

Volume 1

# PLUS ONE

## Study Pack

Mathematics and Science

Physical Education and Arts

Grade 2



New Curriculum  
With  
Answers

Volume 1

# PLUS ONE

## Study Pack

Mathematics and Science

Physical Education and Arts

Grade 2



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*Anchors of the schools curricula*

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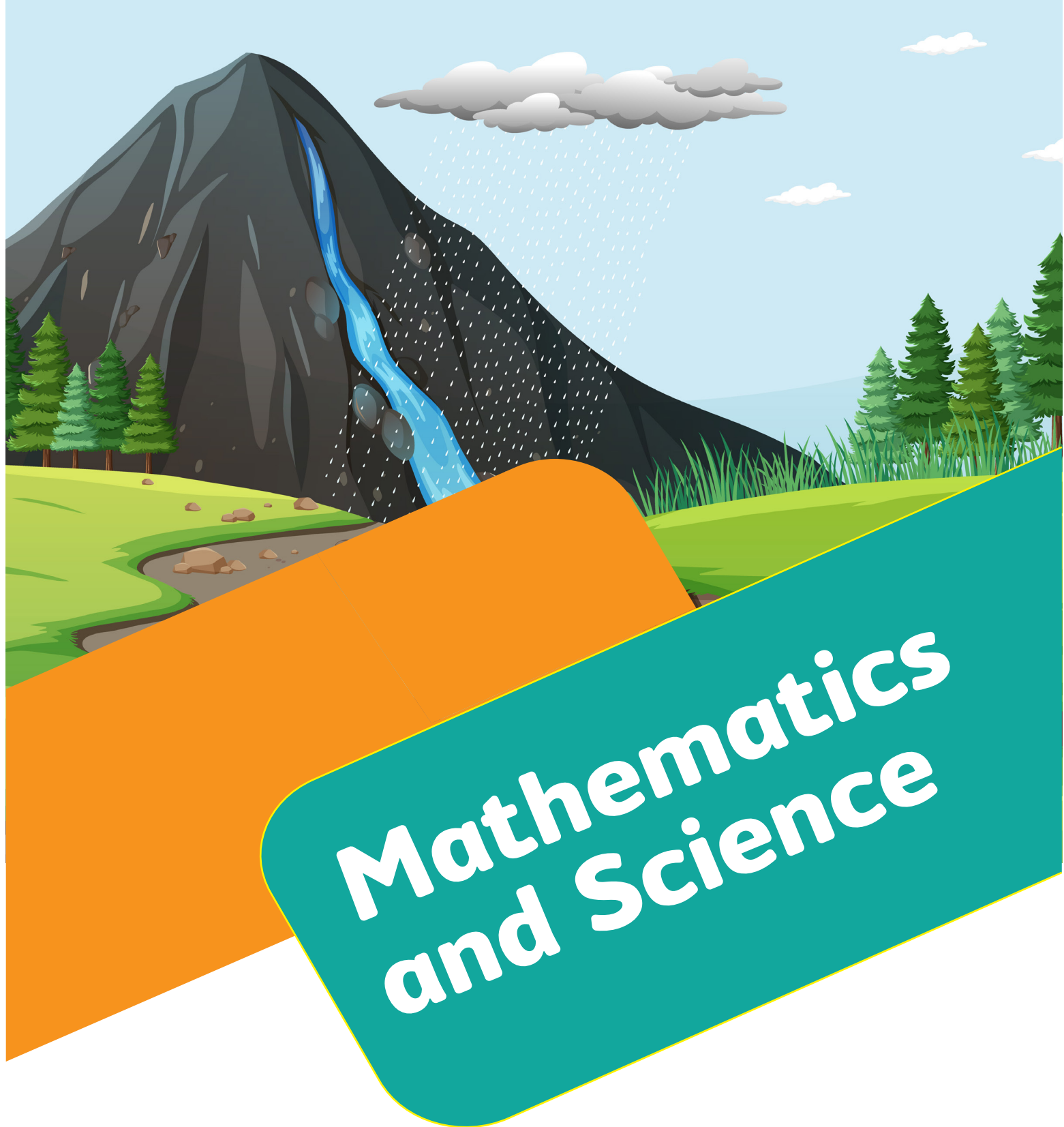
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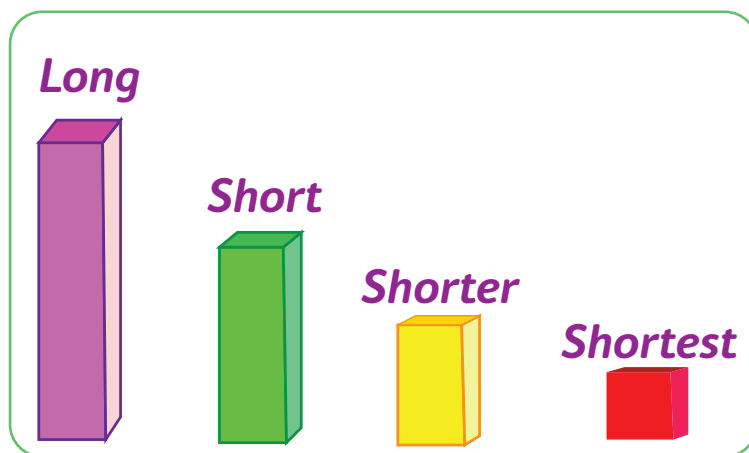
**Authors:** Rachel Madoda and Bernadette Mudima

# TOPIC 1

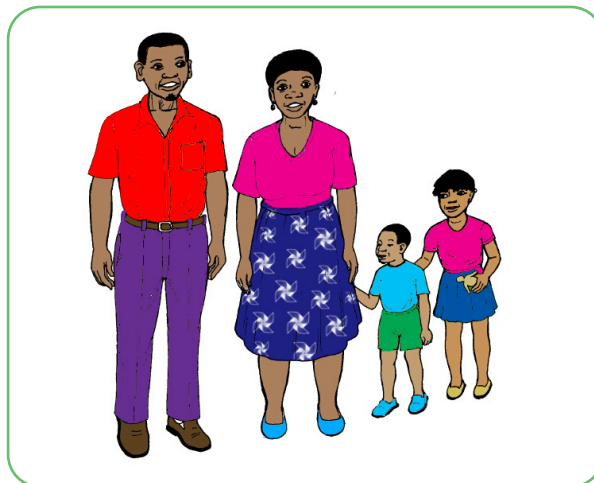
## MATHEMATICAL PLAY

### Ordering according to length

Objects can be ordered according to length, that is from the longest to the shortest.



### Example 1.1



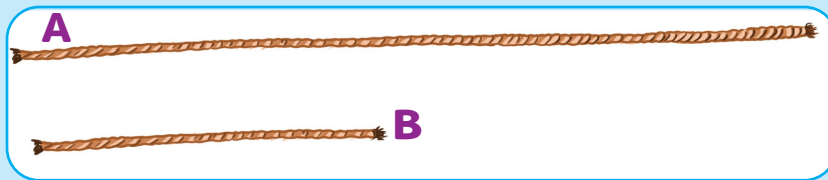
Mr Muleya is the tallest.

Brother Rendani Muleya is the shortest.

## Practice exercise 1.1

Order the following objects according to length.

