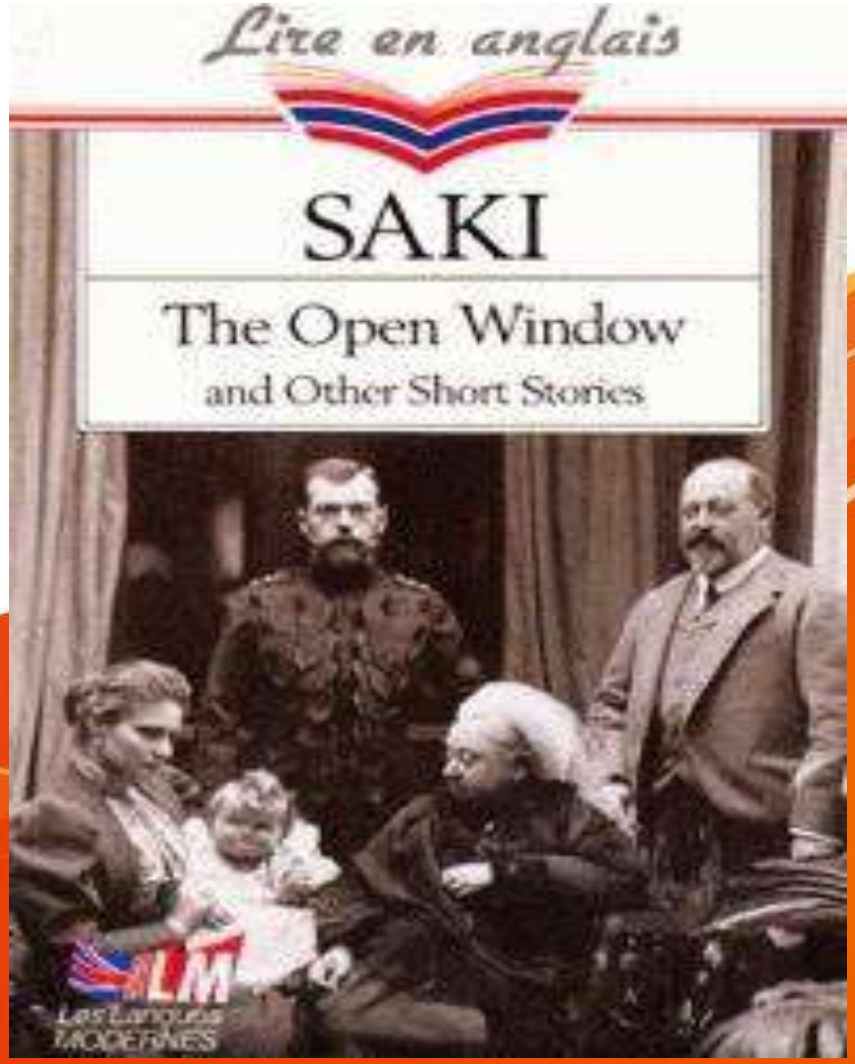


CLASS – VIII
ENGLISH

THE OPEN WINDOW

https://youtu.be/Rd5ImjhPvv0

Introduction:-

- This is a small story by Saki (HH Munro)

- The story revolves around an Open Window and a Smart Story teller girl named Vera niece of Mrs. Sappleton

- The story is an amusing story about how a girl spins fictitious stories about things and people in a short time.

Mr Framton Nuttel

- Mr. Nuttel has a nervous ailment
- He retires to the countryside for cure and calls on a family friend on an introductory note by her sister.
- On calling the Lady of the house was busy and her young niece who comes to entertain him refers to a family mishap with a focus on an open window.

Vera the niece

- Vera the quick witted niece in her conversation finds out the Mr. Nuttel is new to the country and doesn't know her Aunt.
- She narrates to him a mishap that happened about three years ago just after Mr. Nuttel's sister left the countryside.
- She tells him that about three years and a day ago Mrs. Sappleton's husband along with her younger brother and a friend left for a game in the month of October.
- They were accompanied by their dog spaniel

Sad Demise of Mr. Sappleton and his Team

- The niece told Mr. Nuttel that though they were regular gamer and knew the countryside well but on that fateful day they were tricked by quicksand.
- Their body was never found and Mrs. Sappleton had not been able to over come the shock and that is why she always left the window open hoping that her husband would return some day.

Arrival of Mrs. Sappleton

- Presently Mrs. Sappleton arrived and met Mr. Nuttle.
- She inadvertently confirmed the niece story of her husband's return from the gaming.
- Mr. Nuttel tried to change the topic of the talk so that the poor lady would not be traumatised anymore.
- He spoke about his illness and the reason of his visit.
- However Mrs. Sappleton continued the talk and spoke about how her husband would come with muddy feet and soil the carpet.

Arrival of Mr. Sappleton and his Team

- As Mrs. Sappleton spoke about how her brother would tease her. She appeared to be cheerful on seeing the arrival of her husband and his gaming team.
- The niece looked scared too and both of them started looking in the direction of the window.
- Mr. Nuttel couldn't help turning in that direction and saw three human figures and a dog coming towards them.

Exchange of pleasantries

- Mrs. Sappleton greeted her husband and remarked that he was in mud upto his eyes.
- Her brother teased her as usual.
- She commented how he was in time for the evening tea.

Quick exit of Mr. Nuttel

- Seeing these unusual meeting Mr. Nuttel quickly took his hat and his stick and dashed out of the house.
- He moved quickly in fear and almost met with an accident with a cyclist who averted the accident by crashing in the hedge.
- Mr. Sappleton asked about the visitor and his quick retreat.
- Surprised by his manner of exit Mrs. Sappleton remarked about about his bad manners of leaving without an excuse and sorry and how he was only interested in discussing about his nervousness.

Another story by the niece

- This time the niece spinned another story about how Mr. Nuttel was scared of dogs and probably the sight of the spaniel made him run away.
- She told the group how he told her about an incident wherein he was chased by a pack of dogs and he had to take refuge in a newly dug grave in the graveyard by the Ganges
- With the pack of dogs waiting for him with frothy mouths.

IMPORTANT INSTRUCTIONS :

- STUDENTS YOU HAVE TO DO THE WORD MEANINGS AND QUESTIONS ANSWERS IN THE NOTEBOOK.
- THOSE STUDENTS WHO DO NOT HAVE BOOKS FOR THEM THERE IS A PDF LINK OF THE LESSON THE OPEN WINDOW PROVIDED IN THE DESCRIPTION OF THE VIDEO.
- YOU CAN VIEW THE CHAPTER FROM THERE FOR YOUR BETTER UNDERTSANDING.

SOLVED QUESTION/ANSWERS

A. Give reasons for the following :

Q1. Framton Nuttel comes to a rural area.

A1. Framton Nuttel was suffering from some nervous disorder and worry. So he decided to spend a few days in some village and relax in peace.

Q2. His sister gives him letters of introduction.

A2. His sister knew that Framton would meet very few people in the country side. He would feel lonely and bored. His condition could grow worse so she gave him letters of introduction to all people she knew there.

Q3. Hardly a soul and four years ago are two important phrases in the conversation between Framton Nuttel and Mrs. Sappleton's niece.

A3. Hardly a soul and four years ago are two important phrases in the conversation between Framton Nuttel and Mrs. Sappleton's niece because Mr. Nuttel did not know anyone in the village and even his sister had moved out from the villlage four years ago.

Q4. The niece's questions are well planned.

A4. The niece's questions are well planned as she knew that Mr. Framton was a stranger in the village and he knew nothing about Mrs. Sappleton's family.

B. Answer these questions :

Q1. Why did the niece tell Framton Nuttel to try and put up with her ?

A1. The niece told Framton Nuttel to try and put up with her because Mrs. Sappleton was busy and she might take some time to come down so mean while Mr, Framton Nuttel can talk to her.

Q2. How does the niece use the open window, the brown spaniel, the white coat and the mud of the supposed bog to forge her story ?

A2. The niece uses everything she has at her disposal to create a realistic story the open window the brown spaniel the white coat and the mud of the supposed bog . With the help of all this she created a real story and made Mr. Framton believe her.

Q3. Why does the niece tell the family about Framton Nuttel's fear of dog's ?

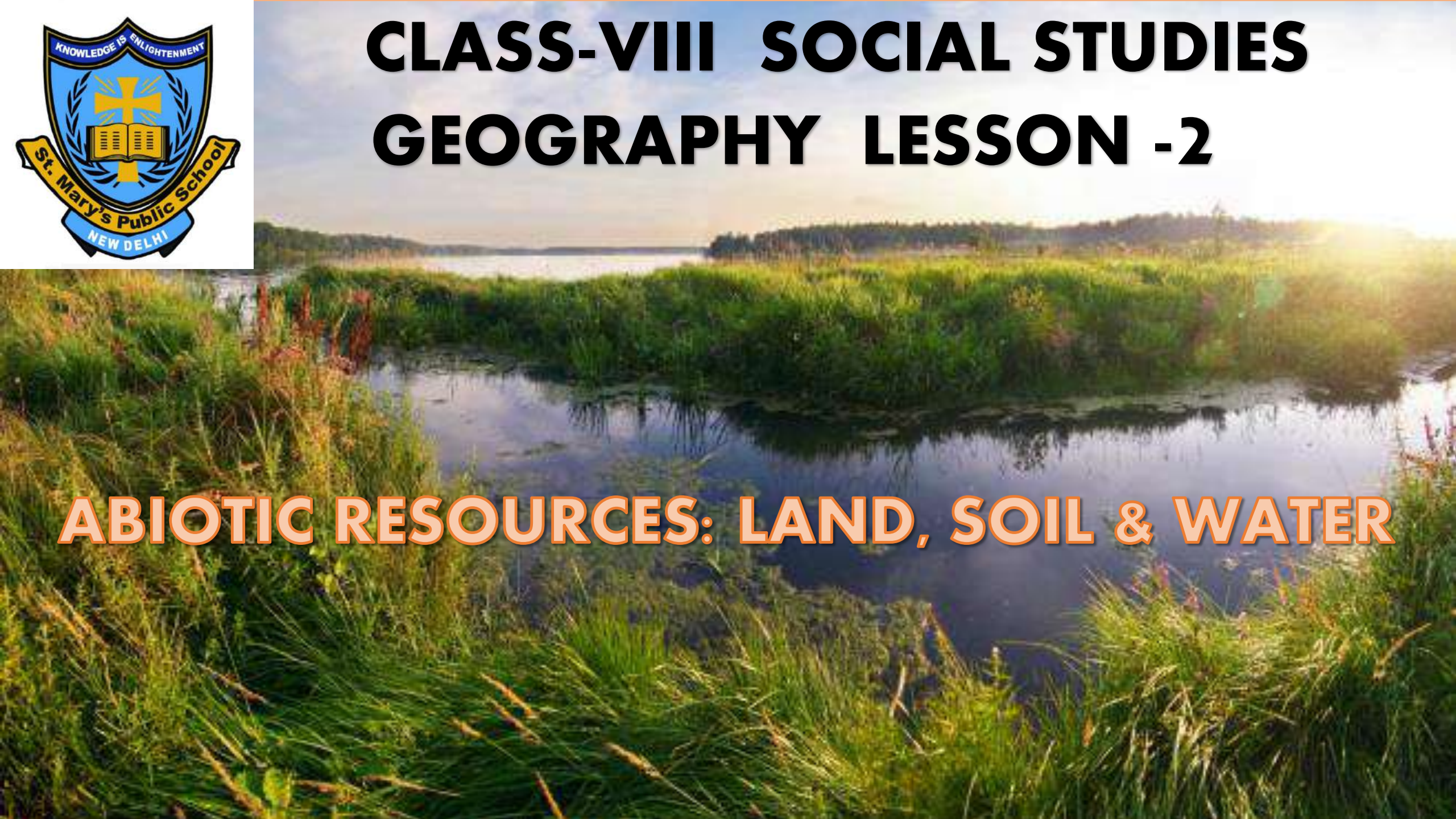
A3. The niece tell's the family about Framton Nuttel's fear of dog's in order to explain why Mr. Framton suddenly panicked and went running out of the house.

Q4. Irony is a literary device which presents a situation or an event that seems contrary to what one expects and is often amusing as a result. Explain the irony of Mrs. Sappleton's observation. 'One would think he had seen a ghost'

A4. The humorous ending of the story is achieved through dramatic irony when poor Mr. Nuttel runs out, scared to death when he sees Mr. Sappelton, Mrs. Sapppelton's brother and the dog spaniel.

Q5. Do you think the niece is an extremely clever girl ? Cite examples from the story to support your answer.

A5. Yes, the niece is an extremely clever girl as before telling a fake story she had confirmed Mr. Framton Nuttel that he did not know anything about Mrs. Sappleton and she was very good in playing tricks and fooling others.



CLASS-VIII SOCIAL STUDIES
GEOGRAPHY LESSON -2

ABIOTIC RESOURCES: LAND, SOIL & WATER

INTRODUCTION

Land, soil, water are the resources which belong to abiotic resources and are the most important resources Whereas natural vegetation and wildlife resources come under biotic resources. Either biotic or abiotic both type of resources are exhaustible in nature. so judicial use of these resources has to be there for enhancing their longevity.

Land Resources

- Land is among the most important natural resources. Land covers about 30% of the total area of the earth's surface.
- Ninety percent of the world population occupies only 30% of the land area. The remaining 70% of land is either sparsely populated or uninhabited.
- Land is unevenly inhabited due to various factors of land and climate, water fertility of soil, etc.
- Normally the sparsely populated or uninhabited areas are because of rugged topography, steep slopes of the mountains, low -lying areas susceptible to water logging, deserted areas and thickly forested areas.
- The densely populated areas of the world have plains, river valleys which have suitable land for agriculture.
- The availability of rich and fertile land make it suitable for living and a huge population resides on it.
- Mineral richness, water resources, fertility of soil and good topographical conditions are important.

Land uses

- Land use refers to the use of land for different purpose such as agriculture, forestry, mining, building houses, roads and setting up of industries.
- Factors affecting land use are of two kinds- Physical factors and Human factors.
- Physical factors include topography, soil, climate and availability of water. Human factors include population and technology.
- On the basis of ownership, land can be classified as private and community land.
- Private land is owned by an individual or family members and is used for personal purposes like house is a private land.
- Community land is owned by the community for common uses and can be used by anyone in the society like collection of fodder, fruits, nuts or medical herbs. These community lands are also called common property resources.
- The demand for land by the people is growing but the availability of land is limited.

Factors Affecting Land Use Pattern :

Climate
Availability of water
Technology and human resource
Topography
Minerals
Types of soil

Conservation of Land Resources

- Growing population and their ever-growing demand has led to a large scale destruction of forest cover and arable land and has created a fear of losing these natural resources.
- The present rate of degradation of land must be checked.
- The common methods used to conserve land resources are afforestation, land reclamation, regulated use of chemical pesticides and fertilizers and checks on overgrazing.
- By making rules related to soil and land conservation and by making the farmers educated regarding the negative aspects of overgrazing and over utilization of fertilizers, the government can play an active role to preserve the soil and land.

Soil Resources

- Soil is the thin layer of grainy substance covering the surface of the earth.
- Soil is made up of organic matter, minerals and weathered rocks found on earth. It takes hundred of years to form few centimeters of soil.
- Soil profile refers to the layered structure which spreads from the parent rocks to the top soil surface.
- The four layers of soil profile are: 1st layer-Top soil with humus and vegetation, 2nd layer-Sub soil with sand, silt and clay, 3rd layer-weathered rock material, 4th layer-Parent rock.
- In different geographic regions, different soils can be observed.
- Various geo-climatic regions make the soil distinctions and varied fertility of soil occurs.
- Different type of soils are suitable for particular type of crops.

Factors of Soil Formation

- The major factors of soil formation are the nature of the parent rock and climatic factors.
- The other factors of soil formation are the topography, role of organic material and time taken for composition of soil formation.
- Parent rock determines the color, texture, chemical properties, minerals, content and permeability of the soil.
- Relief determines the altitude and slope and accumulation of soil.
- Flora, fauna and micro-organism affect the rate of humus formation in soil.
- Climate determines temperature and rainfall which influence the rate of weathering and humus in process of soil formation.
- Time determines the thickness of soil profile. It takes hundreds of years to make just one centimeter of soil.
- soil formation is not the result of only a single factor mentioned above, in fact it is the mixture of all the geo-climatic factors available.
- The presence of micro-organism also plays a very important role in soil nutrient cycle and minerals balance.

Degradation of Soil and Conservation Measures

- The major threats to soil erosion and depletion.
- Human beings and natural factors are responsible for degradation of soils.
- Deforestation, overgrazing, overuse of chemical fertilizers or pesticides, rain water, landslides and floods are the factors which leads to soil degradation.
- Soil conservation refers to the protection, efficient use of soil and preservation of soil resources.

- Mulching is the method in which the bare ground between plants is covered with a layer of organic matter like straw. It helps to retain soil moisture.
- Contour barriers is the method in which stones, grass, soil are used to build barriers along contours. Trenches are made in front of them to collect water.
- In Terrace farming, broad flat steps or terraces are made on the steep slopes, so that flat surfaces are available to grow crops. It reduces the surface runoff and soil erosion.
- In inter-cropping, different crops are grown in alternate rows and are sown at different times to protect the soil from rain wash.
- Contour ploughing is the process of ploughing parallel to the contours of a hill slope to form a natural barrier to stop water from flowing down the slope.
- Shelter belts are the rows of trees planted to check the wind movements to protect soil cover.
- Mixed farming and crop rotation are also some of the methods to improve the fertility of soil.
- excessive use of fertilizers is also a cause of soil degradation and leads to loss of fertility of soil.
- Use of high yield crop variety is also a major cause of concern.

Water Resources

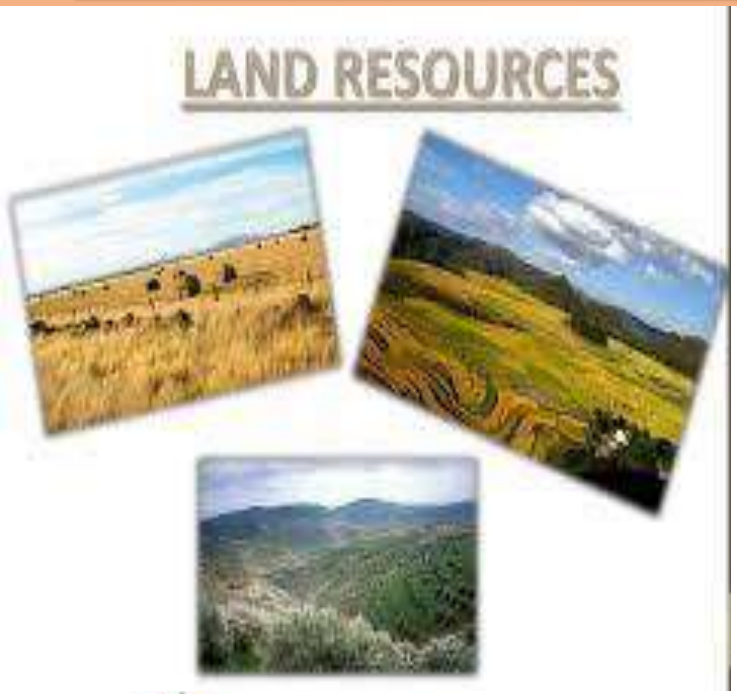
- Water is a vital renewable natural resources. Three-fourths of the earth's surface is covered with water. Therefore, it is called 'water planet.
- Ocean water is saline and not fit for human consumption whereas fresh water accounts for only 2.7% of the total water available.
- Only 1% of this freshwater is available and fit for human use and is found as ground water, rivers, lakes, etc.

