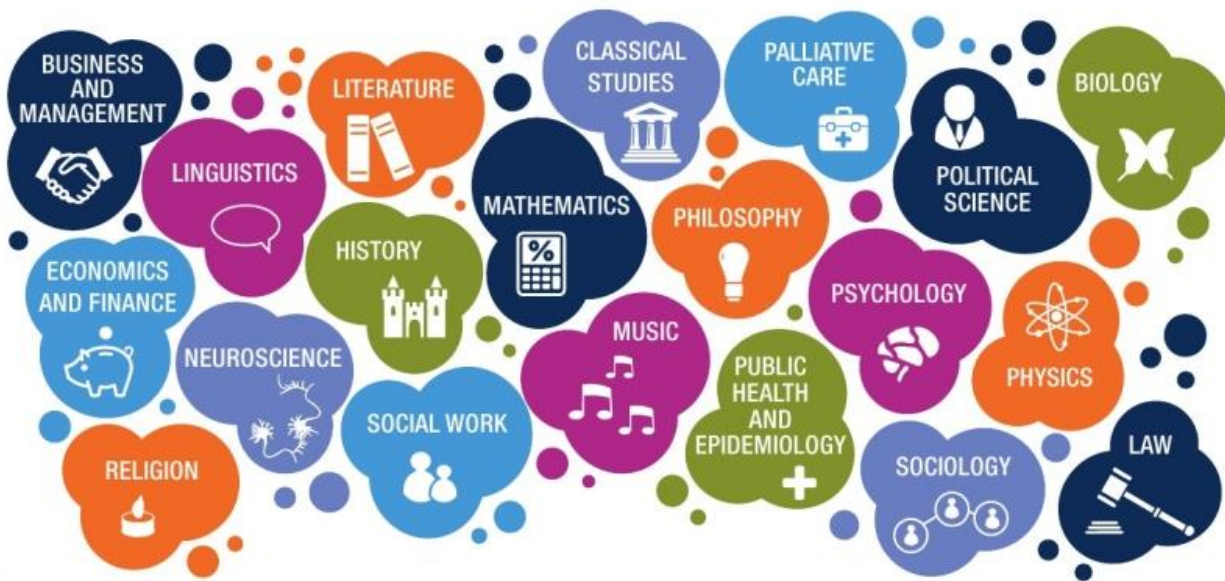# The Millennium School HMEL

Holiday Assignment
Class -IX
Session - 2018-19

Dear Students,

At last the much awaited summer vacation has begun. It is a time for relaxation and enjoyment. As important as it is to rest & enjoy, it is also important to continue to learn.

Strike a balance between work and play and allow yourself to grow in the process. Let vacation time be a doorway to creativity, learning, growth and joy. We have planned some very interesting Holiday Assignments/Projects for you this vacation. These projects have been chosen with a lot of deliberation. Utmost care has been taken to ensure that you use your creativity, your innovative ideas and your imagination to shape your projects into beautiful, wonderful 'creations'.

We are giving you interesting activities and worksheets based on **Flip Learn Prime Modules**. Do them as instructed and submit your work after the vacation

Important Note:

It is mandatory to submit Holiday Assignments to all the subject teachers by 11th July 2018.

Marks are allotted for these Assignments and will be added in your Term-I subject enrichment activities/note book submission.

Relax, enjoy, have loads of fun and come back refreshed!!!

Warm Regards

ENGLISH

SUMMER TIME –**Fabulous Time!!**

Dear students,

The summer holidays are round the corner. It is time to relax and enjoy! To make it fun filled and inspiring, we have some activities for you-

1.Capture any two roadside happenings in your camera and use it as a stimulus to write articles on thought provoking issues. Express your concern on pondering issues such as begging for alms road rage, land , traffic jams, etc. Paste the picture along with the article.

2. Read the book '**14 HOURS by ANKUR CHAWLA'** to create a booklet that contains-

Review of the book **with your take on it**, comic presentation of your favourite character, replication of the cover page.

3.Write a letter to the author Ankur Chawla, expressing your feelings and thoughtful reactions regarding the 26/11attack.

MATHEMATICS

Job at Hand :- Refer to the Fliplearn Prime video.

