for directly sown tiny-seed crop in a seedbed?

			gardening practices on the established tiny-seeded seedbed such as *mulching, watering, thinning and uprooting weeds.*	
	3.2.3 Gardening Tools and Equipment	By the end of the sub strand the learner should be able to: a) Identify appropriate tools and equipment used for gardening in a seedbed b) Demonstrate appropriate use of tools and equipment in gardening c) Practice safety measures when using gardening tools and equipment d) Clean the garden tools and equipment after use.	• In groups, learners to suggest tools and equipment used for gardening in a seedbed • Learners to watch a video clip on safe use and cleaning of gardening tools and equipment. • Learners to use appropriate tools and equipment in gardening practices of a seedbed. • Learners to observe safety measures in the use of tools and equipment. • In groups, learners to clean the gardening tools and equipment after use. • Learners practice learnt skills for growing tiny-seeded crops and maintaining tools and equipment at home.	1. What appropriate tools and equipment are used in gardening practices? 2. What safety measures are observed when using garden tools and equipment? 3. How are garden tools and equipment maintained?
Core competencies to be developed: Communication and collaboration in group activities in gardening activities; Critical thinking and problem solving by participating in activities for own nutritional supplement; Self-efficacy in own contribution to production of crops.				
PCIs: Safety**:** safe handling and use of tools and equipment; Food security: contributing to community foods through production of food crops; Nutrition: use of selected crops for nutritional value.			**Values:** Cooperation and responsibility in group activities for maintaining tools and equipment.	
Links to other subjects: Home Science (nutritional value of selected crops); Science and technology (use and maintenance of tools and equipment).			**Suggested community service learning activities:** Learners to assist parents or guardians in the activities for growing the selected crop and maintaining tools and equipment.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Establishing suitable seedbed for a selected crop	Consistently and correctly establishes a suitable seedbed	Correctly establishes a suitable seedbed	Sometimes establishes a suitable seedbed	Rarely establishes a suitable seedbed
Caring for crop in a seed bed	Consistently and correctly cares for crops in a seed bed	Correctly cares for crops in a seed bed	Sometimes cares for crops in a seed bed	Rarely cares for crops in a seed bed
Appropriate use of tools and equipment	Consistently and responsibly demonstrates appropriate use of tools and equipment in gardening practices	Responsibly demonstrates appropriate use of tools and equipment in gardening practices	Sometimes demonstrates appropriate use of tools and equipment in gardening practices	Rarely demonstrates appropriate use of tools and equipment in gardening practices
Cleaning of tools and equipment after use	Consistently and correctly cleans tools and equipment after use	Correctly cleans tools and equipment after use	Sometimes cleans tools and equipment after use	Rarely cleans tools and equipment after use

Strand	Sub Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry

				Question
3.0 Gardening Practices	**3.3. Innovative Gardening Project (19 lessons)** **3.3.1 Container gardening**	By the end of the sub strand the learner should be able to: a) Identify containers that can be used for innovative gardening b) Prepare a container garden for sowing of seeds c) Sow seeds in a container garden.	• In groups, learners to share experiences on how crops could be grown in places where there is little space for gardening. *In this activity, learners to use seeds to appreciate establishment of crops from seeds.* • Learners to watch or observe stimulus materials such as video clips, charts, pictures and photographs on container gardens and gardening practices showing various crops. • In groups, learners to identify suitable containers to be used for container gardening. • In groups, learners to discuss instances where container gardening can be used and appropriate places where they can be placed. • In groups, learners to prepare container gardens such as *tyres, plastic bottles, wooden boxes, buckets, small jerricans* for sowing a crop from seeds such as *carrots*. • In groups, learners to sow a crop of their choice from seeds in the prepared container gardens.	How can we grow crops where there is little space for gardening?
	3.3.2 Care for Container Gardens	By the end of the sub strand the learner should be able to: a) Identify the caring practices for crop in the container garden b) Care for crops in the container garden c) Carry out harvesting of crop from the container garden d) Acquire information on	• Learners share experiences on container gardening practices for a crop of their choice. *The crop should however be suitable for container gardening. Learners to be guided to select a suitable annual crop that grows within a period of one to three months.* • Learners watch a video clip on	How can we care for container gardens? How are crops in a container garden harvested?

		container gardening practices e) Compile photos on innovative container gardening f) Sell outputs of the container gardens to earn income. g) Appreciate importance of container gardening to food security, income generation and aesthetics.	container gardening practices carried out on crops such as *carrots* among others. • In groups, learners carry out container gardening practices such as *mulching, watering, thinning, uprooting weeds, controlling pests, and removing diseased plants* on the innovative gardens. • In groups, learners harvest the crop from the container garden and prepare them for consumption. • Learners use digital devices that have appropriate software to search for information on container gardening practices and innovative container gardens. • In groups, learners share acquired information on innovative container gardens. • In groups, learners take photos (photos with dates) on the various gardening practices they carry out on their project as a form of simple record keeping. • In groups, learners compile and store photos on gardening practices and container gardens using appropriate methods such as digital or physical photo albums with *details such as activity dates*. • Individual learners make presentations on photos taken and stored for their project. • Learners identify some crop output of the project and offer for sale to the	

			school fraternity, parents and the neighbouring community. *The output should be in form of either harvested produce or crops in containers.* • Learners discuss and appropriately manage income from the sale of project output to *satisfy identified needs.* • Learners collaborate with parents or guardians to establish innovative container gardens at home.	
Core competencies to be developed: Digital literacy in searching and storing photos and information on innovative container gardening; Communication and collaboration in group activities while preparing container gardens; Critical thinking and problem solving by participating in developing appropriate container gardens to solve land shortage problem; Self-efficacy in own contribution to innovations, presentations and sale of output from container garden project.				
PCIs: Environmental protection (use of waste containers); Food security (contributing to community food production through innovative gardening); Nutrition (use of various crops for food). Financial literacy: selling and managing income gained from container gardens project.			**Values:** Unity, cooperation, respect and responsibility in group activities on innovative container gardening.	
Links to other subjects: Home Science (nutritional value of carrots); Science (technology and innovations); Mathematics (measurements in container preparation).			**Suggested community service learning activities:** Learners to collaborate with parents and guardians to establish innovative container gardens at home.	

Assessment rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Preparation of suitable container gardens for sowing crops	Consistently and correctly prepares suitable container gardens for sowing crops	Correctly prepares suitable container gardens for sowing crops	Sometimes prepares suitable container gardens for sowing crops	Rarely prepares suitable container gardens for sowing crops
Caring for crops in container garden	Consistently and correctly carries out gardening practices for crops in container gardens	Correctly carries out gardening practices for crops in container gardens	Sometimes carries out gardening practices for crops in container gardens	Rarely carries out gardening practices for crops in container gardens
Ability to harvest crops	Consistently and correctly harvests crops at the right stage	Correctly harvests crops at the right stage	Sometimes harvests crops at the right stage	Rarely harvests crops at the right stage
Identifying appropriate output for sale	Consistently and correctly identifies appropriate output for sale	Correctly identifies appropriate output for sale	Sometimes identifies appropriate output for sale	Rarely identifies appropriate output for sale

LIST OF RESOURCES

- Soil samples
  - Sand
  - Clay
  - Loam
- A sieve
- Containers with small holes at the base
- Water
- Video clips-relevant to the learning concept in the learning activities
- Photos-relevant to the learning concept in the learning activities
- Photo album
- Manilla papers
- Scissors
- Soft board
- Felt pens
- Sticker labels
- Pins
- Organic materials for composting (farm waste from crops and animals)
- Sticks
- Metal pipes
- Plastic pipes
- Assorted containers
  - Bottles
  - Jerricans
  - Buckets
  - Wooden boxes
  - Used tyres
  - Baskets
- Assorted farm tools and equipment
  - Panga
  - Rake
  - Jembe
  - Slasher
  - Spade
  - Wheelbarrow
  - Knapsack sprayer
  - Garden trowel
  - Manure fork
  - Fork jembe
  - Tape measure
  - String
  - Secateurs
  - Knife
  - Pruning saw
  - Pliers
  - Watering can
  - Weighing balance
  - Gloves
- Wires
- Materials of cloth and sacks origin
- Assorted fruits
  - Guava
  - Tree tomato
- Assorted crop seeds
  - Maize
  - Beans
  - Rice
  - Peas
  - Green grams
  - Carrot seeds
  - Spinach seeds
  - Tomato seeds
  - Kale seeds
  - Sunflower seeds
- Assorted vegetables

- Digital resources
    - Computer
    - Laptop
    - Tablet
    - Smart phones
    - Digital camera
    - Flash disks
    - DVDs
    - Memory cards
    - Internet connectivity devices
    - Projector
    - External memory drives
    - Connectivity cables
    - Data cables
    - Source of power
    - Printer
- Domestic animals-access to various animals
    - Cattle
    - Sheep
    - Goats
    - Poultry
    - Rabbits
- Resource persons-specialized or skilled persons in assorted topical areas

HOME SCIENCE

ESSENCE STATEMENT

Home Science aims at equipping learners with knowledge, skills, attitudes and values which will help promote healthy living in terms of preparing and eating healthy foods, prevention of illnesses, ensuring comfort and safety in the home, observing personal hygiene and wise buying. In addition, the learner will be able to appreciate the physical changes which occur from childhood to adolescence. The learner will engage in practical activities such as shopping for the home, care of the home, cooking and service of food, food preservation, laundry work, sewing, knitting and crocheting. Home science will also strengthen the foundation for development of higher competencies in lower secondary.

LEARNING OUTCOMES FOR HOME SCIENCE

By the end of upper primary, the learner should be able to:

1. promote healthy living practices for the well being of self and others
2. appreciate the needs of a child in promoting proper growth and development
3. plan, prepare and present meals to promote healthy living
4. preserve food using traditional and modern methods
5. choose, use and care for clothes and household articles in school and at home
6. make simple needlework items for enjoyment and entrepreneurial competences
7. use resources appropriately at home and in school

Strand	Sub Strand	Specific learning Outcomes	Suggested Learning Experience	Key Inquiry Question (s)
1.0 HEALTHY PRACTICES	**1.1 Play (5 lessons)**	By the end of the sub strand, the learner should be able to: a) name the various needs of a child for healthy development b) identify different games played in the locality c) identify play items for a child d) list qualities to look for when choosing suitable play items for a child e) make a play item using locally available materials f) care for the play items for the safety of the child g) appreciate the importance of rest after play	• Learners name the needs of a child for healthy development (food, shelter, clothing, play and rest) using digital resources (pictures, video clips and audios), charts, realia • Learners share experiences on the different games played in their locality • Learners are guided to identify play items in their environment using digital resources, charts and realia, • In groups, learners discuss qualities of a play items • In groups, learners make a play item using locally available materials Using video clips, stories, charts and pictures, Learners discuss safety during play • Using video clips and stories learners share experiences on issues to do with security of children during play • Watch video clip on security issues of children during play • Learners play and observe safety during play	1. What are the needs of a child for healthy development? 2. Which play items within your locality are suitable for a child? 3. What are the qualities of a good play item for a child? 4. Which are the common accidents that occur during play among children? 5. What security challenges occur during play?

Core competences to be developed:
- Critical thinking and problem solving – when choosing and making a play item, and also when observing security measures during play
- Communication and Collaboration - when playing together
- Creativity and Imagination– when making play items

PCIs:	Values:
- Safety – during safe play - Environmental issues - use of environmentally friendly materials	- Responsibility – in taking care of the play items - Sharing and Love – acceptance of each other playing

	together - Patience – as they take turns in playing - Peace – during play
Links to other subjects: - Science and technology – in the materials used for playing, also during the exploring of the environment - Physical Health and Education - during play	**Suggested community service learning activities:** Teach others how to make different play items

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to identify safe play items	Correctly identifies safe play items for a child	Identifies safe play items for a child	Identifies some safe play items for a child	With assistance, attempts to identify some play items for a child
Make safe play items using available materials	Correctly makes safe play items using available materials	Makes safe play items using available materials	Makes some play items using available materials	With assistance, able to make some play items using available materials
Care for the play items	Appropriately care for the play items	Cares for the play items	Cares for some play items	With assistance, Cares for some play items
Observe safety during play	Consistently observes safety during play	Observes safety during play	Occasionally observes safety during play	Rarely observes safety during play

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)

2.0 HEALTHY LIVING	**2.1 Common Illnesses in the locality (5 lessons)**	By the end of the sub strand, the learner should be able to: a) identify common illnesses in the locality b) communicate when feeling unwell to others c) identify the causes of common illnesses in the locality d) identify healthy practices that prevent illnesses in the locality e) practice healthy measures that prevent illnesses in the locality f) appreciate the importance of healthy practices in promoting good health in the locality	• Learners share experiences on incidences when they were unwell (pain, stomachache, headache, feeling hot or cold,) • Learners role play on how to communicate with others when feeling unwell • Learners watch video clips, pictures and charts on what causes feeling unwell • In groups, learners discuss the causes of common illness in their locality (coughs, colds. Ear ache, sore throat, vomiting, diarrhoea), • Learners identify healthy practices that prevent feeling unwell from pictures, charts, health documentaries, health posters (washing hands, using a handkerchief, covering the mouth when coughing, wearing shoes, washing raw vegetables and fruits, drinking clean water, using clean cutlery) • In groups, learners use the pictures, health documentaries and health posters to guide discussion on healthy measures to prevent illness in the locality • Learners watch demonstrations, video clips, observe pictures and charts on measures to prevent illness in the locality	1. What causes illness? 2. How can you tell that you are unwell? 3. What measures should you take to prevent common illnesses in your locality?
Core competences to be developed: - Communication and collaboration – is developed when learners share experiences				

- Self-efficacy – when learners are able to identify health practices that makes them feel unwell - Learning to Learn – as learners begin to open up and share their experiences - Digital Literacy – as they interact with the digital gadgets	
PCIs: - Health Education – as they learn the causes and prevention of feeling unwell - Life Skills and Value Education – as they learn and become aware of how they are feeling, they become empowered	**Values:** - Responsibility – when they take care of themselves to avoid being unwell - Love – when they develop compassion towards those who are feeling unwell - Honesty – when communicating about feeling unwell
Links to other subjects: - Languages – they will develop ability to express their ideas clearly using a language during discussion and role play - Science and Technology – as they talk about their body parts	**Suggested community service learning activities:** - Participate in community service activities that target advocacy of healthy practices to prevent illness such as Global Hand Washing Day, World Toilet Day - Take part in immunization programmes like Tuberculosis (TB), polio - Participate in community walks to raise funds - Sensitize the community on the importance of hygiene practrices - Make leaky tins or tippy taps to be used in the community

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to promote good health practices	• Effectively communicate feeling unwell • Effectively carry out healthy practices in promoting good health	• Communicate feeling unwell • Carry out healthy practices in promoting good health	• Communicate feeling unwell, to some extent • Carry out some healthy practices in promoting good health	• Attempts to communicate feeling unwell with assistance • With guidance, carry out few healthy practices in promoting good health

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
2.0 HEALTHY LIVING	**2.2 Care of the home (7 lessons)**	By the end of the sub strand, the learner should be able to: a) identify cleaning	• Learners identify cleaning materials and tools used at home using realia, pictures, video clips, charts (sweeping,	1. What materials and tools do we use to clean our home?

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
		materials and tools used at home b) use locally available resources to make cleaning materials and tools to be used at home c) describe the procedures of cleaning the home d) use various procedures to clean the home e) observe safety when carrying out cleaning activities in the home f) care for cleaning materials and tools for durability g) appreciate a clean home in promoting healthy living	mopping, dusting and disposal of refuse) • In groups, learners discuss improvisation of cleaning materials and tools made from locally available resources • Learners practice safety when making improvised cleaning materials and tools from locally available resources • In groups, learners discuss procedures of cleaning the home (sweeping, mopping, dusting and disposal of refuse) • Learners clean using various procedures (dusting, mopping, sweeping, disposal of refuse) • Learners practice safety when carrying out cleaning activities in the home • Learners clean and store cleaning materials and tools used at home	2. How do we clean our home? 3. How do we care for cleaning materials and tools? 4. Which safety measures do we observe when: - cleaning (sweeping, mopping, dusting) - disposing off refuse - making improvised materials and tools for cleaning?