- Fresh water is the most precious substance on earth. It can neither be added nor subtracted from the earth.
- Water is used for agriculture, industries, generating electricity through reservoirs of dams, etc.
- The major causes of water shortage are increasing population, resign demands for food and cash crops, increasing urbanization and rising standards of living.
- There is water shortage in many regions of the world. It may be a consequence of variation of seasonal or annual precipitation or the scarcity is caused by over-exploitation and contamination of water sources.

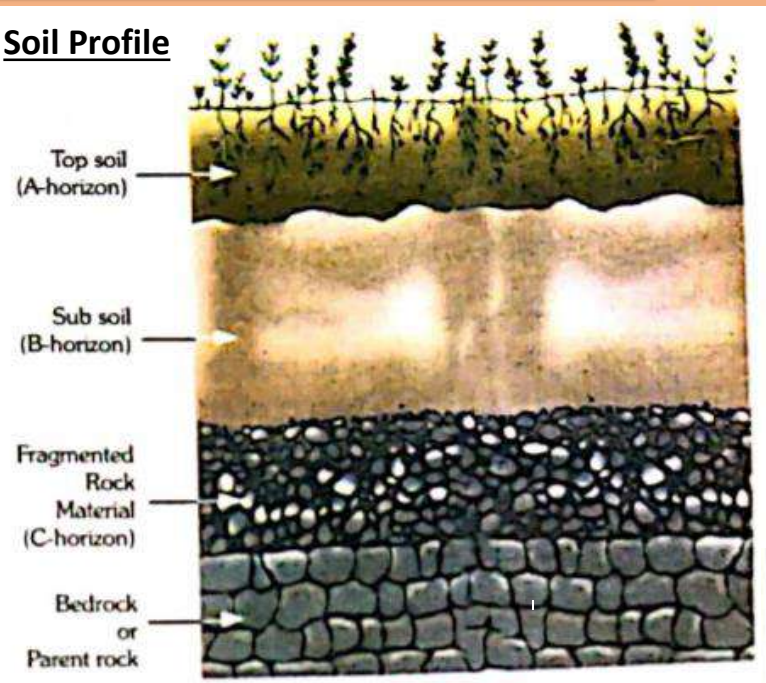
Conservation of Water Resources

- The major problem of today's world is shortage of clean and adequate water sources.
- Steps should be taken to conserve water.
- Water is a renewable resource, but its overuse and pollution make it unfit for use.
- Sewage, agricultural chemicals and industrial waste pollute the water with nitrates, metals and pesticides.
- Forest and other vegetation cover slow the surface runoff and replenish underground water.
- Water harvesting method can also be used to save surface runoff.
- Canals used for irrigation should be properly checked for water losses through seepage and evaporation.
- Rain water harvesting is the process of collecting rain water from roof tops and directing it to an appropriate location where it is stored for future use.

Let us have a Pictorial View

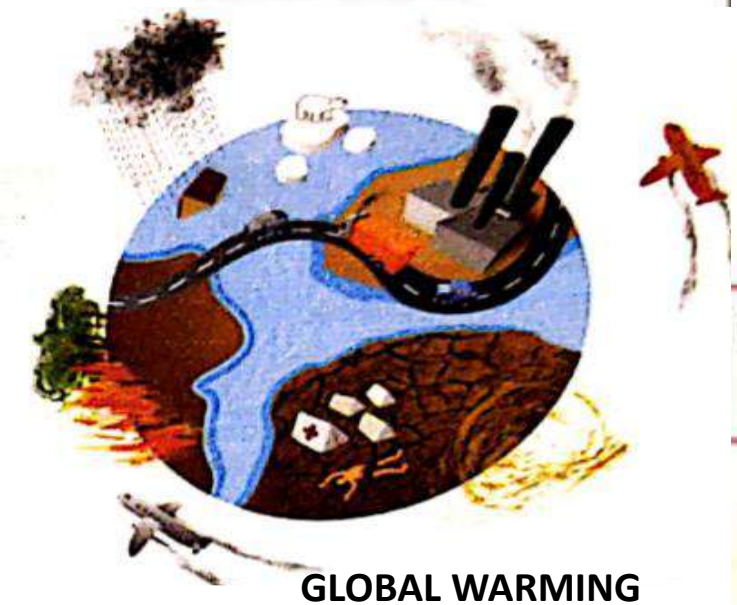


Soil Profile

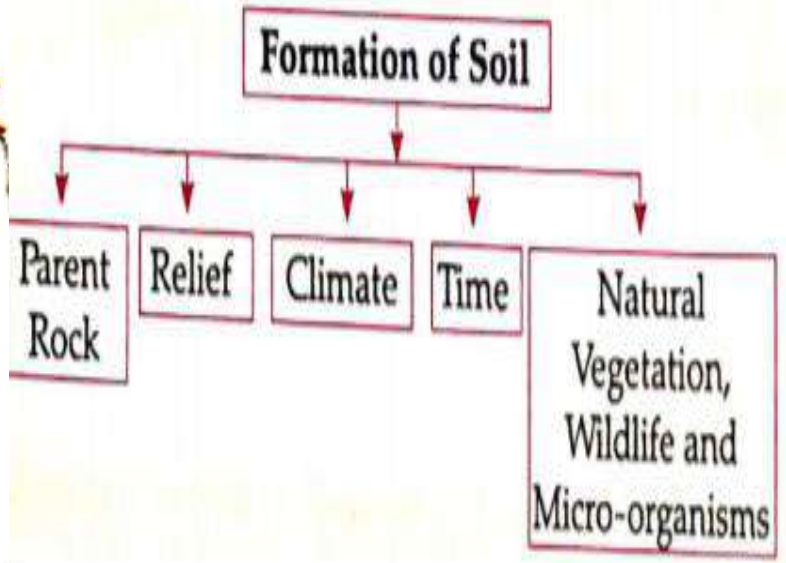


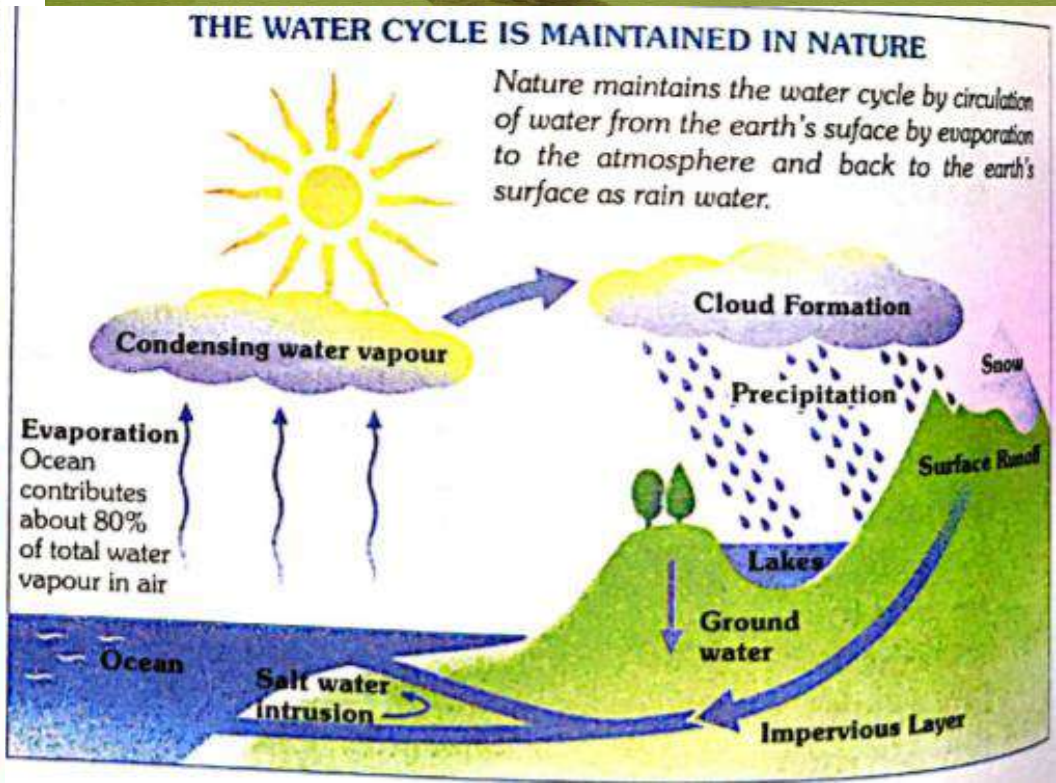
Soil Profile

Land resource and management



GLOBAL WARMING





LET'S DO THE EXERCISES (BOOK EXERCISES)

A. Write the correct answer:

(DO THE WORK IN GEOGRAPHY COPY)

1. Private land is mainly owned by the

Ans- Individuals

2. Which of the following is not associated with soil formation ?

Ans- Soil texture

3. Which of the following methods are used for soil conservation ?

Ans- Mulching, Contour ploughing, Terrace farming

4. Which of the following part is covered by the water .

Ans- 3/4 Part

5. Life on the earth firstly emerged in _____

Ans- Land

B. VERY SHORT ANSWER TYPE QUESTIONS:

Q1. List the factors important for the soil formation .

Ans. Parent rock , Relief , Climate , Time , Natural vegetation , Wildlife etc.

Q2. Which two factors are responsible for land degradation ?

Ans. 1. Deforestation

2. Human activities

Q3. Why are land resources important ? Write any two.

Ans. The land resources are important because :

1. These are the storehouse of mineral deposits .

2. These are rich resources of timber and other products such as gum , medicinal herbs etc.

Q4. Write any two ways to conserve water .

Ans. 1. Rainwater harvesting techniques can be used to save surface runoff.

2. Recycled water should be used as the coolant in the industries.

C. SHORT ANSWER TYPE QUESTIONS :

Q1. Write a short note on the abiotic resources .

Ans. Abiotic resources consists of non – living things like minerals , rock , metals, land, soil and water . These are the free gifts of nature for the living organism.

Q2. What do you know about the land use pattern ?

Ans. Land use pattern is used to indicate the different uses of land . There are considerable variations in land use among nations of the world . For ex: Australia has 56% high percentage of under pastures as India has 57% under cropland

Q3. Write a short note to check soil erosion .

Ans. Soil has certain properties such as fertility , ability to retain air and moisture . But when any of these soil properties is diminished or increased soil erosion takes place and plants fail to grow . To prevent soil erosion afforestation, mulching, Rotation of crops, controlled overgrazing must be done.

Q4. Discuss some methods of Soil erosion .

Ans. 1. **Afforestation**: Rows of trees are planted at short distances in farms to provide shelter belts .

2. **Rotation of crops**: In this method, different crops are grown in alternative ways .

3. **Mulching**: In this method, organized matter such as straw are used to cover the bare ground between rows of plants .

4. **Construction of Dams**: Dams are constructed to slow down the flow of running water

D. LONG ANSWER TYPE QUESTIONS.

Q1. Describe the main factors that affect the land use pattern .

Ans. 1. Climate: Land use pattern of any place is directly or indirectly influenced by the climatic conditions. Climate is very harsh in polar and equatorial regions.

2. Topography: Well drained plain regions provide suitable conditions for agricultural activities and pastures.

3. Types of soil: Well planned land use pattern can be seen in the areas having fertile soil. Areas like cold and hot deserts have infertile soil.

4. Availability of water: The water ability is essential for well developed and land use pattern.

5. Minerals , technology and human resources: They also influence the land use pattern of a place . Human resources use technology to convert the raw natural resource into the valuable products.

Q2. Give the comparative study on the land and soil resources.

Ans. 1. Land resources are referred to the shape , and nature of the land surface. The quality of land is determined by its soil cover.

2. Land can be classified as private and community lands . Soil is divided into number of horizons.

3. Factors affecting land use pattern are- climate , topography , types of soil etc. Whereas factors affecting the formation of soil are- Parent rock , relief , climate etc.

4. Conservation of land can be done by using bio fertilizers. More trees should be grown . Whereas soil can be conserved by afforestation , mulching , rotation of crops , contour ploughing etc.

Q3. Distinguish between land resource and water resource .

Ans. **Land Resources:** Land resource refers to shape form and nature of the land. The land covers about 30% of the total area of the earth surface . Land resources are the storehouse of the mineral deposits .

Water Resources: Water is a vital renewable natural resource of the earth surface . Water is a tasteless and colorless substance that covers about ¾ of the earth surface . It is necessary for all the kinds of living organisms .

Q4. Distinguish between water conservation and soil conservation .

Ans. **A. Water conservation:**

1. Impound water resource by making check dams. Sprinklers or drip irrigation methods should be used.
2. Rainwater harvesting techniques , canals be used to save surface run-off .
3. Recycled water should be used . Underground water storage can be improved.

B. Soil conservation:

1. Afforestation .
2. Mulching .
3. To control overgrazing .
4. Rotation of crops .
5. Construction of dams .

E. Match the column A with column B

COLUMN A	COLUMN B
1. Fertile layer of soil	(a) Arable land
2. Land used for agricultural activities	(b) Water cycle
3. Adequate use of land resources	(c) Humus
4. To check soil erosion	(d) Land use
5. Cycle of water circulation	(e) Rock dams

Ans. 1 (c) 2 (a) 3 (d) 4 (e) 5 (b)

NOTE:

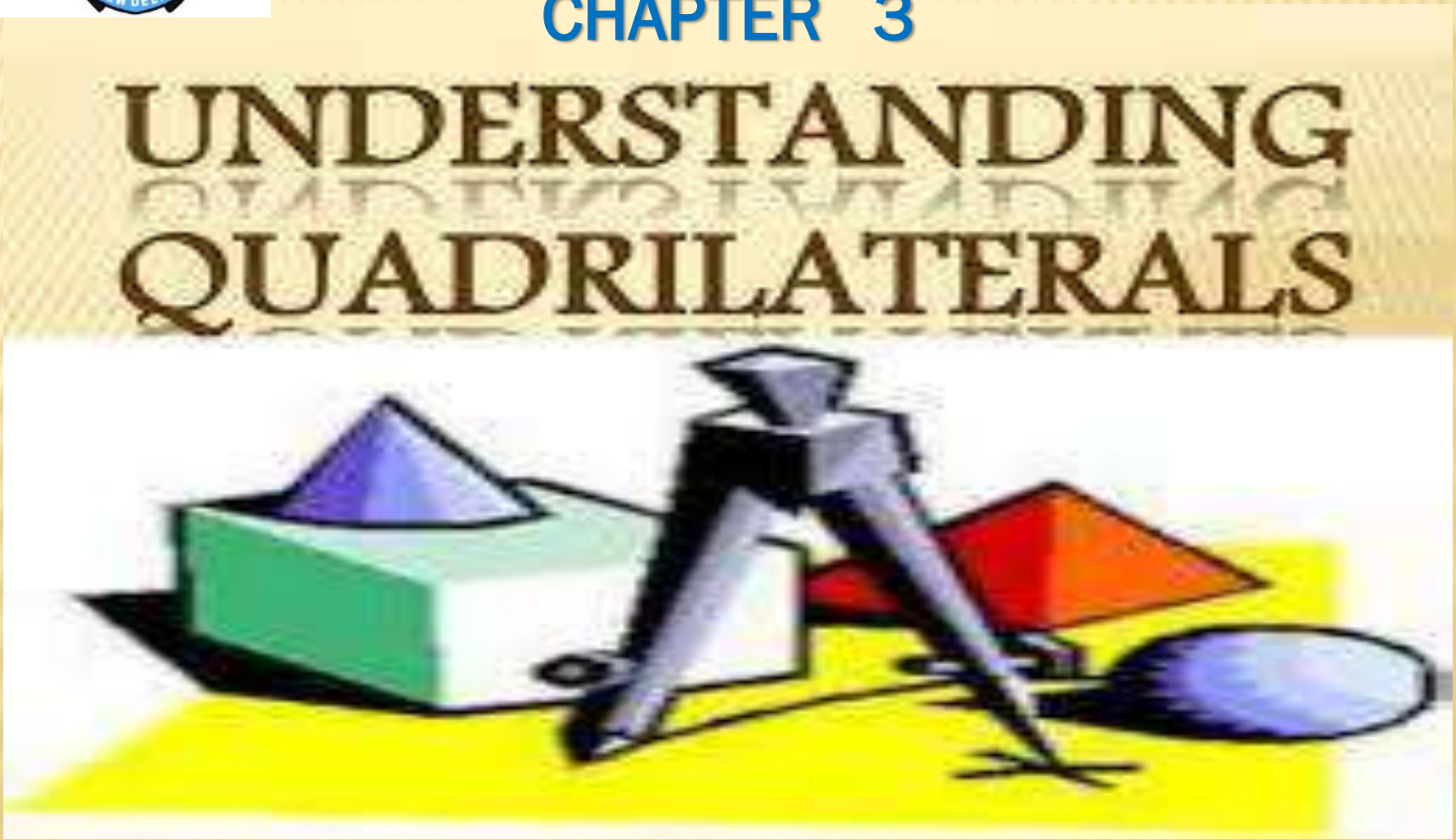
1. Draw a well labelled and colourful diagram of Soil Profile and Water Cycle in your Geography Copy.
2. Go through the chapter properly and learn it .

Click this video link to understand the chapter clearly

https://youtu.be/WD9apVmhAj0

NOTE: If you are unable to open the given link in mobile device, kindly copy the link in Google browser, else try to browse in Internet Explorer or Mozilla Firefox.

