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Prerequisite of Using the Assessment Framework

This Assessment Framework (AF) provides theory and structured conceptual map of how the learning outcomes of a programme of study should be assessed at the middle school level. It contains guidelines and principles of assessment as well as several practical examples illustrate the application in the classroom.

The framework can be considered a blueprint of an assessment programme at the primary school level. As with all assessment frameworks, its enactment in schools and classrooms will require professional judgement guided by the following prerequisites.

Teacher and Head Teacher Development – Where needed, teachers and head teachers would require short courses on a. formative assessment, b. the progressive notions of cyclic purposeful assessment and their need in Pakistani context, and c. the importance and conduct of formative feedback, which facilitates learners' progression from lower-order thinking skills to higher-order thinking abilities. They may also need to learn how to read the curriculum maps and tables of specification to plan for authentic and valid assessment.

School Based Assessment Planning - School based yearly assessment programmes and monthly assessment schemes must be developed. In addition, to providing principles and guidelines for assessment, the AF also includes illustrative samples to help clarify how the former can be translated into practice. The framework also contains schedules of assessment and assessment weightage. These need to be considered for school level planning.

School Based Mentoring – There is a need to develop mentors who can work with teachers and head teachers in the selected schools to help them translate the AF into various schools' realities. Pakistan has schools of varying systems – from public to private to madrasah; varying contexts - from rural to urban to semi-urban; varying socio-economic background – from schools for high-income group to low-income groups to middle-income groups. Therefore, mentors will be required for at least the first year of the implementation of the AF.

CHAPTER ONE

INTRODUCTION

Chapter One

Introduction

This chapter introduces the National Assessment Framework (NAF), developed as an integral component of the National Curriculum Framework (NCF). By drawing on essential information from different national policy documents and from the relevant international literature, the chapter discusses the philosophical positioning of the assessment framework. It presents a brief overview of the quality of education and the need for developing a uniform national assessment framework. It further outlines the basic structure and the principles of various forms of assessment for Geography grades VI- VIII

Quality of Education

Quality as a complex and contested notion does not have a single definition; the understanding and the provisions of inputs into quality in education vary from society to society and context to context. National Curriculum Framework (NCF) (Government of Pakistan, 2018b) refers to quality of education as a set of elements containing input, process, and output of the education system. Quality also entails all the desirable characteristics of learners, processes, learning materials, content, governance, and management, and learning outcomes. Elaborating on the definition, NCF (2018b, p.1) further argues, "Quality education satisfies basic learning needs and enriches the lives of learners and their overall experience of living." Policy document on Minimum Standards for Quality of Education in Pakistan (Government of Pakistan, 2018a) refers to the definition used in Education for All (EFA) Global Monitoring Report 2005, which draws on two principles. The first principle identifies learners' cognitive development as the major explicit objective of all education systems, and the second emphasizes education's role in nurturing creative and emotional development for promoting the values and attitudes of responsible citizenship. The document on Minimum Standards for Quality of Education (2018) explains the concept of quality in terms of education that is "meaningful, relevant and responsive to the needs of individuals and the society as a whole." (Government of Pakistan, 2018c, p.5). Similarly, the National Educational Policy (NEP), 2009 recognizes six pillars of quality, which include curriculum, textbooks, assessment, teachers, learning environment and relevance of education to practical life.

The Need for an Assessment Framework

Assessment is an integral part of the quality of education offered to the students. It serves as a tool to measure outputs and outcomes of processes and practices. As such, assessment plays a central role in translating the key ideas in the quality definition into practice.

Erwin (1991) cited in NCF (Government of Pakistan, 2018b) defines assessment as:

> …the process of defining, selecting, designing, collecting, analysing, interpreting, and using information to continuously increase students' learning and development. It is the systematic collection, review, and use of information about educational programmes to improve student learning. Assessment focuses on what students know, what they are able to do, and what values they have when they receive their education… Assessment is concerned with the collective impact of a series of lessons on student learning. (p.69)

The above definition of assessment implies that on the one hand assessment provides evidence of students' learning of academic content (academic domain) and development in other domains (psychosocial/psycho-emotional, language and affective domains). On the other hand, it supports the collection of relevant information for various purposes such as informing teaching and learning, determining students' progress on an ongoing basis, measuring achievement, and providing information needed for monitoring individual and institutional accountability. These all lead to informed decision-making about improving students' learning outcomes and enhance the overall quality of education focusing on efforts at classroom, school, and system levels.

