NDOLA TRUST SCHOOL

Grade 8

Online Classes

Term 2: Week 1

Content:

1. Home Economics
2. Computer Studies
3. Mathematics
4. French
5. Social Studies
   5.1 History
   5.2 Geography
   5.3 Civics

Home Economics

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GRADE 8 EXERCISE

Food is anything solid or liquid that is taken and does something to the body.

-Builds the body.

-Protects the body from disease.

-For energy and warmth.

The substances we get from the foods we eat are called **nutrients.** The six main nutrients include:

1) Proteins

2) Carbohydrates

3) Vitamins

4) Fats and oils

5) Water\Roughage

6) Mineral salts

EXERCISE

1) List down four solid foods and four liquid foods.
2) Give two examples of foods in all the six nutrients.
3) A meal containing food from the 3 food groups is called a ……..
4) Write the 3 food groups where we should get foods from.

Computer Studies

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UNIT3.2 Output devices:…….*A continuation form Last Week Posts*

An output device is any device that takes data stored on a computer and makes it available to the user in an easy to understand way. This data may be made available using pictures (such as on a monitor or printed to a page) or using sounds (such as with speakers and earphones). The output devices can be divided into the following:

- Display devices – monitors (LCD, LED)
- Printers (Inkjet, Ink tank, Laser, 3-D)
- Data projectors (HDMI, VGA)
- Speakers.

DISPLAY DEVICES

1. MONITORS

All computer software is built around a visual representation of data, therefore the monitor is one of the most important output devices for any computer. To check the quality of a monitor, we need to look at some important characteristics.

These are:

- ✓ **Number of pixels:** Each pixel can be seen as a tiny dot of colour on the monitor. Pixels put together creates the picture that we see on the monitor. The more pixels there are, the more detailed a picture can be. A good monitor is a full HD monitor with 1 920 pixels across the width of the monitor by 1 080 pixels across the height of the monitor. Some modern monitors can have up to 3 840 × 2 160 pixels (called 4K).
- ✓ **Screen size:** The size of a monitor is measured diagonally (that is, from the top left corner to the bottom right corner) and the size is given in inches.
- ✓ **Refresh rate:** The refresh rate of a monitor determines how quickly the image on the monitor can be updated with the newest information. Most monitors have a refresh rate of 60 Hz.
- ✓ **Contrast ratio:** A measure of the number of shades the monitor can show between its blackest black and brightest white. The higher the number of shades, the clearer and sharper the images will be, and the brighter and truer to life the colours will be.
- ✓ **Aspect ratio:** This is the basic shape of the screen based on the ratio of the width to the height measured in inches. For example, if a screen is 16 inches (40,6 cm) wide and 10 inches (25,4 cm) tall, the aspect ratio is 16:10.
- ✓ **Brightness:** Brightness is the perception of how intense or bright the light coming from a screen is. The brighter the light, the more power will be drawn from the computer.

Figure 3.1: *The monitor is the most important output device*

2. PRINTERS

A printer allows a computer to use data and output it to paper. There are three main types of printers. These are:

- ✓ **Dot-matrix printers:** These printers use a series of small pins to strike a ribbon coated with ink, causing the ink to transfer to the paper at the point of impact. Dot-matrix printers are mostly outdated as a personal printer but are still used in banks and manufacturing businesses where it is necessary to use carbon paper to produce multiple copies of a document.
- ✓ **Ink-jet printers:** An inkjet printer operates by painting an image using a spray of ink. This is done by hundreds of tiny nozzles that spray drops of ink directly onto the paper while moving across it. There are two types of ink-jet printers: continuous printers that are usually used for commercial purposes; and on-demand printers. It is a good, all-round printer that is most commonly used for smaller jobs. They are however slightly less reliable.
- ✓ **Laser printers:** A laser printer is a popular printer for personal use. These printers use electrostatic technology. To start the process, the drum is given a positive electrical charge and while it rotates, the printer shines a narrow laser beam over its surface, drawing or projecting the letters and images to be printed as a pattern of electrical charges onto the surface of the drum. When the pattern is set, the drum is rolled in toner, which sticks to certain parts of the drum, that is, the image. When rolled over a piece of paper, this image is 'burned' into the paper with heat and pressure. When the printing is done, the electrical charge is removed from the drum and the excess toner is collected. Laser printers are used for mass production printing because they are generally faster and more reliable but with worse quality prints.
- ✓ **Ink-tank printer:** These printers have print heads built into the printer and u se an integrated bulk ink system. This means that ink is supplied continuously to the print head from an ink tank within the printer itself, no expensive cartridges are needed. When the ink is finished, it can be refilled from an ink bottle. Because of this, printing costs are much lower. They produce low-cost, high volume printing.