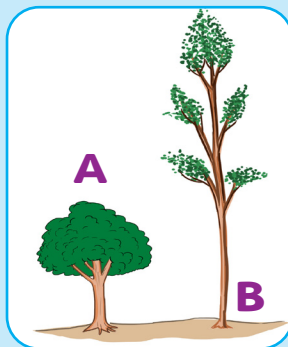
1.



(a) Rope A is \_\_\_\_\_. (long / short)

(b) Rope B is \_\_\_\_\_. (short / long)

2.



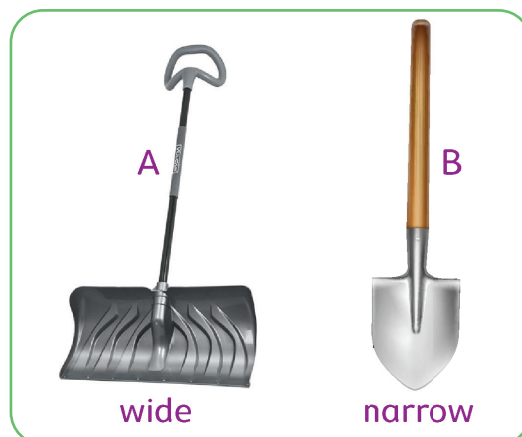
3. Tree A is \_\_\_\_\_. (tall / short)

4. Tree B is \_\_\_\_\_. (short / tall)

## Ordering according to width

Some objects are wide in width.

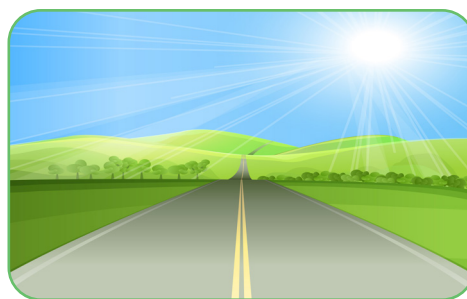
Some objects are narrow in width.



## Example 1.2



Road A



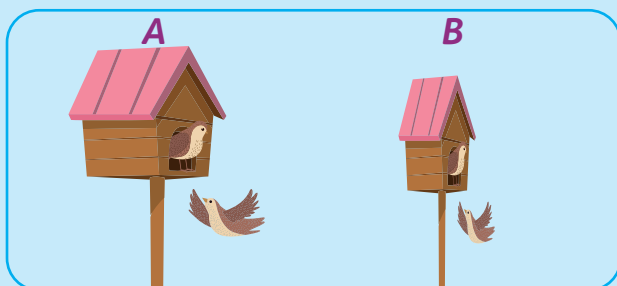
Road B

Road A is a narrow road.

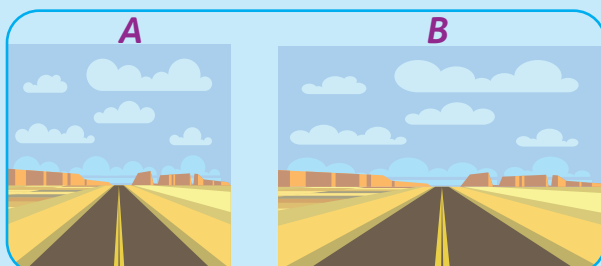
Road B is a wide road.

## Practice exercise 1.2

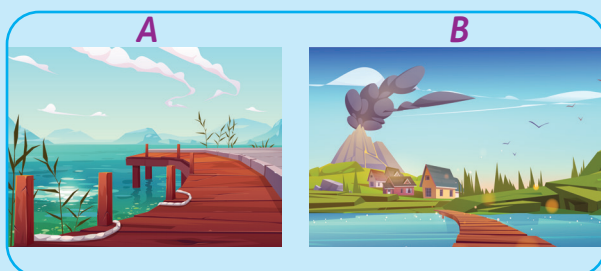
1. Which bird house is wider?



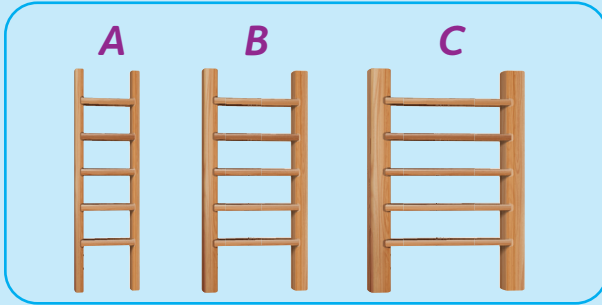
2. Which road is narrower?



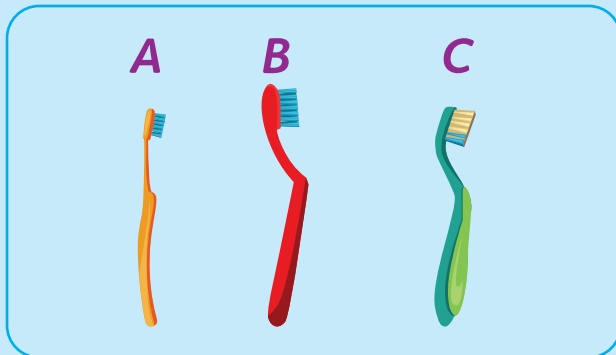
3. Which walkway is wider?



4. Which ladder is the widest?



5. Which brush is the narrowest?



## Classification of objects according to use

Objects can be classified according to their use and type.



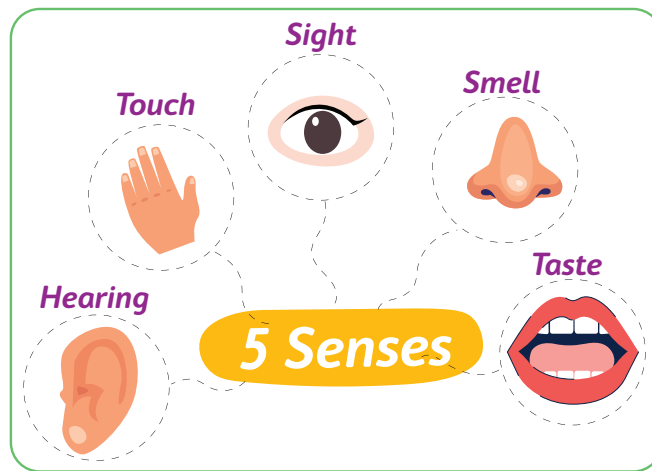
*Electrical gadgets*



*Kitchen utensils*

## Human body

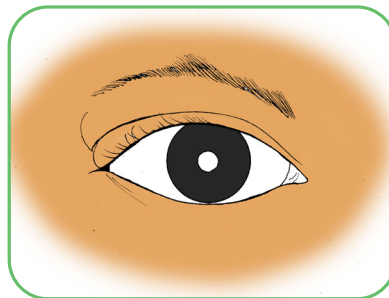
A human being has five senses.



These are sense of sight, touch, smell, hearing and taste.

### Sense of sight

The sense of sight helps people to see using their eyes.



We are able to read books, identify things and walk on the road using our sense of sight.

Eyes need to be cleaned with clean water.



# TOPIC 4

## NUMBERS AND SCIENCE CONCEPTS

### Numbers

#### Counting objects

Below is a chart with numbers from 1 to 100.