Core competences to be developed:
- Communication and Collaboration – as learners practice cleaning in groups
- Critical Thinking and Problem Solving – during improvisation of cleaning materials and tools
- Creativity and Imagination - as learners make improvised cleaning materials

PCIs:	Values:
Environmental issues - take precautions when collecting materials used for improvisation - observing correct disposal of refuse Health related issues - Reduction of pollutants through cleaning e.g. sprinkling water on the ground before sweeping to prevent too much dust in the air - observing correct disposal of refuse - Learners appreciate staying in a clean place Safety	- Unity - when working together - Responsibility - when cleaning and taking care of the materials and tools - Respect – for the environment during disposal of refuse

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
- During improvisation, cleaning and correct disposal of refuse				
Links to other subjects: - Science and Technology – when making improvised cleaning materials and tools - Indigenous Language – when identifying cleaning materials and tools in the locality - Art and Craft – when making improvised cleaning materials			**Suggested community service learning activities:** - Participate in community service activities which involve cleaning	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identify cleaning materials and tools used at home	Correctly identifies cleaning materials and tools	Identifies cleaning materials and tools	Identifies some materials and tools	Identify few materials and tools with assistance
Make cleaning materials and tools to be used at home	Correctly makes suitable cleaning materials using locally available resources	Makes suitable cleaning materials using locally available resources	Makes some cleaning materials and tools using locally available resources	With assistance attempt to make cleaning materials and tools using locally available resources
Ability to clean the home	• Appropriately cleans the home using various procedures • Consistently observes safety measures when cleaning	• Cleans the home using various procedures • observes safety measures when cleaning	• Cleans the home using some procedures safely • observes some safety measures when cleaning	• Makes attempt to clean a home without following the various procedures safely • rarely observes safety measures when cleaning
Care for cleaning materials and tools in the home	• Consistently and appropriately cares for cleaning materials and tools	• Cares for cleaning materials and tools	• Occasionally cares for some cleaning materials and tools	• Needs assistance to care for cleaning materials and tools

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
2.0 HEALTHY LIVING	**2.3 Care and cleaning of**	By the end of the sub- strand, the learner should be able to:	• Learner identifies different materials used for making shoes	1. What are the materials used for making

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
	shoes (8 lessons)	a) identify different materials used for making shoes b) identify materials used for cleaning different types of shoes c) describe the procedure of cleaning different types of shoes d) clean shoes made from different types of materials e) practice safety when cleaning different types of shoes f) clean and store materials used for cleaning different types of shoes g) appreciate the importance of wearing clean shoes	using pictures, realia, video clips (plastic, leather and canvas shoes) • In pairs, learners discuss materials used for cleaning different types of shoes • In groups, learners explain the procedure of cleaning different types of shoes • Learners watch video clips or demonstration on cleaning different types of shoes • Learners clean and store materials after cleaning shoes made from different materials (scrubbing brush, soft cloth, soap, etc.) • Learners practice safety when cleaning different types of shoes • Learners keep a daily log showing how often they clean their shoes • Learner stores the cleaned shoes made from different types of materials	different types of shoes? 2. How do you clean shoes made from different materials?

Core competences to be developed:
- Critical Thinking and Problem solving – during improvisation of the cleaning materials for cleaning shoes
- Communication and Collaboration – when working in pairs and groups
- Creativity and Imagination - when choosing cleaning materials and also in improvising cleaning materials where applicable
- Self-efficacy – when cleaning their own shoes

PCIs:	Values:
- Environmental Education – during disposal of used materials when cleaning shoes - Financial literacy – during the improvisation of cleaning materials	- Unity – when working together - Responsibility – when cleaning and storing materials after cleaning shoes and also disposing off the cleaning water - Honesty – during the storage of shoes after cleaning (to avert theft)

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
Links to other subjects: - Science and Technology - in using materials for cleaning shoes made from different materials - Mathematics - in keeping the daily log			**Suggested community service learning activities:** - Visit a shoe factory to see how they process the materials to come up with different types of shoes. - Visit a market/cobbler to identify the different types of shoes. - Interact with a shoe shiner on cleaning of shoes.	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identify different materials used for making shoes	Consistently and correctly identifies different materials used for making shoes	Correctly identifies different materials used for making shoes	Occasionally identifies different materials used for making shoes	Identifies different materials used for making shoes with assistance
Identify materials used for cleaning different types of shoes	Consistently and correctly identifies materials used for cleaning different shoes	Correctly identifies materials used for cleaning different shoes	Occasionally identifies materials used for cleaning different shoes	Identifies materials used for cleaning different shoes with assistance
Clean shoes made from different materials	• Appropriately cleans shoes made from different types of materials following the correct procedure • Consistently observes safety when cleaning shoes • Appropriately cleans and stores cleaning materials and tools	• Cleans shoes made from different types of materials following the correct procedure • Observes safety when cleaning shoes • Cleans and stores cleaning materials and tools	• Occasionally cleans shoes made from different materials following some procedures • Occasionally observes safety when cleaning shoes • Occasionally cleans and stores cleaning materials and tools	• With assistance, cleans shoes made from different materials • Rarely observes safety when cleaning shoes • Rarely cleans and stores some cleaning materials and tools

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)

2.0 HEALTHY LIVING	**2.4 Fuels used at home (8 lessons)**	By the end of the sub strand, the learner should be able to: a) identify types of fuels used at home b) state reasons for using various types of fuel at home c) use and conserve fuels used at home d) practice safety when using fuels e) state the challenges faced when using different types of fuel at home f) appreciate the importance of conserving fuel at home	• Learners identify types of fuel used at home (electricity, charcoal, wood, gas, paraffin) using charts, pictures, video clips and realia • In groups, learners discuss reasons for using various types of fuel at home (cooking, heating, lighting) • In groups, learners practice using different types of fuel • In groups, learners discuss ways of conserving fuel at home • Learners watch a video clip or demonstration using different types of fuel at home • In groups, learners discuss the challenges faced when using different types of fuel at home • Learners role play safety precautions to be observed while using fuel at home	1. Which types of fuel are available in your locality? 2. How do you conserve fuel at home? 3. How do you ensure safety while using fuel at home? 4. What are the challenges you are likely to face when using different types of fuel at home?

Core competences to be developed:
- Communication and Collaboration - during teamwork activities
- Critical thinking and Problem Solving - when giving reasons for using various types of fuel at home
- Creativity and Imagination during role play on safety precautions to observe when using fuel

PCIs: - Environmental issues in fuel conservation - Disaster and risk reduction in safety precautions while using fuel	**Values:** - Responsibility - in using fuel sparingly - Unity and patience - while working in groups
Links to other subjects: Science and technology during: - conservation of fuel - when identifying types of fuel	**Suggested community service learning activities:** - Sensitize community members on safety measures while using fuels

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identify types of fuel used at home	Correctly identifies types of fuel used at home	Identifies types of fuel used at home	Identifies some types of fuel used at home	With assistance, identifies a few types of fuel used at home
Use of fuel	• Consistently demonstrates ways of conserving fuel • Consistently observes safety while using fuel	• Demonstrates ways of conserving fuel • Observes safety while using fuel	• Occasionally attempts to conserve fuel • Occasionally observes safety while using fuel	• Rarely attempts to conserve fuel • Needs guidance to observe safety while using fuel

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
3.0 CONSUMER EDUCATION	**3.1 Consumer Awareness (3 lessons)**	By the end of the sub strand, the learner should be able to: a) describe a shopping list used for buying items b) state the importance of a shopping list to a consumer c) identify places where one can shop in the locality d) outline the steps to follow when making a shopping list e) prepare a shopping list for use at home f) appreciate the use of a shopping list	• Learners discuss a shopping list through brainstorming in groups. • In pairs, learners discuss the importance of a shopping list to a consumer • Learners discuss places where one can shop in the locality through sharing experiences, pictures, video clips and charts • In groups, learners discuss steps to follow when making a shopping list in order of priority • Learners prepare a shopping list • Learners role play buying items using a shopping list to shop	1. Why do we make a shopping list? 2. What do you consider when making a shopping list?
Core competences to be developed: - Critical Thinking and Problem Solving – when prioritizing items in a shopping list - Communication and Collaboration - when sharing and working in groups - Creativity and Imagination - during role play using a shopping list - Self Efficacy – when able to prepare and use a shopping list				
PCIs: - Life skills- decision making skills when coming up with the necessities to			**Values:** - Responsibility - when making decisions and choices as	

include in shopping list - Financial literacy – making a shopping list to help reduce unwanted expenses	they prepare a shopping list and use it to shop - Honesty – in preparing the shopping list and shopping using it (using the right amount of money and bringing back the balance)
Links to other subjects: - Mathematics – when allocating money to the different items on the list	**Suggested community service learning activities:** - Participate actively in preparing the shopping list and assisting parents/guardians/peers in shopping

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to make a shopping list	Correctly makes a shopping list in order of the most important items	Prepares a shopping list in order of the most important items	Makes a shopping list without prioritizing order of important items	Needs guidance to make a shopping list
Use a shopping list	Effectively shop using a shopping list	Shops using a shopping list	Makes attempt to buy few items in the shopping list	Needs guidance to Shop using the shopping list

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
4.0 FOODS AND NUTRITION	**4.1 Choosing foods (3 lessons)**	By the end of the sub strand, the learner should be able to: a) list factors to consider when choosing foods from a general grocery b) choose foods from a general grocery in the locality c) appreciate the importance of grocery shops in the locality	• Learners discuss factors to consider when choosing food from a general grocery (type of packaging, information on the package, correct weight, freshness, expiry date, price) • Learners will role play choosing foods from a general grocery	1. What do you buy from a general grocery? 2. What factors do you consider when choosing food from a general grocery?
Core competences to be developed: - Critical Thinking and Problem Solving – allowing children to make a choice of food from a multiple perspective - Communication and Collaboration – collaborative skills in the classroom as they role play choosing foods - Self efficacy – in selecting food items correctly				

PCIs: - Life skills - effective decision making skills when choosing food from the general grocery - Health issues - choosing foods which have not expired, appropriately packaged, correct weight, fresh, affordable price	**Values:** - Responsibility - when choosing food from the general grocery - Integrity and honesty – when using and returning the money balance
Links to other subjects: - Mathematics – when accounting for money used for buying food items - Science and Technology – when choosing the correct and healthy foods - Agriculture – farm products from the groceries (vegetable, milk, etc.)	**Suggested community service learning activities:** - Assist parent/guardians in carrying out shopping from a general grocery - Offering to help sell in the shop

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to choose food from a general grocery	Correctly chooses foods from a general grocery in their locality	Chooses foods from a general grocery in their locality	Chooses some foods from a general grocery in their locality	With assistance, chooses a few foods from a general grocery in their locality

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
4.0 FOODS AND NUTRITION	**4.2 Variety in the Diet (3 lessons)**	By the end of the sub strand, the learner should be able to: a) identify foods available in the locality b) state the functions of foods in the body c) classify food into groups according to their functions d) explain the importance of a variety of foods in diet for healthy living e) select foods to make a healthy meal f) appreciate the importance	• Learners identify food available in the locality through experience sharing, realia, pictures, charts, video clips • In groups, learners discuss classification of food according to their functions using pictures, charts, realia, video clips (body building, energy giving and protective foods) • Learners can use shop corner or digital devices to classify food • Learners brainstorm on the meaning of variety in the diet. • Discuss eating different types of foods to get different types of nutrients in the body	1. What are the functions of food in our body? 2. What is variety in the diet? 3. What is a healthy meal?

		of eating a variety of foods in the diet for a healthy living	• In groups, learners select foods to make a healthy diet using realia, charts, pictures or computing devices • In pairs, learners role play on selecting foods to make a healthy diet using realia, charts, pictures or computing devices	
Core competences to be developed: - Communication and Collaboration – is developed when learners discuss in groups - Critical Thinking and Problem Solving – when learners classify food into groups - Self Efficacy – when learners choose and eat a variety of foods in a diet				
PCIs: Health Education – choosing a variety of foods for a healthy diet			**Values:** - Responsibility – choosing a variety of foods for healthy living - Unity – during role playing - Respect – for other people's choice of food	
Links to other subjects: - Agriculture – food from plants and animals - Science and Technology – in the classification of food groups according to their functions			**Suggested community service learning activities:** - Advocate for a variety of foods for a healthy diet using locally available foods in school and at home for healthy living	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identify foods that form a balance diet in the locality	Correctly identifies locally available foods that form a balanced diet	Identifies locally available foods that form a balanced diet	Identifies some locally available foods that form a balanced diet	With assistance, identifies some locally available foods that form a balanced diet
Classify foods according to their functions	Correctly classifies foods according to their functions	Classifies food according to their functions	Classifies some foods according to their functions	With guidance, classifies some foods according to their functions
Select foods to make a balance meal	Accurately selects foods to make a balance meal	Selects foods to make a balanced meal	Selects some foods to make a meal	Needs assistance to select foods to make a meal

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
4.0 FOODS AND NUTRITION	**4.3 Preservation of milk (4 lessons)**	By the end of the sub strand, the learner should be able to: a) identify sources of milk in the locality b) state the importance of milk in the body c) state the reasons for preserving milk d) explain the methods of preserving milk in the locality e) use different methods to preserve milk f) practice food hygiene when using different methods to preserve milk g) appreciate the importance of preserving milk	• In groups, learners brainstorm on the sources of milk in their locality (milk packets in shops, milk vendors, farmers) and the importance of milk in the body. • Learners will identify sources of milk in the locality using pictures, charts, video clips • In groups, learners will discuss the importance of preserving milk • In groups, learners will discuss methods of preserving milk in the locality (boiling, fermenting, home cooler, refrigeration, ~~processing~~) • Learners to watch a demonstration or video clip on methods of preserving milk • Learners use different methods to preserve milk • Learners practice food hygiene when using different methods to preserve milk	1. What are the sources of milk? 2. How do we preserve milk?
Core competences to be developed: - Communication and collaboration – when they engage in group discussions - Critical Thinking and Problem Solving – when learners discuss the importance of preserving milk - Creativity and Imagination – when learners use different methods to preserve milk - Digital Literacy – by accessing information on importance and methods of preserving milk - Self-Efficacy – when learners preserve milk at home				
PCIs: - Health Education – use of hygienic practices when preserving milk - Animal Welfare - respect for the animals			**Values:** - Responsibility – in using different methods to make milk last longer - Honesty – not to add additives in milk - Respect - of other people's source of milk and the animals which are providing us with the milk	

Links to other subjects:	Suggested community service learning activities:
- Science and Technology – in the scientific principles on the various methods used to preserve milk - Agriculture – sources of milk - English – learning of vocabularies such as preservation	- Assist parent/guardian in preserving milk at home - Visit a farm or firm to observe and sensitize people on the processing of milk

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Preserve milk	Correctly uses different methods to preserve milk	Uses different methods to preserve milk	Uses some methods to preserve milk	Needs assistance to use some methods to preserve milk
Practice hygiene when preserving milk	Consistently practices hygiene when preserving milk	Practices hygiene when preserving milk	Occasionally practices hygiene when preserving milk	Needs assistance in practicing hygiene when preserving milk

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
4.0 FOODS AND NUTRITION	**4.4 Fragile Kitchen utensils (6 Lessons)**	By the end of the sub strand, the learner should be able to: a) State the uses of kitchen utensils at home	• In groups, learners discuss the uses of various kitchen utensils at home (cooking, serving and eating)	a) What are the uses of various kitchen utensils at home? b) Which are the fragile

		b) identify kitchen utensils that are fragile c) identify materials used for cleaning fragile kitchen utensils d) clean, dry and store fragile kitchen utensils used at home e) observe precautions when cleaning fragile kitchen utensils f) appreciate fragile kitchen utensils at home	• Learners identify fragile kitchen utensils used at home using realia, pictures, video clips, charts, sharing experiences (glass, thermo flask, earthen ware, ceramic, gourd) • In groups, learners identify materials used for cleaning fragile kitchen utensils at home from realia, charts, pictures and video clips • Learners watch a demonstration from the teacher or video clips on cleaning, drying and storing fragile kitchen utensils • Learners clean, dry and store fragile kitchen utensils used at home • Learners observe precautions when cleaning fragile kitchen utensils (cleaning, drying and storage)	kitchen utensils used at home? c) How do you clean, dry and store fragile kitchen utensils used at home d) What are the precautions to observe when cleaning fragile kitchen utensils?
Core competences to be developed: - Communication and collaboration – during group discussions - Creativity and critical thinking – when identifying fragile items and when identifying cleaning materials - Self-efficacy – when cleaning, drying and storing fragile utensils without breaking				
PCIs: - Environmental issues – proper drainage and disposal of water used for the cleaning process - Health issues – when they use clean utensils			**Values:** - Responsibility – while taking care of utensils - Unity - when working in groups	
Links to other subjects: - Science and technology – properties of matter when exposed to heat - English – when learning new words (fragile)			**Suggested community service learning activities:** participate in cleaning fragile kitchen utensils at home or in an institution	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Ability to clean fragile kitchen	• Correctly identifies fragile kitchen utensils used at home	• Identifies fragile kitchen utensils used at	• Identifies some fragile kitchen utensils used at	• Needs assistance to identify fragile kitchen

utensils	• Appropriately applies the correct procedure to clean, dry and store fragile kitchen utensils	home • Applies the correct procedure to clean, dry and store fragile kitchen utensils	home • Applies some correct procedures to clean, dry and store fragile kitchen utensils	utensils used at home • Needs assistance to clean, dry and store fragile kitchen utensils

Strand	**Sub strand**	**Specific learning outcomes**	**Suggested learning experience**	**Key inquiry question(s)**
4.0 FOODS AND NUTRITION	**4.5 Cooking Food (15 lessons)**	By the end of the sub strand, the learner should be able to: a) state reasons for cooking food b) explain food hygiene practices to observe when cooking food c) state safety precautions to observe when cooking food d) explain methods of cooking food e) cook food using different methods f) appreciate cooking food using different methods	• Learners brainstorm on reasons for cooking food • In groups, learners discuss food hygiene practices to observe when cooking food using pictures, charts, video clips and sharing experiences • Learners watch a video clip or demonstration on safety precautions to observe when cooking food • In groups, learners discuss safety precautions to be observed during cooking • Learners watch a video clip or demonstration on methods of cooking food (boiling, shallow frying) • In groups, learners cook food using different methods (boiling, shallow frying)	1. Why do we cook food? 2. What are the hygiene practices to be observed when cooking food? 3. Which are the safety precautions to observe when cooking food? 4. Which are the methods used when cooking food?

