

GEOGRAPHY SYLLABUS: PLUS 1 / STANDARD XI

Unit	Expected Learning Geography	Content	Transaction Strategy and Activity	Teaching Aids	Periods
I	<p>Ability to understand what an ecosystem means and the interactions among ecosystems</p> <p>Learning about the properties of an ecosystem</p> <p>Appreciating the origin of life on earth, its importance</p> <p>Learning the significance of atmosphere</p> <p>Understanding the need to preserve/ conserve/ protect ecosystems</p> <p>Learning how the four spheres of the earth operate</p> <p>Learning ecosystem and adaptive ecosystem management approaches</p>	<p>Ecosystems- Earth's Spheres: Recap on Lithosphere, Hydrosphere, Atmosphere, and Biosphere. Ecosystem structure, function and behaviour</p> <p>Ecosystem approach and adaptive ecosystem management approach</p>	<p>Collecting colour pictures of ecosystems and environments to give explanations</p> <p>Indicating local ecosystems and in the vicinity</p> <p>Human body as an ecosystem, with life and mind as special features</p> <p>Based on ecological approach, explaining the atmosphere</p> <p>Explaining how atmosphere works and how its layers differ in their characteristics</p> <p>Outdoor school for a day or two to learn about natural ecosystems</p> <p>Discussion on the nature and extent of disturbance and degradation in environment and rural and urban ecosystems</p> <p>Debate on how land, water and air get polluted and affect human health.</p>	<p>Blackboard, colour chalks, colour pictures of ecosystems, Video clippings and audio materials on degraded ecosystems.</p> <p>The conical diagram of ecosystem relations</p> <p>Slide show on select ecosystems</p> <p>UNESCO's Man and Biosphere (MAP) Program materials, if available.</p>	12
II	<p>Ability to realise ecosystem dynamics and its consequences</p> <p>Understanding ecosystem interactions</p> <p>Understanding Ecosystem- Environment relations</p> <p>Learning about the</p>	<p>Ecosystems dynamics</p> <p>Ecological succession Lived spaces/ places</p> <p>Ecosystem habitats</p> <p>Ecosystem types</p> <p>Water ecosystems</p> <p>Hill ecosystems</p>	<p>Explaining the nature and existence of several different ecosystems through pictures</p> <p>Explaining the idea of ecosystem dynamics from the writings of E.T. Odum</p> <p>Visits towards developing an</p>	<p>Colour pictures of ecosystems</p> <p>Mountains, rivers, tanks and seas as separate ecosystems</p> <p>Field work equipment and prior permission from parents for visits</p>	10

	<p>effects of interactions and ecosystem changes consequent upon them</p> <p>Realising the need to protect the ecosystems as from an understanding of individual ecosystems</p> <p>Ability to predict/ foresee ecosystem changes</p>		<p>appreciation of water ecosystems (say, a freshwater tank or lake and a brackish water ecosystem such as a lagoon)</p> <p>Taking or collecting pictures of ecosystems visited</p> <p>Field survey towards understanding the ecosystems and reporting on such a survey to the class</p> <p>Home ground discussion on any one of them</p> <p>Students assemble data and information on local ecosystems</p>		
iii	<p>Ability to understand the katabolic and anabolic activities</p> <p>Learning about the bio-geo-chemical cycles and their characteristics</p> <p>Learning about the energy transfers and how the work</p> <p>Understanding the working of the hydrological cycle and its significance in human life</p>	<p>The harmonious nature Metabolism</p> <p>Biospherical cycles, Bio-Geo-Chemical cycles</p> <p>Oxygen, Carbon and nitrogen cycles</p> <p>Hydrological cycles</p>	<p>Explanations for metabolism, its acts of katabolism and anabolism and also for the life building blocks</p> <p>Colour pictures and charts to show and demonstratively explain the cycles, cyclic changes, and benefits</p> <p>Class discusses the benefits of different cycles while engaged in drawing them as groups</p> <p>Visits to gather information on the nature of anthropogenic activities and reporting on them</p> <p>Round table and panel discussions by students</p> <p>Question-Answer session or quizzes</p>	<p>Blackboard, Colour chalks, Wall charts and maps</p> <p>Pictures MAB materials, slides</p>	11
IV	<p>Ability to understand soil as an ecosystem supporting ecosystems</p> <p>Learning how soil is</p>	<p>Soil resources, soil formation</p> <p>Forms of soil erosion</p> <p>Soil management</p> <p>Desertification</p>	<p>Using the soil profiles of various soils, teacher explains the nature of soils</p>	<p>Blackboard, Colour chalks, Wall charts and maps, Pictures of rills, gulleys, Soil samples</p> <p>Model of soil</p>	10