New words

- ✓ **Tactile device** – a device that makes use of touch
- ✓ **Carbon paper** – thin paper coated with carbon or another pigmented substance, used for making a second impression of a document as it is being written or typed
- ✓ **Electrostatic technology** – uses stationary electric charges instead of electric currents
- ✓ **Toner** – a very fine, dry, black powder-type of ink

- ✓ 3D printers: 3D printing is a process of making three dimensional solid objects from a digital file. The creation of a 3D printed object is achieved by laying down successive layers of material until the object is created. Each of these layers can be seen as a thinly sliced horizontal cross-section of the eventual object e.g. prosthetics and movie props.

Figure 3.4: *A 3D printer*

Figure 3.5: *Printers allow you to output data to paper*

When evaluating printers, it is important to know what the printer will be used for because different printers are good at different things.

Factors to consider when looking for a printer are whether it is black and white and/or colour, how quickly it can print, and how much it costs to print a page.

Other factors to consider include:

- ✓ Dots per inch (DPI) measures how many dots a printer can print in one inch (or 2.54 cm). The higher the DPI, the more detailed the prints.
- ✓ Pages per minute (PPM) measures how many pages of black text a printer can print in a minute. The higher the PPM, the faster the printer can print.

3. DATA PROJECTORS

Projectors use a bright light to project the content displayed on a computer monitor onto any flat surface. One example of where projectors are used is at the cinema. They use large, high quality projectors to display the movie on the screen in front of you. However, projectors can also be connected to computers at home or in office settings, to display your computer's screen on a wall or screen.

There are two types of cables connecting video output devices:

- ✓ VGA – an analog video-only connection.
- ✓ HDMI – a digital video audio connection.

Projectors provide the following advantages:

- ✓ They are easy to carry around
- ✓ They display the content from your computer at a large size.

Figure 3.6: *A projector projects an image onto a flat surface*

However, projectors also have disadvantages:

- ✓ Replacing the lamps is expensive
- ✓ Low-quality projectors can show washed-out or faded images
- ✓ Low-brightness projectors need to be placed close to the screen, decreasing the size of the image
- ✓ Low-brightness projectors may require a dark room.

The quality of a projector can be measured using three main factors:

- ✓ Lumens, which measures the brightness of the projector.
- ✓ Resolution, which determines how many pixels can be displayed.
- ✓ Contrast ratio, which measures the difference between the darkest and lightest parts of the image (that is, the contrast).

4. SPEAKERS AND HEADPHONES

Advantages of speakers:

- ✓ they can be useful for alerting computer users of events using audio notifications, even when they're busy
- ✓ text can be converted into sound.

Disadvantages of computer speakers:

- ✓ they can take up a fair amount of desk-space, compared to headphones.

5. HEADPHONES

There are many different types of headphones, let's look at a few popular choices:

Closed-back headphones 	It creates an isolated audio experience so that only you can hear the sounds you want to hear.
In-ear headphones 	Known for portability, versatility, and convenience. They go a little more deeply into the ear to provide comfort, sound isolation, and sound accuracy.
Bluetooth headphones 	Offer wireless connectivity to various devices through radio transmitter technology (RF). They have a small computer chip inside of them that allows you to pair with the device you are playing music from.

6. INPUT/OUTPUT DEVICES

An input/output device is any hardware used by a human operator or other systems to communicate with a computer. They are capable of sending data (output) to a computer and receiving data from a computer (input).

An interactive whiteboard is a board that combines the technologies of a computer, touchscreen, projector and whiteboard. You can connect an interactive whiteboard to one or more laptops, a PC, tablet, or other electronic devices.

