"Winter is the time for comfort, for good food and warmth, for the touch of a friendly hand and for a talk beside the fire: it is time for home."

- Edith Sitwell

Greeting!!!

Dear Students,

We hope your holiday preparations are underway and that you are enjoying your time with your family.

Cold weather and winter months can be hazardous. Plan ahead to stay safe and healthy.

General Instruction for the Winter Assignment:

- All the written work of the Winter Assignment is to be done on the loose sheets.
- Handwriting should be clear and legible.
- Project work/ Winter Assignment needs to be neat, creative and is to be done by the student only.
- The attempted work should be kept in safe custody as it is to be submitted to the concerned teacher once the school reopens.

Winter Assignment

Grade: 7th **Subject: Science**

Overview

Kingdom Plantae:

Plantae is the plant kingdom that contains all plants on the earth. They are multicellular eukaryotes. Characteristically, they contain a rigid structure that surrounds the cell membrane known as the cell wall. Plants also have a green-colored pigment known as chlorophyll that is quite vital for photosynthesis. Hence, they have an autotrophic mode of nutrition.

Biologist Whittaker provided us with the Five Kingdom Grouping, categorizing all the living organisms into

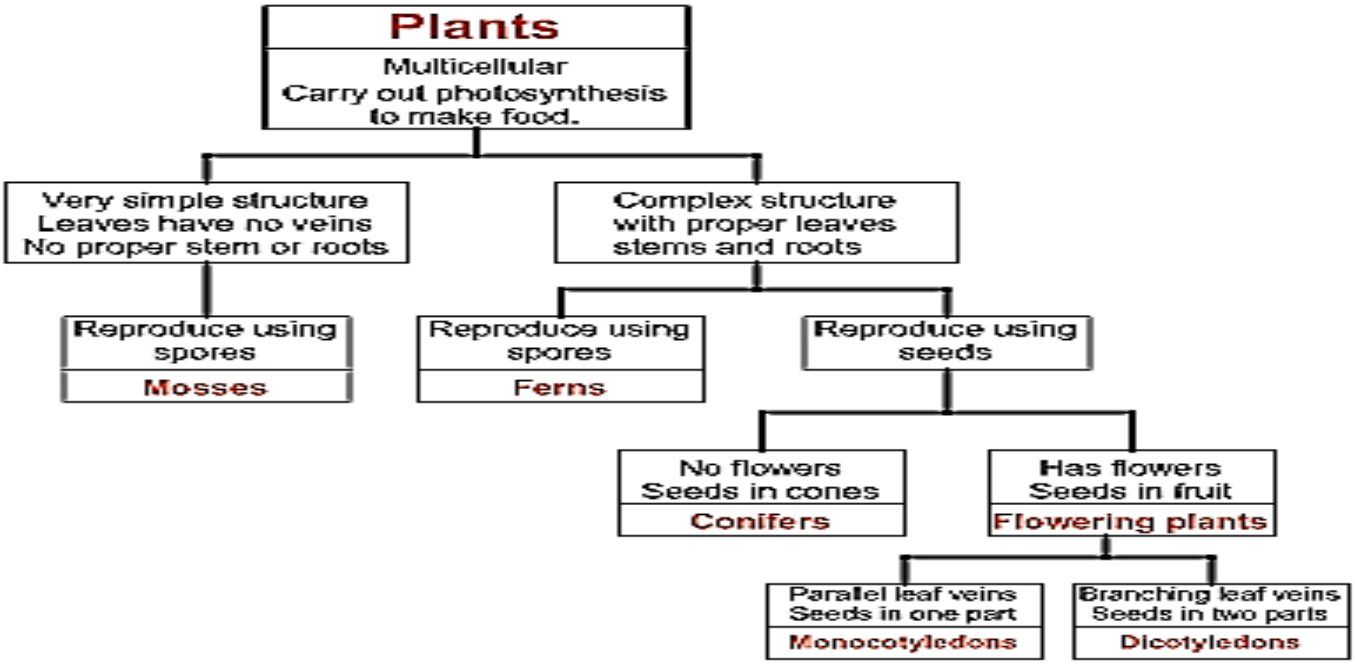
five territories – Protista, Monera, Fungi, Plantae, and Animalia.

Classification of Plants: Considering all these features, the plant kingdom has been separated into five subgroups. They are as follows:

1. Thallophyta 2. Bryophyta 3.Pteridophyta
4. Gymnosperms 5. Angiosperm

Classification of Angiosperms:

Based on the types of cotyledon existing, angiosperms are separated into two classes. They are monocotyledons and dicotyledons. The dicotyledonous angiosperms have two (2) cotyledons in their seeds and the monocotyledonous angiosperms contain one (1) cotyledon.



Worksheet

I. Multiple Choice Questions. Choose the correct answer.

1. ……is the sub kingdom which are spore producing plants that do not produce seeds and flowers.

a) cryptogamae b) phanerogamae c) phaeophyceae d) rhodophyceae

2. The sub-kingdom Phanerogamae is also called as …….

a) non seed plants b) non visible plants c) seed plants d)hidden plant

3. ……..Is a type of algae which have cellulose and algin present in the cell wall.

a) Chlorophyceae b) Phaecophyceae c) Rhodophyceae d) Bryophyta

4. In the bryophytes, true roots are absent ……..are present.

a) vascular tissue b)agar c)pectin d)rhizoids

5.…… are the only cryptogams with vascular tissue and also known as 'vascular cryptogams'.

a) Pteridophyta b) Mosses c) Protonema d) Leafy stage

6. In the Pteridophyte, xylem consists of only tracheids and phloem consists of only …….

a) epithelial cells b) squamous cells c) sieve cells d) columnar cells

9. In the monocotyledonae,…….. Cotyledon is present in the embryo.

a) one b) two c) three d) four

10. …… are the non-flowering plants and produces naked seeds.