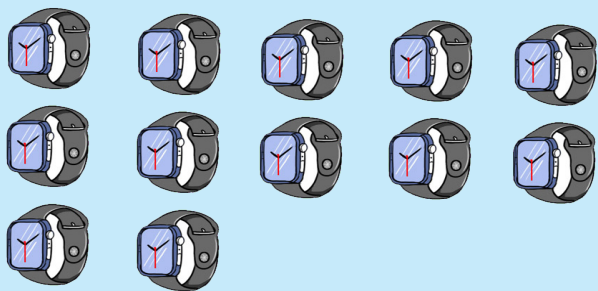
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

#### Example 4.1

How many hats are shown below?



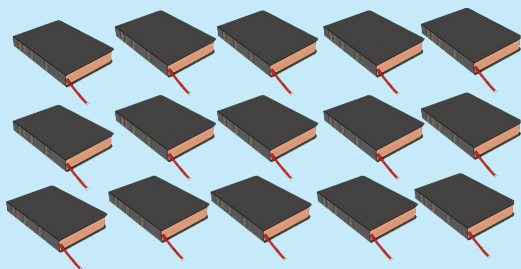
There are 4 hats.



2. There are \_\_\_\_\_ watches.



3. There are \_\_\_\_\_ pairs of shoes.



4. There are \_\_\_\_\_ notebooks.

## Counting in 2s

We can count in 2s by skipping one digit using the number line.

### Example 4.4

Find the missing numbers below.

0    2        6    8    10

The first missing number is 4.

The second missing number is 12.

### Example 4.5

Find the missing number below.

30    32    34    36    38   

The missing number is 40.

### Practice exercise 4.2

1. Find the missing numbers.

(a) 2    4        8    10        14

(b) 12    14    16        20   

(c) 50    52    54            60

2. Complete the following.

(a) 2    4    6    8    10    12   

(b) 1    3    5    7    9   

(c) 5    10    15    20    25   

## Ordinal numbers

Number	Ordinal number in words	Ordinal number
1	First	1 <sup>st</sup>
2	Second	2 <sup>nd</sup>
3	Third	3 <sup>rd</sup>
4	Fourth	4 <sup>th</sup>
5	Fifth	5 <sup>th</sup>

# TOPIC 5

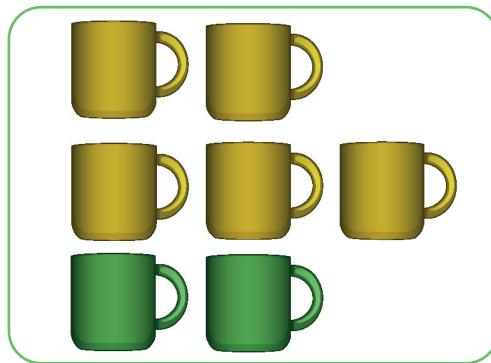
## NUMBER OPERATIONS

### Addition

Addition means putting together.

#### Example 5.1

Find the number of cups shown below.



$$5 + 2 = 7$$

There are 7 cups altogether.

#### Example 5.2

Mary has 10 pencils.



## Using brackets ( )

### Example 5.12

$8 \times 3$  can be written as  $8 (3)$ .

$$8 (3) = 24$$

### Practice exercise 5.9

1.  $\square \times 6 = 36$

2.  $7 \times \square = 42$

3.  $\square \times 5 = 40$

4.  $7 \times \square = 49$

5.  $\square \times 3 = 0$

6.  $\square \times 2 = 20$

7.  $4 \times \square = 16$

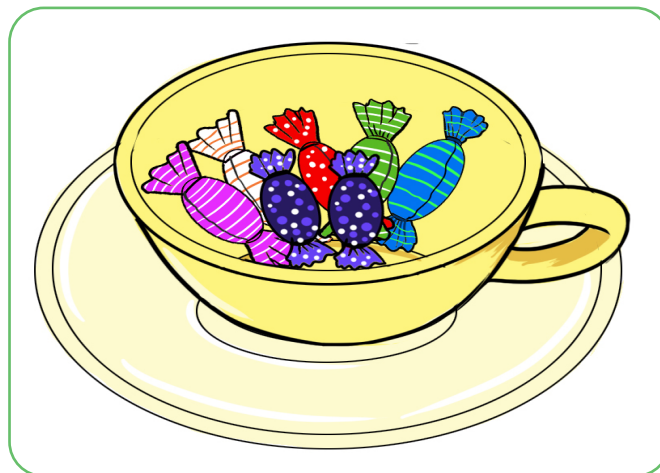
8.  $\square \times 2 = 14$

9.  $9 \times \square = 36$

10.  $\square \times 5 = 20$

## Multiplication stories

### Example 5.13



There are 7 sweets in a cup. How many sweets are in 2 cups?

$$7 \times 2 = 14 \text{ sweets}$$

## Telling time

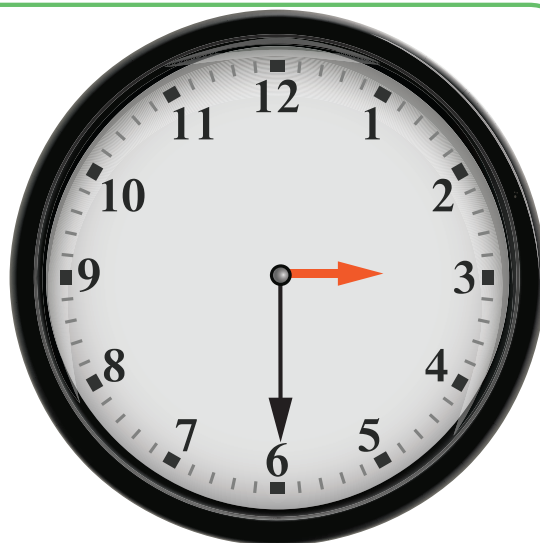
### Example 6.4

What time is shown on the clock faces below?

(a)



(b)

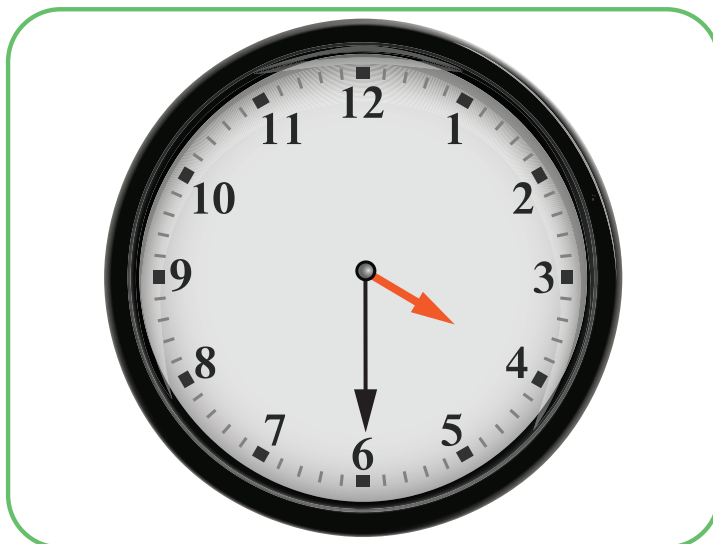


(a) The time is 12 o'clock.

(b) The time is half past 3.