CLASS VIII
MATHEMATICS
CHAPTER 3



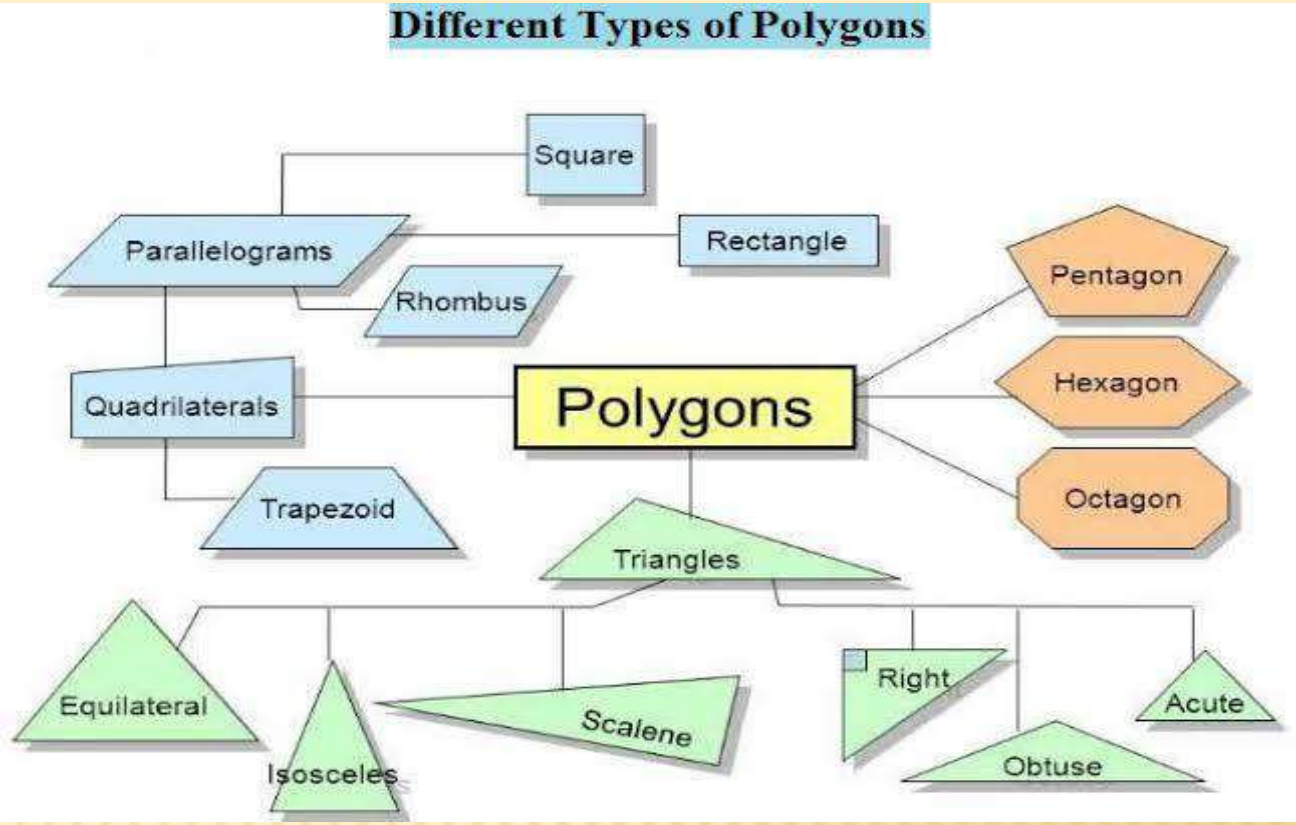
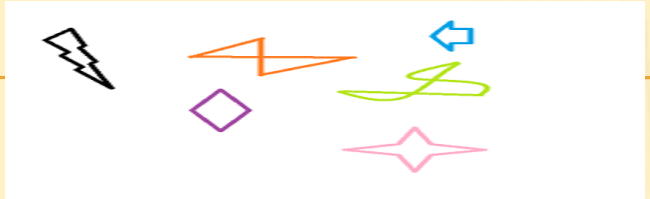


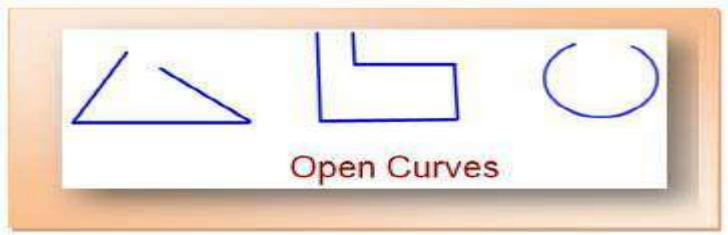
Table of Content

Closed and Open curves

Closed curve is a figure in the plane with no end points. It completely encloses an area



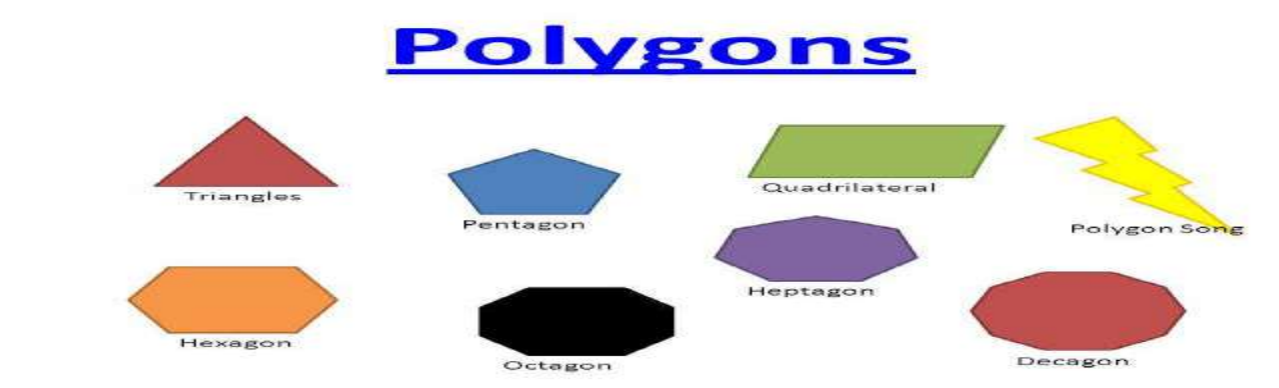
Open curve is a figure in the place with end points



Polygons

A simple closed curve made up of only line segment is called a polygon.

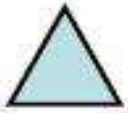
A diagonal is a line segment connecting two non-consecutive vertices of a polygon.



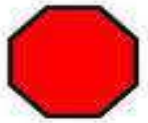
Classification of polygons

Types of Polygons

Triangle	3 sides	Heptagon	7 sides
Quadrilateral	4 sides	Octagon	8 sides
Pentagon	5 sides	Nonagon	9 sides
Hexagon	6 sides	Decagon	10 sides

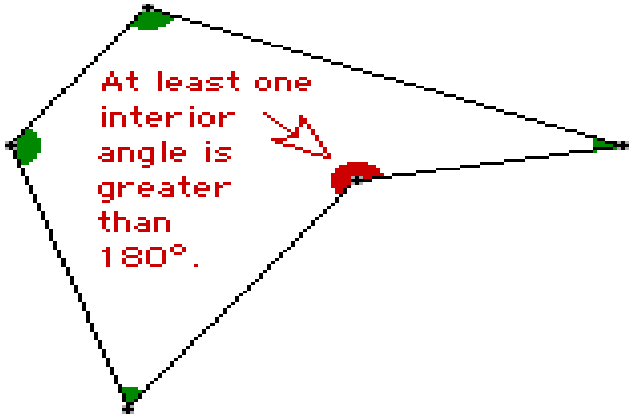




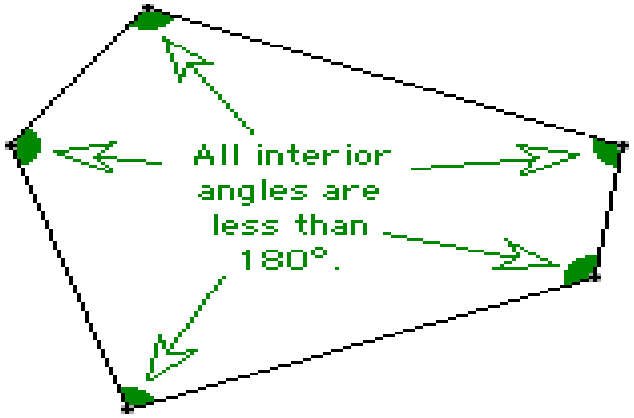



Convex and Concave Polygons

CONCAVE PENTAGON

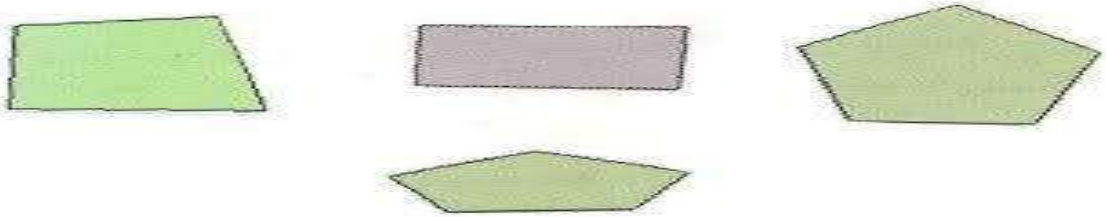


CONVEX PENTAGON



A figure is convex if every line segment drawn between any two points inside the figure lies entirely inside the figure.

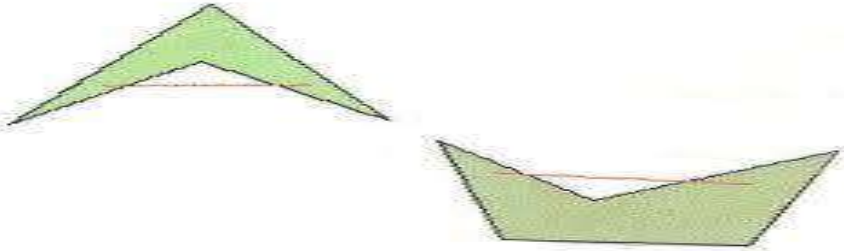
Example:



Concave

The following figures are concave. Note the red line segment drawn between two points inside the figure that also passes outside of the figure.

Example:

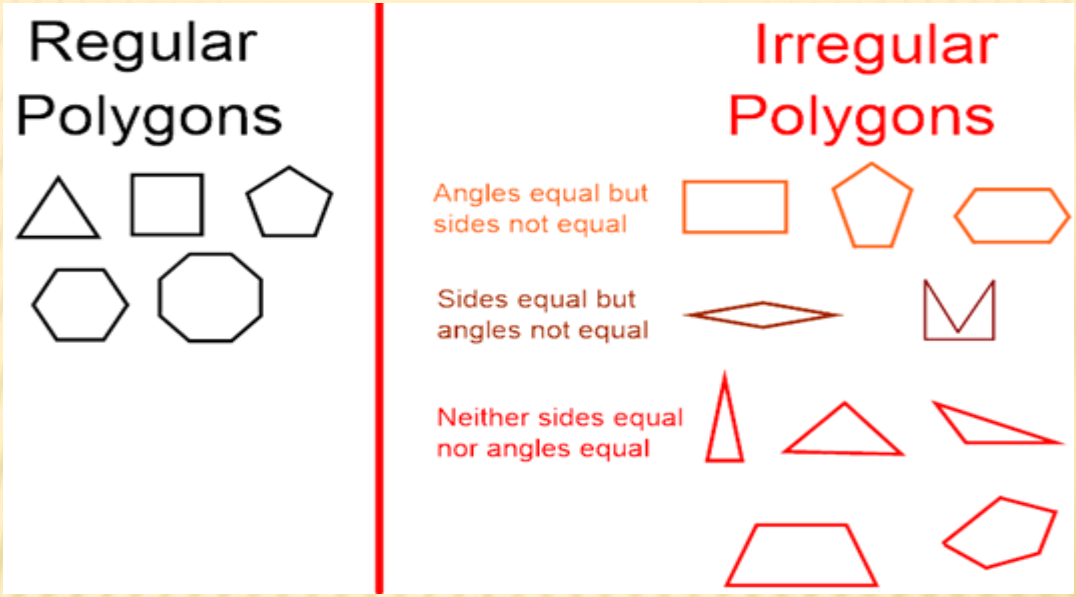


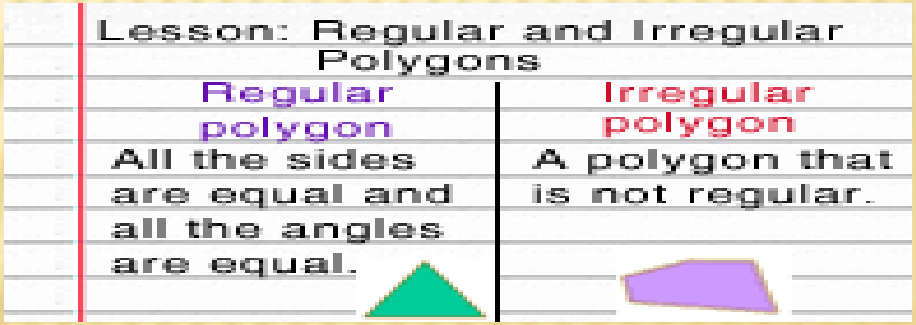
Kathryn Johnson

Regular and Irregular Polygons

A regular polygon is both ‘equiangular’ and ‘equilateral’.

So all the sides and angles should be same





(a) So square is a regular polygon but rectangle is not

(b) Equilateral triangle is a regular polygon

Angle Sum in the Polygons

The Sum of the angles in the polygon is given by $(n-2) \times 180^0$

Angles of Regular Polygons

Sum of the Interior Angles $180(n-2)$

Sum of the Exterior Angles Always 360°!

Each Interior Angle $\frac{180(n-2)}{n}$

Each Exterior Angle $\frac{360°}{n}$

For **Triangle**, n=3
So $(3-2) \times 180 = 1 \times 180^0 = 180^0$

For **Quadrilateral**, n=4
So $(4-2) \times 180 = 2 \times 180^0 = 360^0$

Like this we can find sum of angles of any polygon with any number of sides.

The sum of the measures of the exterior angles of any polygon is 360°.

This property is very useful is finding number of sides of the polygons

Example:
Find the number of sides of a regular polygon whose each exterior angle has a measure of 60°.

Solution:

Total measure of all exterior angles = 360°
Measure of each exterior angle = 60°
The number of exterior angles =360/60=6

Therefore, the polygon has 6 sides.

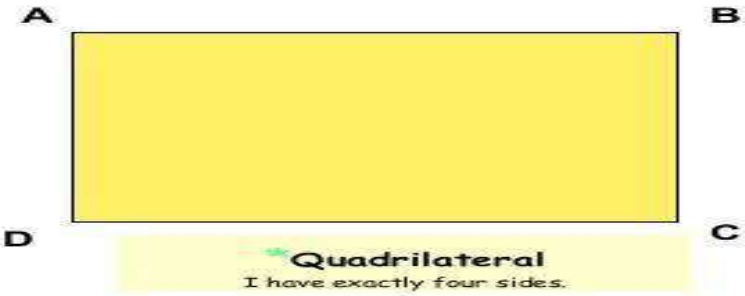
Quadrilaterals

"Quad" means four. Why would all of these shapes be called "quadrilaterals"?

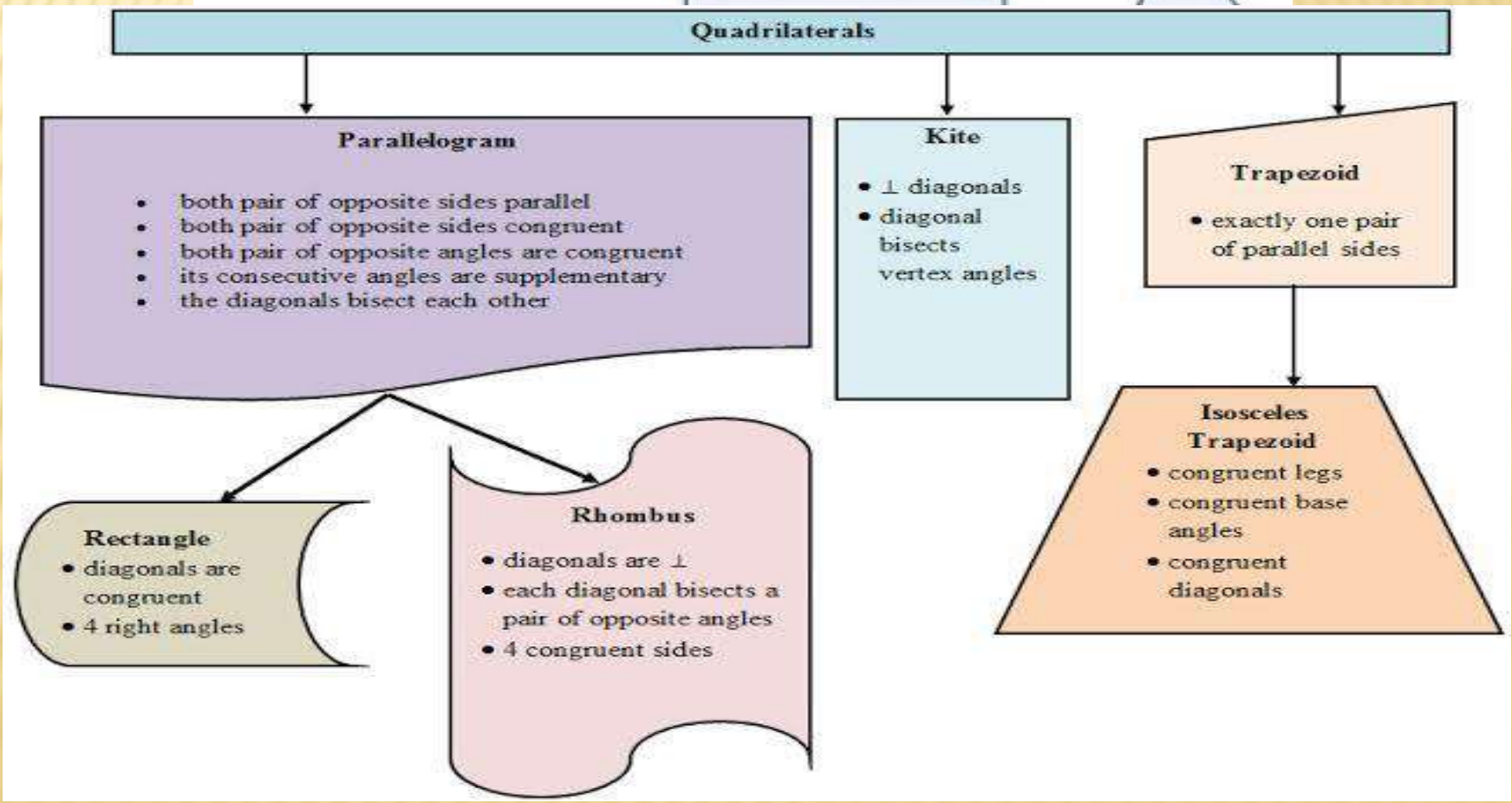
Each shape has four sides.

Definition

- A plane figure bounded by four line segments AB,BC,CD and DA is called a quadrilateral.

