

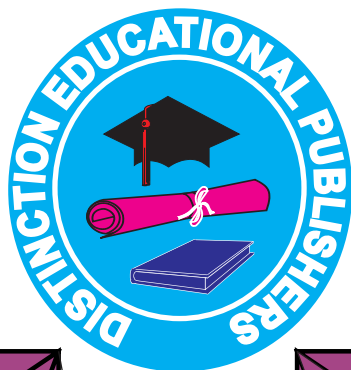
# **DISTINCTION**

## **JUNIOR SECONDARY SCHOOL**

**GRADE 7**

**ENCYCLOPAEDIA**

**SUGGESTED ANSWERS**



**QUALITY IS OUR  
CONCERN**



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**COMPETENCY BASED CURRICULUM**

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## Preface

**Distinction Grade 7 Encyclopaedia** is a comprehensive reference book designed for learners in Junior Secondary School level. It features variety of subjects with substantive and interesting notes for further research and study. It has review tasks that are in line with the requirement of the Competency Based Curriculum. The activities in this encyclopaedia are workable with simple, concise and precise instructions which motivate the learner to carry out further research. This volume has adequately covered the following subjects learnt in Grade 7:

1. Mathematics
2. English
3. Kiswahili
4. Integrated Science
5. Physical Education and Sports
6. Health Education
7. Home Science
8. Agriculture

This encyclopaedia provides an outlook geared towards achieving Vision 2030. It consists of revision tasks that promote communication and collaboration as learners work together in organised groups.

As per the curriculum, all the core competences have been adequately developed. The link to Pertinent and Contemporary Issues (PCI), Values and Community Service Learning are top-notch with enough examples.

In each subject, variety of assessment techniques have been used to enable the learner acquire the relevant knowledge and skills that promote creativity and imagination, critical thinking and problem solving in order to cope with daily life challenges.

It equips the learner with skills that are necessary for making use of locally available safe learning resources.

Learners should engage fully in the suggested activities and tasks provided to enhance learning.

We therefore encourage every learner to acquire the right concepts and skills through personal engagement with **Distinction Encyclopaedia Grade 7**.

# 1 NUMBERS

## 1.1 Whole numbers

### Practice exercise 3 on page 4

- Reading numbers
  - 6 371 456 – six million three hundred and seventy one thousand four hundred and fifty six.
  - 874 965 – eight hundred and seventy four thousand nine hundred and sixty five.
  - 345 217 690 – three hundred and forty five million two hundred and seventeen thousand six hundred and ninety
  - 12 202 219 – twelve million two hundred and two thousand two hundred and nineteen.
- Writing number symbols
  - 5 212 303
  - 22 120 458
  - 87 323 059
  - 600 248 308
- 27 857 598
- 170 212 765

### Practice exercise 4 on page 4

- Reading and writing
  - 25 902 726
  - 40 000 000
  - 7 000 000
- Reading and writing in words
  - 765 489 322 – seven hundred and sixty five million four hundred and eighty nine thousand three hundred and twenty two
  - 99 077 707 – ninety nine million seventy seven thousand seven hundred and seven
  - 8 762 349 – Eight million seven hundred and twenty two thousand three hundred and forty nine
- Four million seven hundred and sixty five thousand three hundred and forty two votes
- Imani got seven million six hundred and forty eight thousand nine hundred and three votes, Pendo got seven million three hundred and twenty one thousand and thirty two votes while Rehema got six hundred and fifty four thousand three hundred eighty nine votes.

### Practical activity on page 5

- To the nearest hundred thousand
  - 300 000
  - 4 200 000
- To the nearest million
  - 5 000 000
  - 8 000 000
- 

Number	To the nearest ten thousand	To the nearest hundred thousand	To the nearest million	To the nearest ten million
448 753 179	448 750 000	448 800 000	449 000 000	450 000 000
23 655 874	2360 000	23 700 000	24 000 000	20 000 000
839 008 272	839 010 000	839 000 000	839 000 000	800 000 000

- 340 000
- 6 000 000 litres

### Practice exercise 5 on page 6

- 24, 42, 18, 10
  - 24, 42, 18, 10
  - 87, 23, 17, 29, 11
- Odd numbers are 79, 23, 93, 177, 255, 59, 133 while even numbers are 10, 122, 48, 164, 198, 36 and 144

### Practice exercise 6 on page 6

- 139, 31, 89, 131, 43, 23, 73, 127, 137, 149, 151
- 2, 3, 5, 7, 11, 13, 17, 19, 23, 29
- 2
- 15
- 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 32, 34, 36, 38, 40, 42, 44, 46, 48,

- 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49,
- 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47

### Practice exercise 7 on page 7

- Odd numbers are 13, 49, and 73 while even numbers are 26, 84 and 120
- Odd numbers are 567, 3459, and 1345 while even numbers are 234, 14300, 8726 and 2102
- 23, 25, 27, 29, 31, 33, 35, 37, 39
- 17 even numbers
- 7, 13, 19, 37 and 47
- 53, 59, 61 and 67

### Practice exercise 8 on page 7

- 169 080
  - 200 530

- c) 4333                      d) 6779  
 e) 424
2. a) 59750 passengers  
 b) 10 493
3. 12192

### Practice exercise 9 on page 8

1. a) 203 904                      b) 848625  
 c) 6 406 200                      d) 104 949  
 e) 3 233 414                      f) 7 798 000
2. sh 702 150
3. sh 340 236
4. 1872 pieces of chalk

### Practice exercise 10 on page 8

1. a) 163 remainder 25                      b) 60  
 c) 46 remainder 95                      d) 14 remainder 480
2. 145.94 litres
3. 5 cars
4. 22 320 bales
5. 420 learners
6. 49600sh 4000

### Practice exercise 11 on page 9

1. a) 350    b) -793    c) 340
2. 50 boxes
3. 7 oranges

### Practice exercise 12 on page 9

1. a) 10, 12    b) 16, 32    c) 90, 110    d) 25, 20
2. a) 39, 45    b) 31, 43    c) 4, 0    d) 324, 972
3. 2029 and 2039
4. 1620

### Practice exercise 13 on page 9

1. a) Size 5 with 13 coins  
 b) i) 13 coins    ii) 16 coins
2. a) size 5 with 16 coins  
 b) i) 16 coins    ii) 20 coins
3. 48, 52
4. 60, 54, 48, 42, 36, 30
5. 70, 77, 84, 91, 98

## 1.2 Factors

### Practice exercise 1 on page 10

1. a) 40, 46 and 48  
 b) 74, 2010, and 8344  
 c) 268 and 1988
2. 62, 64, 66, 68, 70, 72 and 74

### Practice exercise 2 on page 10

1. a) 24, 84, 102  
 b) 612, 594, 972  
 c) 10101, 80946
2. a) 672 divisible by 3  
 b) 62502 divisible by 3  
 c) 9098 not divisible by 3  
 d) 9911 not divisible by 3
3. 846, 513, 1674
4. Not possible

### Practice exercise 3 on page 10

1. a) 344 divisible, 454 not divisible, 868 divisible and 120 divisible  
 b) 1942 not divisible, 1964 divisible, 1978 not divisible and 2000 divisible  
 c) 3552 not divisible, 4834 not divisible, 9896 divisible and 5500 divisible

### Practice exercise 4 on page 11

1. a) 540, 755,                      b) 4040, 7305  
 c) 75, 10000
2. a) 780, 820 and 810  
 b) 660, 675, 875 and 870  
 c) 995, 680, 965  
 d) 8620 7665, 7865
3. 100
4. 125 and 310

### Practice exercise 5 on page 11

1. 84, 216, 144
2. a) 24, 96 are divisible  
 b) 642, 564, 2520, 20160 are divisible  
 c) 612, 732, 444 are divisible  
 d) 3078, 2034, 49374, 91128 are divisible
3. a) 342 divisible                      b) 6354 divisible  
 c) 762 divisible                      d) 626 not divisible  
 e) 892 not divisible
4. 54 is an even number hence divisible by 2 and the sum of the digit 5 and digit 4 is 9 which is divisible by 3. When a number is divisible by both 2 and 3 hence it is divisible by 6.

### Practice exercise 6 on page 12

1. a) 664  
 b) 37480, 41168, 10000  
 c) 192160, 770800, 187560, 978272
2. 73464, 75800, 8944

### Practice exercise 7 on page 12

1. a) 72, 108  
 b) 540, 4365, 1395  
 c) 243, 7875, 783
2. 909, 12789

### Practice exercise 8 on page 13

- 20, 70, 990
  - 460, 2520, 20160
  - 400, 530
  - 7830, 20340, 49000
- 54 is an even number hence divisible by 2 and the sum of the digit 5 and digit 4 is 9 which is divisible by 3. When a number is divisible by both 2 and 3 hence it is divisible by 6.

### Practice exercise 9 on page 13

- 3520, 3047, 4257
  - 9526, 4785, 3124
  - 484, 238722, 84370
- 9340628 is divisible by 11
- 999999
- 100001

### Practice exercise 10 on page 14

- 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20, 21, 22, 24, 25, 26, 27, 28, 30
- Expressing composite numbers as a product of their prime factors.

$4=2 \times 2$	$6=2 \times 3$	$8=2 \times 2 \times 2$
$9=3 \times 3$	$10=2 \times 5$	$12=2 \times 2 \times 3$
$14=2 \times 7$	$15=3 \times 5$	$16=2 \times 2 \times 2 \times 2$
$18=2 \times 3 \times 3$	$20=2 \times 2 \times 5$	$21=3 \times 7$
$22=2 \times 11$	$24=2 \times 2 \times 2 \times 3$	$25=5 \times 5$
$26=2 \times 13$	$27=3 \times 3 \times 3$	$28=2 \times 2 \times 7$
$30=2 \times 3 \times 5$		

2 is the only even number that is a prime factor. The rest of the prime factors are odd numbers.

### Practice exercise 11 on page 14

- 20 = 1, 2, 4, 5, 10 and 20  
32 = 1, 2, 4, 8, 16 and 32  
98 = 1, 2, 7, 14, 49 and 98  
102 = 1, 2, 3, 17, 51 and 102
  - See as shown above.
- 102 = 2, 3, 17  
121 = 11  
280 = 2, 5 and 7  
440 = 2, 5, 11
- $81 = 3 \times 3 \times 3 \times 3$
  - $256 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$
  - $676 = 2 \times 2 \times 13 \times 13$
  - $332 = 2 \times 2 \times 83$
- $72 = 2 \times 2 \times 2 \times 3 \times 3$
  - $45 = 3 \times 3 \times 5$
  - $86 = 2 \times 43$
  - $99 = 3 \times 3 \times 11$

- 102, 104, 105, 106, 108, 110, 111, 112, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 128
- $60 = 2 \times 5 \times 2 \times 3$
  - 2, 9, 3, 3
  - 3, 3, 12, 6, 2, 3

### Practice exercise 12 on page 15

- Factors

12	1, 2, 3, 4, 6, 12
16	1, 2, 4, 8, 16

b)

24	1, 2, 3, 4, 6, 8, 12, 24
36	1, 2, 4, 9, 12, 18, 36

c)

65	1, 5, 13, 65
108	1, 2, 3, 4, 6, 9, 12, 18, 36, 108

- 12
  - 15
  - 20
  - 21
- 12
  - 14
  - 18
- 30
- 14

### Practice exercise 13 on page 15

- First 8 multiples

3	3, 6, 9, 12, 15, 18, 21, 24
5	5, 10, 15, 20, 25, 30, 35, 40

4	4, 8, 12, 16, 20, 24, 28, 32
7	7, 14, 21, 28, 35, 42, 49, 56

6	6, 12, 18, 24, 30, 36, 42, 48
9	9, 18, 27, 36, 45, 54, 63, 72

- 60
  - 72
  - 35
  - 24
  - 36
- 96
  - 1512
  - 72
- 910 seconds
- 2034 september

## 1.3 Fractions

### Practice exercise 1 on page 16

- $\frac{3}{4}$
  - $\frac{5}{6}$
  - $\frac{6}{7}$
- $\frac{3}{4}$
  - $\frac{5}{8}$
  - $\frac{3}{20}$
- less than
  - equal to
  - less than
  - less than
- less than
  - greater than
  - equal to
- Jane
- Thursday

### Practice exercise 2 on page 17

- $\frac{1}{6}, \frac{3}{8}, \frac{1}{2}, \frac{2}{3}$
  - $\frac{1}{6}, \frac{3}{8}, \frac{1}{2}, \frac{2}{3}$
  - $\frac{5}{12}, \frac{1}{2}, \frac{5}{8}, \frac{5}{6}$
- $\frac{1}{4}, \frac{3}{5}, \frac{17}{20}, \frac{9}{10}$
  - $\frac{1}{2}, \frac{14}{25}, \frac{5}{8}, \frac{3}{4}$
- $\frac{4}{5}, \frac{3}{4}, \frac{2}{3}, \frac{1}{2}$
  - $\frac{4}{9}, \frac{5}{12}, \frac{1}{3}, \frac{1}{6}$
  - $\frac{4}{5}, \frac{7}{10}, \frac{9}{20}, \frac{4}{15}$
- Nakuru
- Wanderi
- $\frac{2}{5}, \frac{1}{2}, \frac{4}{7}, \frac{5}{8}, \frac{6}{9}$

### Practice exercise 3 on page 17

- $\frac{37}{40}$
  - $\frac{27}{28}$
  - $\frac{2}{9}$
  - $\frac{7}{24}$
- $\frac{31}{40}$
  - $\frac{9}{40}$
- $\frac{31}{35}$
- $\frac{7}{18}$
- $\frac{2}{15}$
- $\frac{7}{12}$

### Practice exercise 4 on page 18

- $\frac{1}{12}$
  - $10\frac{16}{21}$
  - $6\frac{1}{2}$
  - $6\frac{4}{15}$
- $6\frac{61}{84}$
- $23\frac{7}{10}$
- $7\frac{1}{4}$

### Practice exercise 5 on page 18

- $\frac{13}{30}$
  - $2\frac{1}{28}$
  - $\frac{23}{24}$
  - $1\frac{7}{90}$
- $2\frac{31}{240}$
  - $\frac{1}{4}$
- $8\frac{13}{60}$
  - $1\frac{47}{60}$
- $8\frac{59}{84}$
  - $5\frac{9}{20}$
  - $6\frac{18}{35}$

### Practice exercise 6 on page 19

- 10
  - 40
  - $4\frac{1}{3}$
  - $\frac{5}{8}$
- $2\frac{2}{3}$
- $121\frac{1}{2}$  litres
- $22\frac{1}{2}$  litres

### Practice exercise 7 on page 19

- $\frac{1}{10}$
  - $\frac{1}{2}$
  - $1\frac{3}{8}$
  - $\frac{5}{24}$
  - $8\frac{1}{3}$
- $40\text{m}^3$
- 6 hrs

### Practice exercise 8 on page 20

1.

Number	Reciprocal	Product
$\frac{3}{5}$	$\frac{5}{3}$	$\frac{3}{5} \times \frac{5}{3} = 1$
$\frac{9}{2}$	$\frac{2}{9}$	$\frac{9}{2} \times \frac{2}{9} = 1$
6	$\frac{1}{6}$	$6 \times \frac{1}{6} = 1$
$2\frac{1}{4}$	$\frac{4}{9}$	$\frac{9}{4} \times \frac{4}{9} = 1$
$\frac{1}{13}$	13	$\frac{1}{13} \times 13 = 1$

- $2\frac{1}{4}$
  - $\frac{20}{21}$
  - $\frac{1}{15}$
  - $\frac{10}{13}$
- $\frac{4}{3}$
  - $1\frac{1}{7}$
  - $\frac{4}{15}$
  - $\frac{7}{9}$
- $\frac{1}{3}$
  - $\frac{1}{7}$
  - $\frac{1}{9}$
  - $\frac{1}{2}$
  - $\frac{1}{12}$
- $2\frac{1}{3}$
  - $\frac{7}{33}$
  - $\frac{8}{19}$
  - $\frac{5}{7}$

### Practice exercise 9 on page 20

- $\frac{3}{22}$
  - $\frac{1}{24}$
  - $\frac{4}{5}$
  - $1\frac{2}{3}$
- $\frac{2}{9}$
- $\frac{3}{10}$

### Practice exercise 10 on page 20

- $\frac{1}{5}$
  - $1\frac{1}{8}$
  - $3\frac{1}{2}$
  - $1\frac{2}{3}$
- 6
- $\frac{2}{9}$



### Practice exercise 11 on page 21

- a)  $\frac{2}{7}$     b)  $\frac{1}{58}$     c)  $\frac{35}{52}$     d)  $\frac{8}{15}$
- 2
- $\frac{8}{53}$

### Practice exercise 12 on page 21

- a) 10    b) 6    c)  $19\frac{1}{2}$     d)  $10\frac{1}{3}$
- 40 bottles
- 32 learners

### Practice exercise 13 on page 21

- a)  $\frac{3}{56}$     b)  $\frac{5}{81}$     c)  $\frac{1}{16}$     d)  $1\frac{1}{3}$
- a)  $1\frac{1}{3}$     b)  $\frac{1}{16}, \frac{1}{8}$
- $\frac{1}{2}, \frac{7}{10}, \frac{9}{10}, 1\frac{1}{10}, 1\frac{3}{10}$
- 45, 57, 69, 81, 93, 105, 117
- a) Multiply by 2 or doubling    b) 1

## 1.4 Decimals

### Practice exercise 1 on page 22

- Complete the table below.

Numbers	Thousands	Hundreds	Tens	Ones	Decimal point	Tenths	Hundredths	Thousandths	Ten thousandths
i) 435.768	4	3	5	.	7	6	8		
ii) 97.1345		9	7	.	1	3	4	5	
iii) 321.203	3	2	1	.	2	0	3		
iv) 6.9876				6	.	9	8	7	6

- Hundredths
  - Thousandths
  - Tenths
  - Tenths
  - Hundredths
- 3
  - 8
  - 6
  - 4
  - 5
  - 2
- 4
  - 7
  - 0
  - 0
  - 2
  - 9
- Assess

### Practice exercise 2 on page 23

- Tenths (0.4)
  - Thousandths
  - Ten thousandths (0.0004)
  - Hundredths (0.04)

- Digit 8 is 0.8, Digit 5 is 0.05
  - Digit 0 is 0, Digit 1 is 0.1  
Digit 2 is 0.02, Digit 3 is 0.003  
Digit 5 is 0.0005
  - Digit 0 is 0, Digit 1 is 0.1  
Digit 0 is 0.00, Digit 4 is 0.004  
Digit 7 is 0.0007
- Assess

### Practice exercise 3 on page 23

- 50.7
  - 28.08
  - 2.1
  - 1.21
- 37.5
- sh. 1728.30
- sh. 36.40
- 38.15hrs

### Practice exercise 4 on page 24

- 0.252
  - 1.6544
  - 0.1082
  - 0.428
- 2304.38655
- 6.53875m<sup>2</sup>
- 147.25 litres

### Practice exercise 5 on page 25

- 3.06
  - 0.05
  - 0.009714
- 8.2m
- 33.32 litres
- 0.06367kg
- Assess

### Practice exercise 6 on page 25

- 1.0667
  - 74
  - 760
- 81 pieces
- 4 cups
- assess

## 1.5 Square and Square Roots

### Practice exercise 1 on page 26

- 529
  - 20736
  - 36100
  - 5929
- 225
  - 5184
  - 1681
  - 7569
  - 1024
  - 9801
- 196 tiles
- 9604m<sup>2</sup>
- 729
  - 20164
  - 3136
  - 309136
- 368449m<sup>2</sup>
- 43350cm<sup>3</sup>

### Practice exercise 2 on page 26

- a)  $\frac{4}{81}$     b)  $\frac{21}{49}$     c)  $\frac{81}{121}$     d)  $10\frac{39}{49}$
- a)  $\frac{4}{9}$     b)  $\frac{49}{121}$     c)  $6\frac{219}{625}$     d)  $18\frac{18}{49}$
- a)  $\frac{9}{64}$     b)  $1\frac{32}{49}$     c)  $5\frac{1}{16}$     d)  $13\frac{4}{9}$
- $18\frac{18}{49} \text{ cm}^2$
- a)  $\frac{144}{225}$     b)  $\frac{9}{64}$     c)  $\frac{529}{621}$     d)  $\frac{169}{324}$
- $445\frac{1}{9}$
- Assess

### Practice exercise 3 on page 27

- a) 0.16    b) 0.0625  
c) 11.56    d) 38.9376
- a) 0.09    b) 0.0169  
c) 43.56    d) 1.5625
- a) 40.96    b) 2.0164  
c) 0.09    d) 30.25
- $655.36 \text{ cm}^2$

### Practice exercise 4 on page 27

- a) 9    b) 11    c) 15  
d) 25    e) 16
- a) 7    b) 12    c) 21    d) 42
- a) 15    b) 24    c) 85  
d) 44    e) 63    f) 27  
f) 91    h) 100

### Practice exercise 5 on page 28

- a)  $\frac{5}{8}$     b)  $\frac{6}{7}$     c)  $\frac{9}{25}$     d)  $\frac{27}{10}$  or  $2\frac{7}{10}$
- a)  $1\frac{1}{7}$     b)  $2\frac{1}{2}$     c)  $1\frac{1}{2}$     d)  $1\frac{1}{4}$
- a)  $\frac{16}{25}$     b)  $\frac{4}{5}$

### Practice exercise 6 on page 28

- a) 0.3    b) 0.8    c) 1.5  
d) 0.12    e) 0.45
- a) 1.3    b) 0.22    c) 3.2
- 1.2
- a)  $\frac{64}{100}, \frac{121}{100}, \frac{81}{100}, \frac{1600}{100}$   
b)  $\frac{64}{100} = \frac{2 \times 2 \times 2 \times 2 \times 2 \times 2}{2 \times 2 \times 5 \times 5}$   
 $\frac{121}{100} = \frac{11 \times 11}{2 \times 2 \times 5 \times 5}$   
 $\frac{81}{100} = \frac{3 \times 3 \times 3 \times 3}{2 \times 2 \times 5 \times 5}$   
 $\frac{1600}{100} = \frac{2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 5 \times 5}{2 \times 2 \times 5 \times 5}$

c)  $\frac{8}{10}, \frac{11}{10}, \frac{9}{10}, 4$

$4, \frac{11}{10}, \frac{9}{10}, \frac{8}{10}$

5. Assess

### End of strand 1 assessment

- sh 74
- $\frac{4}{5}$
- a)  $8\frac{1}{6}$     b)  $3\frac{3}{4}$
- a) a) 6    b) 4  
b) a) 8    b) 2  
c) a) 3    b) 7
- 86234425
- a) Five million, two hundred and seventy thousand and eighty eight.  
b) Thirty two million, seventy eight thousand, five hundred and twenty one.
- a) 618 000 000    b) 618 000 000
- a) 1641    b) 575
- Divisible by 6
- a) 15    b) 55
- $2 \times 2 \times 3 \times 3 \times 5 \times 5, 30$
- $\frac{4}{5}, \frac{2}{3}, \frac{5}{12}, \frac{3}{8}, \frac{2}{9}$
- a) 350    b) -1.54    c)  $1\frac{2}{33}$
- a) 22    b) 1
- a) 729    b)  $\frac{169}{225}$     c) 0.0484
- a) 0.8    b)  $\frac{15}{24}$     c) 72
- 2130hrs or 9.30pm

## 2 ALGEBRA

### 2.1 Algebraic Expressions

#### Practice exercise 1 on page 30

- $v + 2$
- $p + 6$
- $x + 1$
- $m - 3$

#### Practice exercise 2 on page 30

- a)  $2x + 10$     b)  $2x + 14$
- 3x years
- $\frac{3}{8}k$
- $\frac{p}{3}$  pencils
- 12d

### Practice exercise 3 on page 31

- $\frac{1}{2}a + \frac{1}{2}b$
  - $m^2$
  - $6B$  and  $4b$
- $ab$  and  $b^2$
- false
  - true
  - false
  - true
  - true
  - false
- $6a + 2b$
  - $\frac{1}{2}a - \frac{1}{8}b$
  - $5\frac{1}{2}x - 5y$
  - $10t + 7p$
  - $6a + 3b - 5$
  - $\frac{1}{3}r - \frac{1}{12}s$
  - $0.4r + 0.85$
- $3ab - 3a - 2b$
  - $52x + 4$
  - $7p - 12$
  - $6p + 17q - 7$
  - $rs - 4s + 4$
- $y + 5$  goats
- $n - 13$  years
- 160 girls
- $(x + 4)$  pairs

## 2.2 Algebraic Expressions

### Practice exercise 1 on page 32

- $5x = 48$
- boys 30 girls 15
- $8x + 600 = 4000$

### Practice exercise 2 on page 33

- 4
  - 8
  - 1
  - 10
- 3
- 7
  - 27
  - 3
  - 12
  - $4\frac{1}{7}$
  - $4\frac{2}{7}$
- 3
  - 8
  - $-1\frac{1}{2}$
- 4
- 5 hectares
- 10
- sh. 88
- sh. 5
- Assess

## 2.3 Linear Inequalities

### Practice exercise 1 on page 34

- $s \leq 80\text{km/h}$
  - Height  $< 5.5\text{m}$
- $c < 13$  years
  - $d \geq 1000$
  - $p \leq 10$
  - $c < 15$

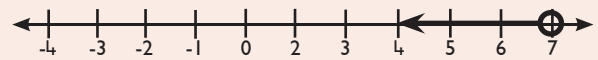
### Practice exercise 2 on page 34

- $<$
  - $<$
  - $>$
  - $>$
- $H > 120\text{cm}$
- $m < 100$
- $3m > 200$
- $3t + 1 < 103$

### Practice exercise 3 on page 35

- Inequalities on a number line

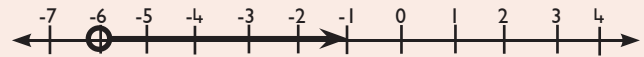
i)  $x < 7$



ii)  $x > -4$



iii)  $x > -6$



- $x > 6$
  - $x \leq 4$
  - $x > 4$
  - $x \geq -4$
- $x > 0$
  - $x > 2$
  - $x \leq 3$
  - $x > 3$

### Practice exercise 4 on page 35

- $3 < x < 10$
  - $-3 \leq x < -1$
  - $1 < x < 7$
  - $-4 < x < 4$
  - $-2.5 < x < 0.5$
- $100 < p < 183$

### Practice exercise 5 on page 36

- Assess
- $1 < x \leq 7$
  - $-4 < x < 5$
  - $-3 \leq x < 5$
  - $0 < x \leq 6$
- 
- $1 < x > 7$
  - $0 < x < 7$

### End of strand 2 assessment

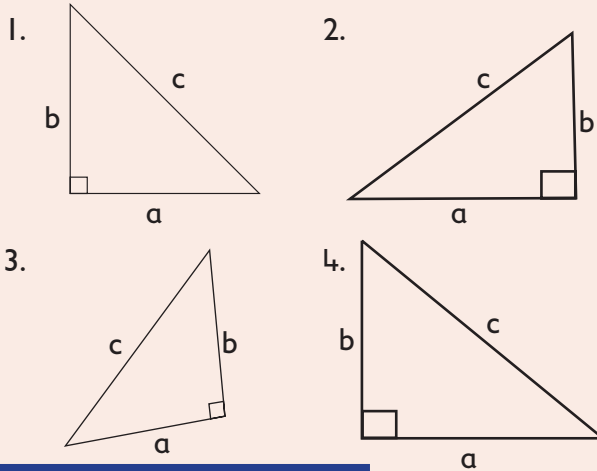
- $z = 4$
  - $x = 6$
- 12
- 12
- length = 20 cm  
width = 10 cm
- 2
- 4, 6, 8
- $10 - 4m$
  - $10y + 16$
  - $2x + 3y + 2z$
- $x > 11$
  - $x > 2$
  - $x < 3$
  - $x > -5$
  - $x > 3$
- $3x - 4 < 20$   
 $x < 8$
- $p \leq 12$
- 110km
- length 170, width 88
- 30, 31, 32
- $55^\circ, 110^\circ, 15^\circ$
- $56^\circ, 56^\circ, 68^\circ$
- $x < 14$
  - $x > -2$
  - $x > 2\frac{5}{11}$

# 3

## MEASUREMENT

### 3.1 Pythagorean relationship

#### Practice exercise 1 on page 37



#### Practice exercise 2 on page 38

- 24 cm
  - 15 cm
- $h = 36$  cm
- 10 cm
- 10 cm
- 4 m
- 50 m
- $c = 13$
  - $b = 24$
- 27.66 km
  - 16 feet
  - 17 cm
  - 21 cm

### 3.2 Length

#### Practice exercise 1 on page 39

- 700 m
  - 150 dm
  - 1.5 Dm
  - 26 dm
  - 100 strides
  - 1.8 km
  - 0.75Hm
  - 4000 strides
- 100 m
  - 1500 cm
  - 0.15 Hm
  - 260 cm
  - 2600 mm
- 1.9 km

#### Practice exercise 2 on page 40

- 19 cm
  - 26 cm
  - 26 cm
  - 152.8 m
- 114 m
- 150 m by 75 m
- 121 m
- 2.112 km
  - 21.12Hm
  - 211.2Dm
  - 2112m

#### Practice exercise 3 on page 41

- 66 cm
  - 26.4cm
  - 88 cm
- 88 cm
- 220 cm
  - 600 revolutions
- 66.82 m
- 1760 cm
- 14 cm

### 3.3 Area

#### Practice exercise 1 on page 42

- 20000 cm<sup>2</sup>
  - 40 000 000 000 cm<sup>2</sup>
  - 200 m<sup>2</sup>
  - 0.02 m<sup>2</sup>
  - 4500 m<sup>2</sup>
  - 340 ares

2.

Square metre m <sup>2</sup>	Hectare	Ares
1. 20000	2	200
2. 5000	0.5	50
3. 150 000	15	1 500
4. 100000	10	1 000

- 0.02 m<sup>2</sup>
- 108 500 000 cm<sup>3</sup>
- 54 m<sup>2</sup>
- 1462.5 m<sup>2</sup>
- 124.74 m<sup>2</sup>

#### Practice exercise 2 on page 42

- 9.88
  - 13.338
  - 1.235
  - 24.7
  - 1.8525
- 1.397
  - 2.024
  - 4.049
  - 8.097
- 15 000 m<sup>2</sup>
  - 60 000 m<sup>2</sup>
  - 5600 m<sup>2</sup>
  - 75 m<sup>2</sup>
- 182186.2 m<sup>2</sup>
  - 202429.1 m<sup>2</sup>
  - 4048583 m<sup>2</sup>
  - 10121457.5 m<sup>2</sup>

#### Practice exercise 3 on page 44

- 100 cm<sup>2</sup>
  - 72 cm<sup>2</sup>
  - 36 cm<sup>2</sup>
- 9 cm<sup>2</sup>
- 137.5 cm<sup>2</sup>
- 135 cm<sup>2</sup>
- 500 tiles
- 248 m<sup>2</sup>
- 13 m<sup>2</sup>
- 98 cm<sup>2</sup>

#### Practice exercise 4 on page 44

- 150 m<sup>2</sup>
- 295.5 cm<sup>2</sup>
- 654 cm<sup>2</sup>
- 168 cm<sup>2</sup>

### Practice exercise 5 on page 45

1.  $3.465 \text{ cm}^2$
2.  $707.143 \text{ m}^3$
3.  $38.5 \text{ cm}^2$
4.  $57.3125 \text{ cm}^2$
5.  $0.95442 \text{ ha}$
6. a)  $36.85 \text{ cm}^2$     b)  $78.75 \text{ m}^2$     c)  $115.5 \text{ cm}^2$

### Practice exercise 6 on page 46

1. a)  $18.14 \text{ cm}^2$     b)  $13.3056 \text{ cm}^2$   
c)  $17.5 \text{ cm}^2$
2.  $48 \text{ m}^2$
3.  $98.56 \text{ m}^2$
4.  $4350 \text{ cm}^2$
7.  $5.5 \text{ m}^2$

## 3.4 Volume and Capacity

### Practice exercise 1 on page 47

1. a)  $2\,300\,000 \text{ cm}^3$     b)  $5\,670\,000 \text{ cm}^3$   
c)  $5600 \text{ cm}^3$     d)  $1\,600\,000 \text{ cm}^3$
2.  $1\,925\,000 \text{ cm}^3$
3.  $770\,000\,000 \text{ cm}^3$
4.  $800 \text{ cm}^3$

### Practice exercise 2 on page 47

1. a)  $45 \text{ m}^3$     b)  $1.234 \text{ m}^3$   
c)  $0.67 \text{ m}^3$     d)  $0.000345 \text{ m}^3$
2. a)  $0.0015 \text{ m}^3$     b)  $21.56 \text{ cm}^3$     c)  $0.24 \text{ m}^3$

### Practice exercise 3 on page 48

1. a)  $288 \text{ cm}^3$     b)  $1950 \text{ cm}^3$
2.  $0.864 \text{ m}^3$
3. 350 cubes
4.  $169.5 \text{ cm}^3$
5. 5 sacks
6. 7 wheelbarrows

### Practice exercise 4 on page 48

1.  $31185 \text{ cm}^3$
2. 10 cm
3. A by  $172 \text{ cm}^3$
4. 3.5 cm
5. 12 cm
6.  $1.723 \text{ cm}^3$
7. 1.4 cm

### Practice exercise 5 on page 49

1.  $1200\,000 \text{ cm}^3$
2.  $1632 \text{ cm}^3$
3.  $99.21 \text{ cm}^3$
4. a)  $1502.8125 \text{ cm}^3$     b)  $55.44 \text{ cm}^3$

### Practice exercise 6 on page 50

1. 20 litres
2.  $600\,000 \text{ cm}^3$      $H = 0.15 \text{ m}$
3. a) 0.8 litres    b)  $4300 \text{ cm}^3$   
c) 1.64 litres    d)  $2800\,000 \text{ cm}^3$
4. a) 3 litres    b) 1.5 litres
5. 0.25 litres or  $250 \text{ cm}^3$

## 3.5 Time, distance and speed

### Practice exercise 1 on page 51

1. a) 240 seconds    b) 780 seconds  
c) 2040 seconds    d) 390 seconds  
e) 3285 seconds
2. a) 360 mins    b) 540 mins  
c) 720 mins    d) 290 mins  
e) 508 mins
3. a) 2 hrs 20 mins    b) 11 hrs 20 mins  
c) 1 hr  $18\frac{1}{3}$  mins
4. a) 4 mins 5 secs    b) 7 mins 32 secs  
c) 12 mins 30 secs
5. 1.25pm
6. a) 14 bottle    b) 64 bottles
7. 3.00pm
8. 1.50pm
9. 12.45pm

### Practice exercise 2 on page 52

1. a) 0.02km    b) 2km    c) 6km  
d) 120km    e) 0.7km
2. a) 2500 m    b) 70 m    c) 12 m    d) 20 m
3. a) 100 000 cm    b) 20cm  
c) 2050 cm    d) 1360 cm
4. a) 85 km    b) 180 km  
c) 155 km    d) 350 km  
e) Misori by 10 km

### Practice exercise 3 on page 52

1. a)  $13\frac{8}{9} \text{ m/s}$     b)  $33\frac{1}{3} \text{ m/s}$   
c)  $41\frac{2}{3} \text{ m/s}$     d)  $8\frac{1}{3} \text{ m/s}$
2. a) 36 km/hr    b) 108 km/hr  
c) 45 km/hr    d) 18 km/hr
3. 100 km/hr
4. 0.69 m/s
5. 80 km/h
6.  $1\frac{2}{3} \text{ m/s}$
7. 160km
8.  $\frac{5}{12} \text{ m/s}$
9. a) Speed limit sign, o diameter  
b) motorists  
c)  $22\frac{2}{9} \text{ m/s}$  and  $6\frac{2}{3} \text{ m/s}$   
d) Identify speed of motorists  
e) Determine the rate of motion
10. a) 62.5m/s    b) 1hr 9 mins  
c) 60 km/hr    d) 70.98 km/hr

## 3.6 Temperature

### Practice exercise 1 on page 53

- Lighting bulb - warmer and without light
  - Computer on use - warmer and computer not in use - colder..
  - Your desk - warmer and the cemented floor - colder.
  - Your face - warmer and the class wall - colder.
  - Ice water - warmer and tap water - colder.
- Heated wood and heated iron - Hotter
  - Melting ice and boiling water - Hotter
  - Black and white surfaces in the sun - Warmer
  - White shiny surfaces in the compound - Warmer

### Practice exercise 2 on page 54

- 296K
- 285K
- 373K
- 162°C
  - 403°C
  - 149°C
  - 677°C
  - 6°C
  - 0°C
  - 393°C
  - 103°C
  - 103.5°C
- 296K
  - 273.5K
  - 373K
  - 339K
  - 329.5K
  - 279.65K
  - 773K
  - 638K
  - 351K
- 9°

### Practice exercise 3 on page 54

- 25°C
  - 69°C
  - 24°C
- 600K
  - 484K
  - 21K
- 27°C
- 305K
- 34°C
- 89°C

## 3.7 Money

### Practice exercise 1 on page 55

- sh. 400
- sh. 700
- sh. 1000
- sh. 300
- sh. 62 000
- 

ELECTRONICS	BUYING PRICE	SELLING PRICE	PROFIT	LOSS
24 TV set	10800	11400	600	
Mobile phone	2050	20000		500
Radio	1500	1750	250	
Casio calculator	1140	1600	460	

### Practice exercise 2 on page 55

- sh. 2045
- 11 $\frac{1}{4}$ %
- 15.38%
- 10%
- 27.27%
- 50%
- 33.33%

### Practice exercise 3 on page 56

- sh. 250
- sh. 6 17 000
- sh. 480
- 

Item	Marked price(sh)	Selling price (sh)	Discount(sh)
Cell phone	18000	1600	1800
Radio	4000	3600	400
Mini Refrigerator	18900	16000	2900
Tv set	16990	15291	1699
Juicer	6500	5850	650
Cooker	34500	33250	1250

### Practice exercise 4 on page 56

- 4%
- 5%
- sh. 15000
- 8.57%
- sh. 402

### Practice exercise 5 on page 57

- sh. 400
- sh. 600
- sh. 5 1200
- sh. 49000
- sh. 24750
- sh. 37 500
  - 5%
- sh. 1485
  - sh. 2255
  - sh. 6 105
  - sh. 82005

### Practice exercise 6 on page 57

- 4%
- 5%
- 7.5%
- 4%
- 15%
- 2%
- 

Goods sold (sh)	Commission earned (sh)	Percentage commission (%)
50000	1750	3.5
120000	4500	3.75
850000	15000	1.76
1050000	25000	2.38
3000000	150000	5

## Practice exercise 7 on page 58

- a) sh. 11450      b) sh. 10877.5
- sh. 39180
- sh. 2850
- 

ITEM	KSHS
2 pencils at shs 10	sh. 20
2 rulers at shs 25	sh. 50
10 exercise books at shs 45	sh. 450
5 rubbers at shs 5	sh. 25
1 geometrical set at shs 200	sh. 200
1 story book at shs 500	sh. 50

## Practice exercise 8 on page 59

- a) sh. 25      b) sh. 35      c) sh. 35  
d) sh. 35      e) sh. 178      f) sh. 95  
g) sh. 232      h) sh. 232
- a) sh. 48      b) sh. 125      c) sh. 107  
d) sh. 107      e) sh. 125      f) sh. 107  
g) sh. 107      h) sh. 29
- i) sh. 800      ii) sh. 290  
iii) sh. 60, sh. 1150

## Practice exercise 9 on page 59

- a) sh. 65      b) sh. 375  
c) sh. 480      d) sh. 590
- a) 95      b) sh. 140  
c) sh. 200      d) sh. 140

## Practice exercise 10 on page 60

- a) sh. 105      b) sh. 105      c) sh. 105  
d) sh. 7      e) sh. 105      f) sh. 105
- i) sh. 55      ii) sh. 256      iii) sh. 57
- a) sh. 105      b) sh. 51  
c) sh. 140      d) sh. 363

## End of strand 3 assessment on page 61

- 46m      2. 5m
- 13      4. 7.2Hm
- 49.5m<sup>2</sup>
- a) 308K      b) 78K  
c) 302K      d) 371K
- a) 27°C      b) 6°C
- 67°C      9. 22.86°
- sh. 22000      11. 3<sup>1</sup>/<sub>3</sub>%
- sh. 42000
- a) 20m/s      b) 30m/s      c) 50m/s      d) 70m/s
- 64km/h      15. 12<sup>2</sup>/<sub>3</sub>m/s
- 36km/hr

# 4

# GEOMETRY

## 4.1 Angles

### Practice exercise 1 on page 62

- a) Acute angle      b) Right angle  
c) Obtuse angle      d) Straight line  
e) Reflex angle      f) Angle at a point  
full rotation angle

### Practice exercise 2 on page 63

- i) b and d, f and h  
ii) b and c, a and c, d and c, b and d
- add upto 180°

### Practice exercise 3 on page 63

Assess

### Practice exercise 4 on page 64

- a) b and c, a and d      b) n and l, k and m
- a)  $p = 100^\circ$ ,  $q = 80^\circ$ ,  $r = 100^\circ$   
b)  $e = 145^\circ$ ,  $f = 35^\circ$ ,  $g = 145^\circ$   
c)  $j = 60^\circ$ ,  $h = 120^\circ$   
d)  $k = 65^\circ$
- 169°      4. 20°

### Practice exercise 5 on page 64

- i) a and c, b and d  
ii) k and m and p  
l and n and q
- i)  $b = 20^\circ$   
ii)  $d = 70^\circ$ ,  $e = 110^\circ$

### Practice exercise 6 on page 65

- p and s, r and q
- i)  $q = 24^\circ$        $x = 67^\circ$ ,  $t = 113^\circ$

### Practice exercise 7 on page 66

- a)  $x = 68^\circ$ ,  $y = 112^\circ$   
b)  $x = 25^\circ$ ,  $y = 115^\circ$ ,  $z = 25^\circ$
- a)  $x = 62^\circ$ ,  $y = 59^\circ$ ,  $t = 62^\circ$   
b)  $x = 123^\circ$ ,  $y = 57^\circ$ ,  $z = 57^\circ$   
c)  $y = 110^\circ$ ,  $z = 50^\circ$

### Practice exercise 8 on page 66

- a) Isosceles triangle  
b) Scalene triangle  
c) Equilateral triangle  
d) Right-angled triangle
- a) Right angled triangle  
b) Scalene triangle  
c) Equilateral triangle  
d) Isosceles triangle

### Practice exercise 9 on page 67

- Assess
- i)  $x = 60^\circ$       ii)  $x = 59^\circ$
- i)  $x = 28^\circ, y = 112^\circ, z = 28^\circ$   
ii)  $x = 166^\circ, y = 194^\circ, z = 165^\circ$
- $60^\circ$
- $x = 112^\circ$

### Practice exercise 10 on page 68

- a)  $80^\circ$       b)  $x = 100^\circ, y = 80^\circ$   
c)  $x = 85^\circ$       d)  $x = 125^\circ$   
e)  $x = 155^\circ$       f)  $x = 120^\circ$   
g)  $x = 77^\circ$       h)  $x = 50^\circ$
- a)  $x = 35^\circ$       b)  $x = 90^\circ$   
c)  $x = 57^\circ$       d)  $x = 102^\circ$
- $a = 60^\circ$

### Practice exercise 11 on page 70

1.