### Example 6.5

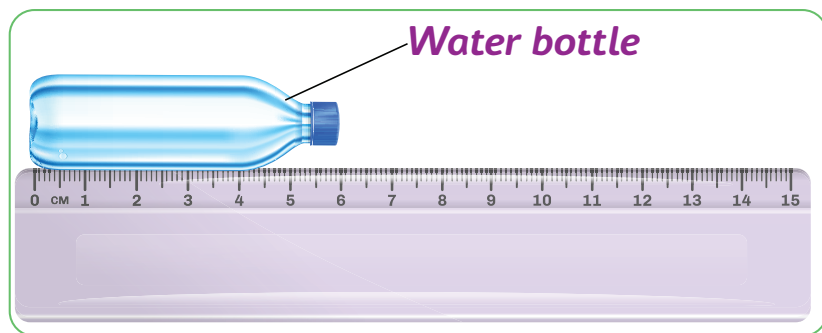
What time is shown below?



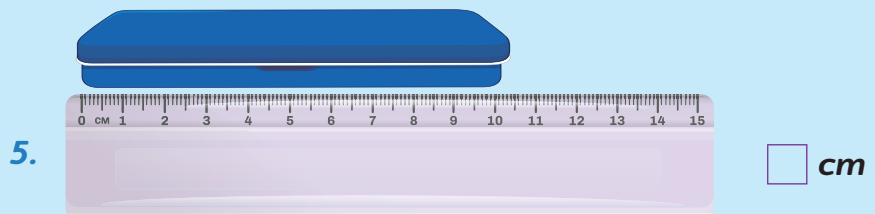
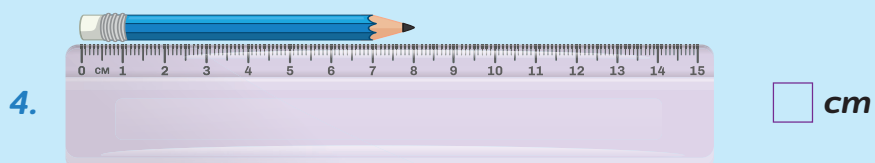
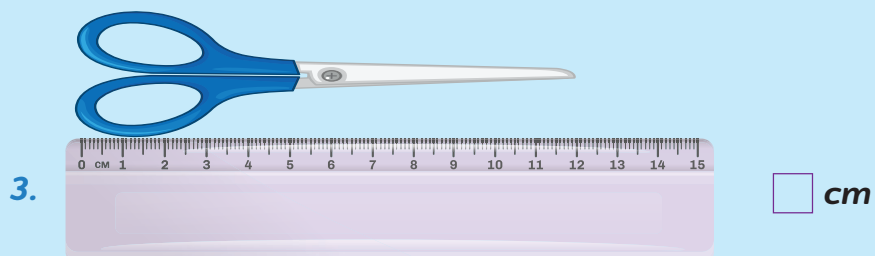
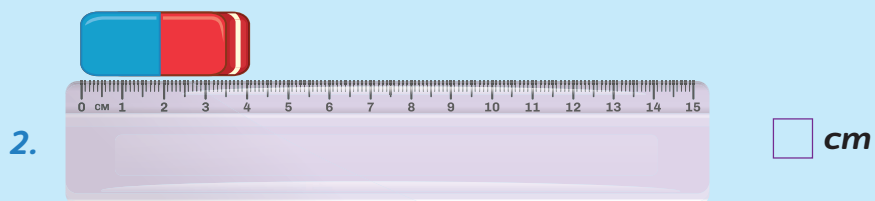
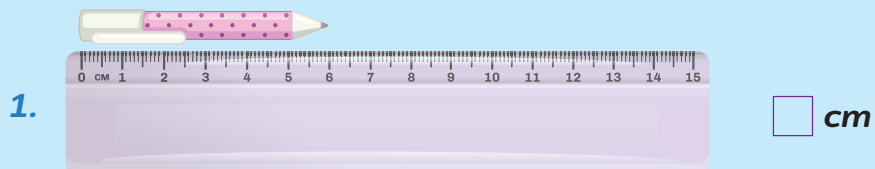
The time is half past 4.

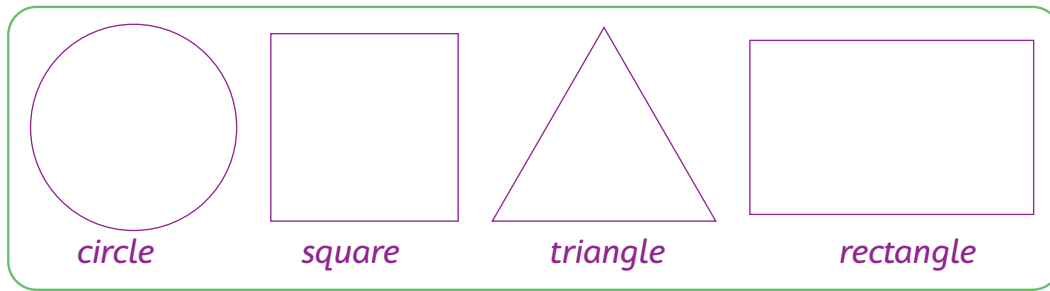
## Example 6.9

The water bottle is 6cm.



## Practice exercise 6.8





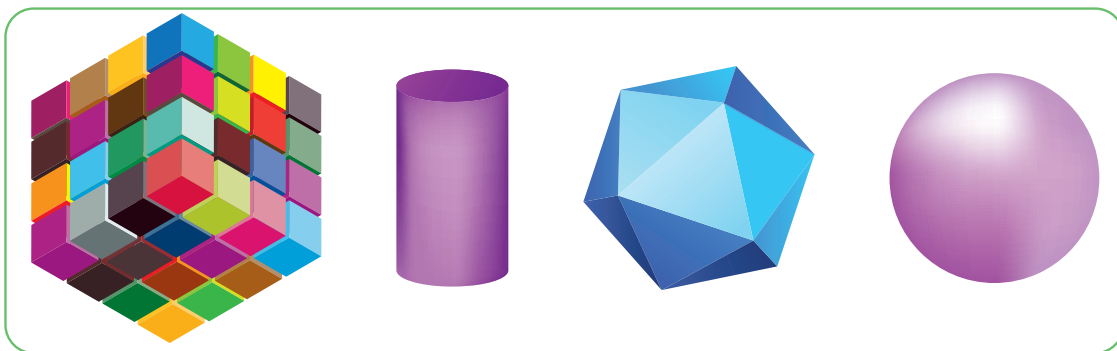
## Properties of plain shapes

- A square has 4 equal sides and 4 corners.
- A triangle has 3 sides and three corners.
- A rectangle has 4 sides and 4 corners.
- A circle is round. It has no corners.

### Practice exercise 6.13

1. A triangle has \_\_\_\_\_ sides. **(2 / 3)**
2. A rectangle has \_\_\_\_\_ corners. **(3 / 4)**
3. A \_\_\_\_\_ is round. **(circle / square)**

## Solid shapes



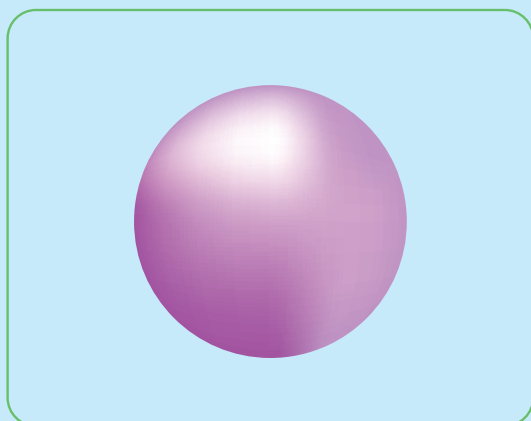
The shapes shown are real life solid shapes.  
Solid shapes have length width and height.  
In addition to that they occupy some space.