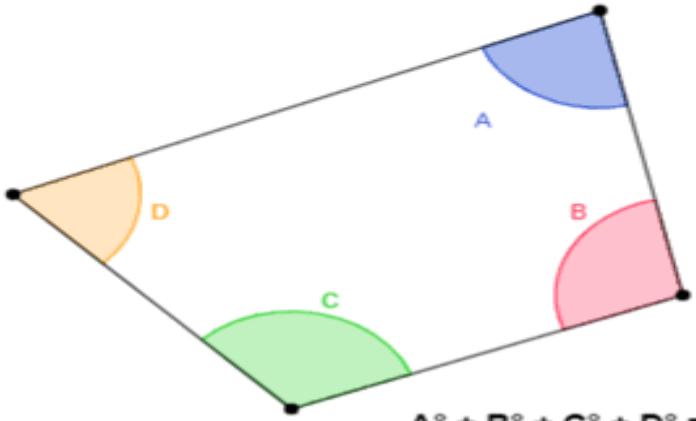


LET US RECALL SOME PROPERTIES OF QUADRILATERALS WHICH YOU HAVE STUDIED IN JUNIOR CLASSES



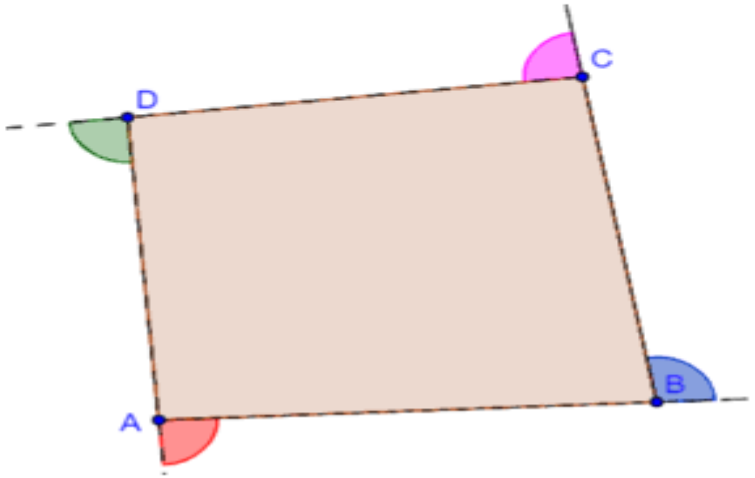
Sum of Angles in a Quadrilateral

Sum of interior angles in a quadrilateral = 360°



A° + B° + C° + D° = 360°

Sum of exterior angles in a quadrilateral = 360°



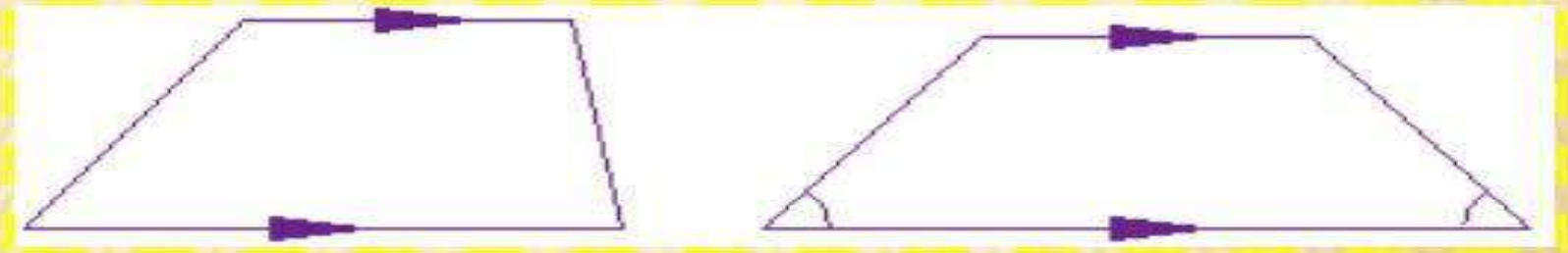
Angle Sum Property of Quadrilateral

Sum of angles of the Quadrilaterals $=360^0$

Exterior Angle Property of Quadrilateral

Sum of exterior angles of the Quadrilaterals $=360^0$

TRAPEZIUM



Trapezoid

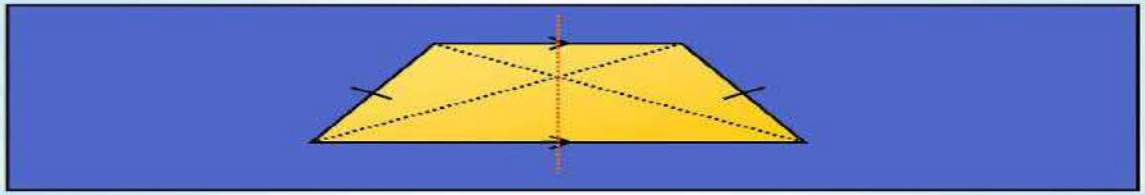
Isosceles Trapezoid

- A trapezium is quadrilateral which has at least one pair of parallel sides
  - It is called an Isosceles trapezium if the sides that aren't parallel are equal in length and both angles coming from a parallel side are equal

Note : Trapezium is UK terminology & in US terminology it is called as Trapezoid

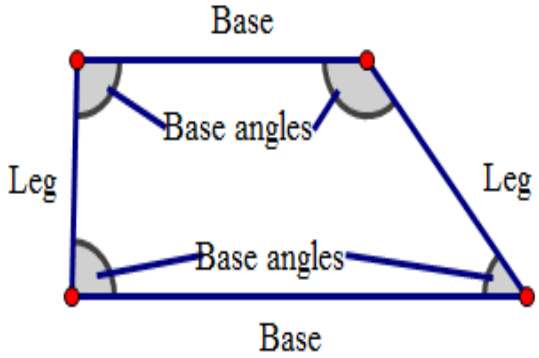
Isosceles trapezium

In an isosceles trapezium the two opposite non-parallel sides are the same length.

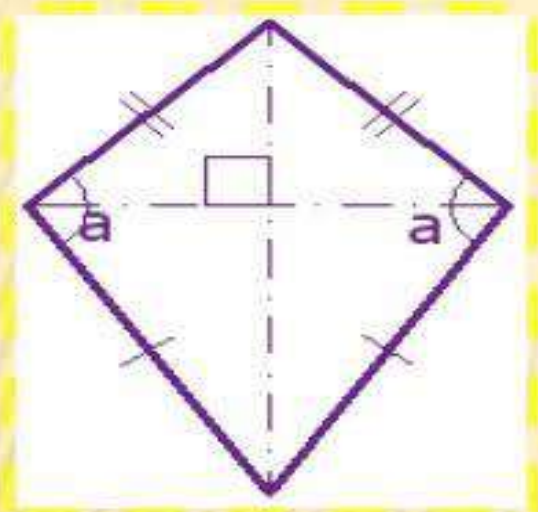


The diagonals of an isosceles trapezium are the same length.

It has one line of symmetry.



KITE



A kite is a quadrilateral whose four sides can be grouped into two pairs of equal-length sides that are adjacent to each other.

Kite quadrilaterals are named for the wind-blown, flying kites, which often have this shape

- Two pairs of adjacent sides of a kite are equal in length
- One pair of opposite angles (the ones that are between the sides of unequal length) are equal in size.
- One diagonal bisects the other.
- Diagonals intersect at right angles.

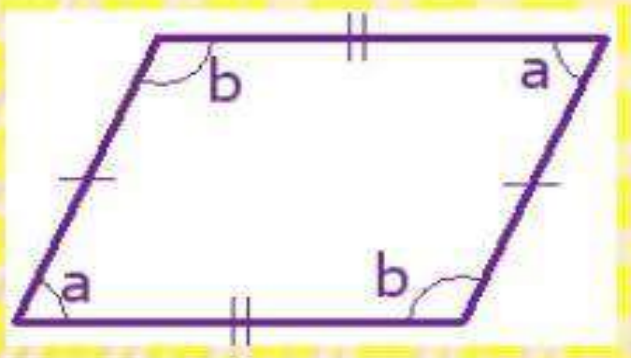
PARALLELOGRAM

What is a Parallelogram?

- Opposite sides are parallel
- Opposite sides are congruent
- Opposite angles are equal
- Consecutive angles supplementary
- Diagonals bisect eachother

MORE ABOUT

PARALLELOGRAM



A parallelogram is a quadrilateral with opposite sides parallel. Also opposite angles are equal (angles "a" is same as angles "b"). The opposite sides are equal .The adjacent angles are supplementary and the diagonals bisects each other ; but they are not equal.

- It is the "parent" of some other quadrilaterals, which are obtained by adding restrictions of various kinds:
- A rectangle is a parallelogram but with all four interior angles fixed at 90°.
- A rhombus is a parallelogram but with all sides equal in length.
- A square is a parallelogram but with all sides equal in length and all angles fixed at 90°.

- NOTE : Write all these points in your register and then solve exercise questions.
- [We have given solution to majority of questions in the next pages, other questions are to be solved as HW]

- **Closed curve** is a figure in the plane with no end points. It completely encloses an area
- **Open curve** is a figure in the place with end points
- A simple closed curve made up of only line segment is called a **polygon**
- **A diagonal** is a line segment connecting two non-consecutive vertices of a polygon
- In a **convex polygon**, every line segment drawn between any two points inside the figure lies entirely inside the figure.
- In a **concave polygon**, the line segment drawn between two points inside the figure can also passes outside of the figure.
- A **regular polygon** is both 'equiangular' and 'equilateral'
- Square is a regular polygon but rectangle is not
- Rhombus is a regular polygon but Parallelogram is not
- Equilateral Triangle is also a regular polygon
- The Sum of the angles in the polygon is given by $(n-2) \times 180$
- **The sum of the measures of the exterior angles of any polygon is 360 °**
- A plane figure bounded by four line segments is called **Quadrilateral**.
- Sum of angles of the Quadrilaterals $=360^0$
- Sum of exterior angles of the Quadrilaterals $=360^0$

- **Trapezium** ----- A Quadrilateral in which one pair of opposite sides are parallel.
- **Kite** ---- Two pair of adjacent sides are equal in length. One diagonal bisects the other.
- Diagonal bisect at 90^0
- **Parallelogram** --- Both pair of opposite sides are parallel.
- Both pair of opposite sides are equal.
- Both pair of opposite angles are equal.
- Adjacent angles are supplementary.
- Diagonal bisect each other.

- FOR FURTHER UNDERSTANDING OF CHAPTER GO THROUGH THE LINK BELOW:
- https://youtu.be/vP-3_atBuU4

MATHEMATICS
CLASS : VIII
EXERCISE : 3.1

Question 2:

How many diagonals does each of the following have?

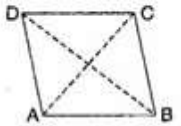
(a) A convex quadrilateral (b) A regular hexagon

(c) A triangle

Answer 2:

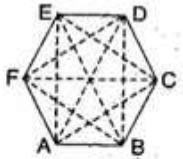
(a) A convex quadrilateral has two diagonals.

Here, AC and BD are two diagonals.



(b) A regular hexagon has 9 diagonals.

Here, diagonals are AD, AE, BD, BE, FC, FB, AC, EC and FD.



(c) A triangle has no diagonal.

Question 3:

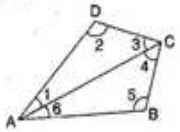
What is the sum of the measures of the angles of a convex quadrilateral? Will this property hold if the quadrilateral is not convex? (Make a non-convex quadrilateral and try)

Answer 3:

Let ABCD is a convex quadrilateral, then we draw a diagonal AC which divides the quadrilateral in two triangles.

$$\angle A + B + \angle C + \angle D = \angle 1 + \angle 6 + \angle 5 + \angle 4 + \angle 3 + \angle 2$$
$$= (\angle 1 + \angle 2 + \angle 3) + (\angle 4 + \angle 5 + \angle 6)$$
$$= 180° + 180° \quad \text{[By Angle sum property of triangle]}$$
$$= 360°$$

Hence, the sum of measures of the triangles of a convex quadrilateral is 360°.



Yes, if quadrilateral is not convex then, this property will also be applied.

Let ABCD is a non-convex quadrilateral and join BD, which also divides the quadrilateral in two triangles.

Using angle sum property of triangle,

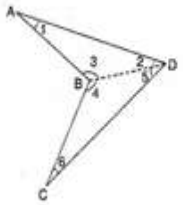
In ΔABD, $\angle 1 + \angle 2 + \angle 3 = 180°$ .....(i)

In ΔBDC, $\angle 4 + \angle 5 + \angle 6 = 180°$ .....(ii)

Adding equation (i) and (ii),

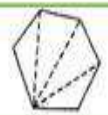
$$\angle 1 + \angle 2 + \angle 3 + \angle 4 + \angle 5 + \angle 6 = 360°$$
$$\Rightarrow \quad \angle 1 + \angle 2 + (\angle 3 + \angle 4) + \angle 5 + \angle 6 = 360°$$
$$\Rightarrow \quad \angle A + \angle B + \angle C + \angle D = 360°$$

Hence proved.



Question 4:

Examine the table. (Each figure is divided into triangles and the sum of the angles deduced from that.)

Figure				
Side	3	4	5	6
Angle sum	$1\times180°$ $=(3-2)\times180°$	$2\times180°$ $=(4-2)\times180°$	$3\times180°$ $=(5-2)\times180°$	$4\times180°$ $=(6-2)\times180°$

What can you say about the angle sum of a convex polygon with number of sides?

Answer 4:

(a) When $n = 7$, then

Angle sum of a polygon $= (n-2)\times180° = (7-2)\times180° = 5\times180° = 900°$

(b) When $n = 8$, then

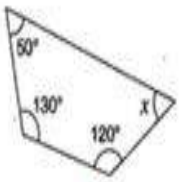
Angle sum of a polygon $= (n-2)\times180° = (8-2)\times180° = 6\times180° = 1080°$

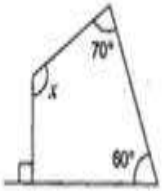
(c) When $n = 10$, then

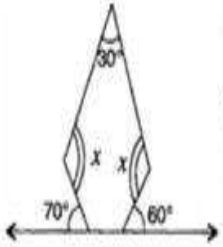
Angle sum of a polygon $= (n-2)\times180° = (10-2)\times180° = 8\times180° = 1440°$

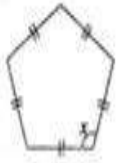
(d) When $n = n$, then, angle sum of a polygon $= (n-2)\times180°$

Question 6: Find the angle measures x in the following figures:









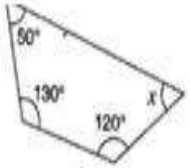
Answer 6:

(a) Using angle sum property of a quadrilateral,

$50° + 130° + 120° + x = 360°$

$\Rightarrow \quad 300° + x = 360°$

$\Rightarrow \quad x = 360° - 300° \qquad \Rightarrow x = 60°$

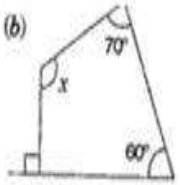


(b) Using angle sum property of a quadrilateral,

$90° + 60° + 70° + x = 360°$

$\Rightarrow \quad 220° + x = 360°$

$\Rightarrow \quad x = 360° - 220° \qquad \Rightarrow x = 140°$



(c) First base interior angle $= 180° - 70° = 110°$

Second base interior angle $= 180° - 60° = 120°$

There are 5 sides, $n = 5$

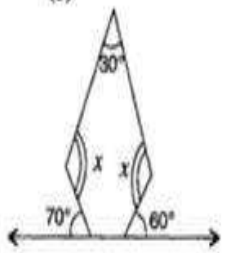
$\therefore$ Angle sum of a polygon $= (n-2)\times 180°$

$= (5-2)\times 180° = 3\times 180° = 540°$

$\therefore \quad 30° + x + 110° + 120° + x = 540°$

$\Rightarrow \quad 260° + 2x = 540° \qquad \Rightarrow 2x = 540° - 260°$

$\Rightarrow \quad 2x = 280° \qquad \Rightarrow x = 140°$



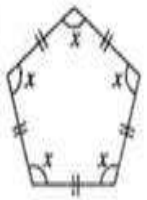
(d) Angle sum of a polygon $= (n-2)\times 180°$

$= (5-2)\times 180° = 3\times 180° = 540°$

$\therefore \quad x + x + x + x + x = 540°$

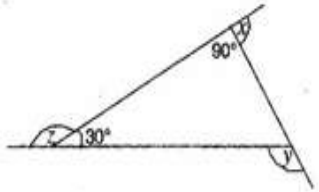
$\Rightarrow \quad 5x = 540° \qquad \Rightarrow x = 108°$

Hence each interior angle is 108°.

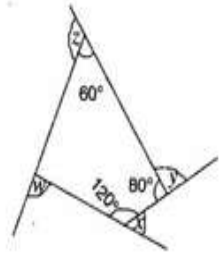


Question 7:

(a) Find $x + y + z$



(b) Find $x + y + z + w$



Answer 7:

(a) Since sum of linear pair angles is 180°.

$\therefore \quad 90° + x = 180°$

$\Rightarrow \quad x = 180° - 90° = 90°$

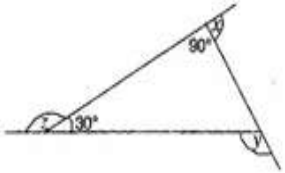
And $z + 30° = 180°$

$\Rightarrow \quad z = 180° - 30° = 150°$

Also $y = 90° + 30° = 120°$

[Exterior angle property]

$\therefore \quad x + y + x = 90° + 120° + 150° = 360°$



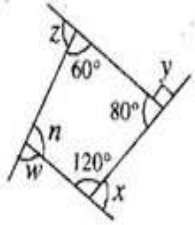
(b) Using angle sum property of a quadrilateral,

$60° + 80° + 120° + n = 360°$

$\Rightarrow \quad 260° + n = 360°$

$\Rightarrow \quad n = 360° - 260°$

$\Rightarrow \quad n = 100°$



Since sum of linear pair angles is 180°.

$\therefore \quad w + 100 = 180°$ .....(i)

$x + 120° = 180°$ .....(ii)

$y + 80° = 180°$ .....(iii)

$z + 60° = 180°$ .....(iv)

Adding eq. (i), (ii), (iii) and (iv),

$\Rightarrow \quad x + y + z + w + 100° + 120° + 80° + 60° = 180° + 180° + 180° + 180°$

$\Rightarrow \quad x + y + z + w + 360° = 720°$

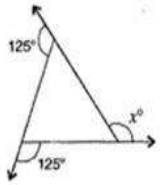
$\Rightarrow \quad x + y + z + w = 720° - 360°$

$\Rightarrow \quad x + y + z + w = 360°$

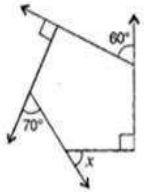
Exercise 3.2

Question 1:

Find x in the following figures:



(a)



(b)

Answer 1:

(a) Here, $125° + m = 180°$ [Linear pair]

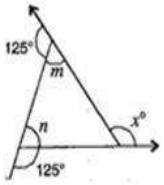
$\Rightarrow \quad m = 180° - 125° = 55°$

and $125° + n = 180°$ [Linear pair]

$\Rightarrow \quad n = 180° - 125° = 55°$

$\because$ Exterior angle $x°$ = Sum of opposite interior angles

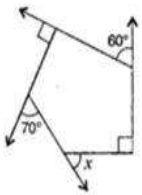
$\therefore \quad x° = 55° + 55° = 110°$



(b) Sum of angles of a pentagon $= (n-2)\times 180°$

$= (5-2)\times 180°$

$= 3\times 180° = 540°$



By linear pairs of angles,

$\angle 1 + 90° = 180°$ ...(i)

$\angle 2 + 60° = 180°$ ...(ii)

$\angle 3 + 90° = 180°$ ...(iii)

$\angle 4 + 70° = 180°$ ...(iv)

$\angle 5 + x = 180°$ ...(v)

Adding eq. (i), (ii), (iii), (iv) and (v),

$x + (\angle 1 + \angle 2 + \angle 3 + \angle 4 + \angle 5) + 310° = 900$

$\Rightarrow \quad x + 540° + 310° = 900° \quad \Rightarrow x + 850° = 900° \quad \Rightarrow x = 900° - 850° = 50°$

Question 2:

Find the measure of each exterior angle of a regular polygon of:

(a) 9 sides (b) 15 sides

Answer 2:

(i) Sum of angles of a regular polygon $= (n-2)\times 180°$

$= (9-2)\times 180° = 7\times 180° = 1260°$

$$\text{Each interior angle} = \frac{\text{Sum of interior angles}}{\text{Number of sides}} = \frac{1260°}{9} = 140°$$

Each exterior angle $= 180° - 140° = 40°$

(ii) Sum of exterior angles of a regular polygon $= 360°$

$$\text{Each interior angle} = \frac{\text{Sum of interior angles}}{\text{Number of sides}} = \frac{360°}{15} = 24°$$

Question 3:

How many sides does a regular polygon have, if the measure of an exterior angle is 24°?

Answer 3:

Let number of sides be n.

Sum of exterior angles of a regular polygon $= 360°$

$$\text{Number of sides} = \frac{\text{Sum of exterior angles}}{\text{Each interior angle}} = \frac{360°}{24°} = 15$$

Hence, the regular polygon has 15 sides.

Question 4:

How many sides does a regular polygon have if each of its interior angles is 165°?

Answer 4:

Let number of sides be n.

Exterior angle $= 180° - 165° = 15°$

Sum of exterior angles of a regular polygon $= 360°$

$$\text{Number of sides} = \frac{\text{Sum of exterior angles}}{\text{Each interior angle}} = \frac{360°}{15°} = 24$$

Hence, the regular polygon has 24 sides.

Question 5:

(a) Is it possible to have a regular polygon with of each exterior angle as 22°?

(b) Can it be an interior angle of a regular polygon ? Why?