	<p>formed and the importance of soils</p> <p>Understanding how soil is being eroded and how it affects agricultural production</p> <p>Learning about the measures for preventing soil erosion</p> <p>Realising the need to conserve soils for future and manage them well for food security</p> <p>Learning how desertification occurs</p>		<p>Class discussion on natural and anthropogenic causes of soil erosion</p> <p>Class discusses in groups how drought becomes a cause of soil erosion</p> <p>Discussion continues with rains / floods as cause of heavy erosion</p> <p>Class discusses desertification in India under teacher guidance</p> <p>Field visits are arranged to see places where soil erosion is rampant, like in a mining area.</p> <p>Visits may be arranged for desert-like areas and landslides</p>	<p>layers Map of deserts</p> <p>MAB materials</p> <p>Slides.</p>	
V	<p>Ability to identify and understand the significance of land and water animals and forests</p> <p>Ability to know the classes of forests</p> <p>Ability to differentiate between forests and land and water ecosystems</p> <p>Recognising the significance of forests and water ability to understand the impacts of their destruction</p> <p>Learning about the measures of conservation and protection of land and water resources</p>	<p>Land and water ecosystems, Green Potential. The Biomes: Forest, Grassland, Desert, and mountainous Living Oceans</p>	<p>Teacher shows students the boundaries of ecosystems/ biomes on a world map</p> <p>Explanations of biomes, vegetation and animals, using pictures.</p> <p>Discussion in the class, in groups on deforestation and its effects</p> <p>A Colloquium on forests and forest management practices in India</p> <p>Visits to nearby forests to observe plants and animals in their natural surroundings</p> <p>Reports on local knowledge of plants and animals.</p>	<p>Blackboard , Colour chinks, Wall charts and maps , pictures of biomes the world over</p> <p>MAB materials</p> <p>Slides, Web search for materials on biomes and deserts.</p>	11
VI	<p>Understanding the meaning of 'industry'</p>	<p>Industries: Primary, secondary, tertiary</p>	<p>Explaining the nature and</p>	<p>Blackboard, Colour chinks</p> <p>Wall charts</p>	12

	<p>and industrial development in India</p> <p>Learning and recognising primary, secondary, tertiary and quarternary industries</p> <p>Identifying agriculture as a collection of several ecosystems</p> <p>Realising the human and cultural factors responsible for agricultural development</p> <p>Learning about the green revolution, first and the second that is being talked about</p> <p>Recognising the possibility of a location theory by concentration on von Thunen's Isolated State theory of agricultural location.</p>	<p>and quarternary industries</p> <p>Agricultural ecosystems</p> <p>Cultural and Human factors, Green revolution</p> <p>Agricultural land use and location: von Thunen</p>	<p>development of industries</p> <p>Discussion on industrial revolution and developments thereof in groups</p> <p>Students, using their general knowledge of scientific development, chat among themselves about technological innovations that made a difference to human life and living</p> <p>Teacher conducts a quiz in order judge the general knowledge of agriculture, using local examples</p> <p>Round table discussion on crops on the hills, valleys and plains</p> <p>Debate on the efficiency of green revolution versus traditional farming, guided and supervised by the teacher</p> <p>Using innovative ways, students check out the von Thunen theory</p> <p>Teachers encourage students to work on modeling (miniature) of the theory</p> <p>Students collect materials on typology of world agriculture</p>	<p>and maps , Pictures of industrial activities, including agro, mineral based and other industries</p> <p>Industrial models</p> <p>Slides, Web search for materials on industrial development in India</p> <p>Use of www.mapsofindia.com</p> <p>www.historyofindia.com</p> <p>for collecting maps and historical information on industries . Models by students to illustrate location theory</p> <p>Classification system for agriculture: local regional and national</p>	
VII	<p>Realising the importance of industrial operations, irrespective of types and sizes</p> <p>Understanding</p>	<p>Industrial ecosystems</p> <p>Functional linkage</p> <p>Input-output relations</p> <p>Criteria for siting industries of</p>	<p>Explaining what functional linkages, in fact just linkages, mean in an industrial context</p> <p>Class describes criteria for siting</p>	<p>Blackboard , colour chalks, wall charts and maps, Pictures of industries of the world over Slides</p> <p>Web search for materials on</p>	12