Core competences to be developed:
- Communication and Collaboration - during group activities
- Critical Thinking and Problem Solving - when observing hygiene and safety when cooking food
- Creativity and Imagination - when cooking different foods
- Citizenship – promotion of our culture

PCIs: - Disaster and risk reduction when observing safety precautions while cooking foods - Patriotism – in promotion of local indigenous foods	**Values:** - Respect - embracing foods from different communities (indigenous foods) - Responsibility – care while handling cooking items
Links to other subjects:	**Suggested community service learning activities:**

- Science and technology – conservation of energy while cooking - Agriculture – sources of food	- Visit the community food vendors and observe how they prepare foods

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identify foods that can be boiled and shallow fried	Correctly identifies foods that can be boiled and shallow fried	Identifies foods that can be boiled and shallow fried	Identifies some foods that can be boiled and shallow fried	With assistance, identifies a some foods that can be boiled and shallow fried
Boil and shallow fry various foods	Correctly cooks food using various methods	Cooks food using various methods	Attempts to cook food using various methods	Needs assistance to cook food using various methods
Practice hygiene and safety during cooking	Consistently practices hygiene and safety during cooking	Practices hygiene and safety during cooking	Occasionally practices hygiene and safety during cooking	Needs guidance to practice hygiene and safety during cooking

Strand	Sub strand	Specific learning outcomes	Suggested learning experience	Key inquiry question (s)
5.0 CLOTHING	**5.1 Needlework tools (5 lessons)**	By the end of the sub strand, the learner should be able to:	• Learner identifies various tools used in needlework from pictures, charts, realia,	1. Which tools do you use in needlework? 2. How do you use the

		a) identify various tools used in needlework b) use basic needlework tools in sewing c) practice safety measures while using the needlework tools d) store needlework tools appropriately for safety e) appreciate use of needlework tools	video clips (needles, scissors, tape measure, ruler, pins, thimble, threads) • Learners will watch a demonstration on use of basic needlework tools • In pairs, learners practice using basic needlework tools • Learners practice safety while using the needlework tools • Learner store needlework tools appropriately	needlework tools? 3. What are the safety measures to be observed while using the needlework tools? 4. How should we store needlework tools?
Core competences to be developed: - Creativity and Imagination skills - when improvising needlework tools - Communication and collaboration – During teamwork activities - Learning to learn – in group activities when using needlework tools - Digital literacy – when learners are watching demonstrations on use of needlework tools				
PCIs: - Safety – when using and storing needlework tools - Life Skills – while interacting with the needlework tools			**Values:** - Responsibility – in using and storing the needlework tools appropriately - Unity – when working in pairs	
Links to other subjects: - Mathematics - when taking measurements, using rulers and tape measures, and cutting different shapes - English - when learning different terminologies e.g. thimble			**Suggested community service learning activities:** Visit the nearby tailoring shop to observe the use of the needlework tools.	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identifies various tools used in needlework	Correctly identifies various tools used in needlework	Identifies various tools used in needlework	Identifies some tools used in needlework	With assistance, identifies tools used in needlework

Use needlework tools	• Correctly use various needlework tools • Consistently practices safety measures while using needlework tools	• use various needlework tools • practices safety measures while using needlework tools	• use some needlework tools practices • occasionally practices safety measures while using needlework tools	• needs assistance to use some needlework tools practices • needs assistance to practice safety measures while using needlework tools
Store basic needlework tools	Appropriately stores needlework tools	Stores needlework tools	Stores some needlework tools	Needs assistance to store needlework tools
Non formal activity Draw and display needlework tools in the classroom, school notice board				
List of assessment methods: observation, critiques, checklist, portfolio, oral and written tests, self and peer assessment				
List of resources: needles, piece of cloth, ruler, sewing threads, pictures, charts, realia, video clips				

Strand	**Sub strand**	**Specific learning outcomes**	**Suggested learning experience**	**Key inquiry question (s)**
5.0 CLOTHING	**5.2 Stitches (9 lessons)**	By the end of the sub strand, the learner should be able to: a) identify stitches used on clothes and	• Learner identifies stitches on clothes (tacking and sewing stitches)	1. Why do we use stitches on clothes? 2. What is the use of

		household articles b) state the uses of stitches in clothes c) practice threading a needle before sewing d) practice using a needle during sewing e) make a handkerchief using tacking stitches f) observe safety precautions during needlework g) appreciate the use of tacking stitches in clothes	• Learner states the uses of stitches on clothes • In pairs, learners practice threading a needle before sewing • Learner practices threading a needle before sewing • Learner practices using a needle during sewing • Learner make a handkerchief using tacking stitches • Learner observes safety during sewing	stitches in clothes and household articles
Core competences to be developed: - Communication and Collaboration – as they work together - Creativity and Imagination - through determination to be persistent in sewing - Self efficacy – ability to make tacking stitches				
PCIs: Safety - when sewing			**Values:** - Responsibility - when observing safety before and during sewing - Unity – when working together	
Links to other subjects: - Mathematics – measuring different tacking stitches during sewing - Art and Craft – when using different colours of threads during sewing			**Suggested community service learning activities:** Learners sensitize people in the community on how to make tacking stitches	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Threads a needle before sewing	Accurately threads a needle before sewing	Threads a needle before sewing	Threads a needle after several attempts before	Needs guidance to thread a needle before sewing

			sewing	
Makes tacking stitches	• Accurately makes tacking stitches on a piece of cloth • Consistently makes neat tacking stitches with uniform tension	• Makes tacking stitches on a piece of cloth • Makes neat tacking stitches with uniform tension	• Makes tacking stitches on a piece of cloth after several attempts • Occasionally makes neat tacking stitches with uniform tension	• Needs assistance to make tacking stitches on a piece of cloth • Rarely makes neat tacking stitches with uniform tension
Use needle during sewing	• Correctly uses a needle during sewing • Consistently observes safety during needlework	• Uses a needle during sewing • Observes safety during needlework	• Attempts to use a needle during sewing • Occasionally observes safety during needlework	• Needs assistance to use a needle during sewing • Needs assistance to observe safety during needlework

Strand	**Sub strand**	**Specific learning outcomes**	**Suggested learning experience**	**Key inquiry question (s)**
5.0 CLOTHING	**5.3 Fixing a button**	By the end of the sub strand, the	• Observe different clothes	1. What do you look for

	(3 lessons)	learner should be able to: a) Identify the use of buttons in clothes and household articles b) state factors to consider when choosing a button ~~to fix on~~ for a garment c) choose buttons for different garments d) fix a button on a garment e) practice safety while fixing a button on a garment f) appreciate a well fixed button on a garment	and household articles with button and discuss their use. • In groups, learners brainstorm on the factors to consider when choosing a button to fix on a garment • Learner uses pictures, realia and charts to choose the right button to fix on a garment • Learner observes demonstration on fixing a button on a garment • Learner fixes the button on a garment • Learner practices safety while fixing a button on a garment	when choosing a button? 2. How do you fix a button?
Core competences to be developed: - Self-Efficacy –when fixing the button - Critical Thinking and Problem Solving – when choosing the right button to fix on a garment Communication and Collaboration – when working together				
PCIs: - Safety – when fixing the button on a garment - Hygiene – good grooming			**Values:** Responsibility - independence in fixing own button	
Links to other subjects: - Mathematics – knowing the number of buttons to be fixed and also number of holes in a button in order to determine mode of fixing - Art and craft – choice of proper colour of button to match the garment			**Suggested community service learning activities:** Sensitize other pupils in school on how to fix buttons on garments	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation

Choose the right button to fix on a garment	Accurately and correctly chooses the right button to fix on a garment	Chooses the right button to fix on a garment	Occasionally chooses the right button to fix on a garment	Needs guidance to choose the right button to fix on a garment
Fixing a button	Accurately and correctly fixes a button on a garment	Correctly Fixes the button on a garment	Fixes the button on a garment but may not be accurately or correctly done	Needs guidance to fix the button correctly on a garment

Strand	**Sub strand**	**Specific learning outcomes**	**Suggested learning experience**	**Key inquiry question (s)**
5.0 CLOTHING	**5.4 Laundrywork (12 lessons)**	By the end of the sub strand, the learner should be able to:	• In groups, learners discuss reasons why	1. Why is laundrywork important in taking

		a) state reasons for laundrywork in caring for clothes and household articles b) identify resources required for carrying out laundrywork c) describe the steps in laundering a handkerchief d) launder a handkerchief as an item of personal hygiene e) observe safety while laundering a handkerchief f) care for and store laundry equipment and materials for safety and durability g) appreciate properly laundered personal items	laundrywork is important in care of clothes and household articles • Learners brainstorm on the resources required for carrying out laundrywork • Learners watch a video or a demonstration of steps on laundering different personal items (mending, sorting, soaking, washing, rinsing, drying, ironing, airing, storage) • In pairs, learners discuss steps followed when laundering different personal items • Learners watch a video or a demonstration on laundering different personal items (handkerchief – white and coloured, socks, stockings, inner wear) **NB:** *teacher to bring a new inner wear for demonstration* • Learners practice laundering of different personal clothing items (handkerchief – white and coloured, socks, stockings, inner wear). • Learners watch a video or a demonstration on safety when laundering personal	care of personal items? 2. What are the steps of laundering different personal items? 3. How do we take care of the resources used in laundrywork?

			items • Learners demonstrate responsibility in caring for and storing cleaning equipment and materials • Learners appreciate laundering of personal clothing items	
Core competences to be developed: - Communication and Collaboration – when working in pairs and groups - Critical Thinking and Problem Solving – when using laundry materials Self Efficacy – ability to launder personal items				
PCIs: - Health Education – promotes healthy living by using clean and neat personal items, good grooming - ESD – in managing resources (reusing water and soap)			**Values:** - Responsibility - when caring for personal items Unity - when working in pairs and groups	
Links to other subjects: - Science and Technology – when using detergents - Mathematics – when using the correct amount of water and detergents			**Suggested community service learning activities:** Learners sensitize their immediate peers to participate in washing of personal items	

Assessment Rubrics

Indicator	Exceeds expectation	Meets expectation	Approaches expectation	Below expectation
Identify resources required for laundry work	Correctly identifies resources required for laundry work	Identifies resources required for laundry work	Identifies some resources required for laundry work	Needs assistance to identify resources required for laundry work

Launder personal items	• Correctly launders different personal items • Consistently observes safety while carrying out laundry work • Consistently and correctly uses laundry work resources	• Launders different personal items • Observes safety while carrying out laundry work • Correctly uses laundry work resources	• Launders some personal items • Occasionally observes safety while carrying out laundry work • Occasionally uses some laundry work resources correctly	• Needs assistance to launder different personal items • Needs guidance to observe safety while carrying out laundry work • Needs guidance to use laundry work resources correctly
Care and store cleaning equipment and materials	Consistently cares and stores cleaning equipment and materials	Cares and stores cleaning equipment and materials	Occasionally cares and stores cleaning equipment and materials	Needs guidance to care and stores cleaning equipment and materials

Non formal activities:
- Dramatize safe play in school
- Role play security measures to observe during play
- Draw posters on safe play and hang them up on the school notice board
- Learners exhibit safe play items in school
- Learners draw posters on washing of hands, cleaning fruits, etc and display on the school notice board
- Learners make leaky tins or tippy taps for washing hands and place them in the different parts of the school compound
- Compose and Sing "usafi" songs and poems
- Collect litter and dispose it off correctly
- Clean their classrooms
- Bring cuttings of pictures of different types of shoes
- Draw pictures of different types of fuel used at home
- Display pictures of fuels used at home
- Learners to have forums in the school or individual classes on the importance of having a shopping list
- Compose songs and poems on the importance of choosing food
- Use forums (debates) in school to talk to the other students about the importance of a balanced diet
- Compose poems and songs on the importance of a balanced diet
- Make posters to sensitize the rest of the school about the importance of a balanced diet
- Compose poems and songs about taking care of animals
- Use an animal welfare club to teach on dairy farming
- Learners exhibit fragile kitchen utensils in school
- Learners draw fragile kitchen utensils used at home and post on the school notice board
- Make charts on drawing of foods which can be boiled or shallow fried
- Paper cutting on the different foods and the methods of cooking (boiling or shallow frying)
- Debates on the methods of cooking (boiling or shallow frying)
- Draw and display needlework tools on the school notice board
- Make stitches and display on the classroom charts or in the portfolio
- Compose songs/poems on good grooming
- Use the home science club to sensitize the school community on good grooming

List of assessment methods:
Checklists, oral and written tests, group discussions, self and peer assessment, portfolio, project, critiques, debates

Learning Resources

#	Strand	Sub strand	List of Learning Resources
1.0	HEALTHY PRACTICES	1.1 Play	Digital resources (pictures, video clips and audios), charts, realia, play items, resource person, reference books
2.0	HEALTHY LIVING	2.1 Common Illnesses in the locality	Video clips, pictures, charts, health posters, and resource person
		2.2 Care of the home	Realia, pictures, video clips, charts, cleaning materials and tools
		2.3 Care of shoes	Pictures, chart, plastic, leather and canvas shoes, video clips and cleaning materials and tools
		2.4 Fuels used at home	Charts, pictures, video clips, realia, types of fuel, resource person, equipment
3.0	CONSUMER EDUCATION	3.1 Consumer Awareness	Pictures, video clips, charts, shopping list, shopping venue/place
4.0	FOODS AND NUTRITION	4.1 Choosing food	Pictures, video clips, packaging, general groceries
		4.2 Variety in the diet	pictures, charts, video clips, different foods, digital devices
		4.3 Preservation of milk	Realia, pictures, charts, video clips, utensils, kitchen equipment and appliances, milk preservation items, milk plants, resource
		Fragile Kitchen utensils	Pictures, video clips, charts, materials used for cleaning, realia
		4.5 Cooking Foods	Kitchen equipment and materials, assorted food items, resource person, fuels, charts, pictures, video clips
5.0	CLOTHING	5.1 Needlework tools	Needles, scissors, tape measure, ruler, pins, thimble, threads, pictures, charts, realia, video clips, resource person
		5.2 Stitches	Resource person, needles, piece of cloth, ruler, sewing threads, pictures, charts, video clips
		5.3 Fixing a button	Sewing tools and materials**,** pictures, realia and chart, different buttons
		5.4 Laundrywork	Resource person, laundry work resources, handkerchief (white and coloured), socks, stockings, innerwear (A clean one)

PHYSICAL AND HEALTH EDUCATION (PHE)

Essence statement:

Physical and Health Education (PHE) aims at enabling the learner to acquire relevant practical knowledge, skills, values and attitudes for functional life PHE is in tandem with the Visible Learning Theory where learners need to be able to think about and solve problems, work in teams, communicat through discussions, take initiatives and bring diverse perspectives to their learning and also Vygotsky's social construction theory which postulates tha learning takes place within the social environment, where the learner negotiates meanings through interacting, both explicitly and implicitly, with th teacher, peers and materials embedded in the context (BECF2017). Physical and Health Education provides, developmentally appropriate learning progression of skills and concepts in movement. This enables the learner to apply their mental, emotional and social skills which allow for participation i future specific games and sport in pursuit of a career and healthy lifestyle.

