

National Curriculum for
Advanced Geography
(Elective)
Grade XI-XII
2011



GOVERNMENT OF PAKISTAN
MINISTRY OF EDUCATION
ISLAMABAD

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Introduction

Geography describes the patterns of spatial and temporal differentiation that, in turn, are governed by interaction between various variables producing a variety of natural and human phenomena on our planet Earth. The foundational concepts for understanding the nature, dynamics and impact of these variables have been incorporated in the curriculum of Grades VI, VII and VIII. Basic understanding has been provided as to how the space, time, place and nature – the material frames of daily life – are constituted and represented through human practices, not as separate elements but in relation to each other. Thus, an integrated approach has been adopted. Continuing further, in this curriculum for Grades IX and X, the spatial and temporal freedom and constraints are recognized through providing recognition of a variety of singular environments that prevail on our planet, and, how and why they differ from each other.

Human experience of space, place and time is mostly perceptive incorporating their learning. Humans, interacting with varied landscape, evolve and organize such actions that lead to emergence of different spatio-temporal structures. The plurality imbibed in the dynamics of these structures well speaks of the integration of heterogeneous elements that are spatially diverse and undergo temporal oscillations.

Geographers' examination of regional characteristics, similarities, differences, interrelations, behaviour and evolving is unique and leads to understanding of distributions, patterns and structures organized in a space. From exploration to understanding, prediction and planning, the milieu suggests a vigorous and challenging undertaking by the geographers. All these labyrinthine ideas have been incorporated in the curriculum in a way that the learners grasp them through their familiarizations with these variety phenomena and consequent enquiry that generates in their minds. This helps in their identification and understanding of the ensuring problems and the rectifying measures through application of their intellectual acumen. Thus, this wholesome and integrated

approach inculcates in the learners a natural thirst for inquiry, discovery and innovation.

Objectives

The objectives of this new curriculum of Geography are to:

- Acquaint with structures and forms emerged in various natural systems and how & why they have their distinctive attributes.
- Inculcate knowledge about the interactions between different natural systems that evolve varied natural systems and the inherent dynamics.
- Awareness about the use of the natural systems by the humans and the resultant structures.
- Sharpen cognizance about the inter-relationship between the Natural Environment and the Human Responses.
- Generate awareness about the key issues confronting our planet and its inhabitants and their analyses leading to suggesting possible remedial measures.
- Learn about the resources endowed to our planet and the resource types.
- Assess the human impact upon the resource quality and quantity.
- Analyze the problems and management issues relating to resource sustainability.
- Evaluate the human impact on Natural Systems and related issues.
- Highlight benefits and shortfalls associated with the Globalization and its efficacy in the socio-economic development of the people.
- Learn about Economic Based Regions and their global role.

CONTENTS	STUDENT LEARNING OUTCOMES
<p>Chapter 1:</p> <p>Physical Geography:</p> <ol style="list-style-type: none"> 1. Definition, history and scope of Geography 2. Introducing Physical Geography 3. Branches of Physical Geography 4. Universe, solar system and the Earth. 5. Land and water distribution 	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define geography and its scope. • Discuss the historical development of geography. • Define Physical Geography and explain its importance. • Describe the main branches of Physical Geography. • Define Universe and its components. • Interpret the sun as a star and source of energy for planets • List other members of the Solar System and describe them. • Describe the shape & size of the earth • Explain the rotation of the earth • Evaluate the revolution of the earth and seasonal change. • Compare the phenomenon of solar and lunar eclipses with diagrams. <p>Describe the land and water distribution on the earth's surface.</p>

CONTENTS	LEARNING OUTCOMES
<p>Chapter 2: Structure of the Earth and Lithosphere:</p> <p>1. Internal structure of the Earth</p> <p>2. Plate Tectonics</p> <p>3. Volcanism</p> <p>4. Earth quakes</p> <p>5. Rocks</p>	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Explain the interior of the earth • Describe the theories regarding the earth's interior. • Interpret the structure and composition of the earth's interior. • Explain the concept of Continental Drift. • Define Plate Tectonics. • Enumerate the major & minor plates and their distribution. • Interprets the fault lines. <ul style="list-style-type: none"> i. Convergence ii. Divergence iii. Lateral plate contract. • Define process of volcanism and its types. • Trace the distribution of volcanoes on the world map. • Define an earthquake • Evaluate the evidences and causes of an earthquake and explain the following phenomenon, i.e. focus, epicentre, Richter scale, Seismograph etc • Describe the types of seismic waves • Trace the major zones of earthquakes on the world map. • Define rock. • Describe major types of rocks, according to their mode of formation. • Define igneous rocks, types and their characteristics <ul style="list-style-type: none"> i. Intrusive ii. Extrusive • Describe Sedimentary rocks types and their characteristics <ul style="list-style-type: none"> i. Mechanically formed ii. Chemically formed • Describe metamorphic rocks, Types and their characteristics.