	<p>relationships between raw materials and industrial location</p> <p>Understanding relationships between industrial location and markets</p> <p>Ability to site industries given the understanding above</p> <p>Understanding the competitions and relations with resources and environment</p>	<p>different types Industrial location: Weber</p>	<p>industry, one by one and in several groups of students Teachers discuss and deliberate with the students about the 'triangular diagram of relationships Students debate on the rationale behind the Weber theory of industrial location Visits to local industries, especially private and government owned, for an appreciation of factors of location.</p>	<p>industries and their milieus.</p>	
VIII	<p>Recognising the importance settlements, rural and urban</p> <p>Appreciation of geographical problems, ability to resolve and regulate at the same time</p> <p>Understanding controls and ability to exercise it</p> <p>Recognising realistic elements of central place theory</p> <p>Verifying the theory with reality and see how far they do match</p> <p>Recognising unit in diversity and the ability to differentiate similarities and dissimilarities</p>	<p>Settlement systems Origin and development of settlements Rural settlements Urban settlements Central Place Theory</p>	<p>Teacher describes in many words what is settlement geography Explaining the history of settlement evolution and change and continuity Using colour pictures, teacher explains contemporary geography of Settlements. Settlements of the hills, plains, floodplains Students discuss among themselves about the forms of settlements Discussion of problems of urban development in groups Explaining the central place theory with colour pictures of contemporary service towns</p>	<p>Black board. colour chalks, wall charts and maps, pictures of biomes the world over Slides on rural and urban settlements Web search for materials on settlements and experimental cases</p>	11
IX	<p>Ability to understand that transport is the bloodline of the</p>	<p>Transport systems Types of transport People, Goods and</p>	<p>Explaining the role of the wheel in the development of</p>	<p>Blackboard, colour chalks Models of transport</p>	7

	<p>contemporary economy</p> <p>Understanding how is transport helping development of a country; region and local area</p> <p>Understanding the role of transport in the Indian economy</p> <p>Learning about the model of transport development</p> <p>Learning about the information explosion and exchanges</p>	<p>Container transport Information Exchanges</p>	<p>that country Describe the structure of transport using maps</p> <p>Discussion on the types/ modes of transport while showing/ exhibiting various models / toys</p> <p>Group discussion on the merits and demerits of the different types of transport</p> <p>Describing containerisation and its role in the sea trade</p> <p>Colloquium on information superhighway and the digital divide</p> <p>Students visit local bus stand and railway stations and also telecommunication centres to collect and analyse information</p>	<p>types/modes</p> <p>Wall charts and maps</p> <p>Pictures of transport the world over Slides</p> <p>Web search for materials on transport and information systems</p>	
X	<p>Understanding the implications of information explosion</p> <p>Recognising and understanding the technological breakthroughs in the era of information explosion</p> <p>Understanding the significance of technological innovations and the revolution they led to</p> <p>Recognising the value of print media, satellite images</p> <p>Appreciating the process of globalisation and how</p>	<p>Information and telecommunications Technological development</p> <p>Information Technology Information Revolution</p> <p>Information system components</p> <p>Globalisation, Liberalisation and Digital divide</p>	<p>Explaining the rapid information and telecommunication development</p> <p>Group discussion on IT, Information revolution and information system components</p> <p>Rationalising the digital divide visits to institutions of information technology in the locality</p> <p>Visit to All India Radio</p> <p>Television Station postal and Telegraph Offices</p>	<p>Blackboard, Colour chalks. Wall charts and maps , Pictures of telecommunication equipment the world over Slides on IIT development</p> <p>Web search for materials on IT and case studies</p> <p>Field visits</p>	11