When used in a classroom environment, they give learners and teachers opportunities to interact more than the traditional blackboard ever could.

Activity 3.2

3.2.1What is a pixel?

3.2.2**What does NOT determine the quality of a projector?**

3.2.3**How is the quality of a computer speakers measured?**

3.2.4**Compare the following four printers by**:

A. How they work
B. What they are usually used for (more specifically than saying they are used to print).

PRINTER	HOW DOES THE PRINTER WORK	WHAT IS IT USED FOR SPECIFICALLY
Dot matrix		
Ink-jet printer		
Laser printer		
Ink-tank printer		

C. You want to buy a new printer on which to print your homework. What are the three main factors that you should take into consideration to determine its quality, and what does each factor measure?

3.2.5**If you need to print high-quality paper certificates, would you recommend a dot-matrix printer, Laser printer or an ink-jet printer? Give at least two reasons for your answer**.

*** Due Date: 5th June, 2020

MATHEMATICS

12-05-2020

TOPIC: SCIENTIFIC NOTATION

LESSON 1

- **Scientific notation** is also called **standard form.**
- **Scientific notation** or **standard form** is a **shorter** way of writing very large or very small numbers.

- A number in scientific notation is written in the form

  $A \times 10^{n}$

Where A= is a decimal number with only **one non-zero digit** (1 to 9) before the point.

n = the **number** of times the **point moved**

NOTE:

(i) **n** is **positive** if the point moved to the **left** (negative direction)

(ii) **n** is **negative** if the point moved to the **right** (positive direction)

EXAMPLES

1. The numbers below are in decimal form, Write them in scientific notation.

(i) 2347

Answer: **2.**347 x 10^3 (Note: In a whole number, the decimal point is at the end of the number. The point moved 3 steps in the **negative (left**) direction, hence the power of positive 3).

(ii) 3000000

Answer: **3.**000000 x 10^6 (Same reasoning with part (i). Since after the point there are only zeros, this answer can also be written with only one zero after the point as 3.0 x 10^6)

(iii) 0.000345

Answer: **3.**45 x 10^{-4} (Note: The point moved **4** steps in the **positive (right)** direction, hence the power of negative 4)

(iv) 7645.239

Answer: 7.645239 x 10^3

(v) 77899778

Answer: 7.7899778 x 10^7

(vii) 6.78879

Answer: **6.**78879 x 10^0 (The power is **0** because the decimal point did **not** move. The point did not move since we already had **one** non-zero digit (6) before the point).

NOTE:

- In the examples above, we moved the decimal point until there was only **one** non-zero digit remaining to the **left** of the decimal point

EXERCISE

1. The numbers below are in decimal form, Write them in scientific notation.

(a) 5678

(b) 44.765

(c) 0.0000567

(d) 0.24578

(e) 3.997

Due Date: Friday, 15th May,2020.

Prepared by Mr. Kabinda (0978-093876)

Lesson 2-Week 1 Term II 2020

TOPIC: SCIENTIFIC NOTATION

Examples

1. Which of the following are written in scientific notation.

a) 5.2×10^7 b) 83.5×10^3 c) 0.7×10^1 d) 2.0×10^0

Solutions

1. a) 5.2×10^7 is in **Scientific Notation.**

(since the number has a *single non-zero digit* before the point and 10 has a *power*.)

b) 83.5×10^3 is **NOT** in Scientific notation

(since there are two digits before the point)

c) 0.7×10^1 is **NOT** in Scientific notation

(since the single digit before the point is 0. Remember that it shouldn't be zero but a non-zero single digit)

d) 2.0×10^0 is in Scientific Notation

SUB-TOPIC:

CONVERTING NUMBERS FROM SCIENTIFIC NOTATION BACK TO DECIMAL FORM.

Note:

1. This lesson is the reverse of our previous lesson

2.When converting a number from standard form to **decimal form**, we move the decimal point to the direction indicated on the power.

For instance,

- ✓ If the power is -5, it means that we have to move the point 5 steps to the negative direction.
- ✓ If the power is + 4, it means that we have to move the point 4 steps to the positive direction.

