

Students, now in Std. (10+1) you are going to study Geography as an independent subject. Geography is a subject of great interest. There is a close relationship between Geography and Science. In Geography you get information about the earth's atmosphere, lithosphere, resources, hydrosphere, human activities and their interrelations. A question arises in your mind that why we should study Geography ? Right ? So now, to find an answer to your questions, to have a solution of your problems, let us enter the world of Geography.

What is Geography ?

Besides man, the earth is a habitat of entire living world. The earth's physical form is not uniform everywhere. There are mountains, plateaus, plains, valleys, oceans, seas, rivers, vast forests and wilderness. Because of variations in physical elements of the earth, variations in socio-economic and cultural environment have arisen. There are villages, cities, markets, railways, roads, industrial units, ports and many other culturally varied environment created by human beings across the entire period of their cultural development. In some regions man has come under the control of adverse geographical conditions while in some other regions he has made the conditions suitable to him through his hard work, intellect and scientific researches. Variations in physical elements and human elements on the earth's surface are studied in Geography. The term Geography was coined by Eratosthenes, a Greek scholar in second century B.C. In Latin, Geo means Earth and Graphia means to describe. Thus, Geography is the science that describes the Earth. Going by meaning of the word, Geography means the Earth's description. The science that systematically describes the earth's surface is Geography. The location, relief, climate, vegetation, animal life, agriculture and plantation crops, minerals and other resources, industries, transportation of the Earth's regions to be studied as well as human groups residing in those regions and their activities and such other systematic information is included in Geography. In the opinion of the well known geographer Hartshorne, Geography is a science that describes variable forms from place to place in the form of human-world.

Some geographers describe the total subject matter of Geography in the form of three short questions or seven words. These are : **What is where and why of it.** Although scope of Geography is as vast as the Earth, it includes study of physical elements and cultural elements, both of which are evaluated keeping man at the centre. Every geographical phenomenon that takes place on the Earth explains functional relationship. If man understands Geography with reference to functional relationship then only knowledge of Geography can become useful in life.

The subject matter of Geography is very vast. In this subject, the origin and evolution of the lithosphere, hydrosphere, atmosphere, biosphere and anthroposphere are studied from scientific view point. So it can be said, the science that studies the five spheres of Earth in detail is Geography. Man has started making rapid use of natural resources. This has resulted in various types of pollution, environmental hazards and biological destruction. The causes for such problems and their solutions form the subject matter of Geography. The German geographer Karl Ritter has said that the study of Geography begins at the earth's surface, but as mankind develops means of observation and research, so also the scope of Geography will extend higher and higher and deeper and deeper from the Earth's surface.

Geography : As a Discipline

The geographers define geographical facts with reference to causal relation. They show more interest in explaining causal relation between two or more geographical facts. e.g., Geography explains that cropping pattern of Punjab and Haryana is different from that of Tamil Nadu and also it discusses diverse relations,

lithosphere, atmosphere, market demand in those states, economic condition of their farmers, use of agriculture related techniques and such other factors.

Most of the geographers who made Geography subject more popular were from India, China, Arabia and Greece. There are quite a large amount of geographical descriptions in our ancient vedas, puranas, aranayaks, brahmin scriptures, Mahabharat and Ramayan. In Atharvaved, the Earth and its characteristics and human population are discussed in detail. In second century B.C., **Eratosthenes** attempted to measure the Earths circumference. The Greek geographer Thales, presented his views on the Earths size, shape, motion in 6th century B.C. Thales is considered the **first geographer** of the world. Claudius Ptolemy, a Greek geographer, presented the Earths latitudes-longitudes and gave information about the geographical location of countries. Strabo, a Roman geographer gave a detailed description about the Earth by compiling 17 books on Geography.

Aryabhatt of India presented details about the solar system and Varahmihir about the Earths diameter. Bhaskaracharya gave information about gravitation and Brahmagupt compiled books on Astronomy and Astrology. The great poet Kalidas in his poems Meghdootam and Kumarsambhavam described the mountains, rivers and forests of India. The Arab geographer, **Ibn Batuta**, visited India and presented information about its land and life of people.