	<p>it works right now</p> <p>Understanding the implications of liberalisation and digital revolution and divide</p>				
XI	<p>Understanding the working of trade, national and international</p> <p>Learning about the significance of trade in contemporary world</p> <p>Learning about the significance of trade in contemporary world</p> <p>Recognising / identifying the causes of trades</p> <p>Learning about the international trade agreements and how they affect trade of the Third World countries</p>	<p>Trade systems</p> <p>Trade Blocs</p> <p>World trade Organisation</p> <p>Trade agreements</p> <p>Trade and the Third World</p>	<p>Describing the process of trade</p> <p>Explaining how trade develops in a region, between countries</p> <p>Asking students collect information on trades that are transacted in the local area</p> <p>Marking important trade centres of the country and the world on maps</p> <p>Discussion on the usefulness of the trade blocs for themselves and for others</p>	<p>Blackboard, Wall maps, World and India</p> <p>Study materials on trade agreements</p> <p>Field visits</p>	9
XII	<p>Understanding and appreciating the notions of country, nation, government and people</p> <p>Learning how and why countries come together as socio-economic groups</p> <p>Understanding the importance of the United Nations, its purpose and perspectives</p> <p>Learning about the various activities of the UN</p> <p>Recognising why the countries of the world were/ are divided as first, second and third</p>	<p>The family nations</p> <p>Three worlds: Where did the second go?</p> <p>Country and Governance</p> <p>United Nations</p>	<p>Explaining why and how of countries, nations, governments and people, from both ideological and social perspectives</p> <p>Asking students role play a government, a community or society, and government to understand the way all work</p> <p>assignments on country groupings and presenting reports in the classroom</p> <p>Visit to local government offices</p> <p>Visit to local UN offices, embassies and consulates</p>	<p>Blackboard, Wall maps of the world, pictures from different countries</p> <p>Compact discs of information on UN and UN organisations such as the FAO, UNESCO, and UNICEF Websites of www.un.org, www.undp.org, www.unicef.org and so on</p>	9

	<p>worlds</p> <p>Learning why the second world disappeared</p>		<p>where possible; Students collect information on various countries of the Third World for a discussion at the class</p> <p>Scrapbook on different countries</p>		
XIII	<p>Understanding why a country unified suddenly broke up into several countries, only to regroup as the CIS</p> <p>Learning/looking back at the causes and consequences of the disintegration</p> <p>Understanding and appreciating the causes in ideological and sociological sense</p>	<p>Disintegration of a Country; Soviet Union History</p> <p>Geographical landscape</p> <p>Economy people and culture</p> <p>Commonwealth of Independent States: Then and Now</p> <p>Wither cold war?</p>	<p>Describing the extent of the Soviet Union using a wall map</p> <p>Scrapbook/album by collecting pictures on Soviet Russia and the CIS countries</p> <p>Visit to Russian Consulate assignments on countries and group discussions.</p>	<p>Blackboard Wall maps and hangs pictures of people different countries of erstwhile Soviet Union</p> <p>albums/Scrapbook</p> <p>Web search for information using search engines.</p>	9
XIV	<p>Understanding how the two Germanys came together and how the Berlin Wall was broken and why</p> <p>Appreciation for a people who wanted to unite and live in peace and amity</p>	<p>Two into One: The Unification of Germanys</p> <p>Berlin Wall History</p> <p>Geographical landscape</p> <p>Economy people and culture</p> <p>The Pain of Unification</p> <p>Germany: Then and Now</p>	<p>Explanations of the Germanys, especially East Germany as a country behind the curtain</p> <p>Discussions on Germany</p> <p>Students collect information, pictures on Germanys then and</p> <p>Scrapbook/album</p>	<p>Blackboard Wall maps and hangs</p> <p>Pictures of people of different countries of erstwhile Soviet Union</p> <p>Albums/Scrapbook</p> <p>Web search for information using search engines</p>	6
XV	<p>Understanding how apartheid could exist in the world</p> <p>Appreciating the compulsions of a people to stand against</p> <p>Learning about the atrocities of the apartheid regime</p>	<p>Apartheid and After: South Africa</p> <p>The Voice of people</p> <p>History</p> <p>Geographical landscape</p> <p>Economy people and culture</p> <p>Mandela and After</p> <p>The future of South Africa</p>	<p>Explaining what apartheid means to us and the South Africans</p> <p>Students role play apartheid and discuss what the black people would have felt</p> <p>Class discusses the role of Nelson Mandela and what has happened after the stepped down as President of South Africa</p> <p>Collecting pictures on South Africa</p>	<p>Blackboard Wall maps and hangs</p> <p>Pictures of people of South Africa</p> <p>Albums/Scrapbook</p> <p>Web search for information using search engines</p>	10