Examples

1. The numbers below are given in scientific notation, write them in **decimal form.**

a) 4.6×10^3

Answer: 4600

b) 7.14×10^2

Answer: 714

c) 7.8×10^0

Answer: 7.8

d) 5.26789×10^2

Answer: 526. 789

e) 5.4×10^{-4}

Answer: 0.00054

f) 6.7×10^{-2}

Answer: 0.067

EXERCISE

1. Which of the following are written in scientific notation.

a) 234.45×10^{3} b) 8.93×10^{-1} c) 0.37×10^{6}

2. The following numbers are written in scientific notation, write them in decimal form

a) 5.7×10^{3} b) 1.476×10^{2} c) 8.93×10^{-2} d) 9.03×10^{0}

e) 9.24568×10^{4} e) 2.431×10^{-3}

NOTE:

- We will have a follow-up lesson on zoom to discuss this work.

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TERM 2 / WEEK 1

GRADE 8 FRENCH REVISION EXERCISE

Relie les expressions françaises ci-dessous avec les expressions anglaises. Écris la lettre de la réponse contre la question.

Match the french expressions below with the english ones. Write the letter of the answer against the question.

1. Bonjour Monsieur Banda.
2. Bonjour Madame Mulenga.
3. Comment allez- vous ?
4. Je vais bien et vous ?
5. Pas mal.
6. Votre nationalité ?
7. Je suis suis zambien ?
8. Moi, je suis zamienne et americaine .
9. Vous avez une double nationalité ?
10. Oui, Monsieur.
11. Vous habitez où ?
12. À Kitwe et vous ?
13. J'habite à Ndola.
14. Vous travaillez ?
15. Oui, je suis médecin.
16. Que faites vous pendant le weekend ?
17. Je vais à la campagne ?
18. Vous parlez combien de langues ?

19. Je parle trois langues.

20. Vous parlez aussi français ?

21. Un peu.

22. Vous avez combien d'enfants ?

23. J'ai quatre enfants, une fille et trois garçons.

24. L'ainé a quel âge ?

25. Il a dix-neuf ans et il est à l'université.

REPONSES/ ANSWERS

A. A bit B. I am a doctor. C. Do you have a duo citizenship? D. He is nineteen years old. E How many children do you have F. I am going to the country side. G. How old is the first born? H. Do you also speak French? I How many languages do you speak ? J. I have got four children, a girl and three boys. K. How are you ? L. I am a zambian M. I live in Ndola N. What do you do during the weekend. . O. I speak three languages P. Yes, I am a doctor. Q. Hello Mr Banda. R. Not so bad S. Good morning Mrs Mulenga. T. I am fine and you ? U. Do you work ? V. Where do you live? W. In Ndola. X. In Kitwe and you ? Y. Yes Sir

SOCIAL STUDIES (HISTORY)

Manlike creatures such as Kenyapithecus, Zinjanthropus and Kenyapithecus are not considered as true men as they were not able to make tools. They did not have developed enough brains that could have enabled them to make tools.

EARLY STONE AGE PERIOD

The Early Stone Age period existed from about 55,000 to 40,000 years ago. An example of a creature who lived during this period is Homo-Habilis. This creature was nomadic-like in nature as he moved from place to place in search of food and water.

Homo-Habilis

The bones of Homo-Habilis were discovered in East Africa at Olduvai Gorge by Dr Leaky. Homo Habilis means 'handy man'. Dr Leaky gave this creature this name because he was able to use his hands to make tools.

Homo-Habilis is believed to be the first true man because of his ability to use his hands to make tools although he looked like an

ape in some ways. In the shape of his forehead and the back of his head, he looked like an ape. His lower jaw was chinless. He had a brain capacity of between 900 and 1300 cubic centimetres. He was about four feet tall and walked upright like man. His hands, fingers and teeth were also similar to those of a man.

Homo-Habilis also made a simple shelter known as the windbreak, probably to protect himself against the cold, wind and sun. The windbreak was made by piling stones in a semi-circle. Archaeologists have found evidence of this at the Kalambo Falls in Northern Province.