        Chapter :- Polynomials

       Details of Video :- 2.4

       Title:- Factorization of polynomials – 1 & Factorization of polynomials- 2

Aim :- To factorize the given polynomial geometrically.

Material required :- Graph sheet (10 × 10) , Orange rectangular strips (10 × 1) , Yellow rectangular strips (10 × 1) , Pink square slips (1 × 1) , Glue stick , scissors.

Procedure :- Solve the following polynomials geometrically in Mathematics notebook.

   a) $x^2 + 5x + 6$

b) $x^2 + 6x - 7$

Parameters of assessment :- Concept Clarity , Accuracy , Neatness , Correct Inference.

NUMBER SYSTEM (WORKSHEET)

GENERAL INSTRUCTIONS

1) **Attempt all the questions in notebook.**
2) **Symbols have usual meaning.**
3) **Use of calculators is not permitted.**

1. Visualize 4.26 on the number line using successive magnification.

2. Add: $(2\sqrt{2} + 5\sqrt{3} - 7\sqrt{5})$ and $(3\sqrt{3} - \sqrt{2} + \sqrt{5})$

3. Simplify:
   (i) $(4 + \sqrt{7})(3 + \sqrt{2})$
   (ii) $(11 + \sqrt{11})(11 - \sqrt{11})$

4. Divide: $18\sqrt{21}$ by $6\sqrt{7}$

5. Rationalize the denominator of the following:
   (i) $\dfrac{1}{(2 + \sqrt{3})}$

   (ii) $\dfrac{\sqrt{3} - 1}{\sqrt{3} + 1}$

6. Show by taking examples that the sum of two irrational numbers may or may not be an irrational number.

7. Evaluate: $(5 - \sqrt{3})^2$

8. Evaluate the following:
   (i) $\left(\sqrt{x^{-3}}\right)^5$

   (ii) $\left(\dfrac{243}{32}\right)^{\frac{-4}{5}}$

9. Find the values of a and b in the equality $\dfrac{\sqrt{2} + \sqrt{3}}{3\sqrt{2} - 2\sqrt{3}} = a - b\sqrt{6}$ (a and b are rational numbers)

10. Simplify the following expression: $-\dfrac{2\sqrt{5}}{\sqrt{6} + \sqrt{5}} + \dfrac{7\sqrt{3}}{\sqrt{10} + \sqrt{3}} - \dfrac{3\sqrt{2}}{\sqrt{15} + 3\sqrt{2}}$

POLYNOMIALS (WORKSHEET)

GENERAL INSTRUCTIONS:

1.**Attempt all the questions in notebook.**
2.**Symbols have usual meaning.**
3.**Use of calculators is not permitted.**

Q1. For what value of k is the polynomial $2y^3+9y^2+y+k$ is divisible by $x-1$?

Q2. Factorize the following:-

a) $8ab^2-18a$
b) $x^2+18x+32$
c) $25x^2+4y^2+9z^2+20xy-12yz-30xz$.
d) $(a-3b)^3+(3b-c)^3+(c-a)^3$
e) $x^2-x-156$

Q3. Using suitable identity, evaluate $(95)^3$

Q4. The polynomials (ax^3+3x^2-3) and $(2x^3-5x+a)$ when divided by $(x-4)=1$

leave the same remainder. Find the value of a.

Q5. Without actual division show that $f(x) = (x^3-3x^2-13x+15)$ is exactly divisible by $g(x) = (x^2+2x-3)$.

Q6. Without actually calculating the cubes, find the value of $1.5^3-0.9^3-0.6^3$ using a suitable identity.

Q7. Give possible expressions for the length and breadth of the rectangle whose area is $35y^2 + 13y - 12$.

Q8. Factories $x^3 + 13x^2 + 31x - 45$. Given that $(x + 9)$ is a factor.

Q9. If $x=0$ and $x=-1$ are the roots of the polynomial $f(x) = 2x^3 - 3x^2 + ax + b$, find

the value of a and b.

Q10. Find the remainder when $2x^3 - 5x^2 + 9x - 8$ is divided by $x-3$.