Answer 5:

(a) No. (Since 22 is not a divisor of 360°)

(b) No, (Because each exterior angle is $180° - 22° = 158°$, which is not a divisor of 360°)

Question 6:

(a) What is the minimum interior angle possible for a regular polygon? Why?

(b) What is the maximum exterior angle possible for a regular polygon?

Answer 6:

(a) The equilateral triangle being a regular polygon of 3 sides has the least measure of an interior angle of 60°.

$\because$ Sum of all the angles of a triangle $= 180°$

$\therefore \quad x + x + x = 180°$

$\Rightarrow \quad 3x = 180°$

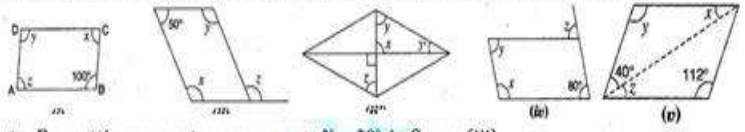
$\Rightarrow \quad x = 60°$

(b) By (a), we can observe that the greatest exterior angle is $180° - 60° = 120°$.

Exercise 3.3

Question 2:

Consider the following parallelograms. Find the values of the unknowns x, y, z.



Note: For getting correct answer, read $3^\circ = 30^\circ$ in figure (iii)

Answer 2:

(i) $\angle B + \angle C = 180^\circ$ [Adjacent angles in a parallelogram are supplementary]

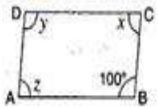
$\Rightarrow \quad 100^\circ + x = 180^\circ$

$\Rightarrow \quad x = 180^\circ - 100^\circ = 80^\circ$

and $\quad z = x = 80^\circ$

[Since opposite angles of a parallelogram are equal]

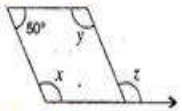
also $\quad y = 100^\circ$ [Since opposite angles of a parallelogram are equal]



(ii) $x + 50^\circ = 180^\circ$ [Adjacent angles in a $||^{gm}$ are supplementary]

$\Rightarrow \quad x = 180^\circ - 50^\circ = 130^\circ$

$\Rightarrow \quad z = x = 130^\circ$ [Corresponding angles]



(iii) $x = 90^\circ$ [Vertically opposite angles]

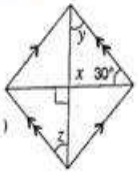
$\Rightarrow \quad y + x + 30^\circ = 180^\circ$ [Angle sum property of a triangle]

$\Rightarrow \quad y + 90^\circ + 30^\circ = 180^\circ$

$\Rightarrow \quad y + 120^\circ = 180^\circ$

$\Rightarrow \quad y = 180^\circ - 120^\circ = 60^\circ$

$\Rightarrow \quad z = y = 60^\circ$ [Alternate angles]



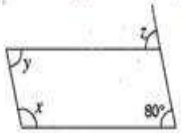
(iv) $z = 80^\circ$ [Corresponding angles]

$\Rightarrow \quad x + 80^\circ = 180^\circ$ [Adjacent angles in a $||^{gm}$ are supplementary]

$\Rightarrow \quad x = 180^\circ - 80^\circ = 100^\circ$

and $\quad y = 80^\circ$

[Opposite angles are equal in a $||^{gm}$]



(v) $y = 112^\circ$ [Opposite angles are equal in a $||^{gm}$]

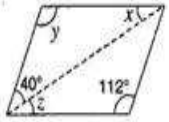
$\Rightarrow \quad 40^\circ + y + x = 180^\circ$ [Angle sum property of a triangle]

$\Rightarrow \quad 40^\circ + 112^\circ + x = 180^\circ$

$\Rightarrow \quad 152^\circ + x = 180^\circ$

$\Rightarrow \quad x = 180^\circ - 152^\circ = 28^\circ$

and $\quad z = x = 28^\circ$ [Alternate angles]



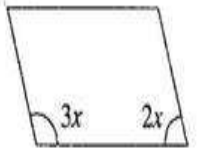
Question 5:

The measure of two adjacent angles of a parallelogram are in the ratio 3:2. Find the measure of each of the angles of the parallelogram.

Answer 5:

Let two adjacent angles be $3x$ and $2x$.

Since the adjacent angles in a parallelogram are supplementary.



$\therefore \quad 3x + 2x = 180^\circ$

$\Rightarrow \quad 5x = 180^\circ$

$\Rightarrow \quad x = \frac{180^\circ}{5} = 36^\circ$

$\therefore \quad$ One angle $= 3x = 3 \times 36^\circ = 108^\circ$

and $\quad$ another angle $= 2x = 2 \times 36^\circ = 72^\circ$

Question 6:

Two adjacent angles of a parallelogram have equal measure. Find the measure of the angles of the parallelogram.

Answer 6:

Let each adjacent angle be x.

Since the adjacent angles in a parallelogram are supplementary.

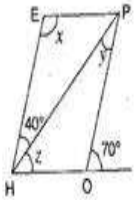
$\therefore \quad x + x = 180^\circ \quad \Rightarrow 2x = 180^\circ \quad \Rightarrow x = \frac{180^\circ}{2} = 90^\circ$

Hence, each adjacent angle is 90°.

$\therefore \quad x + x + x = 180^\circ \quad \Rightarrow 3x = 180^\circ \quad \Rightarrow x = 60^\circ$

Question 7:

The adjacent figure HOPW is a parallelogram. Find the angle measures x, y and z. State the properties you use to find them.



Answer 7:

Here $\angle HOP + 70^\circ = 180^\circ$ [Angles of linear pair]

$\angle HOP = 180^\circ - 70^\circ = 110^\circ$

and $\quad \angle E = \angle HOP$ [Opposite angles of a $||^{gm}$ are equal]

$\Rightarrow \quad x = 110^\circ$

$\angle PHE = \angle HPO$ [Alternate angles]

$\therefore \quad y = 40^\circ$

Now $\quad \angle EHO = \angle O = 70^\circ$ [Corresponding angles]

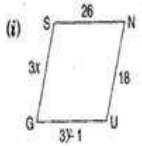
$\Rightarrow \quad 40^\circ + z = 70^\circ$

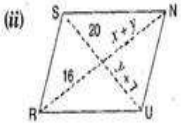
$\Rightarrow \quad z = 70^\circ - 40^\circ = 30^\circ$

Hence, $\quad x = 110^\circ, y = 40^\circ$ and $z = 30^\circ$

Question 8:

The following figures GUNS and RUNS are parallelograms. Find x and y. (Lengths are in cm)

(i) 

(ii) 

Answer 8:

(i) In parallelogram GUNS,

GS = UN [Opposite sides of parallelogram are equal]

$\Rightarrow \quad 3x = 18 \quad \Rightarrow x = \frac{18}{3} = 6$ cm

Also GU = SN [Opposite sides of parallelogram are equal]

$\Rightarrow \quad 3y - 1 = 26$

$\Rightarrow \quad 3y = 26 + 1 \quad \Rightarrow 3y = 27 \quad \Rightarrow y = \frac{27}{3} = 9$ cm

Hence, $x = 6$ cm and $y = 9$ cm.

(ii) In parallelogram RUNS,

$y + 7 = 20$ [Diagonals of ||gm bisects each other]

$\Rightarrow \quad y = 20 - 7 = 13$ cm

and $x + y = 16$

$\Rightarrow \quad x + 13 = 16$

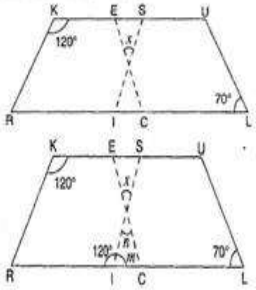
$\Rightarrow \quad x = 16 - 13$

$\Rightarrow \quad x = 3$ cm

Hence, $x = 3$ cm and $y = 13$ cm.

Question 9:

In the figure, both RISK and CLUE are parallelograms. Find the value of x.



Answer 9:

In parallelogram RISK,

$\angle RIS = \angle K = 120°$

[Opposite angles of a ||gm are equal]

$\angle m + 120° = 180°$ [Linear pair]

$\Rightarrow \quad \angle m = 180° - 120° = 60°$

and $\angle ECI = \angle L = 70°$

[Corresponding angles]

$\Rightarrow \quad m + n + \angle ECI = 180°$

[Angle sum property of a triangle]

$\Rightarrow \quad 60° + n + 70° = 180°$

$\Rightarrow \quad 130° + n = 180°$

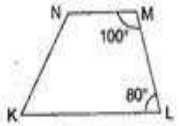
$\Rightarrow \quad n = 180° - 130° = 50°$

also $x = n = 50°$

[Vertically opposite angles]

Question 10:

Explain how this figure is a trapezium. Which is its two sides are parallel?



Answer 10:

Here, $\angle M + \angle L = 100° + 80° = 180°$

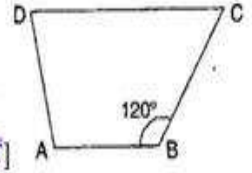
[Sum of interior opposite angles is 180°]

$\therefore$ NM and KL are parallel.

Hence, KLMN is a trapezium.

Question 11:

Find $m\angle C$ in figure, if $\overline{AB} \parallel \overline{DC}$,



Answer 11:

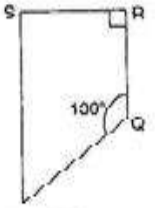
Here, $\angle B + \angle C = 180°$ [$\because \overline{AB} \parallel \overline{DC}$]

$\therefore \quad 120° + m\angle C = 180°$

$\Rightarrow \quad m\angle C = 180° - 120° = 60°$

Question 12:

Find the measure of $\angle P$ and $\angle S$ if $\overline{SP} \parallel \overline{RQ}$ in given figure. (If you find $m\angle R$ is there more than one method to find $m\angle P$)



Answer 12:

Here, $\angle P + \angle Q = 180°$ [Sum of co-interior angles is 180°]

$\Rightarrow \quad \angle P + 130° = 180°$

$\Rightarrow \quad \angle P = 180° - 130°$

$\Rightarrow \quad \angle P = 50°$

$\because \quad \angle R = 90°$ [Given]

$\therefore \quad \angle S + 90° = 180°$

$\Rightarrow \quad \angle S = 180° - 90°$

$\Rightarrow \quad \angle S = 90°$

Yes, one more method is there to find $\angle P$.

$\angle S + \angle R + \angle Q + \angle P = 360°$ [Angle sum property of quadrilateral]

$\Rightarrow \quad 90° + 90° + 130° + \angle P = 360°$

$\Rightarrow \quad 310° + \angle P = 360°$

$\Rightarrow \quad \angle P = 360° - 310°$

$\Rightarrow \quad \angle P = 50°$

MATERIALS – METALS AND NON-METALS

SCIENCE

CLASS - VIII

TOPICS TO BE COVERED

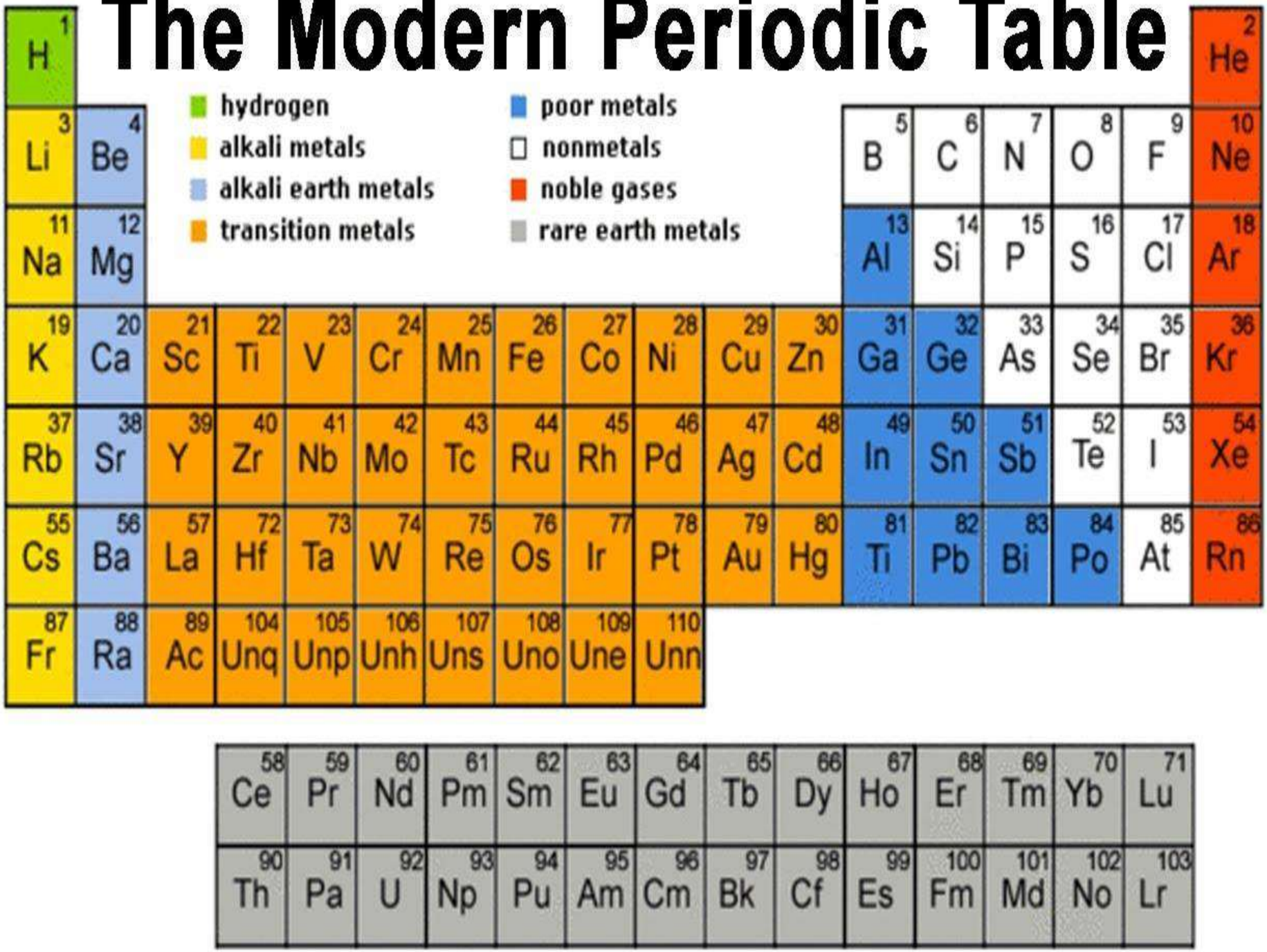
- OCCURRENCE OF METALS AND NON-METALS
- PROPERTIES OF METALS AND NON-METALS
- USES OF COMMON METALS AND NON-METALS
- CORROSION OF METALS
- ALLOYS

ELEMENTS

- A substance which cannot be broken down into two or more simpler substances by chemical reactions is called an element.
- Iron , Hydrogen, Helium, Oxygen, Phosphorus, Sulphur, Chlorine, Bromine, Gold, Silver, Mercury, Aluminium etc. are some examples of elements.
- There are 118 elements are arranged in order of increasing atomic number. In Periodic Table, elements with similar properties are arranged in similar column (called group) and elements with similar number of electrons shells are arranged in the same row (called a periods)
- All the elements can be divided into 3 groups:

  1) Metals 2) Non-metals 3) Metalloids

The Modern Periodic Table



OCCURRENCE OF METALS AND NON-METALS

- Earth is the major source of elements. Oxygen and Silicon are the main elements present in the earth's crust.
- The most abundant metal in earth's crust is aluminium followed by iron, calcium and sodium. The most abundant non-metal is hydrogen.
- Most metals in nature occur in combine state as minerals.
- The minerals from which metals can be extracted conveniently and profitably are called ores.
- The process of extracting metals in pure form from their ores is called metallurgy.
- Nitrogen occur in free state in the atmosphere.
- Carbon occur in free state as graphite, diamond and coal and in combine state it occur as carbon dioxide and carbonates, fossil fuels etc.
- Noble gases such as helium, neon, argon etc. occur in elementary form in air.

METALS – "PHYSICAL PROPERTIES"

- Metals are lustrous i.e. shiny surface.
- Metals are a good conductor of heat and electricity.
- Metals are ductile i.e. they can be drawn into wires.
- Metals are malleable i.e. they can be beaten into thin sheets.
- Metals are solid at room temperature.(except Mercury which is liquid at room temperature).
- Metals are hard.(except alkali metals like Sodium and Potassium).
- Metals have high density.
- Metals are sonorous i.e. they produce sound when struck with a hard object.
- Metals have high melting and boiling point.
- Metals have tendency to lose one or more electrons and form electropositive ions.

NON-METALS – "PHYSICAL PROPERTIES"

- Non-metals are non- lustrous.(except crystals of iodine).
- Non-metals are bad conductor of heat and electricity.(except graphite)
- Non-metals are not ductile.
- Non-metals are not malleable.
- Non-metals are soft. (except diamond)
- Non-metals are non-sonorous.
- Non-metals exits in all three states of matter.
- Non-metals have low density.
- Non-metals have low melting and boiling point.
- Non-metals have a tendency to gain one or more electrons and form electronegative ions.

METALS – "CHEMICAL PROPERTIES"

- **Reaction with oxygen or air:**

Metals + Oxygen or air → Metallic oxides or Basic oxides

$4Na + O_2 \rightarrow 2Na_2O$

(Sodium) (Oxygen) (Sodium oxide)

- **Reaction with water:**

Metals + Water → Metallic oxides or hydroxides + Hydrogen gas

$2Al + 3H_2O \rightarrow Al_2O_3 + 3H_2$

(Aluminium) (Water) (Aluminium oxide) (Hydrogen gas)

- **Reaction with dilute acids:**

Metals + Acids → Salts + Hydrogen gas

$Mg + 2HCl \rightarrow MgCl_2 + H_2$

(Magnesium) (Hydrochloric acid) (Magnesium chloride) (Hydrogen gas)

- **Reaction with bases:**

Metals + Bases → Salts + Hydrogen gas

$Zn + 2NaOH \rightarrow Na_2ZnO_2 + H_2$

(Zinc) (Sodium hydroxide) (Sodium zincate) (Hydrogen gas)

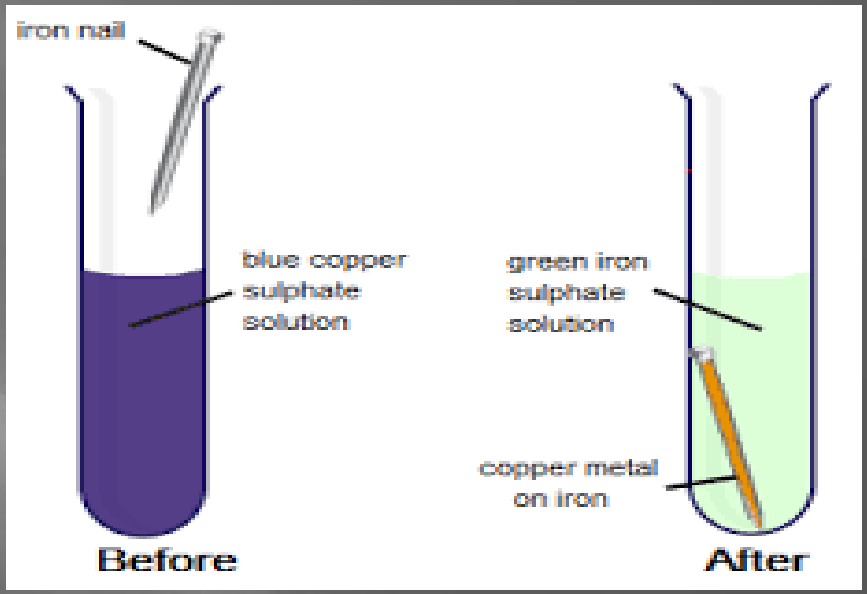
- **Reaction with salt solution (Displacement reaction):**

$Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$

(Zinc) (Copper sulphate) (Zinc sulphate) (Copper)

REACTIVITY SERIES

K	Potassium	Most reactive
Na	Sodium	
Ca	Calcium	
Mg	Magnesium	
Al	Aluminium	
Zn	Zinc	Reactivity decreases
Fe	Iron	
Pb	Lead	
H	Hydrogen	
Cu	Copper	
Hg	Mercury	
Ag	Silver	
Au	Gold	Least reactive



$$Fe_{(s)} + CuSO_{4(aq)} \longrightarrow FeSO_{4(aq)} + Cu_{(s)}$$

Iron + Copper sulphate (Blue colour solution) → Ferrous sulphate (Green colour solution) + Copper

Iron is more reactive than copper. So, when an iron nail is dipped in a copper sulphate solution, iron displaces copper from its solution to form iron sulphate, which is green in colour. Hence, the blue colour of copper sulphate solution changes into green colour because of this displacement reaction.