For his food, Homo-Habilis depended on hunting, gathering and fishing. Alongside his bones were also found bones of small animals such as tortoise and rodents.

The Early Stone Age people mainly lived near waterfalls such as the Victoria and Kalambo for the following reasons:

i. to hunt down animals as they came to drink water.
ii. to catch fish.
iii. they needed the water for drinking.

FOLLOW-UP EXERCISE

1. What term is used to refer to the period during which man made tools out of stone?
2. Who is believed to be the first true man?
3. Who discovered the remains of this creature and what nick-name did he give him?

4. What do we call the period during which this creature lived?
5. Which continent is believed to be the cradle of all mankind?
6. What is the earliest home made by man?
7. Where, in Zambia, is evidence of the above named home found?
8. How do we know that Homo-Habilis also hunted animals for his food?
9. Give three reasons why Homo-Habilis lived near waterfalls.

SOCIAL STUDIES (GEOGRAPHY)

GRADE 8)

TOPIC - WEATHER AND CLIMATE

Read the notes written down on Weather and Climate from your exercise book.

Answer the following questions based on the topic.

1. Define the following geographical terms :-
   (a) Weather (b) Climate
2. What is the difference between Weather and Climate?
3. For each of the following state the instrument used to measure and the units.

TYPE OF WEATHER	INSTRUMENT	UNIT
a) Temperature	_____	_____
b) Sunshine	_____	_____
c) Air Pressure	_____	_____
d) Rainfall	_____	_____
e) Wind Speed	_____	_____
f) Wind Direction	_____	_____

4. Name the **three** types of rainfall received in Zambia?
5. What are **Isotherms** ?
6. What are **Isohyets** ?
7. What do the letters **I.T.C.Z** stand for ?
8. State **two** factors that influence weather?
9. What instruments would you expect to find in a Stevenson screen?

   a).....

b).....

c).....

d).....

10. Use the dictionary to explain the following geographical terms :
    a) Season b)Altitude c) Temperature

TEMPERATURE RECORDINGS

The following are used to keep a temperature record:

Mean Daily Temperature

▪This is the average of the maximum and minimum temperatures e.g. (30°C +10°C)÷2=20°C

Daily or Diurnal Range of Temperature

▪This is the difference between the maximum and minimum temperatures of a day e.g. (Max 30°C - Min 10°C) = 20°C

The Mean Monthly Temperature

▪This refers to the sum of mean daily temperatures for one month divided by the number of days in that month e.g. 229 ÷ 30 = 7.6

The Annual Temperature

▪This is the difference between the mean temperature of the hottest month and that of the coldest month e.g. 32 ºC – 18 ºC =14 ºC

The Mean Annual Temperature

▪This is the sum of mean monthly temperatures for one year divided by 12 months e.g.
264 ºC ÷12 = 22

Temperature and Rainfall figures are given for one town X. Study these figures and answer the questions that follow :

TOWN X	**J**	**F**	**M**	**A**	**M**	**J**	**J**	**A**	**S**	**O**	**N**	**D**
TEMP. (ºC)	23	23	22	21	18	14	15	16	22	26	25	23
RAINFALL(cm)	3	3	1	1	0	0	0	0	0	1	1	2

1. Which month experiences the highest average temperature?
2. Which month experienced the lowest temperature?
3. Which months experienced the heaviest rainfall?
4. How many months are totally dry?
5. Calculate the difference between the mean temperature of the hottest month and that of the coldest month.
6. Find the mean annual temperature for town X.

The maximum and minimum temperatures recorded for one week in the school grounds were :

WEEK	**MON**	**TUE**	**WED**	**THUR**	**FRI**	**SAT**	**SUN**
Max. (ºC)	17	15	14	18	16	16	18
Min. (ºC)	10	6	6	10	9	10	11

1. Calculate the mean daily temperature for Monday.
2. Calculate the daily or diurnal range of temperature for Saturday.

NDOLA TRUST SCHOOL

SUCCESS THROUGH HARD WORK

INSTRUCTIONS

1. **Read the given notes on elections thoroughly.**
2. **Answer all the given questions**
3. **Remember to submit your work in good time.**
4. **The due date for submission is Thursday, 11th June 2020**

kindly note that these notes will be followed by a live zoom lesson, after a reminder is given on google class. This therefore, means that everyone is expected to download a zoom application.