## Practice exercise 6.14

Match the solid shapes related to real life objects using letters.

A



D



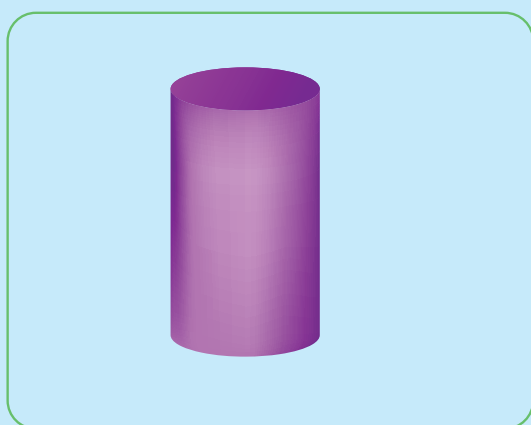
B



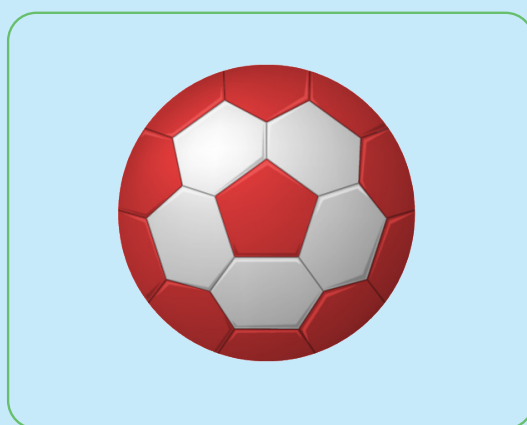
E



C



F



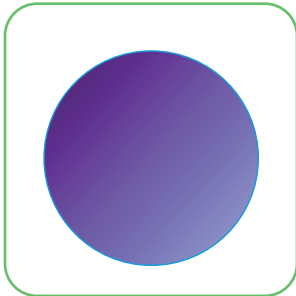
# EXAMINATION PRACTICE 1

## MATHEMATICS AND SCIENCE

### PAPER 1

TIME: 1 HOUR 30 MINUTES

1. This is a \_\_\_\_\_. (square / circle)



2. There are \_\_\_\_ stars. (10 / 11)

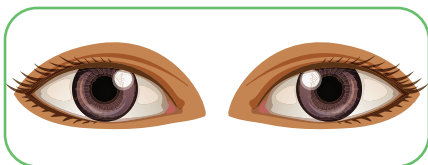


3. 10 12 14  18 20. (15 / 16)

4. 20 in words is \_\_\_\_\_. (twenty / ten)

5. People have \_\_\_\_\_ senses. (five / six)

6. These are \_\_\_\_\_. (ears / eyes)



7. Water can be poured. It is a \_\_\_\_\_. (gas / liquid)

# EXAMINATION PRACTICE 1

## MATHEMATICS AND SCIENCE

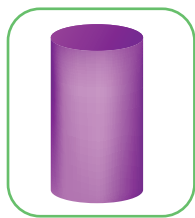
### PAPER 2

TIME: 1 HOUR 30 MINUTES

1. 20    22    24    26        30

The missing number is \_\_\_\_\_.

2. This is a \_\_\_\_\_.



3. I am round and have no corners. I am a \_\_\_\_\_.

4. Put  $>$ ,  $<$  or  $=$  in  $5 + 5$   10.

5.  $40 + 8 =$

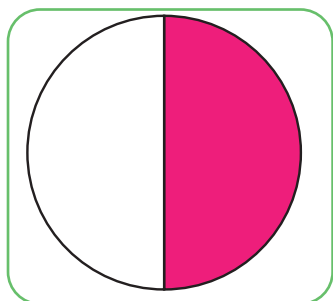
6.  $17 - 9 =$

7. I hear with my \_\_\_\_\_.

8. Water can be solid, liquid and \_\_\_\_\_.

9.  $95 =$   tens  units

10. \_\_\_\_\_ is shaded.



12. The time is \_\_\_\_ o'clock. (12 / 1)



13. 29 is nearer to \_\_\_\_\_. (10 / 20 / 30)

14. Air is used to \_\_\_\_\_ things. (dry / wet)

15. Pencil \_\_\_\_\_ is long. (A / B)



**A**



**B**

16. 8 set of 4 = \_\_\_\_\_. (16 / 32)

17. Eggs comes from a \_\_\_\_\_. (cow / hen)

18. The ball is full of \_\_\_\_\_. (water / air)



19. July is the \_\_\_\_\_ month of the year. (sixth / seventh)

20. Peter has 25 hens. He sold 15 hens. How many hens are left? (40 / 10)



**Development Editor:** Ray Kanyosola

**Authors:** Lindsay Lee Kugara and Sithokozile Zvavamwe

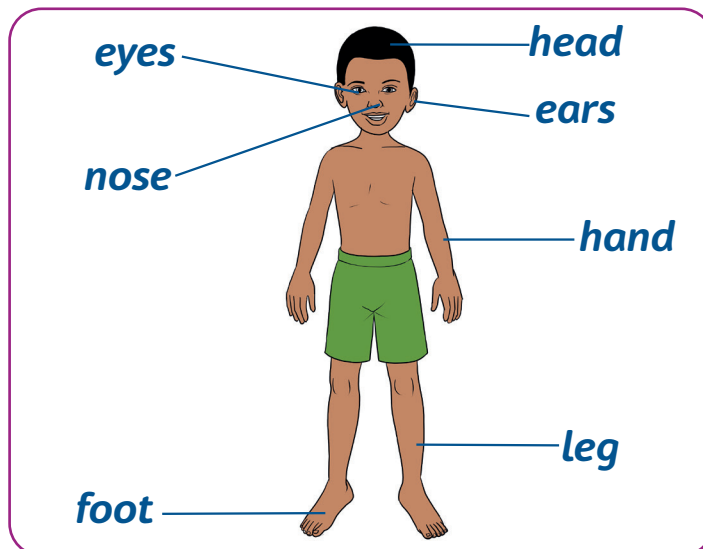
# TOPIC 1

## PHYSICAL EDUCATION HUMAN BODY

### My body

- The human body is made up of different body parts that work together to perform day to day activities.
- These activities include walking, talking, balancing, throwing and eating. The human body should be well taken care of, to stay healthy and fit.

### External body parts

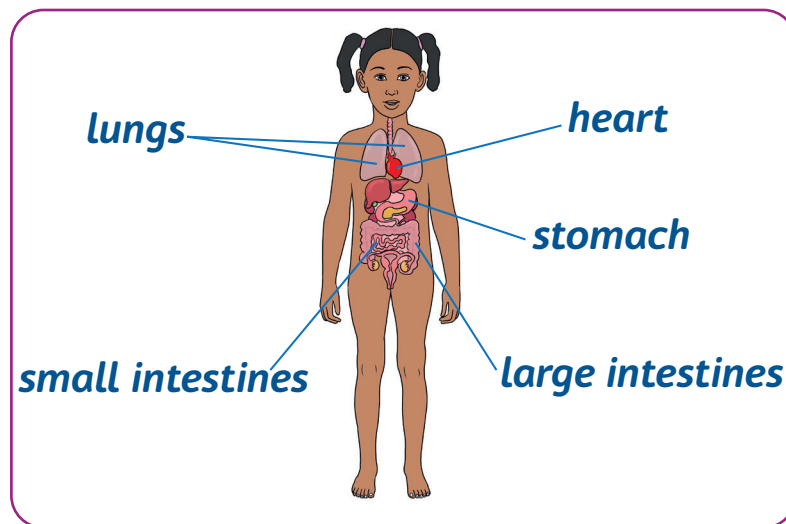


- The human body has external and internal body parts.