CONTENTS	LERNING OUTCOMES
Chapter 3: Landforms: 1. Major Land forms I. Mountains II. Plateaus III. Plains 2. Denudation. Weathering ii. Mass Wasting 3. Landforms made by river 4. Land forms made by glaciers 5. Land forms made by wind 6. Land forms made by waves	Students are expected to: <ul style="list-style-type: none"> • Define landforms • Describe mountain and its types. • Describe plateau and its types. • Describe plains and their types. • Define denudation • Describe weathering process and its types. • Describe Mass wasting as a process and its types. • Describe river as an agent of erosion, transportation and deposition and associated landforms. • Describe the erosional and depositional landforms made by valley and continental glaciers. • Describe wind as an agent of erosion, transportation and deposition and associated landforms. <p>Define waves and describe the erosional and depositional landforms made by waves.</p>

CONTENTS	LERNING OUTCOMES
<p>Chapter 4:</p> <p style="text-align: center;">Atmosphere:</p> <p>1. Introduction</p> <ul style="list-style-type: none"> i) Composition of atmosphere ii) Structure of atmosphere <p>2. Atmosphere Temperature.</p> <ul style="list-style-type: none"> i) Insolation ii) Horizontal distribution of temperature iii) Vertical distribution of temperature 	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define Atmosphere • Describe the composition of Atmosphere • Describe the layered structure of Atmosphere • Define Temperature • Describe Insolation • Explain horizontal temperature distribution over the earth's surface. • Explain vertical distribution of temperature

CONTENTS	LERNING OUTCOMES
<p>Chapter 5:</p> <p style="text-align: center;">Global Circulation:</p> <p>1. Atmospheric pressure.</p> <p>2. Pressure distribution over the earth surface.</p> <p>3. Winds</p> <ul style="list-style-type: none"> I. Relationship between pressure and wind. II. Planetary winds III. Seasonal winds IV. Local winds <p>4. Air masses and their types.</p> <p>5. Fronts and their types.</p> <p>6. Cyclones and their types.</p>	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define Atmospheric pressure • List the instruments used to Measure the Air pressure • Explain the location of pressure belts on the map. • Describe the relationship between pressure and wind • Explain the general pattern of the planetary winds. • Describe the seasonal wind with reference to South Asia draw the direction of the seasonal wind on South Asian map. • Describe the local winds with the help of diagram. • Define Air Masses and their types • Define Fronts and their types • Define cyclone. • Describe main types of cyclones. • Explain the areas, weather and other

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| | <ul style="list-style-type: none"> • characteristics of temperate Cyclones. • Explain the areas, weather and other characteristics of Tropical Cyclones. |
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CONTENTS	LERNING OUTCOMES
<p>Chapter 6:</p> <p>Atmospheric Moisture:</p> <ol style="list-style-type: none"> 1. Humidity 2. Clouds 3. Precipitation 	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define Humidity • Describe the types of Humidity • Describe the major types of clouds and their formation. • Define precipitation • Describe the types of precipitation.

CONTENTS	LERNING OUTCOMES
<p>Chapter 7:</p> <p>Oceanic Movements:</p> <ol style="list-style-type: none"> 1. Currents 2. Tides 3. Waves 	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define ocean currents • Describe the major causes of ocean currents • Show the ocean currents on a world map • Describe the currents of Atlantic, Pacific and Indian Ocean • Define Tides. • Explain the types of tides • Define and explain waves

CONTENTS	LERNING OUTCOMES
<p>Chapter 8:</p> <p style="text-align: center;">Climatic Regions:</p> <ol style="list-style-type: none"> 1. Introduction 2. Major Climatic Region <ol style="list-style-type: none"> i. Equatorial Climatic Region ii. Tropical Climatic Region iii. Temperate Climatic Region iv. Polar Climatic Region 	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define Climatic region • Illustrate the climatic regions on the map • Describe Equatorial Climatic Regions • Describe Tropical Climatic Regions • Describe Temperate Climatic Regions • Describe the Polar Climatic Regions