a) Gymnosperms b) Molluscans c) Herbs d) Dimorphic

11) In the gymnosperms……are present but it is absent in the Angiosperms.

a) Double fertilization b) Triploid endosperm c) Ovary d) Archegonia

12) The cones that bears megasporophylls with ovules are known as……..

a) androcium b) female strobili c) female egg d) female ovum

13) Bryophytaare mostly terrestrial and are dependent on external water for the fertilization, Hence it is called as …….

a) reptilian plants b)amphibian plants c) molluscan plants d) avian plants

14) The two main categories of plants recognized based on whether they produce fruits or not

a)biennials and annuals b)angiosperms and gymnosperms

c)Herbs and shrubs d)bryophyta and pteridophyte

14)Unicellular organisms with a proper nucleus are known as

a)protista b)monera c)fungi d)algae

15)Amoeba belongs to

a) monera b) protist c) fungi d) Algae

II. Give two characteristics and one example of each of the following:

1. Fungi 2. Monocot
3. Dicot 4.Bryophyta
5. Pteridophytes

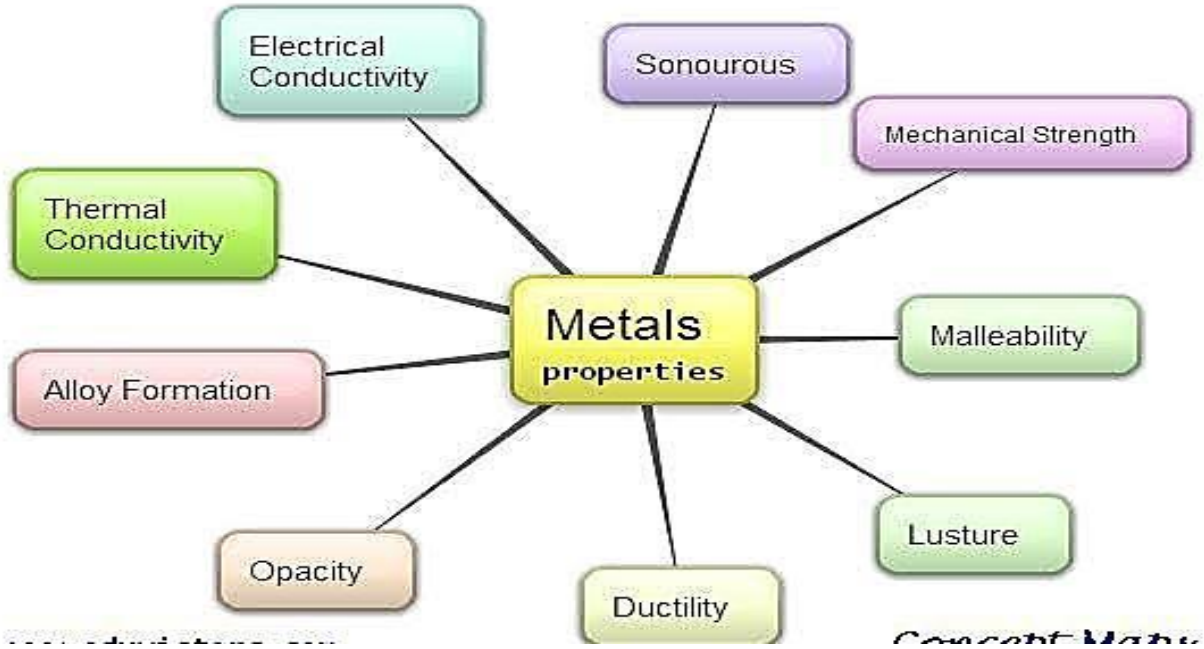
III. Match the items given under Column I with those under Column II

	Column I		**Column II**
1	Bread mold	a	has chlorophyll
2	Spirogyra	b	leaves with spores
3	Moss	c	naked seeds
4	Fern	d	saprophyte
5	Gymnosperm	e	has rhizoids

Metals and Non Metals

Overview:

- Elements can be categorized into metals and non-metals.
- Metals are shiny, ductile, malleable and are good conductors of electricity and heat.
- At room temperature, all metals are solids, mercury being an exception which is a liquid.
- Metallurgy is the study of metal extraction from their ores and later their refinement.
- Non-metals are neither ductile nor malleable.
- They are bad conductors of electricity and heat, graphite being an exception, which conducts electricity.



Difference between physical properties of metals and Non-metals

Metals	Non-metals
Malleable (can be beaten into sheets)	Non-malleable
Ductile (can be drawn into wires)	Non-ductile
Lustrous (shining surface)	Non-lustrous (except iodine)
Sonorous (make a ringing sound)	Non-sonorous
Good conductors of heat and electricity	Poor conductors of heat and electricity
High boiling and melting points	Low melting and boiling points

Assignment

I. Crossword Puzzle.

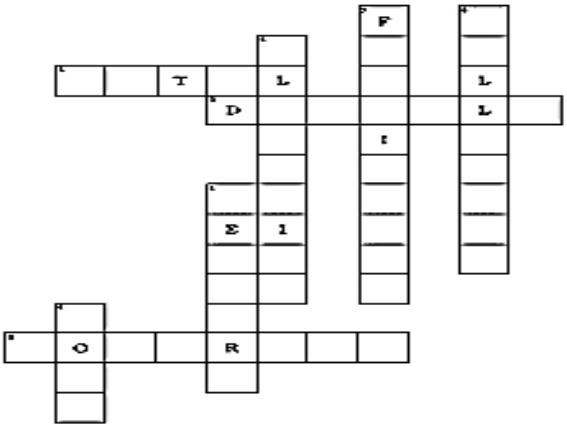


Fig 4.3

Across

- 1. Which is generally hard, ductile, malleable and sonorous.
- 2. A metal is called so it can be drawn into wires.
- 3. Metal bells are used because of this property.