NCF (Government of Pakistan, 2018b), emphasises the need to develop a variety of assessment mechanisms to assess students' competence as per curricula and the SLOs. A robust and coherent national assessment system can help in the realization of the aims, goals and purposes of education articulated in NCF and other policy documents. This can be achievable with the help of a comprehensive and coherent national assessment framework to guide and support education systems, schools, and teachers in bringing about improvement in student assessment on a sustainable basis.

The Purpose of Developing Assessment Framework

The purpose of developing an assessment framework is to ensure the standardized implementation of different forms of assessment that includes formative and summative school-based classroom assessments and large-scale assessment. It encompasses a paradigm shift from the traditional ways of assessing to a competency-based assessment considering the implication for its utility, reliability, and practicality in different contexts. Underpinning different purposes of assessments, the framework serves as guidance for all the stakeholders in the learning system in developing, implementing, and using assessments methodically to instate stronger teaching and learning practices.

The above discussion signifies that assessment needs to be purposeful. It is a broad process of collecting, synthesising, and interpreting information to support student learning and to report on the amount learned. The supporting function is known as formative assessment and the reporting function is known as summative assessment (as shown below).

Assessment Type	**Formative**	**Summative**
	Looking back and preparing forward. Feeding back and feeding forward.	Feeding back. Providing a Snapshot.
Assessment Objectives & Outcomes	**Assessment *as* and *for* Learning**	**Assessment *of* Learning**
	Focusing on constructive feedback from the teacher and on developing students' capacity to self-assess and to reflect on their learning to improve their future learning and understanding.	Making judgments about what the student has learned in relation to the teaching and learning goals; should be comprehensive and reflect the learning growth over the time period being assessed.

Source: (Chappuis & Stiggins, 2017)

The Purpose of Developing the Geography Assessment Framework

Geography Curriculum focuses on departing from the traditional methods of evaluating students' learning; rather it emphasises the use of alternative assessments in order to determine how well students are learning and progressing. The alternative methods of assessments not only gauge a student's progress but also inform the process of teaching and learning.

Aligned with the Geography curriculum, the Geography Assessment Framework is developed to provide different forms of formative and summative assessment along with the purpose with which each assessment is being introduced. It provides a variety of assessment tools to assess all levels of thinking, skills, and attitudes.

The Assessment Framework of Geography reflects the best thinking about the knowledge, skills, and competencies needed for a high degree of learning among all students. It is constructed in the form of tasks that involve taking into account the developmental levels of students. It entails theme-wise weightage of all the grade levels for all the subjects. It will also present a table of specification along with the structure of formative and summative assessment, schedule of assessment, and guidelines for providing feedback for improving performance.

The framework also provides samples/ examples of selected and constructed items for summative and formative tests including marking guidelines, examples of authentic tasks, and rubrics as well as examples of effective feedback.

The Cyclic Assessment

Purposeful assessment is cyclic. There are many versions of cyclic assessment. The one presented here is adapted from Margaret Heritage's model cited in Greenstein (2016).

The cyclic model illustrates how purposeful assessment systematically supports learning by tracking and enhancing student growth towards standards following the seven steps. The seven-step model will be unpacked in the subsequent sections of the framework.

CHAPTER TWO

PRE-ASSESSMENT

Chapter Two

Pre-Assessment

Curriculum Mapping: A Pre-Assessment Strategy

An important consideration in assessment is how well students have mastered the SLOs, what knowledge, skills, and attitudes they have acquired in a particular learning area during an academic year and where they are expected to be at the end of teaching and learning (Greenstein, 2016). The first stage in planning for assessment is, therefore, to develop curriculum maps illustrating the alignment between the SLOs for Geography for grades VI-VIII with the various domains of knowledge, skills and attitudes using pre-specified criteria based on Bloom's taxonomy (see Appendices A, B & C).

The detailed curriculum maps have been developed for Geography grades VI-VIII and are in Appendices D, E and F. Curriculum mapping is based on Bloom's Cognitive, Affective and Psychomotor Domains. The following levels were used in each of the three domains:

The Cognitive Domain comprises six (06) cognitive dimensions, namely remember, understand, apply, analyse, evaluate, create and four (04) knowledge dimensions namely factual, conceptual, procedural, and metacognitive. **The Affective Domain** comprises five (05) dimensions comprising receiving, responding, valuing, organising, and characterising. **The Psychomotor Domain** comprises seven (07) dimensions namely, perception, set, guided response, mechanism, complex overt response, adaptation, and origination (see Appendices A, B & C)

The description, key words and sample assessment in each dimension are given in Appendices A, B and C. The sources from where the description and examples have been taken are also given underneath the tables in the different appendices.