In the 15th century, great travellers of the world discovered new waterways. They gave information about the earths physical form, different places of countries, oceans and life of people of worlds countries. Great geographers of Germany, A. V. Humbolt, Karl Ritter, Imanuel Kant and Fredrich Ratzel and others presented their views on the subject matter of Geography. Geography attained its modern form in Europe, in which physical elements were given preference. In the 20th century, the Earths relief was studied with two approaches-systematic and regional. By 1950, man realized that natural resources of the Earth provide entire support to the living world. Awareness was given that natural resources are to be used judiciously. In the 21st century, physical geography and human geography both were given equal importance. In the decades 1960 and 1970 use of quantitative techniques and modern technology began in Geography.

Since 1957, artificial satellites were sent into space and this made it possible to take photos of the Earths surface. This made it possible to acquire information about mineral deposits and sources of water. With the help of artificial satellites, Geographic Information Systems, Land Information Systems and Global Positioning Systems techniques have become easily available. Currently with the development of Spatial Information Technology, Environment has become an important field of Geography.

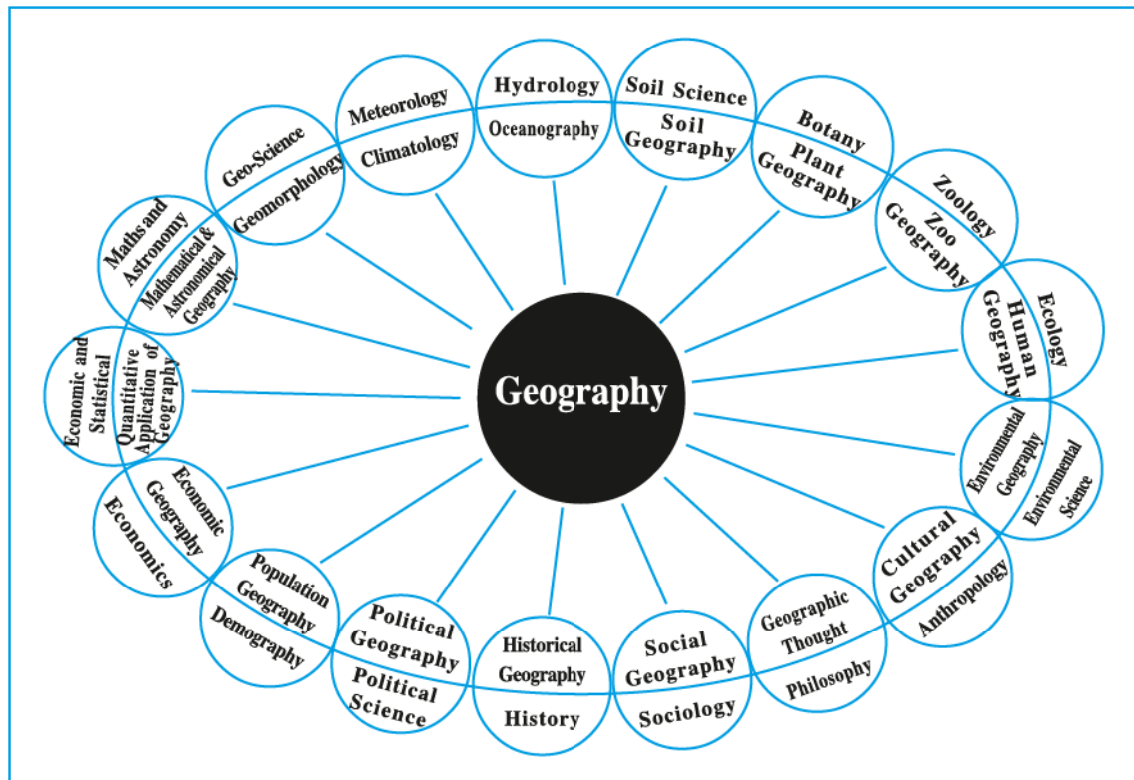
Geography as an Integrating Subject

All natural and social sciences keep in mind one objective-to know the reality. Geography tries to explain the reality in holistic form. All subjects related to science are related to Geography. As an integrating subject, Geography is closely related to several natural and social sciences.