Polygon	Number of sides	Number of triangles formed	Sum of interior angles	Sum of exterior angles	Number of right angles that formed interior angles
Triangle	3	1	$180^\circ$	$360^\circ$	2
Quadrilateral	4	2	$360^\circ$	$360^\circ$	4
Pentagon	5	3	$540^\circ$	$360^\circ$	6
Hexagon	6	4	$720^\circ$	$360^\circ$	8

- a) 2      b)  $180(n-2)$       c) add upto  $360^\circ$   
d) size of angle =  $\frac{360}{\text{number of sides}}$
- a) 4      b) 6 sides
- 7 sides
- 1 triangle
- 

Number of sides	Number of triangles	Sum of interior angles	Sum of interior angles in right angles
3	1	$1 \times 180 = 180$	$\frac{180}{90} = 2$
4	2	$2 \times 180 = 360$	$\frac{360}{90} = 4$
5	3	$3 \times 180 = 540$	$\frac{540}{90} = 6$
6	4	$4 \times 180 = 720$	$\frac{720}{90} = 8$

### Practice exercise 12 on page 71

- a) 10      b) 12      c) 3      d) 15      e) 6
- a)  $90^\circ$       b)  $72^\circ$       c)  $30^\circ$       d)  $40^\circ$

- i)  $x = 100^\circ$       ii)  $y = 85^\circ$       ii)  $y = 50^\circ$
- $65^\circ$
- $x = 60^\circ$

## 4.2 Geometrical Construction

### Practice exercise 1 on page 71

- $98^\circ$       b)  $304^\circ$       c)  $35^\circ$       b)  $35^\circ$

### Practice exercise 2 on page 72

Assess

### Practice exercise 3 on page 72

Assess

### Practice exercise 4 on page 73

Assess

### Practice exercise 5 on page 74

Assess

### End of strand 4 assessment on page 72

- $150^\circ$
- a) b and c, f and g      b) d and c, f and c  
c) a and c, c and g, b and f, d and h
- i)  $130^\circ$       ii)  $180^\circ$
- $35^\circ$
- $x = 98^\circ$
- a) 4 triangles      b) 6 sides
- 5 sides
- Assess
- Assess
- Assess 10cm
- $\angle YXZ = 90^\circ, \angle ZYX = 67^\circ, \angle XZY = 23^\circ$
- Assess

## 5 DATA HANDLING AND PROBABILITY

### 5.1 Data Handling

### Practice exercise 1 on page 76

Assess

### Practice exercise 2 on page 76

Assess

### Practice exercise 3 on page 77

Assess



### Practice exercise 4 on page 78

- Red class 50, Blue class 30  
Green class 40, Yellow class 60
  - pictograph
  - red class
  - 180
  - 8 full apples
- 20 flags
  - Group 4
  - 8 flags
  - Group two
  - 56 flags
- 40
  - 10
  - Ogola and Kinoti
  - 120
  - i) 50 ii) assess

### Practice exercise 5 on page 79

Assess

### Practice exercise 6 on page 80

Assess

### Practice exercise 7 on page 81

Assess

### Practice exercise 8 on page 82

- $7\frac{1}{2}$  minutes
  - 50 km
  - 15km
  - 40 km/hr
- 58km
  - 30 minutes
- 40 km/hr
- 30km
  - c
  - Resting
  - 180km

### End of strand 4 assessment on page 83

1 - 4 Assess

- 1cm represent 10 learners
  - coca cola
  - 45
  - 113

- Saturday
  - 3 litres
  - 43 litres

7 and 8 Assess

- $2\frac{1}{2}$  hrs
  - 5km
  - Resting
  - 30 minutes
  - 2hrs
  - To arrive on time

## MODEL TEST PAPERS

### MODEL TEST PAPER 1 on page 84

- $x < \frac{7}{3}$
  - $x > 4$
- $30\text{cm}^2$
- $27\text{m}^3$
- 32
- $175^\circ$
  - 72 sides
- $194.86\text{cm}^3$
- 10cm
- 8 cm
  - $104\text{cm}^2$

- 220km
  - 60km/hr
- 13 bags
- $\frac{5}{24}$
- 3 hrs
- 20 cm
- $>$
  - $<$
- Assess
- $q = 65^\circ$
- 38cm
- Assess
- 4x years
- $7p - 2q + r - 5$
- $x = 18$
- $1886.5\text{cm}^2$
- $52.27\text{cm}^2$
- sh. 3600
- sh. 15000
- sh. 25000
- $110^\circ$
  - $70^\circ$
  - $110^\circ$
  - $70^\circ$
  - $110^\circ$
  - $110^\circ$
- 47km 930m
- 40cm

### MODEL TEST PAPER 2 on page 85

- $\frac{23}{36}$
- 1.3188m<sup>3</sup>
- Assess
- sh. 2342
- $x = 44.8^\circ$
- sh. 342.86
- $10x - 3$
- 60 000 tiles
- $w = 6\text{cm}$   $l = 18\text{cm}$
- 150cm
- 35.2cm
- $5\frac{\frac{4}{3}, \frac{43}{30}, \frac{8}{5}, \frac{11}{6}}$
- $12.5\frac{4}{8}$
- 1.01pm
- 50cm
- Assess
- 10cm
- 0.6
- 25 litres
- $\frac{22a + 15c}{12b}$
- 432 litres
  - 3 litres
- $\frac{5}{24}$
- 20m/s
- $30^\circ$
- $y = 53^\circ$
- sh. 600
- 31.25%
- 20%
- $14790\text{cm}^3$
- Assess

**MODEL TEST PAPER 3 on page 87**

1. 4730      6930
2. 18g
3.  $\frac{5}{12}, \frac{11}{5}, \frac{9}{4}, \frac{7}{3}$
4.  $2\frac{7}{15}$
5. 12000 tiles
6. 5.6264
7. 0.06
8.  $\frac{11}{18}$
9.  $\frac{60 + c + d + e + f}{6}$

10.  $\frac{y}{5} - \frac{2x}{3}$
11. sh. 12800
12. 16m
13. sh. 10075
14. 62370 litres
15.  $\angle ACB = 40^\circ$        $\angle BCD = 140^\circ$
16. a) 305K      b) 393K
17. sh. 1746
18. Assess
19. Assess
20. a)  $26\frac{2}{3}$  m/s      b)  $2\frac{1}{3}$
21.  $\frac{24m}{7wxy}$
22.  $\frac{zy}{zy}$
23. Assess
24. 15cm
25. 48.166
26.  $n = 54^\circ$
27. 9 sides
28. a) sh. 20      b) 20%
29. 20%
30. 2.8

**MODEL TEST PAPER 4 on page 88**

1. 465 932 646
2. 1134000
3. 10ml
4. 45
5.  $\frac{2}{33}$
6.  $\frac{5}{6}, \frac{4}{5}, \frac{3}{4}, \frac{1}{2}$
7. 2.7kg
8. 0.3025
9. 240cm<sup>2</sup>
10. 0.3
11.  $x > 9$
12. 5m
13. 128.74
14. i) 3520m      ii)  $58\frac{2}{3}$  m/s
15. 63.07cm<sup>2</sup>

16. 6.49cm
17. 73920cm<sup>3</sup>
18.  $\frac{13x - 27}{20}$
19. 2.30pm
20. 5.15pm
21. a) 498K      b) 173K
22. sh. 22 500
23.  $x = 36^\circ$  72
24.  $x = 42^\circ$
25. Assess
26. Assess
27. Assess
28. 104cm
29.  $3\frac{1}{2}$  hrs
30. sh. 665

**MODEL TEST PAPER 5 on page 89**

1. 504cm<sup>2</sup>
2. Assess
3. sh. 1693.50
4. 15.2%
5. 203 seedlings
6. Assess
7. 44.2°
8. 8 learners
9. 1.5
10.  $\frac{3y - 10x}{15}$
11. 88cm
12. 11.44am
13. i) 8.20am      ii) 4.00pm  
iii) 7 hrs 40 min      iv) 1hr 10 mins
14. Assess
15. 1.1, 1.6
16. i) 165km      ii) 3 hrs
17. a) sh. 122      b) sh. 348
18. a) Thursday      b) Friday  
c) 25 learners
19. sh. 27020
20.  $5\frac{11}{14}$
21. Assess
22.  $x = 248^\circ$
23.  $w = 48$ cm       $l = 52$ cm
24. 220 reams
25. 6 sides
26.  $x < 14$
27. a)  $x = 1$       b) 12
28. 10.3%
29. 1600
30. 24m

**ENGLISH**

# 1 PERSONAL RESPONSIBILITY

## Activity 1

a. **The boy is having a conversation with two girls.**

- b.
- I am Helen and she is Linda.  
My name is Ahmed.  
His name is Dr Andako.
  - Sorry for interrupting  
I am afraid my sister and I are new to this town.  
Nice to meet you, Helen and Linda.  
We are pleased to meet you.  
Thank you for your kindness.
  - Any relevant introduction.
  - He offered to take Helen and Linda to their uncle's hospital.
  - Any relevant introduction.
  - To make them know who we are.

## Activity 2

- an encyclopedia, the Bible, journal, Children's Magazine, Newspaper, storybook
- The language level; How interesting it is; Its size.
- A motivational book
- The learners' sense of responsibility.
  - Collective books, telling the time, rubbing the blackboard, looking after the teacher's desk
  - She was more responsible than any other learner.
  - She felt disappointed.
  - She liked the teacher a lot.
  - She researched greatly.
  - They were filled with curiosity.
  - Because Princessa had emerged the best in the environmental conservation project.
  - industrious: hardworking
    - prestigious: most valued
    - insignificant: unimportant
    - unpopular: unloved
  - She was responsible and industrious

## Activity 3

a.

### Proper nouns

- Princessa
- Got Nyabondo Junior Secondary School

### Common nouns

- girl
- class
- school

- classmates
- student
- children
- litter
- dustbin
- flowers

- b.
- garbage
  - pool
  - water
  - ground
  - paper
  - sky
  - flour
  - wind
  - noise
  - home

c.

	Concrete nouns	Abstract nouns
1	gas	envy
2	bridge	ability
3	dust	deceit
4	bag	crime
5	monitor	arrogance
6	city	truth
7	oil	peace
8	hair	gossip
9	kit	life
10	colour	speed

d.

- sorrow
- loss
- belief
- clearance
- disappointment
- length
- bravery
- width
- responsibility
- behaviour
- thought
- envy
- wisdom
- difference
- speech

e.

Concrete nouns	Abstract nouns
taxi	pity
belt	truth
watch	joy
exit	motion
trousers	life
coffee	rage
song	help
tap	piety
yacht	
voice	

#### Activity 4

- Animals growing crops.
- Any relevant response.

**C.**

- Simba, Otoyoy and Apuoyo
- They lived in the savanna
- To ensure their families were not affected by famine.
- To ensure the other two animals get killed.
- To rest.
- He had broken the rule but failed to give an explanation.
- They were fooled by Apuoyo.
- To gain more courage.
- He outsmarted the two other animals.
- Narration of the story.

#### Activity 5

- The first handwriting.
- Neat, well-spaced words, good alignment
- Neat handwriting.

## 2 SCIENCE HEALTH AND EDUCATION

#### Activity 1

- A well narrated story of a race between Hare and Tortoise
- A well narrated story while using gestures and facial expressions.
- Showing classmates how to apply storytelling techniques.
- Using storytelling techniques to narrate a story.
- Using gestures and facial expressions to tell a story.

#### Activity 2

a.

- Who is the speaker in the poem? A child who is HIV positive.

- A poem has stanzas whereas a story has paragraphs.
- Five
- The speaker is sad.
- From the mother during birth.
- No. She needs to be loved.
- Playing with them and being kind to them.
- To show the mood in the poem.
- Any relevant response

b. Looking for and reciting varieties of poems.

#### Activity 3

a.

- jewellery
- time
- darkness
- luggage
- knowledge
- rice
- danger
- environment
- bread
- meat

b.

- The men picked loaves of bread from the shelves.
- The children were scared of mice.
- My neighbours plan to host their sons-in-law.
- Can you see butterflies on the leaves?
- The foxes killed geese that they found hiding in the bushes.
- The ladies went to the dentists to have their teeth extracted.
- My foot got hurt when I tripped and fell.
- The boy usually leaves his bedding neat.
- The women who wore watches are our aunts.
- The chiefs arrested the thieves who stole our neighbours' oxen.
- They found new scarves in the boxes.
- Their servants take care of the donkeys and sheep.
- The boys claimed that they had seen wolves in the bushes.
- We washed plates and dishes.
- We helped the lady-servants to arrange the furniture.

c.

Countable nouns: girl, week, purse, supermarket, home, bus, items, shelf, book, packet,  
Uncountable nouns: foodstuff, money, flour, rice, milk, honey, stationery,

d.

	countable nouns	uncountable nouns
1	song	money
2	journey	information
3	bottle	scenery
4	suitcase	clothing
5	box	furniture
6	hall	sugar
7	shop	power
8	month	electricity
9	room	advice
10	purse	music

#### Activity 4

1. Supporting HIV/AIDS patients
2. Newspaper, Encyclopedia, Magazine, Internet
3. To ensure they do not feel lonely.
4. No. It might add on their pain.
5. To know how to help and take care of HIV patients.
6. Seeking treatment.
7. Medication given to HIV patients.
8. Medical care, balanced diet, exercise and support.
9. Keep it to yourself.

#### Activity 5

1. How did you get information that disease?
2. What a scary story that is!
3. He asked me how I was doing.
4. Do not touch that button!
5. Do you know what he is talking about?
6. Hurray!
7. It is not easy to get that job done.
8. Who helped you to solve the sum?
9. Kindly explain to him what actually happened.
10. Wow! I like your story.

## 3 HYGIENE

### Listening and speaking

#### Activity 1

1. Personal hygiene is the act of ensuring our bodies are clean.
  - a. Bathing, washing hands, brushing teeth, putting on clean clothes and cleaning the environment.

#### Pictures

- a. Sweeping

b. Washing hands

c. cutting nails

d. putting wastes in the dustbin

e. bathing

f. brushing teeth

- c. To maintain personal hygiene, one needs to ensure he or she lives in a clean environment. To achieve this you need to sweep the compound to ensure your surrounding is clean. Apart from your surroundings, you also ensure you maintain body hygiene. This can be achieved by washing hands after visiting the toilet, before handling food and after eating. You should also keep your fingernails short by cutting them whenever they grow. You should also pick litters around the compound and put them in the dustbin to ensure you live in a clean environment. Bathing is also very important because it helps to keep away the germs in our bodies. Brushing teeth helps in controlling tooth related problems such as tooth decay, bad breath and tooth cavity.
- d. combing hair, washing clothes etc.

#### Activity 2

1. Importance of maintaining personal hygiene.
2. a. Bathing b. Washing hands c. Brushing teeth.
3. Use soap or shower gel to bathe. After bathing, clean yourself with a clean towel or sponge to prevent skin irritation and skin bacteria that cause bad smell on the body. Thereafter, apply deodorant to your armpits and then put on dry clean, dry clothes.
4. After lubricating your brush with water, put small amount of paste and then insert into your mouth at an angle at 45-degree angle to your gums and brush your front teeth with gentle strokes. Brush the outside surfaces of your teeth. Brush upside down by flipping the toothbrush. Finally, brush your tongue and then spit out the remnants of toothpaste and saliva into a clean sink. Rinse your mouth with cold water.

### Reading

#### Activity 1

- a. To get information, for enjoyment etc.
- b. By reading words around the word.
- c. By reading the title of the story, by reading the leading statements.

#### Activity 2

1. Personal hygiene
2. It is the keeping of oneself by washing, brushing teeth, shaving etc.
3. Unclean surrounding and lack of personal cleanliness

4. If one looks and feels clean and tidy, he or she will be more confident.
5. Maintaining good hygiene reduces the chances of contacting diseases. One can therefore live longer.
6. Lack of time, energy and dullness.
7. Maintaining good hygiene leads to longer life, confidence, make one appear honest, clean and more cultured than the rest of the community. It also leads to efficiency of work.

### Vocabulary practice

#### Activity 3

(a)

1. *Hygiene*: Conditions or practices conducive to maintaining health and preventing disease, especially through cleanliness
2. *Confidence*: The feeling or belief that one can have faith in or rely on someone or something.
3. *Habit*: something that you do often and regularly
4. *Impression*: The effect or influence that something or someone has on a person's thoughts or feelings
5. *Personality*: The special combination of qualities in a person that makes that person different from others
6. *Tidy*: Arranged neatly and in order.
7. *Disease*: Particular abnormal condition that negatively affects the structure or function of all or part of an organism.

(b) Self-assessment – varied sentences.

#### Activity 4

a.

1. Prevent	2. Personal	3. Control	4. Clean
5. Brush	6. Condition	7. Hygiene	8. Tidy

b. Self-assessment – Varied sentences.

### Grammar

#### Activity 2

1. accepted, take
2. gets
3. left
4. appears
5. ran
6. visited, went
7. threw
8. became
9. seems
10. sat

#### Activity 4

a. Change the following words to past and future tense

Word	Past tense	Future tense
List	Listed	Will list
Wail	Wailed	Will wail
Wait	Waited	Will wait
Advise	Advised	Will advise
Bake	Baked	Will bake
Watch	Watched	Will watch

b. Self-assessment – Varied sentences

#### Activity 6

a. Change these verbs into past and future tenses

Present tense	Past simple tense	Future tense
Arise	Arose	Will arise
Beat	Beat	Will beat
Become	Became	Will become
Cut	Cut	Will cut
Draw	Drew	Will draw
Drink	Drank	Will drink
Dream	Dreamt/dreamed	Will dream

b. Self-assessment – Varied sentences

#### Activity 7

1. rained
2. order
3. learnt
4. repaired
5. talked
6. failed
7. broke
8. ate
9. discovered
10. train

### Intensive reading: Poetry

#### Activity 1

1. Health is Wealth
2. Seven
3. Thinking about wealth
4. Good health
5. Wealth, health

#### Activity 2

1. Regular shape
2. They are organized into four lines in each stanza and there are rhyming words in each stanza
3. Regular pattern
4. Advising people to stop stigmatization of AIDS victims.

#### Activity 3

Self-assessment.

### Writing: Writing a paragraph

#### Activity 1

During the months of July 2022, members of the Health and Cleanliness Club of Jitume Junior School observed the school canteen and rated it in terms of hygiene, affordability of food sold and student satisfaction. Here is a report of our findings.

**(Exposition or background information)**

Most students are not happy with the cleanliness of the canteen. The drains that surround the canteen are always clogged and give off a stink. Students who occupy the table close to the drain say that sometimes the stench is so unbearable that they have to move away and eat whilst standing. Because of the stinking drains, there are many flies in the canteen. Students have to constantly wave their hand over their food just to prevent the flies from settling on the food. This makes eating a rather stressful experience. Besides, the canteen floor is oily and slippery. The canteen emits a distinctive musty smell.

**(Complication)**

“None of us have witnessed the canteen being washed although we have heard that it is washed at weekends. This is hard to believe as the canteen seems no cleaner on Monday than it is on Friday,” Said Sally, the club leader. **(Events of the narrative)**

“Because of this state, more and more students are staying away from the canteen. They bring a packed meal from home. This is not very convenient. We would like the canteen to meet our needs. We hope they will improve and make a greater effort to please the students of the school,” said the Club Patron.

**(Resolution)**

## 4 LEADERSHIP

### Activity 1b

1. American Civil Rights Movement
2. Civil disobedience and non-violence
3. The interpretation of the dream is that a time will come when people will not be subjected to racial discrimination.

### Activity 2

1. He was a counselor in leadership and management.
2. He wanted to learn some facts about good leadership.
3. balance the existing relationships with the new ones.
4. a. Has a passion and drive for what he or she does.  
b. Able to take criticism from others and learn from them and grow them.  
c. A good listener.  
d. Easy to connect with people.
5. A good leader is a person who has a passion and drive for what he or she does. This will not only motivate him or her but his or her followers as well. A good leader is one who is capable of taking criticism positively and learn and r=grow from these criticisms, besides, a good leader should be a good listener and easy to connect with people.

### Reading: Reading for main idea

#### Activity 1

1. (i) Success (ii) personal growth  
(iii) influence (iv) happiness  
(v) to make an impact  
(vi) an incredible future for their loved ones and friends
2. Ruth studied and learnt the ways of becoming successful while Luke copied successful people as a way to be successful.
3. Following and copying what successful people did.
4. (i) defined success.  
(ii) studied about success.  
(iii) learnt from the world’s most successful people.  
(iv) learnt to think for herself

(v) understood the difference between money and success.

5. Luke’s. This is because Luke followed successful people and copied their way of life.
6. Both Ruth and Luke became successful after ten years despite the different paths they took. However, as Ruth was excited about her success and her personal vision of success, Luke was not happy in as much as he was successful in achieving what he wanted. He was emotionally depleted.
7. He realized that he was emotionally depleted.
8. He was not enjoying his success since he was living the life of other people.
9. Her leadership skills inspired her people.
10. It is better to learn your way to success rather than copying. (Any other relevant response is acceptable)

## Grammar

### Verbs and tense

#### Activity 2

- a. eat b. lives c. leave d. revolve e. sucks

#### Activity 3

- a. 1. go 2. Tries 3. Enjoy  
4. Understands 5. Mixes 6. Works 7. Washes  
b. 1. arrives 2. Rings 3. Take  
4. Watches 5. appears 6. Live 7. Tells

### Past simple tense

#### Activity 5

- a. 1. ate 2. Spilled 3. Talked  
4. Left 5. Passed 6. Cooked  
7. Baked  
b. 1. laid 2. Ran 3. Rode 4. Flew  
5. Wrote 6. Went 7. Met  
c. Self-assessment – varied sentences

## Intensive reading: Class readers

#### Activity 1

- a. Self-assessment  
b. 1. The title suggests that the birds decided to choose a king for themselves.  
2. peacock, swallow, magpie, kite, eagle, sparrow and starling.  
3. The sparrow and the eagle.  
4. By hiding under the wings of the eagle and then finally flying higher than the eagle to win the competition.  
5. The eagle. He was capable of flying higher than all the other birds.  
6. The sparrow.

#### Activity 2

- a. Swallow- Very confident and bold.  
b. Magpie – Very talkative and proud.  
c. Peacock- Very boastful  
d. Kite- Very reserved and eager.



e. Eagle – Very proud but ignorant.  
(NB: Any other relevant description is accepted)

**Activity 3**

Self-assessment.

**Writing: Paragraphing**

**Activity 1**

- b. 1. In his farm  
2. In the evenings  
3. One of his workers was absent  
4. Timothy  
5. He had contacted malaria.

**Activity 2**

- (i) The incident took place in the King's palace.  
(ii) Two women had differences over the ownership of the living and the dead sons.  
(iii) The King listened to their testimonies.  
(iv) The King ordered for the live baby to be cut into two.  
(v) The fake mother accepted but the real mother suggested that the baby be given to the other mother instead of cutting him.  
(vi) The King's verdict was that the baby be given to the mother who suggested that the baby should not be killed.

**Activity 3**

My name is David. I am a Kenyan. We celebrate 1<sup>st</sup> June as Madaraka Day every year. We got independence from British rule on 12<sup>th</sup> December 1963. On 12<sup>th</sup> December 1964, Kenya became a republic. I love my country very much.

**Activity 4**

Self-assessment.

**5 FAMILY**

**Activity 2**

- a. 1. Patrick, plan, party  
2. Peter, passenger, plane, pilot  
3. black, bear, behind, bush  
4. bat, upside, branch, big  
5. beans, beach

**Activity 4**

- b. 1. hid, heed  
3. dip, deep  
2. sit, seat  
4. peel, pill

**Word stress**

**Activity 6**

- b. 1. **con**vert – noun      **Convert** – verb  
2. **Im**port- noun      **Import** – verb  
3. **pro**duce – noun      **Produce** – verb  
4. **Con**test – noun      **Contest** – verb  
c. Self-assessment

**Reading: Synonyms and antonyms**

**Synonym**

**Activity 3**

- a. 1. reveal 2. tale 3. aged 4. lazy 5. peaceful  
b. 1. Peculiar 2. reveal, manifest, appear, convey etc.  
3. Frighten, terrify 4. Cease, end  
5. Unrushed, gentle 6. Grasp, grip  
7. Ponder, reflect 8. Sprint, race  
9. Initiate 10. Pretty  
c. Self-assessment

**Antonyms**

**Activity 5**

- a. 1. selfish 2. Strong, crude 3. Reveal, expose  
4. Predator 5. Sense 6. Unsympathetic  
7. Flowing 8. Stranger 9. Hated  
10. Concave 11. Awake, active 12. Boo, hiss  
b. 1. plump 2. Compulsory/obligatory  
3. Dull/stupid/shabby 4. Interesting 5. Coward  
c.

Word	Antonym	Sentences
Insolent	Humble	Our teacher likes humble learners.
Theory	Evident/ proof	Is there proof that the Earth is round?
Inadequate	Adequate/ sufficient	Her explanation was not sufficient enough to convince the police officer that she was innocent.
Anxiety	Calmness/ serenity	The wind failed and the sea returned to calmness
Mild	Harsh/ cruel	He faced some extremely harsh criticism.

**Grammar: Comparative and superlative**

**Degree of adjectives**

**Activity 2**

1. longer 2. More attractive  
3. Less 4. Broader  
5. More fierce 6. Uglier 7. More delicious  
8. Deeper 9. Hotter 10. More

**Activity 3**

1. more generous 2. Better 3. Richer  
4. Prettier 5. Hotter

**Activity 4**

a.

Adjective	Comparative	Superlative
well	Better	Best
Soon	Sooner	Soonest
Enjoyable	More enjoyable	Most enjoyable

Short	Shorter	Shortest
Exciting	More exciting	Most exciting
Rude	Ruder	Rudest
Fat	Fatter	Fattest

- b. 1. most brilliant    2. Sweeter    3. Most difficult  
 4. Most suitable    5. Worse    6. Hottest  
 7. Least intelligent    8. Farthest  
 9. More impatient    10. More expensive

### Intensive reading: Oral narratives

#### Activity 1

1. a. Cierume                      b. Akamba tribesmen  
 c. Ambeere tribesmen    d. Ciokaraine  
 e. Wangu wa Makeri      f. District commissioner.
2. Cierume – She is the main person talked about in the narrative.
3. Brave and courageous
4. She did what many men or women could have done at that time.
5. She used her dancing stick to fearlessly defeat their enemies.
6. A dancing stick.
7. a. Ciokaraine                      b. Wangu wa Makeri

### Writing: Friendly Letter

#### Activity 2

1. a. It has a heading consisting of the address of the sender and the date.  
 b. It has salutation: Dear Becky.  
 c. It has a body that explains the content of the letter.  
 d. It has a complimentary close: 'Your loving friend'  
 e. It has a signature line: Mercy
2. Mercy
3. They are friends.

## 6 DRUGS AND SUBSTANCE ABUSE

#### Activity 1

1. You seem to be deep in thought. Are you okay?; Are you sure all is well? If I were you, I would share it to get it off my chest; I am afraid I have not yet talked to him about it.
2. Sorry for interrupting; May I interrupt? Allow me to say something.
3. Any relevant response.

#### Activity 2

1. The use of drugs for nonmedical purposes.  
 2. Any non medicinal drugs.  
 3. Influence children get from their agemates.

4. They take drugs in the presence of their children.
5. They do not concentrate during lessons or attend school regularly.
6. They often interrupt lessons.
7. Drug abuse may lead to HIV/AIDS infection.
8. It may cause road accident.
9. stress, depression and personality disorders
10. A lot of money may be spent to rehabilitate them; They steal valuables from the family to sell.

#### Activity 3

- a.
1. A song sung to soothe a baby to sleep.  
 2. To lull babies to sleep.  
 3. Urging the baby to sleep.  
 4. Go ahead and sleep.  
 5. A relevant lullaby.
- b. Performing a lullaby.

#### Activity 4

- a.
1. always: adverb of frequency  
 2. rather: adverb of degree  
 3. well: adverb of manner  
 4. patiently: adverb of manner  
 5. now: adverb of time  
 6. already: adverb of time  
 7. inside: adverb of place  
 8. immediately: adverb of time  
 9. never: adverb of frequency  
 10. later: adverb of time
- b.
1. happily  
 2. quickly  
 3. angrily  
 4. quietly  
 5. keenly  
 6. fluently  
 7. heavily  
 8. elegantly  
 9. gently  
 10. tightly  
 11.  
 12.

c.

1S	O	M	E	W	H	2E	R	E	
E						X			3R
L						T			E
D				4V	E	R	Y		G
5O	F	6T	E	N		E			U
M		O				M			L
		D			7H	E	R	E	A
		A				L			R
		Y				Y			L
8C	A	U	T	I	O	U	S	L	Y

d.

1. tonight
2. usually
3. bottom
4. greedily
5. occasionally
6. anywhere

Activity 5

a. Choose the incorrectly spelt word.

1. bizarre
2. decieve
3. tomorrow
4. occassion
5. priviledge
6. existance
7. gratefull
8. jewelry
9. dissappoint
10. truely

b.

1. restaurant
2. surprise
3. beautiful
4. calendar
5. leisure
6. government
7. kilometre
8. centre
9. weather
10. foreign

c.

chief happening there wondered thieves caught  
 unfortunately practice learners dropping alarming  
 conspired caught commit behaviour repeated

d.

- recommend  
 come  
 nation  
 men  
 date  
 rate  
 ration  
 motion  
 made  
 mend  
 road

## 7. NATURAL RESOURCES – FORESTS

### Activity 1

a.

comparison	Emphasis	Addition
whereas while	particularly especially above all this	moreover furthermore besides also

Result	Illustration	Contrast
therefore because	such as for instance like for example You clarify	however nevertheless but

b.

1. Importance of conserving forests
2. They make life possible for human beings and animals.
3. Planting trees; Not destroying forests; sensitising people to avoid cutting down trees.
4. Sadly, consequently, ultimately, another important thing, in addition, luckily, first and foremost
5. Presenting speeches with classmates.

### Activity 2

A story about environment conservation.

### Activity 3

a.

1. mine.
2. yours.
3. hers
4. theirs
5. His
6. ours

- b. 1. She  
 2. him

3. We
  4. it
  5. them
  6. He
  7. They
  8. us
  9. her
- c.
1. I
  2. she
  3. He
  4. she
  5. I
  6. me
  7. they
  8. they
  9. I
  10. he

d. Correct sentences with pronouns.

#### Activity 4

1. The narrator
2. No reason in particular.
3. To avoid being punished by Mr Andako.
4. Mr Rapenda, Mr Andako, Oyundi, Manduli
5. Mr Rapenda: responsible; Mr Andako: harsh; Oyundi: mischievous; Manduli: investigative
6. Main characters feature in most events of the story unlike the minor characters.
7.
  - a. customary: a usual practice
  - b. lethal: serious and dangerous
  - c. stirred: moved
  - d. tranquility: calmness
  - e. all that was an exercise in futility
  - f. haywire: wrong
  - g. apparition: ghost
  - h. our dormitory was a bedlam: it was noisy
8. To make the other students think that the school was haunted.
9. He should have been punished.

#### Activity 5

a.

Writing step	Description
Prewriting	Decide on the topic to write about, carry out the necessary research and put down a few points related to the topic.
Drafting	Write the outline of your writing. Ensure the writing has introduction, body and conclusion.
Revising	Look at the outline of your writing. Correct any errors. Make additions where necessary as you write the second draft.

Editing	Go through the second draft. Check and correct any grammatical and spelling errors as well punctuation mistakes.
Publishing	Share your writing with the audience.

b. A well-written composition.

## 8 TRAVEL

### Listening and speaking

#### Activity 1

1. The Narrator/The Writer, Andaji, Wanyongi and Mother
2. Flume ride and Aqua play
3. Because she was the only girl.
4. She couldn't play at the Airborne Short because she was too short. Her mother suggested that she plays at the Aqua play instead.
5. The narrator/ The Writer.
6. She lost the game and consequently missed the present.
7. Kind/generous/sympathetic/concerned.
8. Self-assessment
9. He probably sympathized with the writer since he had gone through the same experience before.
10. Self-assessment

### Reading: Intensive reading

#### Activity 1

- a. Picture (a) – Road transport  
Picture (b) – Railway transport
- b. Air transport, Water transport, Cable transport, Pipeline transport.
- c. Self-assessment.

#### Activity 2

1. He was only one traveller and therefore he couldn't manage.
2. Road transport.
3. Grassy
4. We should not always try to follow or do what majority of people do.

### Vocabulary practice

- a. 1. Two roads separated into two directions towards the yellow woods.
2. The Traveller took the route that was not used frequently.
3. As a result of using the road least travelled by, the traveller achieved more than what many people had achieved.
4. Return.

- b. 1. Separate.
2. a dense growth of shrubs and other plants, especially under trees in woodland.
3. Walked on or along.
4. An area of land, smaller than a forest, that is covered with growing trees.
5. A long, deep audible breath expressing relief or tiredness.

### Grammar: Simple prepositions

#### Activity 3

- a. 2. by-agent    3. by-agent    4. with-instrument
  5. with-instrument    6. with-instrument
- b. Self-assessment

#### Activity 5

1. toward    2. off, into    3. around    4. along    5. up

### Intensive reading: Poetry

#### Activity 1

1. A character is a person, animal, or object/thing presented as a person in a poem.
2. Characters in poem may be identified by using their actions, words or thoughts.
3. Adjectives.

#### Activity 3

1. Temple, River, Flower, Willow, Sand, Traveller and Field.
2. a. Flowers and Willows – selfless  
b. Field – sleek and vivid  
c. Sand – soft
3. Adverbs such as: here, before, again, now and late.
4. Temple, Bridge, Flower, Traveller.
5. They play the role of human being in a poem.

## 9 HEROES AND HEROINES

#### Activity 1

1. tusks
2. read
3. pool
4. doubt
5. lock
6. tent
7. clash
8. dawn
9. loyal
10. full

#### Activity 2

1. He led the Nandi to resist the British colonial rule.
2. Eleven years

3. He was very close to his father.
4. He was courageous, prophetic, good leadership skills
5. That a black snake spitting fire would pass through the land of Nandi.
6. He was courageous and had great leadership skills
- 7.
- a. intruders: people who enter a place without permission.
- b. ornaments: things used to make a place or something more attractive.
- c. elusive: difficult to find or catch
- d. commemorate: to remember an important event
- e. truce: an agreement between enemies to stop fighting
8. To make ornaments and weapons.
9. To kill Koitalel and his people.
10. He had had brought 75 soldiers instead of 5 as he had promised.

#### Activity 3

1. or
  2. but
  3. or
  4. and
  5. but
  6. or
  7. but
  8. or
  9. or
  10. and
- b.
1. Martha is a good learner but she does not respect her classmates.
  2. The boy worked hard to pass the test but failed terribly.
  3. I would like to browse on the Internet but I do not have data bundles.
  4. We enjoyed the holiday but it was rather short.
  5. My father bought a new house but have not moved in yet.
  6. He is a good friend but I do not like his laziness.
  7. She is very hungry but she has nothing to eat.
  8. We began our journey in the morning but we arrived at our destination late.

- c.
1. Martin plays football and hockey.
  2. Nelima and Rehema have been to Eldoret.
  3. We got to the terminus and boarded the bus.
  4. Kennedy is kind and humble.
  5. My mother keeps cows and goats.
  6. Kindly get into the house and take a seat.
  7. My uncle lives and works in Mombasa.
  8. Mercy has a sore throat and a fever.

#### Activity 4

1. They fear being punished heavily.
2. Cruel, harsh, unforgiving,
3. How do the following characters make the story flow well?
  - a. The king
  - b. The prince
  - c. Sandra
4. A brief summary of the story.
5. He thought she was the most beautiful girl that ever existed.
6. Yes. Any relevant explanation.
7. They did not want the king to know about her
8. Any relevant response
9. He discovered that Sandra was very beautiful.
10. King: cruel and harsh; prince: kind but stubborn; Sandra: beautiful; Sandra's parents: loving and caring

#### Activity 5

A well-written composition about any Kenyan hero or heroine

## 10 MUSIC

### Grammar: Determiners

#### Activity 3

1. a    2. an    3. a    4. an    5. a/an    6. a    7. a

#### Activity 4

Read the following sentences and underline definite article used.

1. The lady over there is a famous actress.
2. That is the boy I told you about.
3. The price of gas keeps rising.
4. The morning is quiet. Let's take a walk.
5. Muthoni lives in an apartment. The apartment is new.
6. Sara can play the guitar.

#### Activity 5

1. an    2. a    3. The/the    4. an/a    5. a    6. a    7. an    8. a    9. A    10. A    11. the    12. The/the/the    13. A/a    14. the    15. The

#### Activity 7

- a. Read the following sentences and then underline the possessive pronouns used
1. My phone got lost yesterday. May I use yours.
  2. Did you know the guitar Mr Karimi is playing is mine?
  3. The house on the corner is theirs.
  4. My friend's phone is superior to mine.
  5. Would you recognize your dog if it were in a company?
  6. Our violin is blue while theirs is black.
  7. I wish you and your family a joyous new year.

b. Fill in the blanks

- |                         |         |                         |
|-------------------------|---------|-------------------------|
| 1. yours                | 2. its  | 3. ours/yours/mine/hers |
| 4. its                  | 5. mine | 6. our/yours            |
| 7. mine                 |         | 8. his/her/my/mine      |
| 9. My/your--- your/mine |         | 10. his/your/her/their  |
| 11. My/your---Your/mine |         | 12. yours               |
| 13. ours                |         | 14. mine                |

### Intensive reading: Characters and character traits

#### Activity 2

1. On the edge of the forest.
2. Because she was alone away from the people who could have helped her.
3. watching from the tree where it perched.
4. a song.
5. It had gone to the forest to fetch firewood.
6. She was no longer afraid because her husband was in the hut.
7. on the spot/immediately.

#### Activity 3

- a.
1. **Fence:** It was broken
  2. **Granary:** Was empty and nearly eaten up by termites.
  3. **Nyumba:** Its grass roof had holes that one could see the sky from inside.
- b. The Smith, the wife of the Smith, the other Smiths, the Dove, the Ogre
- i. Self-assessment
  - ii. Self-assessment
- c. i. **The woman:** Helpless, patient, caring.  
 ii. **The man:** Hardworking, bold, responsible.  
 iii. **The Ogre:** Cruel, selfish, greedy.  
 iv. **The Dove:** Intelligent, caring, empathetic.  
 v. **The other Smiths:** Hardworking.

### Grammar

- a. 1. a  
 2. a  
 3. the  
 4. an  
 5. a

6. the
7. a
8. an
9. the
10. a
11. an
12. the
13. a
14. the
15. the

- b.
1. my
  2. her
  3. our
  4. his
  5. their
  6. Our
  7. your

### Reading: Study skill

1.
  - a. Music is important
  - b. Music helps us express ourselves; Music helps to relieve patients of their pain; Music reduces stress and anxiety; Music can help to memorise certain concepts in academics; It enables students with special needs to find something exciting to do.
2. A well-written summary with:
  - a. The heading
  - b. Sub headings
  - c. Key points from the story
3. Any relevant response.
4. By conveying how one feels through singing or playing music instruments.
5. Anyone can sing a song or play a musical instrument to express one's feelings.
6. Everyone seems to be busy and most people are unfriendly.
7. To make the procedure less painful.
8. Music with slow tempo or instrumentation
9. To increase the intake of oxygen.
10. It makes them feel less stressed.
11.
  - a. to free someone from something.
  - b. important
  - c. instil
  - d. deserted

### Writing

- a. A list of items included in a shopping list.

- b. A relevant shopping list.
- c. A list of camping equipment and personal effects.
- d. Any relevant response.

## 11 PROFESSIONS

### Activity 1

1. Picture (a)–Judge-Determining cases in the court.  
Picture (b) –Mechanic- Repairs vehicles.  
Picture (c) – Farmer- Keeps livestock.
2. Self-assessment.
3. Self-assessment.
4. Self-assessment

### Activity 2

1. Interview.
2. A person who is being interviewed.
3. Cleaning job.
4. Very knowledgeable about his or her work. Very articulate in responding to questions.
5. To determine if an applicant's skills, experience and personality meet the job's requirement.

### Activity 4

1. She or he is a very active person.
2. Class debates, presentations, role-playing exercise and group activities.
3. He or she uses the concept and instruction check methods to assess the mastery of the concept.
4. The employer probably wanted to know if the teacher is well qualified to work in his or her school.

## Intensive reading: Non-fiction materials

### Activity 2

- b.
1. It is an occupation that one undertakes for a significant period of his or her life.
  2. Factors to consider when choosing a career:
    4. attitude
    5. Time efficiency, people management and team player.
    6. Jobs that do not align with your interest.

### Vocabulary practice

#### Activity 4

- a.
  1. **Job:** A task or a piece of work especially one that is paid.
  2. **Profession:** a paid occupation, especially one that involves prolonged training and a formal qualification.
  3. **Interest:** The feeling of wanting to know, do or learn about something.
  4. **Attitude:** A feeling or opinion about something.
  5. **Passion:** Any powerful or compelling emotion or feeling that one has towards something.
  6. **Talent:** Natural skill that one possess.

- b. i. a. Riders, Engineers      b. Doctor  
 c. Footballer      d. Journalist      e. Painter  
 ii. 1. Plumber      2. Dentist      3. Architecture  
 4. Barber      5. Lawyer      6. Actresses  
 7. Cobbler

### Grammar in use

#### Word class: Adjectives

##### Activity 2

#### a. Forming adjectives

1. Mathematical      2. Oily      3. Functional  
 4. Peaceful      5. Mysterious      6. Historical

#### b. Change to adjectives

2. He often act childish.  
 3. The event was successful.  
 4. We enjoyed the rhythmic sound of the drum.  
 5. She adopted a homeless dog.  
 6. Look out, that plant is poisonous.  
 7. It looks like a rainy day today.  
 8. She always act courteously.  
 9. She has a pretty hair.  
 10. We go for a daily walk.

##### Activity 3

- a. 1. inventive  
 2. Curious  
 3. Proud

#### b. Forming adjectives

1. Amazing      2. Interesting      3. Annoying  
 4. Escaping      5. Improving      6. Damaging

### Intensive reading: Dilemma narratives

##### Activity 3

- a. It is a dilemma that require a response.  
 b. The land lord, the cat, A young rat and An old mouse.  
 c. The cat, The young rat and The old mouse.  
 d. Self-assessment.  
 e. Self-assessment.  
 f. Self-assessment.  
 g. Old age come with wisdom.

### Writing

#### Spelling: Antonyms, synonyms and numerals

##### Activity 2

Word	Antonym
Guilty	Innocent
Temporary	Permanent
Join	Separate
Happy	Sad
Expensive	Cheap
Rare	Common/frequent
Wise	Stupid/silly/foolish
Reckless	Careful/cautious
Over	Below/under

### Activity 3

- a. 1. ever      2. remember      3. bright  
 4. cowardly      5. thick      6. kindness  
 b.