The learning area is also designed to develop the learner's creativity and nurture sports talent in the achievement of the learner's full potential. Throug Physical and Health Education the learner is empowered to acquire values and core competencies embed in Basic Education, thus becoming an Engaged Empowered and Ethical Kenyan citizen.

Subject General Learning Outcomes:

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

1. Perform physical and health activities for enjoyment, survival and self-actualization.
2. Utilize knowledge, skills and values acquired through involvement in physical and health activities for safety.
3. Apply knowledge of basic fitness concepts and principles to make responsible and informed choices for a functional life
4. Improvise a variety of equipment and facilities and use tactical and social skills in outdoor experiences for existence and personal development
5. Acquire basic movement skills through a variety of developmentally appropriate movement experiences within the social, cultural, national an international context
6. Demonstrate competency in motor skills and movement patterns needed to perform a variety of physical and health activities
7. Exhibit inter and intra personal responsible social behaviors that respect self and others in physical and health activity settings
8. Appreciate movement skills for recreational and positive use of leisure

Lesson allocation for locomotor skills: 9
Athletics Track

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question(s)
1.0 Basic Movement Skills	**1.1 Locomotor skills:** An athletics track 2 Lessons	By the end of the sub-strand, the learner should be able to: a) identify an athletic track in the community b) identify the common starting and finishing points for 100 and 200meters races on an athletic track c) participate in the school's athletic events to enhance learning d) observe safety when playing games for own and others safety e) play games for fun and enjoyment f) appreciate the athletic track in the community as a resource	▪ In groups learners discuss and name an athletic track in the community ▪ Learners in groups use technology or sketches of an athletic track to identify the common starting and finishing point for 100 and 200 meters races. ▪ Learners participate in the school's athletic events ▪ Learners participate in athletic events for fun and enjoyment and observe safety	1. How does an athletic track look like? 2. What is the importance of honesty in sports competitions?
	1.2 Locomotor skills:- Standing Start in athletics 4 lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the Standing start to enhance learning b) practice the standing start in athletics for skill acquisition c) discuss the term 'fair play' during games and sports for value acquisition d) observe rules when practicing the Standing start in athletics for own and others safety e) play games that involve Standing start in athletics for fun and enjoyment f) appreciate the Standing start as a technique in starting races in athletics	▪ learners interact with digital media to familiarize with the standing start in athletics and observe - the leg placement during the Standing start - the push and arm action during Standing start in athletics - full body alignment (hips, knees, eyes and arms) during the Standing - the commands "On your marks" and "Go!" during the Standing start ▪ Learners in groups practice the - leg placement during the Standing start	1. How do you position your body for a standing start in athletics? 2. Why is it important to respect school rules

			- push and arm action during Standing start in athletics - full body alignment (hips, knees, eyes and arms) during the Standing - commands "On your marks" and "Go!" during the Standing start ▪ learners in groups discuss the term 'fair play' ▪ Learners participate in games for fun and enjoyment and observe safety	
1.0 Basic Movement Skills	**1.3 Locomotor skills:** Standing Long jump 3 lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the Standing long jump to for skill acquisition b) practice the standing long jump for skill masterly c) observe safety when practicing the Standing Long jump for own and others safety d) play games for fun and enjoyment e) appreciate the Standing Long jump in athletics	▪ Learners interact with technology to familiarize with the Standing long jump and observe the body position, the arm swing, flight and landing. ▪ In groups the learners discuss their observations and respect each other's opinion ▪ The learners in groups use drills to practice: - the take-off on both feet in Standing long jump - the arm swing, flight and landing in Standing long jump - body positioning for Standing long jump ▪ Learners in groups discuss the importance of teamwork during games and sports ▪ Learners observe safety when practicing the Standing Long jump ▪ Learners in groups participate in games	1. What moves the body forward after take-off in Standing long jump? 2. Why is it important to work as a team during games and sports?

			for fun and enjoyment	

Core Competences to be developed:

- **Digital literacy:** as learners interact with technology to gather information
- **Communication and collaboration:** as the learner's practice in groups and play games
- **Self-efficacy:** as they perform the standing long jump

Link to PCI's:

Safety: as learners practice the various skills

Values:

- **Respect for self and other:** as learners discus in groups and correct each other
- **Social Cohesion:** as learners all work in groups for skill practice
- **Unity**: as learners practice drills together

Link to other learning areas:

- **Languages:** as learners discuss in groups
- **Home Science and Religious Education:** as learners identify and name body parts used in standing start
- **Mathematics:** as learners count the lanes
- **Science and technology:** as learners manipulate digital gadgets to watch videos

Suggested Community Service-Learning Activities: Learners participate during inter-community athletic competitions for solidarity

Non-formal activities to enhance learning: Learners engage in athletic activities with their peer during their free time.

Suggested: Assessment: Oral questions, written assignment, Observation, Anecdotal notes, practical assessment, peer assessments and self-assessment

Assessment Rubric For: Basic Movement Skills: Manipulative Skills: Athletics Track

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** ▪ identifying the sections of an athletic track ▪ standing start in athletics ▪ standing Long jump	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship** **Attitude** **Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities and portrays inability to work with others
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task. .	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for Manipulative Skills: 51

Manipulative Skills: **Ball Games**

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question(s)
1.0 Basic Movement Skills	**1..4 Manipulative skills**: Ball game skills: Improvising balls 4 lessons	By the end of the sub-strand, the learner should be able to: By the end of the sub-strand, the learner should be able to: a) identify locally available materials for improvising balls b) improvise balls of various sizes for learning c) gather locally available materials for improvising balls d) dispose waste after improvisation for environmental care e) observe safety when improvising balls to avoid injuries f) play games using improvised balls for fun and enjoyment g) appreciate improvising balls for self-sufficiency	▪ learners interact with digital technology to find out the shapes of various hand balls ▪ learners identify locally available materials that can be used to improvise durable hand balls of various sizes ▪ in groups learners gather locally available materials for improvising durable balls ▪ learners in groups improvise age appropriate hand balls of various sizes ▪ learners clean the working area and dispose of waste appropriately ▪ learners observe safety when they improvising balls ▪ learners play games using improvised balls and observe rules	**1.** Which locally available materials are appropriate for improvising durable hand balls? **2.** What safety measures can be taken to avoid injuries when improvising hand balls? **3.** Which are the likely injuries to soccer when improvising soccer balls? **4.** How can the injuries that may occur while improvising hand balls be managed? **5.** Which games can be played using improvised hand balls?

1.0 Basic Movement Skills	**1.5 Manipulative skills: Ball Games:** One handed Catching 3 lessons	By the end of the Sub strand the learner should be able to: a) demonstrate the Two-handed catch for skill acquisition b) practice the Two-handed catch for skill masterly c) observe rules when playing games for own and others safety d) play games for fun and enjoyment e) appreciate the Two-handed catch as a vital skill in playing a number of games	▪ Learners in groups use digital media to view the One-handed catch. they discuss their observations and respect each other's opinion ▪ learners in groups pass a variety of items to each other to practice the One-handed catch using different: - distances - pathways - levels - degrees of force ▪ the learners make relationships by using the Two-handed catch ▪ learners play games for fun and enjoyment and observe safety	1. which distance is easier to catch from using the One-handed catch? 2. How can you use the One-handed catch in everyday life?
1.0 Basic Movement Skills	**1.6 Manipulative skills:** Kneeling Overhead throw 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the Kneeling overhead throw for skill acquisition b) practice the Kneeling overhead throw for skill masterly c) discuss the importance of honesty during games and sports d) Observe the rules when performing the Kneeling overhead throw for safety e) play fun games for enjoyment f) appreciate the Kneeling overhead throw	▪ Learners interact with technology to observe the ball placement during the Kneeling over overhead throw ▪ Learners use drills to practice the Kneeling overhead throw ▪ Learners in groups discus the importance of honesty during games and sports ▪ Learners observe the rules when practicing the Kneeling overhead throw for safety ▪ Learners participate in games for fun and enjoyment	1. How far can a person throw the ball when on their knees? 2. Why is it important to observe honesty during games and sports?

		for strength training		
1.0 Basic Movement Skills	**1. 7 Manipulative skills**: Ball game skills: Overarm pass 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate an Overarm pass for skill acquisition b) practice the Overarm pass for skill masterly c) discuss the importance of respecting team mates during games and sports d) observe rules when passing balls for own and others' safety e) play modified games using the Overarm pass for fun and enjoyment f) appreciate the Overarm pass as a vital skill in a number of games	▪ Interact with digital media to watch a video clip on the Overarm pass and observe the body position and the hand movement, learners discuss their observations and respect each other's views ▪ In pairs learners practice throwing the ball to each other from different directions such as forward, sideways and backward using the Overarm pass ▪ In groups the learners practice passing the ball to each other from various levels such as while standing, kneeling (low, high) ▪ Learners establish relationships as they pass the balls to each other in groups using the overarm pass: ▪ In groups learners practice the over arm pass by passing the ball to each other using varying degrees of force ▪ learners practice the overarm pass over different distances ▪ Learners play modified games using the overarm pass and observe safety	1. How can you use the over arm pass in everyday life? 2. Which games use the overarm pass?
1.0 Basic Movement	**1. 8 Manipulative**	By the end of the sub-strand, the learner should be able to:	▪ Interact with digital media to watch a video clip on the	1. which height (level) is easier to make an

Skills	**skills**: Ball Game - Overhead pass 3 Lessons	a) demonstrate the Overhead pass for skill acquisition b) practice the Overhead pass for skill masterly c) discuss the importance of respecting rules during games and sports d) observe rules when passing balls for own and others' safety e) play modified games using the Overhead pass for fun and enjoyment f) appreciate the Overhead pass as a skill in playing a number of games	Overhead pass and observe the body position, hands movements as the ball is released. Learners discuss their observations while respecting each other's views ▪ In pairs learners practice passing the ball to each other from different directions such as forward and sideways using the Overhead pass ▪ In groups the learners practice passing the ball to each other from various levels (low, medium and high) standing, kneeling and seating using the Overhead pass ▪ In groups the learners use the Overhead pass to practice passing the ball to each other using various degrees of force ▪ Learners establish relationships as they pass the balls to each other in groups using the Overhead pass: ▪ In groups learners practice passing the ball over various distances ▪ In groups the learner's discus reasons for respecting rules during games ▪ Learners play modified games using the Overhead pass and observe safety	Overhead pass from? 2. Why is it important to respect rules during games and sports

1.0 Basic Movement Skills	**1. 9 Manipulative skills: Ball Games:** Underarm pass 3 Lessons	By the end of the sub-strand, the learner should be able to: a) Demonstrate the Underarm pass to for skill acquisition b) practice the Underarm pass for skill masterly c) discuss the importance of making games fun and enjoyable d) observe rules when passing balls for own and others' safety e) play modified games using the Underarm pass for fun and enjoyment f) appreciate the Underarm pass as a vital skill in playing a number of games	▪ Interact with digital media to watch a video clip of the Underarm pass and observe the body position, how the ball is held, and the movement of the hands during release. Learners discuss their observations and respect each other's views ▪ In pairs learners practice passing the ball to each other from different directions such as forward, sideways using the Underarm pass ▪ In groups the learners practice passing the ball to each other from various levels (low, high), standing, kneeling and sitting using Underarm pass ▪ In groups the learners practice the Underarm pass by passing the ball to each other using various degrees of force ▪ Learners establish relationships as they pass the balls to each other in groups using the Underarm pass. ▪ In groups learners practice passing the ball over various distances using the Underarm pass ▪ Learners discus the importance of having fun and joy as they play	1. When is it most appropriate to use the underarm pass? 2. Why is it important to have fun and joy when playing games? 3. Which distance is most appropriate for the Underarm pass?

			games ▪ Learners play modified games using the Underarm pass for fun, enjoyment and observe safety	
1.0 Basic Movement Skills	**2. 0 Manipulative skills: Ball Games:** Chest pass 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the Chest pass for skill acquisition b) practice the Chest pass for skill masterly c) discuss the importance of commitment to a team during games sports d) observe the rules when passing the ball for own and others' safety e) play modified games using the Chest pass for fun and enjoyment f) appreciate the Chest pass as a skill in playing a number of games	▪ Interact with digital media to watch a video clip on Chest pass and observe how the fingers are spread over the ball, hand placement and how the ball is released. In groups learners discuss their observations and respect each other's views ▪ In pairs learners practice passing the ball to each other in various levels such standing and kneeling using Chest pass ▪ In groups learners practice passing the ball over various distances using Chest pass ▪ In pairs learners practice the Chest pass using various degrees of force ▪ In groups learner's discus the importance of commitment to team during games and sports ▪ Learners play modified games using the Chest pass and observe safety	1. Why is it important to be aware of personal and general space when playing games? 2. Why is it important to have team commitment during sports?
1.0 Basic Movement Skills	**2.1 Manipulative skills: Ball Games:**	By the end of the sub-strand, the learner should be able to: a) demonstrate the Bounce pass for skill	▪ Learners interact with digital media to watch a video clip on Bounce pass and observe the execution of the pass. They	1. What makes a good bounce pass? 2. Which distance is

	Bounce Pass 3 lessons	acquisition b) practice the Bounce pass for skill masterly c) observe rules when playing games for own and others safety d) play games for fun and enjoyment e) appreciate the Bounce Pass as a vital skill in playing a number of games	discuss their observations and respect each other's opinion ▪ In pairs learners practice the bounce pass from different directions such as forward and sideways ▪ In pairs the learners practice the bounce from different levels, (low, medium and high) ▪ In pairs the learners practice the Bounce pass using various degrees of force ▪ In pairs the learners practice the Bounce pass over various distances ▪ Learners establish relationships as they pass the balls to each other in groups using the Bounce pass • Learners play modified games using the Bounce pass and observe safety	appropriate for a bounce pass?
1.0 Basic Movement Skills	**2.2 Manipulative skills**: **Ball Games:** Improvising Soccer balls 3 Lessons	By the end of the sub-strand, the learner should be able to: a) describe the soccer ball to enhance learning b) identify locally available materials for improvising soccer balls c) gather locally available materials for improvise soccer balls	▪ learners interact with digital media to find out the shape, sizes of various soccer balls and the ball sizes for ages 9-11. Learners discuss their findings and respect each other's opinion ▪ learners in groups list locally available materials that can be used for improvising soccer balls	1. Which materials are appropriate for improvising durable socce balls? 2. What safety measures can be taken to avoid injuries when improvising soccer balls? 3. Which are the likely

		d) improvise age appropriate soccer balls for use in learning e) clean the working area for environmental care f) observe safety measures when improvising soccer balls to avoid inquiries g) play games using improvised soccer balls for fun and enjoyment h) appreciate improvising the soccer balls for self-sufficiency	▪ In groups learners gather locally available materials for improvising soccer balls ▪ learners in groups improvise age appropriate soccer balls of various sizes ▪ Learners in groups clean the working area after work ▪ learners observe safety measures when improvising soccer balls ▪ learners play games using improvised soccer balls for fun and enjoyment and observe safety	injuries to soccer when improvising soccer balls? 4. How can the injuries that may soccer while improvising soccer balls be managed?
1.0 Basic Movement Skills	**2.3 Manipulative skills:** Soccer-passing 6 Lessons	By the end of the sub-strand, the learner should be able to: a) identify body parts used when passing the ball in soccer for body awareness b) label the different parts of the foot used for passing the ball in soccer c) practice passing the ball using the instep for skill acquisition d) observe the rules when passing the ball in soccer for own and others' safety e) appreciate passing as an important skill in soccer	▪ Learners interact with technology to watch a video clip on passing using different parts of the foot. Learners discuss their observations and respect each other's opinion ▪ Learners in pairs show each other the different parts of the foot used for passing in soccer(Instep, inside of the instep and outside of the instep) ▪ Learners draw the foot and indicate the different parts of the foot used for passing the ball in soccer (instep, outside of foot and the inside of the instep) ▪ Learners in group demonstrate passing using the Instep without the ball and with the ball	Which are the parts of the foot used for passing in soccer?

