

# **DRAFT CURRICULUM**

**IN THE SUBJECT OF**

**GEOLOGY**

**FOR CLASSES  
(IX-X)**

Developed By

Directorate of Curriculum & Teacher Education NWFP,  
ABBOTTABAD  
April, 2003

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## **PREFACE**

A nation without means of reforms is a nation without means of survival. The best course to make reforms is always remain in education. The Federal Govt of Pakistan feels the need of modifying, revising and making abreast of time the curricula across the levels and subjects (I-XII). Form now in consonance of National Education Policy (1998-2010) already pure sciences, social sciences and languages curricula in two phases i.e 2002 AD and 2001 AD respectively have been designed and developed in collaboration with all 4 Curriculum Bureax accordingly. This is the 3<sup>rd</sup> phase - 29 subjects yet 61 level is in operation.

The NWFP Curriculum & Teacher Education Directorate under the auspices of the Secretary School & Literacy Department and certainly in collaboration with Federal Ministry of Education, Curriculum Wing, Islamabad has convened various Provincial Draft Curriculum Development Committees meetings comprising working teachers, Subject Specialists, University/College teachers and Curriculum Developers to prepare the document in selected disciplines as per availability of financial assistance.

The curriculum development has always been remain continuos process. Indeed, to accomplish this titanic task one needs immense commitment, stout vigour and profound professional insight. Special gratitude to Almighty Allah that such head & heart qualities were found among the members of the committees and others engaged in the process.

We don't claim that this work is complete in all respect. However, the Ministry can ameliorate it through the modicum efforts of NCDC. Before going to depart I must like to appreciate to both committee members and all subject specialists plus officials for fulfilling the task despite the snags and limitation.

Umar Farooq  
Director  
Curriculum & Teacher Education  
NWFP, Abbottabad

## Introduction

**G**eology is the science of the earth, man's systematic attempt to understand the planet on which he dwells, its origin and development through the past, its size, shape, and composition, the processes that are now, or have formerly been at work upon its surface and in its interior, and the origin and evolution of the life upon it. Geology thus involves systematic observation and measurement of the soils, rocks and fossils of the streams and oceans, of glaciers, earth quacks, mountains plains and volcanoes.

Despite its youth, geology has profoundly influenced men's thinking. Geology brought new concept of time, just as astronomy revolutionised ideas of space and of the position and motions of the earth among the stars. Comparisons of the biological relations between living and fossil organisms, together with the geologic demonstration of the definite sequence of changing fossil assemblages in time, led to the doctrine of evolution.

Geology also has had a most pronounced impact on the economic of nations. The power and wealth of the nation is largely determined by its endowment of useful minerals, its skills in finding and utilising them. In this age of political unrest and readjustment among nations the vast accumulation of petroleum is a potent force in world politics. We shall be wiser in world affairs if we know where petroleum occurs and how it is discovered.

## **OBJECTIVES:-**

- ÷ To give useful information to the students.
- ÷ To make students good citizen of the country.
- ÷ To acquaint the student with importance of geology.
- ÷ To develop scientific attitude in the students.
- ÷ To develop ability to criticise conditions in a constructive way.
- ÷ To tell about the origin of ht earth.
- ÷ To provide a portion of knowledge about minerals. their composition and importance.
- ÷ To develop an appreciation of the significance of geology.
- ÷ To teach about oceans.
- ÷ To enable students to know about deserts and the work of the wind.
- ÷ To acquaint students with the knowledge about ground water.
- ÷ To develop ability of students to discuss glaciers.
- ÷ To enable the students to comment on weathering and soil.
- ÷ To familiar students with the concept of earthquakes.
- ÷ To make students competent enough as to live an effective life.
- ÷ To develop scientific thinking in the students.
- ÷ To enable the student to apply new knowledge for the solution of daily problems.

## Course out line

### **I. Origin of earth:**

- ⊕ Theories of origin of earth.
- ⊕ Structure of the earth.
- ⊕ Place in solar system.

### **II. Minerals:**

- ⊕ Definition of mineral
- ⊕ Variation in composition of mineral
- ⊕ Importance of mineral

### **III. Identification of rocks:**

- ⊕ Common structure of rocks
- ⊕ Kinds of rocks
- ⊕ Role of rocks in human life

### **IV. The Oceans:**

- ⊕ Circulation of the sea
- ⊕ Tides, waves and current
- ⊕ The life zones of the sea

### **V. Deserts and the work of the wind:**

- ⊕ Evolution of desert land forms
- ⊕ Work of the wind
- ⊕ Surface forms of moving sand

### **VI. Ground water:**

- ⊕ Source of ground water
- ⊕ Ground water movement
- ⊕ Discharge of ground water into the ocean

**VII. Glaciers:**

- ÷ Glacier motion
- ÷ Kinds of glacier
- ÷ Effect of glacial loads on the earth crust

**VIII. Weathering and soils:**

- ÷ Analysis of weathering
- ÷ Climatic factors in weathering
- ÷ Residual soil and soil profile

**IX. Earthquakes:**

- ÷ What are earth quacks
- ÷ Causes of earth quakes
- ÷ Effects of earthquakes.

## **GUIDE LINE FOR BOOK**

Pages up to 200

- ∞ May be written in simple language.
- ∞ Author may be requested that students previous knowledge and experience may be given due attention while writing different concepts.
- ∞ Every unit may be developed in accordance with the demands given in the list of objectives.
- ∞ Exercises for students may be given at the end of each chapter or unit.
- ∞ Picture, Maps, diagrams etc may be given where these are needed.
- ∞ Difficult words and ambiguous terms may be avoided.

### **Instructional Material:**

- ✧ Models
- ✧ Specimens
- ✧ Maps
- ✧ Pictures
- ✧ Mineral of different hardness
- ✧ Instructional T.V
- ✧ Projector
- ✧ Provision for use of Internet

## In-service Training

- ✘ Teachers may be trained that may enhance their knowledge and proficiency and they would be able to teach this subject with full competency.

## Evaluation of students work:

The marks should be divided as follow:

Theory	=	Essay items	=	45 % Marks
		Objective items	=	30 % Marks
Practical	=	.....	=	25 % Marks
Total				100

**Note:** Paper setter may be strictly directed to set paper, which will cover the entire course. It is totally injustice to set paper in the first part or in the last part of course it should please be avoided.