Word	Antonym	Sentence
Smooth	Rough	The driver took a turn and drove <b>through</b> the rough road leading to the village
Include	Exclude	
Entrance	Exit	
Broad	Narrow	
Allow	Forbid	
Ceiling	Floor	
Often	Seldom, rare, never	
False	True	
Ancient	Modern	

### Activity 5

- a. 1. lifeless      2. tidy      3. sobbed      4. above  
 5. achievements      6. dawn      7. afraid  
 b.

Word	Synonym
Impartial	Neutral
Mobile	Movement
Surplus	Excess
Total	Entire/complete
Mourn	Grieve for
Moral	Virtuous
Cozy	Snug/comfortable/warm
Hold	Grip/clasp/clutch
Help	Aid
Ecstasy	Bliss/joy/rapture/cloud nine

### Activity 7

- b. 2. In the year one thousand nine hundred and sixty-three, Kenya go Independence.  
 3. Kenya became a Republic in the year one thousand nine hundred and sixty-four.  
 4. In the year two thousand and ten, a new constitution was promulgated in Kenya.  
 5. A deadly and viral Covid-19 disease broke out in the world in the year two thousand and twenty.  
 6. The most peaceful election in Kenya was conducted in the year two thousand and twenty-two.

## 12 TRADITIONAL FASHION

### Activity 1

1. Trickster narrative  
 2. The Hare, The Hyena, Hare's mother, Hyena's mother, The Old Hyena.



3. a. **Hare:** He was cunning and treacherous.  
b. **Hyena:** Foolish
4. He probably wanted the Hyena to suffer.
5. Hyena's mother's
6. He must have been thinking that his mother was the one responsible for the death of their animals.
7. In the bushy banana garden.
8. He secretly followed the hare and witnessed everything.
9. An old Hyena.
10. Do not fall for every advice.  
Some friends can be enemies.  
Think before you act.

#### Activity 2

1. a. 'I think we should consult the seer to find out why our cows are dying'.  
b. 'Let us go and kill our mothers and take out their livers. We shall then cook and taste these livers'.
2. Consulting the seer.
6. Self-assessment
7. Self-assessment.
8. He would have first thought of the consequences of killing his mother.
9. The consequence that would befall him.
10. a. He knew his mother was not responsible for the death of their cows.  
b. His mother was the one feeding him.

### Reading: Comprehension

#### Activity 1

1. Children in traditional attire.
2. The Kuria community
3. The traditional dress is a way of expressing culture.

#### Activity 2

1. The last day before the learners broke for the December holiday.
2. They were looking forward to know what 'Cultural Day' really was.
3. Giriama
4. To promote ethnical harmony and tolerance, to learn and understand the cultures of their schoolmates.
5. They had never thought that their teachers were from different cultural backgrounds.
6. A spacious airy school hall.
7. a. To dress in their traditional costume.  
b. To present a folksong from their communities.  
c. To find out customs and traditions of a community with which they were unfamiliar.
8. a. Cultural Day helps one to learn about the customs and traditions of his classmates.  
b. One can know more about other cultures better when he or she know their background.
9. wedding

10. Cultural Day, A thrill by Kuria Folk dance. (any other relevant suggestion is accepted)

### Vocabulary practice

#### Activity 4

1. **Costume:** A set of clothes and other accessories one wears when he or she is acting.
2. **Culture:** A way of life of a particular community.
3. **Bemuse:** To be confused
4. **Wore on:** Passed
5. **Amusing:** Entertaining and funny; causing laughter.
6. **Outfit:** A set of clothes worn together.
- b. Self-assessment.

### Grammar in use: Phrasal verbs

#### Activity 2

1. off    2. up    3. out    4. up    5. off    6. through
7. across    8. on    9. forward    10. away

#### Activity 5

- a.
  1. **Come on:** To encourage someone to do something.
  2. **Come over:** To come to a place, move from one place to another, or move towards someone.
  3. **Come out:** To become known or be made public.
  4. **Come between:** To cause disagreement between people or groups.
  5. **Come at:** To move toward someone in a threatening or aggressive way.
  6. **Come into:** To enter a place or a new position or state.
- b. Self-assessment

#### Activity 6

1. comes out    2. come around    3. came off
4. come around    5. came about    6. came across

#### Activity 8

1. **Give up:** Despair
2. **Give over:** To allow oneself to be taken over by emotion or addiction.
3. **Give off:** Emit
4. **Give up on:** To stop trying doing something because you feel you cannot succeed.
5. **Give way:** Collapse or break.
6. **Give yourself up:** to allow yourself to be fully affected by, controlled by, or involved in something.

### Reading: Main idea

#### Activity 1

- b. 1. The effect of Western Fashion on Traditional Fashion.  
2. It has undercut the local prices.  
3. The rise of Internet and Social Media.

#### Activity 2

1. **Fashion:** A popular or the latest style of clothing, hair, decoration, or behaviour.
2. **Famous:** Known by many.

3. **Embrace:** To accept a belief, theory, or change willingly.
4. **Consumer:** A person who purchases goods and services for personal use.
5. **Cultural diversity:** The existence of a variety of cultural or ethnic groups within a society.

### Writing

#### The writing process: Dialogue

##### Activity 1

- b. 1. It is about a customer who wanted a traditional designer dress from a Designer.
2. Kamba community.      3. Dark brown.
4. Kshs. 2820
5. A person who plans how something new will look and be made.
- c. 1. colon, question mark, comma and full stop.
2. The Designer and the Customer.

## 13 LAND TRAVEL

##### Activity 1

1. Road transport
2. Railway transport.
3. Air and water.
4. Self-assessment.

### Listening and Speaking

##### Activity 2

- b. 1. The Persona is talking about the road to his Home.
2. Country road, Take me home, West Virginia mountain mama.
3. West Virginia.
4. Mountain, Shanandoa River.
5. Self-assessment.
6. The River and the mountain.

##### Activity 3

1. **Memory:** Recollection.
2. **Misty:** Covered with mist.
3. **Dusty:** Covered with dust.

### Intensive reading: Comprehension

#### Strategies

##### Activity 1

1. An ambulance, an injured person being taken into the ambulance, an injured person being attended to by a first aider, first aid kit and motorcycle on the ground.
2. By being very cautious on the road. (Any other explanation)
3. Being hit by a falling object, Trips and falls, Bruises, Sprains, Cuts, Burns, Choking and Poisoning.
4. Self-assessment.

##### Activity 2

- b. 1. Because it causes damage and injury.
2. It is unexpected or unintentional incident.
3. At least one thousand.

4. Attitude.
5. relax a bit or take a taxi.
6. It hampers the ability of the brain.
7. It minimizes the effect of accident.

##### Activity 3

1. a. Avoid driving when tired.
- b. Avoid driving under the influence of alcohol.
- c. Ensure whenever you are travelling, you buckled up your seatbelt.
- d. Avoid using mobile phones while driving.
- e. Obey the traffic lights.
- f. Never over speed.
- g. Repair any mechanical problem in the vehicle that may make it faulty.
- h. Avoid driving under unfavourable weather. If it cannot be avoided, then drive slowly.

#### Vocabulary practice

##### Activity 4

1. **Damage:** To harm or spoil something.
2. **Injury:** physical harm or damage done to a living thing
3. **Unintentional:** Accidental
4. **Precaution:** A measure taken in advance to prevent something dangerous, unpleasant, or inconvenient from happening.
5. **Hamper:** To restrict the movement of by bonds or obstacles
6. **Motorist:** A person who drives a car.
7. **Pedestrian:** A person walking rather than travelling in a vehicle.
8. **Leisure:** Use of free time for enjoyment.
9. **Safety:** The condition of being protected from or unlikely to cause danger, risk, or injury.
10. **Indicator:** Lights on a car that flash to show which way the car is turning.

#### b. Self-assessment.

##### Activity 5

1. **Jump a red light:** To ignore a red traffic light and keep driving.
2. **Bring down:** To reduce the level of something.
3. **Under our control:** Able to be handled or managed with success.

### Grammar in use

#### Sentences: Simple sentences

##### Activity 2

1. Sally (subject) **sells sea shells.** (predicate)
2. Charles (subject) **wrote the composition.** (predicate)
3. The cat (subject) **stretched.** (predicate)
4. John (subject) **saw a dog.** (predicate)

##### Activity 4

- a. Mr Obonyo works for an oil company.
- b. He used to ride on public transport.
- c. He was unable to reach by 8: 00 am.
- d. So, he bought himself a car.

- e. He can use the car even for other things.
- f. Mr Obonyo uses the car frequently.
- g. He relies on it for his movement.
- h. He visits markets and fuel suppliers.
- i. He uses the car almost every day.
- j. He uses it for visiting his office.

## Reading

### Literature: Praise songs

#### Activity 1

1. a. A song can be used to pass important message.
- b. A song can used to entertain.
- c. A song can be used to praise someone or something.
- d. A song can be used to encourage someone etc.
2. Self-assessment.
3. During National functions, When we are expressing appreciation for what someone has done for us.
4. Self-assessment.

#### Activity 2

1. 'I have to praise you'.
2. Probably a friend.
3. He or she has been with the writer during hard times and good times.
4. a. For what they have done to us.
- b. For their achievements. Etc.

## Writing

### Creative writing: Narrative composition

#### Activity 1

1. Some writers use very interesting stylistic devices such as idioms and other phrases.
2. By skillfully using interesting expressions such as idioms.
3. Idioms, metaphors, similes, proverbs, phrasal verbs, relevant vocabulary among others.

#### Activity 2

1. a. **Live it up:** To have an exciting and very enjoyable time.
- b. **At the crack of dawn:** Very early in the morning (daybreak).
- c. **To hit the road:** To leave a place or begin a journey.
- d. **To send orison to God:** To pray.
- e. **To cough the engine to life:** The journey began.
- f. **To break the journey:** To stop somewhere for a short time during a journey.

#### Activity 3

- a.
  1. **Biting more than you can chew:** To try to do too much; to take on or attempt more than you are capable of doing.
  2. **Own up:** To admit that you have done a bad thing.

3. **Call it a day:** to stop what you are doing because you do not want to do any more or think you have done enough.
4. **Hold your tongue:** To stop yourself from speaking.
5. **To have an itchy feet:** To start to want to travel or do something different.
6. **Having a lot on your plate:** To have something, usually a large amount of important work to deal with.

## 14 SPORTS: OUTDOOR GAMES

#### Activity 1

- a.
  1. banned
  2. stung
  3. chin
  4. king
  5. gone
  6. fans
- b. **Complete the sentences with the correct word.**
  1. fine, vine
  2. fast, vast
  3. van, fan
  4. leave, leaf
  5. fail, veil
  6. save, safe
- c. Correct intonation

#### Activity 2

1. Facts about rugby
2. 30 players
3. 1 hour 20minutes
4. In rugby, the ball can be held with hands by all players unlike in football.
5. Seven
6. A try is scored when a player touches the ball to the ground in the opponent's in-goal
7.
  - Read the passage again
  - Make a list of the key points.
  - Write the summary in your own words.
  - Go through your summary. Eliminate unnecessary details.
8. A well-written summary

#### Activity 3

1. plays
2. were
3. earn

4. has
5. are
6. had
7. were
8. wants
9. has
10. were

#### Activity 4

1. The impact of the shot he took
2. Close to one month.
3. The opponents' fans were very happy. The fans of the writer's were unhappy.
4. There was limited time left and they were trailing.
5. He looked in the direction of the ball.
6. They were eager to score another goal.
7. To make up for the lost time.
8.
  - a. spirits were dashed: getting discouraged
  - b. all our efforts had borne no fruit: they did not attain their goal.
  - c. Fire burned in their eyes: They were furious.
  - d. They were not ready to go down without a fight: They were eager to play well till the last minute.
  - e. There was an eternal uproar from all and sundry: Everyone was very happy.
9. as huge as an elephant, as helpless as a baby, as quiet as a mouse, as tired as a dog, as loud as thunder;
10. Fire burnt in their eyes; The black and white ball at my feet moved with me; . It flew across the grass; Some were furiously red; We were going to inject our blood, sweat and tears into it; Their joy knew no bounds; My teammates were equally over the moon; Weaving our way through our opponents; My stomach knotted;
11.
  - "We are out of the game, Manduli," whispered one of my teammates.
  - "We must fight to the death. Let us remain as fierce as a lion until the final whistle is blown," I remarked.
  - "Good job, Manduli. That was really good," said our coach.
  - "Thank you, coach. I had to put into practice what you taught me," I replied.
12. A list of metaphors.

#### Activity 5

A well-written composition

### 15. TOURIST ATTRACTION SITES IN KENYA

#### Practice Activity 1

- a.
  1. the introduction, body and conclusion
  2.
    - Make a comprehensive research about the topic.
    - Put down key points about the report.
    - Write the actual report.
    - Read through your report to correct errors.
    - Rehearse how you intend to present the report.
    - Do the actual presentation of the report.
  3. A presentation of the speech.
- b. Preparation and presentation of a speech.

#### Activity 2

1. Any relevant response.
2. To express emotions when reading.
3. What to enjoy at the Maasai Mara National Reserve
4. Scan the third paragraph and find the differences between Tsavo East and Tsavo West. Tsavo West receives more rainfall hence has more vegetation as compared to Tsavo East.
5. To have an idea what the story is about.
6. Reading more materials regularly.
7. He can guide him to read faster and help him to use the dictionary to pronounce words correctly.

#### Activity 3

- a.
  1. negative
  2. negative
  3. positive
  4. negative
  5. positive
  6. negative
  7. negative
  8. positive

9. negative

10. positive

**b.**

1. Mr Waweru does not work as an accountant in the city.
2. My friends and I do not plan to go on a trip.
3. They did not manage to see different wild animals.
4. My aunt did not buy new furniture for her house.
5. Richard and his elder sister did not write exciting poems about tourism.
6. We do not have great plans on how to spend our holiday.
7. The tour guide did not explain to us the difference between leopards and cheetahs?
8. The little girl did not amaze the audience with her excellent speech.
9. I do not think I know where we can easily see an ostrich.
10. That was not the most exciting adventure I have ever had.

**c.**

#### **Affirmative sentences**

You look rather worried.

I am very tired.

We had a family trip to Lake Nakuru National Park today.

We have just got back home.

You must have had an exciting day.

It was a very exciting trip.

We really enjoyed ourselves.

I'll show you the pictures on Monday

#### **Negative sentences**

I am not worried at all, Peter.

It is not usual for you to be tired on a Saturday evening.

It is not because of the assignment.

I have never been to Lake National Park.

Unfortunately, we did not see lions.

Neither did we see leopards.

#### **Activity 4**

1. The country is exciting to visit.
2. Come and see the beauty of Kenya. It has been repeated to emphasise how beautiful the country is.

3. A citizen of the country: Kenya.

4. There are many things to enjoy in Kenya.

5. rain and again, bark and dark, song and long, free and be, sky and cry, roar and more

6. What shows in the poem that Kenya is a good place to visit? There are many animals to see.

7. To show the mood of the events in the poem.

8. Learners write and share a poem.

#### **Activity 5**

a. There is a roaming lion.

b. A well-designed notice

c. 1. Tourism in Kenya.

2. Smoking is bad.

3. Do not feed wild animals in the park.

4. Do not practise poaching.

5. Do not cut down trees.

d. A well-designed poster.



## **MODEL PAPERS**

### **Model Paper 1**

1. How can I help you?
2. I am sorry for that
3. Have you travelled out of the county lately?
4. I need to take your blood sample
5. All will be well
6. They did most of the things together.
7. They were having a leisurely walk.
8. It was exciting to see.
9. To ensure each one of them got something to carry home.
10. He was disgruntled.
11. Why was Monkey green with envy? Tortoise's banana had grown whereas his dried up.
12. He ate all the bananas instead of dropping some to Tortoise.
13. To punish Monkey.
14. It has nature reserves with varied wildlife.
15. There are skyscrapers and contemporary facilities.
16. A long period without food.
17. famine, disease and war.
18. It is very dry and there is not much food.
19. To seek employment.
20. There are fewer job opportunities.
21. Poor agricultural methods and unpredictable weather conditions.

**Use the correct form of the word in brackets.**

22. keener
23. smarter
24. elder
25. sound
26. compound
27. flour
28. me
29. its
30. has
31. are
32. has
33. definite
34. committed
35. into
36. had anticipated
37. could
38. However
39. Luckily
40. the

**Model Paper 2**

1. May I know who you are.
2. What are your qualifications?
3. Where have you been working since then?
4. How else will you be useful to the school apart from teaching?
5. I am grateful for the invitation to attend this interview.
6. She did not have a pet yet her home was in a remote area.
7. She was scared.
8. Sandra was unaware of the danger she was exposing herself to.
9. It might have rabies.
10. To treat the animal's wounds.
11. To see his family.
12. She thought it might be killed by hunters.
13. He had been wounded by a hunter.
14. Many people love playing or watching it.
15. Britain
16. He can touch or hold the ball with his hands.
17. Every team member plays an important role.
18. To ensure the game is orderly.
19. If a player commits a foul.
20. To ensure that players of the same time can easily identify one another.

21. Six
22. early
23. together
24. an
25. a
26. the
27. The choir sang exciting songs during the church service.
28. She chose to do her chores in the morning.
29. He gave us two hours to get everything ready.
30. noun
31. verb
32. noun
33. equipment
34. applause
35. homework.
36. some
37. these
38. Since
39. whenever
40. must

**Model Paper 3**

1. Do you live in this area?
2. I am going to Mr Koyo's home.
3. Do you know his other name?
4. Is there any other thing you know about him?
5. I'll take you to his home.
6. They met by chance.
7. They met frequently.
8. Such animals could betray them.
9. Unity is strength.
10. roaming
11. He was scared of the cows.
12. He deceived them hence making them to separate.
13. cunning
14. to assess the changes that have taken place in our environment and forecast what we could be facing in the future
15. calamity; catastrophe
16. Due to increased rainfall.
17. It brings about an increased destruction of property, infrastructure and livelihood.
18. Due to rise in temperature.
19. People will starve.
20. mangrove trees will submerge.
21. ten years



18. Red, yellow and orange.
19. Dull and ugly.
20. They can make us feel positive or negative.  
They can change our feelings about something.

#### **Cloze test**

21. commotion
22. all of a sudden
23. towards
24. along
25. baying

#### **Grammar**

26. round, new, white, leather
27. An ambitious, young, Kenyan
28. Noor was both dirty and late for school.
29. The stranger knocked the door immediately we fell asleep. The stranger knocked the door as soon as we had fallen asleep.
30. On Monday morning, Awino went to see Mr Mogoba, the Managing Director at Distinction Publishers across Ronald Ngala Avenue in Nairobi, but she was told he had gone on a tour to Fort Jesus in Mombasa.
31. My father, Mr Hassan, will take a short holiday in May or late June.
32. but
33. and
34. or
35. The sick child was given painless injection.
36. I like Norwegian food.
37. better
38. least
39. me
40. you, him

### **Model Paper 6**

#### **Dialogue**

1. The use of the words such as; my phone, the phone is cutting out.
2. At the office.
3. To pick up extra papers for the computer printer.
4. Lennox's phone had bad reception.
5. Can you please, sorry.

#### **Passages**

##### **Success**

6. It is the ability to overcome the circumstances and achieve what one desires.
7. By all means. By every possible way.
8. Integrity
9. People's friendship and respect.
10. Being insensitive to other people's feelings and disregarding people.
11. Friends and respect.
12. Disappointment and dejection.

13. As you strive for success, let it not be the only priority and be mindful of other people. Besides, as we pursue success, we should not compromise our integrity.

#### **A frightening experience**

14. Home
15. He was tired sleepy and late.
16. When the rider made a few turns in an area he could not recognize.
17. begin to realize that the rider was for no good.
18. When the rider did not answer him but instead increased his speed.
19. He jumped off the motorbike, landed on the ground, dived off the road to avoid the rider and then ran off.
20. It is best not to take risks even when it seems or difficult to be careful.

#### **Cloze test**

21. income
22. contractor
23. weighing
24. plentiful
25. afford

#### **Grammar**

26. some
27. none
28. was
29. have
30. Supermarket is being shoplifted from every day by people.
31. Mother will definitely be surprised by this good news.
32. not as beautiful as
33. nearest
34. to
35. at
36. Where were you going yesterday?
37. I was swimming as Eunice was riding a bicycle.
38. keep away.
39. postpone
40. despair



# MAJIBU YA KISWAHILI

# 1 Usafi wa kibinafsi

## A. Kusikiliza na kuzungumza

### Zoezi 1

1. Kuepuka vizuizi vya mawasiliano  
Kusikiliza kwa makini  
Kumtazama mzungumzaji kwa makini  
Kutikisa kichwa kuonyesha kusikiliza kauli  
Kutumia maneno au vihishishi vya kumhimiza  
kuendelea kuzungumza  
Kumtazama mzungumzaji ana kwa ana
2. Kutumia lugha ya adabu  
Kutomkata kalima mzungumzaji  
Ubadilishanaji zamu ufaao  
Kujibu kwa kujikita kwa kiini cha swali au  
mazungumzo  
Kumwangelia mzungumzaji unapojibu
3. Kushiriki mazungumzo na mzazi au mlezi

## B. Kusoma

### Zoezi 2

1. Kueleza mambo kwa kurejelea kifungu
  - a) Mambo hayo yalifanyika siku ya Ijumaa, wakati wa asubuhi hadi alasiri
  - b) Shughuli mbalimbali za kuadhimisha siku ya usafi zilifanyika
  - c) Waziri wa Mazingira katika gatuji hilo
2. Matukio mbalimbali yakifuatana kama vile kuwasili uwanjani, kuwasili kwa mgeni wa heshima, kutumbuizwa, kupokea mafunzo, kufumukana
3. Alishangiliwa, alipigiwa makofi, alikaribishwa
4. mtandaoni – mfumo wa mawasiliano ya kielektroniki unaopitia katika kompyuta ulimwenguni na hutumiwa kutafuta na kupeana habari.  
usafi wa kibinafsi – masuala ya usafi yanayoathiri mtu binafsi  
sabuni – mchanganyiko wa vitu ambao hutumika kuogea, kufulia na kusafishia vitu.  
mchezo wa kuigiza – ni mchezo unaohusisha uigaji ama utendaji wa mambo namna mtu mwingine anavyotenda

## C. Kuandika

### Zoezi 3

1. Herufi kubwa hutumika mwanzoni mwa sentensi, kuanzisha nomino maalum, kwenye maneno yaliyofupishwa
2. Siku moja, mimi na dada yangu Amina tulikuwa tumealikwa kuhudhuria sherehe kule Nanyuki. Siku hiyo ilikuwa Alhamisi. Tuliampa asubuhi na mapema ili tusichelewe. Niliingia hamamuni na kuoga kwa

maji fufutende. Dada naye alioga kisha akapiga meno mswaki. Nywele zake zilikuwa zimechanwa zikapendeza. Nami nilikuwa nimezidira nywele zangu na kuangua kucha. Tulisafiri hadi mjini ili kuhudhuria warsa kuhusu jinsi ya kujikinga kutokana na UKIMWI. Bi. Nasaha ndiye aliyekuwa mgeni mheshimiwa katika mkutano huo. Tulijifunza mambo mengi sana siku hiyo.

3. Kifungu kitungwe na herufi kubwa kutumiwa kwa usahihi.

### Zoezi 4

1. Kikomo hutumiwa mwishoni mwa sentensi iliyokamilika, kwenye mkato wa maneno, kuandika tarehe, kuonyesha sehemu ambayo si nzima na kutenga shilingi na senti.
2. Wakazi wa eneo la Mwirembe hawakujua mengi kuhusu usafi wa kibinafsi. Chifu wa eneo hilo aliandaa mkutano ili wafundishwe mengi kuhusu suala hilo. Mkutano huo ulifanyika Jumamosi, tarehe 23. 04. 2022. Kufikia saa 10.30, kila mmoja alikuwa ameketi na kutulia tuli. Ukumbi wa mkutano ulikuwa na urefu wa mita 50.35 na upana wa mita 25.55. Dkt. Siha ndiye aliyekuja kuwapa mafunzo. Baada ya kuwaelimisha, waliuliza maswali yaliyowatatiza kisha wakaondoka.
3. Kifungu kitungwe na kuakifishwa kwa kutumia kikomo kwa usahihi.

## D. Sarufi

### Zoezi 5

1. Musa, Ijumaa, Kenya, Mombasa, Krismasi, Ziwa Victoria, Mlima Kenya, Kiswahili na kadhalika
2. Fanaka, Zawadi na Nuru ni wanafunzi katika shule ya Busara. Shule hiyo hupatikana karibu na Mlima Elgon. Wao huthamini usafi wa kibinafsi katika maisha yao. Kila siku hawakosi kupiga mswaki ili meno yao yawe safi. Siku ya Jumamosi, wao hufua nguo zao na kuzipiga pasi. Likizo ya mwezi wa Aprili, wazazi wao huwapeleka kule Mombasa ili waogeele katika Bahari Hindi. Watoto hao hufurahia sana.
3. Sentensi sahihi zitungwe kwa kutumia nomino za pekee zilizopeanwa.

### Zoezi 6

1. Mifano ya nomino za kawaida kama vile motto, mkebe, darasa, kiti, mbuzi na kadhalika
2. zulia, ukuta, mswaki, beseni, chaki,
3. Sentensi sahihi zitungwe
4. Kifungu kitungwe kwa kutumia nomino za kawaida

## Tathmini ya sura ya kwanza

1. Kuepuka vizuizi vya mawasiliano  
Kusikiliza kwa makini
2. Kutumia lugha ya adabu  
Kutomkata kalima mzungumzaji
3. Kikomo hutumika mwishoni mwa sentensi, kwenye maneno ya mkato, kutenga shilingi na senti na kadhalika.
4. Herufi kubwa hutumika mwanzoni mwa sentensi, kwenye nomino za pekee, kwenye akronimu na kadhalika.
5. Mtoto huyu ataenda Mombasa siku ya Alhamisi. Tulipotoka Nairobi tulienda kutazama Mlima Kenya.
6. Jumamosi, Juma
7. Abdala  
Jumapili  
Desemba  
Mumias
8. kikombe, meza
9. Sentensi sahihi zitungwe
10. nomino za jumla

## 2 Lishe Bora

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. dhamani                      thamani  
adhiri                              athiri  
dhibiti                              thibiti  
madhubuti                        thubutu  
dhibitisha                         thibitisha
2. Kusoma maneno na kutamka sauti ipasavyo
3. Kuunda vitanzandimi
4. Kujirekodi ukisoma vitanzandimi vilivyoundwa

### B. Kusoma

#### Zoezi 2

1. Kuchagua na kusoma matini
2. Kuandika msamiati uliotumiwa katika matini iliyosomwa
3. Kutunga sentensi sahihi kwa kutumia maneno yaliyotambuliwa
4. Kumweleza mzazi au mlezi ujumbe kutoka katika matini iliyosomwa
5. Kumtolea rafiki muhtasari

### C. Kuandika

#### Zoezi 3

1. Kueleza vipengele vya kimuundo vya barua ya kirafiki kama vile anwani, tarehe, mtajo, mwili, hitimisho na wakatabahu
2. Kuandika barua ya kirafiki

## D. Sarufi

### Zoezi 4

1. Nomino za makundi ni majina ambayo hutaja kundi au jamii ya vitu au watu wakiwa pamoja.
2. Mifano ya nomino za makundi kama vile thureya ya nyota, umati wa watu, kicha cha funguo, safu ya milima, bumba la nyuki, bunda la noti, kishazi cha samaki, mlolongo wa magari, mkungu wa ndizi, kichala cha matunda na nyinginezo
3. jozi ya viatu, kicha cha funguo, kikosi cha polisi, halaiki ya watu, shada la maua
4. Kufanya shughuli kulingana na maagizo
5. Kutunga sentensi sahihi

### Zoezi 5

1. Mifano ya nomino za dhahania kama vile furaha, huzuni, amani, upendo, wema, chuki, ugonjwa, afya, werevu, utajiri, ujinga, wasiwasi na imani
2. ufukara, uzuri, malezi, ukata, umoja, nguvu, utengano, udhaifu
3. Kutunga sentensi sahihi
4. Kuandika aya moja kwa kutumia nomino zilizopeanzwa
5. Shughuli zifanyike kikamilifu

## Tathmini ya sura ya pili

1. dhu/thu      dha/tha
2. Barua ya kirafiki husaidia kujenga uhusiano mwema baina ya ndugu, jamaa au marafiki.
3. anwani, tarehe, mtajo na vinginevyo
4. Nomino za dhahania hutaja hali ambayo haionekani wala kushikika.
5. woga, bidii, kiburi, ushirikiano
6. Nomino za makundi hutumika kutajia vitu, watu au wanyama katika mkusanyiko au jamii moja
7. kicha cha mboga, koja la maua, mwongo wa miaka
8. matunda, maua, noti
9. Sentensi sahihi zitungwe kwa kutumia nomino zilizopeanwa
10. Barua iandikwe kwa kuzingatia kanuni zinazofaa

## 3 Uhuru wa Wanyama

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Fasihi ni somo linalohusiana na tungo za kisanaa kama vile: hadithi, methali, vitendawili, ushairi, riwaya, tamthilia na hadithi fupi.
2. fasihi simulizi na fasihi andishi
3. fasihi simulizi huwasilishwa kwa njia ya mdomo, kwa kusimuliwa nayo fasihi andishi huwasilishwa kwa njia ya maandishi

## Zoezi 2

1. Mifano ya tungo za fasihi simulizi ni hadithi, semi, mazungumzo, ushairi simulizi na maigizo.
2. Mifano ya tungo za fasihi andishi ni kama vile novela, riwaya, tamthilia, ushairi na hadithi fupi.

## B. Kusoma

### Zoezi 3

1. **Novela** ni hadithi yenye urefu kati ya hadithi fupi na riwaya. Novela ni utungo wa fasihi andishi na huwa na wahusika wachache kushinda riwaya.
2. huwa na wahusika wachache. matukio huhusu mandhari machache. huwa na ploti ya moja kwa moja. kisa huweza kusomeka kwa muda mfupi, pengine kikao kimoja. huwa na maudhui machache.

## C. Kuandika

### Zoezi 4

1. Kuchagua mada yenye ujumbe kuhusu uhuru wa wanyama
2. Kuandika vidokezo kulingana na mada iliyoteuliwa
3. Kuandika insha ya kubuni

## D. Sarufi

### Zoezi 5

1. mate, maji, maziwa, changarawe, wino, damu
2. maji, maziwa, uji, mchuzi, soda
3. Kutunga sentensi sahihi kwa kutumia nomino za wingi zilizopeanwa
4. Kutunga sentensi sahihi kwa kutumia nomino za wingi zozote

### Zoezi 6

1. kuchora, kulima, kuchelewa, kukimbia, kukama, kuelewa, kufika, kukataa
2. kutunza, kuwapa, kuishi, kuua, kuharibu, kujiuliza, kuwapa, kuwatibu, kutunza, kuishi
3. Mifano kumi ya nomino za vitanzijina kama vile kusoma, kuandika, kuimba, kuchora, kutembea na kulala.
4. Kutunga sentensi sahihi kwa kutumia baadhi ya nomino zilizoandikwa kwenye nambari ya tatu
5. Kutunga aya kwa kutumia nomino za vitenzijina zilizopeanwa

## Tathmini ya sura ya tatu

1. Fasihi ni **sanaa ambayo hutumia lugha ya mazungumzo au maandishi ili kuwasilisha ujumbe kwa hadhira husika.**
2. fasihi andishi na fasihi simulizi

3. huwasilishwa kupitia maandishi, huwa mali ya mtu binafsi, huhifadhiwa katika vitabu au majarida, ni vigumu kurekebisha papo kwa hapo ikiwa kosa limetokea
4. tamthilia, riwaya, novela
5. kuwasilishwa kwa njia ya mdomo, kuwa mali ya jamii, huhifadhiwa na katika kumbukumbu za watu, huweza kubadilishwa papo kwa hapo kosa likitokea
6. hadithi, semi, mazungumzo, ushairi simulizi na maigizo
7. **Novela** ni hadithi yenye urefu kati ya hadithi fupi na riwaya.
8. huwa na wahusika wachache, matukio huhusu mandhari machache, huwa na ploti ya moja kwa moja, kisa huweza kusomeka kwa muda mfupi, pengine kikao kimoja, huwa na maudhui machache
9. maji, mafuta, uji, unga, sukari
10. kuimba, kusoma, kutembea, kulala

## 4 Aina za Maliasili

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Nyimbo za watoto huimbwa na watoto hasa wanapocheza.
2. Wimbo uimbwe kwa mahadhi yanayofaa.
3. huandamana na michezo ya watoto, huimbwa kwa sauti ya juu, huimbwa na watoto, huhusisha uchezeshaji wa viungo vya mwili, huwa na kurudiwarudiwa kwingi, huwa za kuburudisha
4. sauti hurudiwarudiwa, maneno na vifungu vya maneno hurudiwa, viungo vya mwili huchezeshwa

#### Zoezi 2

1. Bembelezi ni nyimbo ambazo huimbwa ili kumrai au kumbembeleza mtoto asilie au alale.
2. Wimbo uimbwe kwa mahadhi mwafaka.
3. huwa na maneno matamu, huimbwa kwa sauti ya chini, huimbiwa mtoto ili kumbembeleza, huimbwa kwa sauti nyororo, huimbwa na wazazi au walezi
4. urudiaji wa sauti, urudiaji wa maneno na vifunguvya maneno, uchezeshaji wa viungo vya mwili, utumiaji wa sauti nyororo, kupokezana vifungu

### B. Kusoma

#### Zoezi 3

Shughuli zifanyike kikamilifu kulingana na maagizo.

### C. Kuandika

#### Zoezi 4

1. wahusika: nyanya, babu, wakazi wa Shimoni, wanyamapori

mandhari: msitu wa Kilwa, eneo la Shimoni, nyumbani kwa nyanya na babu

- Insha ya masimulizi iandikwe kwa kuzingatia kanuni zinazofaa.

## D. Sarufi

### Zoezi 5

- nilioga, walikula, mlisoma, tuliimba
- anasema, ninapiga, ninaiandika, ninapanda, wanathamini
- atakuja, zitapelekewa, nitakusomea, nitainyunyizia, nitakueleza
- Kusoma kifungu kisha:
  - kutambua vitenzi katika wakati uliopita: ulipoumbwa, walikuwa
  - kutambua vitenzi katika wakati uliopo: anafaa, anashauriwa, wanachafua, wanaougua, ninaomba
  - kutambua vitenzi katika wakati ujao: tulipewa, tutateseka, watateseka

### Zoezi 6

- Kutunga sentensi katika wakati uliopita
- Kutunga sentensi katika wakati uliopo
- Kutunga sentensi katika wakati ujao
- Punda hao wanapumzika chini ya mti. Nilifuata sheria nilipoendesha gari barabarani. Atasugua meno kwa uangalifu. Wanafunzi wote walizingatia lishe bora. Usawa wa kijinsia unasisitizwa na chifu. Tutakariri shairi kuhusu aina za maliasili.

## Tathmini ya sura ya nne

- Nyimbo za watoto huimbwa na watoto wanapocheza.
- huandamana na michezo ya watoto, huimbwa kwa sauti ya juu, huimbwa na watoto, huhusisha uchezeshaji wa viungo vya mwili, huwa na kurudiwarudiwa kwingi, huwa za kuburudisha
- sauti hurudiwarudiwa, maneno na vifungu vya maneno hurudiwa, viungo vya mwili huchezeshwa
- Bembelezi huimbwa na mzazi au mlezi ili kumrai mtoto asilie bali alale.
- huwa na maneno matamu, huimbwa kwa sauti ya chini, huimbiwa mtoto ili kumbembeleza, huimbwa kwa sauti nyororo, huimbwa na wazazi au walezi
- urudiaji wa sauti, urudiaji wa maneno na vifunguvya maneno, uchezeshaji wa viungo vya mwili, utumiaji wa sauti nyororo, kupokezana vifungu
- anasoma, tunaimba, unalala
- watasoma, atacheza, kitapikwa
- lilipandwa, nilioga, mlitambuliwa
- Kutunga sentensi sahihi

## 5 Unyanyasaji wa Kijinsia

### A. Kusikiliza na kuzungumza

#### Zoezi 1

- aheri/ sabalheri  
aheri/masalheri  
aleikum salaam  
marahaba  
vyema/vizuri
- asubuhi  
jioni  
wakati wowote  
wakati wowote  
jioni
- shikamoo  
pole/ ugua pole  
shikamoo  
makiwa  
cheichei
- Kufanya utafiti na kulijaza jedwali

#### Zoezi 2

- jioni au usiku, wakati wa kulala, watu wanapoagana, watu wanapoagana, watu wanapoagana bila matumaini ya kuonana tena, asubuhi, mtu anapoenda safari, wakati wa kulala
- Kujaza jedwali kikamilifu

### B. Kusoma

#### Zoezi 3

- Kutaja msamiati uliotumika katika kifungu na kueleza maana yake.
  - walitiwa mbaroni – alikamatwa na polisi
  - hulka – tabia au silica
  - unyanyasaji – kumnyima mtu haki au kumdhulumu
  - kijinsia – kulingana na jinsia ya mtu (iwapo ni wa kike au kiume)
  - alifungwa jela
- Kuandika habari mahususi ya kila aya kwa sentensi moja
- Shughuli zifanyike kulingana na maagizo

### C. Kuandika

#### Zoezi 3

- usahihi wa habari, mpangilio wa maelezo wenye mantiki, lugha sahili, maelezo yanayotoka upande mmoja
- Kuandika insha ya maelekezo
- Kuisoma insha ya nambari ya pili

## D. Sarufi

### Zoezi 5

- wakati uliopo hali ya kuendelea: wangali wanasoma, angali anacheza, mngali mnajithamini wakati uliopita hali ya kuendelea: tulikuwa tukiongea, nilikuwa nikifua, tulikuwa tukifagia wakati ujao hali ya kuendelea: nitakuwa nikitembea, watakuwa wakishauriana, mtakuwa mkishirikiana
- wakati ujao hali ya kuendelea, wakati uliopo hali ya kuendelea, wakati uliopo hali ya kuendelea, wakati uliopita hali ya kuendelea, wakati ujao hali ya kuendelea, wakati uliopita hali ya kuendelea
- Kutambua nyakati na hali zilizotumika katika kifungu

### Zoezi 6

Kutunga sentensi kwa kutumia vitenzi vilivyopeanwa

### Tathmini ya sura ya tano

- sijambo, sina la kuamba, aheri/sabalheri
- ya kuonana, buriani dawa, binuru
- wadogo kwa wakubwa, watoto wanapoamkuana, watu wowote
- jioni, asubuhi, jioni, mtu anapowasili mahali
- siku inapoanza, watu wanapoagana bila matumaini ya kuonana tena, wakati wa kulala, usiku
- kuandika vitenzi katika wakati uliopo, hali ya kuendelea – angali anatembea
- kuandika vitenzi katika wakati uliopita, hali ya kuendelea – alikuwa akifua
- kuandika vitenzi katika wakati ujao, hali ya kuendelea – nitakuwa nikipumzika
- Kutunga sentensi kwa kutumia vitenzi vilivyopeanwa
- Kuandika insha ya maelekezo

## 6 Usalama Shuleni

### A. Kusikiliza na kuzungumza

#### Zoezi 1

- Kusikiliza matini kuhusu usalama shuleni
- Kueleza usahihi masuala yanayozungumziwa katika makala
- Kutaja kilichoeleweka kutokana na makala hayo
- Kutaja msamiati uliotumika na kueleza maana
- Kutabiri kinachoweza kutokea

## B. Kusoma

### Zoezi 2

- maudhui ni mambo muhimu yanayoelezwa katika kazi ya fasihi kama vile riwaya, tamthilia au novela
- dhamira ni kiini cha jambo au habari inayosimuliwa ama kuandikwa katika katika katika kazi ya fasihi.
- Kuandika maudhui katika novela iliyosomwa
- Kuandika dhamira katika novela iliyosomwa
- Jina la novela iliyosomwa

## C. Kuandika

### Zoezi 3

- Kubuni mada kutokana na picha zilizotazamwa.
- Kuandika kisa chenye maelezo dhahiri kutokana na picha.

## D. Sarufi

### Zoezi 4

- imejengwa, hucheza, wanapocheza, wasiumie, yamepangwa, ukipita, utapata, akisoma, wakiandika, wanapanda, wanapopata
- Kutunga sentensi kwa kutumia vitenzi vikuu

### Zoezi 5

- Vitenzi vikuu: wakitufundisha, tumepewa, kuzingatia, tulipopewa, anafuata, tunajua, kuzingatia, wakilalamika, kutambua, ametambua, wasipofuata, wakaumia, kuanguka, akikimbia, ukizingatiwa Vitenzi visaidizi: wamekuwa, angali, inawabidi, waliokuwa, walikuja, wanaweza, aliyewahi, alipokuwa, umekuwa
- Kutunga sentensi kwa kutumia vitenzi visaidizi

### Tathmini ya sura ya sita

- Maudhui ni suala kuu linalozungumziwa katika kazi ya fasihi ilhali dhamira ni nia ya kuifanya kazi husika.
- Kutaja maudhui na dhamira kutokana na novela iliyosomwa.
- wakisoma, anasakura
- sijawahi, nitakuwa
- Kutunga sentensi kwa kutumia vitenzi vikuu
- Kutunga sentensi kwa kutumia vitenzi visaidizi
- Kusoma vifungu na kuandika mifano ya vitenzi vikuu
- Kusoma vifungu na kuandika mifano ya vitenzi visaidizi
- Kutunga kisa kutokana na picha

## 7 Kuhudumia Jamii Shuleni

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Kutaja ujumbe katika ufahamu huo
2. makocha – walimu wa michezo kama vile soka walishirikiana – walifanya shughuli kwa pamoja marefa – waamuzi wa michezo kama vile kandanda na masumbwi  
ufanisi – hali ya kupatikana kwa mafanikio  
mashabiki – watu wanaopenda mchezo au jambo fulani  
maafisa wa polisi – askari ambao wanahakikisha kuwa usalama upo  
michezo – mambo yafanywayo kwa minajili ya kujifurahisha  
usalama – hali ya kutokuwapo kwa hatari au matatizo  
jukumu – wajibu  
mazingira – hali ya mambo yanayomzunguka mtu mahali ambapo anaishi au maisha yake
3. Kumfasiria mwenzako ujumbe wa ufahamu

### B. Kusoma

#### Zoezi 2

1. Kutaja ujumbe unaopatikana katika kila aya kwa sentensi fupifupi
2. Kuunganisha sentensi za nambari ya kwanza katika aya moja
3. Kutumia viunganishi na alama za kuakifisha zinazofaa ili kuipa aya mtiririko
4. Ufupisho ni kueleza ujumbe wa makala au ufahamu kwa njia fupi

### C. Kuandika

#### Zoezi 3

1. Kuandika insha kwa kuzingatia msamiati unaofaa
2. Kuchapa insha hiyo na kuituma kwa mwalimu na wanafunzi sana

### D. Sarufi

#### Zoezi 4

1. Vitenzi vishirikishi ni .....
2. ndiyo, ndio, ni, si, ni

#### Zoezi 5

1. ni, ndiyo, si, ki, ndiye
2. Kutunga sentensi kwa kutumia vitenzi vilivyooleanwa

## Tathmini ya sura ya saba

1. kuhudumia – kutoa msaada kwa mtu anayehitaji jamii – mkusanyiko wa watu
2. Ufupisho ni kueleza habari kwa njia fupi.
3. ni, si, ndio, ki
4. ndimi
5. yu, ndiye, si
6. Kutunga sentensi kwa kutumia vitenzi vilivyooleanwa
7. angali, la, alikuwa
8. Insha ya maelezo hufafanua au kutoa maelezo kuhusu jambo fulani.
9. Msamiati ufao huiwezesha insha kueleweka na kuwasilisha ujumbe kwa urahisi.
10. Kuandika insha kwa kuzingatia kanuni za insha ya maelezo.