TOPIC: POLITICAL ORGANISATION

SUB-TOPIC: ELECTIONS

Definition of key terms

1. To **elect** is to choose a leader of a community or country.

2. **An election** is the process of choosing a leader of a community or country.

3. Franchise right is the right to vote.

Types of elections in Zambia

There are three types of elections in Zambia namely;

I. Primary elections.

These are elections held by different political parties to choose candidates to stand in presidential, parliamentary and local government elections.

II. Tripartite elections

These are also known as general elections. In these elections the nation votes for the president, members of parliament, executive mayors and councilors and they are conducted every after five years. However, these elections are conducted in two ways (systems): The presidential elections are held under single member majoritarian system or 50%+1 meaning that for one to be declared president they should obtain more than 50% of the total valid votes cast. While the rest of the elections are conducted under the Single member Plurality system meaning that one needs to just get more votes than the rest to be declared winner.

Having mentioned different people who are elected during these elections, it is important to know them and their different qualifications.

a) President

He/she is the head of state and government and represents the people of Zambia.

Qualifications

- He/she must be a citizen by birth or descent;
- One who has been ordinarily resident in Zambia;
- They should be at least thirty-five (35) years old
- Must be a registered voter;
- One who has obtained, as a minimum academic qualification, a grade twelve certificate or its equivalent;
- Should be fluent in the official language;
- Should have been paying tax;
- Must declare that person's assets and liabilities, as prescribed;
- pays the prescribed election fee on, or before, the date fixed for the delivery of nomination papers; and is supported by at least one hundred registered voters from each Province.
- He/she must belong to apolitical party

b) Member of parliament

A member of parliament represents people in a constituency.

Qualification for Member of Parliament

- He/she must be a citizen of Zambia;
- One who is at least twenty-one years old;
- Must be a registered voter;
- He/she must have obtained, as a minimum academic qualification, a grade twelve certificate or its equivalent; and
- declares that person's assets and liabilities

b) **Mayoral and Council Chairpersons Elections Qualifications**

A person qualifies to be nominated as a candidate for election as a Mayor/Council Chairperson if that person;

- Is a citizen of Zambia
- Is at least 21 years old
- Is a registered voter
- has obtained, as a minimum academic qualification, a grade twelve certificate or its equivalent
- declares assets and liabilities

c) **Councilors**

A councilor represents people in a ward.

Qualifications

A person qualifies to be nominated as a candidate for election as a Councilors if that person:

- Is 19 years of age or older
- has obtained, as a minimum academic qualification, a grade twelve certificate or its equivalent
- is a citizen or a holder of a resident permit, resident in the district
- has a certificate of clearance showing the payment of council taxes where applicable

iii. By elections

These are held to replace a president, member of parliament or councilor. These Elections should be held within (90) days of the occurrence of the vacancy.

Types of by elections

1) Presidential elections- These are held to replace the president.

2) Parliamentary elections - These are elections held to replace the Member of Parliament.

3) Local elections- These are elections held to replace the executive mayor or councilors

The following are some of the conditions under which a by-election can be held or disqualification from the seat.

a) Death of president, member of parliament, mayor or councilor.

b) Expulsion of a president, member of parliament, mayor or councilor from the party

c) Imprisonment of president, Member of Parliament, mayor or councilor for more than six months.

d) Resignation of a president, Member of Parliament, mayor or councilor from the seat or party.

e) If the election results are nullified by the courts

revision questions

1. what is the minimum age for one to contest for presidency in Zambia? **1 mark**
2. Who is the leader of a ward? **1 mark**
3. What term is given to the right of citizens to vote**?** **1 mark**
4. When will Zambia conduct its next General Elections**?** **1 mark**
5. Give two conditions for a bi-election. **2 marks**
6. What is the difference between a presidential election and a parliamentary election? **2 marks**
7. State the two systems that Zambia is currently using when electing leaders during the general elections. **2 marks**

In case of clarity, kindly contact me on the following given details:

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