			▪ In pairs learners practice the Instep pass: - In various levels (low, medium and high) - different speed, - at various distances - different directions ▪ Learners play minor games that use the Instep for fun and enjoyment and observe rules	
1.0 Basic Movement Skills	**2.4 Manipulative skills:** Hand Juggling 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate hand juggling for skill acquisition b) practice hand Juggling of balls for skill masterly f) observe rules when hand juggling for own and others' safety c) play hand juggling games for fun and enjoyment d) appreciate Juggling for self-determination	▪ learners interact with digital media to watch a video clip on hand juggling and observe hand juggling of One and two balls juggling. Learners discus the video clip and respect each other's opinion ▪ Learners individually practice hand juggling using different items (bean bags, scurf's, soft small balls). ▪ Learners in pairs practice hand juggling of One ball and give each other feedback ▪ Individually the learners practice hand juggling of two balls ▪ In groups learners practice hand juggling of two balls and give each other feedback ▪ Learners individually display	1. How can hand juggling be used in everyday life?

			Juggling to the class and take video clips of each other ▪ play games using Juggling with the instep for fun and enjoyment and observe safety	

Core Competences to be developed:

- **Digital literacy:** as learners interact with technology to watch a video clip in various skills
- **Critical thinking and problem solving:** as learners improvise soccer balls and play games
- **Creativity and imagination:** as learners identify and gather and materials for improvising balls
- **Communication and collaboration:** as learners improvise balls and play games with each other

Link to PCI's:

- **Safety and security:** as learners play games
- **Environmental conservation:** as clean the working area after work

Life skills education: self-awareness and self-esteem: as the learners identify the various body parts

Link to Values:

- **Respect:** as the leaners discuss video clips learn in groups and respect each other opinion
- **Responsibility:** as learners improvise ball, clean the environment and care for the equipment
- **Integrity: as** learners play games and observe rules

Link to other learning areas:

▪ **Languages:** as learners discuss the materials, they will gather for improvising soccer balls and when they are playing games together ▪ **Science and technology:** as learners interact with technology to learn watch various video clips
Suggested Community Service-Learning Activities: learners improvise play equipment and use them to play games and become peer tutors
Suggested Non-formal activity to support learning: The learners interact with digital media to learner new games that they can play using improvised balls in school and at home.
Suggested Assessment: Oral questions, Observation, Anecdotal notes, Written assignment, Self-assessment and Peer assessment

Assessment rubric for: Manipulative Skills: **Ball Games**

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** ▪ Improvising hand balls ▪ Catching ▪ Kneeling overhead throw ▪ Over arm pass ▪ Overhead pass ▪ Underhand pass ▪ Chest-pass ▪ Bounce Pass ▪ Passing - Instep pass ▪ Hand juggling	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship** **Attitude** **Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities and portrays inability to work with others

3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task. .	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Manipulative Skills: Batting Games - Rounders

Strand	**Sub-Strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Key Inquiry Question(s)**
1.0 Basic Movement Skills	**2.9 Manipulative skills:** bats, posts and Rounders balls	By the end of the sub-strand, the learner should be able to: a) describe the Bats, Posts and Rounders ball	▪ Learners interact with digital technology to find out the size and shape of the Bat, posts and Rounders ball	1. Which locally available materials are appropriate for

	6 Lessons	to enhance learning b) draw and label the Bats, Posts and Rounders ball in the rounders game c) identify locally available materials for improvising the Bats, posts and Rounders balls d) improvise age appropriate Bats, posts and Rounders ball for playing rounders game e) observe safety measures when improvising the Bats, posts and Rounders ball f) play games using improvised Bats, posts and Rounders ball for fun and fitness g) appreciate improvising the Bats, posts and Rounders ball for self-sufficiency	▪ Learners individually draw and label the Rounders, Bat and balls for rounders game ▪ Learners in groups list locally available materials that can be used to improvise Bat, posts and Rounders balls ▪ In groups learners gather locally available materials for improvising Bat, posts and Rounders balls ▪ Learners in groups improvise age appropriate Bat, posts and Rounders balls ▪ Learners observe safety measures when improvising Bat, posts and Rounders balls ▪ Learners play games using improvised equipment in Rounders and observe rules	improvising durable rounders equipment? 2. What safety measures can be taken to avoid injuries when improvising rounders equipment? 3. Which are the likely injuries to occur when improvising rounders equipment? 4. How can the injuries that are likely to occur while improvising rounders equipment be managed?
1.0 Basic Movement Skills	**3.1 Manipulative skills:** Pitch orientation 2 lessons	By the end of the sub-strand, the learner should be able to: a) identify the different sections of a Rounders pitch b) draw a sketch of the Rounders pitch to enhance learning c) place Rounders posts in the play area for field orientation d) observe rules when playing Rounders for	▪ The learners interact with technology to watch a video clip of a Rounders pitch and look out for the batting and bowling square, the width and length of pitch ▪ Using images from the digital media or sketches provided learners draw the Rounders pitch and indicate the batting square, the bowling square and the 1st , 2nd , 3rd and 4th posts ▪ Learners in groups place the Rounders	Which are the sections of a Rounders pitch

		safety e) play Rounders games for fun and enjoyment f) appreciate the Rounders as a game for recreation	posts in the play area. ▪ Learners participate in a Rounders games for fun and enjoyment and observe safety	
1.0 Basic Movement Skills	**3.2 Manipulative skills:** Bowling in Rounders 3 Lessons	By the end of the sub-strand, the learner should be able to: a) describe bowling in rounders game b) identify the body parts that are used when bowling in Rounders c) practice bowling for skill masterly d) observe the rules of bowling for fair play and competition e) play Rounders for fun and enjoyment f) appreciate bowling in rounders	▪ learners watch a video clip on bowling and observe the body parts used for holding the Rounders ball the bowling action as used in Rounders. learners discuss their observations from the video clip and respect each other's opinion ▪ Learners practice the correct ball griping in rounders (First and second fingers placed over two seams of the ball where they come together, with the thumb also over seam). ▪ Learners practice recovery after ball release ▪ Learners demonstrate the standing positions during bowling (feet staggered, feet apart) ▪ In pairs learners demonstrate the arm swing for power and balance during bowling ▪ Learners practice throwing the Rounders ball in different levels (low, medium, high) ▪ Learners practice bowling in different directions (sideways, forward) ▪ Learners play bowling drills for fun and enjoyment observing the rules of bowling.	1. What is the correct stance for the bowling technique? 2. Why is it important to grip the ball correctly in rounders game'

1.0 Basic movement skills	**3.3 Manipulative skills: Rounders Batting** 4 lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the body positions in rounders when batting for skill acquisition b) practice batting in rounders for skill masterly c) observe rules when batting for safety d) play conditioned Rounders games for fun and enjoyment e) appreciate batting in Rounders for a successful game	▪ Learners interact with technology to observe the Stance, Grip, swing and hit. The learners discuss their observations and respect each other's opinion ▪ Learners in groups practice the - Stance - Grip - Swing - Hit ▪ Learners practice batting the ball to various distances ▪ Learners in groups use drills to practice batting ▪ Learners observe rules as they play the batting minor game ▪ Learners record the scores as they play games	What is the best body position for a batsman in Rounders?
1.0 Basic Movement Skills	**3.4 Manipulative skills:** Running a rounder 3Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate running a rounder for skill acquisition b) practice running a rounder for skill masterly c) observe rules of running a rounder for safety d) play Rounders games for fun and enjoyment e) appreciate Running a rounder in the game of rounders	▪ interact with technology to watch running a rounder in rounders game ▪ learners in groups practice running around ▪ learners in groups practice, post contact drills in running a rounder ▪ learners in groups observe rules when running a rounder for safety ▪ learners play Rounders games for fun and enjoyment	How many posts are there in Rounders pitch?
Core Competences to be developed:				

- **Digital literacy:** as the learners interact with technology to learn skills in Rounders
- **Creativity and imagination:** as learners improvise Rounders equipment to play games
- **Communication and collaboration:** as learners discuss with each other and share opinion
- **Self-efficacy:** as learners demonstrate to one other skill and play games together

Link to PCI's:

- **Safety and security:** When handling the equipment ensuring that they do not hurt each other or self
- **Social cohesion:** as learners play together from different social backgrounds
- **Life skills education:** Self-awareness and self-esteem when learners know parts of their bodies and to manipulate them in playing games

Link to Values:

- **Responsibility:** as they clean the working environment, and carry the equipment back to the store
- **Unity:** Players develop strong relationships as they play together and form teams
- **Social justice:** They practice fairness in the observation and administration of rules to all

Link to other learning areas:

- **Mathematics:** as counter Rounders
- **Languages:** as they communication and collaborate with each other
- **Science and technology:** as learners interact with technology

Suggested Community Service-Learning Activities:

learners improvise play equipment and use them to play games and become peer tutors

Suggested Non-formal activity to support learning:

The learners interact with digital media to learner new games that they can play using improvised balls in school and at home.

Suggested Assessment:

Oral questions, Observation, Anecdotal notes, Written assignment, Self-assessment, Peer assessment

Assessment rubric for: Manipulative skills: Batting Games - Rounders

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** ▪ Field and equipment orientation Bowling Batting - Stance - Grip - swing hit • Running a rounder	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance

2.	**Sportsmanship Attitude Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities and portrays inability to work with others
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task. .	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Manipulative skills: jumping rope - Basic Rope Work

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question(s)
1.0 Basic movement skills	**3.5 Manipulative skills: Basic Rope work:** Improvising the jump rope 3 lessons	By the end of the sub-strand, the learner should be able to: a) identify locally available materials for improvising the jump rope b) gather locally available materials for improvising durable jump rope c) list safety measures to be observed when improvising the jump rope to avoid injuries d) clean the working area for	▪ Learners interact with technology to watch a video clip on jump rope ▪ In groups learners list locally available materials for improvising durable jump rope ▪ In groups learners gather locally available materials for improvising durable jump rope ▪ In groups learners discuss and list the safety measures to be observed when improving the jump rope	1. Which are some of the locally available materials that can be used to improvise durable jump ropes? 2. Which materials are appropriate for improvising durable soccer balls? 3. What safety measures can be taken to avoid injuries when

		environmental care e) play games for fun and enjoyment f) appreciate improvising the Jump rope for self-sufficiency	▪ In groups learners improvise different sizes of jump ropes using locally available materials ▪ Learners clean the working after improvising ▪ Participate in games for fun and enjoyment	improvising soccer balls 4. Which are the likely injuries to soccer when improvising soccer balls 5. How can the injuries that may occur while improvising jump rope be managed?
1.0 Basic Movement Skills	**3.6 Manipulative skills: Basic rope works: Jumping techniques:** Grip, proper body, arm and wrist position, rope swing correct jumping height (not too high nor low) 3 lessons	By the end of the sub-strand, the learner should be able to: a) describe the jump rope to enhance learning b) practice the correct techniques for jump rope grip, body posture, arm and wrist position, rope swing, measuring correct rope length and jumping height to avoid injuries c) observe rules when jumping rope for safety d) play games for fun and enjoyment e) appreciate using the correct jumping techniques for safety	▪ In groups learner interact with technology to watch video clips on - body posture - arm and wrist position - rope swing - measuring correct rope length - correct jumping height - grip. Learners discuss their observations and respect each other opinion. ▪ Learners individually demonstrate the correct grip, body posture, arm and wrist position, rope swing, measuring correct rope length and jumping height ▪ Learners play games for fun and enjoyment	Why is it important to use the correct jumping techniques in jump rope?
1.0 Basic Movement Skills	**3.7 Manipulative skills: Basic rope work: S**ingle bounce	By the end of the sub-strand, the learner should be able to: a) demonstrate the **S**ingle bounce in jump rope for skill acquisition	▪ Using technology, the learners watch a video clip on jump rope and observe the single bounce skill. Learners discuss their observations and respect each other's opinion	1. How many counts can you make when jumping rope using the **S**ingle bounce?

	skill 3 lessons	b) practice the **S**ingle bounce in jump rope for skill masterly c) observe safety when jumping rope for own and others safety d) discuss life style diseases a person may avoid by jumping rope e) play games for fun and enjoyment f) appreciate the single bounce as a skill for jumping rope	▪ Learners in groups practice single bounce in different: - directions - levels (low, medium and high) - speed ▪ establish relationships using the **S**ingle bounce skill in jump rope for space awareness ▪ Learners in groups discuss the life style diseases a person may avoid by jumping rope ▪ learners participate in games for fun and enjoyment observe rules *Do not lift the foot more than 5cms from the ground	2. How does skipping contribute in keeping a person healthy?
1.0 Basic Movement Skills	**3.8 Manipulative skills: Basic rope work -** Double bounce 3lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the the Double bounce in jump rope to enhance learning b) practice the Double bounce in jumping rope for skill masterly c) perform Double bounce in jumping rope for skill masterly d) make relationships while jumping rope using the Double bounce for space awareness e) observe safety when jumping rope for own and others safety f) play games for fun and enjoyment g) appreciate the double bounce as a skill for jumping rope	▪ Using technology, the learners watch a video clip on jump rope and observe the Double bounce skill. Learners discuss their observations and respect each other's opinion ▪ Learners in groups practice Double bounce in different: - directions - levels (low, medium and high) - speed ▪ establish relationships using the Double bounce in jump rope for space awareness ▪ learners participate in games for fun and enjoyment observe rules *Do not lift the foot more than 5cms from	How many counts can you make when jumping rope using the Double bounce?

			the ground	
1.0 Basic Movement Skills	**4.9 Manipulative skills: Basic rope work:** One-foot bounce 3 lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the One-foot bounce to enhance learning b) practice the One-foot bounce in jump rope for skill masterly. c) observe safety when jumping rope for own and others safety d) play games for fun and enjoyment e) appreciate the One-foot bounce as a skill for jumping rope	▪ In groups learners' practice one-foot bounce without rope - Jump on the spot using the right foot only and count to five. Repeat with the left foot and count to five. - jump on the spot with one leg and turn 90^0 to the left and to the right - Jump over a rope on the floor to the right and left using the left foot only. Repeat with the right foot. - Jump over a rope on the floor forwards and backwards using the left foot only. Repeat with the right foot. ▪ Individually learners' practice one-foot bounce using the rope. ▪ In groups learners' practice one-foot bounce using the rope. ▪ Learners observe safety when jumping rope for own and others safety ▪ learners play games for fun and enjoyment *Do not lift the foot more than 5cms from the ground	1. Which is harder to jump single or double bounce? 2. What can be done for learners to have fun and joy during games time
Core Competences to be developed: ▪ **Critical thinking and problem solving:** as the learners gather the relevant materials to improvise the jump rope ▪ **Communication and collaboration:** as the learners practice improvise the jump rope in groups and use it to practice the various skills in jump rope				

- **Digital literacy:** as learners interact with technology
- **Self-efficacy:** as learners master rope skills

Link to PCI's:

- **Life skill:** self-esteem and self-awareness as learners work in groups and master different skills
- **Safety:** as learners observe safety when improvising the jump rope and practicing the various skills in jump rope
- **Environmental issues:** learners leave the working place clean after improvisation

Link to Values:

- **Respect:** learners respect each other's opinion as they discuss and work in groups
- **Responsibility:** as the learners use the rope for the intended purpose and gather equipment for safe storage after class
- **Fair play:** as learners give each other chances to jump and make the correct count as they jump
- **Health:** as learners jump rope to maintain healthy weight and strong bones
- **Social cohesion:** as learner jump rope in groups to drive fun and enjoyment
- **Love:** as the learners jump rope as a team and work together to gather materials for improvising ropes
- **Peace:** as learners watch video clips together and discus while respecting each other's views

Link to other learning areas:

- **Languages:** as learners discuss video clips in groups and answer key inquiry questioning
- **Mathematics:** as learners take suitable rope measurements. Make correct counts, and make number shapes using jump rope
- **Art and craft:** as learners improvise jump ropes and make shapes

Suggested Community Service-Learning Activities:

Learners visit children's homes to assist in making appropriate play items using improvised locally available materials

Suggested non-formal activity to enhance learning:

Learners to jump rope using improvised ropes as they count, make shape and numbers with the other children back at home.