Down

- 4. A metal generally used for making jewellery.
- 5. A metal which is liquid at room temperature.
- 6. A metal which reacts with acid as well as base to form hydrogen gas.
- 7. Substances used to enhance the growth of plants.
- 8. Property by virtue of which metals can be beaten into thin sheets.

Common Alloys and their uses

Overview:

Alloys:

- A solid mixture of two or more metals or metals and non-metals.
- Alloys have properties highly different than their constituents.
- Properties of a metal are improved by alloying. For example, pure iron is soft but gets hard and strong when alloyed with 0.05% Carbon

Worksheet.

I. Multiple Choice Questions: Choose the Correct Answer:

1. Aluminium is used for making cooking utensils. Which of the following properties of aluminum are responsible for the same?

(i) Good thermal conductivity (ii) Good electrical conductivity

(iii) Ductility (iv) High melting point

(a) (i) & (ii) (b) (i) & (iii) (c) (ii) & (iii) (d) (i) &(iv)

2. The most abundant metal in the earth's crust is

(a) iron (b) aluminium (c) calcium (d) sodium

3. The poorest conductor of heat among metals is
(a) lead (b) mercury (c) calcium (d) sodium
4. Which property of metals is used for making bells and strings of musical instruments like Sitar and Violin?
(a) sonoroity (b) malleability (c) ductility (d) conductivity
5. Which of the following non-metal is lustrous?
(a) sulphur (b) oxygen (c) nitrogen (d) iodine
6. The atomic number of an element 'X' is 12. Which inert gas is nearest to X?
(a) He (b) Ar (c) Ne (d) Kr
9. Galvanisation is a method of protecting iron from rusting by coating with a thin layer of
(a) galium (b) aluminium (c) zinc (d) silver
10. An element X is soft and can be cut with a knife. This is very reactive to air and cannot be kept open in air. It reacts vigorously with water. Identify the element from the following
(a) Mg (b) Na (c) P (d) Ca
11. Amalgam is an alloy of
(a) copper and tin (b) mercury (c) lead and tin (d) copper and zinc
12. The electronic configurations of three elements X, Y and Z are X — 2, 8; Y — 2, 8, 7 and Z — 2, 8, 2. Which 'of the following is correct?
(a) X is a metal (b) Y is a metal
(c) Z is a non-metal (d) Y is a non-metal and Z is a metal

II. Fill in the blanks

1. Elements can be classified as …… and ……. .
2. Two examples of metals which are poor conductors of heat are ……, …… .
3. Two metals which melt when kept on the palm are ……, …… .
4. A non-metal which is a good conductor of electricity is …… .
5. Metals can form positive ions by …… .
6. A non-metal which is lustrous is …… .
7. A metal which burns in air with a dazzling white flame is …… .
8. Metals which are so soft that they can be cut with a knife are ……, ……

Atomic Structure

Overview:

Everything in this universe is made up of matter. Matter is defined as any substance that has mass, occupies volume and may be perceived by the senses.
Exception: Phenomena like heat, electricity, light, sound, magnetism, vaccum, shadow are not matter because they have no mass and does not takes up space.

- Matter is made up of small particles. The particles of the matter are very small. We cannot see them even with a high power microscope.
- The particles of the matter have following characteristics

- Matter is made up of small particles.
- The particles in the matter have spaces between them. This space is called inter molecular space.
- The particles in the matter are moving in nature, because the particles of a matter have kinetic energy. The motion of the particles increases with an increase in temperature.
- The particles in the matter attract each other, but this mutual force of attraction is effective only when the particles are very close to each other. In solids the particles are closely packed and hence they have greater intermolecular forces attractions while in gases, the particles are loosely held. Hence they have weak forces of attractions.

Worksheet:

I. Multiple Choice Questions: Choose the Correct

1.The word atom is derived from the Greek word
(a) anu (b) paramanu (c) atomos (d) none of these
2. Matter is composed of very small particles called –
(a) atom (b) element (c) molecule (d) compound
3. Atoms of the same elements are –
(a) same (b) different (c) may be same or different (d) none of these
4. The fundamental particles of atom are –
(a) electron (b) proton (c) neutron (d) all of these
5.Where protons and neutrons are present in an atom?
(a) orbits (b) nucleus (c) in both a and b (d) none of these
6. Electrons are revolved around the nucleus in fixed path are called –
(a) orbits (b) nucleus (c) both a and b (d) none of these
7.The smallest particle of an element or a compound that has independent existence is called
(a) atom (b) molecule (c) compound (d) none of these
8. Which charge is carried by neutron :
(a) positive (b) negative (c) both a and b (d) no change
9. Positively charges particle of an atom is –
(a) proton (b) electron (c) neutron (d) all of these
10.Negatively charged particle of an atom is –
(a)proton (b) electron (c) neutron (d) all of these
11. Combining capacity of an atom is –
(a) valancy (b) atomicity (c) both a and b (d) none of these
12. The number of proton of an atom is called –
(a) atomic number (b) mass number (c) both a and b (d) none of these
13. Mass number is sum of –
(a) number of proton (b) number of electrons
(c) number of neutron (d) both a and c
14.What is the formula of iron oxide ?
(a) Fe_2O_3 (b) FeO_4 (c) Fe_3O_4 (d) Fe_2O_2
15.How many periods are there in periodic
(a) 3 (b) 4 (c) 7 (d) 8

16.Elements are arranged in periodic table according to increasing order of their –
(a)atomic number (b) mass number
(c) chemical properties (d) none of these
17.What is the atomic number of magnesium element?
(a) 14 (b) 12 (c) 16 (d) 9
18.Iron reacts with oxygen to produce –
(a) Iron oxide (b) iron sulphide (c) Iron sulphate (d) none of these
19.On heating solid ammonium chloride ammonia and hydrogen chloride gas are –
(a) absorbed (b) released (c) both a and b (d) none of these
20.What are the products of burning of candle?
(a) CO_2 (b) H_2O (c) both a and b (d) none

II. Complete the Chart. You can become more familiar with the atomic structure of some common substances by completing the chart below.