## 8 Ulanguzi wa Binadamu

### A. Kusikiliza na kuzungumza

1. Mazungumzo ya kupasha habari ni aina ya mazungumzo ambayo huwa na lengo la kueneza ujumbe fulani ambao ni muhimu.
2. warsha, semina, mihadhara
3. kuteua mada, kutumia lugha sahili kulingana na hadhira, kusikiliza maoni ya wengine na kujibu maswali yao
4. Kushiriki katika mazungumzo

### B. Kusoma

#### Zoezi 2

1. Mandhari ni mahali ambapo matukio mbalimbali katika fasihi hutokea.
2. Ploti ni mfuatano wa matukio au visa kimantiki kuanzia tukio la mwanzo hadi tukio la mwisho.
3. Kutaja mandhari kwa kurejelea novela iliyosomwa.
4. Kueleza namna matukio yalivyofuatana katika novela iliyosomwa
5. husaidia kushughulikia maudhui ya kazi ya fasihi, hujenga mtiririko wa kisa, huchangia katika kujenga sifa za wahusika
6. huibua mgogoro katika fasihi, hujenga taharuki baina ya matukio, hujenga mtiririko unaofaa katika fasihi
7. Kuandika maelezo mafupi kuhusu mandhari ya novela iliyosomwa
8. Kuandika maelezo mafupi kuhusu ploti ya novela iliyosomwa

## C. Kuandika

### Zoezi 3

1. Kupigia koma (,) mistari kwenye sentensi
2. Kutunga sentensi
3. kuonyesha pumziko fupi katika sentensi, kuandika anwani, kutoa habari za ziada katika sentensi, kutenga orodha ya vitu zitatu au zaidi, katika tarakimu ya elfu moja na zaidi
4. Tangu nilipozaliwa, niliajuzwa kuwa ulanguzi wa binadamu haufai. Uovu huo huleta madhara kwa mhasiriwa kama vile ya kimwili, kisaikolojia na pengine kifo. Wanapoumizwa, huhitaji matibabu ili kuirudisha hali yao vizuri. Matibabu mengine huhitaji shilingi 1,000 au zaidi. Ili kumaliza ulanguzi wa binadamu, tunahitaji ushirikiano kati ya maafisa wa pilisi, serikali na wanachi kwa jumla. Ikiwa tabia hiyo haitakoma, ya kuwalangua binadamu, tutakuwa tukikiuka haki za binadamu. Sote tuepuke tabia hiyo na kuendeleza usawa, uzalendo, ushirikiano na bidii.

### Zoezi 4

1. Hutumika mwishoni mwa sentensi ambayo ni swali.
2. Ni nani asiyejua kuwa asiyesikia la mkuu huvunjika guu? Kukataa kufuata maagizo kuna madhara mengi. Ukishauriwa na yeyote kuhusu jambo fulani, wewe hufanya nini? Kila mmoja anafaa kufuata ushauri, sheria na maagizo anayopewa. Mojawapo ya mambo tunayofaa kufanya ni kupinga ulanguzi wa binadamu. Mengine ni kama matumizi ya mihadarati, ukabila na ufisadi. Je, tunafaa kufanya nini ili kumaliza ulanguzi wa binadamu?

## D. Sarufi

### Zoezi 5

1. mtoto, kiwavi, mbuzi, mikunga, manna
2. Wakulima walivuna mazao mengi.  
Askari hao walifunga wahalifu vikuku mikokoni.  
Wanafunzi wanafaa wapende kusoma vitabu vya hadithi.  
Ndovu walirudiwa mbugani.  
Wafugao ndwele hawajui waganga wanatibu.
3. Kutunga sentensi

### Zoezi 5

1. mhindi, mkono, mchuzi, mgambo, mgodi, mgahawa, mchirizi, mchoro, mchuano, mbuyu, mbuni
2. mihindi, mikono, michuzi, migambo, migodi, migahawa, michirizi, michoro, michuano, mibuyu, mibuni
3. Kuandika nomino za ngeli ya U – I

4. u, u, u, u, u
5. Mibiringani imezaa vizuri miaka hii.  
Mibuni ile inapendeza.  
Mibaazi ikikosa maua inasingizia mvua.  
Michezo ya kufana iliwasilishwa na shule jirani.  
Michomo iliyowasumbua wagonjwa wale ilitibiwa.
6. Nomino katika ngeli hii hucukua kiambishi 'u' katika umoja na 'i' katika wingi.

## Tathmini ya sura ya nane

1. Ni maongezi ambayo hufanywa na watu wawili au zaidi wakiwa na nia ya kueneza ujumbe fulani ambao ni muhimu.
2. mafunzo shuleni kuhusu suala fulani, maelezo kuhusu namna ya kutumia kifaa fulani, ufafanuzi kuhusu jinsi ya kuzuia msambao wa maradhi fulani
3. kutumia lugha sahili kulingana na hadhira, kusikiliza maoni ya wengine na kujibu maswali yao, kuwa mchangamfu ili kuvutia umakini wa wanaokusikiliza
4. Ploti ya novela ni mfuatano wa matukio katika novela.  
Mandhari ya novela ni mahali ambapo matukio katika novela yanafanyikia.
5. Kueleza ploti na mandhari ya novela iliyosomwa.
6. Kiulizi hutumika mwishoni mwa sentensi ambayo ni swali.
7. Kutunga na kuakifisha sentensi kwa kutumia kiulizi.
8. mkato, kipumuo
9. kutoa habari za ziada katika sentensi, kutenga orodha ya vitu vitatu au zaidi, katika tarakimu ya elfu moja na zaidi
10. Kutunga sentensi na kuiakifisha kwa kutumia koma.
11. mkono U - I  
mtoto A - WA  
chura A - WA  
muhogo U - I  
mfagizi A - WA
12. Kutunga sentensi
13. Kutunga sentensi
14. A – WA
15. U – I

## 9

## Matumizi ya Vifaa vya Kidijitali katika Mawasiliano

## A. Kusikiliza na kuzungumza

### Zoezi 1

1. dugu ndugu  
rada randa  
doa ndoa  
dodi ndondi  
poda ponda
2. Kumtamkia mwenzako maneno ya nambari ya kwanza



3. Kujirekodi kwa ukitamka vitanzandimi vilivyopeanwa
4. Kutunga vitanzandimi

## B. Kusoma

### Zoezi 2

1. Kueleza kile ambacho kinazungumziwa katika kifungu
2. Kutaja yule ambaye kifungu hicho kinalenga
3. idhini – ruhusa  
madhara – uharibifu au athari mbaya  
wakila mwata – wakiteseka  
utajiuma kidole – utajuta
4. Kueleza habari katika kifungu kwa ufupi

## C. Kuandika

### Zoezi 3

1. Kuandika insha ya masimulizi
2. Kushirikiana na ndugu na marafiki kuisahihisha insha ya nambari ya kwanza

## D. Sarufi

### Zoezi 4

1. chakula, kikapu, chandarua, kijibwa, kioo
2. Kuandika nomino tano za ngeli ya KI – VI kama vile kiti, chumba, kitanda, kitoto
3. ki, ki, ki, ki, ki
4. Vitanda vyetu vimefunikwa kwa vyandarua. Vidole hivi vimepona. Vijiji vile vina wakazi wazalendo. Vyumba vya kujengea maabara za tarakilishi vimenunuliwa. Vipakatalishi vipya vimewekwa katika madawati.
5. Kutunga sentensi katika umoja
6. Kuandika sentensi za nambari ya tano katika wingi

### Zoezi 5

1. matunda, nanasi, gari, jicho, jino, mawimbi,
2. li, li, ya, ya, ya
3. Kuandika mifano ya nomino za ngeli ya LI – YA
4. Kutunga sentensi katika umoja
5. Kuandika sentensi za nambari ya nne katika wingi
6. Viambishi vya upatanisho vya ngeli ya LI – YA ni silabi za kwenye fungutenzi ambazo ni LI katika umoja na YA katika wingi.

## Tathmini ya sura ya tisa

1. nda da  
nda da
2. Kutamka maneno ipasavyo
3. Kutunga vitanzandimi

4. matumizi – namna ya kusaifu fedha au kitu kingine vifaa vya kidijitali – kifaa chochote kilicho na tarakilishi  
mawasiliano – ushanaji habari kwa njia mbalimbali
5. Kifungu hicho kinahusu nani?  
Ni nini kinachozungumziwa katika kifungu hicho?  
Matukio yanatokea wapi?  
Matukio katika kifungu hicho ni ya lini?
6. Kuandika kifungu kwa ufupi
7. tunda LI – YA  
chumba KI – VI  
nanasi LI – YA  
kitoto KI – VI
8. marinda, vipakatalishi, vyoo, makabati
9. Makarai yao yamewekwa karibu na vibanda vile. Maembe yaliyokatwa kwa visu yalikuwa mabivu.
10. Kiti kilichowekwa darasani kilikuwa kipya. Chombo cha kidijitali kilichonunuliwa kilikuwa kizuri.
11. Kuandika insha ya masimulizi

## 10 Kujithamini

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Nyimbo za kazi ni nyimbo ambazo huimbwa na afanyakazi wanapofanya kazi.
2. mazingira ya kufanya kazi
3. jina lolote la wimbo wa kazi
4. ujumbe unaopatikana katika wimbo wa kazi ulioandikwa katika nambari ya tatu
5. Kuwafundisha ndugu na marafiki
6. Kuimba wimbo wa kazi

#### Zoezi 2

1. Wimbo wa dini huimbwa na waumini mbalimbali ili kutoa sifa, ibada na shukrani kwa Mungu
2. mazingira ya dini au ibada
3. Kuandika wimbo wa dini wowote bila kujali dini wala dhehebu husika
4. Ujumbe kutokana na wimbo wa dini ulioandikwa katika nambari ya tatu
5. Kuwaimbia ndugu au marafiki wimbo wa dini wowote
6. Kuimba wimbo wa dini akiwa n ndugu na marafiki zake

### B. Kusoma

#### Zoezi 3

1. Majina ya wahusika katika novela
2. Sifa za wahusika katika novela

- Uhusiano baina ya wahusika katika novela
- Muhtasari wa sifa za wahusika katika novela
- Kuandika mafunzo matatu kutokana na matendo ya wahusika katika novela

### C. Kuandika

#### Zoezi 4

- Kueleza vipengele vya kimuundo vya barua rasmi ya kuomba msamaha kama vile anwani ya mwandishi, tarehe, anwani ya mwandikiwa, mtajo, mada, mwili, jina na sahihi ya mwandishi
- Kueleza ujumbe na lugha inayozingatiwa katika barua rasmi ya kumba msamaha kama vile lugha ya upole na ushawishi, ujumbe unaoeleza sababu za kosa lililotokea
- Kuandika barua rasmi ya kuomba msamaha

### D. Sarufi

#### Zoezi 5

- nyanya/bibi, kibaya, mchana, maskini (au kisawe chake), mwembamba, kilio, woga, huzuni, nje, kubwa
- Nomino na vinyume vyake kama vile mama – baba
- Vivumishi ba vinyume vyake kama vile mzuri – mbaya
- Vinyume vya maneno ni upande mwingine (wa nyuma) wa nomino inayorejelewa
- mdogo, kichafu, vijana, mbingu, wanaume
- Kutunga sentensi

### Tathmini ya sura ya kumi

- Nyimbo za kazi ni nyimbo mabazo huimbwa wakati wa kufanya kazi.  
Nyimbo za dini huimbwa ili kumwabudu au kumsifu Mungu.
- mazingira ya kufanya kazi
- mazingira ya maabadini
- kumwambia mzazi au mlezi wimbo wa kazi na wimbo wa dini
- Mhusika ni kiumbe anayesawiriwa au kubuniwa katika kazi ya fasihi anayefanana au kumwiga kiumbe halisi duniani kwa kiasi fulani.
- Vinyume vya maneno hali ya jambo linalokinzana na jingine.
- huzuni – furaha  
jogoo – koo  
babu – nyanya/bibi  
mke – mume
- mfupi – mrefu  
mwembamba – mnene/ mnono  
kizuri – kibaya  
ndogo – kubwa
- Kutunga sentensi kwa kutumia vinyume vya maneno

- anwani ya mwandishi, tarehe, anwani ya mwandikiwa, mtajo, mada, mwili, jina na sahihi ya mwandishi
- Kuandika barua rasmi ya kuomba msamaha

## 11 Majukumu ya Watoto

### A. Kusikiliza na kuzungumza

#### Zoezi 1

- Ni kutumia ishara na vitendo vinavyofaa katika mazungumzo ili kutekeleza majukumu mbalimbali.
- kumwelekeza mtu njia, kueleza jinsi ya kutayarisha chakula, kufafanua jinsi ya kutumia kifaa fulani, kueleza jinsi ya kufua nguo
- ishara za mabega, ishara za mikono, ishara za vidole, kutumia mdomo, kutumia uso na macho
- Kumweleza mwenzako jinsi ya kufua nguo

### B. Kusoma

#### Zoezi 2

- Kuchagua na kusoma matini
- Kujaza jedwali
- Kuandika msamiati na maana yake
- Kutunga sentensi kwa kutumia msamiati uliotambuliwa
- Kuandika muhtasari wa ujumbe

### C. Kuandika

#### Zoezi 3

Kuandika insha ya maelezo

### D. Sarufi

#### Zoezi 4

- kutendwa, kutenda, kutenda
- kauli ya kutendea – pelekea, bebea, rushia, chorea, pigia  
kauli ya kutendwa – sukumwa, wekwa, fagiliwa, andikwa, bebwa  
kauli ya kutenda – soma, lala, chukua, paka, meza,
- Kuandika vitenzi katika kauli zilizopeanwa
- 

	kauli ya kutendwa	kauli ya kutendea	kauli ya kutenda
a)	wekwa	wekea	weka
b)	pikwa	pikia	pika
c)	jengwa	jengea	jenga
d)	chorwa	chorea	chora
e)	fungwa	fungia	funga

#### Zoezi 5

- kutendea, kutenda, kutendwa, kutendea, kutendwa, kutenda
- Kutunga sentensi

## Tathmini ya sura ya kumi na moja

1. Ni kutumia ishara na vitendo mbalimbali wakati wa mazungumzo ili kuwasilisha ujumbe kwa haraka.
2. kufafanua jinsi ya kutumia kifaa fulani, kueleza jinsi ya kubeba kifaa hasa kama kinaweza kikavunjika, kueleza jinsi ya kufua nguo
3. ishara za vidole, kutumia mdomo, kutumia uso na macho
4. majukumu ya watoto nyumbani – kucheza na wanuna, kuwachunga mifugo, kuenda shambani majukumu ya watoto shuleni – kuongoza makundi ya mijadala, kukusanya madaftari, kuongoza shughuli za usafi
5. umri wa msomaji, ujumbe wa makala, lugha inayotumika, ukubwa wa makala
- 6.

	Kutenda	Kutendea	Kutendwa
	<u>cheza</u>	chezea	<u>chezwa</u>
	soma	<u>somea</u>	<u>somwa</u>
	<u>nyoa</u>	<u>nyolea</u>	nyolewa
	imba	<u>imbia</u>	<u>imbwa</u>
	<u>ruka</u>	rukia	<u>rukwa</u>

kutendwa, tendewa, tenda, tendewa, tenda

8. Kutunga sentensi
9. Vipengele vya mpangilio vya insha ya maelezo kama ile mada/kichwa, mwili na hitimisho
10. Kuandika insha

## 12 Magonjwa ambukizi

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Kutaja hoja muhimu katika kila aya
2. Kutaja hoja muhimu katika habari yote
3. Kueleza hoja muhimu kwa ufupi

### B. Kusoma

#### Zoezi 2

Kusoma kifungu kwa kuzingatia kanuni mwafaka

### C. Kuandika

#### Zoezi 3

Kuandika insha ya hotuba na kumsomea mzazi au mlezi

### D. Sarufi

#### Zoezi 4

1. Sentensi sahili ni sentensi ambayo hutumia kitenzi kimoja au hurejelea wazo moja.
2. Sentensi ambatano ni sentensi zinazohusisha vitenzi zaidi ya kimoja kwa kutumia viunganishi.

3. Sentensi sahili
  - a) Mwalimu wetu anaitwa Busara.
  - b) Bwana Busara anapenda sana usafi.
  - c) Yeye hutusisitizia umuhimu wa kudumisha usafi.
  - d) Wanaopuuza huzungumziwa na wanafunzi wenzao.
  - e) Yeyote akiambukizwa maradhi anafaa kumwona daktari ili atibiwe.

### Sentensi ambatano

- a) Yeye huishi mbali na shule lakini walimu wengine wanaishi karibu na shule.
  - b) Wengi wetu huzingatia usafi wa mwili na mazingira ingawa wengine hupuuza ushauri wa mwalimu.
  - c) Wao hukumbushwa kuwa kutodumisha usafi ni hatari na huweza kusababisha magonjwa ya kuambukizwa.
  - d) Wengi hubadilisha mienendo yao madhali hawataki kujiathiriwa na magonjwa ya kuambukizwa.
4. Kutunga sentensi sahili
  5. Kutunga sentensi ambatano

## Tathmini ya sura ya kumi na mbili

1. malaria, waba, UKIMWI, mafua
2. matamshi bora, kasi inayofaa, sauti inayopasa, ishara zifaazo
3. ishara za uso, ishara za mabega, ishara za mikono
4. Sentensi sahili huwa na kitenzi kimoja au tendo moja.  
Sentensi ambatano ni sentensi sahili mbili au zaidi zilizounganishwa kwa kiunganishi.
5. sentensi sahili, sentensi sahili, sentensi ambatano, sentensi ambatano, sentensi sahili, sentensi ambatano
6. Kutunga sentensi sahili na ambatano
7. Hotuba ya kupasha habari ni hotuba yenye lengo la kuwasilisha ujumbe fulani
8. hatibu, hadhira
9. mada au kichwa, utangulizi, mwili, hitimisho
10. Kuandika hotuba

## 13 Utatuzi wa Mizozo

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Maria, Juma, Musa, Zawadi
2. Maria – kushirikiana na wengine  
Juma – hodari/safi  
Musa – mpole/mtatuzi  
Zawadi – mpendaamani
3. Kueleza mafunzo kutokana na wahusika

## B. Kusoma

### Zoezi 2

1. Mbinu za lugha ni maarifa yaliyotumiwa katika kazi ya fasihi. Ni kutumia lugha kiufundi ili kuwasilisha ujumbe.
2. Mifano ya mbinu za lugha katika novela iliyosomwa
3. hurembesha kazi ya fasihi na kuifanya ipendeze, hurahisisha kuwasilisha ujumbe, huibua uwazaji kina wa msomaji

## C. Kuandika

### Zoezi 3

Kuandika insha ya maelezo kwa kuzingatia kanuni zinazofaa.

## D. Sarufi

### Zoezi 4

1. wakati uliopo, wakati ujao, wakati uliopita
2. Wajacha kukata miti katika msitu huo. Tunatunza wanyamapori katika eneo hili. Wanyama wale watafurahia uhuru wao. Vijana hao wanatambua majukumu yao. Sote tunapinga ukabila na ufisadi. Mlielewa jinsi ya kuihudumia jamii shuleni.
3. Kutunga sentensi

### Zoezi 5

1. uliopita, ujao, uliopo, ujao, uliopo, uliopita
2. Ukanushaji ni kukana au kukataa jambo fulani.
3. Hawakulala ndani ya chandarua kilichotibiwa Hawaipendi nchi yao. Wanafunzi hawataimba wimbo kuhusu umoja. Hatuzingatii haki za kijinsia. Wakulima hawatazuia mmomonyoko wa udongo. Sote hatukunawa mikono baada ya kutoka msalani.

## Tathmini ya sura ya kumi na tatu

1. Mhusika ni kiumbe anayetekeleza majukumu mbalimbali katika kazi ya fasihi.
2. Wahusika wana mchango mkubwa katikakuwasilisha ujumbe wa mwandishi.
3. Mbinu za lugha ni fani mbalimbali za lugha ambazo mwandishi hutumia katika uandishi wake.
4. hurahisisha kuwasilisha ujumbe, huibua uwazaji kina wa msomaji, hudhihirisha sifa za wahusika
5. tashbihi, istiara, tashihisi, swali la balagha, methali
6. Ukanushaji ni kukataa ama kupinga jambo fulani.
7. uliopita, uliopo, ujao
8. Vijana hao hawakusameheana. Chifu hawashauri wakazi. Hatutahudhuria mkutano wa upatanisho.

9. Mambo ya kimsingi katika uandishi wa insah ya maelezo kama vile mada, utangulizi, mwili na hitimisho.
10. Kuandika insha ya maelezo

## 14 Matumizi ya Pesa

## A. Kusikiliza na kuzungumza

### Zoezi 1

1. nahau, methali, tashbihi, sitiari, urudiaji wa maneno na vifungu, maneno yasiyokuwa na maana
2. hurahisisha uimbaji, huleta urari, husaidia kuwasilisha ujumbe

## B. Kusoma

### Zoezi 2

1. Kueleza habari muhimu katika aya ya kwanza.
2. Kueleza ujumbe wa aya ya tatu kwa sentensi moja.
3. Kudondoa habari mahususi kutoka katika kifungu.
4. Kundika msamiati katika kifungu.
5. Kueleza funzo kutokana na habari iliyosomwa.
6. Kuandika habari kwa ufupi.

## C. Kuandika

### Zoezi 3

Kuandika insha ya maelekezo.

## D. Sarufi

### Zoezi 4

1. mkebe – kebe  
mji – jiji  
ndoo – doo  
uso – juso  
mwalimu – jalimu
2. jibwa, joka, janajike, jijicho, jito
3. majigari, majiji, jiduka, majitabu, majikalamu, buga, madovu, majoka, mabogo, magamia, maguruwe, magombe, mabuzi, majito, madoo, majikarai, majiti

### Zoezi 5

1. Kueleza matumizi ya nomino za hali ya ukubwa
2. Kutunga sentensi

## Tathmini ya sura ya kumi na nne

1. methali, tashbihi, sitiari, urudiaji
2. hurahisisha kuwasilisha ujumbe, hurahisisha uimbaji wa wimbo, huleta urari katika wimbo
3. nani, nini, wapi, lini
4. dovu, gombe
5. jibwa, jikalamu, jitunda
6. toto, jijino, jiti
7. Kutunga sentensi sahihi

8. kumwelekeza mtu njia, kueleza jinsi ya kuandaa chakula fulani, kufafanua jinsi ya kutumia mashine au kifaa chochote, kueleza jinsi ya kumhudumia mgonjwa, kufafanua hatua za kufanya jambo lolote
9. usahihi wa habari, mpangilio wa maelezo wenye mantiki, lugha sahili
10. Kuandika insha ya maelekezo

## 15 Maadili ya Mtu binafsi

### A. Kusikiliza na kuzungumza

#### Zoezi 1

1. Kutaja masuala matatu yaliyozungumziwa katika matini
2. utulivu, utiifu (anapofuata sheria), kutokata tama, uadilifu, usafi, usikivu, ukarimu, uaminifu
3. Kutaja msamiati unaohusiana na maadili ya mtu binafsi
4. Kueleza maana ya msamiati wa nambari ya tatu
5. Malkia alifurahi, alishangaa, hakuamini na kadhalika  
Walibadilisha tabia zao, walijitetea, walithamaza tu na kadhalika

### B. Kusoma

#### Zoezi 2

1. Kueleza habari katika aya ya kwanza, pili na tatu kwa sentensi mojamoya.
2. Kueleza ujumbe wa kifungu chote kwa kuunganisha sentensi za nambari ya kwanza li kuunda aya moja.
3. Kuandika ufupusho wa kifungu.

### C. Kuandika

#### Zoezi 3

1. Kuandika majibu ya baruapepe
2. Kuisambaza baruapepe ya nambari ya kwanza

### D. Sarufi

#### Zoezi 4

1. Usemi halisi hutaja maneno ya msemaji moja kwa moja jinsi alivyoyatamka.
2. Usemi taarifa huripoti kauli ya msemaji kwa kuyabadilisha maneno lakini ujumbe hubakia vile ulivyonuiwa na msemaji.
3. leo huwa siku hiyo, jana huwa siku iliyopita, 'ki' cha masharti huwa -nge-/-ngali- na kanuni nyinginezo

#### Zoezi 4

1. Usemi halisi hutumiwa kunukuu maneno ya msemaji bila kuyabadilisha ilhali usemi taarifa huripoti maneno ya msemaji japo ujumbe huwa haubadilishwi.

2. Kaka alimwambia mwenzake kuwa siku hiyo angetambua kuwa ni muhimu kumheshimu kila mtu. Watalii walisema kuwa nchi ya Kenya ilikuwa na wanachi wazalendo.  
Nyanya aliwambia wajukuu kuwa yeye angepanda mboga na matunda yake pale/hapo.
3. "Mkizingatia usafi wa kibinafsi mtajiepusha na magonjwa ya kuambukizwa." daktari aliwaambia. "Uzalendo ni muhimu sana nchini humu." Imamu aliwaeleza.  
"Ni vyema kila mmoja awe mwenye bidii na uvumilivu." mwalimu aliwakumbusha.
4. Kutunga sentensi katika usemi halisi.
5. Kubadilisha sentensi za nambari ya nne ziwe katika usemi taarifa.

### Tathmini ya sura ya kumi na tano

1. Ni mwenendo mzuri ambao mtu binafsi huwa nao.
2. uadilifu – hali ya kutenda haki bila kupendelea upande wowote  
tabia – mazoea yanayotokana na kurudiarudia hali, mwenendo au matendo fulani
3. kifungu kinahusu nani, nini, lini na wapi
4. Usemi halisi ni maneno aliyoyasema mtu moja kwa moja. Maneno hayo hunukuliwa jinsi alivyoyasema. Usemi wa taarifa ni kueleza maneno aliyoyasema mtu, ni ripoti kuhusu yaliyosemwa hapo awali.
5. jana huwa siku iliyopita, mimi huwa wewe/yeye, sasa huwa wakati huo
6. usemi halisi, usemi taarifa
7. "Leo ni siku ya kuwatuza wanafunzi waadilifu." mwalimu alisema.  
Mama alisema kwamba waache kumpigia mgeni kelele.
8. anwanipepe ya mwandishi, anwanipepe ya mwandikiwa, mtajo, mada, mwili, hitimisho, jina la mwandishi
9. sahihi ya mwandishi
10. Kuandika baruapepe

### MAJARIBIO

#### Jaribio la kwanza

- |       |       |       |
|-------|-------|-------|
| 1. A  | 2. A  | 3. C  |
| 4. A  | 5. C  | 6. B  |
| 7. A  | 8. D  | 9. B  |
| 10. D | 11. D | 12. A |
| 13. B | 14. D | 15. B |
| 16. C | 17. C | 18. B |
| 19. B | 20. C |       |
21. Mfano wa sentensi sahili kama vile 'Juma anatembea polepole.'
  22. mbili (fasihi simulizi na fasihi andishi)
  23. sentensi yenye kitenzi kishirikishi kama vile ni, si, ndi-, yu, ki
  24. kivumishi, kielezi, kiwakilishi, kitenzi
  25. Novela ni utungo ambao ni mrefu kuliko hadithi fupi lakini mrefu kuliko riwaya.
  26. "Leo nitawafundisha jinsi ya kusakura mtandaoni."

- mama alisema.
27. Mvulana mwenye huzuni amempelekea nyanya koo mdogo.
  28. fasihi andishi
  29. mboga
  30. bembelezi
  31. ikiwa
  32. nomino
  33. vivumishi
  34. vihusishi
  35. kiwakilishi
  36. kuwa
  37. ambatano
  38. wakati
  39. sita
  40. utungaji

### Jaribio la pili

1. ajira – kazi iafanywayo na mtu ulanguzi wa binadamu – biashara ya kuuza binadamu
  2. kufanya uchunguzi, kuwashika watekaji nyara
  3. kushirikiana na polisi kuwatambua wahalifu
  4. daawa, fulusi, hulka (hakiki visawe vingine sahihi)
  5. Agamanya aliharibiwa na vijana waliokuwa wamepotoka kitabia.
  6. Hutumika kuendeleza uhalifu.
  7. uhaishi/tashihisi, tashbihi, nahau
  8. Methali za malezi au majuto kama vile Asiyesikia la mkuu huvunjika guu.
  9. wangempa ushauri nasaha, wangemwadhibu, wahihakikisha kuwa hajihusishi na vijana waliopotoka (hakiki jibu lolote sahihi)
  10. hakiki funzo lolote linalopatikana
  11. wazee, vijana, majirani, marafiki,
  12. wenye bidii, wenye umoja
  13. mafunzo yoyote kama vile kushirikiana, kufanya bidii, kujiepusha na vita
  14. urudiaji, methali, tashbihi
  15. urudiaji – kushikana, kushikana, kushikana methali – Umoja ni nguvu, utengano ni udhaifu. Tashbihi – bidii kama mchwa
  16. kuisitiza ujumbe, kuchora picha kamili, kuipamba lugha na kadhalika
  17. yalifanyika asubuhi kwa sababu ya salamu zilizotumika na mwalimu (sabalheri ni salamu za asubuhi)
  18. kusikiliza – kutikisa kichwa kujibu – kutomkata msemaji kalmia (hakiki majibu mengine sahihi)
  19. hakiki majukumu sahihi ya watoto nyumbani
  20. dhamira ilikuwa kutoa ufafanuzi unaofaa kuhusu majukumu ya watoto
- |       |       |       |
|-------|-------|-------|
| 21. A | 22. D | 23. A |
| 24. C | 25. B | 26. B |
27. yoyote
  28. mwanajamii
  29. miongoni mwao
  30. wayafanyayo

- |       |       |       |
|-------|-------|-------|
| 31. D | 32. D | 33. A |
| 34. C | 35. D | 36. D |
| 37. B | 38. B | 39. C |
| 40. A |       |       |

### Jaribio la tatu

1. Bembelezi – unamtuliza mtoto ili alale
  2. urudiaji wa maneo na kauli, sauti ya kumbeleza
  3. huwasilishwa kwa kutikisa viungo vya mwili, huwasilishwa kwa sauti ya chini
  4. mazingira ya kuwabembeleza watoto waache kulia au walale
  5. kuupinga kwa kila njia/kila namna
  6. huisaidia jamii ili ijiepushe unyanyasaji wa kijinsia
  7. kuwashika na kuwafungulia mashtaka
  8. udhalimu – tendo la kufanya mambo yaliyo kinyume na haki unyanyasaji – kumfanyia mtu vitendo visivyo vya dharau kutenda haki – kufanya mambo kwa kulingana na haki ufsadi – upokeaji au utoaji wa hongo
  9. hakiki jibu lolote sahihi kama vile unyanyasaji wa kijinsia haufai
  10. methali yoyote ya uhusiano kama vile Umoja ni nguvu utengano ni udhaifu.
- |       |       |       |
|-------|-------|-------|
| 11. C | 12. B | 13. A |
| 14. A | 15. C | 16. A |
| 17. D | 18. D | 19. B |
| 20. C | 21. B | 22. B |
| 23. D | 24. A | 25. C |
| 26. D | 27. D | 28. B |
| 29. C | 30. B |       |
31. akifua
  32. ungali
  33. Hakiki usahihi wa sentensi zilizotungwa
  34. vitenzi vishirikishi
  35. Hakiki usahihi wa sentensi zilizotungwa
  36. mnana minana ngeli ya A – WA  
kijibwa vijibwa ngeli ya KI – VI  
mwaka miaka ngeli ya U – I  
karai makarai ngeli ya LI – YA
  37. Akina mama waliviweka vipakatalishi katika makabati. Miembe yenye maembe makubwa yana viota vidogo.
  38. a – wa, li – ya, ki – vi, u – I
  39. furaha, nyeupe, chini, karimu, koo, nyembamba
  40. Hakiki usahihi wa sentensi zilizotungwa kwa kutumia vinyume vya maneno yaliyopeanwa

### Jaribio la nne

1. kupiga mswaki – kusugua meno kwa kutumia mswaki  
kupiga sulu – kutumia brashi ya viatu kupiga viatu rangi  
kuangua kucha – kukata kucha  
kupenga kamasi – kutoa kamasi puani kwa nguvu  
hanchifu, kitana, mswaki, mkasi wa kucha

3. atakuwa mgonjwa, atachambuliwa na wadudu kama vile mbu
4. Tusipozia magonjwa kwa kuwa safi, tutateseka baada ya kuambukizwa magonjwa.
5. Mtu mwenye bidii, anayefanya kazi kwa moyo wote
6. kipwepwe, kipindupindu, kuendesha
7. Maisha ya mtu hurefuka kwa kuwa mtu huyo hujiepusha na magonjwa yatokanayo na uchafu.
8. ugaga – meno  
matongo – machoni  
koga – mwilini
9. Dhamira ya mwandishi wa makala haya ni kusisitiza umuhimu wa kudumisha usafi wa mwili na mazingira.
10. Hakiki funzo lolote lililo sahihi.
11. B                      12.A                      13. B
14. D                      15. C                      16. B
17. A                      18. C                      19.A
20. C                      21. C                      22. B
23. B                      24. D                      25.A
26. soma, somea, somwa  
fungua, fungulia, funguliwa  
jenga, jengea, jengwa
27. Hakiki usahihi wa sentensi zilizotungwa
28. sentensi sahihi – hueleza dhana au wazo moja kwa kutumia kishazi huru kimoja.  
sentensi ambatano – hutumia kiunganishi kuunganisha dhana mbili au zaidi zinazozungumziwa.
29. Tathmini usahihi wa mifano iliyotungwa
30. Mshukiwa huyo hatahojiwa baadaye.
31. Guruwe lililosimama karibu na jijiwe ni la janajike hilo.
32. Usemi halisi – hunukuu maneno ya msemaji moja kwa moja jinsi alivyosema.  
Usemi taarifa – huripoti maneno ya msemaji kwa kuyapanga upya bila kubadilisha ujumbe.
33. Rais aliwaambia watalii kuwa taifa hilo lilikuwa na wananchi ambao walithamini amani na umoja.
34. anwani ya mwandishi, anwani ya mwandikiwa, tarehe, mada, mtajo, mwili, hitimisho
35. herufi kubwa – kuanzisha sentensi, kuandika nomino maalum, kuandika mkato wa maneno, kuandika akronimu  
kikomo – mwishoni mwa sentensi, mkato wa maneno, kutenga sehemu ya kitu kizima kwenye tarakimu

### Jaribio la tano

1. kipindupindu/waba na mengine  
UKIMWI na mengine  
ukambi na mengine  
mafua na mengine
2. ulikuwa ukisambaa haraka, haukuwa na tiba
3. ndio uliotokea hivi punde mno, ugonjwa huo ulileta hofu mno
4. ili ugonjwa huo usisambae kupitia kwa wanafunzi na wafanyakazi shuleni
5. kwa kuwa huduma za ununuzi na usafiri ni muhimu mno na ni vigumu kumudu maisha bila shughuli hizo
6. lilibeba abiria thelathini (30)
7. kufunika pua na kinywa wakati wa kupiga chafya na kukohoa, kujifunika kwa barakoa, kunawa mikono, kutumia na viyeyuzi na kadhalika
8. Methali yoyote ya majuto kama vile Asiyesikia la mkuu huvunjika guu.
9. Kunawa ndiyo njia bora zaidi kwa kuwa huosha virusi hivyo na kuviondoa mwilini
10. Hakiki jibu lolote sahihi kulingana na aya ya mwisho
11. Mbinu zozote za lugha kama vile nahau na tashbihi
12. nahau – hung'oa nanga  
tashbihi – matumaini ya tai
13. humwezesha mtu kujua matukio yenye umuhimu kwake
14. Ningehakikisha kuwa kila mmoja anapata elimu ya kutosha, ningengeza nafasi za kazi nchini
15. Wao huwa na matumaini kuwa watafaulu na kuibadilisha hali yao/ Huwa hawaamini kuwa yale wanayoyasikia ni ya kweli
16. kazi za kijungujiko – kazi zenye malipo kidogo  
kazi za sulubu – kazi zinazohitaji nguvu nyingi
17. Tunafaa kuzikubali kazi zinazofanywa kwa mikono kama vile kilimo na kuzifanya kwa kujitolea.
18. kupunguza hali ya wakenya wanaosafiri ng'ambo wakienda kutafuta kazi/ kushirikiana na serikali za mataifa ya ng'ambo ili wakenya wanaoenda kufanya kazi huko wapewe haki (hakiki majibu yoyote sahihi)
19. kupinga dhuluma dhidi ya wakenya wafanyao kazi katika mataifa ya uarabuni, kutafuta suluhu kuhusu kudhulumiwa kwa wakenya wafanyao kazi katika mataifa ya uarabuni(hakiki majibu yoyote sahihi)
20. Tathmini funzo lolote sahihi kutokana na makala hayo
21. B                      22. D                      23. C
24. A                      25. C                      26. D
27. A                      28.A                      29.A
30. B
31. kuanzisha sentensi, kuandika nomino maalum, kuandika mkato wa maneno, kuandika akronimu
32. Hakiki usahihi wa sentensi hizo
33. nomino za pekee, nomino za kawaida/jumla
34. Hakiki usahihi wa sentensi hizo
35. Mifano ya nomino za wingi kama vile uji, unga, maji na kadhalika
36. Mifano ya nomino za vitenzijina kama vile kusoma, kuimba, kutembea na kadhalika
37. wakati uliopo, wakati ujao, wakati uliopita
38. Hakiki usahihi wa sentensi hizo
39. wakati uliopo hali ya kuendelea, wakati uliopita hali ya kuendelea, wakati ujao hali ya kuendelea
40. Hakiki usahihi wa sentensi hizo

**Answers to Assessment exercise 1.1**

1. Biology, Chemistry and Physics.
2. From lower secondary school, the path way related to Integrated Science is Science, Technology, Engineering and Mathematics.
3.
  - Science journalists report science-related news and information to the general public. It involves writing information and summaries of important findings from scientists.
  - Laboratory technicians help in developing new products and supervising experiments as they run. They clean lab equipment and keep them in good condition. They also maintain and calibrate laboratory equipment.
  - Public health educators develop programs, materials, and events in order to educate people about health and how to manage existing health conditions.
4. Assess the learner's explanation.
5. Importance of Integrated Science.  
It helps us to understand how to live a health life.  
It leads to different careers.  
The knowledge acquired helps us understand nature.  
It enables us to understand how our body systems work
6. The following careers followed science technology engineering and mathematics from junior secondary. Mechanic, laboratory technician, dentist and pharmacist.
7. Arts and sports science
8.
  - a) Pilot
  - b) Science technology engineering and mathematics
  - c) Operating and flying an plane which is learnt from one of the components of Integrated Science.

**Answers to Assessment exercise 1.2**

1. Common hazards in a laboratory include:
  - Open flames
  - Sharp objects
  - Corrosive materials
  - Toxic materials
  - Flammables
  - High pressure gases
  - Explosive chemicals
  - Carcinogens
2.
  - a) Pricks: sharp objects,
  - b) Burns: Open flames, flammables
3.
  - A. Flammables
  - B. Toxic materials/ substances
4. The common accidents include; cuts, burns and scalds, ingestion of harmful substances
5. Open flames, sharp objects, corrosive materials, toxic materials, flammables, high pressure gases among others.
6. Carcinogenic
7.
  - Cool the burn by holding it under cool running water until the pain feels better.
  - You can use cold milk or canned drinks instead of cold water.
  - Remove any jewelery or clothing unless stuck to the burn, before the area begins to swell.
  - Cover the area loosely with sterile bandage length ways when it has cooled. Use a clean dry piece of cloth if you do not have bandage.
  - Monitor the casualty. Seek medical advice
8.
  - When the cut is deep, more than half a centimetre deep.
  - It has been 5 years or more since the casualty got a tetanus shot.
  - Blood gets out in spurts.
  - Bleeding does not stop.
  - The body part such as a fingertip is cut off. Put the part that is cut off in a sealed glass container right away. Put the glass in a container with ice water.



9. a) to avoid burns due to spurts from boiling
- b) since some substances may be poisonous or lead to suffocation.
- c) To avoid unnecessary fire accidents
10. • Get the poison away from the child.
- Help the child spit out anything in the mouth.
- If it's a household chemical, read the label and follow the instructions for accidental poisoning.
- Take the person and the chemical sample to the hospital. Note that the person should not be made to vomit.
11. They may cause more damage and increase the risk of infection.
12. To be aware of the possible hazard and accidents that they can lead to.

### Answers to Assessment exercise 1.3

1. Observing skills, Measuring skills, Manipulating skills, Classifying skills, Predicting skills, Communicating skills, Conclusion skills
2. a) *Manipulating*- handling and carrying out practical using objects or apparatus or animals or plants.
- b) *Classification*- sorting, grouping or ordering objects or events into categories based upon characteristics or defined criteria
- c) *Observation*- using your senses to gather information about an object or event. It is description of what was actually perceived.
3. a) When the height reduces the bounce height also reduce.
- b) bounced the ball, observed the ball bouncing, measured the height, recorded the measurements in a table.  
Bounced the ball – Manipulative  
Observed the ball bouncing – Observation  
Measured the height – Measurement  
Recorded the measurements in a table – Communication.
- c) The height from where the ball is dropped and the height of the bouncing ball reduce. The higher the height from which the ball drops the higher the height of bounce.

4. A *basic quantity* is a quantity that cannot be obtained from other physical quantities. A *derived quantity* is a quantity obtained by combining basic quantities by either multiplication or division.
5. Area is derived from length while density is derived from mass and length.
6. Area – Square metres, Temperature – Kelvin, Density – Kg/m<sup>3</sup> Mass – Kilogram
7. a) 30 m b) 5.5 m
8. a) 714.29 kg/m<sup>3</sup> b) 800 kg/m<sup>3</sup>

### Answers to Assessment exercise 1.4

1. An apparatus is an equipment used for a particular activity or purpose.
2. Candle, stove gas, Bunsen burner, kerosene stove
3. Microscope
4. A. Spring balance, B. Thermometer
5. a) W – chimney X – Collar  
Y – air hole Z – gas valve
- b). W – It is a pathway for the laboratory gas to the top for burning; It allows mixing of laboratory gas and air for burning.  
X – Regulates air  
Z – regulate flow of gas
6. P- Ocular - magnifies the image formed by the objective.  
Q- Objectives - lenses that receive the light from the field of view and form the first image.  
R- stage - supports the slide and the specimen.  
S- Base - foundation which supports the microscope & keeps it stable.  
T- arm - supports the ocular, objectives and body tube.
7. To protect our health. There should be proper disposal of chemicals to protect the environment
8. Hand lens has low power magnification while microscope has high power magnification.
9. Time is a measure of duration; Volume is the amount of space occupied by a substance and Magnification is is the process of enlarging the apparent size of a substance.
10. Assess learner's responses.