- Internal body parts are parts found inside the body and cannot be seen.
- External body parts are found outside the body and can be seen.

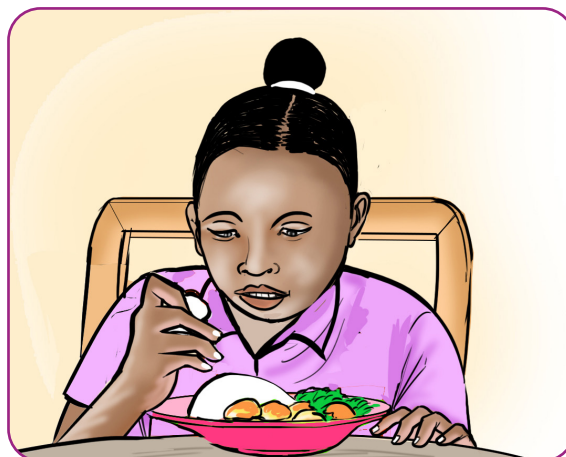
## Internal body parts

- There are found inside our bodies.
- Examples of internal body parts are the lungs, stomach, heart, small and large intestines.



The body needs to be taken care of every day. We take care of our bodies by:

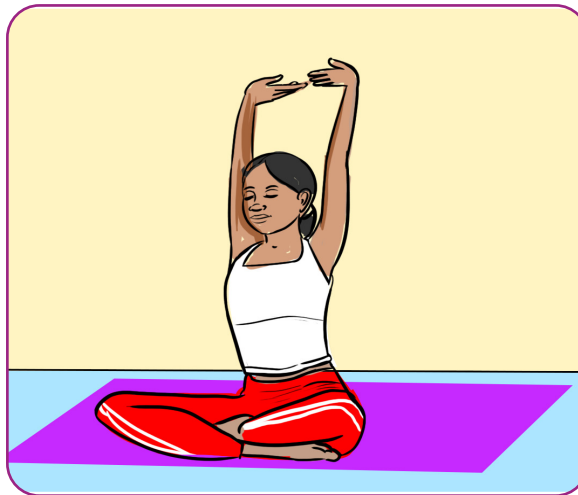
- eating healthy foods.



- washing your body thoroughly and apply lotion.



- drinking a lot of water.
- washing our hands before eating and after using the toilet.
- exercising regularly.



- brushing your teeth daily.
- having enough rest.
- wearing protective clothes when performing.

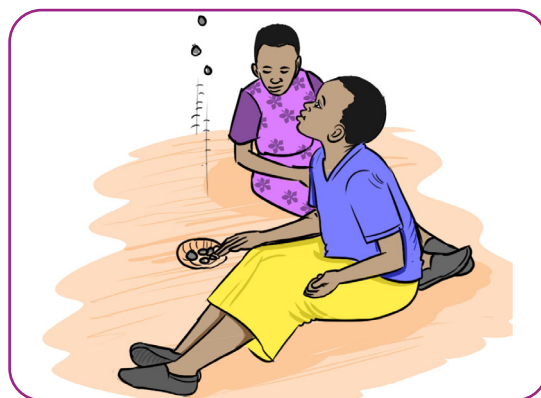
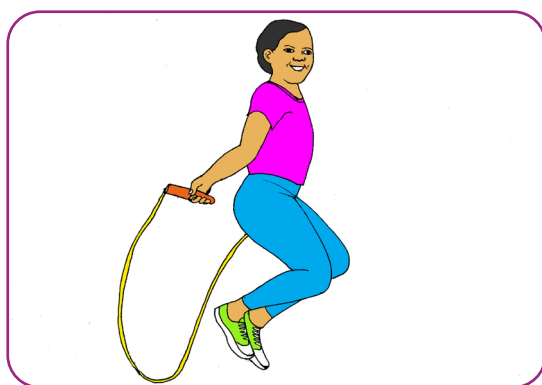


## TOPIC 5

# PHYSICAL EDUCATION CO-ORDINATION

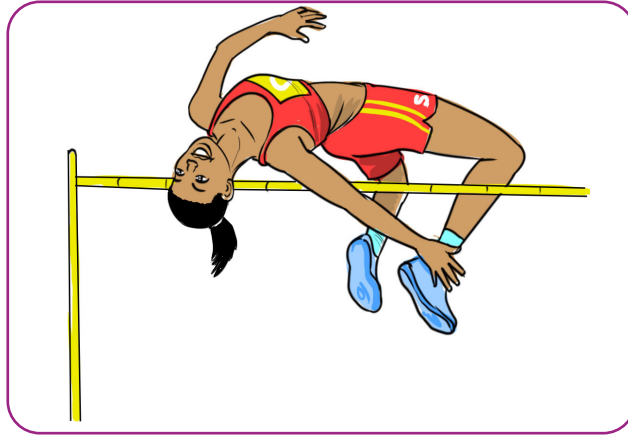
### Co-ordination skills

- Co-ordination is being able to move two or more body parts at the same time to achieve a goal.
- Using the hands, legs and eyes at the same time is co-ordination.
- Good co-ordination requires the athlete to combine multiple movements into a single movement.

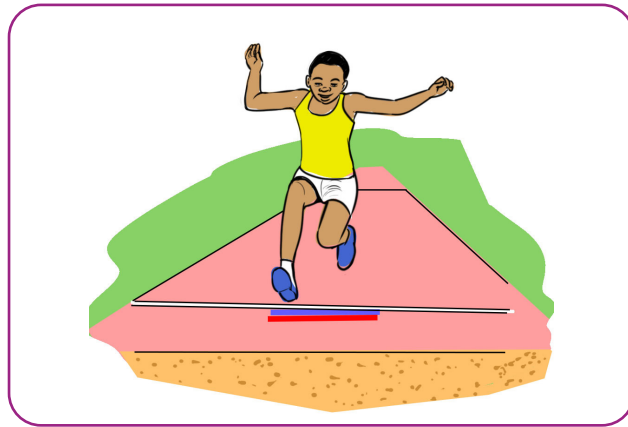


- When playing *nhodo* our hands and eyes work together.
- When skipping a rope, your hands, legs, feet and eyes work together for the body to achieve skipping.
- Legs, hands and eyes work together when batting in cricket.

- There are two types of jumps.
  - Jumping for height such as high jump.



- Jumping for length such as long jump.



## TOPIC 13

# VISUAL AND PERFORMING ARTS HISTORY OF ARTS AND CULTURE

## Music

- Music plays a variety of roles in the society. Such roles can be seen daily and others can be seen on special events.
- Music provides entertainment during wedding ceremonies.