To understand the Earths rotation and revolution, latitude-longitude, standard time, rainfall, graphs of temperature and other geographical aspects, mathematics is a useful subject. To understand eclipse and its time, flood, earthquake and to predict natural hazards, Geography takes help of mathematics and science. To get into the core of important events in nations history or a foreign country, geographical knowledge is necessary. All branches of physical geography are interrelated with natural science. Geography is closely interrelated to geology, astronomy, physics, botany, biology and other sciences.

All subjects of social science-philosophy, history, civics, political science, economics, sociology and anthropology are directly related to Geography. Branches of Geography such as political geography, historical geography, economic geography, population geography have relation with social science. Geographical conditions determine has relation with mans food, clothing, shelter and culture, so Geography is related to social sciences. Geography studies mans economic activities like transportation, communication,

industries, agriculture, etc. Thus Geography has close relations with economics. Knowledge of Geometry is essential for map reading, giving information in maps and for calculating latitudes and longitudes. Every subject has its philosophy, which acts as a fundamental role for the subject. Philosophy is helpful to Geography in preparing The History of Geographical Thought. Geography gets help from history for time synthesis. Geography obtains support from Political Science for analysis of political systems, area of state, population, various organizations, etc. Geography establishes relation with civics so that an international understanding develops in a person, feeling of world brotherhood and duty towards global organizations develops in a person. Thus, Geography establishes its relation with natural and social sciences.



1.1 Relation of Geography with natural and social sciences and Branches of Geography

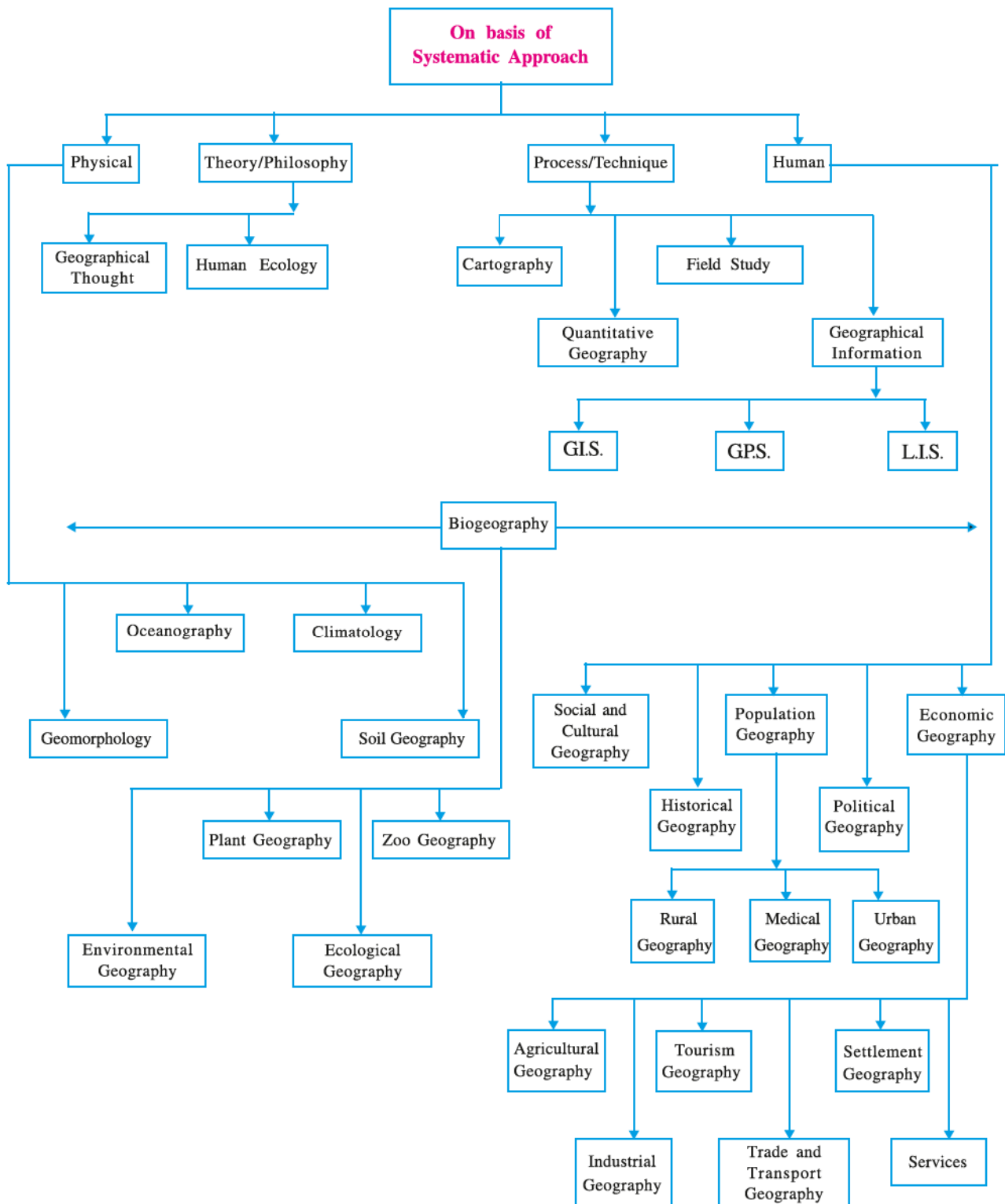
In Geography, there are two approaches to study : (1) Systematic Approach and (2) Regional Approach