12. To neutralise the positive charge of the body of the truck by electrons coming through the chain from the ground and thus the danger of any sparking is avoided

### Answers to Assessment exercise 4.2

- The sources of electricity include hydro-electric power, geothermal, wind power, solar energy, dry cells.
- Assess the circuits
- Ammeter
- Circuit A is Series arrangement while circuit B is parallel arrangement
  - The advantages and disadvantages of parallel circuit is as follows,

Advantages	Disadvantages
We know that the voltage remains constant in the parallel connection. Therefore, each component in the circuit gets the same amount of voltage.	To construct the parallel connection, we need lots of wires.
We can connect or disconnect a new electric appliance in the circuit without affecting the other components in the circuit.	We cannot meet the requirement when the exact same amount of current is required to pass through the element.
If there is a fault in one of the electric appliances, the current is able to pass through different paths of the circuit.	In parallel circuits, we cannot increase the voltage since the resistance decreases in the parallel circuit.

- Current electricity is the form of electricity that exists when charges are able to constantly flow. As opposed to static electricity where charges gather and remain at rest.  
They both transfer electric charges. They both work with conductors and insulators. They

both build up charges. They are both a form of electricity.

- Parallel connection. The bulbs light with same brightness
- bulb A
  - Bulb D will light after reconnection
  - Bulb A and B will continue to light while C goes off.
- Pieces of paper
- glass, plastic, rubber, and natural and synthetic fibers, such as cotton and nylon
- Write materials that are non-conductors of electricity.
- Lighting, heating, cooling, and refrigeration and for operating appliances, computers, electronics, machinery, and public transportation systems.

### Answers to Assessment exercise 4.3

- Substances or objects that have a force that pull or push other objects
- Magnetic materials are substances that get attracted by magnets while non-magnetic materials are substances that are not attracted by magnets
- Suspend bar magnet to turn around to come to rest approximately in a north – south direction. Every magnet must have a south and a north pole. It is impossible to separate one pole from the other
- helps to create a magnetic field that creates sound vibrations when hit by electric signals
- repel
  - repel
  - Attract

### MODEL TEST PAPER 1

- Integrated science** is body of knowledge of various field of science (subjects) to make it a whole in a way none of the subjects stands alone.
- Assess learners work
- Science, technology engineering and Mathematics
- Cut, burns and poison ingestion

5.
  - Cool the burn or scald as quickly as possible by holding it under cool running water until the pain feels better. You can use cold milk or canned drinks instead of cold water.
  - Remove any jewellery or clothing unless stuck to the burn, before the area begins to swell.
  - Cover the area loosely with sterile bandage lengthways when it has cooled. *Use a clean dry piece of cloth if you do not have bandage.*
  - Monitor the casualty. Seek medical advice
6. Communicating
7. Clean the floor to remove the pieces of glass. Report to the lab technician or teacher about the accident.
8. Measuring
9. Time, length, temperature, mass, electric current etc
10. 0.5 litres
11. Heating substances
12. Measuring instrument
13.
  - a) *Base* provides support to the Bunsen burner
  - b) *Barrel* contains air intake openings that mix air and gas together. It is a metal tube that lies on the base of the burner
  - c) *Air hole* allows air to enter the burner for a mixture of air and gas or any other liquid fuel with air
  - d) *Collar* controls the amount of air entering the barrel
14.
  - a) Decantation
  - b) Decantation
  - c) immiscible
  - d) condensation.
  - e) ability to be carried by winds.
15.
  - a) winnowing
  - b) Winnowing then sieving
  - c) Separating funnel/ decantation
  - d) sieving
  - e) dissolves in water, sedimentation and decantation, filtration, evaporation.
16.
  - A – fractionating column
  - B – condenser
  - C – Inlet
  - D – Outlet
17. Determines whether a substance is an acid or a base.
18. Litmus paper, Phenolphthalein, Methyl orange
19.
  - a) Universal indicator
  - b) P – acids, Q – neutral and R – base
  - c) P any acid like lemon R any base like baking powder, toothpaste,
  - d) Not a base or acid
  - e) Water
  - f) they determine the strengths of acids or bases
20. North and South
21. Assess learners
22.
  - A – sperm
  - B – Ovum/ egg
23. Positive, negative or neutral charges
24. For earthing or neutralising the static charges
25. Assess the learners
26. Using a magnet
27. Parallel circuit
28. To measure the amount of current in a circuit
29.
  - a) Assess
  - b) to charge the van de Graff generator
30. Suspend the bar magnet. Determine the direction the ends of the bar are facing.

## MODEL TEST PAPER 2

1. Biology, Chemistry, Physics
2. Science, Technology, Engineering and Mathematics
3. Beam balance and graduated cylinder
4. Volume
5. Experiments
6. Open flames  
Sharp objects  
Corrosive materials  
Toxic materials  
Flammables  
High pressure gases
7. Observing
8.
  - It also provides information on the quantity and expected dates of expiry.
  - Provide information on the contents and ingredients of the products that we are using or want to consume.
  - Serve as a guide on how to use the product properly.

- Inform consumers. For instance smoking is dangerous to your health.
- Length is the distance between two points  
Mass is the quantity of a substance  
Time is the measure of a duration
  - A basic quantity is a quantity that cannot be obtained from other physical quantities while derived quantity is a quantity obtained by combination of basic quantities by either multiplication or division.
  - 3.92 kg
  - A – Beaker  
B – conical flask  
C – Syringe
  - Magnify objects
  - a) A – chimney  
B – collar  
C – valve  
D – air hole  
E – base  
b) B the collar control the amount of air
  - To minimise exploitation and also to create awareness about the products.
  - Assess
  - Decantation the process of separation of liquid from solid and other immiscible (non-mixing) liquids, by removing the liquid layer at the top from the layer of solid or liquid below.
  - Assess
  - Sublimation
  - a) Separating funnel  
b) Separating immiscible mixture
  - Manufacturing of soap for bathing and washing, making antacid tablets to treat our stomach, making tooth pastes for brushing our teeth and making lime that is used to reduce acidity in the soil
  - The sperm are ejected from the male reproductive organ called the penis.
    - The sperm enters the female body through her reproductive organ (vagina).
    - Then the sperm travels through the uterus and fallopian tube.
    - In the fallopian tube, it meets the egg produced by the female organs.
    - So fertilization takes place in fallopian tubes.
  - Fertilization results in the formation of a zygote which develops into an embryo.
  - The zygote is the beginning of a new individual.
  - a) Urine  
b) excess water, urea, and salts through the sweat glands
  - it gets charged hence attracts pieces of paper
  - a) Attract each other  
b) Repel each other
  - Assess
  - A- Ammeter  
B- Voltmeter
  - Magnetic materials* are substances that get attracted by magnets while *non-magnetic materials* are substances that are not attracted by magnets
  - Repel each other
  - a) connecting wire, dry cell, Ammeter, load  
b) Connecting wire complete the circuit to allow current to flow through it, dry cell is the source of electricity, Ammeter measures the amount of electric current across a circuit

### MODEL TEST PAPER 3

- Physics* is the scientific studies that deal with matter and relation to energy.
  - Biology* is scientific the study of living things (plants and animals).
  - Chemistry* is the scientific study of matter and its properties
- The three main pathways include: Arts and Sport Sciences, Social Sciences and Sciences, Technology, Engineering and Mathematics.
- Mechanic
  - Laboratory technician
  - Dentist
  - Pharmacist etc
- Thermometer
- A hazard is a risk that can cause harm in the environment.  
An accident is an incident that happens unexpectedly resulting to damage, injury or death

6. Common hazards in a laboratory include:  
Open flames, sharp objects, corrosive materials, toxic materials, flammables, high pressure gases, explosive chemicals, carcinogenic, radioactive substances etc
7. Observing skills, measuring skills, manipulating skills, classifying skills, predicting skills, communicating skills, conclusion skills
8. Classification
9.  $0.25\text{g/cm}^3$
10. Area, volume, density
11. A- spring balance  
B- stop watch
12. Fine adjustment knob
13. Solid-liquid mixtures- Soluble solute
14. a)  $78^\circ\text{C}$   
b) Alcohol  
c)  $100^\circ\text{C}$   
d) water  
e) ensure uniform heating  
f) They have varying boiling points  
g) for uniform heating  
h) To determine the temperatures  
i) Fractional distillation method
15. Assess
16. Wood ash
17. • Diseases e.g. HIV and AIDs, STIs  
• Abortion  
• Improper diet in case of pregnancy  
• Early pregnancy.
18. P - Hair  
Q- Capillary  
R - Sweat pores  
S - Epidermis  
T - Sweat glands
19. Take care of the skin
20. Rubbing and induction
21. Use is in printers and photocopiers where static electric charges attract the ink, or toner, to the paper. Other uses include paint sprayers, air filters, and dust removal. Static electricity can also cause damage
22. Conductors are materials that allow electrons from one particle to the next to easily flow while non-conductors do not conduct

- electricity as there is no free charge dispersion on the surface or inside the substance.
23. Electric kettle, iron box, heater, refrigerator etc
  24. Some of the uses of magnet include
    - a) Separating mixture involving magnetic materials
    - b) Showing compass direction of place majorly used by pilots, sailors, soldiers, hikers and others utilize this compass
    - c) Lifting magnetic material
    - d) Used in generators and motors
    - e) Used in a speaker transforms the electronic signal to sound vibrations
    - f) Prevents corrosion in a water heater.
  25. Bring one bar closer to one another at a time. Identify the bar that cannot attract each other are not magnets. Identify one that attract the other as magnet and one that cannot be attracted as non-magnetic
  26. Source of electricity, connecting wire, bulb and switch
  27. Series and parallel connection
  28. It will get attracted to the wall
  29. A - Negative charge  
B - neutral charges  
C - Positive charges
  30. Iron etc

#### MODEL TEST PAPER 4

1. Integrated Science
2. Assess
3. Safety equipment
4. A – Carcinogenic  
B – Fire
5. Assess
6. Observation
7. *Volume* is the amount of space that a substance or object occupies, or that is enclosed within a container.  
*Area* is the amount of space enclosed in an object  
*Density* is the mass per unit volume
8. a) metres  
b) Kelvin  
c) Amperes

9. a) 0.34 kg  
b)  $3.078 \times 10^{-3} \text{ m}^3$   
c)  $110.46 \text{ kg/m}^3$   
d)  $0.0513 \text{ m}^2$
10. a room or building equipped for scientific experiments and research.
11. A- microscope  
B- goggles
12. To magnify objects
13. Test tube rack
14. magnifies the image formed by the objective.
15. D
16. A- *Ocular (eyepiece lens)* - magnifies the image formed by the objective.  
B- *Objectives* - lenses that receive the light from the field of view and form the first image  
C- *Course adjustment* - used for initial or low power adjustment.  
D- *Fine adjustment* - used for fine tuning and high power focusing.  
E - *Stage* - supports the slide and the specimen  
F - *Diaphragm* - controls the amount of light reaching the specimen.  
G- *Illuminator* - source of light.
17. Bunsen burner, stove, electricity heater etc
18. *Sedimentation* is the process of heavier particles of an insoluble solid settling down in a liquid. It is a technique for separating mixtures of chemicals while *decantation* is the process of removing liquid from a container without disturbing the sediment.
19. Winnowing, sieving
20. Sodium hydroxide solution. It is basic
21. Assesss
22. A – fallopian tube  
B – Ovary  
C – Uterus  
D – Vagina
23. Irons were attracted by magnet
24. Some dangers posed by static electricity are:  
a. Electric shock due to the flow of current  
b. Fires or explosions.  
c. Production disturbances in the processing of paper, plastics, composites, powder, granules and liquids.
- d. Damage to electronic equipment and components.  
e. Damage to mechanical components such as bearings
25. Dry cell, geothermal, solar, wind power etc
26. Some of the uses of electricity include heating, lighting, communication and powering machines.
27. Parallel connection. It supplies power uniformly
28. Assess
29. A is series while B is parallel connection
30. a) attracts  
b) repels

### MODEL TEST PAPER 5

- Leads to different careers
  - Knowledge and skills help in problem solving
  - Helps us to explain nature
  - Helps us explain how the body system works
  - Helps us understand how to live a healthy lifestyle
- a) repairing a car  
b) Physics and Chemistry
- Arts and Sports
- Spring balance
- Blood group AB or O
- Platelets
- Assess
- Gloves, dust coat and goggles
- communication
- a) Ammeter  
b) determine the amount of current  
c) Amperes (A)
- $1000 \text{ kg/m}^3$
- Teat pipette/dropper
- U – magnet
- Base and the arm
- Evaporation or simple distillation
- a) Sublimation  
b) Winnowing  
c) use of magnet  
d) Decantation
- Sedimentation and decantation



18. Yes, the water will disappear completely.
19. A- measure temperatures  
 B- collect distillate  
 C- support the round bottom flask  
 D- Condense hot gases back to their liquid form.
20. Reduce the acidity of the soil
21. Sweat glands, pore, hair, epidermis
22. A- Kidney removes excess water, excess salt and urea.  
 B- Ureter passes urine to the urinary bladder.  
 C- Urinary bladder stores the urine temporarily before being released  
 D- Urethra is a passage way for urine outside the body
23. Drinking enough water, eating healthy food, performing regular exercises etc
24. They attract the opposite charges (the negative charges in the balloon will make the electrons in the wall move to the other side of their atoms (like charges repel) and this leaves the surface of the wall positively charged)
25. • Separating mixture involving magnetic materials  
 • Showing compass direction of place majorly used by pilots, sailors, soldiers, hikers and others utilise this compass  
 • Lifting magnetic material  
 • Used in generators and motors  
 • Used in a speaker transforms the electronic signal to sound vibrations  
 • Prevents corrosion in a water heater.
26. They repel

27. Parallel

Difference Between Series and Parallel Circuits	
Series	Parallel
The same amount of current flows through all the components	The current flowing through each component combines to form the current flow through the source.
In an electrical circuit, components are arranged in a line	In an electrical circuit, components are arranged parallel to each other
If one component breaks down, the whole circuit will burn out.	Other components will function even if one component breaks down, each has its own independent circuit

28. To avoid electric shock or electrocution
29. Negative charges move.
30. Attracted due to static electricity.

# **PHYSICAL EDUCATION AND SPORTS**

## **ANSWERS**

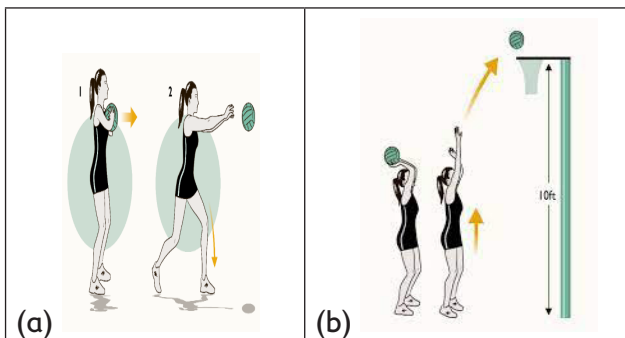
# 1 GAMES

## Netball:

### 1.1 chest pass

#### Assess your progress

1. Grip on netball
2. (a) GS – Goal shooter  
(b) GA – Goal attack
- 3.



4. (a) Post and rim (b) The ball (c) The bibs (d) The whistle (and any other)
5. Chest pass is a very fast and flat pass. This enables a team to move quickly up a court in a precise and accurate fashion.
6. Safety measure to be observed when practising chest pass in Netball are as follows.
  - (a) Have good preparation for the practise.
  - (b) Always warm up to reduce the risk of injury.
  - (c) Undergo fitness programs to develop aerobic fitness, strength, balance, coordination and flexibility.
  - (d) Perform good technique and practices to help prevent injury.
  - (e) Participate in training programmes to improve body balance.
  - (f) Learn correct passing, catching and landing techniques.
  - (g) Wear the right protective equipment.
  - (h) Seek professional advice on footwear.
  - (i) Consider preventive ankle taping or bracing to reduce injury risks.
  - (j) Check netball environment for hazards.
  - (k) Use Netball Australia's Game Day Checklist (available at [www.netball.asn.au](http://www.netball.asn.au)) to ensure a safe playing environment.
  - (l) Provide adequate run-off area around the court.
  - (m) Goal posts should be padded and secured firmly to the ground with no part posing a tripping risk.
  - (n) Remove courtside hazards.
  - (o) Cool down after practising.

## 1.2 Dodging and marking in Netball

#### Assess your progress

#### Task

1. Dodging
2. (a) Perform warm up activities (b) Play with flat shoes. (Refer to safety measures listed in Assess your progress in chest pass.)
3. Dodging in Netball is the outwitting the defender by moving in one direction and then quickly moving off in the opposite direction to receive a pass. Marking in netball is an organized defensive tactic which aims to prevent a member of the opposing team (usually an attacking player) from taking control of the ball or scoring.
4. Skill of dodging is used in the game of Netball when the dodging player is preparing to receive the ball.
5. (a) Marking (b) Dodging

## 1.3 Foot work in Netball

#### Assess your progress

1. (a) Double leg landing (b) Single leg landing
2. It is a swivel movement that allows the player to move on a fixed axis to either pass or shoot.
3. (a) TRUE (b) FALSE
4. When with the ball.
5. Refer to safety measures such as the following.
  - (a) Stay fit.
  - (b) Make sure your coach is prepared.
  - (c) Check your sports gear.
  - (d) Warm up and stretch.
  - (e) Stay hydrated.
  - (f) Perform good technique and practices to help prevent injury.
  - (g) Participate in training programmes to improve body balance.
  - (h) Check netball environment for hazards.
  - (i) Use Netball Australia's Game Day Checklist (available at [www.netball.asn.au](http://www.netball.asn.au)) to ensure a safe playing environment.
  - (j) Provide adequate run-off area around the court.
  - (k) Goal posts should be padded and secured firmly to the ground with no part posing a tripping risk.
  - (l) Remove courtside hazards.
  - (m) Cool down after practising.

## Handball

### 1.4 Passes and reception in Handball

#### Assess your progress

- Chest pass
  - Bounce pass
  - Overhead pass
  - shoulder pass
  - flick / wrist pass
  - Jump pass
  - side pass
  - back pass(among others)
- Refer to safety measures in Netball.
  - Players are not allowed to pull, hit, or punch the ball out of the opponent's hands,
  - Do not endanger an opponent with the ball
  - the Goalkeeper may defend their goals in any manner using hands, feet, and body.
- Side pass
- Dribbling

### 1.5 Footwork in Handball

#### Assess your progress

- Dodging or dribbling
- Three
- Stay fit.
  - Make sure your coach is prepared.
  - Check your sports gear.
  - Warm up and stretch.
  - Stay hydrated.
  - Perform good technique and practices to help prevent injury.
  - Participate in training programmes to improve body balance.
  - Provide adequate run-off area around the court.
  - Goal posts should be padded and secured firmly to the ground with no part posing a tripping risk.
  - Remove courtside hazards.
  - Cool down after practising.
- FALSE
- TRUE

### 1.6 Dodging and marking in Handball

#### Assess your progress

- To outwit the defender.
- To prevent the attacker from receiving the ball or scoring.
- The defending player as well as the goalkeeper.
- Stay fit.
  - Check your sports gear.
  - Warm up and stretch.
  - Stay hydrated.
  - Participate in training programmes to improve body balance.

- Provide adequate run-off area around the court.
- Do to pull, hit, or punch the ball out of the opponent's hands, endanger an opponent with the ball**
- Do not contact the ball below the knees.
- Remove courtside hazards.
- Cool down after practising.

### 1.7 Dribbling in Handball

#### Assess your progress

- Low dribbling
- To enable a player to keep control of the ball,
  - To enable a player to travel past a defender
  - To enable the player to **move the team forward up the court.**
- Stay fit.
  - Check your sports gear.
  - Warm up and stretch.
  - Stay hydrated.
  - Participate in training programmes to improve body balance.
  - Provide adequate run-off area around the court.
  - Do to pull, hit, or punch the ball out of the opponent's hands, endanger an opponent with the ball**
  - Do not **contact the ball below the knees.**
  - Remove courtside hazards.
  - Cool down after practising.
- Low dribbling
  - High dribbling

### 1.8 Shooting in Handball

#### Assess your progress

- Running shot
  - Jump shot
  - Dive shot
  - Lob shot
  - Falling shot
- Falling shot
- Lob shot
- Lob shot

#### End of strand 1.0 assessment

- Push pass
  - Bounce pass
  - Wrist or Flick pass
  - Back pass
  - Jump pass
  - Side pass
- flick or wrist pass
  - side pass
- To indicate their playing positions.

4. Whistles / hand signal / face expression / body movement / body posture / gestures / eye contact / touch / space
5. (a) The goal shooter (b) The goal keeper  
(c) The centre
6. To prevent COVID-19
7. Is opening fingers and snapping the wrists to let the ball out of the palms.
8. Is a skill in which the ball is quickly propelled to a teammate from chest level using both hands.
9. To defend, attack and mark the opposing centre player.
10. a) Bibs b) Netball rings
11. Refer to answers in number one.
12. Dodging
13. Handball
14. Seven
15. Goal keeping
16. Low dribbling
17. (a) Push pass (b) bounce pass  
(c) Wrist or Flick pass (d) back pass  
(e) jump pass (f) side pass
18. Falling shot
19. (a) 7m line (b) 9m line  
(c) 4m goalkeeper's line  
(d) 6m line (The D-zone or Goal area)  
(e) 2.5m line (clearance line)  
(f) Sideline (g) Centre line  
(h) substitution line (i) Halfway line
20. No foul.

## 2 ATHLETICS

### 2.1 Long jump

#### Assess your progress

1. (a) 10m long (b) 3m wide  
(c) the runway is 1m wide
2. The landing pit
3. (a) Dry grass (b) Sand  
(c) Saw dust
4. (a) Sail technique (b) Hang technique  
(c) Hitch kick technique

### 2.2 Javelin

#### Assess your progress

1. (a) The javelin must be released from over the shoulder.  
(b) The tip of the javelin must strike the ground first.  
(c) The javelin does not need to stick in the ground to be a valid throw.  
(d) It is not a foul if the javelin touches the ground during the run up.

2. Javelin
3. (a) Cord (b) shaft (b) metal tip
4. Javelin sector
5. The throwing sector
6. (a) Write two safety measures when throwing a javelin.  
(b) Throw the javelin in only one direction.  
(c) Do not stand in the landing sector when the javelin is being thrown.  
(d) No one stands in front or behind the thrower.  
(e) Carry the javelin vertically unless you are throwing it.
7. (a) To reduce injuries.  
(b) For sportsmanship.  
(c) For physical fitness.  
(d) For harmony in society.  
(e) For economic growth.
8. (a) carry (b) Crossover  
(c) Release (d) Recovery
9. Refer to question 7.

### 2.3 Sprint start in athletics

#### Assess your progress

1. (a) Bunch / Bullet start in sprint  
(b) Medium start in sprints  
(c) Elongated sprint start
2. (a) "On your marks!"  
(b) "Get set!"  
(c) "Go!"
3. Bunch start
4. (a) Get ready to start the competition.  
(b) Do not take any supplement to increase speed and stamina.  
(c) Do not touch the starting line or the other side of the starting side line before the pistol fires.  
(d) False start the athlete is disqualified.  
(e) Do not step on the white lines that mark the lanes throughout the race.  
(f) Run in the designated lanes and do not cross the lanes throughout the race.  
(g) Do not obstruct other athletes' paths.  
(h) Do not leave the track. This leads to disqualification.  
(i) Have up to eleven spikes or less.  
(j) The spikes size should not exceed more than nine mm.

### 2.4 Running in sprint races

#### Assess your progress

1. (a) 100m (b) 200m (c) 400m
2. (a) Bunch / Bullet start in sprint  
(b) Medium start in sprints  
(c) Elongated sprint start

3. Maintaining
4. Reaction time
5. (a) Reaction time  
(b) Acceleration  
(c) Maintaining

## 2.5 Finishing techniques in sprint races

### Assess your progress

1. a) Bunch / Bullet start in sprint  
b) Medium start in sprints  
c) Elongated sprint start
2. Run through finish technique
3. a) Reaction time  
b) Acceleration  
c) Maintaining
4. a) Not taking any supplement to increase speed and stamina.  
b) Not touching the starting line or the other side of the starting side line before the pistol fires.  
(k) Not having false start.  
(l) Not stepping on the white lines that mark the lanes throughout the race.  
(m) Running in the designated lanes and not cross the lanes throughout the race.  
(n) Not obstructing other athletes' paths.  
(o) Not leaving the track. This leads to disqualification.  
(p) Having up to eleven spikes or less as per the standards.  
(q) The spikes size not exceeding more than nine mm.
5. (a) Shoulder shrug technique  
(b) Drop finish technique  
(c) Run through finish technique
6. Starting block

## 2.6 Baton exchange relay

### Assess your progress

1. (a) Up sweep (b) Down sweep
2. Four
3. (a) 100m by 4 (b) 400m by 4
4. Down sweep baton exchange
5. (a) The baton should not be thrown  
(b) Carry the baton in your hand always

### End of strand 2.0 assessment

1. (a) Bunch / Bullet start in sprint  
(b) Medium start in sprints  
(c) Elongated sprint start
2. Long jump
3. (a) Sail technique  
(b) Hang technique  
(c) Hitch kick technique

4. (a) Reaction time  
(b) Acceleration  
(c) Maintaining
5. (a) Shoulder shrug finish technique  
(b) Drop finish technique  
(c) Run through finish technique
6. Upward baton exchange technique
7. The javelin
8. (a) The grip  
(b) The carriage  
(c) The approach run  
(d) The crossover  
(e) The release  
(f) The follow through  
(g) The recovery
9. (a) the American grip  
(b) the Finnish grip  
(c) the V grip
10. (a) 100m by 4 (b) 400m by 4
11. Read the hitch kick technique in long jump.
12. (a) love (b) Responsibility  
(c) Integrity (d) Social justice  
(e) Respect (f) honesty  
(g) unity (h) peace
13. a) Reaction time (or sprint start in athletics)  
b) crossover in javelin  
c) Bunch start in sprints  
d) carriage in javelin  
e) Run through finish technique  
f) Elongated sprint start

## 3 PHYSICAL FITNESS AND HEALTH

### 3.1 Pre-exercise assessment of flexibility, balance and coordination

#### Assess your progress

1. (a) stop watch  
(b) sit and reach box  
(c) goniometer  
(d) tape measure or ruler (e) flexometre  
f) angle ruler
2. (a) Lunges (b) pushups  
(c) squats (d) burpees  
(e) planks (among others)
3. Skipping rope
4. Coordination

### 3.2 Fitness activities for flexibility, balance and coordination

#### Assess your progress

1. (a) i. Lunges ii. pushups iii. squats  
iv. burpees v. planks (among others).  
(b) i. foot tapping ii. single leg stance

- iii. squats
  - iv. walking on a line
  - v. Sit to stand
  - vi. hip thrust
  - vii. Planks
  - viii. leg swings
2. Drinking enough clean water regularly
  3. (a) Always warm up.  
(b) Do not over stretch.  
(c) Stretch towards joint movement direction.  
(d) Put on sportswear.  
(e) Avoid wet and slippery surfaces.  
(f) Cool down after exercises.
  4. Regular exercise makes the body parts stronger. For example, a stronger heart can pump more blood with less effort. As a result, **the force on the arteries decreases.** This lowers blood pressure.
  5. Respect increases confidence and team work. This in turn helps one to have friends to perform exercises with.

### 3.3 Post-exercise assessment of flexibility, balance and coordination

#### Assess your progress

1. It is the assessment carried out after practising fitness activities for flexibility, balance and coordination. This is done to confirm that the exercises done brought positive results.
2. By taking water frequently during the exercises.
3. (a) Sit and reach box  
(b) measuring tape or ruler  
(c) goniometer  
(d) stop watch (and many more)
4. To keep a record of the progress of fitness exercises.

#### End of strand 3.0 assessment

1. Balance
2. (a) V-balance (b) T balance  
(c) Single leg balance (among others)
3. Agility
4. (a) TRUE (b) FALSE (c) TRUE  
(d) TRUE (e) TRUE
5. (a) Always warm up before exercises.  
b) Do not overstretch
6. a) Stop watch  
b) sit and reach box  
c) tape measure (among others)
7. a) pushups b) planks c) burpees  
d) juggling (among others)
8. a) sit and stand b) side lunges  
c) seat stretches (among others)
9. To stay hydrated.
10. a) skipping rope b) balls c) stop watch  
d) sit and reach box (among others)

11. Congratulate him or her.
12. a) i. seat stretches ii. lunges  
iii. Planks (among others)  
b) i. side stepping ii. One leg stand  
iii. Sit and stand (among others)  
c) i juggling ii. Dribbling  
iii. Target practice (among others)

4

## CAREER OPPORTUNITIES IN SPORTS

### 4.1 Games and sports related careers

#### Assess your progress

1. (a) Physiologist (b) coach (c) teacher  
(d) Nutritionist (e) officiators (among others)
2. Name them; like sports academies, karate, gymnasiums and boxing.
3. The letter must be official following the structure of official letter and the theme of the letter.
4. (a) Theme of visit  
(b) Accessibility  
(c) Weather condition  
(d) Security (among others)
5. Any sports and games activity.
6. It must be an official letter with the message of thanking them.

### 4.2 Use of talent to generate income

#### Assess your progress

1. (a) Coaching (b) scouting  
(c) Physiologist (among others)
2. It is natural skill or aptitude.
3. (a) Participating in games.  
(b) Entertaining people  
(c) Innovating things (among others)
4. (a) To develop his home.  
(b) Starting a business.  
(c) Starting farming.  
(d) Paying his school fees and that of his siblings.  
(e) Developing the community.
5. Use your essay writing skills.

### 4.3 Choice of financial services for management of monetary awards

#### Assess your progress

1. (a) Through interest from savings  
(b) Through participating in sports and games events

- (c) By earning salary for providing services to the talented people  
 (d) By charging viewers who attend the talent shows.
- (a) As a coach (b) as a referee  
 (c) as a scout (d) as a driver  
 (e) as a financial adviser (f) as a nutritionist  
 (g) as a physiologist  
 (h) as a sports field maintainer
  - (a) Banks  
 (b) Savings and Credit Co-operative Society.  
 (c) Digital financial services
  - Is a plan for future saving and spending as well as planned income and expenses.
  - Listen to their advice.
  - Find out from your coach and teacher and share with your friends and siblings.

### End of strand 4.0 assessment

- (a) Coach (b) Referee  
 (c) Scout (d) Driver  
 (e) Financial adviser (f) Nutritionist  
 (g) Physiologist  
 (h) Sports field maintainer
- (a) Banks  
 (b) Savings and Credit Co-operative Society.  
 (c) Digital financial services
- They help to develop talents and economy of the community.
- (a) Nearness  
 (b) Sports and games offered  
 (c) Security in the area
- The letter to be official and to follow the format of official letter and convey the message.
- Consider the points in number 5.
- (a) Through participating in sports and games events.  
 (b) Through employment in the sports and games institution.  
 (c) By providing services like transport to sports and games participants.
- Banks and other financial institutions.
- Is a plan for future saving and spending as well as planned income and expenses.
- Make sure the amount for savings is more than 20% of the total. Learn to save.
- You can consult your teacher, coach or any patent rights official in your area.
- Remember: Pointing out saving financial institutions in your area as well as teaching them saving.
- Saving / loans and financial advices
- Saving is important.
- a) Preparing a budget

- To save
- To avoid impulse buying
- To get financial advice from financial institutions
- To invest

## 5 HOCKEY

### 5.1 Hockey: equipment, grip and stance

#### Assess your progress

- (a) stick (b) helmet (c) gloves  
 (d) shin guard (e) socks  
 (f) boots  
 (g) shorts and jersey (among others)
- 11
- Using a hockey stick point out: (a) handle/grip  
 (b) shaft (c) scoop  
 (d) toe (e) head (f) heel.
- (a) side line (b) goal line  
 (c) centre line (d) 23m line  
 (e) shooting circle
- (a) Hold the stick correctly.  
 (b) Avoid approaching each other from behind.  
 (c) The head should always face down.

### 5.2 Passing skills in Hockey

#### Assess your progress

- (a) head (b) shaft
- Passing skill
- (a) push pass (b) drive pass (c) sweep pass
- (a) Players are not allowed to use parts of their bodies to control the ball.  
 (b) Players are not allowed to physical interfere with the opponent.  
 (c) Hit the ball only with the flat side of the stick. (Among others)
- Hockey game is a high risky game so rules will help players to develop values of love, respect, responsibility, social justice, peace among others.

### 5.3 Hitting skills in Hockey

#### Assess your progress

- Find from digital and written resources.
- (a) It moves to the direction intended.  
 (b) It moves faster.  
 (c) It is the best method to pass the ball to a player who is very far.
- (a) Maintain safe distance from the stick.  
 (b) Maintain eye contact with the ball.  
 (c) The ball should be below knee level.  
 (d) Use the flat part of the stick to hit the ball.
- To put on protective gear without failure.
- To increase power of hitting the ball and to the direction intended.



## 5.4 Stopping skills in Hockey

### Assess your progress

- Reverse stick stopping hockey ball
- Confirm by doing it practically and give each other feedback.
- Discuss the drills with your siblings and friends. You may use the drills to practise stopping in Hockey.
- So that the ball does not go far.
- Refer from other written or digital texts and discuss with your coach or teacher.

### End of strand 5.0 assessment

- Hockey
- (a) the Hockey stick (b) the Hockey ball  
(c) blockers gloves (d) Helmet  
(e) Jersey (f) field hockey shin guards
- V-Grip
- Ready position for playing
- Show your friend the well drawn and labeled hockey stick to give you feedback.
- (a) Players are not allowed to use parts of their bodies to control the ball.  
(b) Players are not allowed to physical interfere with the opponent.  
(c) Hit the ball only with the flat side of the stick. (Among others)
- (a) push pass (b) drive pass  
(c) sweep pass
- (a) Players are not allowed to use parts of their bodies to control the ball.  
(b) Hit the ball only with the flat side of the stick. (Among others)
- V-grip in hockey
- Forward pass the heel of the stick is on the ground as the pass is taken while reverse pass the heel of the stick is facing up and the toe down when the pass is taken.
- Refer to number ten except this time the stick is used to stop the ball.
- Tell your coach or teacher the drill. Use the drill to practise stopping hockey ball.
- It is a modified or conditioned hockey game with less number of players.
- To allow the ball to stop at the stick without bouncing far.
- 11.

## 6 KABADDI

### 6.1 Defensive positioning and entry in Kabaddi

#### Assess your progress

- 7

- a) right and left corners  
b) right and left covers  
b) right-in and left-in  
c) the centre
- The raider (the centre)
- This is when the raider chants the word “Kabaddi!” when raiding.
- Refer to Activity 1 in Defensive positioning in Kabaddi. Show your friend to give you feedback.
- (a) Two Teams of Seven Players.  
(b) Each Match Consists of Two Halves.  
(c) Points are Scored by Raiding the Opposition’s Side.  
(d) A Successful Raid is Worth Two Points.  
(e) A Player is Out if they are Caught During a Raid.  
(f) The raider has to cant.

### 6.2 Defensive skills in Kabaddi

#### Assess your progress

- (a) Chain tackle (b) block tackle
- Block tackle is done by one person while chain tackle is done by two or more people.
- List atleast three; like: (a) Kabaddi rugby drill game (b) Kabaddi field hockey drills
- Tackling can be done individually or with a teammate(s).
- (a) Player must be tested for leg strength and agility.  
(b) Wear skin protection to prevent abrasions or cuts.  
(c) Wear face-mask to prevent the abrasions and nose injuries.  
(d) Wear elbow and knee protection to help prevent the injuries to these joints.

### 6.3 Attacking skills in Kabaddi

#### Assess your progress

- (a) Squat thrust (b) Hand touch
- (a) Carry out warm up before practise.  
(b) Player must be tested for leg strength and agility.  
(c) Wear skin protection to prevent abrasions or cuts.  
(e) Wear face-mask to prevent the abrasions and nose injuries.  
(f) Wear elbow and knee protection to help prevent the injuries to these joints.  
(g) Carry out cool down after practise.
- List atleast three; like: (a) Kabaddi rugby drill game (b) Kabaddi field hockey drills
- Hand touch
- Use good techniques and practices.

## End of strand 6.0 assessment

1. Refer to written and digital materials for the court size and positioning of defensive players.
2. 7
3. Entry in Kabaddi is when the attacking team sends **raiders** into opponent team's sections. The sole aim of the raider is to tag the members of the opposite team and run back into his or her team side. Each player he or she touches on the opponent's side gives his or her team one point. The raider needs to **repeatedly yell the word "Kabaddi"** soon after crossing the midline and he or she needs to keep yelling till he safely returns to his zone. It is worth noting that, under no circumstances the raider should stop yelling the word "Kabaddi". In case, he or she does so, he or she should return to his or her zone as soon as possible.
4. (a) The raider to chant "Kabaddi after crossing the midline."  
(b) The raider cannot be pulled by the cloths or hair but grabbed limbs or torso.
5. For fare play
6. Raider
7. (a) Block tackle (b) Chain tackle
8. Hand touch
9. This is the most unique feature of Kabaddi. The rule says the raider has to chant the word "Kabaddi" as soon as he enters the defending zone and should continue till he or she come back to your side by crossing the middle line. If the player fails in this at any moment during his raid, he will be out of the match. So indirectly the duration of cant can be used as an I-measurement tool of Kabaddi.
10. The raider cannot be caught by his hair or cloths.

## 7 SWIMMING

### 7.1 Water orientation

#### Assess your progress

1. (a) the shallow end (b) the deep end
2. Share your drawing with your friend or sibling for opinion.
3. You may use empty plastic jerrycans with tops, banana stems and bicycle or car tubes.
4. For safety / rescue or guidance while in the pool
5. When he or she has learnt to float

### 7.2 Front crawl in swimming

#### Assess your progress

1. Front crawl
2. (a) The arm action (b) The breathing  
(c) The leg action
3. flutter kicks

4. FALSE
5. To go with a friend who knows how to swim or to make sure that the pool has swimming pool attendant.

### 7.3 Backstroke in swimming

#### Assess your progress

1. The toes
2. (a) Walk. Do not run.  
(b) Obey pool rules.  
(c) No diving at the shallow end.  
(d) Never swim alone.  
(e) Shower before entering a swimming pool (among others.)
3. flutter kicks
4. (a) Not littering. (b) Following instructions.  
(c) Cleaning the environment.
5. Backstroke.

### End of strand 7.0 assessment

1. Buoyancy
2. Water orientation
3. (a) Walk. Do not run.  
(b) Obey pool rules.  
(c) No diving at the shallow end.  
(d) Never swim alone.  
(e) Shower before entering a swimming pool (among others.)
4. a) Empty water jerrycans  
b) banana stalks  
c) bamboo stalks  
d) Bicycle tubes (among others)
5. Shallow end
6. Backstroke in swimming
7. Love is a religious value.
8. Refer to written and digital materials as you discuss with friends.
9. Patience, respect, love, peace
10. (a) Front crawl arm drills  
(b) Front crawl leg drills  
(c) Front crawl body position drills  
(d) Front crawl breathing drills

## MODEL TEST PAPERS

### MODEL TEST PAPER 1

1. (a) Standing shot put (b) Long jump  
(c) High jump (d) javelin  
(e) Discuss throw
2. Non visual technique
3. Javelin
4. Not skipping on the balls of his feet
5. Thigh trap or chest trap
6. Over arm serve
7. Falling shot

8. Shoulder pass
9. (a) Ball (b) bat (c) gloves
10. (a) Middle line (b) bulk line (c) Bonus line
11. Breaststroke
12. (a) One hand catch (b) Two handed catch (c) Pancake catch
13. Elbow stand
14. (a) saw dust (b) banana leaves (c) sand
15. A sequence
16. (a) Speed - ability to move the body quickly. (b) Power-ability to move weight quickly. (c) Coordination - ability of the body to perform smooth and efficient movements. (d) Endurance - ability to withstand something.
17. (a) Tinder (b) Kindling (c) Wood
18. Stings
19. Two persons support
20. a) Sprain (b) Fracture
21. Rugby
22. Observing the rules of the game.
23. a) Elongated sprint start (b) Standing start (c) Bullet start
24. Side line
25. To start the center pass
26. Netball
27. A player, with or without the ball, cannot move into an area of the court that is not designated for their position.
28. Main reason is to increase metabolic activities of the muscles to be used in the match. Any reason in relation to fitness is acceptable.
29. To pivot and change direction
30. Falling shot

## MODEL TEST PAPER 2

1. For physical and health fitness
2. A
3. Uprights, horizontal crossbar, sand pit, mattress
4. (a) Skip rope on a smooth surface measure in rope skipping? (b) Use the correct rope. (c) Wear flat rubber shoes. (d) Wear sports attire. (e) Replenish water from time to time during exercise. (f) If there are more than one skipper, skippers should keep a safe distance from each other to avoid injuries by the ropes.
5. When the ball is at the waist level.
6. T- balance
7. The ability of the body to change direction fast without losing balance.
8. B
9. The Goal Keeper's (GK) primary function is to guard the goal circle. Defend the opposing shooters and prevent them from scoring goals. He or she takes throw-ins at the base line. He or she is the last line of defense.

10. Goal attacker
11. The pitcher
12. It has the following performance: Cant, Squat thrust, Hard touch
13. Rules to be observed while in the pool are: A. Do not hold on others. B. Do not push others while swimming. C. Do splash water at others swimmers.
14. Inverted breaststroke
15. Gone home
16. The serve
17. To avoid being tapped.
18. A jerrycan, A floating vest, A kick board and any others
19. GA/GD, GK/GS, WD/WA
20. Can pitch the ball / Can tap the runner / Can catch the ball
21. Handball / Rounders / Volleyball / soccer (among others)
22. Standing discuss / Long jump / standing javelin (among others)
23. (a) Take the baton to the waiting athlete. (b) Wait for the baton before running. (c) Do not throw the baton.
24. Wounded duck
25. (a) Jump and land on a soft surface. (b) Maintain safe space. (c) Remove stone on the runway.
26. Jump shot
27. The angle, speed and steepness of the ball's trajectory makes it hard for the opponent or goalkeeper to stop it.
28. Hang technique
29. Hurdle
30. Plunks / burpees / stretching / pushups / lunges (among others)

## MODEL TEST PAPER 3

1. To drink water. Drinking water will hydrate her body.
2. Running through finishing technique
3. A relay baton
4. Up sweep
5. Measuring tape / the uprights / Cross bars / the mattresses
6. NO
7. Straddle cross
8. a) Not to jump too high. b) To use the correct rope length. c) To wear high heeled rubber. d) To skip on an even ground.
9. The hands
10. Volley ball
11. The dig
12. Swimming



# HEALTH EDUCATION

## 1.0 HEALTH AND NUTRITION

### Revision exercise 1.1

- Education- Is the process through which knowledge, skills, attitudes and values are acquired in order to become more useful members in the community.
  - Health education- Is a process of acquiring functional health knowledge, skills, beliefs and practical health skills needed to provide awareness about health behaviour for good health.
- Nutritionist- advises people on their nutritional requirements.
  - Nurses- they provide the necessary health care to patients.
  - Physiotherapists- they provide physiological therapy required by patients.
  - Psychologist- they provide mental and emotional support to people.