	Symbol	Atomic Number	Mass Number	Number of Protons	Number of Neutrons	Number of Electrons
Lithium						
	K					
Iron						
	P					
Cobalt						
	Sulphur					
Carbon						
Oxygen						
	N					
	Ar					
Calcuim						

III. Assignment

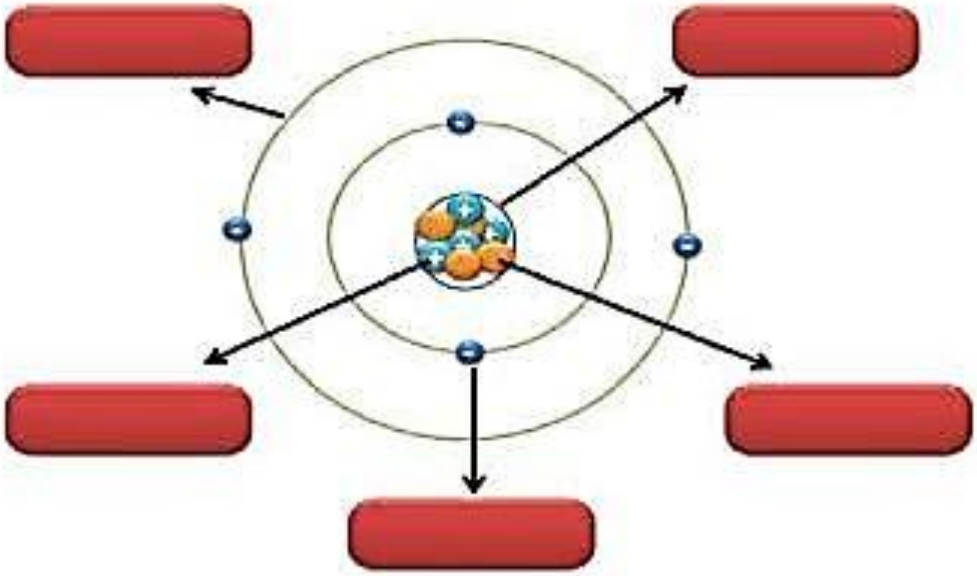
Chemistry – Atomic Structure

Q. 1 Match the correct pairs : (Use the pencil and draw lines)

Scientists		Discoveries
1. William Crooks	a)	Electron orbit/shells
2. J.J. Thomson	b)	Neutrons
3. E. Goldstein	c)	Atomic nucleus
4. Lord E. Rutherford	d)	Protons
5. James Chadwick	e)	Electrons
6. Niels Bohr	f)	The cathode rays

Q. 2 Choose the word options and drag them into the correct places:

Electron | Orbit | Nucleus | Proton | Neutron



IV. Assignment

Chemistry – Atomic Structure

Q. 1 Match the correct pairs : (Use the pencil and draw lines)

Element [protons]		Electronic Configuration
1. Magnesium[p=12]	a)	2, 8, 3
2. Sulphur[p=16]	b)	2, 8
3. Neon[p=10]	c)	2, 8, 2
4. Calcium[p=20]	d)	2, 8, 6
5. Aluminium[p=13]	e)	2, 8, 8, 2