CONTENTS	LERNING OUTCOMES
<p>Chapter 9:</p> <p style="text-align: center;">Practical Geography:</p> <ol style="list-style-type: none"> 1. Location 2. Directions <ul style="list-style-type: none"> • Methods of finding directions 3. Scale 4. Introduction to GIS, GPS and Remote Sensing. 5. Relief features <ul style="list-style-type: none"> • Methods of showing relief 6. Conventional Signs. <ul style="list-style-type: none"> • 	<p>Students are expected to:</p> <ul style="list-style-type: none"> • Define location • Define Direction • Explain methods of finding direction. • Define scale • Explain the types of scale • Measure distance between two points by using map scale • Define G.I.S, G.P.S. & Remote sensing. • Use of GIS, GPS and Remote Sensing • Draw relief features by using different methods. • Explain the symbols used for the representation of physical and human features on the map.

CHAPTER WISE PERCENTAGE WEIGHTAGE (XI-XII)

Grade-XI			
S. No	Chapter	Weightage	No. of Periods
1.	Physical Geography and its Branches	10%	
2.	Lithosphere	15%	
3.	Land Forms	10%	
4.	Atmosphere	10%	
5.	Global Circulation	10%	
6.	Atmospheric Moisture	10%	
7.	Ocean Movement	10%	
8.	Climatic Regions	10%	
9.	Practical Geography	15%	
Total:		100%	

Grade-XII

S. No	Chapter	Weightage	No. of Periods
1.	Human Geography	15%	
2.	Population	20%	
3.	Human Settlements	15%	
4.	Economic Activities	15%	
5.	Political Geography	10%	
6.	Natural Hazards	10%	
7.	Practical Geography	15%	
Total:		100%	

Instructional Strategies

Learning of Geography should focus on meaningful participatory environment, both by instructor and students. The participation in the class should be able to understand, interpret, analyse and synthesis geographical information with the help of various tools and techniques like maps, table graphs, G.I.S. (Geographical Information Systems) R.S (Remote Sensing), GPS (Global Positioning Systems) and texts to recognize Pattern and solve problems at local and international levels. In the process the participants should be able to appreciate the spatial and temporal variations in different physical and Human environments and the interaction between the two.

Teachers need to ensure whatever students learn prepares them not only to do well in examinations, but successfully face the challenges of a global society, and develop their social consciousness to the extent that they become the agents of social change. In order to achieve this objective teachers need to adopt innovative instructional strategies.

These strategies should intellectually engage the students of varying degrees of interests, abilities and styles of learning, strengthen their power of reasoning and stimulate their active participation through different activities like maps, diagrams and exercises.

There are many reasons for using a variety of instructional strategies. Students own active intellectual engagement in the learning process increases their retention of their learning. Living in the information age where knowledge is growing exponentially and facts are available at the click of a button students need to learn "how to learn". Many instructional strategies besides facilitating students, academic learning also aid development of number of skills and values preparing them for the varied roles they will play in today's society. Also, in any class of students there will be ranges of interests, abilities and styles of learning. Varying the teaching strategies will address these differences allowing all children to learn.

Lecture

1. Lectures must be well-planned.
2. Problem-oriented and accompanied by the use of appropriate maps, models, diagrams, transparencies, photos, graphics, charts, animations, movies etc. These can also be displayed by an overhead or multimedia projector if possible and wherever available.
3. Lectures should not be one sided. In order to make a lecture interactive and keep students engaged, the teacher should from time to time ask questions.
4. The students should also be encouraged to ask questions which may be answered by the teacher or directed to other students inviting them to answer.
5. This strategy is highly effective as students participate equally, practice social

skills and individually demonstrate what they have learned from their partners.

Discussion

Discussion is yet another important form of group interaction which yields a number of benefits to the students.

1. It increases their knowledge of the topic and provides them with an opportunity to explore a variety of views which in turn help them to examine their assumptions in the light of different perspectives.
2. It also strengthens their communicative skills and familiarizes them with the art of academic discourse.
3. In planning a discussion, the teacher should review the material and choose such a topic which builds upon the constants the students have recently covered and allows them enough room to come up with innovative ideas.
4. It should not be merely a repetition of the facts they have learned from their books or the teacher's lecture.
5. All students should be given equal opportunity to participate and contribute in the discussion and by putting probing questions, such as "why do you think so?" and "Can you elaborate further? etc., they should be encouraged to come up with appropriate answers.
6. All discussions should be summarized briefly and precisely, identifying the questions for further inquiry and discussion.