NON-METALS – " CHEMICAL PROPERTIES"

- **Reaction with oxygen or air:**

Non- metals + Oxygen or air → Non- metallic oxides

S + O_2 → SO_2

(Sulphur) (Oxygen) (Sulphur dioxide)

- **Reaction with water:**

Non- metals + Water → No reaction

Si + H_2O → No reaction

(Silicon) (Water)

- **Reaction with dilute acids:**

Non- metals + Acids → No reaction

P + HCl → No reaction

(Phosphorus) (Hydrochloric acid)

USES OF COMMON METALS

- Iron is used to make pipes, automobiles, machinery, railing cylinders, nails, bolts chains etc.
- Copper is used for making electric wires, cables, utensils, car radiators etc.
- Aluminium is used for making electric cables, cooking vessels, packaging etc.
- Zinc is mainly used as a protective coating for iron to prevent rusting (Galvanisation) and in making of electrodes in dry cell.
- Gold and silver are used for making coins and jewellery.
- Lead is used for making water pipes and electrodes in automobile batteries.

USES OF SOME COMMON NON-METALS

- Hydrogen is used for the synthesis of ammonia gas, welding torch, extraction of metals etc.
- Sulphur is used in the manufacture of sulphuric acid, skin ointments, insecticides, pesticides, gun powder etc.
- Silicon is used in electronic and computer industry, for making waterproof clothes, greases, polishes etc.
- Graphite is used as lead in pencil, electrodes in dry cell, lubricant.
- Phosphorus is used in making matchboxes, fireworks and phosphate fertilizers.
- Oxygen is used for respiration and combustion.

CORROSION OF METALS

- Corrosion is defined as a process in which the metal slowly gets eaten when comes in contact with air and moisture.

- For examples: (a) When iron comes in contact with air and moisture, a brown and flaky substance formed called rust.

$$4Fe + 3O_2 + H_2O \longrightarrow 2Fe_2O_3.H_2O$$

(Iron) (Oxygen) (Water) (Iron oxide, rust)

(b) When copper comes in contact with air and moisture, it get coated with green coloured substance called copper carbonate.

$$2Cu + H_2O + CO_2 + O_2 \longrightarrow Cu(OH)_2 + CuCO_3$$

(Copper) (copper hydroxide) (copper carbonate)

(c) Silver becomes black, lose their shine due to its reaction with hydrogen sulphide present in the atmosphere.

PREVENTION OF CORROSION

Metals can be prevented from corrosion by the following methods:

1. Painting 2. Lubrication 3. Galvanisation (coating of zinc on iron articles) 4. Electroplating (deposit a metallic layer of either tin or chromium on iron articles) 5. Anodisation (deposit a thin layer of aluminium oxide on aluminium)

Alloys

An alloy is a homogeneous mixture of two or more metals or a metal and a non- metal.

The main purpose of making alloys are as follows:

- To increase hardness of metal.
- To metal more resistant to chemical attack.
- To decrease the melting point of metal.

INSTRUCTIONS

- Read the chapter thoroughly.
- For the better understanding of the chapter link is provided: https://youtu.be/oANBKbSpjB4 , https://youtu.be/US-hxxbqFqE .
- Do questions B(Fill up), C(Match), D(True/False), I(MCQs) in your book.
- Do questions A(Very Short), E(Short Answer Type-I), F(Short Answer Type-II) and G(Long Answer) in your science copy.
- Also do the worksheet attached separately along with the ppt. in your science copy.
- Learn the chapter.

Questions and answers

Q.A Very Short Answer Questions.

1. Name two metals which exist in free state.
Ans 1.Silver and Gold

2. Name the most abundant non-metals in: (i) the universe (ii) earth's crust
Ans 2.(i) Hydrogen (ii) Oxygen

3. Out of copper and zinc which metal evolves hydrogen gas on reacting with dilute hydrochloric acid?
Ans 3.Zinc

4. Name an alloy of aluminium used in construction of aircrafts.
Ans 4.Duralumin

5. Which non-metal has very high melting and boiling points?
Ans 5.Graphite

6. State two conditions necessary for rusting of iron.
Ans 6.Air and moisture

7. What is the difference between physical state of metals and non-metals at room temperature?
Ans 7.Metals are solid at room temperature .Non- metals can occur as solid, liquid and gases at room temperature.

8. Why are electric wires made of copper or aluminium?
Ans 8.Electric wires are made of copper or aluminium because they are metals which are good conductor of heat and electricity.

9. Metal 'X' dipped in a salt solution of Y, displaces 'Y' from the solution. Which is more reactive X or Y?
Ans 9. X is more reactive.

Q.E Short Answer Question Type-I

1. Why is sodium kept in kerosene oil?

Ans 1. Sodium is kept in kerosene oil because sodium reacts with oxygen at room temperature and catches fire.

$4Na + O_2 \longrightarrow 2Na_2O$

2. Which of the following will give displacement reaction

(i) NaCl solution in Cu- container?

(ii) $AgNO_3$ solution in Cu- container?

Ans 2. (i) $NaCl + Cu \longrightarrow$ No reaction (because Na is more reactive than Cu)

(ii) $AgNO_3 + Cu \longrightarrow Cu(NO_3)_2 + Ag$ (because Cu is more reactive than Ag)

3. What are alloys?

Ans 3. An alloy is a homogeneous mixture of two or more metals or a metal and a non-metal.

4. Which metal do not corrode easily?

Ans 4. Metals like Gold (Au) and Platinum (Pt) do not corrode easily because they are in non-reactive and do not combine with other elements to form compounds.

5. What is the nature of (i) metallic oxides and (ii) non-metallic oxides?

Ans 5. (i) Metallic oxides are basic in nature.

(ii)Non- metallic oxides are acidic in nature.

6. Can alloying be used to lower the melting point? If so give an example.

Ans 6. Yes, alloying can be used to lower the melting point. Ex- Lead and Tin.

7. If a material can be drawn into wires, what will you call that material, a metal or a non- metal?

Ans 7. Metal.

8. A rock is found to have very small amount of copper, would you call the rock, an ore of copper?

Ans 8. No, because ores are concentration of minerals in rock that are high enough to be economically extracted for use. All ores are minerals, but all minerals are not necessarily ores.

9. Name the metal which is common in brass and bronze.

Ans 9.Copper

10. A non- metal was burnt in air. The product formed was dissolved in water . What be the action of (i) red litmus (ii) blue litmus paper?

Ans 10. (i) No change (ii) Blue litmus paper turns red colour because when non-metal was burnt in air acidic oxide is formed and when this acidic oxide dissolved in water acid is formed.

Q.F Short Answer Questions Type-II

1. Which gas is produced when a reactive metal reacts with dilute sulphuric acid? Write chemical equation to prove it.

Ans 1. Hydrogen gas is produced when a reactive metal reacts with dilute sulphuric acid.

$$Fe + H_2SO_4 \longrightarrow FeSO_4 + H_2$$

2. What do you mean by malleability and ductility?

Ans 2. Malleability - The property by virtue of which metals can be beaten into thin sheets. ,Ductility-The property by virtue of which metals can be drawn into thin wires.

3. Give any two uses of (i) hydrogen (ii) Oxygen

Ans 3. Two uses of Hydrogen are:

(a) Hydrogen is used for the synthesis of ammonia gas which is used to manufacture fertilizers such as urea, ammonium sulphate.

(b)Hydrogen is used in welding torch.

Two uses of Oxygen are:

(a)Oxygen is used for respiration. (b)Oxygen is used for combustion.

4. An element reacts with oxygen to form a compound which is basic in nature. The element is likely to be (i) Calcium (ii) Carbon (iii) Hydrogen (iv) Nitrogen. Explain with reason.

Ans 4. The element is Calcium because when calcium (metal) react with oxygen it lead to the formation of Calcium Oxide which is basic in nature.

$$2Ca + O_2 \longrightarrow 2CaO$$

5. Noble metals are used to make jewellery. Give reason.

Ans 5. Noble metals are used to make jewellery because they are non-reactive and highly resistance to corrosion.

6. Explain how painting a metal prevents it from corrosion.

Ans 6. Painting a metal keeps air away from the metal surface. Hence prevent metal from corrosion.

7. Why do copper vessels turn green with the passage of time?

Ans 7. Copper is a metal which when comes in contact with air and moisture get corroded and get a coating of green substance called basic copper carbonate.

$$2Cu + H_2O + CO_2 + O_2 \longrightarrow Cu(OH)_2 + CuCO_3$$

8.Can copper sulphate solution be stored in an iron container?

Ans 8. No, copper sulphate solution cannot be stored in an iron container because iron is more reactive than copper. Iron displace copper from its solution and form iron sulphate.

9. What are metalloids? Name any two metalloids.

Ans 9. Metalloids are the elements which have the properties of both metals and non- metals. Boron (B)and silicon(Si) are the examples of metalloids.

10."Sodium has low density but it is a metal." Explain the statement.

Ans 10.Sodium whose outermost shell has 1 electron, is a metal. It has low density because it has a comparatively large volume.

Q.G Long Answer Questions:

1. Describe an experiment to show conditions necessary for rusting of iron.

Ans 1.Write down Activity- 9 in your copy and draw figure also (Page no.- 56)

2. Compare the following properties of metals and non-metals: Physical state, ductility, malleability, sonority, electrical conductivity.

Ans 2.

Properties	Metals	Non-metals
a. State of existence	Metals are solid at room temperature.	Non-metals exist in all the three states of matter.
b. Lustre	Metals have shining surfaces.	Non-metals are normally non-lustrous.
c. Conductivity	Metals are good conductors of heat and electricity.	Non-metals are poor conductors of heat and electricity.
d. Density	The density of metals is quite high.	The density of non-metals is low.
e. Hardness	Metals are usually very hard.	Non-metals are normally soft.
f. Sonorosity	Metals are sonorous which means that they produce sound when struck with some hard object.	Non-metals are non – sonorous because they are soft.
g .Malleability and ductility	Metals are malleable and ductile.	Non-metals are not malleable and ductile. They are brittle.

3. Describe briefly any four methods used for preventing corrosion of metals.

Ans3. A) Painting:- Painting keeps air away from the metal surface.

B) Lubrication:- Lubrication is applying grease or oil on the metal surface which keeps moist air away from metal.

C) Galvanisation:- Galvanisation means coating of zinc on iron articles to prevent rusting.

D) Alloying:- Alloying means mixing some metals with other corrosion-resistant metals, for example, iron mixed with chromium and nickel (stainless steel) does not rust easily.

4. State whether a displacement will occur if the following are mixed. Give reasons along with chemical reactions:

(i) Iron filling and copper sulphate solution.

(ii) Zinc dust and iron sulphate solution.

(iii) Copper wire and zinc sulphate solution.

(iv) Silver coin and calcium sulphate solution.

Ans 4. (i) $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$ (Displacement Reaction because Iron(Fe) is more reactive than copper(Cu).

(ii) $Zn + FeSO_4 \rightarrow ZnSO_4 + Fe$ (Displacement Reaction because Zinc(Zn) is more reactive than Iron(Fe).

(iii) $Cu + ZnSO_4 \rightarrow$ No Reaction (because Zinc (Zn) is more reactive than copper (Cu).

(iv) $Ag + CaSO_4 \rightarrow$ No reaction (because Calcium (Ca) is more reactive than Silver (Ag).

5. With a suitable activity show that sulphur burns in air to form a compound which is acidic in nature.

Ans 5.Write activity -5 on page no- 51.

ST.MARY'S PUBLIC SCHOOL
SUB: SCIENCE (WORSHEET)
CLASS: VIII
Chapter- 4 " Materials: Metals and Non-metals"

Q.1 Write answer in one word:

a. Name a metal which can be cut with a knife.
b. Name the black material inside a pencil.
c. Write the nature of non-metallic oxides.

Q.2 Fill in the blanks:

a. Metallic oxides are _____ in nature.
b. Metals react with acids to produce _____ gas.

Q.3 State whether the statements are true or false and if the statements are false give reason.

a. Coal can be drawn into wires.
b. Magnesium cannot displace copper from copper sulphate solution.

Q.4 Why the immersion rods for heating liquids are made up of metallic substance?

Q.5 Why small amount of either copper or silver is added while making gold ornaments?

Q.6 Why a copper vessel is exposed to moist air for long acquires a dull green coating? Write the chemical equation involved.

Q.7 Why food items like curd is not stored in copper container?

Q.8 Complete the following equation and balance them.

a. $Al + HCl \longrightarrow$ _____ + _____

b. $Zn + H_2O \longrightarrow$ _____ + _____

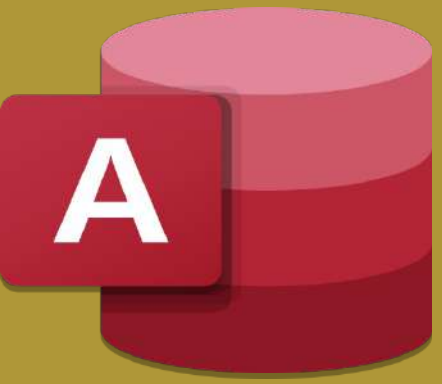
c. $P_2O_5 + H_2O \longrightarrow$ _____

d. $Cu + AgNO_3 \longrightarrow$ _____ + _____

Q.9 Write the uses of the following:

a. Silicon b. Lead c. Hydrogen d. Zinc

COMPUTER



CLASS-VIII

CHAPTER-2

Learn To Use Microsoft Access 2010

(Continuation of Ch-2)

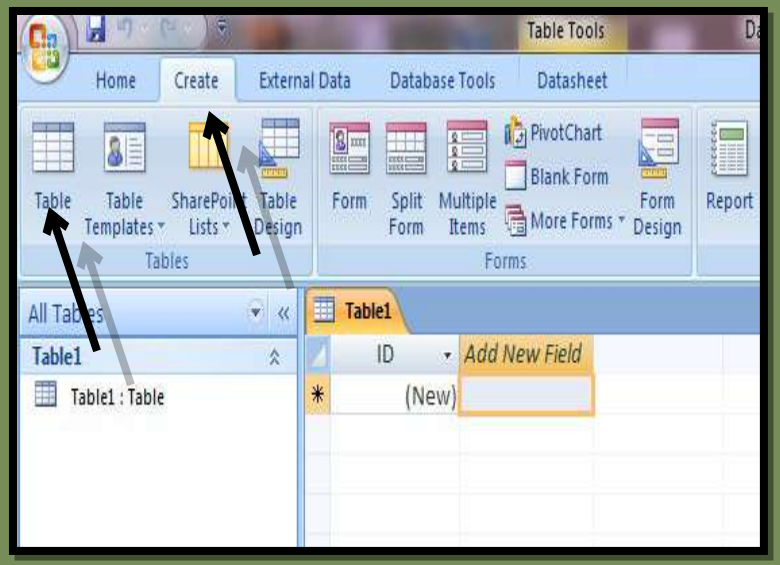
https://www.youtube.com/watch?v=dzooeYfDjng&feature=youtu.be

CONTENTS

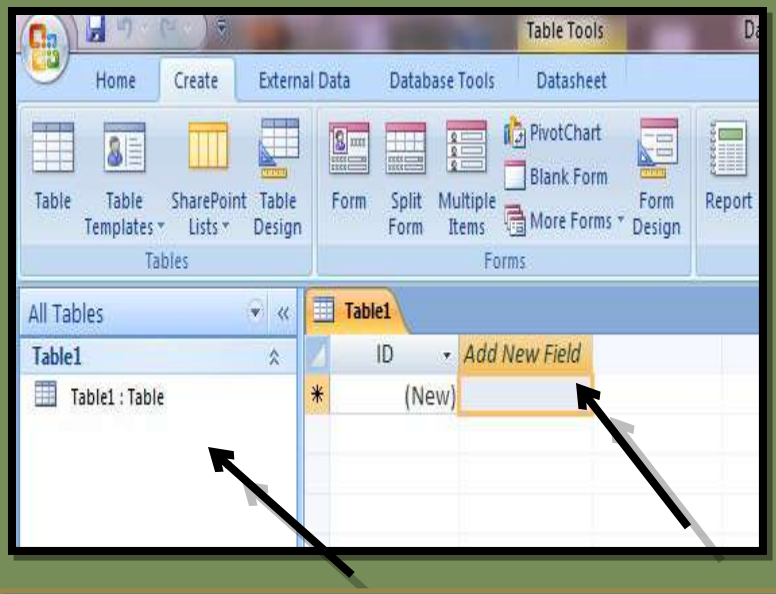
- Creating a table using Datasheet View
- Table Structure
- Creating a table using Design View
- Primary key
- Switching views
- Manipulating the data

Creating a table using Datasheet View

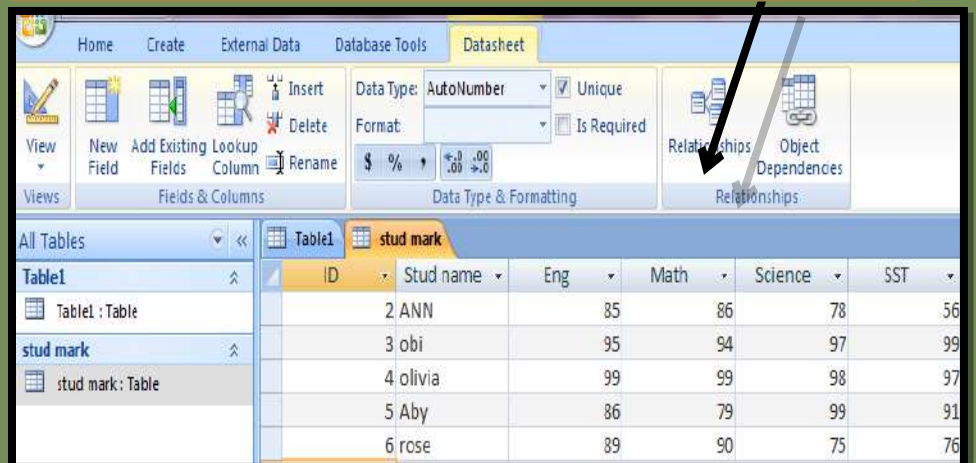
- Click the Create tab



Click the table and add column



Click the column and add data



Save the table and click ok.