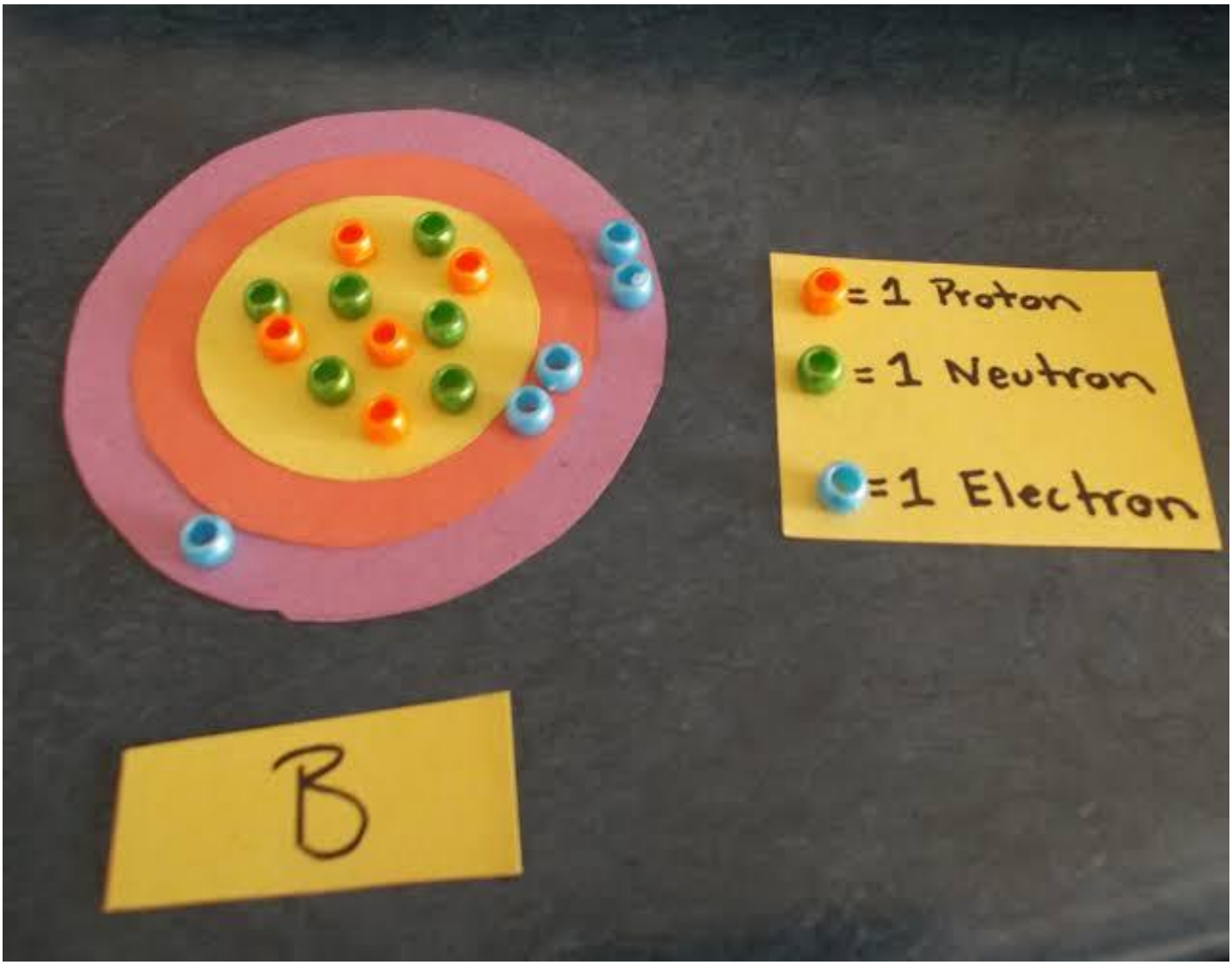
Q. 2 Choose the word options and drag them into the correct places:

$2n^2$ | Mass No. | Isotopes | Valency | Atomic No.

1. Atoms of the same element having the atomic number but different mass number. _____
2. This is to tell us the total number of protons and neutrons present in a neutral atom. _____
3. It is formula to determine the maximum number of electrons in each shell of an atom. _____
4. This is to tell us the number of electrons or protons that are present in a neutral atom. _____
5. This tells us the number of electrons donated or accepted by an atom to achieve a stable electronic configuration. _____

V. Project Work:

Using the below picture as reference and make Atomic Structure of First 10 elements of the Periodic Table.
Also get Familiar with the distribution of elements in the periodic table by going through it repeatedly.



Class: 7th **Subject: Social Studies**

Section A: History

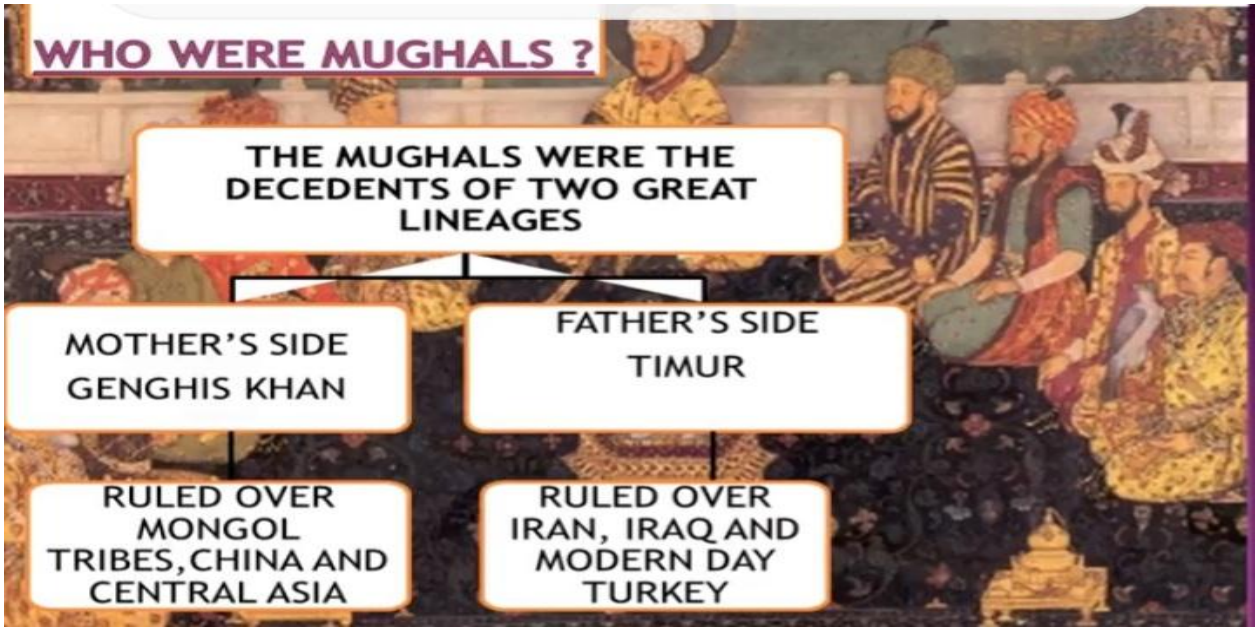
"The Mughal Empire "

Learning Outcome :