Cooperative Learning /Students Control Learning Methods.

Cooperative learning is one of the most important strategies in which students work together in small groups or pairs to maximize their own and each other's learning. Improved self-esteem, increase-task time, increase higher order thinking, better understanding of marital, ability to work in collaboration with others and improve attitude towards school and teachers. It would create opportunities for students to use and master social skills necessary for living productive and satisfying lives.

Inquiry/Investigation

Inquiry/investigations is a process of framing questions, gathering and analyzing information and drawing conclusions from it. There are a number of steps in conducting an inquiry for example:

1. The teacher may choose a topic and have students frame inquiry question(s) based on the topic for instance. How various life patterns are evolve in different natural environment.
2. Students formulate a hypothesis, i.e. provide possible explanation or educated guesses in answer to the question, for instance. Real life patterns in different environments exhibit various forms of evolution to over.

environment.

3. Students plan the inquiry. For example:
What is the best place to find information on the topic? What is the best way to gather data?
How to allocate time?
Whom to consult?
4. Help student locate information/gather data. For example: Read books on Regional Geography of the world. Geography of Pakistan and South Asia; search the internet (Depending on the availability of facilities).
5. Students record information as they find it.
6. Help student evaluate their findings and draw conclusions. Students may look for relationships in the information gathered, analyze the information and try to find an answer to the query. Teach them to support their opinions with evidence from their data.
7. Have students communicate their findings in creative ways, written, oral and visual. For example, as a poster, article, talk show, role-play, PowerPoint presentation or presentations on charts, maps or even the blackboard.
8. Encourage students to suggest possible action based on findings, if required by the theme Select actions that are doable. Look at possible consequence of each action. Choose the best action, e.g. write a report for a newspaper/magazine relating to Trans-boundary water dispute between Pakistan and India.
9. Make an action plan and carry out the action e.g. arrange a walk on the environmental problems of a city.
10. Reflect on the success/challenges of the action if required.

To conclude, these strategies besides promoting academic achievements would enable students to explore a range of views on a topic, gather information, answer questions, improve their problem-solving and communicative skills and teach them how to work as a team. It will also increase higher order thinking and improve their attitude towards self learning and the environment.

Assessment is gathering quantitative and qualitative information, using a variety of tools and techniques that are easy to understand and interpret. Assessment should aim at evaluating teaching and learning, showing proficiency in a wide variety of tasks at class level and at providing information to different people on how well standards are being met.

Assessment and its various patterns should be in accordance with the needs of the curriculum and designed in such a manner that they inculcate and improve in students various skills such as observation, curiosity, creativity and application. Some of the assessment types are as under:-

- **The Select response**, where students select the answer to a question from two or more given choices. This category includes multiple choice,

true/false, fill in the banks and matching items type questions.

- A **constructed response** format requires students to create their own answer to a question or task. This allows teachers to gain insight into students, thinks and creative process, and to assess higher order thinking. This category includes short and essay types question.
- **Teachers, observations** are commonly ignored as a form of assessment. However, teachers should constantly observe and listen to students as they work. Non-verbal communication, such as inattention, looks of frustration and other causes give greater insight than verbal feedback, Observation is also important in assessing performance tasks, classroom climate and teacher effectiveness.
- **Self-assessment** refers to students evaluating themselves. In self-evaluation of academic achievement, students rate their own performance in relation to established standards and criteria. Students may also be asked to answer questions that reveal their attitudes and beliefs about themselves or other students as part of their self-reporting.