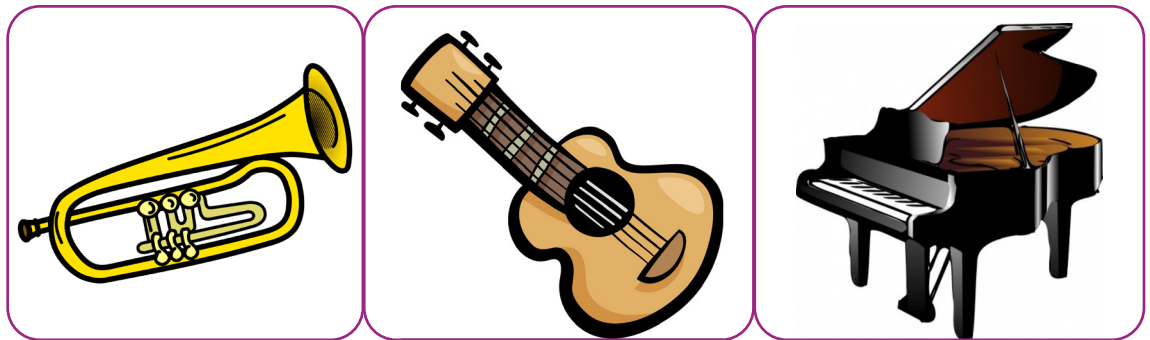


- Songs are also sung at funerals and during different ceremonies.
- Songs can be sung when playing games.
- They can also be sung when doing cultural activities.
- Zimbabwe has a wide range of musical instruments.

- Examples of Zimbabwean instruments include *chigufe*, *mbira*, *marimba*, *hosho*, *hwamanda* and *ngoma*.



- Music can be played while playing instruments.



- Modern musical instruments include a guitar xylophone, a piano and a keyboard.

## Visual Art

- Visual art is art created to please the eye.
- It includes pottery, beading, sculpturing and photography.
- Visual art makes use of many materials.
- Some materials that are used in visual art include paper, clay and paint.



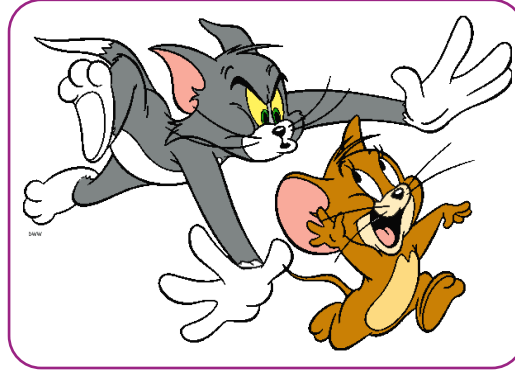
- A visual artist is one who makes visual art.
- Zimbabwe has many visual artists like Dominic Benhura and Sylvester Mubayi.



## Theatre

- Theatre film is a dramatic performance done in front of a live audience.
- Theatre performances educate the society.
- They also teach traditions, norms and values.
- An audience is a group of people watching a drama being performed on stage.

- Animation is when pictures and drawings are made to appear as if they are moving.



- An actor is one who performs the role of a character in a play on the stage.
- There are many actors in Zimbabwe such as Tsotsi, Nijo and Dhafu.



*Tsotsi*



*Nijo*



*Dhafu*

## Dance

- Dance is a rhythmic way in which the body responds to music.
- There are many types of dances.
- Different cultures have different types of dances.
- There are different type of dances from different cultures.

Type of dance	Ethnic group
Isitshikitsha	Ndebele
Mhande	Karanga
Mbende	Zezuru
Muchongoyo	Ndau
Dinhe	Korekore
Amabhiza	Ndebele
Mbakumba	Karanga

- There are many dancers and dance groups in Zimbabwe.
- Examples of dancers include John Cole, Sandra Ndebele and the Iyasa group.
- Dance is performed at various events like wedding and funerals.



- It can be performed at national celebrations like the Independence Day and Heroes' Day celebrations.

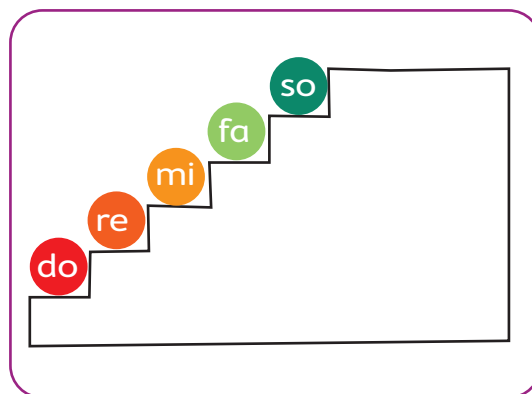


## TOPIC 14

# VISUAL AND PERFORMING ARTS THE CREATIVE PROCESS AND PERFORMANCE

## Music

- Pitch is the highness or lowness of a sound.
- For example, a cat's meow has a high pitch whilst a lion's roar has low pitch.
- A whistle has a high pitch.
- A drum has a low pitch.
- Pitch can be noted from the diatonic scale.



- It is composed of the notes **do**, **re**, **mi**, **fa** and **so**.
- From the diagram, the following can be seen.
  - **do** has the lowest pitch.
  - **re** is higher than **do** but lower than **mi**, **fa** and **so**.
  - **mi** is higher than **do** and **re** but lower than **fa** and **so**.





*Microphone*



*Smartphone*

- Music can be played on many devices such as a radio, television, computer, internet and even on smartphones.
- When composing music, the following ethics must be followed.
  - Compose music that is respectful.
  - Do not copy or steal other people's music.
  - Do not disrespect cultures and religious beliefs of others.

## Visual Arts

Visual arts are made using a variety of technological tools.

**Examples of such tools include the following.**

Tool	Picture	Function
Camera		To take pictures. To capture videos.

Tablet		For drawing. To scan pictures.
Computer		To edit videos and audio recordings.
Software		To edit photos and films. To add visual effects to photos and films.
Lights		To make objects more visible.

- When photos and films are made, they can be edited using computer softwares.
- Examples of softwares that can edit pictures and films are Adobe and CorelDraw.

# EXAMINATION PRACTICE 1

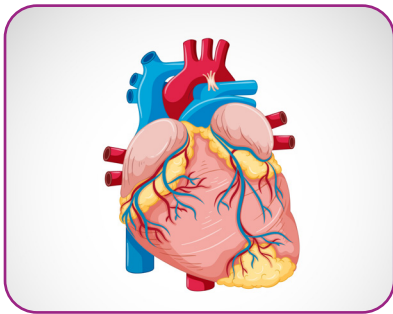
## PHYSICAL EDUCATION AND ARTS

TIME: 1 HOUR 30 MINUTES

Answer **all** questions.

**Choose the correct answer.**

1.

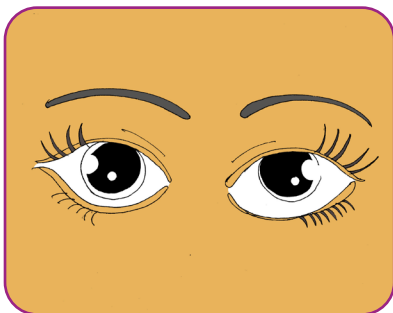


The \_\_\_\_\_ is an internal body part.  
**(heart / leg)**

2.

\_\_\_\_\_ organs are parts of the body that we can see. **(Internal / External)**

3.