Students will be able to

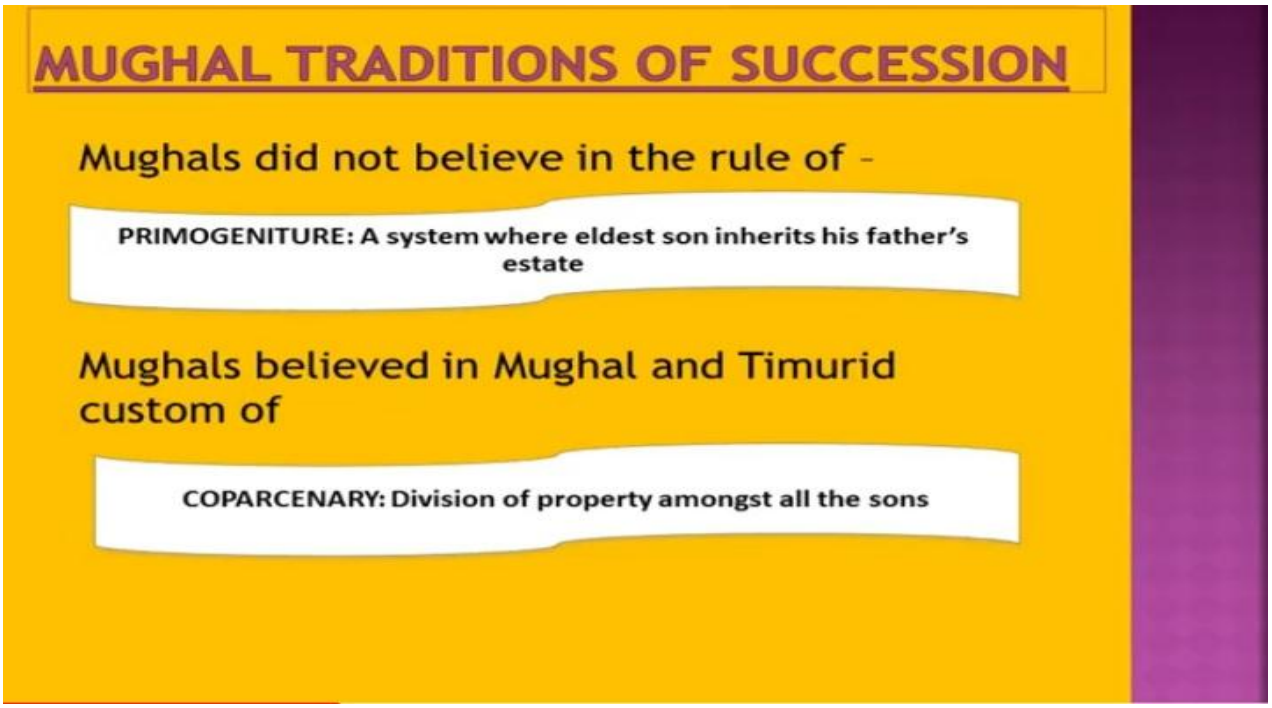
- Trace the political history of the 16th and 17th centuries
- Relate with the imperial administration at the local and regional levels.
- Know how the Mughal literature is used to reconstruct History
- Know about the Mughal rulers and their achievements

Overview:



The Mughals descended from two great lineages; maternally, they descended from the house of Mongol emperor Genghis Khan, and paternally from the Turco-Mongol emperor Timur .Although they were known as Mughals because of their Mongolian descent, they did not like being referred to as Mughals because the name of the Mongols has been marred by massacres and bloodshed.

- Because the word Mughal was connected with Mongols and Genghis Khan who killed many people, the Mughals did not like being called that.
- But the Mughals were very proud of their Timurid ancestry because Timur had captured Delhi in 1398.



Mughal Emperors

Babur

- **Babur** ascended the throne of *Ferghana* in 1494 when he was only 12 years old. But he soon fled because of the *invasion of the Uzbegs*.
- He captured Kabul in 1504 and took over Delhi in 1526 by *defeating Ibrahim Lodi* at *Panipat*.

Humayun

- Humayun became king after Babur, but internal problems and his defeat to Sher Khan at Chausa and Kanauj forced him to flee to Iran where he received the help of the Safavid Shah and recaptured Delhi in 1555.
- But he died soon after, in an accident at his palace.

Akbar

- He was 13 years old when he became the king. And as he attained full power he relieved his regent Bairam Khan of his duties and then began conquests against the Suris, the Afghans, the kingdoms of Malwa and Gondwana, and the Sisodiyas. He also crushed the revolt of his brother Mirza Hakim and the Uzbegs.
- He then launched military campaigns in Gujarat, eastern Bihar, West Bengal, and Orissa, and suppressed another revolt by Mirza Hakim.

- Next, he launched campaigns in the north-west where he seized Kandahar from the Safavid Shah, and Kashmir and Kabul after the death of Mirza Hakim.
- He also launched expeditions in the Deccan, and annexed parts of Berar, Khandesh, and Ahmednagar.
- In his final years as emperor he faced a rebellion from his son and future emperor, Prince Salim.

Jahangir

- He continued the campaigns started by his father, and also won total control over the Sisodiyas.

- But he was also under a lot of pressure due the rebellions by his son, Prince Khurram, and by Nur Jahan's attempts to marginalise him.

Shah Jahan

- After Shah Jahan took the throne, the Afghan noble Khan Jahan Lodi was defeated, campaigns against Ahmednagar began, the Bundelas were defeated, and Orchha was seized.
- But in the north-west, Shah Jahan faced losses as the Balkh region was lost to the Uzbegs and the Kandahar region was lost to the Safavids.Finally, in the Deccan, he annexed Ahmednagar and became an ally of the kingdom of Bijapur.But in his final years as emperor a battle began between his sons for the throne.

Aurangzeb

- Aurangzeb temporarily defeated the Ahoms, the Sikhs, and the Rajputs, and also the Maratha chieftain Shivaji. *But* when Aurangzeb insulted him, *Shivaji declared himself an independent king* at war with the Mughal Empire.