(1) Systematic Approach : This is an approach of general geography. German geographer **Alexander von Humbolt** (1769-1859) is a proponent of this approach. In this method, geographical elements are divided into topics and study of each is done at a global level. Lithosphere, atmosphere, biosphere, minerals, agriculture, industry, transport, trade, etc. are placed in different topics and studied.

E.g. Natural vegetation It is first studied at a global level and then information about classified types in regional form is given, such as mediterranean type of vegetation, coniferous type of vegetation, monsoonal vegetation, equatorial type of vegetation, etc. In systematic study, the aspect is studied from the entire to its components.

(2) Regional Approach : Regional approach was developed by German geographer **Karl Ritter** (1779-1859). After dividing the earth into different units, a distinct regional area is studied in respect of all of its geographical aspects.

Amazon river basin in South America, Congo river basin in Africa, Malaysia, Indonesia and Phillipines archipelago can be joined and studied as one natural region as **‘Equatorial Forest Region’**. The climate, vegetation, agriculture, minerals, animal life, etc. of this region are studied. This is known as regional approach.



1.2 Branches of Geography

Branches of Geography based on Systematic Approach

(1) Physical Geography : Physical Geography is divided into five sub branches.

(1) Geomorphology (2) Climatology (3) Oceanography (4) Soil Geography (5) Hydrology

In Geomorphology, information about the landforms of the earth surface, their distribution, origin and types are studied. In Climatology, zones of the atmosphere, seasons, components and elements of atmosphere such as temperature, atmospheric pressure, winds, precipitation, clouds, cyclones and local winds, etc. are studied. Oceanography studies the origin of oceans, tides, depth of oceans, their location, ocean currents, relief of ocean bottom, salinity of ocean water and also effects of oceans on human life. In soil science, types of soils, their origin, distribution, characteristics and uses are studied.

(2) Human Geography : Because of interrelations between nature and man, villages, hamlets, cities, countries, factories, roads, railways, settlements develop. Their cultural characteristics and distribution are studied in Human Geography. The main branches of Human Geography are cultural geography, social geography, population geography, rural geography, urban geography, economic geography, industrial geography, agricultural geography, trade and transport geography, political geography, etc. It explains geographical factors and geographical problems that act as barrier to human development. It discusses their solutions. In the opinion of Vidal de la Blache, in human geography the knowledge of interrelations between natural laws that control the earth and the life developed on Earth are included, 'Study of changing relations between active man and unresting earth is Human Geography' - **Ellen Sample.**

(3) Bio Geography : Interrelations between Physical Geography and Human Geography have given rise to Bio Geography. Zoo Geography, Plant Geography, Ecology and Environmental Geography are the branches of Bio Geography. Zoo Geography gives information about different animals, insects and micro organisms. Plant Geography gives information about forests and different types of vegetation, types and distribution of grasslands. Ecology is the scientific study of changing relations between man and nature, various effects of nature on human life, habitats of species, their areas, development, classification and their distribution. Environmental Geography provides information about the environmental problems, types of pollution, environmental protection, degradation of living environment and impact on human well being.