PHYSICS

Assignment- Motion

1. Go for a 15 min drive with your parents and carry a paper pen and a stopwatch, and take following observations:
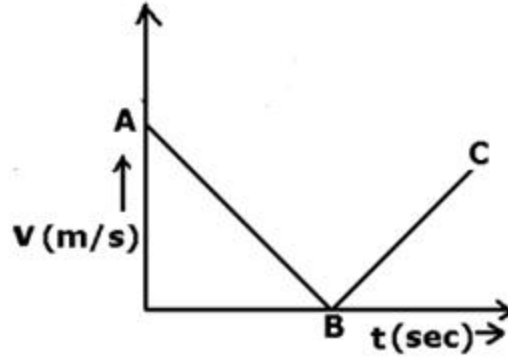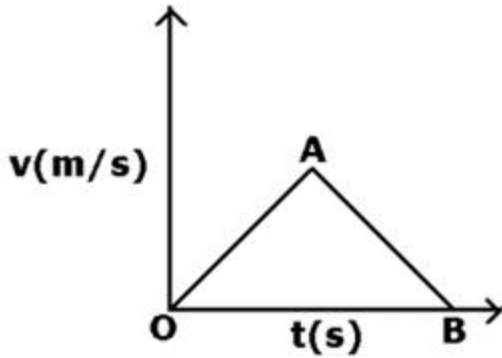
T(min)	1	2	3	4	5	6	7	8	9	10	11	12	14	15
Distance(km)														
Speed(kmh^{-1})														

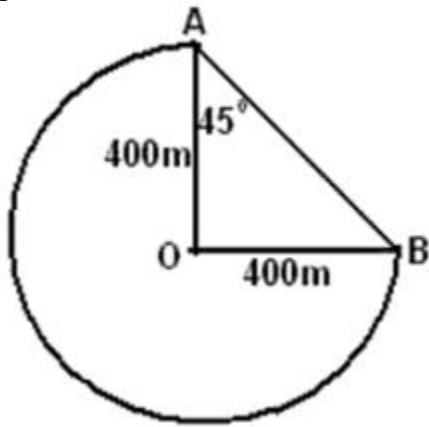Plot distance - time and velocity–time graph and paste it in your notebook.

2. Go through the chapter I, Physics, on Flip learn Prime and answer the following questions in your notebook..

Q.1 A cyclist goes around a circular track once every 2 minutes. If the radius of the circular track is 105 meters, calculate his speed.

Q.2 A racing car has a uniform acceleration of 4 ms^{-2}. What distance will it cover in 10 seconds after the start?

Q.3 A bus covers a distance of 250 km from Delhi to Jaipur towards West in 5 hours in the morning and returns to Delhi in the evening covering the same distance of 250km in the same time of 5 hours. Find (a) Average speed (b) Average velocity of the bus for the whole journey.

Q.4 A car travels a distance of 200 km from Delhi to Ambala towards North in 5 hours. Calculate (i) Speed (ii) Velocity of car for this journey.

Q.5 A body thrown vertically upward rises up to a height 'h', and comes back to the initial position. Calculate i) the total distance travelled by the body ii) the displacement of the body.
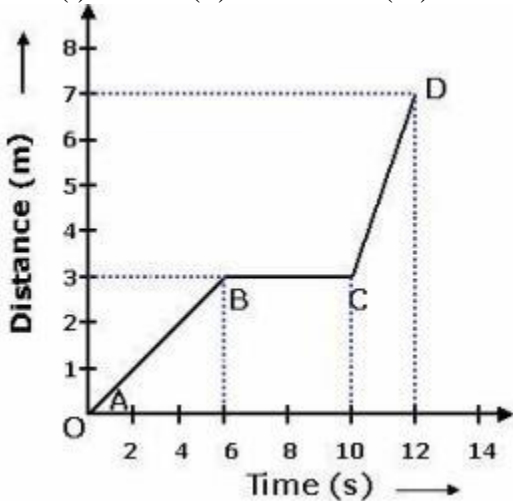
Q.6 Train A travells a distance of 120 km in 3 hours whereas another train B travells a distance of 180 Km in 4 hours. Which train travells faster?