Assignment

- **Take a large map of Asia. With red pins , mark the extent of Akbar's empire.**
- **Prepare a timeline of Mughal emperors along with important battles fought by them .You can take help from one such example shown below:**

Battle	year	Remarks
Battle of Ghaghra	1529	Babur defeated the joint forces of the Afghans and Sultan of Bengal

New political formations of 18th century

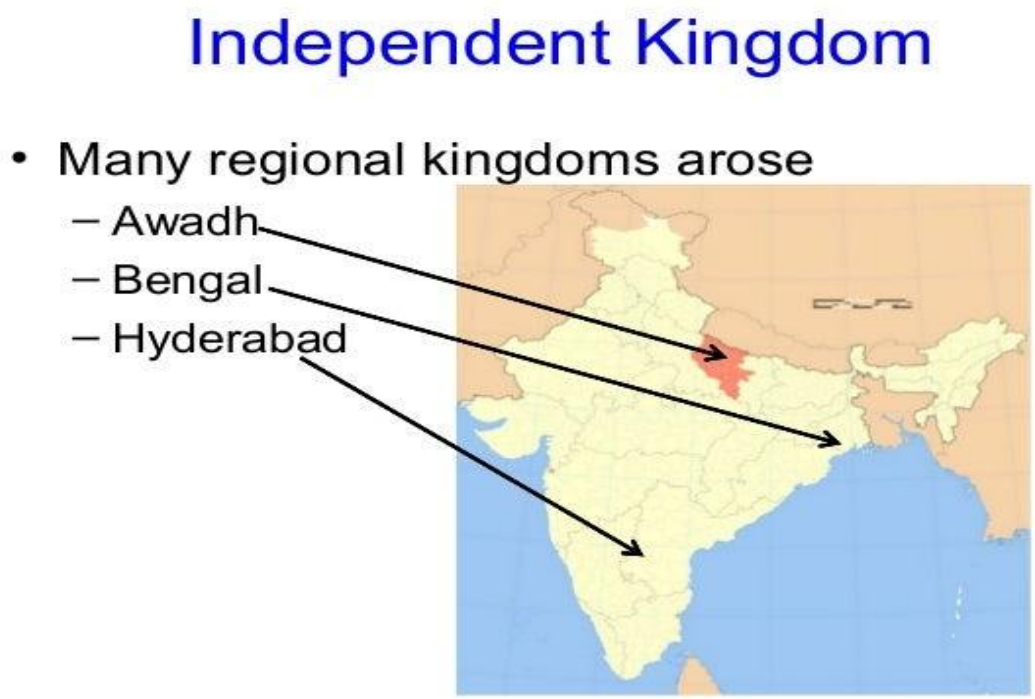
Learning outcome:

- Delineate developments related to the Sikhs, Rajputs, Marathas, later Mughals, Nawabs of Awadh and Bengal, and the Nizam of Hyderabad

Introduction

- The power of the Mughal Empire had declined by the start of the eighteenth century, and by 1765, the British started controlling many parts of eastern India.

- New kingdoms emerged in the years between the death of Aurangzeb in 1707 and the battle of Panipat in 1761.



Emergence Of New States

- With the fall of the Mughals, the governors of large provinces, subadars, and powerful zamindars asserted their authority over different parts of the country.
- Through the 18th century, the Mughal Empire became fragmented into many a parts.
- states that were Mughal provinces earlier, such as Awadh, Bengal, and Hyderabad, became independent and powerful, but they did not break all ties with the Mughal Empire
- states under the control of Marathas, Sikhs, and Jats that had seized their independence after a long battle with the Mughals.

Assignment:

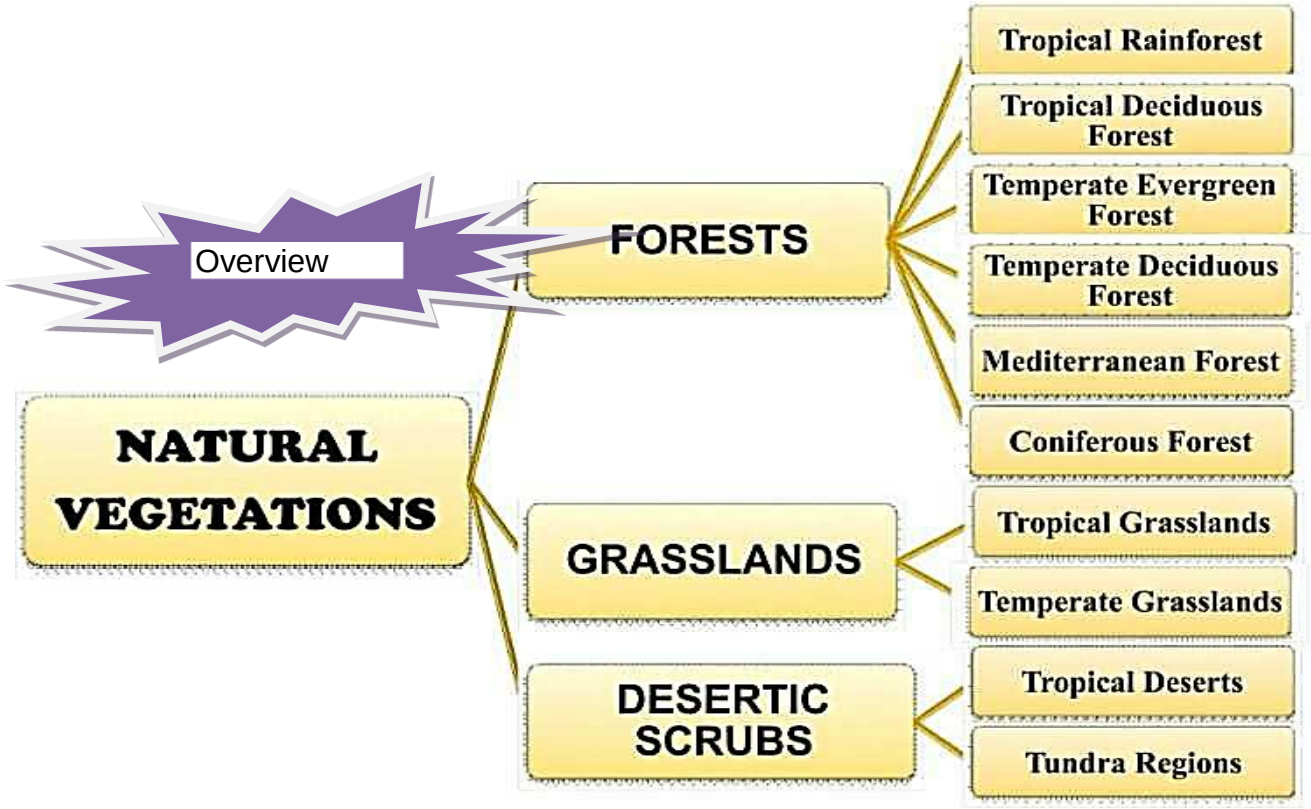
- Collect and share some historical facts that you find interesting about the beginnings of Sikhism.