3.

In medicine	In sports	In food
Nursing	Physiotherapy	Nutritionist
Doctor		

- Cleaning the environment.
  - Engaging young children in physical activities.
  - Participating in agricultural activities that will lead to production of healthy food.
  - Campaign against lifestyle conditions.
  - Environmental concerns through tree planting.  
(Assess other relevant answers)
- Prevents lifestyle diseases.
  - It provides information on emotional and mental health.
  - Prevents STI's and environmental diseases.
  - Develops health career- related opportunities.  
(Assess other relevant answers)

### Revision exercise 1.2

- Increase of individual and collective health awareness through participation in health action programmes.
- Creates employment and alleviates poverty in the community.
  - It fights corruption and improves health services.
  - Provides clean water to its citizens.

- Ensures there are enough medical and health facilities in the country.
  - Allocates enough funds to help in health promotion and awareness.  
(Assess other relevant answers)
- We are all affected in one way or another either directly or indirectly.
  - Drugs and substance use increases the rate of crime in the country.
  - Drugs affect the youth and consequently the economy of the country.
  - It causes an increase in the number of school dropouts.
  - It increases the spread of HIV and AIDS and other sexually transmitted infections.  
(Assess other relevant answers)
- It contains harmful chemicals that compromise the immunity of the body.
  - Tar causes cancer of the mouth, throat and lungs.
  - Carbon monoxide interferes with transport of oxygen.
  - Nicotine causes addiction.
  - Clean environments prevent diseases.  
(Assess other relevant answers)
- Eating healthy diets.
  - Involvement in physical activities.
  - Getting enough sleep.
  - Planting of trees.
  - Participating in community cleanup activities.
  - Use of clean and safe water.  
(Assess other relevant answers)
- Poverty.
  - Illiteracy.
  - Physical inactivity.
  - Culture and social norms.
  - Low population densities in some areas.
  - Inadequate resources and manpower.
  - Stigma associated with conditions in rural areas.

### Revision exercise 1.3

- Macronutrients - These are nutrients required by the body in large quantities because they are very useful.
  - Micronutrients - These are nutrients required by the body in small amounts.
- They spare the use proteins for energy.
  - They are used in sweetening and flavouring agents.
  - They supply the body with energy.
- Chicken, beef, beans, peas, fish.

## End of strand 1 assessment

1. Health refers to a state of the normal functioning of the body.
2. This is the process of acquiring functional health knowledge and practical skills with the intention of changing behaviour that affect human health.
3. Macronutrients are nutrients required by the body in large amounts while micronutrients are nutrients required in small amounts.
4. Proteins, carbohydrates, fats and vitamins.
5. i) They help in repair of worn-out tissues in the body.  
ii) They are used as building blocks in the body.  
iii) They are used in the formation of certain body chemicals such as enzymes.  
(Assess other relevant answers)
6. Functions of water include;  
i) Removal of waste products from the body.  
ii) Keeps the skin moist.  
iii) It helps in the formation of digestion.  
iv) It helps to keep the cool through perspiration.  
Functions of fibre include  
i) Bowel movement.  
ii) Cleaning of the alimentary tract.  
iii) It prevents constipation.
7. Anaemia, rickets, marasmus and kwashiorkor.
8. Kwashiorkor.
9. Fish, beans, milk, chicken  
(Assess other relevant answers)
10. This is creation of health awareness through transmission of knowledge, skills and attitudes that ensure both individual wellbeing and that of the community.
11. Financial challenges to procure the required equipment, lack of good will, from the community to support the idea, other engagements at school may be a hindrance.
12. HIV and AIDS and other STI's, drugs and substance use, lifestyle conditions  
(Assess other relevant answers)
13. Nutrition refers to the process of supplying the body with important substances required for good health while nutrients are chemical substances found in food and required by the body for good health.
14. Micronutrients are required for certain processes in the body and failure to supply them interferes with those processes- leading to poor health.

15. Health promotion provides important awareness that prevents and controls many environmental, nutritional and lifestyle diseases disorders.

## 2.0 HUMAN BODY SYSTEMS

### Revision exercise 2.1

1. Being a lubricant in the mouth, saliva causes the food particles to stick together and as the tongue pushes the food at the back of the mouth for swallowing, the food gets rolled into boluses.
2. The fats and oils must be emulsified before they are digested in the small intestines.
3. Maize, rice, cassava, green bananas, wheat, sweet potato, Irish potato, yams.  
(Assess other relevant answers)
4. Acid reflux, constipation, bloating, roundworms (Assess other relevant answers)
5. a) Acid reflux - Consumption of foods with a lot of acid.  
b) Constipation - Lack of fibre in the diet  
c) Bloating- Eating foods that upset the alimentary canal.  
d) Roundworms - eating undercooked food and eating fruits and vegetables without properly cleaning them.  
(Assess other relevant answers)
6. a) Acid reflux - This is prevented by avoiding fatty foods and those with a lot of acid.  
b) Constipation - This is prevented by eating foods rich in fibre and drinking a lot of water  
c) Bloating - This is prevented by eating foods rich in fibre.  
d) Roundworms - Cooking food until is ready, properly cleaning foods and vegetables before consumption.  
(Assess other relevant answers)

### Revision exercise 2.2

1. An excretory organ is a part of the body that eliminates waste from the body.
2. Skin, lungs, kidney  
(Assess other relevant answers)
3. a) Boils are infectious that may occur on the body due to inflammation of the hair follicle.  
b) These are conditions of the skin caused by fungi. Such conditions include ringworms.
4. i) Inform the teacher about the condition for further action.

- ii) Advise them against exposure to the agent that caused the allergic reaction.
  - iii) Consult a specialist about the skin allergic reaction.  
(Assess other relevant answers)
- 5.
- i) Personal hygiene helps to keep the skin clean and prevent fungal infections.
  - ii) Keeps the pores open and eliminates sweat.
  - iii) Healthy skin improves one's self esteem by preventing bad and irritating odour.  
(Assess other relevant answers)

### Revision exercise 2.3

1.
  - i) A healthy circulatory system ensures proper distribution of heat in the body.
  - ii) The brain is one of the most important organs in the body that dictates the functioning of the various body systems processes. This organ requires enough food nutrients and oxygen. An unhealthy circulatory system will hamper the supply of these materials. Consequently this results to death.
  - iii) Transport of waste materials to the excretory organs is another important function of the circulatory system. Without a healthy and an efficient circulatory system, these wastes would accumulate in the body and become harmful.
2.
  - a) Healthy feeding- This ensures that lifestyle diseases are controlled, especially those related to nutrition. Healthy feeding prevents accumulation of harmful substances into blood vessels.
  - b) Enough sleep- Enough sleep lowers the blood pressure. During the day, a person's blood pressure goes up due to many activities.
  - c) Early diagnosis and treatment of diseases- Early diagnosis and treatment prevents the blood vessels and the heart from being damaged.
  - d) Physical exercises- This increases the strength of the heart and prevents accumulation of fats in the blood flows.
3. Vena cava, pulmonary vein, aorta, pulmonary artery, right auricle, left auricle, right ventricle and left ventricle.

### End of strand 2 assessment

1. This is important because it makes it easier to swallow the food.
2. Small intestines are heavily coiled to increase the surface area for absorption of food.
3. The content of the food.
4. Heart attack, hypertension  
(Assess any other relevant answer)
5. They pump blood to a longer distance.
6. It helps in bowel movement.
7. This a long tube running from the mouth to the anus that allows movement food.
8. This is to ensure maximum digestion and absorption of food.
9. Pulmonary artery.
10. Arteries, veins, capillaries.
11. Hair acts as thermoregulators. When the temperature is high they collapse and release the trapped air. As a result this allows loss of excess heat. On the other hand, when the temperature is low the hairs stand and trap the air. This trapped air insulates the body against heat loss.
12. Right auricle, right ventricle, left auricle, left ventricle.
13. Aorta
14. Boils, scalds (Assess other relevant answers)
15. Eating foods rich in fibre and intake of water.

## 3.0 MENTAL AND EMOTIONAL HEALTH

### Revision exercise 3.1

1.
  - (a) Mental health refers to a person's cognitive, behavioural and emotional stability state and wellbeing.
  - (b) Mental illnesses refer to any disease which may affect a person's feelings, perceptions and behaviour.
2. Mental health is important because it enables us:
  - i) Cope with the stress of life
  - ii) Be physically fit
  - iii) Have good relationships
  - iv) Work productively
3. Signs and symptoms of mental health illnesses include;
  - i) Withdrawal from family, friends and relatives.
  - ii) Avoiding activities they would normally enjoy.
  - iii) Eating too much or too little.



- iv) Feeling hopeless.
  - v) Experiencing delusions.
4. The following are some of the causes of mental illness and disorders;
- i) Traumatic experiences
  - ii) Stigma
  - iii) Isolation and loneliness
  - iv) Alcohol, drugs and substance use
5. Positive mental wellbeing can be maintained through the following ways:
- i) Eating well.
  - ii) Encouraging them to be confident.
  - iii) Supporting them to accept themselves.
  - iv) Encouraging them to participate in physical activities.

### Revision exercise 3.2

1. This is the subjective sense of overall personal worth or value.
2. Low self-esteem is responsible for mental disorders and illnesses such as depression and anxiety.
3. Measures that should be taken to maintain positive mental health are:
  - i) Be physically active.
  - ii) Eat healthy foods.
  - iii) Steer away from harmful substances.
  - iv) Seek professional help.
  - v) Have good relations with other people.
  - vi) Learn new skills.
4. The are some of the environmental factors that can affect a person's mental being:
  - i) Pollution.
  - ii) Substance use.
  - iii) Extreme weather conditions.
  - iv) Hazardous conditions at work.
  - v) Smoking.
  - vi) Poverty.
  - vii) Sleep deprivation.
5. (a) Isolation: Lack encouragement from family and friends may lead to increased levels of anxiety and stress and even depression.
- (b) Stigma: A stigmatised or discriminated person worsen their already bad mental problems and it is difficult for them to heal.
- (c) Poverty: Poverty in childhood and among adults can cause social stresses, stigma and trauma.

### End of strand 3 assessment

1. Mental health refers to a person's cognitive, emotional and behavioural state of mental stability and wellbeing.
2. Mental health refers to a person's cognitive, emotional and behavioral state of mental stability and wellbeing while mental illness refers to a group of illnesses that may affect one's thoughts, perceptions, feelings and behaviour.
3. i) Abuse- which refers to any form of mistreatment on a person by another.  
 ii) Stress- a negative feeling in one's mind when they are under pressure.  
 iii) Trauma- refers to a life threatening experience that comes to one's mind due to a certain tragedy.  
 iv) Personal attitudes- these refer to how one feels about themselves.  
 (Assess other relevant answers)
4. i) Traumatic experiences  
 ii) Genes and family history  
 iii) Isolation and feelings of loneliness  
 (Assess other relevant answers)
5. i) Feeling sad and depressed  
 ii) Anger issues  
 iii) Alcohol, drug and substance use  
 iv) Having regular panic or anxiety attacks  
 (Assess other relevant answers)
6. i) Abuse- which refers to any form of mistreatment on a person by another.  
 ii) Stress- a negative feeling in one's mind when they are under pressure.  
 iii) Trauma- refers to a life threatening experience that comes to one's mind due to a certain tragedy.  
 iv) Personal attitudes- these refer to how one feels about themselves.
7. i) Poverty.  
 ii) Isolation.  
 iii) Loneliness.  
 iv) Parenting.  
 (Assess other relevant answers)
8. i) Spiritual support- helps one maintain a healthy circle.  
 ii) Healthy eating- enables one maintain a healthy lifestyle.  
 iii) Getting enough sleep - allows one to rest.  
 iv) Guidance and counselling - enables one overcome challenges that they may be going through.  
 (Assess other relevant answers)

9. Sharing and asking for support from family and friends on challenges one is going through can help maintain one's mental health.
10. Pollution, overcrowding, noise, lack of basic needs such as water, poor transport system. (Assess other relevant answers)
11. Stress is a negative feeling in one's mind caused by pressure to achieve something while depression is a feeling of hopelessness caused by prolonged periods of stress.
12. i) Guidance and counselling sessions- this enable one be guided on selecting the best approach to handle a challenge they might be going through.  
ii) Maintaining strong family ties- this provides support when one is going through a challenge.  
iii) Healthy eating- helps in maintaining a healthy body hence a healthy mind. (Assess other relevant answers)
13. i) Serious accidents.  
ii) Physical or sexual assault. (Assess other relevant answers)
14. i) Maintaining a healthy diet.  
ii) Participating in healthy activities that can boost and keep the brain healthy. (Assess other relevant answers)
15. a) Depression  
b) Guidance and counseling sessions, keeping them company and engaging them on the challenges they may be going through. (Assess other relevant answers)

## 4.0 USE OF MEDICINE

### Revision exercise 4.1

1. Medicine should be obtained from legal dealers and chemists with the doctor's prescription.
2. i) Medicines bought over the counter may be expired.  
ii) The patient may not be diagnosed to determine the cause of the illness.  
iii) There is lack of appropriate prescription and dosage. (Assess other relevant answers)
3. This prevents any risks of overdosing (Assess other relevant answers)
4. Prescribed medicine is given under the instructions of a doctor or a medical practitioner while un-prescribed medicine is not given under doctor's or a medical practitioner of instructions.

5. Headaches, nausea, allergic reactions, stuffy nose, rash and dizziness  
(Assess other relevant answers)

### End of strand 4 assessment

1. A drug or other substance for the treatment or prevention of disease
2. Medicine is a substance or preparation used in treating disease, while a drug is any chemical compound either prepared in laboratory of plant or animal which is intended to bring change in normal physiological functions of body. All medicines are drugs but all drugs are not medicines.
3. Prescribed medicine is given under the instructions of a doctor or a medical practitioner.
4. Antibiotics and pain relievers.
5. Un-prescribed medicine is not given under a doctor's or a medical practitioner instructions.
6. Six (6) tablets
7. Headaches, nausea, allergic reactions, stuffy nose, rash and dizziness. (Assess other relevant answers)
8. Read the prescription, read the side effects of the medicine, read any other instruction on the packaging of the medicine.
9. They might buy the wrong medication (Assess other relevant answers)
10. Children may accidentally consume it.
11. Medicine should be taken as prescribed by the doctor.
12. Assess learner's responses. (Answers may include; seeking help from an adult, rushing her to the nearest health center)
13. In a closed cabinet or cupboard, away from the reach by children, under the conditions described in the packaging.
14. The number of times to take a medicine, the amount of medicine to take, the period after which to take the medicine.
15. It helps to avoid accidents especially through intake by children. (Assess other relevant answers)

## 5.0 FIRST AID AND BASIC LIFE SUPPORT

### Revision exercise 5.1

1. A first aid kit is a small box containing items which are used in assisting an injured person before the patient is taken to hospital.

2. First aid is the first treatment given to the patient before being taken to the hospital
3. First aid is administered to prevent the condition of the patient from worsening before they are taken to the hospital.
4. (a) Surgical gloves are used to protect the person who is administering first aid against infection in case of contaminated blood especially when the patient is bleeding.
  - (b) Scissors are used to cut bandages.
  - (c) Painkillers are used to relieve pain when the patient is in hurt or injured.
  - (d) Bandages are used to support injured parts, secure dressings and control bleeding.
5. Used first aid materials should be well disposed in waste bins and later disposed off appropriately depending on the used material for first aid.

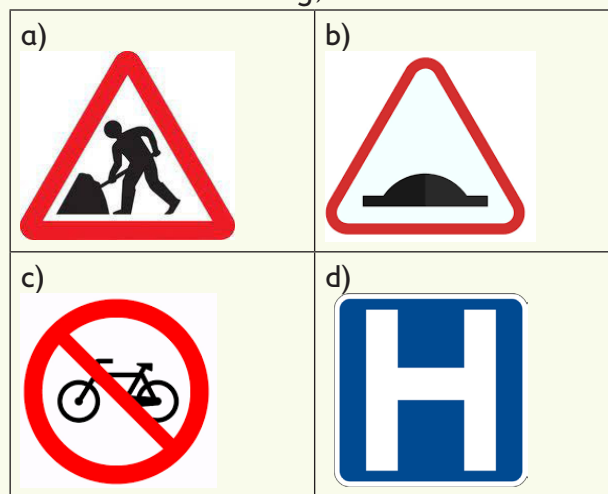
### Revision exercise 5.2

1. Accidents and injuries caused by the following:
  - i) Unsafe playing grounds.
  - ii) Electric faults.
  - iii) Oil spills.
  - iv) Lack of safety awareness and training.
  - v) Slips and falls.
  - vi) Fatigue.
  - vii) Dehydration of the body.
  - viii) Violence.
2. Accidents and injuries may be managed by;
  - i) Offering medical assistance.
  - ii) Removing the person from the area where the accident or injury has occurred or clear the area around them.
  - iii) Complete an accident report.
  - iv) Conduct an accident assessment.
  - v) Use the incident to improve your risk mitigation techniques.
3. Accidents and injuries are prevented through the following ways;
  - i) Avoid unsafe playgrounds.
  - ii) Keep rugs in place.
  - iii) Make homes well lit.
  - iv) Reduce clutter.
  - v) Use step tools when necessary.
  - vi) Any oil spills should be cleared.
  - vii) Electric faults should be rectified by qualified technicians.
4. (a) Scalds: This is a burn or other injury caused by hot liquid or steam

- (b) Fracture: This is a break that occurs in a bone.
- (c) Sprain: This is an injury caused by the movement of a joint into an unnatural position.

### Revision exercise 5.3

1. Road safety refers to methods and measures that are observed to prevent causes of road accidents.
2. A. No turning left  
B. No parking
3. Assess learner's drawings of symbols to look similar to the following;



### End of strand 5 assessment

1. Road safety refers to methods and measures that are observed to prevent causes of road accidents.
2. i) Speeding - speeding can contribute to road accidents as the driver can lose control of the vehicle.  
ii) Drunken driving - driving while drunk could mean one's visibility is affected as well their ability to interpret and make decision, it could also lead to impaired judgement, sleeping or drowsiness.  
iii) Driving faulty vehicles- faulty vehicles can break down while on the move.  
(Assess other relevant answers)
3. i) Avoid unsafe playgrounds.  
ii) Keep rugs in place.  
iii) Make homes well lit.  
iv) Reduce clutter.  
v) Use step tools when necessary.  
(Assess other relevant answers)
4. Burns, falls, slips, scalds.
5. First aid is the first treatment given to a patient before being taken to the hospital.

6. First aid is administered to prevent the condition of the patient from worsening and to give them hope.
7. (Assess learner's drawings to look similar to the one shown below.)



8. Hot liquid or steam.
9. Used first aid materials should be well disposed in waste bins and later disposed off appropriately depending on the used material for first aid.
10.
  - i) Control bleeding. Use a clean towel to apply light pressure to the area until bleeding stops (this may take a few minutes)
  - ii) Wash your hands well.
  - iii) Rinse the wound.
  - iv) Press the cut to stop any bleeding.
  - v) Dry the wound.
  - vi) Replace any skin flaps if possible.
  - vii) Cover the wound.
  - viii) Seek help.
11. Sprain
12. A first aid kit is a small box containing items which are used in giving help to an injured person before the patient is taken to hospital.
13. Used to cover or tie the injured part of the body.
14. A disinfectant and a bandage.
15. Because everyone is a road user and road safety is a factor that concerns all road users, since every act that someone carries while using the road can contribute to their safety and that of others.

## 6.0 ENVIRONMENTAL HEALTH AND SANITATION

### Revision exercise 6.1

1. Environmental health focuses on the relationship between people and their environment with an aim of promoting human health as well as safe communities.
2. Sanitation refers to public health conditions related to clean drinking water and treatment, disposal of human waste and sewage.
3. Environmental health is important because it;
  - i) Reduces environmental pollution.

- ii) Lengthens lifespan.
  - iii) Reduces exposure to diseases.
  - iv) Enhances quality of life.
4. Environmental factors affecting human health can be controlled by:
  - i) Creating awareness on environmental factors that affect human health.
  - ii) Reducing the use of farm chemicals.
  - iii) Legislation to reduce the impact of industrial activities that are harmful to human health.
  - iv) Using healthy, efficient energy sources.

### Revision exercise 6.2

1. Environmental health focuses on relationships between people and their environment with an aim of promoting human health. Sanitation refers to public health conditions related to clean drinking water and treatment, disposal of human waste and sewage.
2. Environmental health is critical for healthy and quality life because it helps to control a number of diseases. Through awareness, factors that lead to environmental degradation and diseases are prevented. Consequently, this increases the lifespan.
3. The following factors affect human health:
  - i) Diseases caused by germs.
  - ii) Lack of health care.
  - iii) Poor road network.
  - iv) Poor water quality.
  - v) Global environmental issues.
4. It is important to make them understand that participating in a cleanup exercise in the community is good. They should be made to understand that there are many other diseases that they may be exposed to apart from what they think they may get by participating in the clean-up activity. Let them know that by taking part in the cleaning exercise, they are being responsible and conscious of other people. They should be made to understand the different ways a person may contract diseases related to pollution. Let them not be forced.
5.
  - i) Water contaminants.
  - ii) Air contaminants.
  - iii) Soil contaminants.
6.
  - i) Excessive use of farm chemicals
  - ii) Dust particles
  - iii) Industrial gases
  - iv) Burning tyres and plastics
  - v) Vehicle exhaust fumes
  - vi) Aerosol sprays

### Revision exercise 6.3

1. Infection prevention refers to the approaches and practical measures taken to prevent harm caused by infections to patients and health workers.
2. Cleaning refers to removal of loose soils or dust particles on a surface while disinfection refers to the use of chemicals to kill germs on surfaces and equipment.
3. Personal protective equipment refers to clothing and equipment designed to protect a person from contracting or the spread of diseases or illnesses.
4.
  - i) Plastic bottles and elastic bands to make face shields.
  - ii) A piece of cloth to act as a mask.
5. The following infections require the use of personal protective equipment;
  - i) Flu
  - ii) Corona
  - iii) Tuberculosis
  - iv) Cholera

### End of strand 6 assessment

1. Infection prevention and control refers to the approaches and practical measures taken to prevent harm caused by infections to patients and health workers.
2. Face masks, goggles, gumboots, faces shield. (Assess other relevant answers)
3. Elastic bands, clear plastic bottles to make a face shield (Assess other relevant answers)
4. These are harmful substances that accidentally or deliberately find their way into the environment due to human activities and affect the quality of water, soil, air and the life of living organisms in the environment.
5. Bacteria and viruses found in the environment cause diseases to human beings.
6. Environmental health refers to relationships between people and their environment with an aim of promoting human health.
7.
  - i) Chemical contaminants such as gases can affect human health as they may cause respiratory diseases.
  - ii) Biological contaminants such as viruses and bacteria may cause various health challenges.
  - iii) Environmental components such as dust and pollen may cause allergies.
  - iv) Pollution of the environment can cause various health challenges. (Assess other relevant answers)

8.
  - i) Control pollution of the environment
  - ii) Plant trees as they help in purifying the environment. (Assess other relevant answers)
9. May lead to the following;
  - i) Respiratory infections
  - ii) Heart disorders
  - iii) Allergic reactions
  - iv) Mental disorders (Assess other relevant answers)
10.
  - i) Through use of health and efficient energy sources
  - ii) Reduction of use of farm chemicals
  - iii) Proper disposal and management of domestic waste (Asses other relevant answers)
11. Chemical contamination by vapour, gases and moisture can cause infections such as allergies.
12. Environmental health is important for;
  - i) maintaining a long life-span
  - ii) enhancing the quality of life
  - iii) reducing exposure to diseases
  - iv) reducing exposure to pollutants (Assess other relevant answers)
13. Sanitation refers to public health conditions related to clean drinking water and treatment, disposal of human waste and sewage.
14.
  - i) Reduction of environmental factors
  - ii) Use of healthy, efficient renewable sources of energy
  - iii) Legislation to deal with industrial activities that cause environmental contamination (Assess other relevant answers)
15. Assess learner's responses depending on the community they live in. (Answers could be linked to pollution, deforestation, mining etc)

## 7.0 HUMAN REPRODUCTIVE HEALTH

### Revision exercise 7.1

1. Puberty is the onset of adolescence.
2. An adolescent is a young boy or girl who is going through adolescence.
3. An intersex refers to a person that may have both male and female sex characteristics.
4. The following are some characteristics of an intersex:
  - i) A larger clitoris than expected.
  - ii) A smaller penis than expected.
  - iii) No vaginal opening.
  - iv) Penis without urethral opening.

5. Personal hygiene needs associated with puberty;
  - i) Regular bathing.
  - ii) Washing personal clothing with soap.
  - iii) The use of deodorants to suppress bad odour.
  - iv) Good hygiene is necessary throughout life.
  - v) Girls should use sanitary towels.

### Revision exercise 7.2

1. Reproductive health refers to the condition of male and female reproductive systems during all life stages.
2. Reproductive health is affected by cultural practices in a number of ways such as cultural practices like female genital mutilation, female circumcision etc.  
These practices can affect the reproductive parts where the practice is carried on leading to poor reproductive health.
3. Sexually Transmitted Infections are diseases which are transmitted from one person to another through sexual contact.
4. Sexually Transmitted Infections can affect reproductive health by destroying the reproductive organs. Consequently some of these Sexually Transmitted Infections cause sterility.
5. Practices that enhance reproductive health include:
  - i) Eating a varied diet.
  - ii) Drinking plenty of water.
  - iii) Maintaining healthy weight to reduce to reduce exerting pressure on reproductive organs.
  - iv) Regular consultation with health care providers.
  - v) Regular physical exercises.

### End of strand 7 assessment

1. Reproductive health refers to the condition of male and female reproductive systems during all life stages.
2. Growth spurt, increase in size of the reproductive organs, hair growth under the armpits and growth of pubic hair, sweat glands become active.
3. Reproductive health is important because;
  - i) It helps in making the youth understand sexual health.
  - ii) It helps in creating awareness among the adolescents as this is the time when hormonal changes in the body take place leading to the reproductive interest.

- iii) It helps in the prevention of Sexually Transmitted Infections such as HIV and AIDS.
  - iv) Adolescents can follow safe sexual practices and not get involved in unhealthy sexual relationships and illegal practices.  
(Assess other relevant answers)
4. He may have heard this as a myth in the community he lives.
5. Puberty is the onset of adolescence.
6. Puberty is the onset of adolescence while adolescence is the period following the onset of puberty during which a young person develops from a child into an adult.
7. Attraction to members of the opposite sex, mood swings, feelings of embarrassment.  
(Assess other relevant answers)
8. Because they lose blood during menstruation.
9.
  - i) Growth of breast
  - ii) Widening of hips
  - iii) Their voice becomes melodious
10. Menstruation, or period, is normal vaginal bleeding that occurs as part of a woman's monthly cycle.
11.
  - i) Changing of sanitary towels or tampons, regularly.
  - ii) Should not use soaps or cleaning agents on the vagina.
  - iii) Properly and regularly clean their body.
12. A myth is an outright lie that cannot be corrected while misconception can be corrected by advancing proper proofs.
13.
  - i) One cannot swim during menstruation- It is alright to swim during menstruation.
  - ii) One should not prepare food during menstruation - menstruation is a normal body process and should not be treated as a taboo.
  - iv) Any form of physical activity can disturb the menstrual flow- physical exercises help to relieve pain and discomfort that comes with menstruation such as; cramps.
14.
  - i) Regular bathing.
  - ii) Washing personal clothing with soap and clean water.
  - iii) The use of deodorants to suppress bad odour.
  - iv) Good hygiene is necessary throughout life.
  - v) Girls should use sanitary towels.  
(Assess other relevant answers)
15.
  - i) Oral hygiene.
  - ii) Body hygiene.
  - iii) Cleanliness of the clothes they wear.
  - iv) Cleanliness of beddings.  
(Assess other relevant answer)

## MODEL TEST PAPERS

### Model test paper 1

1. Health is a state of the normal body functioning. (Assess other relevant answers)
2. Eating health diets, getting enough rest, getting enough physical exercise. (Assess other relevant answers)
3. Vitamins, minerals. (Assess other relevant answers)
4. Stomach.
5. Fallopian tube or oviduct.
6. i) Can lead to increase in respiratory infections such as tuberculosis, flu, asthma and pneumonia.  
ii) May cause allergies.  
iii) May cause some types of cancer such as lung cancer and skin cancer.  
iv) May cause nausea, headaches, fatigue and difficulty in breathing or skin irritation. (Assess other relevant answers)
7. i) Using public transport to minimise the number of vehicles emitting carbon monoxide, nitrogen oxides, and hydrocarbons that are released when fuel burns.  
ii) Reduction of forest fires and smoking.  
iii) Use of fans instead of air conditioner.  
iv) Use filters for chimneys. (Assess other relevant answers)
8. Protein, vitamins, minerals and carbohydrates.
9. Dark green vegetables, eggs, fish, bone soup
10. Acid reflux
11. Constipation. (Assess other relevant answers)
12. Answer picture B. (Assess any relevant explanation)
13. i) Excretion.  
ii) Temperature regulation.  
iii) Vitamin D synthesis.  
iv) Protection of internal body organs. (Assess other relevant answers)
14. i) Use of pesticides and fertilisers should be minimised.  
ii) Cropping techniques should be improved to prevent growth of weeds.  
iii) Through reusing and recycling waste instead of dumping it on the soil.  
iv) Through controlled grazing.
15. a) Heart attack  
b) Healthy feeding, early diagnosis, getting enough sleep, physical exercises.

16. (i), (iii), (iv)
17. Puberty is the time in life when a boy or girl becomes sexually mature. It is a process that usually happens between ages 10 and 14 for girls and ages 12 and 16 for boys. It causes physical changes, and affects boys and girls differently.
18. Attraction to members of the opposite sex. (Assess other relevant changes)
19. i) Females experiencing menstrual should not be allowed to go to a farm where crops are growing.  
ii) Menstrual flow hinders one from preparing food. (Assess other relevant answers)
20. i) Female genital mutilation.  
ii) Traditional circumcision.  
iii) Involvement in multiple sexual encounters.
21. i) Avoiding drug and substance use.  
ii) Regular exercises.  
iii) Healthy eating.
22. Mood swings, attraction to members of the opposite sex, feeling embarrassed due to body changes.
23. Corona or Covid-19
24. Burns, falls, slips (Assess other relevant answers)
25. i) Arranged marriage.  
ii) Female genital mutilation.  
iii) Traditional circumcision. (Assess other relevant answers)
26. i) Contraceptives are harmful to women's health.  
ii) Reproductive health issues are only for women  
iii) A woman involved in sexual intercourse during her periods cannot conceive. (Assess other relevant answers)
27. i) Face masks.  
ii) Face shield. (Assess other relevant answers)
28. i) Bacteria.  
ii) Viruses.  
iii) Fungi.
29. Protein.
30. i) Dysentery.  
ii) Cholera.  
iii) Typhoid.

### Model test paper 2

1. Fatty tissues, oil glands, sebaceous glands, sweat glands, blood capillaries, nerve endings and hair follicles.

2. Acne is caused by dirty skin.  
(Assess other relevant answers)
3. HIV and AIDS, chancroid, syphilis, gonorrhoea.  
(Assess other relevant answers)
4. Macronutrients are needed in large amounts in the body while micronutrients are needed in smaller amounts.
5. Keep the digestive system healthy by preventing constipation.
6. Carbohydrates and proteins.
7. Proteins.
8. The baby should be fed on a diet rich in proteins.
9. Group III.
10. Prevent blood backflow.
11. Corruption, lack of proper policies, poor infrastructure. (Assess other relevant answers)
12. Increase in height and weight, production of sex cells, sweat glands become more active, growth of pubic hair, pimples on the face.
13. Left ventricle.
14. They pump blood to the furthest tissue.
15. Promotion of mental and emotional health, prevention and control of communicable diseases. (Assess other relevant answers)
16. This is a person born with male and female biological traits and sexual characteristics.
17. Occupational therapy, nursing, psychologist. (Assess other relevant answers)
18. Certain diseases may attack a person with sedentary lifestyle.
19. Getting enough rest, physical exercise, healthy diet. (Assess other relevant answers)
20. Pulmonary artery.
21. Carbohydrates.
22. bloating, cramping, acid-reflux.  
(Assess other relevant answers)
23. Vitamin B.
24. Vitamin K.
25. Antibiotics.
26. A written guidelines by a doctor or a medical practitioner on how to take prescribed medicine)
27. i) Causes diseases to animals.  
ii) Causes diseases to human beings.  
iii) Affects the growth of crops.  
iv) Acid rain destroys the surfaces of corrugated iron sheets.  
(Assess other relevant answers)
28. i) Recycling.  
ii) Reusing.  
iii) Proper disposal of human waste.

- iv) Avoiding watering animals in water sources.
- v) Controlling soil erosion.  
(Assess other relevant answers)
29. i) Poverty.  
ii) Severe or long term stress.  
iii) Stigmatisation.  
iv) Loneliness.  
v) Childhood abuse.  
(Assess other relevant answers)
30. i) Headaches.  
ii) Dizziness.  
iii) Fever .  
iv) Nausea.  
(Assess other relevant answers)

### Model test paper 3

1. Duodenum
- 2.

Part of digestive system	Function
Small intestines	Absorption of food
Stomach	Digests protein
Small intestines	Absorption of water

3. Large intestines, rectum (Assess other relevant answers)
4. Villi.
5. Vena cava and pulmonary vein.
6. Cholesterol.
7. Coronary artery.
8. v, iii, ii, i, iv
9. Mouth, respiratory system and reproductive system.
10. Vitamins.
11. Cleaning removes dirt, dust and other particles from surfaces while disinfecting kills harmful bacteria and viruses from surfaces.
12. Recycling.
13. Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes.
14. Excessive use of farm chemicals.  
(Assess other relevant answers)
15. Waste papers, sawdust, glass.  
(Assess other relevant answers)
16. Oil spillage, untreated sewage, farm chemicals, soil particles.  
(Assess other relevant answers)
17. Maize, rice, sorghum, millet, cassava, sweet potatoes, irish potato.  
(Assess other relevant answers)



18. Proper personal hygiene, proper diet, physical exercise. (Assess other relevant answers)
19. Improving individual attitudes and beliefs. (Assess other relevant answers)
20. Disease.
21. Scurvy.
22. Problem in blood coagulation.
23. Clinics, schools, churches. (Assess other relevant answers)
24. Environmental control program. (Assess other relevant answers)
25. Sebaceous glands, sweat glands, hairs, pores, sweat duct. (Assess other relevant answers)
26. Small intestines.
27. Eating a balanced diet, remaining active, self-acceptance. (Assess other relevant answers)
28. Left auricle and left auricle.
29. Stress, poverty, isolation. (Assess other relevant answers)
30. See the doctor for further instructions and advice.

#### Model test paper 4

1. i) age of the person who needs the medicine.  
ii) dosage.  
iii) expiry date. (Assess other relevant answers)
2. Vena cava.
3. Liver, pancreas. (Assess other relevant answers)
4. Aorta
5. Excess water, salt, urea, lactic acid. (Assess other relevant answers)
6. i) To reduce infection and diseases.  
ii) To avoid bad odour. (Assess other relevant answers)
7. Proper sanitation during menstruation is important because it:
  - i) Prevents reproductive tract infections.
  - ii) It increases one's confidence.
  - iii) It boosts a lady's self-esteem and makes her feel comfortable.
8. i) Ringworms.  
ii) Scabies.  
iii) Boils. (Assess other relevant answers)
9. i) Breast enlargement.  
ii) Hips broaden. (Assess other relevant answers)
10. Oviduct.
11. i) Heart attack.

- ii) Hypertension. (Assess other relevant answers)
12. i) Bhang.  
ii) Heroin.  
iii) Cocaine.  
iv) Mandrax. (Assess other relevant answers)
13. Stomach.
14. Chancroid, gonorrhoea. (Assess other relevant answers)
15. i) Encourage the local community to take part in physical activities.  
ii) Conduct campaign against poor lifestyle. (Assess other relevant answers)
16. Skin.
17. i) Excessive use of farm chemicals  
ii) Deforestation (Assess other relevant answers)
18. Dispose off the remaining medicine
19. She should go to the health centre and seek advice.
20. Cholera, typhoid. (Assess other relevant answers)
21. i) Lack of interest in hobbies.  
ii) Withdrawal. (Assess other relevant answers)
22. Whooping cough, tuberculosis. (Assess other relevant answers)
23. Bilharzia.
24. i) Depression.  
ii) Anxiety.
25. Roughage or fibre.
26. Vitamins. (Assess other relevant answers)
27. Abstinence.
28. i) Early diagnosis and treatment.  
ii) Water treatment.  
iii) Avoiding drugs and substance use.  
iv) Immunisation.
29. i) Oil spillage.  
ii) Improper disposal of industrial waste.  
iii) Improper disposal of domestic waste.  
iv) Acid rain.  
v) Excessive use of farm chemicals.
30. i) Coughing.  
ii) Sneezing.  
iii) Chest pain.  
iv) Nausea  
v) Skin and eye irritation.

## Model test paper 5

1. Attraction to members of the opposite sex.  
(Assess other relevant answers)
2. Public health officers.  
(Assess other relevant answers)
3. C
4. B
5. D
6. Proper hygiene.
7. i) K carries bright red blood while L carries dark red blood.  
ii) K carries oxygenated blood while L carries deoxygenated blood.  
iii) K carries blood to all parts of the body while L carries blood to the lung.
8. i) Lack of interest in hobbies.  
ii) Withdrawal.  
(Assess other relevant answers)
9. i) Poverty.  
ii) Trauma.  
iii) Stress.  
iv) Alcohol, drug and substance use.  
(Assess other relevant answers)
10. i) Guidance and counseling.  
ii) Strengthening of family ties.  
(Assess other relevant answers)
11. i) Protection of internal body organs.  
ii) Excretion.  
iii) Storage of fat.  
(Assess other relevant answers)
12. To avoid poisoning during medication.  
(Assess other relevant answers)
13. Curatives.
14. i) Sores at the corners of the mouth.  
ii) Protruding stomach.  
(Assess other relevant answers)
15. a) Anaemia.  
b) Liver, spinach, kidney, beans.  
(Assess other relevant answers)
16. Revisit the doctor immediately.
17. To avoid harmful effect from the medicine such as poisoning.  
(Assess other relevant answers)
18. Scissors, gloves, painkillers.  
(Assess other relevant answers)
19. • Bumps ahead.  
• Stop sign.  
• No right turn.  
(Assess other relevant answers)
20. i) Not talking while eating to prevent choking.  
ii) Fixing any electric faults.  
iii) Picking dangerous objects in the compound.  
(Assess other relevant answers)
21. Recklessness among drivers.
22. i) Creating awareness on common health concerns.  
ii) Cleaning the school compound.  
iii) Washing personal clothes.
23. i) Prevents lifestyle diseases.  
ii) It provides information on emotional and mental health.  
iii) Prevents STI's and environmental diseases.  
iv) Develops health career- related courses.  
(Assess other relevant answers)
24. Increase of individual and collective health awareness through participation in health action that strengthens programmes.
25. i) Keeping physically fit through regular exercises.  
ii) Avoiding food that upset or cause discomfort in the digestive system.  
iii) Through proper cleaning of food before cooking or consumption.  
(Assess other relevant answers)
26. i) Through keeping a healthy diet.  
ii) Through regular physical exercises.  
iii) Through going for medical check up for early diagnosis of any conditions affecting the circulatory system.  
(Assess other relevant answers)
27. First aid is the immediate help given to an injured person before they are taken to a health centre for further treatment.  
(Assess other relevant answers)
28. An accident is an unexpected situation in which someone is injured or hurt.  
(Assess other relevant answers)
29. They can help save lives, prevent accidents and injuries and bring order on the roads.  
(Asses other relevant answers)
30. A road user who is walking rather driving or travelling in a vehicle.

# HOME SCIENCE

## I: FOODS AND NUTRITION

### 1.1: Food Nutrients

#### Assessment Task 1.1

- It enables one to be a responsible citizen in his or her home and community.
  - It enables one with skills to lead a well-balanced life such as managing the home, child care, food, clothing, finances and fashion designing.
  - It teaches us important details about the art of preparing balanced meals using safe methods.
  - It enables us learn how to run a home and take care of the community.
  - It teaches personal health and healthy lifestyles.
  - It is an avenue to a variety of job opportunities, for example, in the hotel industry, housekeeping, food catering, nutrition, social work and fashion design.
2. Food enrichment is combining foods that have different nutrients during preparation and cooking so as to improve their nutritive value. For example, adding milk or margarine to vegetables, porridge or other cooked foods.
3.
  - Stewing
  - Frying
  - Steaming
  - Boiling
4. a) Grilling  
b) Grilling is suitable for cooking small chunks of meat or thin cuts of food such as chicken, pork and fish fillet, sausages, bacon fillet, tender loin, tomatoes and kidney.

### 1.2: Small Kitchen Tools and Equipment

#### Assessment Task 1.2

1. Small kitchen tools and equipment are essential tools and equipment that make cooking easy and enjoyable and come in different shapes and sizes depending on their use.

2. Small kitchen tools and equipment are used in baking, cutting, measuring, weighing, shaping, moulding, separating, lifting, mixing, turning and scooping foods.
3. a) Identify the following small kitchen tools and equipment.  
*Picture A:* Frying pan or skillet  
*Picture B:* Slotted spoon or slotted turner  
*Picture C:* Wooden spoon  
*Picture D:* Measuring jug or jar  
b) A. *Frying pan or skillet:* Frying, sautéing, searing, oven finishing, browning.  
B. *Slotted spoon or slotted turner:* Used when cooking foods that require more fat (or water) to fall off the food. Best used for frying, as the openings allow oil to escape for clean and easy transfer of food.  
C. *Wooden spoon:* Turning or mixing foods when cooking.  
D. *Measuring jug or jar:* Measuring liquid foods.  
c) *Frying pan or skillet*
  - Avoid soaps with alkalis for they produce a darkening effect on aluminum.
  - Wash in warm soapy water and rinse.
  - Avoid banging them.*Plastic measuring jar or jug*
  - Do not clean with a hard scoring pad as they may roughen the surface.
  - Avoid sudden extreme changes in temperatures in the water for washing.
  - Wash in warm soapy water and rinse.
  - Plastic items should not be exposed to boiling water except for brief moments.
  - Avoid putting them in an oven or on a hot stove.
  - Avoid chopping or cutting food on them.
  - Avoid using them to beat or whisk other foods in them.
  - Avoid using them for hot fat.
  - Plastics should not be exposed to strong heat or the sun for long periods for that causes tenderness which in turn leads to cracks on plastic items.