Q.7 Convert speed of 72km/hr into a) m/s b) cm/s

Q.8 A particle is moving in a circle of radius 1m. Draw a diagram to show the following positions of the particle a) 1m. from the center, 30^0 North-East b) 1m. from the center, 30^0 West-North c) 1m. from the center towards South.

Q.9 Differentiate between
a) Speed and Average speed
b) Speed and Velocity
c) Uniform linear motion and Uniform circular motion.

Q.10 Explain using distance – time graphs a) When the body is at rest, b) When the body is moving with a uniform speed c) When the body is moving with a non-uniform speed.

Q.11 A train travels at a speed of 60 km/hr for 0.52hr, at 30 km/h for the next 0.24 hr and then at 70 km/h for the next 0.71h.What is the average speed of the train?

Q.12 Write the mathematical expression & S.I. units for the following
1. Speed
2. Average speed
3. Velocity
4. Average Velocity
5. Acceleration.

Q.13 Manav runs from one end X to the other end Y of a straight 200m road in 2 minutes 30 seconds. Then, he turns back and covers another 80m to point Z in another 1 minute. Find Manav's average speed and velocities (a) from X to Y. (b) from X to Z.

Q.14 An object starts from rest and is uniformly accelerated so that its speed is 60 m/s after 20s. If it travels with this speed for 40 s and is then brought to rest by a uniform retardation in 30 s. Sketch the velocity-time graph and calculate the acceleration, the retardation and the total distance travelled.

Q.15 Two trains X and Y are running on parallel tracks with a speed of 72km/h and 54km/h respectively. The driver of train X applies the brake and it comes to a stop in 10seconds. While the driver of train Y applies the brake and the train retards uniformly before coming to rest in 15 seconds. Plot distance-time graphs for both the trains. Also, calculate the distance travelled by each train after the brakes were applied.

Q.16 Name the motion when distance travelled by an object decreases with time. Also show the distance time variation.

Q.17 A driver changes the speed of car from 10m/s to 20m/s in 5 seconds. Find the acceleration of the car?

Q.18 A stone is dropped freely from the top of a tower and it reaches the ground in 4 seconds. Calculate height of the tower. (g = 10 m/s^2

Q.19 A body starts from rest and acquire a velocity of 10 m/s in 2 seconds. Find acceleration.

Q.20 Give the interpretation of the following graphs:

Q.21 A cyclist travels 3/4 of a circular track from A to B as shown in figure. The radius of the circular track is 400 m. (i) What is the distance travelled by the cyclist? (ii) What is the displacement?
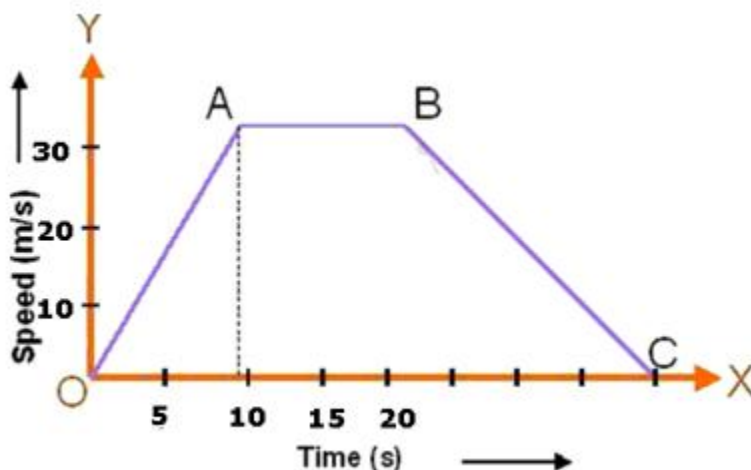

Q.22 The graph shows the position of body at different times. Calculate the speed of the body as it moves
from: (i) A to B (ii) B to C and (iii) C to D.

Q.23 Study the speed time graph of a body given here and answer the following questions:
(a) What type of motion is represented by OA?
(b) What type of motion is represented by AB?
(c) What type of motion is represented by BC?