Suggested Assessment:

Oral questions, Observation, Anecdotal notes, written assignment, self-assessment practical assessment and peer assessment

Assessment rubric for: Manipulative Skills: Jump Rope

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** **Basic rope work:** - Improvising the jump rope - Jump rope techniques - Single bounce - Double bounce - One-foot bounce	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship** **Attitude** **Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities and portrays inability to work with others
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and**	Learner always	Always participates safely	The learner needs	The learner needs

	application of rules	participates safely and encourages others to be safe, follows instruction and stay on task.	and follows instructions and stays on task without undue fatigue.	occasional prompting to observe safety and stay on task. .	constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for rolls: 7
Lesson allocation for Balances: 6
Lesson allocation for Sequences 9
Gymnastics skills: Rolls Balances and Sequences

Strand	Sub-Strand	Learning Outcomes	Suggested Learning Experiences	Inquiry Question
2.0 Gymnastics	**2.1 Rolls:** Forward roll 3 Lessons	By the end of the sub- strand, the learners should be able to: a) name the body parts that are used when performing the forward roll for body awareness b) practice the forward roll for skill masterly. c) observe rules when performing the forward rolls for own and others safety. d) play games for fun and enjoyment e) Appreciate the forward for self-esteem	▪ Learners interact with digital media to watch a video clip on forward roll and observe the placement of hands and the forehead as the person rolls ▪ Learners in pairs practice the forward roll ▪ Learners display the forward roll for excellence ▪ Play games for fun and enjoyment and observe safety	How are the hands and the fore head placed during forward roll?
2.0 Gymnastics	**2.2 Rolls:** Backward roll 4 Lessons	By the end of the sub- strand, the learners should be able to: a) name the parts of the body that are used when performing the Backward roll for body awareness, b) practice performing the Backward roll for skill masterly. c) play games for fun and enjoyment d) observe rules when performing the Backward roll for own and others safety.	▪ Learners watch a video clip on Backward roll and observe the placement of hands and the lifting of the feet as the person rolls ▪ Learners in pairs practice the Backward roll ▪ Learners display the Backward roll for excellence ▪ Play games for fun and enjoyment and observe safety	1. Which is easier between **b**ackward roll and forward roll **2.** How Backward be useful in daily life?

		e) play games for fun and enjoyment f) Appreciate the Backward for self-esteem		
2.0 Gymnastics	**2.3 Individual balances:** Headstand 3 Lessons	By the end of the sub- strand, the learners should be able to: a) name the parts of the body that are used when performing the Headstand for body awareness b) practice performing the Headstand for skill masterly c) play games for fun and enjoyment d) observe rules when performing the Headstand for own and others safety.	▪ Learners watch a video clip on Headstand and observe the placement of hands, forehead and lifting of feet into a headstand ▪ Learners in pairs practice the Headstand ▪ Learners display the Headstand for excellence ▪ Play games for fun and enjoyment and observe safety	How can headstand be useful in daily life?
2.0 Gymnastics	**2.4 Individual balances:** Handstand 3 Lessons	By the end of the sub- strand, the learners should be able to: a) name the parts of the body that are used when performing the Handstand stand for body awareness, b) practice performing the Handstand stand for skill masterly c) perform Handstand stand for skill masterly d) play games for fun and enjoyment e) observe rules when performing the forward rolls for own and others safety.	▪ Learners watch a video clip on Handstand stand and observe the placement of hands and the forehead ▪ Learners in pairs practice the Handstand stand ▪ Learners display the Handstand stand for the class	How can handstand be useful in daily life?
2.0 Gymnastics	**2.5** **Sequences** Two action sequence 3 lessons	By the end of the sub- strand, the learners should be able to: a) describe Two action sequence for skill acquisition b) practice Two action sequence for skill masterly c) observe rules when performing the Backward	▪ learners use technology to find out what is a Two action sequence ▪ learners in pairs practice Two action sequence such as pencil roll into egg roll (roll-roll) ▪ learners in pairs practice a sequence with two actions and give each other feedback ▪ learners observe safety when performing the sequences	How can a Two action sequence be used in daily life?

		rolls for own and others safety d) play games for fun and enjoyment	▪ learners play games for fun and enjoyment	
2.0 Gymnastics	**2.6 Sequences** Three action sequence 3 Lessons	By the end of the sub- strand, the learners should be able to: a) describe a Two action sequence for skill acquisition b) practice a three action sequence for skill masterly c) play games for fun and enjoyment d) observe rules when performing the Two action sequence for own and others safety	▪ learners use technology to find out what is a Three action sequence ▪ learners in pairs practice a Three action sequence . The sequence should have two skills one of them has to be repeated such as squat stand into a forward roll into a squat stand ▪ learners in pairs practice a sequence with three actions and give each other feedback ▪ learners observe safety when performing the Three action sequence sequences ▪ learners play games for fun and enjoyment	How can a Three action sequence be used in daily life?
2.0 Gymnastics	**2.7 Sequences** Four action sequence 3 lessons	By the end of the sub- strand, the learners should be able to: a) describe a four-action sequence for skill acquisition b) practice a Four action sequence for skill masterly c) play games for fun and enjoyment d) observe rules when performing a Four action sequence for own and others safety	▪ learners use technology to find out what is a four-action sequence ▪ learners in pairs practice a four-action sequence that has four actions. The sequence should have two skills but both of them are repeated in the sequence such as handstand into a T-balance into a handstand into a T-balance. ▪ learners in pairs practice a sequence with four actions in it and give each other feedback ▪ learners observe safety when performing four actions sequences ▪ learners play games for fun and enjoyment	How can a four-action sequence be used in daily life?
Core Competencies: ▪ **Communication and collaboration**: as the learner's discus and give each other feedback ▪ **Critical thinking and problem solving:** it is achieved as the learners observe rules and maintain safety ▪ **Self-efficacy:** as the learners gain confidence in performing the skill and display it ▪ **Learning to learn:** as the learners learn how to use personal and general				

▪ **Digital literacy:** as the learners manipulate the digital gadgets and watch or take video clips
Link to PCIs: **Safety:** as the learners observe the pool rules of not pushing each other and eating around the pool **Environmental issues**: the learners clean up the learning area after learning **Link to Values:** ▪ **Respect:** This is developed as learner's discus and respect each other's opinion ▪ **Unity:** as the learners perform the tank roll in partners ▪ **Social cohesion:** as the learners work together in groups and respect each other's skill level ▪ **Responsibility:** as learners develop patience and perseverance when performing the skill
Links to other learning areas: Languages: when learners are discussing in groups, science and technology
Suggested community service-learning activities: the learner performs together with the others gymnastics displays for the community
Suggested Non-formal activity to support learning: The learner to participate in school gymnastic displays
Suggested Assessment: Oral questions, Written assignment, Observation, Anecdotal notes, Self-assessment, practical assessment and Peer assessment

Assessment rubric for Gymnastics

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** **Gymnastics** **Static balances:** ▪ Rolls ▪ Balances ▪ Sequences	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship** **Attitude** **Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities and portrays inability to work with others

3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task. .	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Swimming can be taken as an option to the Frisbee game in the institutions that have a swimming pool

Lesson allocation for Basic strokes: 6
Lesson allocation for basic dives: 4
Swimming

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question/s
3.0 Swimming	**3.1 Basic Strokes** Front Crawl 6Lessons	By the end of the sub-strand the learner should be able to: a) Identify floating devices from the local environment for body positioning in front crawl b) practice the Front Crawl for skill masterly c) observe rules when performing the front crawl for own and others safety d) play water games for fun and enjoyment e) appreciate the front crawl for water survival,	▪ learners name floating devices in the local environment ▪ The learner holds the floater between the legs and practices the arm action ▪ The learners hold the floater in their hands and practice the flatter kicks ▪ In pairs the learners clasp hands and tow each across the width of the pool while performing the leg action the same for arm ▪ Play water games such as water polo	1. Why is it important to breathe in out of water and breathe out in water? **2.** Why is it important to have the body streamlined in water when swimming?
3.0 Swimming	**3.2 Basic dives:** Crouch surface dive 2 Lessons	By the end of the sub-strand the learner should be able to: a) describe the Crouch surface dive to in swimming b) demonstrate the Crouch surface dive for skill acquisition c) practice the Crouch surface dive in swimming for skill masterly d) observe the pool rules for own and others safety e) play water games using the Crouch surface dive for fun and enjoyment	▪ learners interact with technology to observe the Crouch surface dive ▪ learners individually demonstrate the Crouch surface dive ▪ learners individually practice the Crouch surface dive ▪ learners individually display the Crouch surface dive ▪ learners observe the pool rules to maintain hygiene ▪ learners display the Crouch surface dive to the class ▪ learners play water games fun and	Why is it important to learn how to dive into the water?

		f) appreciate the Crouch surface dive as a skill in swimming	enjoyment	
3.0 Swimming	**3.3 Basic dives:** Standing surface dive 2 Lessons	By the end of the sub-strand the learner should be able to: a) describe the Standing surface dive to in swimming b) demonstrate the Standing surface dive for skill acquisition c) practice the Standing surface dive in for skill masterly d) observe the pool rules for own and others safety e) play water games using the Standing surface dive for fun and enjoyment f) appreciate the Standing surface dive as a skill in swimming	▪ Learners interact with technology to observe the Standing surface dive. ▪ Leaners individually demonstrate the Standing surface ▪ Leaners individually practice the Standing surface dive ▪ Learners display the Standing surface learners observe the pool rules to maintain hygiene ▪ Display the Standing surface dive to the class ▪ Learners play water games for fun and enjoyment **Note:** have a spotter to assist learners who are afraid.	Why is it important to learn the standing dive in swimming?
Core Competencies: ▪ **Communication and collaboration**: This are achieved when the learners swim together in groups ▪ **Critical thinking and problem solving:** it is achieved as the learners observe rules and maintain safety				
PCIs: ▪ **Safety:** this will be done as the learners observe the pool rules of not pushing each other and eating around the pool ▪ **Water and sanitation**: this will be observed as the learners take a shower before entering the pool to maintain pool hygiene ▪ **Environmental issues**: the learners clean up the learning area after learning				
Values: **Respect:** This is developed as learner's discus and respect each other's opinion **Unity:** this is achieved as the learner's swim together from various backgrounds **Social cohesion:** this is achieved as the learners work together in groups and respect each other's skill level **Responsibility:** it is developed as learners develop patience and perseverance when performing the skill				
Links to other learning areas: **Languages:** when learners are discussing in groups, science and technology				
Suggested community service-learning activities: The learner to participate community swimming for good use of leisure and peaceful co-existence				
Suggested Non-formal activity to support learning: The learner to participate in the school swimming competition				

Suggested Assessment:
Oral questions, Written assignment, Observation, Anecdotal notes, Self-assessment, practical assessment and Peer assessment

Assessment rubric for: Basic Swimming Strokes and Diving

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** **Swimming Strokes** ▪ Front Crawl **Diving** ▪ Crouch surface dive ▪ Standing surface dive	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship** **Attitude** **Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for frisbee: 10

Invasion Games: Frisbee game

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question(s)
4.0 Invasion Games	**4.1 Frisbee skills:** The field of play 1 lesson	By the end of the sub-strand, the learner should be able to: a) draw the frisbee field for field orientation b) identify the equipment used for playing the frisbee game for familiarization c) play games for fun and enjoyment d) appreciate the frisbee field for playing frisbee	▪ Learners in groups use technology to familiarize with the frisbee field and to identify the equipment used for playing the frisbee game ▪ Learners individually draw the frisbee field ▪ play games for fun and enjoyment ▪ learners individually appreciate the game of frisbee	Which other game is similar to frisbee
4.0 Invasion Games	**4.2 Frisbee skills:** One- handed rim catch: 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the One-handed rim catch in Frisbee for skill acquisition b) practice the One-handed rim catch in Frisbee for skill masterly c) observe rules when throwing using the One-handed rim catch in Frisbee for safety d) play games for fun and enjoyment e) appreciate the One-handed rim catch in Frisbee as a skill	▪ Learners use technology to watch a game of frisbee and observe the One-handed rim catch ▪ Learners individually practice the One-handed rim catch in frisbee ▪ Learners in pairs practice the One-handed rim catch ▪ Learners in trees practice the One-handed rim catch ▪ Learners in groups practice the One-handed rim catch ▪ Learners use drills to practice the one-handed catch in frisbee ▪ Learners play frisbee games for fun and enjoyment	How can the one-handed catch be used in daily life?
4.0 Invasion Games	**4.3 Frisbee skills:** Fore hand throw 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate the Fore hand throw for skill acquisition	▪ Learners interact with technology to watch a game of frisbee and observe the Fore hand throw in frisbee ▪ Learners in pairs practice the Fore hand throw in frisbee	How can the Fore hand throw be used in daily life?

		b) practice the Fore hand throw for skill masterly c) observe rules when throwing using the Fore hand throw for safety d) play games for fun and enjoyment e) appreciate the Fore hand throw in Frisbee as a skill	▪ Learners in threes practice the Fore hand throw in frisbee ▪ Learners in groups practice the Fore hand throw in frisbee ▪ Learners use drills to practice the Fore hand throw in frisbee ▪ Learners play frisbee games for fun and enjoyment	
4.0 Invasion Games	**4.4 Frisbee skills:** Backhand throw 3 Lessons	By the end of the sub-strand, the learner should be able to: a) demonstrate Backhand throw in frisbee for skill acquisition b) practice the Backhand throw in frisbee for skill masterly c) play games for fun and enjoyment d) appreciate the Backhand throw in frisbee as a skill for playing the game	▪ Learners interact with technology to watch a game of frisbee and observe the Backhand throw in frisbee ▪ Learners in pairs practice the Backhand throw in frisbee ▪ Learners in threes practice the Backhand throw in frisbee ▪ Learners in groups practice the Backhand throw in frisbee ▪ Learners use drills to practice the Backhand throw in frisbee ▪ Learners play frisbee games for fun and enjoyment	Why is it important to cooperate with each other when playing games?

Core Competences to be developed:

- **Critical thinking and problem solving:** as the learners gather the relevant materials to improvise the jump rope
- **Communication and collaboration:** as the learners practice improvise the jump rope in groups and use it to practice the various skills in jump rope
- **Digital literacy:** as learners interact with technology
- **Self-efficacy:** as learners master rope skills

Link to PCI's:

- **Life skill:** self-esteem and self-awareness as learners work in groups and master different skills
- **Safety:** as learners observe safety when improvising the jump rope and practicing the various skills in jump rope
- **Environmental issues:** learners leave the working place clean after improvisation

Link to Values:

- **Respect:** learners respect each other's opinion as they discuss and work in groups
- **Responsibility:** as the learners use the rope for the intended purpose and gather equipment for safe storage after class
- **Fair play:** as learners give each other chances to jump and make the correct count as they jump
- **Health:** as learners jump rope to maintain healthy weight and strong bones
- **Social cohesion:** as learner jump rope in groups to drive fun and enjoyment
- **Love:** as the learners jump rope as a team and work together to gather materials for improvising ropes
- **Peace:** as learners watch video clips together and discus while respecting each other's views

Link to other learning areas:

- **Languages:** as learners discuss video clips in groups and answer key inquiry questioning
- **Mathematics:** as learners take suitable rope measurements. Make correct counts, and make number shapes using jump rope
- **Art and craft:** as learners improvise jump ropes and make shapes

Suggested Community Service-Learning Activities:

Learners visit children's homes to assist in making appropriate play items using improvised locally available materials

Suggested non-formal activity to enhance learning:

Learners to play frisbee during their own free time at home.