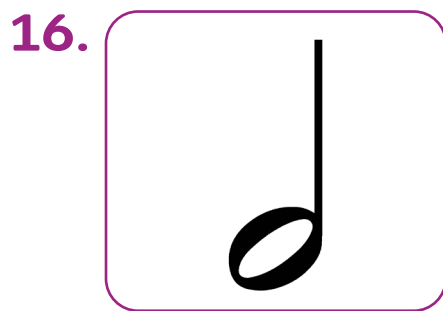


The \_\_\_\_\_ is an external body part.  
**(eyes / heart)**

13. People watching a theatre performance are known as \_\_\_\_\_. (**actors / an audience**)

14. Dinhe dance is from the \_\_\_\_\_ culture. (**Korekore / Ndau**)

15. The highness or lowness of a sound is called \_\_\_\_\_. (**pitch / rhythm**)



The musical note shown above is called a \_\_\_\_\_. (**crotchet / minim**)

17. An object with length, width and height is said to be \_\_\_\_\_. (**2-D / 3-D**)

18. An example of a theatre game is \_\_\_\_\_. (**mystery bag / skipping rope**)

19. A dance performed by one person is known as a \_\_\_\_\_ dance. (**duet / solo**)

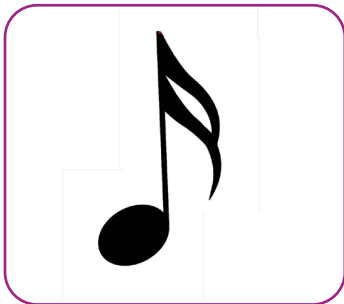
20. The speed of a song is known as \_\_\_\_\_. (**dynamic / tempo**)

15.



The percussion instrument shown above is \_\_\_\_\_. **(shakers / cymbals)**

16.



The musical note is called a \_\_\_\_\_. **(quaver / semiquaver)**

17. An object with length and width only is said to be \_\_\_\_\_. **(2-D / 3-D)**

18.



A \_\_\_\_\_ is used when recording music. **(pitch / microphone)**

19. \_\_\_\_\_ is when a group of dancers perform together. **(A solo / An ensemble)**

20. The message in a theatre film is called the \_\_\_\_\_. **(costume / theme)**

# EXAMINATION PRACTICE 6

## PHYSICAL EDUCATION AND ARTS

TIME: 1 HOUR 30 MINUTES

Answer **all** questions.

**Choose the correct answer.**

1.



She is balancing with her hands and legs, forming a \_\_\_\_\_. (**bridge / square**)

2.

Water in the swimming pool is treated to prevent \_\_\_\_\_. (**drinking / diseases**)

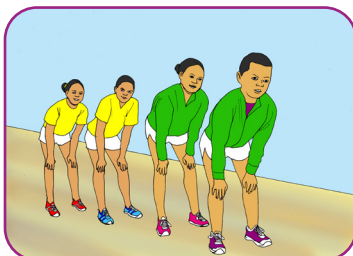
3.

The one who saves people from water hazards is called a \_\_\_\_\_. (**teacher / lifeguard**)

4.

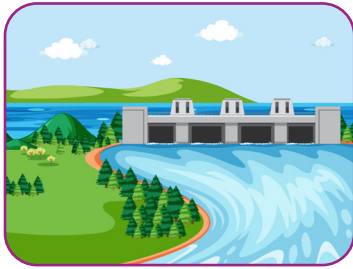
When swimming, you use your \_\_\_\_\_ to move. (**head and shoulders / hands and legs**)

5.

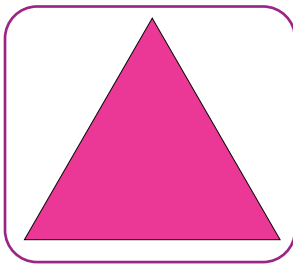


The type of formation shown above is called a \_\_\_\_\_. (**linear / circular**)

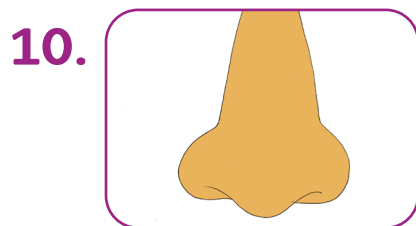
7. Which of the following is a water body?  
(Cup / Dam)



8. The following shape is called a \_\_\_\_\_.  
(square / triangle)



The picture above shows a \_\_\_\_\_.  
(camera / television)



The body part shown above is used to \_\_\_\_\_.  
(eat / breathe)

11. The role of music at national functions is to  
\_\_\_\_\_ people. (fight / unite)

15.



The instrument shown above is called a \_\_\_\_\_. **(drum / colour wheel)**

16.



The artist shown above is \_\_\_\_\_.  
**(Jah Master / Albert Nyathi)**

17.



The diagram above shows examples of music \_\_\_\_\_. **(songs / symbols)**

18.



The picture shows stage \_\_\_\_\_.  
**(colour / setting)**



## Examination 1 Paper 1 Answers

1. Circle
2. 10
3. 16
4. twenty
5. five
6. eyes
7. liquid
8. 12
9. 9
10. =
11. water
12. donkey
13. accidents
14. 28
15. 20
16. 2
17. rainfall
18. air
19. False
20. 2

## Examination 1 Paper 2 Answers

1. 28
2. cylinder
3. circle
4. =
5. 48
6. 8
7. ears
8. gas
9. 9 tens 5 units
10.  $\frac{1}{2}$

## Examination 2 Paper 1 Answers

1. 15
2. fifteen
3. 31; 38; 40; 55; 99
4. tongue
5. feet
6. 12
7. 24
8. 6 tens 6 units
9. lion
10. Sand

# Physical Education and Arts Answers

## EXAMINATION 1 ANSWERS

- |                   |                   |
|-------------------|-------------------|
| 1. heart          | 11. entertainment |
| 2. External       | 12. drawing       |
| 3. eyes           | 13. audience      |
| 4. grow           | 14. Korekore      |
| 5. males          | 15. pitch         |
| 6. picking litter | 16. minim         |
| 7. razor blade    | 17. 3-D           |
| 8. 8              | 18. mystery bag   |
| 9. strong         | 19. solo          |
| 10. Washing hands | 20. tempo         |

## EXAMINATION 2 ANSWERS

- |             |                 |
|-------------|-----------------|
| 1. carrot   | 11. educating   |
| 2. shapes   | 12. Pottery     |
| 3. rolling  | 13. animations  |
| 4. hands    | 14. mbakumba    |
| 5. Swimming | 15. shakers     |
| 6. floating | 16. semiquaver  |
| 7. drowning | 17. 2-D         |
| 8. batting  | 18. microphone  |
| 9. slower   | 19. An ensemble |
| 10. power   | 20. theme       |

## EXAMINATION 9 ANSWERS

- |                   |                     |
|-------------------|---------------------|
| 1. locomotion     | 11. Dominic Benhura |
| 2. ball           | 12. Sandra Ndebele  |
| 3. 3              | 13. triangle        |
| 4. hand-eye       | 14. 3               |
| 5. linear         | 15. ensemble        |
| 6. red and yellow | 16. shape           |
| 7. eating healthy | 17. Microphone      |
| 8. running        | 18. an exhibition   |
| 9. group          | 19. script writer   |
| 10. music         | 20. teamwork        |

## EXAMINATION 10 ANSWERS

- |                  |                   |
|------------------|-------------------|
| 1. direction     | 11. visual artist |
| 2. water         | 12. traditions    |
| 3. transfer      | 13. Iyasa         |
| 4. costumes      | 14. independence  |
| 5. choreography  | 15. drum          |
| 6. secondary     | 16. Albert Nyathi |
| 7. co-ordination | 17. symbols       |
| 8. Five          | 18. setting       |
| 9. receiving     | 19. make-up       |
| 10. horizontal   | 20. Honesty       |