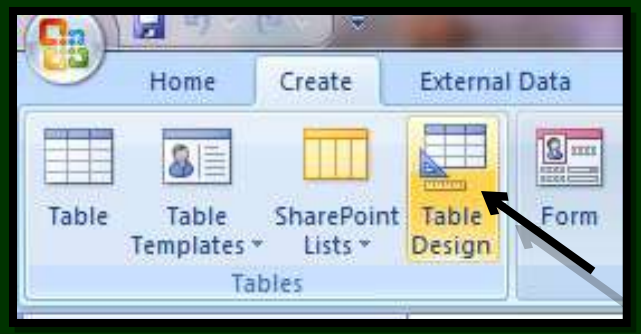
Table Structure

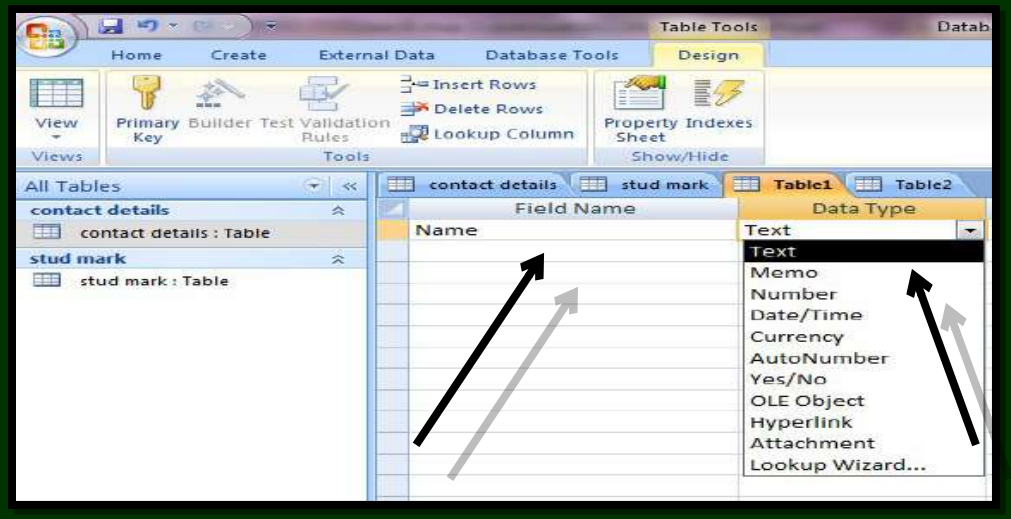
- The table structure indicates the name ,size , and type of various fields. Some data types are as follows:
- Text: The data type Text contains letters , numbers and symbols. The numbers in a text are considered as text.
- Number : The data type Number contains numeric values .For example:46,2204.
- Currency: Currency contains symbols for currency , decimal and commas .For example:$ 45.
- Date/Time : The data type Date/Time contains the date and time . For example 01/01/2000.
- Memo : Memo contains long text with all kinds of data.

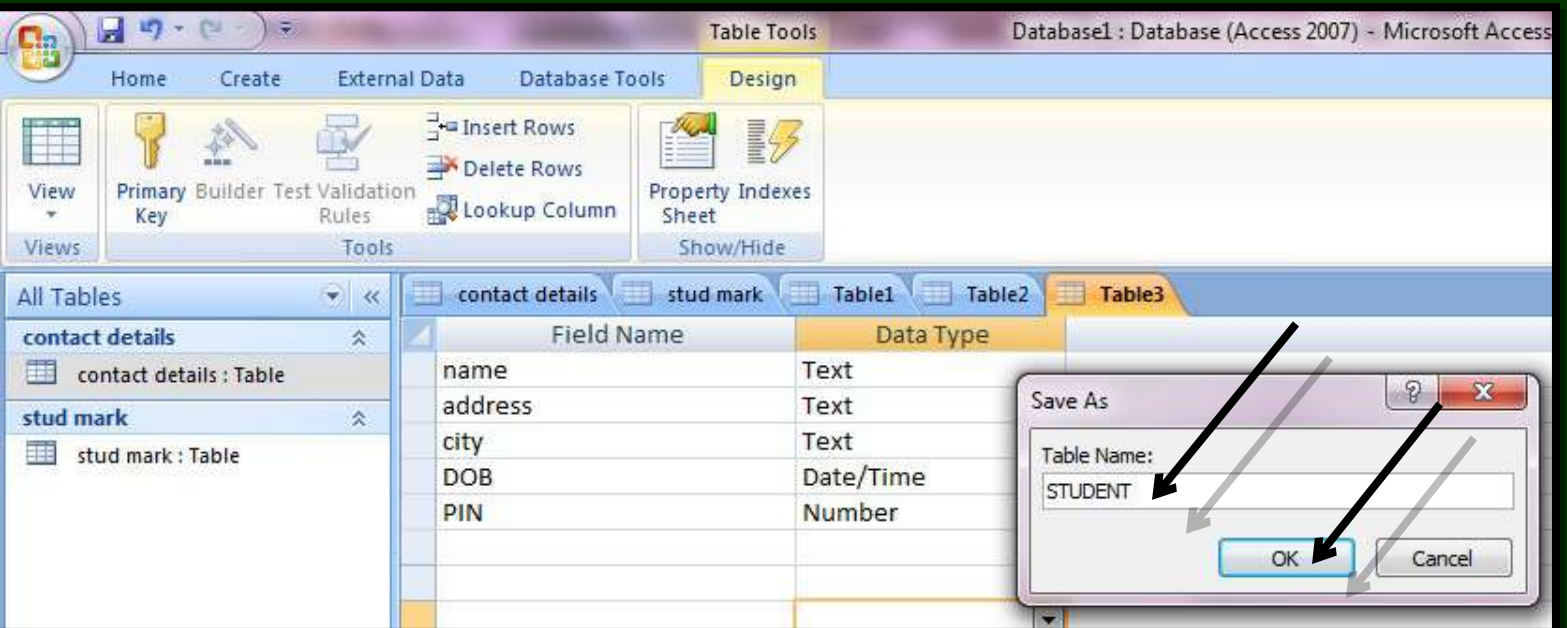
  For example: My name is Ben , I am 10 years old.
- Yes/No: It represent only one of the two value i.e. True/False or Yes /No or On/Off.

Creating a table using Design View

- Click Create tab

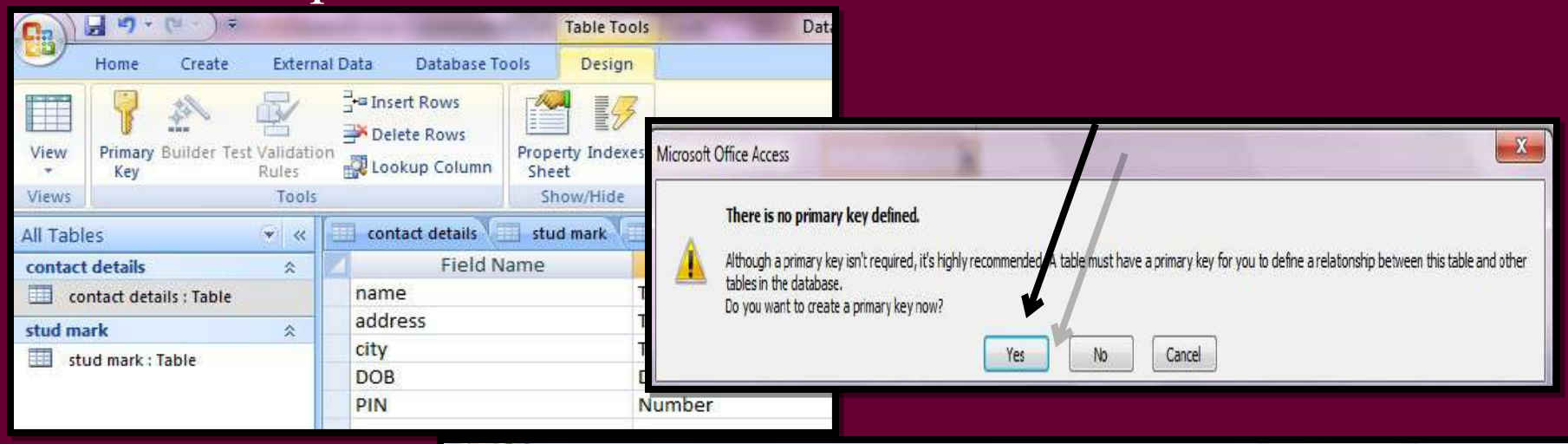


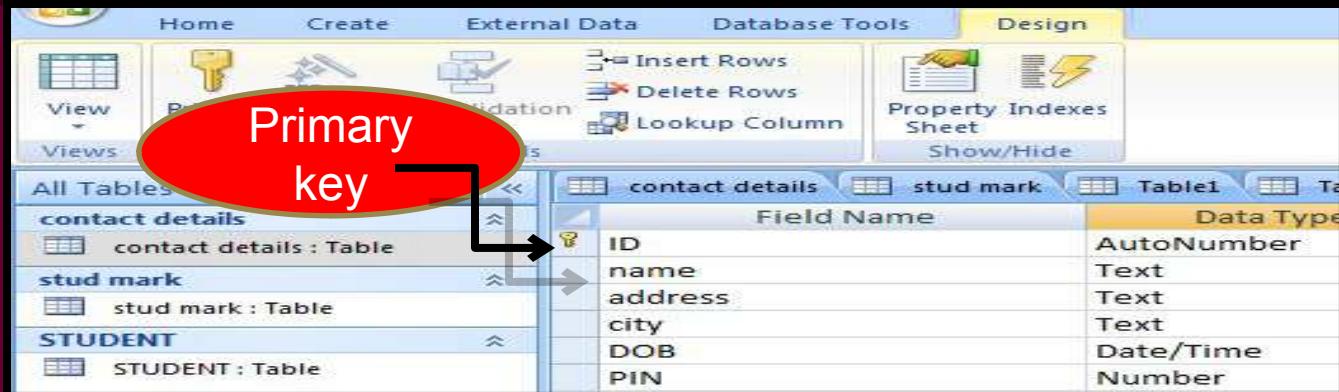




Primary Key

- A table should have atleast one field that has a unique value for each record . For example :Roll number/ID of each student.
- A primary key does not allow Null Values and must always have a unique value.

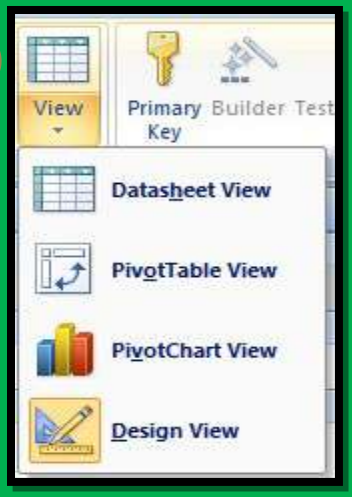




SWITCHING VIEWS

- Access provides different views to work with data . There are four views . They are
  - Datasheet View
  - PivotChart View
  - PivotTable View
  - Design View

Two Main views
1)Datasheet View(spreadsheet view)
2)Design View(table structure view)



Entering Data : The Datasheet View

To enter data into the table in the Datasheet View , type the value in the respective fields. Press the Tab key to move to the next field.

Manipulating the data

Manipulation means to make changes in the data . The following modification can be done on a table.

- Add a new record/row :Press the Tab key, to add a new record .
- Add a new field/column : Right-click on the column header and choose Insert field. A new field is inserted to the left of selected field.
- Update a Record : Click the cell you want to update and type the new value.
- Delete a row/column : Select the entire record/column by clicking on the row/column header an press the Delete key.

Do all question & answers in Notebook

1)What is a primary key ? State its use in a table.

Ans: Primary Key refers to one or more fields(columns) which uniquely identify each record in a table. A primary key does not allow null values and must always have a unique value. A primary key is used to relate a table to foreign keys in other tables.

2)What is the difference between Datasheet View and Design View in a table?

Datasheet View	Design View
It displays the view in a row/column format which allows you to view , enter or manipulate data	It displays the view which allows you to enter field names, data types and the description into your table.

Answers

3)Write short notes on the following data types:

a) Text b)Number c)Currency

Ans: Text: The data type Text contains letters, numbers and symbols. It can contain a combination of upto 255 characters .Example:Vita13

Number: The data type Number contains numeric values. It does not accept letters or other symbols except numbers. Example :2020.

Currency: The data type Currency contains symbols for currency, decimals and commas. Example:$45,

Answers

4)What are the manipulation operations that can be done on a table?

Ans: The manipulation operations that can be done on a table are (a) Add a new record/row (b) Add a new field/column

c) Update a record (d) Delete a row/column.

5)Write down the steps to create a table structure using design view.

- Click on Create tab on the Ribbon
- Click the Table design from the Tables group.
- Type the name of a field in the Field Name and press the Tab key to move to the Data Type column.

Answers

- An arrow appears for the drop down list in the Data Type column. Click the arrow and select the data type.
- Save the table after adding all your fields by clicking the Save button.
- Type the table name and click the OK button.

6) List the four types of views in a table.

Ans: The four types of views are

- Datasheet View
- PivotTable View
- PivotChart View
- Design View

WORKSHEET (Lesson -2)

Fill in the blanks:

1)The initial code name of MS Access was_____.

2)A_____ is used to extract information from a database.

3)The concept of relational database was given by_____.

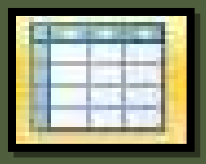
4)Microsoft Access is a _____ software.

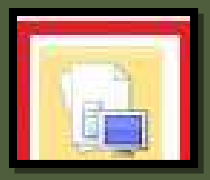
5)A primary key does not allow_____ values.

Identify the following icons and write their names.

1)  _____

3)  _____

2)  _____

4)  _____

Answers for Worksheet

Fill in the blanks:

1) Cirrus
2) Query
3) E.F Codd
4) Application
5) Null

Identify the following icons and write their names.

6) Table Design
7) Table
8) Blank database
9) Sample Templates

अर्धवार्षिक पाठ्यक्रम

- कक्षा 8 संस्कृत

- पाठ 3 - महताम् अपि महान् ,
- पाठ 4 - सुवचनानि ,
- पाठ 5 - श्रृगाल कथा ,
- व्याकरण - प्रत्यय , शब्द रूप , धातु रूप , वार्तालाप।

https://youtu.be/wgoi4maYpCk

संस्कृत
कक्षा-8

पाठः- 3

महताम् अपि महान्

महान से भी महान

- शिक्षकः - छात्रा ! किम् यूयम् जानीथ - महाराजा रणजीतसिंहः नेत्रेण काणः आसीत् ?
- शिक्षक - छात्रों ! क्या तुम सब जानते हो - महाराजा रणजीतसिंह एक आँख से काने थे ?
- शिष्याः - आम् ! वयम् जानीमः।
- शिष्यगण - हाँ ! हम सब जानते हैं।
- शिक्षकः - किम् इदम् अपि जानीथ यत् सः जन्मना काणः नासीत् ?
- शिक्षक - क्या यह भी जानते हो कि वह जन्म से काने नहीं थे ?
- शिष्याः - तर्हि कदा स काणः अभवत् ?
- शिष्यगण - तब फिर वह कब काने हुए ?
- शिक्षकः - काचित् वृद्धा पाषाणखण्ड-प्रहारेण तं नेत्रेण काणः अकरोत्।
- शिक्षक - किसी बुढ़िया के पत्थर मारने से वह आँख से काने हुए ।
- शिष्याः - किं वदति भवान् ? धिक् तां वृद्धाम्।
- शिष्यगण - आप क्या कहते हैं ? उस बुढ़िया को धिक्कार है।

- शिक्षकः - आम् ! आश्चर्यमिदम् यत् सः तस्यै वृद्धायै अन्नं धनं च अयच्छत् ।
- शिक्षक - हाँ ! यह आश्चर्य है कि उन्होंने उस बुढ़िया को अनाज और धन दिया।

- शिष्याः - किमर्थं सः एवम् अकरोत् ? भवान् महाराजा रणजीत सिंहस्य कथां श्रावयतु । अस्मभ्यं कथा अतीव रोचते।
- शिष्यगण - उन्होंने ऐसा किसलिए किया ? आप हम सबको महाराजारणजीतसिंह की कहानी सुनाइए। हमें कहानी बहुत अच्छी लगती है।

- शिक्षकः - श्रृणुत! एकदा सः भटैः सह ग्रामम् अगच्छत्। तत्र सः स्वमित्रस्य गृहं प्रति अगच्छत् तदा एव तस्य नेत्रे एकम् पाषाणखण्डम् अपतत्। एका वृद्धा तत् पाषाणखण्डम् अक्षिपत्। सैनिकाः शीघ्रम् एव तां वृद्धां अभितः अतिष्ठन् तस्यै अक्रुध्यन् च।
- सुनो ! एक बार वह सेवकों के साथ गाँव में गए । वहाँ वे अपने मित्र के घर की ओर जा रहे थे तभी उनकी आँख पर एक पत्थर गिरा। एक बुढ़िया ने वह पत्थर फेंका था । सैनिक जल्दी बुढ़िया के चारों ओर खड़े हो गए और क्रोध करने लगे।

- तदा महाराजा रणजीतसिंहः तां वृद्धां अपृच्छत् - " त्वं मां किमर्थम् अमारयः ?" सा अवदत् - "न, न। अहं भवन्तं न अमारयम् । अहं मम शिशवः च क्षुधिताः आसन् । अहं वृक्षात् फलं पातयितुम् ऐच्छम् । अतः फलाय पाषाण खण्डान् अक्षिपम्।" महाराजा अवदत् - " अहम् अवजानम् । त्वं गच्छ । " भटेभ्यः च आदेशम् अयच्छत् यत् तस्यै वृद्धायै पर्याप्तम् अन्नं धनं च यच्छेत्।
- तब महाराजा रणजीतसिंह ने उस बुढ़िया से पूछा - "तुमने मुझे किस लिए मारा ?" वह बोली - "नहीं, नहीं। मैंने आप को नहीं मारा । मैं और मेरे बच्चे भूखे थे । मैं पेड़ से फल गिराना चाहती थी। इसलिए फल के लिए पत्थर फेंका ।" महाराजा बोले - "मैं समझ गया I तुम जाओ ।" और सेवकों को आदेश दिया कि उस बुढ़िया को काफ़ी अनाज और धन दो।

- एकः सैनिकः अवदत् - "महाराज! इयं त्वाम् पाषाणखण्डेन अमारयत् भवान् च तस्पै दण्डं यच्छेत्I"

महाराजा अवदत्- "न माम् , सा वृक्षं मारयति स्म I तदापि वृक्षः तस्यै फलं यच्छति अहं च पुनः नृपः अस्मि ।“

- एक सैनिक बोला - "महाराजा! इसने आपको पत्थर से मारा और आपको इसे दंड देना चाहिए ।" महाराजा बोले - "मुझको नहीं , वह वृक्ष को मार रही थी । तब भी पेड़ उसको फल देता है मैं तो फिर राजा हूँ।"

सम्प्रति लेखनीयम्

- (एकपदेन उत्तरत) एक पद में उत्तर दीजिए-
- (क) महाराजा रणजीतसिंह: केन काण: आसीत्?
- नेत्रेण
- (ख) रणजीतसिंहं का काण: अकरोत्?
- एका वृद्धा
- (ग) महाराजा कै: सह ग्रामम् अगच्छत्?
- भटैः
- (घ) महाराजा कस्मै अन्नं धनं च अयच्छत्?
- वृद्धायै
- (ङ) सा कं मारयति स्म?
- वृक्षम्

- स्थूलानि पदानिआधारीकृत्य प्रश्ननिर्माणं कुरुत।

स्थूल पदों के आधार पर प्रश्ननिर्माण कीजिए-

- उदाहरणम्- राजा वृद्धायै अन्नं धनं च अयच्छत्।
  राजा वृद्धायै किम् अयच्छत्?
- (क) स स्वमित्रस्य गृहं प्रति अगच्छत्।
  स कस्य गृहं प्रति अगच्छत्?
- (ख) सैनिकाः तां वृद्धाम् अभितः अतिष्ठन्।
  के तां वृद्धाम् अभितः अतिष्ठन्?
- (ग) भटेभ्यः सः आदेशम् अयच्छत्।
  केभ्यः सः आदेशम् अयच्छत्?
- (घ) इयं त्वाम् अश्मेन अमारयत्।
  इयं त्वाम् केन अमारयत्?
- (ङ) एकदा सः भटैः सह ग्रामं अगच्छत्।
  एकदा सः कैः सह ग्रामं अगच्छत्?