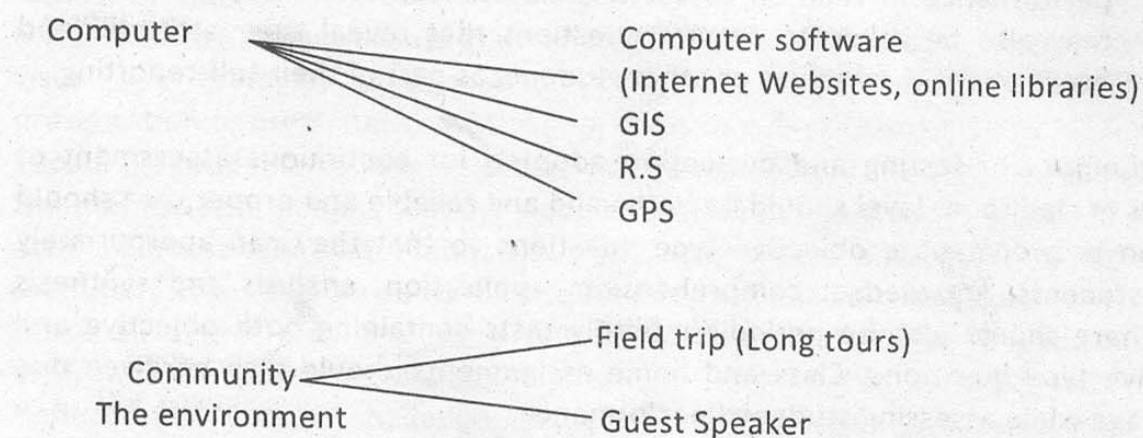
The techniques of testing and evaluation adopted for continuous assessment of students at classroom level should be both valid and reliable and proper care should be taken to prepare the objective type questions so that they can appropriately assess students' knowledge, comprehension, application, analysis and synthesis skills. There should also be periodic/monthly tests containing both objective and subjective type questions. Class and home assignments should also be given due weight age while assessing students' performance.

Guidelines for Developing Teaching-Learning

Resources

A number of teaching and learning materials are required for effective teaching of particular subjects. For example:

- Textbooks
- Teachers, guides
- Students workbooks
- Visual aids such as charts, models, maps, transparencies, documentaries and study tours, etc.



For Geography in particular the following resources/teaching aids can be utilized to effectively support the process of teaching and learning in the classrooms:

- Primary and secondary source material
- Maps/globe (different kinds)
- Case and models
- Charts and Models
- Case studies
- Encyclopaedias
- Documentaries
- Newspapers/newsmagazines
- Internet
- Museums
- GIS, R.S, GPS

Text Books

A textbook is an important teaching and learning resource. It is one of the most extensively used resource and serves as a framework for teaching throughout the year.

Basic features of a textbook

- The textbook should confirm in all its details to the parameters laid down in the curriculum.
- It must have accurate, factual and up-to-date material
- The material must be sufficient to give students the knowledge they need to understand concepts, develop skills and engage in higher order thinking,
- The material should help students understand the world in which they live, prepare for exams, prepare for life, raise their standard and promote independent thinking.
- The language of the narrative should be simple, clear and logical and should not be loaded with unnecessary details and repetitions.
- The material must be error-free so that it can be trusted.
- The material must be unbiased and non-controversial.
- Textbooks should be well illustrated with maps, diagrams, charts, and photographs.
- A number of activities should be included throughout the book.
- End-of-the-chapter exercises must encourage students to think, develop skills, and use information for a variety of purposes.
- Textbook must have an index.
- Must include a Glossary
- Must be contextually relevant.

Teacher Guide

Teacher guides provide detailed explanation of key concepts of the curriculum, lay down guidelines on how to teach a particular topic, and provide further examples to facilitate learning. A teacher's guide serves to educate teachers and thus can be seen as a means of helping teachers develop professionally.

Basic Features of a Teacher Guide:

- A teacher guide helps teachers teach text and extend activities.
- It does this by keeping contextual realities in view.
- It recommends various teaching strategies and

A Teacher Guide Contains:

- Rationale for suggested teaching
- Various assessment strategies }
• Teaching learning resources } Up-to-date relevant
- Additional information sources
- Extended activities and how to conduct them

A teachers' guide should include introduction to the guide explaining how to use it must be easy to understand and use, expand and develop teacher's repertoire of knowledge and skills.

Workbook

Workbooks are books that contain writing activities, maps, blank maps, diagram and exercises that are related to each chapter in the textbook. Workbook exercises help to develop student's understanding of the concepts dealt with in the text, to develop skills and to apply knowledge to new situations.

Basic features of Workbooks:

- Workbooks contain many exercises and activities for each chapter, topic, sub-topic.
- These exercises and activities effectively help develop, practice and assess students' content knowledge, skills and higher order thinking and are different from exercises, activities in text and guide.
- Workbooks correspond to text-exercises and activities for same topic/chapter grouped together, presuppose knowledge and skills developed in text only.
- They are non-repetitive in style, structure with a purpose to engage students.
- They are easy for students to understand and follow, clear instructions.
- They carry several illustrations/examples/explanations to reinforce concepts of the textbook.