(4) Geographical methods and Techniques : In the geographical methods and techniques, following sub branches are included :

- Field study (Physical and socio-economic survey)
- General and computer based map making
- Quantitative Geography
- Spatial Information Technology (Geographic Information System, Global Positioning System, Land Information System)

Regional Approach :

Sub branches of Regional Geography are as follows :

- | | |
|------------------------|---------------------|
| ● Regional Study | ● Regional Analysis |
| ● Regional Development | ● Regional Planning |

Importance of Geography

Study of Geography is essential for the improvement of vision and mission of humanity. Knowledge of Geography is very important for agriculture, trade, transport, industries and of other development. Geography provides fundamental knowledge for understanding different aspects of human life, for analyzing cultural heritage of human society, understanding historical events and for solving current global problems.

Geography plays an important role in the development of international understanding a feeling of world brotherhood, nationalism and other developmental value. Knowledge of Geography is essential for solving national and international problems. There are certain aims and objectives behind study of every subject. Geography is a dynamic subject. Development of its subject matter is science based. By studying Geography, several capacities and skills develop among us. Geography helps us to understand tourism fairs and festivals.

Geographical knowledge promotes international friendship. Geography plays a supportive role developing various skills such as map reading, placing information in map, measuring rain, temperature, earthquake intensity, air pressure, etc. A healthy viewpoint develops among us regarding natural resources and awareness develops for making wise use of resources. Geography gives information about the characteristics and diversities related to the lithosphere, atmosphere, hydrosphere and biosphere. This fulfils mans curiosity. Skills such as observing different types of maps, the earths globe and its natural and physical elements develop in a person. A mental capacity develops to understand cause and effect relationship among geographical phenomena. Knowledge of Geography is a practical necessity for fields such as trade, defense, tourism, industry, agriculture and animal rearing. Geography gives understanding of inter dependence among the nations of the world. Geography is in the background of many of our festivals and social customs. Study of Physical Geography helps us to know mans economic activities, successes and failures. Study of Geography provides necessary guidance regarding natural hazards like earthquake, landslide, storm, flood or famine and also about environment protection and conservation. Essential knowledge about global problems such as energy and water conservation, environmental care, pollution control is incomplete without study of Geography. Knowledge of Geography also becomes essential for finding a solution to problems such as increasing population and decreasing vegetation, poverty and terrorism. The feeling of one world one family is cultivated only through the study of Geography. Development of mental capacities in a person, such as minute observation, drawing conclusions, taking decisions and developing proper opinion, become easier through Geography. Knowledge of Geography is very important so that citizens understand national problems and contribute in solving them.

Dear students, now you are acquainted with the entire subject matter of Geography. In the following chapters we will study Physical Geography. Exercise-questions and activities given at the end of each chapter will fulfill your wish to know something new and also help in taking your academic achievements still higher. So friends, let us study Geography with interest, curiosity and with pleasure.

EXERCISE

1. Answer the following questions in detail :

- (1) In the present context Geography is a very useful subject. Explain the statement.
- (2) Explain the meaning of Geography and discuss its subject matter.

2. Write a to-the-point answer to the following questions :

- (1) Mention the major sub-branches of Geography.
- (2) Mention the sub divisions of Physical Geography and describe them in brief.
- (3) Define : Human Geography.

3. Answer the following questions in brief :

- (1) With which subject is Geography related ?
- (2) Mention any four divisions of Human Geography.
- (3) What are the current global problems ?
- (4) What is Population Geography ?

4. Answer the following questions in one-two sentences :

- (1) Which Indian geographer gave information about the solar system ?
- (2) Who travelled to India and described its land and people ?
- (3) What are the sources to acquire geographical knowledge ?
- (4) Write names of two Indian geographers.
- (5) Explain the meaning of word 'Geography'.

5. Select the correct option from the options given and write the answer :

- (1) Who was the worlds first geographer ?
(a) Thales (b) Ibn-batuta (c) Karl Ritter (d) Bhaskaracharya
- (2) The great geographer Karl Ritter was from which country ?
(a) Greece (b) England (c) Arabia (d) Germany
- (3) Who travelled to India and described its land and life of people ?
(a) Aryabhata (b) Ibn-batuta (c) Kalidas (d) Bhaskaracharya
- (4) Who composed Meghdootam ?
(a) Chandragupta (b) Bhaskracharya (c) Kalidas (d) Varahmihir