Q.24 A car moves in a straight line from rest at t=0. It accelerates with $2m/s^2$. Solve the following table

Time	2 sec	?	?	10 min
Displacement	?	?	25 m	?
Velocity	?	10 m/s	?	?

Long answer type questions:

Q.25 Derive the three equations of motion from the speed-time graph.
Q.26 Look at the table:

Time	10:30 am	11:00 am	11:30 am	12:00 noon	12:30 pm
Distance from origin point (KM)	0	15	28	40	60

(i) Draw position time graph for the journey.
(ii) Is the car is moving with constant speed?
(iii) What is the average speed?
(iv) Which duration represents the maximum velocity?

CHEMISTRY

GENERAL INSTRUCTIONS:

Refer to the below mentioned modules on **Fliplearn Prime** and answer the following questions:

1.2 Physical nature of matter

1.3 Matter can change its state

 1.4 Evaporation

2.3 Separating the components of mixture

2.5 What are the types of pure substances?

Q1. Can we boil water at room temperature? Give reason.

Q2. How is ice changed into water and then into steam?

Q3. Why is ice rubbed immediately on the burnt part of the skin?

Q4. Why do we feel cool after applying shave lotion or perfume?

Q5. Why particles of one type of matter diffuse into particles of other?

Q6. You are provided with a mixture containing sand, iron fillings, ammonium chloride and sodium chloride. Describe the procedures you would use to separate the components from the mixture?

Q7. Non metals are usually poor conductors of electricity and heat. They are non-lustrous, non malleable and are coloured.

a. Name a lustrous non-metal
b. Name a non-metal which exists as a liquid at room temperature
c. Name a non metal which is required for combustion.

Q8. Can we separate alcohol dissolved in water using a separating funnel? If yes, then describe the procedure. If not, explain.

Q9. You are given two samples of water labeled as A and B. Sample A boils at 100^0C and sample B boils at 102^0C. Which sample of water will not freeze at 0^0C? Comment.

Q10. Alka was making tea in a kettle. Suddenly she felt intense heat from the puff of steam gushing out of the spout of a kettle. She wondered whether the temperature of the spout was higher than that of the water boiling in the kettle. Comment.

BIOLOGY

Tissues

Dear students please go through module 2.2 and 2.3 on Fliplearn Prime and solve

the following questions in your biology notebook :

Q1. Which tissue is responsible for increase in the girth or width of the tree trunk ?

Q2. What is the function of collenchymas in a plant ? Draw a well labeled diagram

 of collenchyma.

Q3. Give any three points of differences between :

   a. Xylem and phloem
   b. Parenchyma and sclerenchyma tissues
   c. Bone and cartilage

Q4. Name the four elements of xylem and state their functions.

Q5. Draw a well labeled diagram of the three types of muscles in humans.

Q6. List any four salient features of meristematic tissue.

Q7. What type of cells shoot apex and root apex consist of?

Q8. Which connective tissue :

   a. Is flexible
   b. Has a fluid matrix
   c. Is fibrous and present between muscles and skin
   d. Stores fat

Q9. What are the characteristic features of meristematic tissues?

Q10. What is the function of adipose connective tissue?

Q11. What is the role of epidermis in plants?

Q12. What is the specific function of a cardiac muscle?

Q13. What are the functions of the stomata?

Q14. How does a cork act as a protective tissue?

Q15. Identify the type of tissue in the following:

    a. Skin   b. Bone   c. Lining of kidney tubule

    d. Bark of tree   e. Vascular bundle

ECONOMICS

Watch the Non Farming Activities in Palampur (Synopsis and Mind Maps) in Fliplearn prime video.

Answer the following questions in your notebook.

1)List out any ten non farming activities in a modern Indian village.They can be the ones currently being practiced in Indian villages or you can innovate and suggest new ones keeping in mind the activities suitable for an Indian village.

Also explain in 4 to 5 sentences ,how each activity can help in generating employment and modernising the village.

2) Write the significance of non farming activities for the rural development.

3) What can be done to encourage non farming activities in a village?

Submit the notebook in the first week of July.

HISTORY

Ch 1 : French Revolution
Watch smart module - Impact of the French Revolution

Write a letter to your younger sister and tell her the significance of French Revolution and its contribution to the World.
To be done in History Notebook.