			Class discusses the change in the economy since the breakdown of apartheid and independence		
XVI	<p>Learning the roots of cartography and how historically the science has changed from manual to automation</p> <p>Appreciating maps and learning the skills of drawing scales</p> <p>Understanding the meaning of large and small scales</p> <p>Learning to draw contour diagrams and cross sections of relief</p> <p>Learning to draw profiles, of relief and rivers</p>	<p>Cartography Maps and scales</p> <p>Contours and cross sections Profiles: Rivers, relief</p>	<p>Knowing-doing exercises, teacher performed as illustrative actions</p> <p>Class/lab work on maps, scales, profiles</p> <p>Homework/assignments for students to complete a set of scales, contour diagrams, and profiles</p> <p>Students are asked to identify features on maps, especially top sheets, such as knoll, ridges and saddles, valleys of different descriptions</p> <p>students are asked to draw for exhibits in the classroom</p>	<p>Blackboard Demonstrations Wall hangs and display maps Precision instruments.</p>	20
XVII	<p>Ability to plan, design and carry out fieldwork</p> <p>Understanding the rudiments of fieldwork in research and practical learning</p> <p>Learning to create databases, analyse and interpret results using simple techniques</p>	<p>Fieldwork Planning field work Practising fieldwork</p> <p>New, innovative methods of fieldwork: rapid and participatory appraisals</p>	<p>Explaining what constitutes fieldwork</p> <p>Students plan and execute fieldwork with a specific purpose in mind.</p> <p>Collecting materials on various field surveys, including resources surveys and appraisals</p> <p>Executing a carefully designed fieldwork in the local area with focus on local problems</p>	<p>Black board, wall hangs Charts on steps to Field work Flip charts, field equipment</p>	20
XVIII	<p>Understanding what is remote sensing and it is actually done</p> <p>Learning various methods of remote sensing: ariel, satellite,</p>	<p>Remote Sensing Ariel, Satellite and Radar Remote sensing systems</p> <p>Use of remote sensing</p> <p>Remote sensing in</p>	<p>Explaining principles of remote sensing and types of remote sensing.</p> <p>Students are asked to look at images and make</p>	<p>Black Board, Wall hangs of images, Images for class work, Pictures of aircrafts, satellites and radars for appreciation. Web</p>	20

	<p>and radar based</p> <p>Learning skills to visually interpret images</p> <p>Learning how images can be used in resources and environment assessment</p>	<p>natural resources and environment management</p>	<p>something out of them towards an assessment</p> <p>Hands-on exercises on understanding digital data, pixels and so on.</p>	<p>search for materials on use of remote sensing analysis</p>	
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Note: Two of the seven periods a week will be spent on practicals, and the rest given over to theory/class teaching. At least ten exercises in each of the two units of the practicals: XVI and XVII. The last unit has to be taught more carefully as it is on the technology of remote sensing. Expert help may be sought to do that.