Section B: Geography

Natural vegetation and Wildlife

Learning Outcome :

- learn about the nature of earth's diverse flora and fauna



- The temperature in a region depends on its height; the higher a place is from the sea level, the colder it usually is. And temperature affects the type of natural vegetation in a region.
- The type of vegetation that grows in an area also depends on the moisture, slope of land, and thickness of soil.
- Depending on these factors, vegetation is divided into three categories: forests that grow in rainy areas, grasslands that grow in regions with moderate rainfall and shrubs that grow in regions with scanty (little) rainfall and extreme temperatures.

Introduction

The temperature in an area depends on the height of that region and temperature affects the type of natural vegetation in that region. The growth of vegetation also depends on moisture, slope and thickness of soil. Depending upon these factors vegetation is divided into three categories namely forests, grasslands and shrubs.

Assignment :

- We have many wonderful species of wildlife species in rainforests of our world but many of these exotic animals are endangered due to rampant poaching and destruction of their natural habitats (homes/forests). Make a list of 20 such Endangered Rainforest Animals and find out the major reasons for their falling numbers and the measures to be taken to protect the same. One such example is already given below :

Endangered Rainforest Animal	Major reasons for their falling numbers	Measures to be taken to protect them
1.Jaguar	The lands once ruled by jaguars are being destroyed by logging large scale agriculture and urban areas.Habitat fragmentation makes it incredibly difficult for these felines to hunt and mate,which poses a major threat to their population number and survival.	❖ Enable prey base recovery. ❖ Reduce habitat loss ,degradation and fragmentation. ❖ Decrease livestock losses to jaguars and associated retaliatory killings.

- There are many national parks around the world that are specifically made to protect a single species or help an endangered group of animals continue living and growing in their natural habitat. The Kazinranga National Park in Assam, India, for example, is made protect the one-horned rhinoceros. In a tabular form enlist at least 10 national parks or wildlife reserves made to protect specific animals.

Section C: Political Science

Media and Democracy

Learning outcome:

- understand the role of the media in facilitating interaction between the government and citizens
- Gain a sense that government is accountable to its citizens understand the link between information and power.

Introduction

- A medium is a means or way of communication, and modern mass media is everything that is used to communicate with the people.
- Modern media uses a lot of expensive technology, often paid for by the government or repeated advertisements.
- Governments and businessmen unfairly control which stories are shared or not by the media.
- The media sets the agenda for the nation, so it must be independent and balanced otherwise it becomes undemocratic.
- Modern mass media needs expensive technology and experts.
- Media companies make money from advertisements that are repeated to make people buy different things and services.
- This often becomes a challenge, because media companies might not report the truth about themselves or their profitable clients.

- **Assignment**

- ✓ Write a short paragraph on Importance of "Media in Our Daily Lives" .
- ✓ Make a collage of all the advertisements you find in one newspaper .

Agree or Disagree

- Everything in TV, radio, Internet, and local and international events is a part of the media.
- Newspaper, radio, and magazines come under the category of print media.
- Radio, TV, newspapers, the Internet, and several other forms of communication can be collectively termed as media.

Advertising

Learning outcome :

- Understand how advertisements are made
- Types of advertisement
- Impact of Advertising on consumers

- Advertisements draw our attention to various products, describing them positively so that we become interested in buying them. Advertisements are found in several forms: Print and electronic media as well as in hoarding or on taxis.

Building Brands and Brand Values

- Advertising is all about building brands. At a very basic level, branding means stamping a product with a particular name of the sign. Products have an associating brand value with which the consumer associates themselves.
- For example, there are many soaps but every company will have to give the soap a different name, by doing this, they create another brand of soap.
- Through advertisements, the company uses visuals and images to create a brand value for their product such that the products may create an impression in the customer's mind.

Brand Values and Social Works

- Advertisements play an important role in social and cultural life.
- Branded products are costly but companies link them to style, design, etc. such that people tend to buy them.
- Advertisements appeal to personal emotion of people which induce people to buy the products.

Assignment :

- Draft an advertisement on social networking.
- Write a short paragraph on how advertising plays an important role in making a brand name.
- Advertisements are normally made by advertising agencies which help in devising a marketing strategy. Justify the statement.