निम्नलिखित वाक्यानि कः कम् प्रति उक्तवान्?

- किसने किससे कहा?
- (क) त्वं मां किमर्थम् अमारय:?

  कः - रणजीतसिंह: , कम् - वृद्धाम्
- (ख) इयं त्वाम् *अश्मेन* अमारयत्।

  कः - सैनिक: , कम् - रणजीतसिंहम्
- (ग) मम शिशवः क्षुधिता: आसन्।

  कः - वृद्धा: , कम् - महाराजम्
- (घ) अहम् अवजानम्। त्वं गच्छ।

  कः - रणजीतसिंह: , कम् - वृद्धाम्

कथानकक्रमानुसारेण पुनर्लिखित।

दिए गए वाक्यों को कथानक के क्रम अनुसार पुनः लिखिए-

- (क) महाराजा रणजीत सिंह: नेत्रेण काणः आसीत्।
- (ख) सः जन्मना काणः न आसीत्।
- (ग) वृद्धा पाषाणखण्ड-प्रहारेण तं काणः अकरोत्।
- (घ) अहं फलाय पाषाणखण्डान अक्षिपम्।
- (ङ) सः तस्यै वृद्धायै अन्नं धनं च अयच्छत्।
- (च) सा त्वाम् पाषाणखण्डेन अमारयत्।
- (छ) भवान् च तस्यै दण्डं यच्छेत्।
- (ज) वृक्षः तस्यै फलं यच्छति, अहं च पुनः नृपः।

भाषा अवबोधनम्

कोष्ठकात् समुचितानि विकल्पानि चित्वा रिक्तस्थानानि पूरयत।

कोष्ठक से उचित विकल्पों को चुनकर रिक्त स्थानों की पूर्ति कीजिए -

- (क) मार्गम् उभयतः वृक्षाः सन्ति।
- (ख) बालकः जनकेन सह गच्छति।
- (ग) सः भिक्षुकः कर्णाभ्याम् बधिरः।
- (घ) अधुना रामः गृहम् प्रति अगच्छत्।
- (ङ) मोहनः इदं पुस्तकं कस्मै दास्यति ?
- (च) मह्यम् फलं रोचते।

निम्नलिखित वाक्यानि उपपदविभक्ति-अनुसारेण शुद्धानि कुरुत।

निम्नलिखित वाक्यों को उचित उपपद विभक्ति के अनुसार शुद्ध कीजिए-

- उदाहरणम्- राजा भटान् आदेशं अयच्छत्।
  राजा भटेभ्यः आदेशं अयच्छत्।
- (क) मार्गस्य उभयतः वृक्षाः सन्ति।
  मार्गम् उभयतः वृक्षाः सन्ति।
- (ख) पुस्तकस्य विना कथं पठिष्यसि?
  पुस्तकम् विना कथं पठिष्यसि?
- (ग) मां शीतलं जलं रोचते।
  मह्यम् शीतलं जलं रोचते।
- (घ) बालकः जनकेन प्रश्नं पृच्छति।
  बालकः जनकम् प्रश्नं पृच्छति।
- (ङ) छात्राः गुरवे प्रश्नं पृच्छन्ति।
  छात्राः गुरुम् प्रश्नं पृच्छन्ति।

मञ्जूषायाः उचितशब्दैः वाक्यानि पूरयित्वा पुनःलिखत।

मंजूषा से उचित शब्द चुनकर वाक्यों को पूरा कीजिए- (सर्वदा, अपि, कदा, यत्, सह, केन)

- (क) सीता रामेण सह गच्छतिI
- (ख) त्वम् कदा पठिष्यसि?
- (ग) अहम् अपि फलं खादामि।
- (घ) यत् कार्यं कुरु परिश्रमेण कुरु।
- (ङ) सः केन काणः अभवत्?
- (च) पुत्र! सर्वदा सत्यं वद।
- **सूक्तिः**
- ॥ अहिंसा परमो धर्मः ॥
- (अहिंसा ही सबसे बड़ा धर्म है।)

कक्षा - आठवीं

पाठ – 6
पुष्प

लिंक अवश्य देखें

https://youtu.be/Ke9SlVMcfUg

6 पुष्प

प्रस्तुत कविता में फूलों के महत्व को बताते हुए कवयित्री यह संदेश देना चाहती हैं कि हमें भी फूलों की सुगंध के समान अपने सद्गुणों तथा अच्छाइयों को समाज में बिखेरना चाहिए।

सुगंधित हैं स्वयं, और
सुगंध चारों ओर फैलाते हैं,
रंग-बिरंगे फूलों को देखो,
जुड़-जुड़ कर सुंदर माला बन जाते हैं।

हर **अवसर** पर भूमिका इनकी,
अलग-अलग ही होती है
जैसी भी हम माँग करते हैं,
गुच्छे में हों या पंखुड़ियों में
पूर्ति सबकी ये करते हैं।

कहीं तो धागे में पिरोकर
माला का निर्माण करते हैं,
कहीं मंदिर में या दरगाह पर
हम **अर्पित** इन्हें करते हैं।

शुभ कामना का **संदेश** पहुँचाने वाला भी यही
वीरों के पथ पर बिखरने वाला भी यही
मृतक को **श्रद्धांजलि** देने वाला भी यही
जन्मदिवस का तोहफ़ा बनने वाला भी यही

कहीं रोगी की चिकित्सा के लिए
दवा बन जाते हैं,
तो कहीं वर-वधू के गले का
हार बन जाते हैं।

मौका खुशी का हो या गम का
पुष्प सदैव मानव का साथ देते हैं।

-वंदना चड्ढा

[illegible], [illegible] में सुन्दर एवं टंकण की सरलता हेतु कुछ वर्ष पहले कुछ शब्दों में परिवर्तन हुआ [illegible] - [illegible], इन्सान - इनसान, महत्त्वपूर्ण - महत्वपूर्ण, कर्त्तव्य - कर्तव्य, [illegible] - [illegible] इत्यादि। व्याकरण की दृष्टि से दोनों ही प्रकार के शब्दों को सही माना जाता है।

पुष्प कविता - भावार्थ

यह कविता हमें फूलों से प्रेरणा प्राप्त कर मुस्कराते रहने की सीख देती है॥ रंग बिरंगे फूल सुगंध बिखेरते है इन्ही फूलों से माळा बनती है। हर मौके पर अलग अलग भूमिका निभाने वाले फूल शुभकामना देने और मृतक को श्रद्धांजली देने में काम आते हैं।

सभी प्रश्न – उत्तर कॉपी में करें।

मौखिक

1 फूल

2 माला

3 फूल

लिखित

1 शुभकामना देने और मृतक को श्रद्धांजली देने में काम आते है, मंदिर व दरगाह में चढाए जाते है फूलों से सुंदर माला बनायी जाती है।

2 देवी देवताओं को फूलों की माला चढाई जाती है, उनके चरणों में पुष्प अर्पित किए जाते है, बिना फूलों के पूजा अधूरी मानी जाती है।

सभी प्रश्न – उत्तर कॉपी में करें।

लिखित

3. सुख मे फूलों का साथ तब होता है, जब किसी का जन्मदिन सालगिरह या पूजा के अवसर हो दुख में किसी रोगी की दवा बनाते वक्त बीमार को शीघ्र ठीक होने की कामना करने के लिए फूल भेजे जाते हैं। मृतक को श्रद्धांजली देने में काम आते हैं।

4. फूलों से एनेक प्रकार की दवाईयाँ बनाई जाती है, गुलाब की पंखुडियाँ त्वचा के रोग ठीक करने में सहायक होती हैं

ब) **दीर्घ उत्तरीय प्रश्न** (Long Answer Questions)—

1. फूल मंदिर में मूर्तियों पर व दरगाह पर चढ़ाए जाते हैं। फूलों से माला बनती हैं। फूलों से गुलकंद इत्यादि दवाइयाँ बनाई जाती हैं। किसी के जन्मदिवस पर फूलों का गुलदस्ता भेजा जाता है। मृतक को फूलों से पुष्पांजलि दी जाती है।

2. फूलों के साथ काँटों का होना सकारात्मक सोच है क्योंकि जीवन में भी सुख-दुख साथ-साथ चलते हैं। रात-दिन को भी कोई अलग नहीं कर सकता। उसी प्रकार फूलों के साथ काँटों का होना भी स्वाभाविक है। यदि दिन ही दिन होगा तो रात का महत्व नहीं, यदि अच्छा ही अच्छा होगा तो उसका महत्व समाप्त हो जाएगा। यदि जीवन में संघर्ष नहीं तो जीवन का महत्व नहीं। इसी प्रकार काँटों के बिना फूलों का महत्व नहीं।

3. **फूलों की भूमिका** —

तोहफ़े के रूप में — किसी भी व्यक्ति के शुभावसर पर हम फूल या गुलदस्ता भेजकर शुभकामना का संदेश देते हैं। किी के जन्मदिवस पर फूलों पर फूलों की सजावट की जाती है। दीपावली इत्यादि पर फूलों के हार मूर्तियों पर चढ़ाकर पूजा की जाती है। शुभावसरों पर फूलों के बंदनवार बनाकर दरवाजों पर लगाए जाते हैं।

4. श्रद्धांजलि के रूप में — जिस प्रकार शुभावसरों पर फूलों का महत्व है, उसी प्रकार पुष्प दुख में भी हमारा साथ देते हैं। किसी मृतक को पुष्पांजलि देने में फूलों का प्रयोग किया जाता है। रोगी को शीघ्र स्वस्थ होने की आशा में फूलों का गुलदस्ता पहुँचाया जाता है।

ग) निम्नलिखित पंक्तियों का भावार्थ लिखिए–

उपर्युक्त पंक्तियों में कवियत्री ने पुष्पों का महत्व बताते हुए यह कहा है कि हमारे देश के वीर जब देश के लिए प्राणों का बलिदान देने जाते है तो वे जिस मार्ग से होकर जाते हैं, उन्हें सम्मान देने के लिए उस मार्ग पर फूल बिखेरे जाते हैं। किसी

मृतक के प्रति सम्मान, आदर या स्नेह का भाव दर्शाने के लिए भी पुष्पांजलि दी जाती है।

(घ) दिए गए प्रश्नों के लिए उत्तर का सही (✓) विकल्प चुनिए–

1. (क) सुगंध
2. (ख) मूर्ति पर
3. (ग) दोनों
4. (ग) सफ़ेद और रंगीन

भाषा की बात

(क) निम्नलिखित रेखांकित कारक परसर्गों के भेद बताइए–

1. की – संबंधकारक
2. को – संप्रदान कारक (देने का बोध हो तो 'को' विभक्ति के साथ संप्रदान कारक होता है।
3. पर – अधिकरण कारक
4. से – करण कारक (साधन)
5. से – अपादान कारक (पृथक होने का बोध)

(ख) निम्नलिखित शब्दों के दो-दो पर्यायवाची शब्द लिखिए–

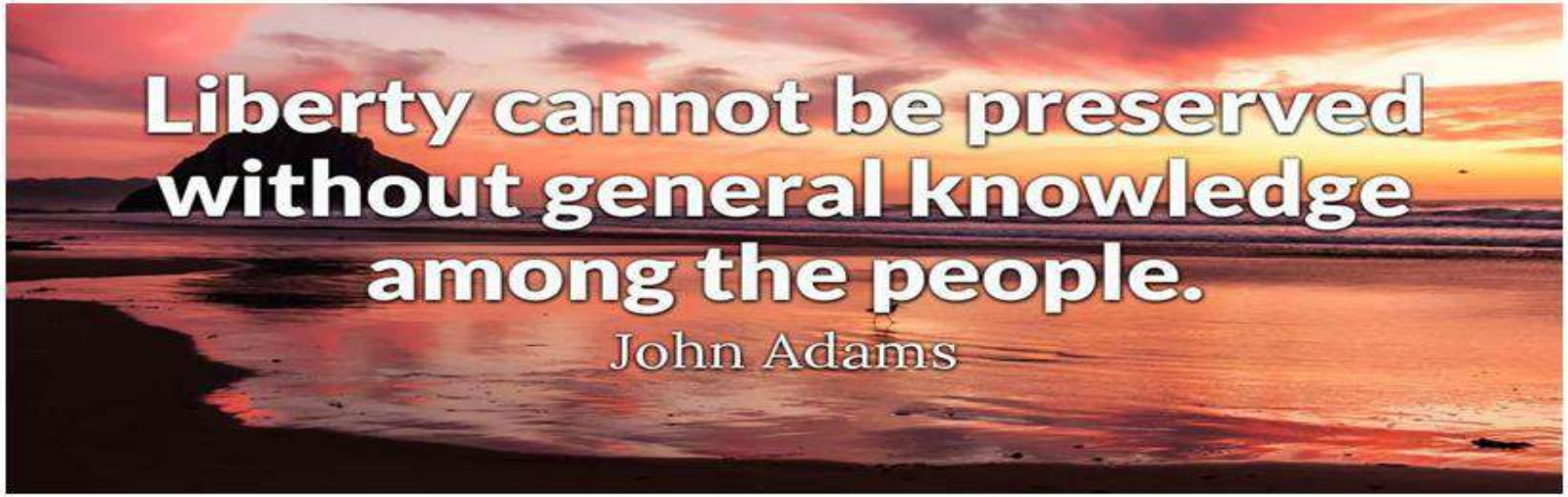
1. पुष्प, सुमन
2. देवालय, शिवालय
3. उपहार, भेंट
4. मनुष्य, इनसान

(ग) शब्दों की वर्तनी शुद्ध करके उन्हें पुनः लिखिए–

1. सुगंध
2. अर्पित
3. भूमिका
4. श्रद्धांजलि

GENERAL KNOWLEDGE

CLASS VIII



Life in the Desert

Desert plants which have been adapted themselves to desert conditions.

Click on link for understanding the concept of this topic

https://youtu.be/roHAByCaYmg

Barrel cactus :

Barrel cactus are cultivated by plant nurseries as an ornamental plant. They are considered easy to grow and relatively fast growing. **Barrel cactus** can fall over because they grow based on sun orientation. They usually grow towards the south to prevent surface tissue sunburn, giving the name "compass **cactus**

The whole of the barrel cactus is designed to retain water. Spines serve not only as a defense mechanism against hungry **desert** animals, they also provide some shading to the plant. The stem is covered in a thick, waxy coating that seals the plant, protecting it from excessive evaporation.

Old Man Cactus

This **cactus** may look funny, but that Grandpa-like hair actually helps the **cactus survive in** the **desert** by blocking the **desert** sun's harmful rays. Therefore helping the **cactus** retain water and not dry out.

Prickly Pear Cactus

There are many adaptations that the pancake **prickly pear cactus** has to the Sonoran **Desert**. **Cacti** have reduced their leaves to spines to reduce water loss and to protect the **cactus**. The roots of the **prickly pear cactus** are also made for very dry environment to help adapt to the **deserts** hot weather

Fishhook Cactus

This **cactus**, which is most commonly found in the Sonoran **Desert**, is small and round! It has long spines that look like **fish hooks**, which is how it got its name.
This **cactus**, like others, survives through photosynthesis

Saguaro Cactus

The **saguaro cactus** is a master of **desert survival**. Every aspect of this plant is specifically designed to thrive in the sometimes harsh Sonoran **Desert**. The skin of the **saguaro cactus** covered with a thick waxy coating that waterproofs the plant, and reduces water lost to the air through transpiration

SPORT LEGENDS

Click on link for understanding the concept of this topic

Sportsperson who have been exceptional in the sports

https://youtu.be/8judNDmsnaU

Jesse Owens

He was an American athlete. He is best remembered for his performance at the 1936 Berlin Olympics, where he won gold medals in the long jump, the 100 and 200 metre dashes, and the 4 x 100-metre relay. He was the first American track and field athlete to win four gold medals at a single Olympic Games.

Diego Maradona

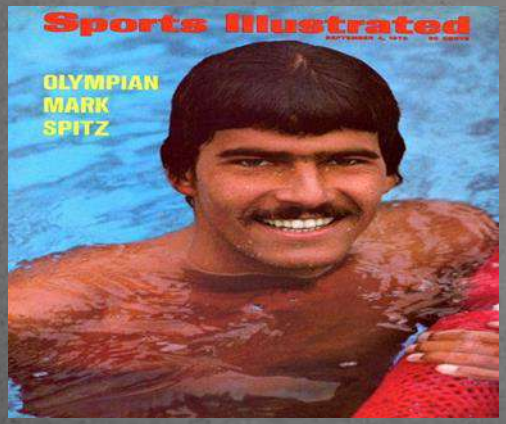
Diego Maradona was born on 30th October 1960 in Lanus, Buenos Aires . He is an Argentine former football player. He won the World Cup in Mexico in the year of 1986.

Sugar Ray Robinson

Sugar Ray Robinson (May 3, 1921,- April 12, 1989, Los Angeles) was an American professional boxer who competed from 1940 to 1965. After his boxing career ended, **Robinson** attempted a career as an entertainer, but it was not successful.

Magic Johnson

Magic Johnson (born August 14, 1959 in Michigan) is an American retired NBA basketball player. He won the NBA Championship in 1980, 1982, 1985, 1987 and 1988 all with the Los Angeles Lakers.



Mark Andrew Spitz

He was born on February 10, 1950 and is an American former competitive swimmer and nine-time Olymp ic champion. He was the most successful athlete at the 1972 Summer Olympics in Munich, winning seven gold medals, all in world record time.

WORKSHEET

General Knowledge

A. Unscramble the words and write the correct answer.

1. It is the longest mountain chain . _____SNDAE

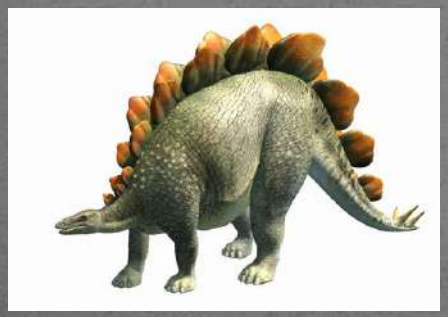
2. Pablo Picasso and other artists of the 20th century developed this style of painting , which looked like little cubes. _____CMBUSI

3. The eyes of this animal appear to glow red in dark light. _____LSREUM

4. Which Italian Football Club is nicknamed Rossoneri ? _____CA ILANM

5. It refers to a technology that is used in digital watches , television and many portable computers. _____CDL

B. Identify the following and write their name.



_____ _____ _____ _____

C. Name the countries to which the following belong.

1. Bedouin tribes _____
2. Weinston Churchill _____
3. Tom yum _____
4. Mount Pinatubo _____
5. Ankara _____
6. Jigme Khesar Namgyel Wengchuck _____
7. Usain Bolt _____
8. Kyat _____

D. Answer the following :

1. Name the first dinosaur to be described and named.

   _____

2. Who was the first person in history to win both Nobel prize and Oscar ?

   _____

3. Who invented the first computer mouse?

   _____

4. Which country in the MiddleEast became independent on 14th May 1948?

   _____