CIVICS

Chapter 2-What is Democracy? Why Democracy?

Watch module 2.2 -Features of Democracy and based on it write an article in about 200 words on "Democracy in contemporary world". Give examples of the countries which have recently become a democracy from dictatorial rule, their struggle and victory. Write this article in your Civics note copy.

GEOGRAPHY

India -size and location

Kindly watch videos 1.1 and 1.2 Geography in Fliplearn Prime and do the following questions:

Question. Answer the following very briefly.

Q1.What is latitudinal and longitudinal extent of India?

Q2. In which hemisphere does India lie with reference to the equator?

Q3.Why is India called a sub continent ?

Q4.Name the narrow channel of sea which separates India from Sri Lanka?

Q5.Why do we need a standard meridian for India?

Q6.With reference to India name the following surrounding it.

- a) Major islands
- b) Seas, Oceans and bays.

Q7.Mark and label the following on Indian political map.

- a) The island groups of India lying in

    Arabian sea and the bay of Bengal.

- b) The states through which the Tropic of Cancer passes.
- c) The Union territories of India.

ACTIVITY: PLASTIC OCEANS

a) Prepare a project on the harmful effects of plastics on marine life.
   Procedure: Explore on internet how plastic waste is reaching oceans and affecting marine life.
b) Name and explain the Oceans that have become major trash cans/Rubbish patch.

HINDI

अपनी 'smart class' मोड्यूल के अंतर्गत 'हिंदी' विषय के वर्ण-विच्छेद ,अनुस्वार ,अनुनासिक नुक्ता के वीडियो देखिए एवं इन सभी से सम्बंधित 10-10 शब्दों के वर्ण-विच्छेद,अनुस्वार अनुनासिक के शब्द लिखिए | (कार्य अपनी नोटबुक में लिखिए)

COMPUTERS

Directions: Complete this worksheet by filling in the blanks or as directed by your instructor.

To learn about each section click on the section headings then answer the section questions. Pay close attention to the directions for each section.

When finished study the answers CAREFULLY. Turn in the worksheet to your instructor unless directed otherwise.

Start by reviewing the Computer Basic Overview.
Click here for Vocabulary

Section 1 - Input/Output
Click on the link above (Input/Output) and review the power point about peripheral devices. As you read the information decide which of the following peripheral items INPUT information or OUTPUT information. Designate the type of peripheral component by writing INPUT or OUTPUT by each of the items below

   1. Monitor _____

   2. Keyboard _____

   3. Scanner _____

4. Laser Printer _____

5. Mouse _____

6. Speakers _____

7. Digital Camera _____

Section 2 – <u>What's Inside a Computer?</u>

Click on the link above (What's Inside a Computer) and review the power point. After reading the material answer the questions below about each components responsibility.   Fill in the blank with the correct answer from the box. Some may be used more than once or not at all.

CPU	BIOS	power supply	hard drive	network card
Motherboard	RAM	USB Port	ROM	video card

1. I connect computers and allow them to talk to each other. _____

2. I wake up the computer and remind it what to do. _____

3. I am the brain of the computer.   _____

4. Information is stored on my magnetic cylinders. _____

5. I hold all of the other circuit boards.   _____

6. I handle the graphics that are displayed on the monitor. _____

7. I am the type of port used by flash drives _____

Section 3 - <u>Storage</u>

Click on the link above (Storage) and review the power point. Fill in the blanks with the vocabulary words from the box. Use each word only once. You may want to refer back to the vocabulary list that was given above.

information	flash drive	CD	primary	DVD	secondary

1. _____ memory is stored on chips located on the motherboard.

2. _____ memory is stored on the hard drive.