Suggested Assessment:

Oral questions, Observation, Anecdotal notes, written assignment, self-assessment practical assessment and peer assessment

Assessment rubric for: Invasion Games: Frisbee

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation

1.	**Skill acquisition (cognitive)** **Frisbee game** ▪ The field of play ▪ Skills: - One- handed rim catch - Fore hand throw - Backhand throw	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship** **Attitude** **Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for components of health-related fitness:13

Health and Physical fitness: Components of health-related fitness:

Strand	Sub strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry Question(s)

5.0 Health and Physical fitness	**5.1 Components of health-related fitness:** Warm up and cool down 3 lessons	By the end of the sub-strand, the learner should be able to: a) explain the term health related fitness to enhance learning b) explain the importance of warmup in exercise readiness c) explain the importance of cool down after exercises for body recovery d) identify activities that are suitable for body warm and cool down e) list traditional activities that can be used for body warm up and cool down f) observe rules when playing games for own and others safety g) Play games for fun and enjoyment h) Appreciate the importance of warm up and cool down activities	▪ The learners in groups use technology to find out the meaning of the terms: - health related fitness - warmup - cool down ▪ Learners in groups discuss the importance of warmup before exercises and cool down after exercises ▪ Learners in groups identify the activities that can be used for; - warmup - cool down ▪ Learners in groups discuss traditional activities that can be used for warm up and cool down ▪ Learners play games for fun and enjoyment and observe safety	Why is it importan to warm up and to cool down before and after exercises ?
5.0 Health and Physical fitness	**5.2 Components of health-related fitness:** Human heart 2 lessons	By the end of the sub-strand, the learner should be able to: a) using diagrams locate the position of the human heart for body awareness b) list the functions of the human heart to enhance learning c) find out the heart rate at rest and after exercise for fitness d) describe the changes that occur in the human body after vigorous exercise e) list the components of health-related	▪ Using technology learners in groups find out the position of the human heart ▪ Individually learners find out their heart rate at rest ▪ learners in groups using technology discuss and list the functions of the human heart ▪ In pairs learners engage in a vigorous activity and find out each other's heart rate after the activity ▪ Learners participate in vigorous	1. What is the importance of exercise to the human heart? 2. What are the changes that occur in human body after vigorous exercises?

		fitness to enhance learning f) play games for fun and enjoyment g) appreciate being healthy for daily activities	activities in groups and discuss the body changes that take place after the activity (heart rate, body temperature, breathing rate among others) ▪ In groups learners list the components of health-related fitness	
5.0 Health and Physical fitness	**5.3 Components of health-related fitness:** Cardiorespiratory endurance 2 lessons	By the end of the sub-strand, the learner should be able to: a) Explain the term Cardiorespiratory endurance to enhance learning b) identify exercises that can be used to develop Cardiorespiratory endurance c) perform exercises that aid in developing Cardiorespiratory endurance for fitness d) observe rules when playing games for own and others safety e) play games for fun and enjoyment f) appreciate the importance of Cardiorespiratory endurance in daily life	▪ learners in groups interact with technology to find out what is Cardiorespiratory endurance ▪ learners in groups using technology discuss and list the functions of the heart ▪ learners in groups discuss and list exercise activities that can develop Cardiorespiratory endurance ▪ Learners groups practice exercises that aid in developing Cardiorespiratory endurance ▪ learners in groups discuss the importance of cardiorespiratory endurance in daily life ▪ Learners play games for fun and enjoy and observe safety	Why is it importan to develop Cardiorespiratory endurance?
5.0 Health and Physical fitness	**5.4 Components of health-related fitness:** Muscular strength 2 Lessons	By the end of the sub-strand, the learner should be able to: a) describe the term muscular strength to enhance learning b) identify exercises that assist in developing muscular strength c) perform exercises that aid in developing muscular strength	▪ learners in groups interact with technology to find out what is muscular strength ▪ learners in groups discuss the importance of muscular strength in daily life ▪ learners in groups discuss and list exercise activities that increase muscular strength of the arms, legs,	1. Which exercises can be used to develop muscular strength? 2. Why is it important to have strong muscles?

		d) observe rules when playing games for own and others safety e) play games that aid in developing muscular strength for fun and enjoyment f) appreciate the importance of exercise of exercise to the human for healthy living	abdomen, and heart. ▪ Learners individually and in groups practice exercises that aid in developing muscular strength for the arms, legs, abdomen, and heart. ▪ Learners individually bring images of people they think have good muscular strength and post them on class bulletin board or wall ▪ Learners play games for fun and enjoyment and observe safety	
5.0 Health and Physical fitness	**5.5 Components of health-related fitness:** Muscular endurance 2 Lessons	By the end of the sub-strand, the learner should be able to: a) explain the term muscular endurance to enhance learning b) identify exercises that assist in developing muscular endurance c) discuss the importance of muscular endurance in daily life d) perform exercises that aid in developing muscular endurance for fitness e) observe rules when playing games for own and others safety f) play games that aid in developing muscular endurance for fun and enjoyment g) appreciate muscular endurance for daily activities	▪ learners in groups interact with technology to find out what muscular endurance is ▪ Learners in groups discuss and list exercise activities that increase muscular endurance ▪ learners in groups discuss the importance of muscular endurance in daily life ▪ Learners individually and in groups practice exercises that aid in developing muscular endurance ▪ Learners play games for fun and enjoyment and observe safety	1. Which exercises can be used to develop muscular endurance? 2. Why is it important to develop muscular endurance?
5.0 Health and Physical fitness	**5.6 Components of health-related fitness:**	By the end of the sub-strand, the learner should be able to:	▪ learners in groups interact with technology to find out the meaning of muscular and joint flexibility	1. What is the importance of muscular and

	Muscular and joint flexibility 2 lessons	a) Explain the terms muscular and joint flexibility to enhance learning b) identify exercises that assist in developing muscular and joint flexibility c) discuss the importance of muscular and joint flexibility in daily life d) perform exercises that aid in developing muscular and joint flexibility for fitness e) Set up a fitness circuit that has exercises for all the health-related fitness components f) observe rules when playing games for own and others safety g) play games that aid in developing muscular and joint flexibility for fun and enjoyment h) appreciate muscular and joint flexibility in the performance of daily activities	▪ Learners in groups discuss and list exercise activities are suitable for muscular and joint flexibility. ▪ learners in groups discuss the importance of muscular and joint flexibility in daily life ▪ Learners in groups perform exercises develop muscular and joint flexibility ▪ Learners in groups set up a fitness circuit that has exercises for all the health-related fitness components ▪ Learners play games for fun and enjoyment and observe safety	joint flexibility in daily life? 2. Which are the components of health-related fitness?

Core Competences to be developed:

- **Self-efficacy:** as learners learn about the effect of exercise on the heart muscle and when learning about the components of health-related fitness
- **Digital literacy:** as learners interact with technology
- **Critical thinking and problem solving:** as learners discuss different inquiry questions
- **Communication and collaboration:** as learners engage in discussions and play games

Link to PCI's:

- **Safety:** as learners observe safety when playing games
- **Citizenship: Social justice:** as the learners collaborate with each in class activities
- **Health Education:** as they appreciate the use of drugs for sustainable health promotion
- **Life skills:** self-awareness: learners develop self-esteem as they role play, discuss and play games

Link to Values:

- **Respect:** as learners listen to each other views during discussions and respect each other's opinion

Link to other subjects: ▪ **Languages:** as the learners are discuss during class activities and games time ▪ **Science and technology**: interact with technology to find out the meaning of the term hydration and dehydration and investigate the dangers of incorrect drug use
Suggested Community Service-Learning Activities: The learner plans exercise routine for the family for exercises that develop Muscular and joint flexibility
Suggested Non-formal activity to support learning: The Learner performs exercises that build muscular strength, endurance, flexibility and agility at home and over the holidays
Suggested Assessment: oral questions, written assignment, observation, anecdotal notes, self-assessment, practical assessment and peer assessment

Assessment rubric for: Nutrition and physical activity

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** **Skill acquisition (cognitive)** **Physical fitness and health:** Components	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance

	of health-related fitness ▪ Human heart ▪ Muscular strength ▪ Muscular endurance ▪ Muscular and joint flexibility ▪ Cardiorespiratory endurance ▪ Warm up and cool down				
2.	**Sportsmanship Attitude Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for Nutrition and physical health:8
Physical activity and health : Nutrition and physical health

5.0 **Health and Physical fitness**	**5.7 Nutrition and sports performance:** Water intake 2 Lessons	By the end of the sub-strand, the learner should be able to: a) explain the terms hydration and dehydration for body functions b) state the importance of drinking water during games and sports for hydration c) state the signs of a well hydrated athlete during games and sports	▪ Learners interact with technology to find out the meaning of the term's hydration and dehydration ▪ Learners in groups discuss the importance of taking water during games and sports ▪ Learners in groups discuss the signs of a well hydrated	Why is it necessary for an athlete to take plenty of water during games sports?

		d) state the signs of a dehydrated athlete during games sports e) explore ways of taking clean water for health f) play games for fun and enjoyment g) appreciate the importance of drinking clean water during games and sports for hydration	athlete during games and sports ▪ Learners in groups discuss the signs of a dehydrated athlete during games and sports ▪ Learners in groups explore ways of taking clean water during games and sports ▪ Learners in groups discuss the dangers of taking unclean water ▪ Learners play games for fun and enjoyment and observe safety	
5.0 Health and Physical fitness	**5.8 Nutrition and sports performance:** Healthy eating habits 2 Lessons	By the end of the sub strand, the learner should be able to: a) discuss the importance of healthy eating habits during games and sports b) share food with others for companionship during games and sports c) list the benefits of making healthier food choices during games and sports d) play games for fun and enjoyment e) appreciate making healthier food choices for a healthy body	▪ Learners in groups discuss the benefits of taking time when eating food ▪ Learners in groups discuss the reasons for sharing food with others ▪ Learners in groups discuss the importance of healthy eating habits (for example taking time to eat healthy food during games and sports) ▪ Learners in groups discuss the benefits of making healthy food choices ▪ learners play games for fun and enjoyment and observe safety	Why is it importan to make healthier food choices during games and sports?

5.0 **Health and Physical fitness**	**5.9 Nutrition and sports performance:** Food intake during games and sports 4 Lessons	By the end of the sub-strand, the learner should be able to: a) identify the common foods found in the community b) identify the different food nutrients for survival c) classify food into different food groups to enhance learning d) name the importance of taking balanced diet during games sports performance e) discuss the importance being healthy during games and sports f) discuss when to eat each of the food groups during sports performance g) plan a menu for the school athletic team during training h) observe rules during games for own and others safety i) play games for fun and enjoyment j) appreciate the importance eating a well-balanced meal during sports performance	▪ Learners interact with technology to identify the common foods found in their community and food nutrients in them ▪ Learners in groups classify food into different food groups ▪ Learners in groups discuss the importance of taking balanced diet during sports performance ▪ Learners in groups discuss the importance of being healthy during games and sports ▪ Learners in groups discuss when to eat each of the food groups during sports performance ▪ Learners in groups plan a menu for the school athletic team during training ▪ learners play games for fun and enjoyment, while observing safety	1. Why is it important to eat balanced diet during competitions? 2. what can sports people do to make sure they remain healthy?

Core Competences to be developed:

Self-efficacy: as learners discuss terms related to water intake during games and sports, how to make healthy food choices

- **Digital literacy:** as learners interact with technology
- **Critical thinking and problem solving:** discuss the importance of taking balanced diet during games and sports
- **Communication and collaboration:** as learners engage in discussions and play games

Link to PCI's:

- **Safety:** as learners observe safety rules in handling drugs and when playing games

▪ **Health Education:** as they appreciate the use of drugs for sustainable health promotion ▪ **Life skills:** self-awareness: learners develop self-esteem as they role play, discuss and play games **Link to Values:** ▪ **Respect:** as learners listen to each other views during discussion ▪ **Responsibility:** making right choice when taking food during games and sports
Link to other subjects: ▪ **Languages:** as the learners are discuss during class and games time ▪ **Home Science**: as learners discuss food intake during games and sports ▪ **Science and technology**: interact with technology to find out the meaning of the term hydration and dehydration and investigate the dangers of incorrect drug use
Suggested Community Service-Learning Activities: The learner discusses healthy eating habits with the family at home
Suggested Non-formal activity to support learning: The learner cleans a water bottle and uses it to carry clean water for drinking to school
Suggested Assessment: oral questions, written assignment, observation, anecdotal notes, self-assessment, practical assessment and peer assessment

Assessment rubric for: Health and Physical fitness

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** **Skill acquisition (cognitive)** **Nutrition and physical health:** ▪ Water intake ▪ Healthy eating habits ▪ Food intake during games and sports	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance

2.	**Sportsmanship Attitude Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for Wellness: 6

Health and Physical fitness : Wellness

5.0 Health and Physical	**6.0 wellness:** Dealing with emotions	By the end of the sub strand the leaner should be able to:	▪ Learners in groups using technology find out the meaning of the term kindness	Why is it important to be kind to others?

fitness	2 Lessons	a) describe the term emotional wellbeing b) state the importance of kindness in daily life c) identify suitable ways to show kindness to others during games and sports d) describe the effects of showing kindness to others during games and sports e) play games for fun and enjoyment f) appreciate showing kindness to others for harmonious coexistence	▪ Learners in groups discuss the importance of kindness in daily life ▪ Learners in groups discuss suitable ways of showing kindness to others ▪ Learners in groups discuss the effects of showing kindness to others during games and sports ▪ Learners in groups discuss ways in which their community shows kindness to others (school community, Church/Mosque/Temple community among others) ▪ Learners play games for fun and enjoyment	
5.0 Health and Physical fitness	**6.1 Wellness:** Alcohol and drug abuse in games and sports performance 2 Lessons	By the end of the sub strand the leaner should be able to: a) identify common harmful drugs and substances used in the community b) identify stereo types associated with drugs and substance use during games and sports c) discuss the importance of abstinence from substance and drug use during games and sports d) observe rules when playing games for own and others safety e) play games for fun and enjoyment	▪ Learners in groups identify common harmful drugs and substances used in the community ▪ Learners in groups identify stereo types associated with drugs and substance use during games and sports ▪ Learners in groups discuss the importance of abstinence from drugs and substance use during games and sports ▪ Play games for fun and enjoyment and observe safety	What are the benefits of having alcohol and drug abuse free communities?

5.0 **Health and Physical fitness**	**6.2 Wellness:** Alcohol and drug abuse in games and sports performance 2 lessons	By the end of the sub-strand, the learner should be able to: a) identify factors that influence the abuse of alcohol and drugs during games and sports b) discuss ways of resisting peer influence on alcohol and substance abuse during games and sports c) discuss the short- and long-term effects of drug and substance abuse during games and sports d) identify behavior changes associated with alcohol and drugs abuse during games and sports e) state ways of communicating about alcohol and drug abuse among the peer during games and sports f) observe rules when playing games for own and others safety g) appreciate staying clean of alcohol and drug abuse during games and sports competitions h) play games for fun and enjoyment	▪ learners in groups identify common harmful drugs and substances abused during sports competitions (alcohol, solvents, glue among others) ▪ learners in groups identify the factors that influence drugs and substance use during games and sports competitions (peer pressure, media, home influence among others) ▪ Learners in groups discuss the short- and long-term effects of drug and substance use during games and sports competitions ▪ learners in groups identify the behavior changes associated with drugs and substance abuse during games and sports competitions ▪ Learners in groups discuss ways of communicating to the relevant people about alcohol and drug use during games and sports competitions ▪ Play games for fun and enjoyment and observe safety	1. How can a sports person avoid drugs and substances use during games and sports? 2. Why is it important to resist negative peer influence?