#### Wooden spoon

- Avoid exposing them to strong heat or the sun for long.
- The water used for cleaning wood should not be too hot, as it may discolour the wood.
- Use suitable bleach to remove discolouration.
- Wash in warm soapy water and rinse.
- Avoid putting them in an oven or on a hot stove.

#### Slotted spoons

- Avoid putting hot utensils on them.
- Dry thoroughly paying special attention to the drying, for water leaves marks if allowed to dry on the surface.
- Dry after washing while ensuring that you remove all the water to avoid marks left by water as it dries.
- A special stainless steel cleaner can be used.

#### d) Frying pan or skillet

- Hang skillets and pans on a pegboard.
- Mount a ceiling pot rack.
- Store pans and skillets in a toe-kick drawer.
- Display copper cookware with a hanging pot rack.
- Store lids for pots and pans in a drawer.

#### Plastic measuring jar or jug

- Keep them in appropriate storage cupboard, in a dry environment.
- Plastic (and rubber) utensils should be stored in cold, dark, dry, and oxygen-free conditions.

#### Wooden spoon

- Keep wooden spoons stored in a well-ventilated, clean location. You can also store them in a drawer.

#### Slotted spoons

- Store them in a drawer or hang them on a rack using the hole usually located at the end of the handle.
4. • Some scoops are specialised spoons used to serve food.
- They are also used for transferring large quantities of chopped foods from cutting board to pan or bowl.

5. a) Learners to draw and colour two baking tools or equipment.
- b) Baking tools or equipment are used to prepare foods for baking.
6. a) Identify the following kitchen tools and equipment. Measuring jugs (or jars) and measuring spoons.
- b) • Do not clean with a hard scoring pad as they may roughen the surface.
- Avoid sudden extreme changes in temperatures in the water for washing.
  - Wash in warm soapy water and rinse.
  - Plastic items should not be exposed to boiling water except for brief moments.
  - Avoid putting them in an oven or on a hot stove.
  - Avoid chopping or cutting food on them.
  - Avoid using them to beat or whisk other foods in them.
  - Avoid using them for hot fat.
  - Plastics should not be exposed to strong heat or the sun for long periods for that causes tenderness which in turn leads to cracks on plastic items.

## 1.3: Cooking Foods

### Assessment Task 1.3

1. a) Kitchen tools and equipment.
- *Kitchen separating utensils* include flour sieve, tea strainers, draining or perforated spoons and colanders.
  - *Kitchen lifting equipment* include scoop spoons, dessert forks and fish slicers.
  - *Baking tools* include casseroles, baking tins, pie dishes and baking sheets.
  - *Cutting tools* include knives, vegetable peelers and kitchen shears.
  - *Measuring tools* include measuring cups, kitchen scales and measuring spoons.
  - *Pots and pans* include saucepans, pots, frying or sauté pans.
  - *Mixing tools* include wooden spoons, whisks, rotary beaters and mixing bowls.
  - *Turning tools* include tongs, spatulas, solid turners and cooking forks.

- *Scooping tools* include ice cream scoops, cookie scoops and melon baller scoop.
  - *Traditional tools* include calabashes, gourds and wooden spoons.
- b) Different small kitchen tools and equipment are made for specific tasks. They can be used for baking, cutting, measuring and weighing, shaping and moulding, separating, lifting, mixing, turning and scooping.
- c) Factors to consider in the choice of the small kitchen tools and equipment include
- Price
  - Budget
  - Quality of the item to buy
  - Use of the item
  - Available substitutes
  - Storage space
  - Size
  - Colour
  - Durability
  - Ease of cleaning
  - Shape
- d) How to care for different tools.
- Use the tools and equipment for the right purpose to be efficient and effective.
  - Use correct method when cleaning, drying and storing.
  - Fragile tools and equipment like those made of ceramics and glass should be handled with great care. Avoid dropping and banging them.
  - Avoid use of hot water and harsh abrasives for wooden and plastic tools and equipment.
- e) Store kitchen tools and equipment in cupboards, shelves or hang in airy places.

2. **Method of cooking**      **Examples of foods that can be cooked**

Grilling	Small chunks of meat or thin cuts of food such as chicken, pork and fish fillet, sausages, bacon fillet, tender loin, tomatoes and kidney. Juices dripping from the foods should be tapped and used to make gravy, sauces and soups
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Roasting	Bigger pieces of food including sweet potatoes, yams, cassava, fish, bananas, green maize, whole chicken and large pieces of meat.
Steaming	Green, leafy vegetables, root tubers, fish

3. a) Roasting
- b) Guidelines for roasting cooking method:
- Separate the grilling food from other foods.
  - Refrigerate food before grilling.
  - Use a clean grill.
  - Use separate plates for uncooked and cooked foods.
  - Wash your hands before and after handling it.
  - Make sure its juice does not mix with other foods.
  - Use a food thermometer to ensure it is cooked to a safe temperature.

**END OF STRAND 1 ASSESSMENT**

1. Importance of Home Science education:
- It enables one to be a responsible citizen in his or her home and community.
  - It enables one with skills to lead a well-balanced life such as managing the home, child care, food, clothing, finances and fashion designing.
  - It teaches us important details about the art of preparing balanced meals using safe methods.
  - It enables us learn how to run a home and take care of the community.
  - It teaches personal health and healthy lifestyles.
  - It is an avenue to a variety of job opportunities, for example, in the hotel industry, housekeeping, food catering, nutrition, social work and fashion design.
  - It is a field of study that deals with health, diet, child care, textile and garment designing and managing resources among others.

- It can lead to many careers including becoming a teacher, chef, air hostess, nutritionist, community health worker and fashion designer.
  - The knowledge and skills gained in Home Science can help one start income generating activities such as shoe shining, laundry work, tailoring repairs, cake making and decoration and clothes making.
  - The money gained from income generating activities in Home Science can be used to meet the needs of a family.
  - Studying Home Science can help one to learn how to make healthy food choices and engage in healthy eating practices.
  - Studying Home Science enables one to gain knowledge and skills on personal hygiene and care for the environment this promotes a clean and healthy nation.
2. Teacher, Chef, Air host or hostess, Dietician, Fashion designer, Entrepreneur, Researcher, Community health worker, Textile engineer, Interior designer, Laundry worker, Waiter, Nutritionist.
  3. It is advisable to wash vegetables first before cutting to minimise nutrient loss in the vegetables during preparation.
  4. Re-heating food destroys the chemical structure of nutrients and vitamins
  5. The excess water remaining after boiling food can it be used:
    - a) To prepare gravies
    - b) to knead dough
    - c) as a refreshment (soup).
  6. *Food enrichment* is the combination of foods that have different nutrients during preparation and cooking so as to improve their nutritive value whereas *food fortification* is the practice of adding food nutrients into a given food during processing to increase their nutritive value. For example, breakfast cereals, baby foods and commercial flours are fortified with calcium while some commercial juices are fortified with vitamin C. Table salt

is fortified with iodine to prevent and manage goitre.

7. Supplementation of nutrients is using products intended to give you nutrients that might be lacking from your diet. They are usually taken as tablets, capsules, powders or as liquids.

8. Cooking methods:

*Baking:* Cooking food by dry heat without direct exposure to a flame (for example, in an oven)

*Stewing:* Cooking food at simmering point in a small quantity of liquid

*Frying:* Cooking of food in hot fats or oils, usually done with a shallow oil bath in a pan over a fire or as so-called deep fat frying, in which the food is completely immersed in a deeper vessel of hot oil

*Grilling:* Cooking that involves a significant amount of direct, radiant heat, and tends to be used for cooking meat and vegetables quickly

*Roasting:* Cooking by exposing food to dry radiant heat

*Boiling:* Cooking of food by immersion in water that has been heated to near its boiling point

*Steaming:* An indirect cooking method that uses hot steam generated from water to cook food

9. Common baking tools:

Measuring cups (for measuring liquid and dry ingredients)

Baking cups

Mixing bowls

Baking oven

Decorating tools

Wooden Spoon(s)

Rubber Spatulas or scrapers

Spatulas or metal turners

Pastry brushes

Electric mixers or hand whisks

Kitchen Scissors

Rolling board and pin

10. Factors to consider when purchasing small kitchen tools and equipment.

- Price
- Cost
- Quality
- Use of the item
- Available substitutes
- Size
- Storage space
- Colour
- Durability
- Ease of cleaning
- Shape

11. Safety precautions when cleaning and storing small kitchen tools and equipment.

- Handle them with care to avoid damage to the tool.
- Do not handle sharp parts of the tools by holding the cutting edges.
- Wipe the tools and equipment with a clean cloth to prevent them from rusting.
- Be careful when washing utensils. Place sharp items like knives pointing down in the utensil basket.
- Never put knives in a sink or basin of soapy water when cleaning or rinsing them. They may not be seen and may easily cause an accident.
- Be very cautious with glassware. Carefully place them to prevent breaking or chipping. Ensure they do not knock against each other.
- Do not overload glasses because piling glasses and plates can cause their edges to chip away. Some can end up breaking.
- After washing utensils, store dish washing products and detergents out of the reach of children and pets.
- Always seek guidance or help when cleaning tools and equipment with many parts that need to be assembled by a professional.
- Read the dishwashing detergent labels and follow the instructions.

- Avoid mixing dish washing detergents with other cleaning products.
- Avoid direct contact with the washing detergent and skin or clothes.

12. Grilling is cooking by radiant heat from a metal grid or grill heated by gas or electricity. It is a fast method of cooking that uses dry heat over or under a red-hot fire. It is suitable for cooking small chunks of meat or thin cuts of food such as chicken, pork and fish fillet, sausages, bacon fillet, tender loin, tomatoes and kidney. Juices dripping from the foods should be tapped and used to make gravy, sauces and soups.

13. Steaming is cooking food using steam from boiling water. It is a slow method of cooking. During steaming, water does not directly get into contact with the food. Steam circulates freely all round the food until it is cooked. Suitable foods for steaming are fish, some vegetables and puddings. The steaming container must be well covered to prevent the food from soaking up in condensing steam, as this will make it soggy. Steaming saves on fuel and time as another type of food can be boiled in the pot of boiling water. Steamed food is easy to digest.

14. a) Roasting.

- b) Roasting is cooking in front of red-hot fire. The fire should be smokeless. It is usually done on an open fire. It can also be done in an oven. If roasting in an oven, the food should be placed on a rack with a drip-tray. Compared to grilling, roasting is a slower cooking process and therefore best suited to cook bigger pieces of food including sweet potatoes, yams, cassava, fish, bananas, green maize, whole chicken and large pieces of meat.

15. Conserving food nutrients in vegetables during preparation:

- Wash your hands before preparing food.
- Ensure that utensils and surfaces used for food preparation are clean.
- Wash or clean the food before preparation.
- Keep raw foods in a clean, ventilated place.

- Keep food at safe temperatures. For instance, keep vegetables in a cool place to prevent enzymes from destroying vitamins.
- Use clean water to prepare food.
- Use separate cutting boards for different food items. For example, have a chopping board for vegetables and another for meat.
- Always wash the vegetables first before chopping them.
- Chop vegetables into large, even sized pieces to avoid nutrient loss when they come in contact with air or water.

Conserving food nutrients in vegetables during cooking:

- Use recommended amounts of water when cooking vegetables.
- Cook vegetables in their own water while covered and on low heat.
- Cook vegetables as soon as you chop them.
- Do not dispose the water obtained from vegetables after boiling. Use it to prepare gravies or to knead dough.
- Root vegetables like potatoes and carrots should be boiled in their skins. You may peel them after boiling.
- Avoid using sodium bicarbonate (*Magadi soda*, bicarbonate of soda or baking soda) when cooking vegetables.
- Cook vegetables for a recommended period of time to conserve nutrients.
- Cook food until it is tender.
- Cover cooked food to avoid contamination.

## 2: CONSUMER EDUCATION

### 2.1: Buying Goods and Services

#### Assessment Task 2.1

1. Factors to consider when buying goods include:
  - Cost or price charged for the products
  - Quality of the products
  - Function of the products
  - Characteristics of the products
  - Availability of the products at the required location
  - Promotion of the products
  - The sales channel for the products

2. Methods of buying various household goods and services.
  - Cash
  - Credit
  - Barter trade
  - Mobile money
3. Examples of sales outlets and the products or services obtained from each:
  - Kiosks
  - Grocery stores
  - Shops
  - Boutiques
  - Supermarkets, hypermarkets, malls
  - Online outlets
  - Ecommerce stores
4. Ways of saving income when buying household goods and services:
  - Budget before going out to buy to limit purchases.
  - Buy used, refurbished or older models.
  - In supermarkets, malls and from online stores, check for promotions and discounts.
  - Compare prices and use price matches.
  - Choose quality over quantity.
  - Keep track of spending. Avoid impulse buying.
  - Buy products or goods in season when their supply is high.
  - Buy what you urgently require first.
  - Re-use some items
  - Improvise
  - Take good care of items
5. We carry out comparative shopping from a range of available suppliers or sellers to identify the best price for the items or services we are willing to buy. It is an evaluation of potential sellers to see which one is offering the best deal.
6. Challenges experienced when buying goods and services.
  - *Defective products* resulting from faulty manufacturing, mishandling or accidental falls.
  - *Poor quality products* especially if handled by wrong or unprofessional people.
  - *Overcharging*, in cases where the seller or service provider is the only one.



- *Underweight or under-measure*, in cases where faulty measuring equipment are used.
- Shop breakages that result in losses to the seller and unavailability of goods to buyers.
- *Delivery issues* where the goods are to be taken to places with no clear map or direction.
- Misleading prices or advertising.
- Change of mind.

## END OF STRAND 2 ASSESSMENT

- Factors to consider when buying goods and services at the household level.
  - Cost or price charged for the products
  - Quality of the products
  - Function of the products
  - Characteristics of the products
  - Availability of the products at the required location
  - Promotion of the products
  - The sales channel for the products
- Methods of payment in a sales outlet include:
  - Use cash
  - Buy on credit
  - Use barter trade
  - Use mobile money payment option.
- Barter trade method of buying goods is the exchange of goods for goods, goods for services or services for services.
- List down the goods and services we can get from the following sales outlets.
 

*Picture A:* Barber shop – hair cut  
*Picture B:* Supermarket – household goods  
*Picture C:* Green grocer – Fresh vegetables and fruits.
- Ways of saving income when buying household goods.
  - Buying in large quantities
  - Taking advantage of discounts
  - Buying in plenty when a seasonal good is in plenty supply
  - Scouting for cheaper sales outlets
  - Buying goods or services on offer

- Earning or redeeming loyalty points when shopping
  - Buying durable or long lasting products
- High quality ensures higher customer satisfaction and a greater chance of continued buying. If customers aren't satisfied, they will not most likely return to buy.
  - Buying on credit is a cashless way of buying goods or services with a promise of paying later.
  - Importance of saving income when buying household goods:
    - Promotes financial independence, which gives one the ability to live without depending on others for financial support.
    - Provides accumulation of emergency funds.
    - Promotes debt free living.
    - Cushions against sudden financial or job loss.
    - Helps finance big-ticket items or major life events.
    - Promotes a person's liquidity.

## 3: TEXTILE AND CLOTHING

### 3.1: Natural Textile Fibres

#### Assessment Task 3.1



- Natural textile fibres are those obtained from nature, that is, from plants, animals and minerals. The raw, natural materials are spun into threads and yarns that are then woven or knit into fabrics.
- Main sources of natural textile fibres:
  - Plants
  - Animals and
  - Minerals.
- Natural textile fibres he was trying to identify.
  - Shrinks when it approaches the flame. Burns readily without melting. Silk
  - It smells like burning hair. Its ash is gritty and dark. Wool
  - Flares up and burns quickly with a yellow flame. It leaves little or no ash that is fine and crumbles easily. Cotton
- Properties of natural fibers:
  - They are easy to handle
  - They are non-toxic

- They are strong and tough
- They are flexible
- Some are soft like cotton
- Some are elastic like silk
- They are less durable.

### 3.2: Sewing Machine

#### Assessment Task 3.2

1. A sewing machine is a machine used to sew (attach or bind) two or more pieces of fabric together with thread
2. Parts of a sewing machine and their functions.

Part of the sewing machine	Name	Function
	Presser foot	Holds the fabric in place when sewing.
	Throat plate	Allows the bobbin thread to come out and the needle to pass through to make stitches.
	Bobbin case	Holds the bobbin when sewing.
	Balance wheel	Rotates the upper drive shaft for machine operation, which causes the needle and hook to move in a manner that produces stitches.

3. Examples of sewing machines:
  - Treadle sewing machines
  - Hand driven sewing machines
  - Electric sewing machines
4. Causes of missed or irregular stitching.
  - Using an incorrect needle.
  - When the needle is not set or clamped correctly.

- Sewing with the same needle for too long.
- When the machine is too dirty.
- When the needle bar is set incorrectly.
- When the timing on the machine is off.
- Inserting insufficient pressure on the pressure foot.
- Using a damaged, blunt or bent needle.
- Needle too fine for fabric.
- Pulling the fabric when sewing.
- Not oiling the machine.

### 3.3: Seams

#### Assessment Task 3.3

1. A seam is a line where two pieces of fabric are sewn, joined or bound together in a fabric using stitches.
2. a) Types of seams John is likely to use:
  - Plain seam
  - An open seam
  - An overlaid seam
  - French seam
  - Machine fell seam
  - Run and fell seam.
- b) Factors to consider when choosing seam:
  - Texture of the fabric
  - Design and use of the garment
  - Place where seam is used
  - Current fashion.
- c) Why we neaten seams on garments:
  - Neatening is necessary if the seam is going to be visible on the reverse side of the item.
  - To secure hems and turnings and to prevent raw edges from fraying.
  - To prevent the edges of the fabric from rolling or curling.
  - To give more structure to the garment and reinforce the seam.
  - Help in maintaining the shape of the seam and garment in general.
3. **Picture A:** Open seam  
**Picture B:** Plain seam  
**Picture C:** Overlaid seam

## END OF STRAND 3 ASSESSMENT

### 1. Classification that they learnt.

<b>Plant sources</b>	Cotton, jute, linen
<b>Animal sources</b>	Silk, wool, hair from camels and rabbits
<b>Mineral sources</b>	Glass, asbestos

### 2. Uses of natural textile fibers.

- *Cotton*: A variety of textile products are made from cotton.
- *Jute*: It is used to make ropes, gunny bags and carpets.
- *Silk*: It is another plant fibre that is commonly used as a stuffing in pillows, sleeping bags, and life jackets.
- *Hemp*: Hemp fibres are used in the production of ropes, carpets, nets, clothes, and paper.
- *Flax*: Fibres obtained from the stem of the flax plant are woven to make a fabric called linen. Flax fibres are also used in the production of rope and high-quality paper.
- Because of its fibrous nature, *glass fibre* can be spun and woven into textile cloths and garments. This makes textiles resistant to high temperatures, flames, electrical fires and corrosive substances. The fireproofing capabilities of glass fibre makes it an ideal material to use in protective clothing such as jackets for firefighters and aprons and mitts for foundry workers. Weaving glass fibers along with other fibers also improves the tensile strength of textile products.

### 3. Properties of natural textile fibers.

- Cotton is a very strong fibre and will withstand friction during washing.
- Linen is more strong and lustrous.
- Woollen fabrics are warm to wear.
- Silk is smooth, soft, shiny and highly lustrous.
- Fibre glass has a coarse texture.
- Jute is tough, durable and rough.

### 4. Burning tests should be carried out in a safe place away from combustible materials.

- If using matches to light the candle, let the odour of the lit match disappear before beginning the burning tests.

- Practise the technique with known samples of textiles. Make observations by sight and smell at each stage of the burning process.
- Be keen. The flame may consume the fibres quickly and, because the samples are very small, the burning fibres may be difficult to see.

- For safety wear your mask to avoid inhaling the fumes or smoke from burning fibres. Use tongs to avoid being too close to the candle flame. Avoid loosely fitting or dangling clothes such as scarfs to be safe from the flame.

### 5. Natural textile fibres are those produced from nature materials such as plants, animals and minerals.

### 6. Types of sewing machines.

- Treadle sewing machines
- Hand-driven sewing machines
- Motor-driven or electric sewing machines

### 7. Factors Mr Musa needs to consider when buying a sewing machine include.

- Cost
- Use
- Space
- Brand
- Ease of use
- Running of the machine
- Spare parts

### 8. Parts of a sewing machine and their functions.

- *Spool pin*: Holds the spool of the upper sewing thread.
- *Bobbin*: Part of a sewing machine on which the lower sewing thread is wound.
- *Bobbin case*: Holds the bobbin when sewing.
- *Pattern selector dial*: Sets the symbol of the desired stitch pattern.
- *Hand wheel*: Controls the movement of the take up lever and needle.
- *Power switch*: The off and on switch of an electric sewing machine.
- *Tension disc*: Controls the tension on the top thread.
- *Needle clamp*: Holds the needle in its actual

place

- *Presser's foot*: Holds the fabric in place when sewing.
  - *Presser foot lever*: Manually moves the presser foot up and down.
  - *Feed dog*: Pulls the fabric forward during sewing.
  - *Needle*: Forms stitches in the garment.
  - *Needle plate*: A metal plate situated under the needle and presser foot that moves the fabric forward during sewing.
  - *Arm*: For lifting the head of the sewing machine.
9. How to carry out basic straight stitching.
- Check pressure foot and needle before threading
  - Plug in and turn on the machine (if using an electric sewing machine)
  - Wind thread on to the bobbin
  - Insert the bobbin into the machine
  - Thread the upper thread system and needle
  - Choose setting in terms of stitch type, thread tension, stitch length and width.
  - Test the stitches and machine tension.
10. Outline any two machine faults.
- Loops formed under material
  - Thread breakage
  - Loops formed at the top of material
  - Skipped stitches
  - Needle breaking
  - Puckered seams
  - Machine jams and does not move
11. Ways of caring for a sewing machine include:
- Keep your machine covered
  - Change your needle regularly
  - Oil the machine
  - Wipe or dust your machine after every use.
12. A sewing machine is used to sew (attach or bind) two or more pieces of fabric together with thread
13. A *seam* is a line where two pieces of fabric are sewn, joined or bound together in a fabric using stitches.

14. A *seam allowance* is the area between the fabric edge of the fabric and stitching line on two or more pieces of fabric sewn together whereas a *seam line* is a line formed by the seam of a fabric that shows where stitches join two pieces of fabrics together.

15. Types of seams used in the clothing construction.

- Plain seam
- An open seam
- An overlaid seam
- French seam
- Machine fell seam
- Run and fell seam

## 4: CARING FOR THE FAMILY

### 4.1: Household Cleaning Agents

#### Assessment Task 4.1

1. A cleaning agent is a substance used to remove dirt, stains and bad smell on different surfaces.
2. Household cleaning agents.
  - Soap
  - Detergents
  - Degreasers
  - Abrasives
  - Acids
3. Soapless detergents are cleaning agents in form of foams, powder, liquid and paste, ideal for use with hard water, as they do not produce scum the way soap detergents do. They do lather easily in both hard and soft water.
4. Ingredients to prepare a homemade soap.
  - Water
  - Wood ash (or lye)
  - Soap builders
  - Fragrances or scents
  - Dyes or colourants
  - Disinfectants
5. Things to consider when selecting the cleaning agents for a house.
  - Gentle on hands

- Lathers easily with water
  - Has an appealing fragrance
  - Be safe on fabrics
6. *Soap builders* prevent free water ions to react with other soap ingredients, which would have caused them to work less efficiently or form soap scum
    - *Dyes or colourants* hide discoloration as the soap ages, even out the natural coloring in soap, give soap a colour that might make it more appealing, or to differentiate between scents in different soaps.
    - *Disinfectants* are chemicals for killing germs or help stop the spread of germs on clothes.
  7. Importance of making soap using locally sustainable resources.
    - Enables recycling of some of the locally available materials.
    - Gives one an opportunity to made soap of his or her taste or preference.
    - Makes use of waste products from other processes such as ash from using wood fuel.
    - Promotes our creativity and innovation.
    - Locally made soaps are cheaper than commercially produced soaps.

## 4.2: Special Treatment in Laundry Work

### Assessment Task 4.2

1. Special treatment in laundry work is taking care of clothes and household articles in a way other than the normal laundry process.
2. Examples of special treatment in household laundry work include:
  - spotting,
  - sponging,
  - starching and
  - dry cleaning.
3. Requirements for preparing homemade starch:
  - Source of starch, including green maize, cassava or Irish potatoes
  - 3 to 4 cups of warm water
  - Cheese cloth, or any other locally available cloth such as a pillowcase, *bandana*, clean cloth diaper or muslin cloth
4. Sponging procedure:
  - Grater
  - Tray
  - A sheet of paper or any other locally available option such as wax paper, aluminium foil, paper bag or parchment paper
  - Clean coffee grinder or any other locally available option such as a food processor or blender
  - A small glass jar such as a spice jar
4. Sponging procedure:
  - Prepare the solution of water and the detergent.
  - Put the sponge in the soapy water and squeeze out excess water from the sponge or cloth.
  - Rub the affected area gently and repeatedly.
  - If the dirt is off, dip the sponge into clean water to rinse the spot.
  - Air the garment to dry completely.
  - Once dry, store the garment appropriately.
  - Clear and clean your working area.
5. Safety measures to be observed when carrying out various special treatments:
  - Work in a well-ventilated room.
  - Read care labels on fabric.
  - Wear rubber gloves to avoid contact with chemicals.
  - Remember to clean up any spills.
  - Follow the directions on the product label and heed all warnings.
  - Wash your hands or skin with a lot of water immediately after using or getting in contact with the cleaning agents.
  - Dry cleaning agents evaporate easily. Always close the solvent containers immediately after each use.
  - Do not use cleaning solutions near an open flame or open electrical socket. Do not smoke while using cleaning chemicals.

6. A basin, dirty cloth, a sponge, water, pegs, detergent and a hanger are used in Spinging.
7. Starching in laundry work is the addition of starch to clothes during cleaning to make them smooth, crisp and wrinkle free. Starch also makes the clothes attain some level of dirt resistance.
8. Requirements needed in home dry-cleaning: Dry-cleaning uses non water based chemical solvents and absorbents (dry cleaning agents) to clean clothes.
9. Importance of special treatments in laundry work:
  - *Starching* makes it easy to remove stains on clothes. It reduces wrinkles in fabrics and gives the clothes a straight and professional look. It also helps in preventing stain penetration in fabrics
  - *Spotting* helps to remove stubborn stains.
  - Woolen cloths and cloths made of heavy dark coloured fabrics are well maintained when sponged.
  - *Home dry-cleaning* helps to clean fabrics that cannot be washed with water. Home dry-cleaning solutions are also less abrasive on clothes.
  - *Sponging and spotting* saves water usage as cleaning only happens where the stain is thus making it easier for treating heavy garments.
  - Some special treatment solutions contain bleaching agents which whiten clothes and preserve the life of the clothes.
  - Others contain deodorisers that make clothes to smell nice.
10. Safety precautions to observe during special treatment on household laundry articles:
  - Store various cleaning solutions carefully, out of the reach of children. The storage area should be cool, dry, and away from food storage areas. Keep bottles tightly capped and boxes closed.
  - Do not transfer cleaning solutions to new containers. Keep them in their original containers. This way you will never have

to search for directions for their proper use. This will also ensure they are always clearly labelled.

- Follow the directions on the product label and heed all warnings.
- Glass or unchipped porcelain containers are preferable to metal or plastic containers when working with cleaning solutions. Never use plastic with solvents. Never use any container that is rusty. Clean all containers thoroughly after use.
- Protect your hands with rubber gloves. Do not touch your eyes or skin while handling cleaning solutions. If you accidentally touch your eyes, or spill the solutions on your skin, flush immediately with clean water.
- Remember that some laundry agents produce choking or irritating fumes. It is therefore advisable to work in a well ventilated area.
- Do not use cleaning solutions near an open flame or open electrical socket. Do not smoke while using cleaning chemicals.
- When using a cleaning solution on a washable fabric, be sure to rinse all its traces out of the fabric.
- Do not experiment with mixtures of cleaning solutions.
- Never combine cleaning solutions unless specifically directed to do so. Such combinations can be harmful.

#### END OF STRAND 4 ASSESSMENT

1. Soap and water
2. Uses of soap as a cleaning agent.  
Soap is used for washing, bathing and other types of housekeeping. Soap helps in removing dirt, germs and stains.
3. Soaps produce soap scum when used for washing, bathing and other types of housekeeping whereas soapless detergents are ideal for use with hard water as they do not produce scum the way the soaps do.
4. Non-toilet soaps are soaps used to clean excess dirt. They are used to remove hard stains and grease.

5. Various forms of soap and soapless detergents.
  - Liquid soap
  - Bar soap
  - Handmade made
  - Soapless forms – powder soap, liquid soap and paste soap
6. Ingredients for making homemade soap
  - Wood ash (or lye)
  - Water
  - Salts
  - Fats or oils
  - Fragrances
  - Colourants
  - Disinfectants
  - Soap builders.
7. Qualities of an effective household cleaning agent:
  - Gentle on hands
  - Lather easily with water
  - Has an appealing fragrance
  - Be safe on fabrics
8. Ways of improving home-made soap.
  - Adding scents
  - Adding colourants
  - Cutting or shaping it in your desired form and size
9. Laundry work is the washing, drying, bleaching, dry cleaning and ironing of any clothing or clothes.
10. Special treatments in laundry work include:
  - Spotting
  - Sponging
  - Starching
  - Home dry-cleaning
11. Reasons for carrying out special treatment in laundry work:
  - To fix colour
  - To disinfect the clothes
  - Starching makes it easy to remove stains on clothes. It reduces wrinkles in fabrics and gives the clothes a straight and professional look. It also helps in preventing stain penetration in fabrics.
  - Spotting helps to remove stubborn stains.
- Woolen cloths and cloths made of heavy dark coloured fabrics are well maintained when sponged.
- Home dry-cleaning helps to clean fabrics that cannot be washed with water. Home dry-cleaning solutions are also less abrasive on clothes.
- Sponging and spotting saves water usage as cleaning only happens where the stain is thus making it easier for treating heavy garments.
- Some special treatment solutions contain bleaching agents which whiten clothes and preserve the life of the clothes.
- Others contain deodorisers that make clothes to smell nice.
12. Procedure for starching as a special treatment:
  - Wash and thoroughly dry your cloth
  - Position your cloth on an ironing board
  - Apply starch product evenly across the cloth
  - Iron the shirt before it is completely dry.
  - Air the shirt to dry completely.
  - Once dry, store it appropriately.

## MODEL TEST PAPERS

### MODEL TEST PAPER 1

1. a) Illnesses they are likely to have mentioned.
  - Coughs
  - Common colds
  - Malaria
  - Cholera
  - Typhoid
  - Dysentery
  - Tuberculosis
  - Pneumonia
  - Fever
  - Stomachaches
- b) What are the causes of illnesses?
  - They can be caused by germs from dirty food.
  - Drinking contaminated water.
  - Inserting sharp objects in the ears and nose.

- Interacting with infected people without taking precaution.
  - Eating using dirty hands.
  - Using dirty or unsterilised tools.
  - Sharing personal items.
2. Healthy practices to prevent common illness:
- Cleaning the nose using a handkerchief.
  - Covering the mouth when coughing.
  - Washing the hands using clean running water especially water from the tap.
  - Eating well cooked foods.
  - Avoid sharing of personal items.
  - Clearing bushes, cutting long grasses and draining stagnant waters.
3. Items that can be used to clean a classroom:
- Brooms
  - Appropriate soap or detergents
  - Moppers
  - Water
  - Dusting cloths
  - Cobweb removers
4. Methods of cleaning the home.
- Sweeping
  - Dusting
  - Mopping
  - Wiping
  - Scrubbing
  - Spraying
  - Disinfecting
  - Polishing
  - Vacuum cleaning
5. Safety precautions when cleaning the room.
- Use appropriate cleaning methods depending on the surface to be cleaned.
  - Avoid walking on wet floor.
  - Wait for the floor to dry before arranging furniture in the room.
  - Wear a mask to avoid inhaling fine dust.
  - Always leave the windows open for free flow of air after sweeping or dusting.
  - Handle fragile household items carefully to avoid breakages and injuries from cuts.
6. Different ways of caring for and storing cleaning materials and tools.
- Always use them for the correct purpose.
  - Keep them in a dry and safe place after use.
  - Store brushes on a shelf with the bristle facing up.
  - Hang broom and mops after cleaning them.
  - Keep electric or fragile cleaning tools and equipment in lockable or safe rooms or places.
7. A well-equipped kitchen helps to save energy, time and money.
8. Some small kitchen equipment they learnt.
- *Separating utensils* such as flour sieve, tea strainers, draining or perforated spoons and colanders.
  - *Lifting equipment* such as scoop spoons, dessert forks and fish slicers.
  - *Baking tools* such as casseroles, baking tins, pie dishes and baking sheets.
  - *Cutting tools* such as knives, vegetable peelers and kitchen shears.
  - *Measuring tools* such as measuring cups, kitchen scales and measuring spoons.
  - *Pots and pans* such as saucepans, pots, frying or sauté pans.
  - *Mixing tools* such as wooden spoons, whisks, rotary beaters and mixing bowls.
  - *Turning tools* such as tongs, spatulas, solid turners and cooking forks.
  - *Scooping tools* such as ice cream scoops, cookie scoops and melon baller scoop.
  - *Traditional tools* such as calabashes, gourds and wooden cooking sticks and wooden spoons.
9. Qualities of good cooking facilities:
- Should be easy to operate (not complicated)
  - Should be easy to clean after use
  - Should be of appropriate size
10. Advantages of using a gas cooker:
- It can be used in many places where cooking gas is available.
  - It occupies a small space.
  - It is easy to clean after use.



- It cooks food faster as compared to other cooking equipment.
  - It is less costly compared to electric cookers.
  - It is environmentally safe as compared to wood fuels.
  - It is safer to operate as compared to wood fuel or electric cookers.
11. Disadvantages of using charcoal jiko.
- It requires a lot of attention when cooking.
  - If the room is not well-ventilated, the gases produced can be choking or suffocating.
  - It leads to environmental destruction as trees have to be cut to make charcoal.
12. Some of the sources of fuel in the home are:
- Wood
  - Charcoal
  - Biogas
  - Paraffin
  - Gas
  - Electricity
13. Examples of electric kitchen equipment.
- Cookers, food mixers, blenders, microwaves, electric kettles, toasters, coffee makers, electric ovens, refrigerators, deep freezers
14. A food processor is equipment that makes food preparation easy, faster and enjoyable.
15. Good grooming is the art of taking care of yourself and your body to enhance your appearance and look presentable.
16. Learners could practise grooming by:
- taking a bath daily to avoid bad odour
  - trimming the hair and nails
  - dressing appropriately
  - By brushing teeth routinely.
17. Improvising, making or coming up with an alternative to an industrially made object, tool or item using locally available resources with an aim of performing a certain function or saving on income.
18. Healthy eating habits for an adolescent.
- They should observe table manners when taking meals.
  - They should take a balance diet for healthy growth and development.
  - They should always create time for meals.
  - They should avoid junk foods, and focus more on nutritious traditional foods
19. An accessory is an item or article worn or used other than clothes to enhance one's looks or appearance.
20. Cosmetics are substances used or applied on the body to improve one's appearance or enhance their beauty or looks.
21. Factors to consider when purchasing small kitchen tools and equipment.
- Price
  - Cost
  - Quality
  - Use of the item
  - Available substitutes
  - Storage space
  - Size
  - Colour
  - Durability
  - Ease of cleaning
  - Shape
22. Small kitchen tools and equipment he mentioned.
- *Kitchen separating utensils* include flour sieve, tea strainers, draining or perforated spoons and colanders.
  - *Kitchen lifting equipment* include scoop spoons, dessert forks and fish slicers.
  - *Baking tools* include casseroles, baking tins, pie dishes and baking sheets.
  - *Cutting tools* include knives, vegetable peelers and kitchen shears.
  - *Measuring tools* include measuring cups, kitchen scales and measuring spoons.
  - *Pots and pans* include saucepans, pots, frying or sauté pans.
  - *Mixing tools* include wooden spoons, whisks, rotary beaters and mixing bowls.
  - *Turning tools* include tongs, spatulas, solid turners and cooking forks.

## MODEL TEST PAPER 2

- Scooping tools include ice cream scoops, cookie scoops and melon baller scoop.
  - Traditional tools include calabashes, gourds and wooden spoons.
23. Reasons why they were expected to make proper choices of baking utensils.
- To pick appropriate utensils for ease of use.
  - To settle on utensils that are specifically made for the activity.
  - To achieve their desired results in baking.
  - To avoid or minimise accidents during cooking.
  - To enjoy the cooking experience.
  - To save time and cost of acquiring necessary tools and equipment.
24. *Mixing tools* include wooden spoons, whisks, rotary beaters and mixing bowls  
*Turning tools* include tongs, spatulas, solid turners and cooking forks.
25. Methods of cooking different types of foods.
- Baking
  - Stewing
  - Frying
  - Grilling
  - Roasting
  - Boiling
  - Steaming
26. Roasting is cooking in front of red-hot fire. The fire should be smokeless. It is usually done on an open fire.
27. Natural sources of textile fibres. Plants, animals and minerals.
28. Helen mentioned: Jute, cotton, flax, hemp
29. Types of cleaning agents.
- Soaps and soapless detergents
  - Water
30. Basic ingredients in the soap making process.
- Water
  - Wood ash (or lye)
  - Soap builders
  - Fragrances or scents
  - Dyes or colourants
  - Disinfectants
1. Main requirements of growing healthy:
    - Play and or exercising and adequate rest
    - Eating a healthy diet
    - Good grooming
    - Maintaining healthy relationships
    - Maintaining a disease free environment
  2. Mr Karanja likely taught
    - Promotes healthy functioning of the body
    - Promotes the breakdown of foods in the body
    - Prevents some types of diseases or illnesses
    - Improves our mood
    - It is a positive way to spent our leisure time
  3. Outline any three qualities of a good play item.
    - Should be strong
    - Should be safe to play with
    - Should be durable
    - Should be of good quality
    - Should be smooth
    - Should be in its proper shape, size and function
  4. Tom, a Grade 4 learner, was asked to state safety measures to observe during play. What is he likely to have mentioned?
    - Avoid playing with dangerous objects.
    - Avoid playing near or in dangerous places.
    - Always inform others where you are playing from.
    - Observe time when playing.
    - Always engage in safe games.
  5. State any three playing items.
    - Balls
    - Sticks
    - Ropes
    - Stones
    - Grass and twigs
    - Toys
    - Hula-hoops
    - Sand
    - Plastic buckets
    - Bicycles

6. Examples of moulding tools they learnt about.
  - Cake moulds (such as muffin tins, Bundt cake, angel food cake pans, and other bakewares)
  - Spring form pans
  - Gelatin dessert moulds (also known as 'jelly moulds')
  - Cake cutters
  - Melon bowlers
  - Rolling boards and rolling pins
  - Cake spatulas
7. Outline ways of caring for cutting tools.
  - Sharpen when necessary or blunt
  - Avoid exposing blades to too much heat because they can end up losing shape
  - Wash immediately after use
  - Avoid soaking blades with wooden handles.
  - Wipe the blades off any water after washing
  - Store in lockable, lined drawers
8. Small kitchen equipment she could buy:
  - *Separating utensils* such as flour sieves, tea strainers, draining or perforated spoons and colanders.
  - *Lifting utensils* such as scoop spoons, dessert forks and fish slicers.
  - *Baking utensils* such as casseroles, baking tins, pie dishes and baking sheets.
  - *Cutting utensils* such as knives, vegetable peelers and kitchen shears.
  - *Measuring utensils* such as measuring cups, kitchen scales and measuring spoons.
  - *Pots and pans* such as saucepans, pots, frying or sauté pans.
  - *Mixing utensils* such as wooden spoons, whisks, rotary beaters and mixing bowls.
  - *Turning utensils* such as tongs, spatulas, solid turners and cooking forks.
  - *Scooping utensils* such as ice cream scoops, cookie scoops and melon baller scoop.
  - *Traditional utensils* such as calabashes, gourds and wooden spoons.
9. Qualities of a good glass.
  - Should be durable
  - Should be attractive
  - Should stand some degree of temperature
  - Should be well molded and smooth
10. Ways of caring for kitchen items made of glass.
  - Avoid exposing them to too much heat
  - Avoid using abrasive to avoid scratching glass
  - Wash with warm soapy water.
  - Avoid abrasive pads as they roughen the surface.
  - Avoid exposing them to boiling water except for brief moments.
  - Do not expose them to strong heat or the sun for long periods because it can cause cracking.
  - Use suitable cleaning agents to remove discolouration.
  - Avoid putting hot utensils on them.
  - Avoid putting them in an oven or on a hot stove.
  - Avoid using them for hot fat.
11. Qualities of an earthenware kitchen utensil.
  - It should be easy to clean
  - It should have a smooth and attractive finish
  - Appropriate size according to the use it is to be put to
  - Desired shape in line with the use or purpose
12. Reasons why a budget is important:
  - track expenses.
  - control spending.
  - save more money.
  - reduce wastage of resources.
  - prepare or save for emergencies.
  - make better financial decisions.
  - stay out of debt.
13. Caring for plastic items.
  - Wash with warm soapy water.
  - Avoid abrasive pads as they roughen the surface.
  - Avoid exposing them to boiling water except for brief moments.
  - Avoid exposing them to strong heat or the sun for long periods for that causes tenderness which in turn leads to cracks on plastic items.
  - Use suitable bleach to remove discolouration.

14. Handling traditional kitchen utensils.
  - Avoid banging them as they chip and break.
  - Avoid extreme change of temperature in the washing water.
  - Wash them with water and a soft pad.
  - Rinse and dry.
  - Avoid stacking them when arranging or storing.
15. Kitchen tools and equipment used at home that can be improvised.
  - *Mixing tools* such as whisks and bowls
  - *Plastic containers* for pepper shakers
  - *Sufuria* with tight fitting lid used as steamers
  - Graters
  - Chopping boards
  - Baking tins
16. Adolescence is the period between childhood and adulthood
17. Physical changes they learnt about that take place in both boys and girls.
  - Increased body size
  - Growth of hair under the armpits and pubic hairs
  - Appearance of acne
18. Emotional changes that take place in adolescents.
  - Experiencing mood swings
  - Attraction to opposite sex
  - Being sensitive to self-image
  - Argumentative with those in authority
19. Mention any three physical changes in girls.
  - Start of menstruation
  - Voice becomes feminine
  - Breast enlarge
  - Hips enlarge
20. Accessories used by adolescents.
  - Umbrellas
  - Neck and head scarfs
  - Belts
  - Caps
  - Chains such as necklaces and bangles
  - Wrist watches
  - Neck and bow ties
21. a) Steaming is an indirect cooking method that uses hot steam generated from water to cook food
  - b) Foods that can be cooked by steaming include: fish, some vegetables and puddings.
22. State the suitable equipment used for grilling. Some of the grilling equipment are long handled spatulas, charcoal, charcoal chimney, grill mitts, grill cleaning brushes, basting brushes, sturdy grilling tongs, meat chopping wood planks or carving boards, grill basket, tools for adding spices or oiling the meat and grill apron.
23. Foods prepared by boiling include; potatoes, green maize, vegetables such as cabbages, beef, chicken and fish
24. Tom mentioned silk and wool
25. *Soaps* are substances used for cleaning fixed dirt to get rid of tough stains and grease. They are also used for other functions such as laundry and dish washing whereas *soapless detergents* are cleaning agents in form of foams, powder, liquid and paste, ideal for use with hard water, as they do not produce scum the way soap detergents do. They do lather easily in both hard and soft water.
26. Forms of soaps they learnt.
  - Liquid soaps
  - Cake or bar soaps
  - Foam soaps
  - Powder soaps
  - Paste soaps
27. Qualities of an effective household cleaning agent.
  - Gentle on hands
  - Lathers easily with water
  - Appealing fragrance
  - Safe on the fabric
28. Ways of improving handmade soap: Using fragrances (scents), dyes, antiseptic or glycerine.
29. Mention two safety precautions to consider when cleaning fragile kitchen utensils.
  - be careful when washing utensils. Place sharp items like knives pointing down in the utensil basket.
  - never put knives in a sink or basin of soapy water when cleaning or rinsing them. They may not be seen and may easily cause an accident.