3. A _____ can hold information greater than a CD or DVD.

4. A _____ usually holds up to 650 to 700 MB.

5. A _____ holds even more information at least 7 GB.

6. The purpose of storage in a computer is to hold _____ or data.

Section 4 - **Programs**

Click on the link above (Vocabulary) and review the power point. After reading the material answer the questions below. Fill in the blank with the correct answer from the box. Some may be used more than once or not at all.

downloaded	translators	installing	programming	program	programmers

1. A _____ is a set of instructions that tells the computer how to perform a specific task.

2. Programs are like _____ that allow people to work with computers without learning the computer's language.

3. Using bits and bytes in different combinations to represent a code is known as _____

4. Copying a program onto your computer's hard drive from another source is known as _____ _____ the program.

5. People who write codes to create programs are known as computer _____

6. Some programs can be _____ from the internet directly to your hard drive

Section 5 – Parts of a Computer

4 Main Parts of a Computer

Part 1: This type of device is known as a(n)_____ device. (Section 1)

- It enables information to be passed into the computer.
- It includes the: Keyboard, mouse, scanner, digital camera, microphone, etc.

Part 2: This device is responsible for _____

(Section 3)

- A unit that holds and gives information to the processor as needed.

- There are two types of storage:
    1. Temporary storage which holds information for short periods and only when the computer is on.
        i. Examples of temporary storage include RAM
           (R_____A_____ M_____)
           RAM allows stored data to be accessed in any order. (i.e., at random).

    2. Long term storage holds information for as long as you want it.
        i. Examples of Long-term storage include Hard Disk Drive, CD-Rom, DVD, Flash Drive.

Part 3: This is the brains of the computer.

The _____ (Section 6)

- It controls all functions.
- The processor is called the CPU
  (C _____ P_____ U_____)
- The motherboard holds the CPU and physically connects all the other main parts of the computer.
- Cases and chassis house the motherboard and the CPU.

Part 4: This type of device is known as a(n)_____ devise. (Section 1)
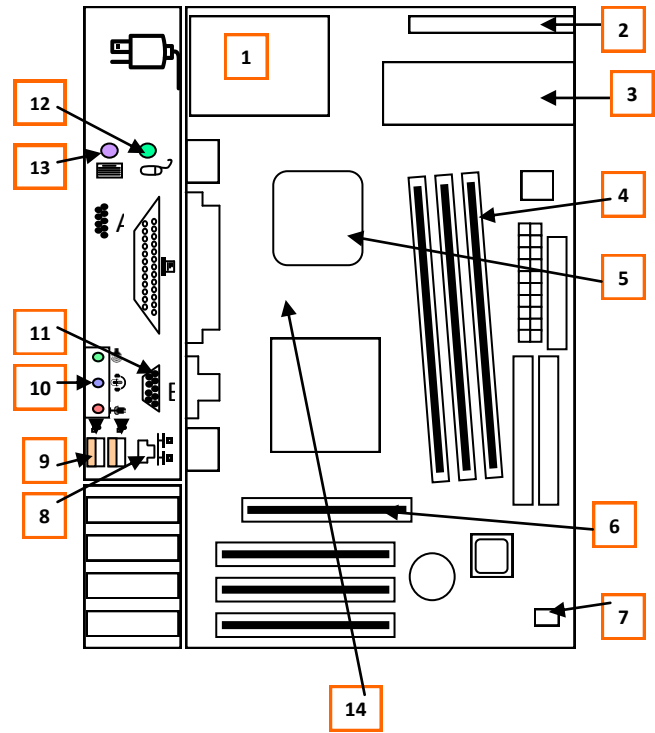
- A device that receives information from the processor in the form of words, sounds or pictures.
- These devices include printers, speakers and Monitor.

Section 6 - [Hardware Basics](#)

Label the parts by finding the diagram in the presentation link above.

1)_____

2)_____

3)_____

4)_____

5)_____

6)_____

7)_____

8)_____

9)_____

Hard Drive
Sound
Power Supply
CD/DVD
CPU
Motherboard
BIOS
RAM
Video
USB

Punjabi

lVky : lwiebRryrI iv`c peIAW pMjwbI dIAW pusqkW dI sUcI lyKk Anuswr (According to Writer)bxwE

Aqy id`qw hoieAw swrw slybs Xwd kro [

 lVkIAW lwiebRryrI iv`c peIAW ihMdI dIAW pusqkW dI sUcI lyKk Anuswr (According to Writer Name)bxwE

Aqy id`qw hoieAw swrw slybs Xwd kro [

HAPPY HOLIDAYS!