Core Competences to be developed:

- **Self-efficacy:** as learners appreciate the importance of avoiding alcohol and drug abuse for healthy living
- **Digital literacy:** as learners interact with technology

• **Critical thinking and problem solving:** as learners discuss ways of resisting peer influence on alcohol and substance abuse during games and sports competitions ▪ **Communication and collaboration:** as learners engage in discussions and respect each other's opinion
Link to PCI's: ▪ **Health Education:** as the learners appreciate the importance of avoiding alcohol and drug abuse for healthy promotion ▪ **Life skills:** self-awareness: learners develop self-esteem as they role play, discuss and play games **Link to Values:** ▪ **Respect:** as learners listen to each other views during discussion and respect each other's views ▪ **Integrity:** as learners learn the dangers of alcohol and drug abuse ▪ **Responsibility:** as the learners learn the various ways of communicating about alcohol and drug abuse among the peer during games and sports competitions
Link to other subjects: ▪ **Languages:** as the learners are discuss during class and games time ▪ **Science and technology**: Learners in groups using technology find out the meaning of the term kindness
Suggested Community Service-Learning Activities: The learner engages in drug awareness campaign during a community drug sanitization forum
Suggested Non-formal activity to support learning: The Learner performs exercises that build muscular strength, endurance, flexibility and agility at home and over the holidays
Suggested Assessment: oral questions, written assignment, observation, anecdotal notes, self-assessment, practical assessment and peer assessment

Health and Physical fitness: Wellness

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
1.	**Skill acquisition (cognitive)** **Skill acquisition (cognitive)**	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance

	Wellness: ▪ Dealing with emotions ▪ Alcohol and drug abuse in sports performance ▪ Avoiding alcohol and drug use in sports performance				
2.	**Sportsmanship Attitude Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for Common Injuries in Sports:15

First Aid in Games and Sports: Common Injuries in Sports

Strand	**Sub-Strand**	**Specific Learning Outcomes**	**Suggested Learning Experiences**	**Key Inquiry Question(s)**
7.0 First Aid in	**7.1 Common Injuries in**	By the end of the sub-strand the learner should be able to:	▪ Learners in groups interact with technology to find out the meaning of the term first aid	Why is First Aid important in

Games and Sports	**games and Sports:** ABC of First Aid 3 Lessons	a) explain the term First Aid to enhance learning b) discuss the meaning of the acronym ABC in first aid to for first aid awareness c) demonstrate how to apply the ABC of First Aid in an unconscious person d) discuss how to call for help during an emergency e) list the safety measures for handling a bleeding victim f) discuss how to calm an injured victim g) observe rules when playing games for own and others safety h) play games for fun and enjoyment i) appreciate the ABC of first aid in responding to emergencies	and the acronym ABC in First Aid ▪ Learners in groups practice applying the ABC of First Aid (Airways, Breathing and Circulation or pulse rate) ▪ Learners practice calling for help during emergency ▪ Learners in groups practice calming an injured victim ▪ Learners list the safety measures for handling a bleeding victim when administering first aid ▪ Learner play games for fun and enjoyment and observe safety	emergencies?
.0 First Aid in Games and Sports	**7.2 Common Injuries in games and sports: First Aid box** 3 Lessons	By the end of the sub-strand the learner should be able to: a) identify the items in a first aid box for familiarization b) explain the importance of a First Aid Box for emergencies c) list the items of a First Aid box to enhance learning d) observe safety when handling the items of a First Aid box to avoid injury e) play games for fun and enjoyment f) appreciate the First Aid box for emergency cases	▪ Learners interact with technology to find out the contents of a First Aid box ▪ Learners in groups discuss the importance of a first aid box ▪ The learners examine and arrange the items of a First Aid ▪ Learners in groups discuss and list the items of a first aid box ▪ Learners in groups discuss situations that require the use of items in a first aid box ▪ In groups learners discuss how to safely handle items in a first aid box ▪ Learners participate in games for fun and enjoyment	1. What items ar found in a Fir Aid box? 2. Why is it important to have a first ai box in school and at home?
.0 First	**7.3 Common**	By the end of the sub-strand the learner should be	▪ Learners interact with technology to identify	1. Which are

Aid in Games and Sports	**Injuries in Sports:** Bruise 2 Lessons	able to: a) describe a bruise as an injury b) discuss the signs and symptoms of a bruise for identification c) demonstrate a cold press application on a bruise for lessening pain d) observe safety when handling a bruise for protection e) observe rules when playing games for own and others safety f) play games for fun and enjoyment	a bruise ▪ Learners in groups discuss the causes of bruising ▪ Learners in groups discuss the signs and symptoms of a bruise ▪ Learners interact with technology to observe the application of a cold press on a bruise ▪ In groups learners demonstrate and practice the application of cold press on a bruise ▪ Learners observe safety when handling a bruise to avoid infection ▪ Learners participate in games for fun and enjoyment	signs and symptoms of bruise? **2.** How do you apply first aid on a bruise?
.0 First Aid in Games and Sports	**7.4 Common Injuries in Sports:** Nose bleeding 2 Lessons	By the end of the sub-strand the learner should be able to**:** a) identify the causes of nose bleeding to enhance learning b) discuss the causes of nose bleeding for first aid c) apply first aid to stop nose bleeding in a victim d) observe safety when applying first aid to stop nose bleeding for protection e) observe safety when playing games for own and others safety f) play games for fun and enjoyment	▪ Learners interact with technology to identify nose bleeding ▪ Learners in groups discuss the causes of nose bleeding ▪ Learners interact with technology to observe the application of First Aid to stop nose bleeding ▪ In groups learners demonstrate and practice how to apply First Aid to stop nose bleeding ▪ Learners observe safety when applying first aid to stop nose bleeding to prevent infection ▪ Play games for fun and enjoyment	How can you app First Aid to stop nose bleeding?
.0 First Aid in Games and	**7.5 Common Injuries in Sports: Wounds:** clean	By the end of the sub-strand the learner should be able to**:**	▪ Learners interact with technology to identify the causes of a Clean-cut wound ▪ Learners interact with technology to observe how to clean a clean-cut wound	1. Why should you clean a clean-cut wound?

Sports	cut wounds 3Lesson	a) discuss the causes of clean-cut wounds for safety b) demonstrate cleaning of a clean-cut wound to avoid infection c) observe safety when cleaning a clean-cut wound for protection d) select a bandage for application on a clean-cut wound e) applying a bandage on a clean-cut wound for self-protection f) apply a bandage on a clean-cut wound to keep it from being infected g) play games for fun and enjoyment	▪ Learners in groups discuss safety measures to observe when cleaning a clean-cut wound ▪ Learners in pairs demonstrate how to clean a clean-cut wound ▪ Learners in groups identify and select appropriate bandages for a clean-cut wound ▪ Learners in groups apply clean bandages on a clean-cut wound ▪ Learners participate in games for fun and enjoyment an observe safety	2. Why is it important to cover a clean-cut wound?
.0 First Aid in Games and Sports	**7.6 Transporting an injured victim:** Single human crutch method 2 Lessons	By the end of the sub-strand the learner should be able to**:** a) describe the Single human crutch method used for transporting an injured victim b) demonstrate how to carry a victim using the Single human crutch method c) observe safety when using the Single human crutch method to avoid more harm d) play games for fun and enjoyment e) appreciate Single human crutch method for injured victim	▪ Learners interact with technology to observe the Single human crutch method and how it is used to transport an injured victim ▪ Learners demonstrate and practice the Single Human crutch method in pairs ▪ Learners observe safety when using the Single human crutch method. ▪ Participate in games for fun and enjoyment and observe rules	Which situation would be most appropriate in using the Single human crutch method?

Core Competences to be developed:

- **Self-efficacy:** as the learner's role or dramatize in first aid
- **Digital literacy:** as learners interact with technology
- **Creativity and imagination:** as the learner role, participate in games, dramatize and improvise
- **Critical thinking and problem solving:** as learners assesses situations for ABC and when identifying situations signs and symptoms
- **Communication and collaboration:** as they are assuring and calming the victim, calling for help and when assessing the situation

Link to PCI's:

- **Safety: when handling victims**
- **Health Education:** when caring out first aid

Link to Values:

- **Respect:** as learners demonstrate how to carry an injured victim
- **Love:** when learners appreciate the Single human crutch method for carrying an injured victim

Link to other learning areas:

- **Science and technology:** as learners interact with technology
- **Languages:** as learners communicate with victims and as they call for help
- **Mathematics:** as they cut the badges

Suggested Community Service-Learning Activities:

The leaners demonstrate stopping nose bleeding and transporting a victim during sports day or parent's day in school

Suggested Non-formal activity to support learning:

Interact with technology to learn more on Single human clutch method

Suggested Assessment:

Oral questions, Written assignment, Observation, Anecdotal notes, Self-assessment and peer assessment

Assessment rubric for: First Aid: Safety in Games and Sports

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation
	Skill acquisition (cognitive) **First Aid in games and sports** ▪ **Common Injuries in games and Sports:** - ABC of First Aid	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance

	- First Aid box - Bruise - Nose bleeding - Clean- cuts wounds ▪ **Transporting an Injured Person** - Single human crutch method				
	Sportsmanship Attitude Teamwork	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
	Health and fitness enhancing behaviors	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
	Safety and application of rules	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

Lesson allocation for Recreation:7
Outdoor Activities: Recreation:

Strand	Sub-Strand	Specific Learning Outcomes	Suggested Learning Experiences	Key Inquiry

				Question(s)
8.0 Outdoor activities	**8.1 Recreation:** Active and passive Leisure activities 3 lessons	By the end of the sub-strand, the learner should be able to: a) describe the term active and passive leisure activities in recreation b) list down active leisure activities within the community c) differentiate between active and passive leisure activities in recreation d) state the disadvantages of passive leisure activities for recreation e) locate leisure sites in the county map f) identify cultural activities in the community for leisure g) observe safety measures when engaging in leisure activities to avoid injury h) play games for fun and enjoyment i) desire to engage in active leisure activities for good health	▪ learners interact with technology in pairs to look up for the meaning of the terms active and passive leisure activities ▪ learners in groups discuss active and passive leisure activities ▪ learners in groups list down active and passive leisure activities ▪ learners in groups to discuss the differences between active and passive leisure activities ▪ learners to role play the disadvantages of passive leisure activities ▪ learners to draw the county map and indicate leisure sites ▪ learners in groups discuss cultural activities they can participate in for leisure ▪ learners in groups to identify different leisure activities done at home, school and community ▪ learners to highlight safety measures to be observed when engaging in leisure activities ▪ participate in games for fun and enjoyment and observe safety	Why is it important to engage in active leisure activities?
8.0 Outdoor activities	**8.2 Recreation :** Leisure and Time management 2 lessons	By the end of the sub-strand, the learner should be able to: a) describe leisure and time for self-	▪ learners interact with technology to find out what is Leisure and Time management ▪ learners interact with technology to plan a personal schedule for leisure	Why is important to plan time?

		management b) organize daily routine to create time for leisure activities c) observe safety when planning for leisure activities d) play games for fun and enjoyment e) appreciate leisure and time management for self-management	time ▪ learners in groups discuss how to organize the daily routine to create time for leisure activities ▪ learners in groups discuss the safety measures that should be observed during leisure activities ▪ participate in games for fun and enjoyment and observe safety	
8.0 Outdoor activities	**8.3 Recreation:** care for community recreation facilities 2 lessons	By the end of the sub-strand, the learner should be able to: a) describe the use of community recreation facilities b) mention the recreation facilities in the community c) observe cleanliness when using the community recreation facilities d) explain ways of keeping the community recreation facilities safe for all e) conserve the community recreation facilities for future generations f) play games for fun and enjoyment g) appreciate caring for community recreation facilities for posterity	▪ Learners interact with technology to find out what community recreation facilities are ▪ In groups learners discuss the various community recreation facilities found in their community ▪ Learners in groups suggest ways of cleaning and conserving community recreation facilities ▪ In groups learners suggest ways of keeping the community recreation facilities safe for all ▪ participate games for fun and enjoyment and observe safety	1. Why are community recreation facilities important? 2. Which actions portray community and solidarity in the school

Core Competences to be developed:

- **Self-efficacy:** organize the daily routine to create time for leisure activities
- **Digital literacy:** as learners interact with technology
- **Learning to learn:** as learners as learners find out the meaning of time and phrase
- **Creativity and imagination:** as learners play games
- **Critical thinking and problem solving:** as learners discuss and suggest and identify ways of doing things

▪ **Communication and collaboration:** as learners discuss in groups and play games
Link to PCI's: ▪ **Safety and security:** and space awareness when doing outdoor activities ▪ **Citizenship:** Social interaction as learners work together in recreational activities ▪ **Learner support program:** As learners participate in community festivals and activities ▪ **Life skills:** Self-esteem and decision making: As they plan and participate in leisure activities for recreation **Link to Values:** ▪ **Responsibility:** as learner care for the community recreation facilities ▪ **Patriotism:** as they take care and conserve the community reaction facilities ▪ **Respect:** as learners engage in community recreation facilities and respect each other's opinion as they discuss in groups
Link to other learning areas: ▪ **Science:** as learners interact with technology ▪ **languages:** as learners communicate with each other as they play games and discuss in groups ▪ **Music:** as learners play games ▪ **Mathematics:** when planning for time
Suggested Community Service-Learning Activities: Learners engage in community events such as cleaning of the environment
Suggested Non-formal activity(ies) to support learning: The learners engage with peer after school to play games, watch birds among other activities
Suggested Assessment: Oral questions, Written assignments, Observation, Anecdotal notes, Self-assessment and Peer assessment

Assessment rubric for: Outdoor and Recreation Activities

#	Indicator	Exceeding expectation	Meeting expectation	Approaching expectation	Below expectation

1.	**Skill acquisition (cognitive)** **Outdoor Activities:** ▪ **Recreation:** - Active and passive Leisure activities - Leisure and Time management - care for community recreation facilities	The learner demonstrates excellent ability in skill performance and volunteers to assist others.	The learner executes the skills with little effort and requires minimum supervision	The learner requires significant effort to perform skills and requires constant supervision	The learner cannot perform without assistance
2.	**Sportsmanship Attitude Teamwork**	The learners portray excellent sportsmanship in all activities and exhibits genuine concern for others	The learner demonstrates sportsman like behavior in most activities and works well with others	The learner demonstrates sportsman like behavior under supervision and works with others under supervision	The learner demonstrates un-sportsman like conduct in most activities
3.	**Health and fitness enhancing behaviors**	The learner demonstrates an exceptional level of fitness and surpasses all grade level components of fitness.	The learner improves personal growth within physical fitness expectations levels.	The learner irregularly progresses towards improving personal fitness level.	The learner is unable to maintain personal levels of physical fitness
4.	**Safety and application of rules**	Learner always participates safely and encourages others to be safe, follows instruction and stay on task.	Always participates safely and follows instructions and stays on task without undue fatigue.	The learner needs occasional prompting to observe safety and stay on task.	The learner needs constant supervision to enforce safety, obey instructions and stay on task.

APPENDICES

Strand	Sub strand	Suggested Learning Resources

Basic Movement Skills	**Locomotor skills:**	PHE Design, field/space, Video, Video clips, Charts, Observation check lists, Assessment check lists First Aid kit, exercise books, pens, pencils and rubbers
	Manipulative skills	PHE Design, space/ fields, field markers, Video clips, video clips, Observation check lists, balls improvised or real, exercise books pens, pencils and rubbers Bat, posts, Assessment check lists Rounders ball, balls of various sizes, ropes
Gymnastics	**Rolls**	PHE Design, space/ fields, Assessment check lists field markers, Observation check lists. Video clips, video clips, mats, First Aid kit, exercise books pens, pencils and rubbers
	Balances	PHE Design, space/ fields, field markers, Observation check lists, Video clips, video clips, First Aid kit, mats exercise books pens, pencils and rubbers
	Sequences	PHE Design, space/ fields, field markers, Assessment check lists Video clips, video clips, mats, Task cards, First Aid kit exercise books pens, pencils and rubbers
Swimming	**Basic stroke**	PHE Design, digital devices, towels, floaters, Observation check lists, pebbles or coins, oil, soap, video clips, exercise books, pens, pencils and rubbers
	Basic dives	PHE Design, digital devices, towels, floaters, pebbles or coins, oil, soap, video clips, exercise books, pens, Assessment check lists pencils and rubbers
Physical health and fitness	**Components of health-related fitness**	PHE Design, space/ fields, field markers, Assessment check lists Video clips, video clips, First Aid kit, exercise books pens, pencils and rubbers
	Nutrition and sports performance	PHE Design, Learners exercise books and pens, pencils and rubbers Video clip on misuse of drugs, Water bottles, Assessment check lists Charts and pictures of various foods groups Observation check lists
	wellness	PHE Design, Learners exercise books and pens, pencils and rubbers Video clip on misuse of drugs, Water bottles, Assessment check lists Charts and pictures of various foods groups
First aid in games and sports	**Common Injuries in games and Sports:**	PHE Design, Video clips, First Aid Box, exercise books and pens, pencils and rubbers, and Assessment check lists
Outdoor activities	**Recreation**	PHE Design, Video clips, First Aid Box, exercise books and pens, pencils and rubbers, and Assessment check lists