- be very cautious with glassware. Carefully place them to prevent breaking or chipping. Ensure they do not knock against each other.
  - do not overload glasses because piling glasses and plates can cause their edges to chip away. Some can end up breaking.
  - after washing utensils, store dish washing products and detergents out of the reach of children and pets.
  - always seek guidance or help when cleaning tools and equipment with many parts that need to be assembled by a professional.
  - read the dishwashing detergent labels and follow the instructions.
  - avoid mixing dishwashing detergents with other cleaning products.
  - avoid direct contact with the washing detergent and skin or clothes.
30. Communicable diseases comprise infectious diseases such as tuberculosis and measles, while non-communicable diseases are mostly diseases that cannot be transmitted from one person to another, such as cancers and diabetes.

### MODEL TEST PAPER 3

- Materials for caring and cleaning of shoes.
  - Canvas
  - Plastic
  - Leather
- State any two materials that can be used to clean shoes based on the materials they are made of.
  - Shoe polish
  - Shoe brush
  - Cleaning rug
  - Water
- State any two safety precautions Shaline was supposed to observe when cleaning the shoes.
  - Clean the shoes using warm water
  - Remove the mud using a blunt piece of stick
  - Use the right procedure to clean the shoes based on the material they are made of
  - Wash hands after cleaning shoes
- What are some of the fuels used at home?
  - Electricity
  - Charcoal
  - Gas
  - Wood
  - Paraffin
- A shopping list is a list of items to be bought or purchased, written on a piece of paper or on a digital device such as a mobile phone. It shows the cost or price of each item on the list and the total cost as the sum of the costs of all items to be bought.
- Grocery shop
- Factors Susan needs to consider when choosing foods from a grocery shop.
  - Use a shopping list to guide you while shopping.
  - Observe the freshness or expiry date of packaged products on sale.
  - Avoid impulse buying.
  - Compare prices of products or services.
  - Inspect the products before buying to find out if they are safe for use or consumption.
- Classes of food based on their nutritive value.
  - Body building foods
  - Protective foods
  - Energy giving foods
- Types of brushes and brooms she could buy.
  - Cobweb brushes
  - Short handled brooms
  - Locally made brooms
- Ways of caring for a food processor.
  - Using it for the right purpose only
  - Taking it for service when faulty
  - Switching it off when not in use
  - Cleaning it after use before storage
  - Storing it well
- Reasons for cooking food.
  - To make it soft.
  - Cooking makes food easier to eat.
  - It makes food more appetising and palatable (taste better).
  - It makes food easier to digest.
  - It makes food safe to eat (to kill germs in the food).
  - Some foods last longer when cooked.
  - Cooking improves the appearance of food.
  - It improves the taste of food.

12. Hygiene practices to observe when frying.
  - Wash their hands before touching or handling the food
  - Use clean utensils to handle the food
  - Use the correct method of cooking
13. Food fortification
14. Non-communicable diseases and disorders.
  - Asthma
  - Epilepsy
  - Diabetes
  - Cancer
  - Obesity
  - Heart diseases
  - Hypertension
15. Hypertension or high blood pressure, is a condition in which the force of the blood against the artery walls is too high
16. We should always budget because:
  - It enables one to spend money wisely (not to overspend).
  - It helps one remain focused on what to buy.
  - It makes one live a happy life.
  - It prepares one for emergencies.
  - It enables one identify bad spending habits.
17. State any two foods rich in iron.  
Lean meat, sea foods, beans, nuts and cereals, poultry meat, spinach and lentils
18. When a person does not get enough iodine, he or she suffer from goitre.
19. Food preservation is the process of treating and handling food properly, safely and hygienically for it not to go bad or for storage.
20. What are the basic soap ingredients?  
Water, wood ash, salt, fats and oils
21. What is the use of a sewing machine?  
Binding or attaching pieces of cloths together using thread
22. Steam is used to cook food in steaming method.
23. List down the factors to consider when buying small kitchen tools and equipment.
  - Price
  - Cost
  - Quality
  - Use of the item
  - Available substitutes
  - Storage space
  - Size
  - Colour
  - Durability
  - Ease of cleaning
  - Shape
24. Ways used to buy goods and services.
  - Cash
  - Credit
  - Use of mobile money
  - Barter trade
25. Comparative shopping is comparing products based on price, features, reviews and other criteria. It involves visits to sellers' stores or physical facilities to compare prices, find offers, discounts, items on promotion, post-sales benefits (such as repair or replacement if faulty) quality, specifications and quantity.
26. A hand wheel on a sewing machine rotates the upper drive shaft for machine operation, which causes the needle and hook to move in a manner that produces stitches.
27. Which are the methods used to neaten seams?
  - Pinking
  - Edge stitching
  - Loop stitching
  - Overcasting
28. Ways of neatening seams.
  - Sewing
  - Cutting
  - Ironing
  - Utilising selvages
29. Soft water is water that forms lather easily while hard water does not easily form lather with soap.
30. Grilling is a form of cooking that involves dry heat applied to the surface of food, commonly from above, below or from the side.

#### MODEL TEST PAPER 4

1. Food enrichment is the combination of foods that have different nutrients during preparation and cooking so as to improve their nutritive value.

2. A good play item
  - Should be strong
  - Should be safe to play with
  - Should be durable
  - Should be of good quality
  - Should be smooth
  - Should be in its proper shape, size and function
3. Describe the process of cleaning canvas shoes.
  - Remove and wash the laces.
  - Remove dust by beating shoes against each other.
  - If they have mud, use a blunt object to remove it.
  - Scrub the shoes in clean soapy water using a brush or a maize cob.
  - Rinse the shoes and put them out to dry.
  - Replace the shoe laces when dry.
  - Store them in a clean place.
4. What to consider when buying foods from a general grocery.
  - Use a shopping list to guide you while shopping.
  - Observe the freshness or expiry date of packaged products on sale.
  - Avoid impulse buying.
  - Compare prices of products or services.
  - Inspect the products before buying to find out if they are safe for use or consumption.
5. Shopping list
6. Give reasons why we should preserve milk.
  - To prevent wastage
  - To make it last longer
  - To make it easy to store and transport
7. Describe different methods of preserving meat.
  - Sun drying
  - Refrigeration
  - Salting
  - Smoking
8. Name at least three fragile kitchen tools and equipment commonly used at home.
  - Glass utensils
  - Utensils made of melamine or china-ware
  - Thermos flasks
  - Earthenware utensils
9. Reasons for cooking food.
  - To make it soft.
  - Cooking makes food easier to eat.
  - It makes food more appetising and palatable (taste better).
  - It makes food easier to digest.
  - It makes food safe to eat (to kill germs in the food).
  - Some foods last longer when cooked.
  - Cooking improves the appearance of food.
  - It improves the taste of food.
10. Reasons for airing clothes before storage.
  - To get rid of dampness
  - To remove bad smell
  - It reduces wrinkles
  - Airing in the sun whitens and disinfects clothes.
  - It preserves clothes
11. Communicable disease are those that can be transmitted from one person to another.
12. A gas cooker is preferable because:
  - It is locally and readily available
  - It can be used anywhere
  - It is quick to use
  - It is a clean fuel
13. Physical changes in boys during adolescence.
  - Growth of hair under the armpits and pubic areas
  - Voice breaks and becomes deeper
  - Experiences wet dreams
  - Hair grows on their chins
  - The body grows rapidly
14. Beans is not a cereal because cereals are monocotyledonous seeds, while beans are dicotyledonous seeds
15. Lack of Vitamins C causes scurvy
16. Common causes of communicable diseases.
  - Sharing of personal items
  - Living in a dirty environment
  - Poor hygiene and sanitation
  - Using unsterilised tools

17. Procedure of cleaning a tiled surface.
- Sweep loose dirt or dust from the surface
  - Mop the floor with clean soapy water
  - Scrub the surface with a soft brush or cloth or mop
  - Rinse the tiles with clean water
  - Wipe and dry with clean cloth
18. Sponging in laundry work means to moisten, or absorb with sponge. It involves cleaning fabrics that are soiled on the surface only by using a cleaning fluid and a sponge or a cotton pad with no fluff.
19. Food fortification is the practice of adding food nutrients into a given food during processing to increase their nutritive value. For example, breakfast cereals, baby foods and commercial flours are fortified with calcium while some commercial juices are fortified with vitamin C. Table salt is fortified with iodine to prevent and manage goitre.
20. During blanching, Atieno plunged the vegetables that were half cooked into cold water to halt the process of cooking.
21. Name the methods of cooking different type of food. Grilling, roasting, steaming, boiling, frying, stewing
22. What to consider when buying a sewing machine
- Cost
  - Space
  - Use of the machine
  - Ease of use
  - Availability of spare parts
  - Brand of the machine
23. A seam is a line where two pieces of fabric are sewn, joined or bound together in a fabric using stitches.
24. A pulse is an edible seed that grows in pod and is a dicotyledonous, such as beans, green grams.
25. What deficiency disease will a child suffer from if he or she lacks proteins in the diet?  
Kwashiorkor
26. List down ways of preserving cereals.
- Use of wood ash
  - Sun drying
  - Use of chemicals
27. Which method of cooking food relies on fat from the food?  
Dry fat frying
28. Which factors should one consider when choosing clothes and shoes?
- Occasion
  - Size and shape
  - Cost
  - Color
  - Age
  - Weather
  - Comfort
29. A pre teen is person between the ages of 9 and 12 years
30. Starching is adding starch to the clothes during laundry. Starching adds firmness hence providing body to cotton and linen items. It also creates a higher resistance to wrinkling and soiling. Using laundry starch will also ease ironing.

### MODEL TEST PAPER 5

1. Conserving nutrients in food while cooking.
  - Wash vegetables first before cutting
  - Do not cut vegetables into very small pieces as nutrients will be destroyed when in contact with water or air
  - Cook food in a small amount of water
  - Root vegetables should be boiled with skin and remove the peels after boiling
  - Cooking food with baking powder destroys vitamin C content in the vegetables
2. Food enrichment is the addition of nutrients to food that were lost during processing.
3. Aspects of good grooming for an adolescent.
  - By taking a bath daily to avoid bad odour.
  - Trimming the hair and nails.
  - By dressing appropriately.
  - By brushing teeth routinely.
4. A hanging hem is used to avoid further unthreading unfolding of the hem



5. Give examples of positive leisure.  
Drawing, swimming, playing ball games, walking, painting, reading story books, planting trees
6. State the properties of natural textile fibres.
  - They are easy to handle
  - They are non-toxic
  - They are strong and tough
  - They are flexible
  - Some are soft like cotton
  - Some are elastic like silk
  - They are less durable
7. Name the different types of sewing machines.
  - Treadle sewing machines
  - Hand driven sewing machines
  - Electric sewing machines
8. Causes of irregular stitches when sewing a fabric on a sewing machine include:
  - Using an incorrect needle.
  - Insufficient pressure on the pressure foot
  - Blunt or bent needle
  - When the needle is not set or clamped correctly.
  - Sewing with the same needle for too long.
  - When the machine is too dirty.
  - When the needle bar is set incorrectly.
  - When the timing on the machine is off.
  - Inserting insufficient pressure on the pressure foot.
  - Using a damaged, blunt or bent needle.
  - Needle too fine for fabric.
  - Pulling the fabric when sewing.
  - Not oiling the machine.
9. Factors to consider when choosing seams.
  - Type of garment
  - Position of the seam
  - Shape of the seam
  - Texture of the fabric
  - Age of the wearer
10. An adolescent or teenager is a person between the age of 13 and 19 years.
11. State the physical changes that occur in girls during adolescence.
  - Start of menstruation
  - Voice becomes feminine
  - Breast enlarge
  - Hips enlarge
  - Increase in body size
  - Growth of hair under the armpits and pubic hair
  - Developing acne
12. Give examples of non-communicable diseases.
  - Asthma
  - Epilepsy
  - Diabetes
  - Cancer
  - Obesity
  - Heart diseases
  - Hypertension
13. Sun drying, salting and smoking
14. Outline how you would care for wooden small kitchen tool or equipment.
  - Wash in warm soapy water
  - Rinse well in clean water
  - Dry with non-fluffy cloth
15. Why is it advisable to open all the windows when cleaning a room? To prevent dust blowing back to the clean areas
16. Describe the procedure of cleaning a latrine with a cemented floor.
  - a) Clean and disinfect everyday
  - b) Give great care around the opening
  - c) Sprinkle water on earthen floor that has disinfectant and sweep
  - d) Cemented floor should be scrubbed with warm soapy water that has a disinfectant
  - e) Rinse well
  - f) The latrine opening or hole should be sprinkled with ash, soil or appropriate disinfectant
17. Identify examples of types of surfaces found in the home.
  - *Glass surfaces*, such as glass tables, windows, shower mirrors and glass furniture.
  - *Wooden surfaces*, such as cupboards, tables, wardrobes, show racks and shelves.
  - *Cemented surfaces*, such as walls and floors.
  - *Tiled surfaces*, such as floors, kitchen and bathroom walls.
  - *Metallic surfaces*, such as metallic chairs, tables and drawers
  - *Earthen surfaces* such as floors in traditional houses

18. Resources required for cleaning a glass surface such as a glass window include a bucket of warm water, soft and non-fluffy wiping cloth or old newspapers, glass cleaning agent or spray.
19. Disadvantages of a flat or an apartment type of modern house.
- No privacy
  - Parking may be shared and inadequate
  - Fire and pests easily spread from one house to another
  - Staircase may not be safe for children and the aged
  - Neighbours could be noisy
  - Not easy to keep the compound neat because of sharing
20. Sources of fats and oils include avocado, peanuts, coconut oil and cheese.
21. Define the term time management.  
This is planning time effectively so that right time is allocated to the right activity.
22. What is the importance of time management?
- One becomes focused
  - One gets more free time
  - One works smarter
  - One creates time for leisure
  - One can do a lot within a shorter period of time.
  - Helps reduce stress because one is able to finish work within the given time.
  - The performance is improved because of managing time well.
  - One is able to achieve his or her goals well.
  - It improves one's life because he or she can achieve what is expected.
23. Factors to consider when repairing a gaping seam:
- Initial type of stitch used.
  - Initial colour of thread used.
  - The cost of repair.
  - The type of fabric.
  - The size of the gaping seam or hanging hem.
  - The colour of the garment.
  - The type and colour of the thread to use.
  - The type of stitch to use on each repair.
24. Give examples of decorative stitches.
- Stem stitches
  - Satin stitches
  - Chain stitches
25. Grade 5 learners ate the following meals for supper:  
**Mary** - Chapati, beans, cabbage and an apple  
**Jane** - Rice, potatoes and kales  
**Anne** - Ugali, kales and bananas  
Who among the girls ate a balanced diet? Mary
26. A swelling on his neck, had fast heart rate, difficulty in swallowing food and a tight feeling in the throat are symptoms of goitre.
27. State the reasons for laundry work.
- Makes the garment look new
  - It removes creases
  - Removes dirt and stains
  - Kills germs
  - Makes clothes last long
  - Makes the garment neat
28. What is the importance of observing care labels on clothes before laundry work?
- It will tell you the proper temperature of water, air, and iron to apply to your garment. Reading the care instructions before purchasing a garment can help you avoid items that are expensive to maintain.
  - It will tell you the proper temperature of water, air, and iron to apply to your garment.
  - Helps one know how to properly care for a particular garment which in the long run prolongs its use.
29. What is the name given to a notice or an announcement made to promote a product or a service? Advertisement
30. Examples of types of media used in advertisement.
- Radio
  - Posters
  - Phones
  - Bill boards
  - Television
  - Newspapers
  - Internet
  - Word of mouth

# AGRICULTURE

# Conserving Agricultural Environment

1.0

## 1.1 Soil pollution control

### Revision exercise 1.1

1. Soil pollution refers to contamination of soil by introducing substances that are harmful and that degrade soil quality.
2. Excessive use of artificial fertilisers, excessive use of agricultural, chemicals, plastic waste. (Assess other relevant answers)
3. Excessive use of artificial fertilisers increases the acidity of soil, reduces the content of organic matter, humus contents, affects the organism living in soil and around it and causes stunted growth in plants.
4. Pesticides, herbicides, fertilisers. (Assess other relevant answers)
5. By use of posters, songs, poems, talking walls, not getting involved in activities that cause soil pollution. (Assess other relevant answers)

## 1.2: Water conservation measures

### Revision exercise 1.2

1. It is the practice of using water efficiently to reduce wastage.
2. Turning off taps when not in use, recycling water for example; water used to clean clothes can be used to clean the house or the toilet. (Assess other relevant answers)
3. Mulching, shading, constructing water retention structures. (Assess other relevant answers)

## 1.3 Agroforestry

### Revision exercise 1.3

1. It is the integration and interaction of trees and crops, trees and livestock or all the three; trees, livestock and crops on the same piece of land.
2. a) It helps in control of soil erosion  
b) The trees act as windbreakers  
c) Helps in maintenance of soil fertility  
d) Livestock are a source of organic manure  
e) Trees are a source of timber  
(Assess other relevant answers)
3. Through control of soil erosion, being a source of organic manure. (Assess other relevant answers)
4. a) Non-competitiveness for sunlight, minerals and water with crops.  
b) Trees should be able to grow comfortably along side crops.  
c) Trees that have multiple uses.  
(Assess other relevant answers)

## Assessment 1

1. Soil pollution refers to contamination of soil by introducing substances that are harmful and that degrade soil quality.
2. Excessive use of artificial fertilisers, excessive use of agricultural, fertilisers, plastic waste. (Assess other relevant answers)
3. Crop rotation is a technique of planting different crops in the same piece of land but at different times.
4. i) Minimise the use of chemicals such as insecticides, fungicides and herbicides on the farms.  
ii) Improve cropping techniques to prevent growth of weeds.  
iii) Recycle waste products.  
iv) Use special pits for dumping waste.  
v) Treat industrial toxic waste before it is disposed off.  
vi) Plant more trees to prevent soil erosion.
5. Agroforestry is the growing of crops together, with trees and keeping of animals at the same time on the same piece of land.
6. Reducing evaporation of soil moisture, they lower soil surface temperature.
7. Through constant addition of organic matter from the decomposed litter.
8. i) Provide shade and shelter to the crops  
ii) Help retain soil moisture  
iii) Fallen leaves from trees can be used as fodder  
iv) There is plenty of food supply throughout the year  
v) Trees pump nitrogen into the soil  
vi) They suppress weed growth.
9. Deep tap rooted trees draw water deep in the soil.
10. i) Size  
ii) Tolerance to heat and drought  
iii) Pest susceptibility  
iv) Soil condition at planting time  
v) Amount of sunlight  
vi) Drainage
11. i) Decreased soil fertility  
ii) Changes in soil structure leading to death of micro-organisms  
iii) Toxic dust emitted causes health issues on people  
iv) Poor yields due to contaminated soil
12. i) Retention ditches  
ii) Earth basins  
iii) Water retention pits
13. i) Slashing weeds  
ii) Restricted cultivation  
iii) Mulching

14. Water conservation is the preservation, control and development of water resources, both surface and ground water.
15. Minimum tillage is a soil conservation system with the goal of minimum soil manipulation necessary for successful crop production.

## 2.0 Crop Production

### 2.1 Preparation of planting site

#### Revision exercise 2.1

1. A planting site refers to any place where crops can be established and taken care of till maturity.
2. A planting site determines the preparation it undergoes as different sites comprise different types of tilth.
3. Ground sites, walls, containers, along driveways, sidewalks.  
(Assess other relevant answers)
4. Seeds, suckers, cuttings, tubers.  
(Assess other relevant answers)
5. Preparation of different types of planting sites can be done through consideration of the type of planting material and the tilth needed for the planting material.  
(Assess other relevant answers)

### 2.2: Crop establishment

#### Revision exercise 2.2

1. A planting material is part of a mature plant that can be used in establishment of young plants of the same type.
2. Seeds and vegetative materials.
3. Seeds, stem cuttings, vines, tubers, splits, suckers, bulbils, bulbs. (Assess other relevant answers)
4. Selection of planting materials should be done depending on the maturity of the planting material especially for vegetative materials, seeds should be full, not broken or wrinkled and tubers should feel firm when pressed and not dry.
5. Broadcasting, dibbling and drilling.

### 2.3 Crop management

#### Revision exercise 2.3

1. Crop production is a common agricultural practice followed by farmers to grow and produce crops to use as food.
2. Crop management practices ensure that crops grow in the best conditions for maximum yields.
3. i) Weeding- removal of unwanted crops that grow among crops.

- ii) Thinning- uprooting of crops that may have grown in excess in one planting hole or holes to provide maximum space for growth space for the remaining crops.
- iii) Gapping- filling the gaps or spaces left by seeds that fail to germinate or seedlings that fail to grow.
- iv) Hardening- it refers to the process of exposing crop produce to conditions that are suitable for storage after their harvest.

### Assessment 2

1. Planting sites are the suitable places for establishing crops. The sites may include ground sites, container sites, on walls, along the fence or along the driveway.
2. Tilth is a land that has been plowed, sowed, tilled and is ready to be used for growing crops.
3. i) Fine tilth  
ii) Medium tilth  
iii) Course tilth
4. Seedlings, stem cuttings, bulbs, suckers.
5. A course tilth is created by digging the planting site and it is created for large planting materials like tubers, suckers and cuttings while fine tilth is created by raking and levelling the soil ready to sow seeds. A fine tilth is created for small seeds.
6. Vegetative materials are plant tissues or plant parts for example; stems, leaves or roots while seed materials are plants or parts of plants intended for sowing, planting, grating or budding.
7. Sweet potato, sugarcane. (Assess other relevant answers)
8. Overgrown woody cuttings, middle woody cuttings, young immature cuttings.
9. Dibbling method, drilling method, broadcasting method.
10. Dibbling is the process of placing seeds in holes made in seedbed and covering them.
11. i) Drilling method-seed drill  
ii) Dibbling method-dibbler
12. A weed is unwanted crop or plant while a crop is a plant which grows or is intended to be grown for some use or useful product.
13. Thinning is the process of removing plants or parts of plants to facilitate the growth of other plants.
14. i) It refers to the act of heaping soil around the root zone of plant.  
ii) It refers to the process of exposing crop produce to conditions that are suitable for storage after their harvest.

15. This is the set of agricultural practices performed to improve the growth, development and yield of crops.

## 3.0 Animal Production

### 3.1: Animal handling

#### Revision exercise 3.1

1. The agricultural process of keeping animals for profit.
2. Humane treatment of animals means handling animals in ways that minimise their distress during human interactions while inhumane treatment of animals, means treating the animal with cruelty.
3. Proper use of handling aids, appropriate harnessing, proper transportation methods, proper restraining, humane slaughtering, responsible working hours and loading of animals.
4. Humane treatment of animals is important because animals that are treated humanely produce quality products, They are active in the service they provide, they become less aggressive and they are highly productive. (Assess other relevant answers)

### 3.2: General management of pets

#### Revision exercise 3.2

1. A pet is an animal that is reared for pleasure and companionship attached to them.
2. Through adoption of abandoned pets, through buying from a pet shop or other pet owners, shop, inheritance. (Assess other relevant answers)
3. Social factors, economic factors, safety factors.
4. Feeding, housing, sanitation, parasite and disease control. (Assess other relevant answers)
5. Rabbits, dogs, cats and birds such as parrots. (Assess other relevant answers)

### 3.3: Preparation of animal products

#### Revision exercise 3.3

1. (Assess learner's responses) Answers could include; eggs, honey, milk.
2. To facilitate packaging and pricing, to increase profit as sorted and grades eggs fetch more prices at the market. (Assess other relevant answers)

3. Through crushing and straining method which separates honey from beeswax and other hive impurities such as pollen. (Assess other relevant answers)
4. Colour of the shell, the quality of the shell, shape, size and weight, the period between laying and storage. (Assess other relevant answers)
5. Crushing and straining method.

### Assessment 3

1. i) Buying from other pet owners or pet stores.  
ii) Being given as a gift. (Assess other relevant answers)
2. Plastic container, glass or aluminum container.
3. Feeding, housing, sanitation. (Assess other relevant answers)
4. Parasite and diseases can be controlled by deworming your pet regularly and also spraying the pet to kill the external and internal parasites. (Assess other relevant explanation)
5. Condition of the shell, the cleanliness of the egg. (Assess other relevant answers)
6. By providing better living conditions with adequate space, proper handling and safe harnessing. (Assess other relevant answers)
7. Proper handling can reduce animal pain and distress. (Assess other relevant answers)
8. Proper sanitation encourages better faecal hygiene and prevent your pet from getting any infections from their waste. (Assess other relevant answers)
9. a) Humane treatment of animals means handling animals in ways that minimise their distress during human interactions  
b) Inhumane treatment of animals means treating the animals with cruelty.
10. Regular meal schedule will keep your pet healthy.
11. Animal cruelty involves beating, poor restraining, inappropriate castration and poor transportation method.
12. Cats, rabbits. (Assess other relevant answers)
13. The house for the pet should be kept clean always so as to keep the pet in a clean environment.

## 4.0 Agriculture and Technology

### 4.1 Off-season cropping techniques

#### Revision exercise 4.1

1. Off-season cropping means growing crops before or after their normal season or the period when their production is low.
2. Staggered planting means growing the same type of a crop in a farm at different time intervals, while succession planting involves establishing a new crop in the same space after harvesting the previous crop.
3. Timed planting means growing a crop earlier or later than its planting season to avoid the stage or period that a certain pest causes the most damage to crops or when it can fetch the highest prices at maturity.
4.
  - a) It improves farm yields.
  - b) It prevents growth of weeds and unwanted plants.
  - c) It helps to keep a check on soil fertility in areas where crops do not do well thus one is able to add nutrients to the soil.
  - d) Off-season cropping ensures there is a supply of food even during low seasons of production, hence food security is ensured. (Assess other relevant answers)
5. Timed planting, staggered planting. (Assess other relevant answers)

### 4.2 Framed suspended gardens

#### Revision exercise 4.2

1. Off-season crops are those that can be grown throughout a year without depending on rainy seasons or certain periods to mature.
2. Along driveways, along pathways, on balconies situated in sights that receive enough sunlight. (Assess other relevant answers)
3. Leafy vegetables such as kales and spinach, herbs and spices such as spring onions, lemon grass and coriander, root vegetables such as carrots and beetroot. (Assess other relevant answers)
4. Vegetables such as kales and spinach, herbs and spices such as spring onions, lemon grass and coriander. (Assess other relevant answers)
5.
  - a) It improves farm yields.
  - b) It prevents growth of weeds and unwanted plants
  - c) It helps to keep a check on soil fertility in areas where crops do not do well thus one is able to add nutrients to the soil.

- d) Off-season cropping ensures there is a supply of food even during low seasons of production, hence food security is ensured. (Assess other relevant answers)

### 4.3: Value addition techniques

#### Revision exercise 4.3

1. Value addition is the process of changing a crop produce from its original state or form to make it last longer or fetch more profit when sold.
2. To make it last long or to fetch a high profit in the market once sold. (Assess other relevant answers)
3. Drying, frying and blanching such as vegetables. (Assess other relevant answers)
4.
  - a) Simsim- simsim butter and simsim snacks such as bars or balls. (Assess other relevant answers)
  - b) Pumpkin- pumpkin flour, pumpkin snacks such as crisps. (Assess other relevant answers)

## MODEL TEST PAPERS

### MODEL TEST PAPER 1

1. Soil erosion is a process by which topsoil is gradually removed from one place, transported and then deposited to another place by the action of water, wind, animals and human beings.
2.
  - i) Splash erosion
  - ii) Sheet erosion
  - iii) Gully erosion
  - iv) Rill erosion
3. This is the excess water flowing on the ground surface.
4. Soil recovery is the process of collecting soil from soil deposition sites and using it to replace the lost top soil.
5. River banks, ditches. (Assess other relevant answers)
6. Sheet erosion occurs when a thin layer of soil is removed uniformly by surface runoff on a flat or gentle sloping bare land. (Assess other relevant answers)
7. Gapping is the process by which seedlings or crops that dry up after transplanting are replaced. (Assess other relevant answers)
8. Pruning is the process by which excess branches are removed so as to remain with few strong ones. (Assess other relevant answers)

9.
  - i) By cleaning them after use
  - ii) Storing them in a dry place
  - iii) Sharpening cutting parts if blunt  
(Assess other relevant answers)
10.
  - i) Wheelbarrow
  - ii) Garden trowel  
(Assess other relevant answers)
11. It can generate income which can help our parents or guardian in paying our school fees, buying school uniforms and even buying books. (Assess other relevant answers)
12.
  - i) Choose container
  - ii) Prepare the container
  - iii) Select your seeds
  - iv) Place seeds in the soil
  - v) Watering
13. Container gardening is the practice of growing plants in containers.  
(Assess other relevant answers)
14.
  - i) Dry mulching covering the soil
  - ii) Building gabions across a gully
  - iii) Growing cover crops
  - iv) Planting trees  
(Assess other relevant answers)
15.
  - i) Wear gloves when working outside. Gloves protect your hands.
  - ii) Use the right tool for the right job  
(Assess other relevant answers)
16. Cassava, sweet potato (Assess other relevant answers)
17. This method involves scattering the seeds all over the field in a random manner. Broadcast is the practice of dispersing seeds over the surface of the soil.
18.
  - i) The rainfall patterns
  - ii) The type of crop to be planted  
(Assess other relevant answers)
19. Weeding is the process of removing unwanted plants from a field with growing crops. (Assess other relevant answers)
20. Hardening encourages a change from soft succulent growth to a firmer harder growth.  
(Assess other relevant answers)
21.
  - i) Start by giving your tools a good scrubbing to remove any mud and grit from the blades and handles with a brush.
  - ii) Wipe tools and dry them a rag or let them dry in the sun.  
(Assess other relevant answers)
22. Pruning knife is used to remove dead diseased or damaged stems and branches. (Assess other relevant answers)
23.
  - i) By mulching
  - ii) By altering
  - iii) By thinning
  - iv) By weeding  
(Assess other relevant answers)
24. Transplanting should be done when the weather is calm, cloudy and cool.  
(Assess other relevant answers)
25. Tomatoes, cabbages (Assess other relevant answers)
26. Soil in a moisture bed is well enriched with organic manure and this improves its water retention ability. (Assess other relevant answers)
27. Vegetative materials, seeds. (Assess other relevant answers)
28. Peat moss, coco peat (Asses other relevant answers)
29.
  - i) Excessive use of farm chemicals.
  - ii) Plastic waste.  
(Assess other relevant answers)
30. Ornamental gardening refers to cultivation of plants with the aim of enhancing beauty of a place or landscape. (Assess other relevant answers)

## MODEL TEST PAPER 2

1. Sunken bed, raising bed.
2. Shallow pits trap runoff and thus increase water infiltration into the soil particle. (Assess other relevant answers)
3. By mulching, by use of a polythene bag to prevent seepage of water after irrigation.  
(Assess other relevant answers)
4. Drip irrigation helps to conserve water in the fruit garden, this water prevents the plant from drying. (Assess other relevant answers)
5. Mulching encourages better plant growth and development. It also conserves moisture.
6. Watering, pruning, weeding, adding manure  
(Assess other relevant answers)
7. Oxen can be used for ploughing land, some domestic animals give us eggs, milk and meat.  
(Assess other relevant answers)
8. A vegetable is a plant or part of a plant eaten as food when cooked or raw for example; tomato, carrots and spinach. (Assess other relevant answers)
9. Root vegetables, stem vegetable, leafy vegetables, fruit vegetables.
10. Rice, sorghum. (Assess other relevant answers)
11. A fork jembe, a wheelbarrow, a shovel, binding wire, a panga. (Assess other relevant answers)
12. A raised seedbed retains water for a longer time than ordinary seedbed. (Assess other relevant answers)
13.
  - i) Using soil as a base to support the roots of the ornamental plants.



- ii) Using soilless media as a base to support the roots of the ornamental plants
- 14. Brings beauty to the environment. (Assess other relevant answers)
- 15. Inappropriate harnessing, inhumane slaughtering. (Assess other relevant answers)
- 16. Humane handling of animals and inhumane handling of animals.
- 17. Safe harnessing and constriction using approved methods, proper handling. (Assess other relevant answers)
- 18. The cost of the pet, the behaviour of the pet. (Assess other relevant answers)
- 19. Housing and sanitation, feeding, parasite and disease control. (Assess other relevant answers)
- 20. Plastic containers, glass containers, aluminum containers.
- 21. Excessive use of artificial fertilisers, plastic waste. (Assess other relevant answers)
- 22. i) Creating awareness messages on the importance of soil conservation.  
ii) Proper disposal of used chemical containers and plastic waste. (Assess other relevant answers)
- 23. It helps during dry seasons since it makes water available longer after the rains. (Assess other relevant answers)
- 24. By constructing structures such as water retention ditches. (Assess other relevant answers)
- 25. Agroforestry is the growing of crops together with trees or animals on the same piece of land.
- 26. i) It reduces soil erosion caused by wind and water.  
ii) Trees adds nutrients to the soil. (Assess other relevant answers)
- 27. It grows faster. (Assess other relevant answers)
- 28. Ground sites, container sites.
- 29. Overgrown woody cuttings, middle woody cuttings. (Assess other relevant answers)
- 30. A weed is unwanted plant that grows where crops are and they compete for nutrients and water with the cultivated plants. (Accept other relevant descriptions)
- v) Raise the soil to about 15cm above the ground surface
- vi) Break big soil until it is fine
- vii) Add manure and mix well with soil
- viii) Level the nursery bed (Assess other relevant descriptions)
- 3. Shading
- 4. A. Watering can  
B. Jembe  
C. Shears  
D. Panga
- 5. i) Clean them after use  
ii) Store them in a dry place  
iii) Sharpen cutting tools if blunt  
iv) Use them for the correct purpose  
v) Replace broken parts and ensure the handles are firm  
vi) Take care while handling farm tools and equipment (Assess other relevant answers)
- 6. i) Splash erosion  
ii) Sheet erosion  
iii) Rill erosion  
iv) Gully soil erosion
- 7. Gully erosion
- 8. i) cut a ripe fruit into two parts  
ii) scoop out the seeds  
iii) clean the seeds with cold water to remove pulp  
iv) spread and dry the seeds in the sun  
v) select good seeds for planting and store them in a clean dry place
- 9. i) flat seedbed  
ii) sunken seedbed  
iii) raised seedbed  
iv) container seedbed
- 10. The seeds can rot hence low-quality crop produce (Assess other relevant answers)
- 11. Ornamental gardening is the cultivation of plants for beauty of a place.
- 12. Peat moss, pebbles, coco peats.
- 13. The crops may dry up due to lack of enough water, if not shaded direct sunlight may harm the crops. (Assess other relevant answers)
- 14. It saves on water used in irrigation. (Assess other relevant answers)
- 15. i) Crops produce is available through out the year  
ii) Soil is enriched with organic manure which improves water retention  
iii) Many crop plants can be planted on a small area leading to high yields. (Assess other relevant answers)
- 16. Grapevine
- 17. Wire mesh fence, safe traps, deflectors, innovative lights, innovative sound devices and thorny fences. (Assess other relevant answers)

### MODEL TEST PAPER 3

- 1. Soil erosion
- 2. i) Select a suitable site  
ii) Clear vegetation on the selected site  
iii) Measure 1 meter wide and any convenient length on the ground using a tape measure  
iv) Dig the marked site to loosen the ground and remove all the weeds and stones
- 16. Grapevine
- 17. Wire mesh fence, safe traps, deflectors, innovative lights, innovative sound devices and thorny fences. (Assess other relevant answers)

18. i) They retain moisture.  
ii) They collect maximum rainfall.  
iii) They do not dry quickly.  
iv) They keep roots cooler.  
v) They reduce the need for irrigation.  
(Assess other relevant answers)
19. Splash erosion
20. Farmers, Agricultural training centers, Agricultural research stations. (Assess other relevant answers)
21. Soil recovery is the collection of soil from soil deposition sites and using it to replace the lost top soil. (Assess other relevant explanation)
22. Training
23. Sheep, chicken, rabbits, cows, pig, goats  
(Assess other relevant answers)
24. Gapping
25. Mulching
26. i) To preserve moisture in the soil  
ii) To suppress growth of weeds  
(Assess other relevant answers)
27. Drip irrigation
28. i) Loam soil  
ii) Clay soil  
iii) Sandy soil
29. It provides support for crops with weak stems
30. Organic gardening

#### MODEL TEST PAPER 4

1. Shallow pits trap runoff and therefore increase water infiltration into the soil. Shallow pits conserve more moisture.
2. i) Sunken seedbed  
ii) Raised seedbed
3. Deterrents are methods that are made purposefully to scare and keep off small wild animals that can destroy crops and harm domestic animals. (Assess other relevant description)
4. Use of wiremesh fences, use of innovative sound devices and thorny fences. (Assess other relevant answers)
5. A seedbed is an area prepared with soil for planting seeds. (Assess other relevant answers)
6. i) By building gabions across the gully.  
ii) By practicing mulching when farming.  
(Assess other relevant answers)
7. Soil is a valuable resource for any agricultural activity and we depend on it for food. (Assess other relevant answers)
8. Gully erosion
9. Mulching the crops, weeding, shading. (Assess other relevant answers)
10. i) Mulching helps to conserve moisture as well as reduces weed growth.  
ii) Mulching also helps us obtain a clean fruit since when the fruit drops down, they do not touch the ground.  
(Assess other relevant answers)
11. Creeping crops provide food security for the society. (Assess other relevant answers)
12. Organic gardening refers to a system of growing crops using natural farming technique and materials instead of artificial chemicals. (Assess other relevant answers)
13. It is because some of the chemicals remain in the crops for a long time which might cause sickness when the crops are consumed by the people. (Assess other relevant answers)
14. Pigeon peas, green grams and cow peas.  
(Assess other relevant answers)
15. Proper spacing ensures that the crops receive adequate nutrients, water, sunlight and air for proper growth. (Assess other relevant answers)
16. Gapping is important since it replaces the seedlings which fail to germinate so that high yields are obtained. (Assess other relevant answers)
17. Threshing, shelling. (Assess other relevant answers)
18. Harvesting crops with dry pods should be done during dry weather conditions and when the sun is not too hot.
19. When a legume starts to wilt, you should water it.
20. A machete is used for cutting or digging out weeds.
21. i) Wear gloves when working to protect their hands.  
ii) Use the right tool for the right job.  
(Assess other relevant answers)
22. By cleaning it after use.  
(Assess other relevant answers)
23. i) Using dibbing method  
ii) Using drilling method  
iii) Using broadcasting method
24. i) Condition of soil moisture  
ii) Onset of rain  
(Assess other relevant answers)
25. i) Innovative drip irrigation  
ii) Container gardening  
(Assess other relevant answers)
26. i) Staggered planting  
ii) Timed planting  
(Assess other relevant answers)
27. Sweet potato, potatoes. (Assess other relevant answers)
28. It is a suitable place prepared mainly for planting crops. (Assess other relevant answers)

29. Grading is the sorting out of eggs into different categories according to their interior quality and weight. (Assess other relevant answers)
30. i) Pruning knife  
ii) Shovel  
iii) Watering can  
(Assess other relevant answers)

### MODEL TEST PAPER 5

1. Planting sites are the suitable places for planting crops. The sites may include ground sites, container sites or even along the fence. (Assess other relevant answers)
2. Tilth generally refers to the physical condition of the soil as it relates to plant growth.
3. i) Mulching- mulching is done to reduce evaporation of moisture and suppress weeds.  
ii) Thinning- it leaves or enables ample space for plants to grow and be healthy.  
iii) Watering- prevents plants from drying up. (Assess other relevant answers)
4. i) Time of planting  
ii) Site preparation  
(Assess other relevant answers)
5. Tree seedlings are best planted out at the onset of long rains. The rains should be established. The soil should be moist to depth of at least 20cm when planting.
6. Soil pollution refers to anything or any act that causes contamination of soil and degrades the soil quality.
7. i) Plastic waste  
ii) Excessive use of farm chemicals.  
(Assess other relevant answers)
8. i) Soil pollution decreases soil fertility thus decreasing soil yield.  
ii) Soil gets contaminated thus affecting the plants.  
(Assess other relevant answers)
9. i) Control the use of artificial fertilisers  
ii) By recycling waste products which might cause soil pollution.  
(Assess other relevant answers)
10. Crop rotation is a technique of planting different crops in the same piece of land but at different times.
11. i) Practising crop rotation.  
ii) Planting cover crops to cover bare soil.  
(Assess other relevant answers)
12. i) They should have very less water requirement.  
ii) They should not compete for sunlight.  
(Assess other relevant answers).

13. i) Tree support pollination.  
ii) They suppress weed growth.  
iii) They stabilise soil and temperature.  
(Assess other relevant answers)
14. i) They reduce pressure on forest.  
ii) There is more efficient recycling of nutrients by deep rooted trees on the site.  
(Assess other relevant answers)
15. Earth basins are square or rectangular shaped small water holding structures that measure between 1m to 2m in width and have a earth ridge of about 30cm all around.
16. Water conservation is the practice of using water efficiently to reduce wastage.
17. Agroforestry trees should be able to survive in areas with drought like characteristics. They should be able to grow with minimum supply of water.
18. i) Course tilth  
ii) Fine tilth  
iii) Medium tilth
19. Course tilth has large soil particles and is created for large planting materials while fine tilth has small soil particles and is created for small planting materials.
20. i) Vegetative materials  
ii) Seed materials  
(Assess other relevant answers)
21. Dibbling is the process of planting seeds in holes made in seedling and covering them.
22. A dibbler
23. i) Broadcasting method  
ii) Dibbling method  
iii) Drilling method
24. A weed is an unwanted plant while a crop is a plant which grows or needed to be grown for some use.
25. The process of making the outer covering of some crop products such as bulb onions harder before harvesting.
26. Thinned out plants are those parts of the plant that has undergone the process of thinning.
27. Earthing up refers to the act of heaping soil around the root zone at the potato plant.
28. Conserving water ensures there is water for later use. (Assess other relevant answers)
29. Hardening encourages a change from soft succulent growth of crop produce to firm harder growth.
30. Crop management is a set of agricultural practices performed to improve the growth, development and yield of crops.