Curriculum maps were used for the following four purposes:

- Develop topic wise or competency wise weightage
- Develop tables of specifications based on the weightage
- Group SLOs in terms of knowledge, skills, and attitudes they are trying to develop
- Develop assessment codes

The following section presents tables of specifications followed by list of assessment codes, SLOs and assessment strategies.

Tables of Specifications

Tables of specifications were prepared for each grade levels to align student-learning outcomes with key competencies or instruction units and calculate the number of assessed items.

Grade VI

Total Percentage Share of the Three Domains for Geography

Domains	Share in Percentage
Cognitive	68%
Affective	6%
Psychomotor	26%

Weightage of Each Domain

No	Domains	Cognitive	Affective	Psychomotor	Weightage
1	Domain A: Physical Geography	26%	0%	14%	40%
2	Domain B: Human Geography	28%	6%	6%	40%
3	Domain C: Environmental Geography	14%	0%	6%	20%
	Total (100%)	68%	6%	26%	100

Table of Specification

Competency / Learning Domains	Domain A: Physical Geography (40%)	Domain B: Human Geography (40%)	Domain C: Environmental Geography (20%)	Total 100%
Cognitive Domain				
Remember (6%)	3	2	1	6
Understand (23%)	9	10	4	23
Apply (6%)	2	3	1	6
Analyze (31%)	13	12	6	31
Evaluate (3%)	1	1	1	3
Create (0%)	0	0	0	0
Affective Domain				

Receiving (3%)	1	1	1	3
Valuing organizing (3%)	1	1	1	3
Psychomotor Domain				
Perception (5%)	2	2	1	5
Set (20%)	8	8	4	20
Total	40	40	20	100

Grade VII

Total Percentage Share of the Three Domains for Geography

Domains	Share in Percentage
Cognitive	**82%**
Affective	**7%**
Psychomotor	**11%**

Weightage of Each Domain

No	Domain	Cognitive	Affective	Psychomotor	Weightage
1	**Domain A: Physical Geography**	16%	0%	8%	23%
2	**Domain B: Human Geography**	47%	8%	4%	57%
3	**Domain C: Environmental Geography**	19%	0%	0%	20%
	Total (100%)	82%	7%	11%	100

Table of Specification

Competency / Learning Domains	Domain A: Physical Geography (23%)	Domain B: Human Geography (58%)	Domain C: Environmental Geography (19%)	Total 100%
Cognitive Domain				
Remember (0%)	0	0	0	0
Understand (27%)	0	19	8	27
Apply (12%)	8	4	0	12
Analyze (35%)	8	20	7	35

Evaluate (8%)	0	4	4	8
Create (0%)	0	0	0	0
Affective Domain				
Responding (7%)	0	7	0	7
Psychomotor Domain				
Guided Response (11%)	7	4	0	11
Total (100%)	23	58	19	100

Grade VIII

Total Percentage Share of the Three Domains for Geography

Domains	Share in Percentage
Cognitive	80%
Affective	12%
Psychomotor	8%

Weightage of Each Domain

No	Domain	Cognitive	Affective	Psychomotor	Weightage
1	Domain A: Physical Geography	16%	0%	8%	24%
2	Domain B: Human Geography	48%	8%	0%	56%
3	Domain C: Environmental Geography	20%	0%	0%	20%
	Total (100%)	80%	12%	8%	100

Table of Specification

Competency Learning Domains	Domain A: Physical Geography (24%)	Domain B: Human Geography (56%)	Domain C: Environmental Geography (20%)	Total 100%
Cognitive Domain				
Remember (0%)	00	00	00	00

Understand (20%)	00	12	08	20
Apply (08%)	00	08	00	08
Analyze (44%)	08	24	12	44
Evaluate (08%)	04	04	00	08
Create (04%)	04	00	00	04
Affective Domain				
Receiving (%04)	00	04	00	04
Organizing (04%)	00	04	00	00
Psychomotor Domain				
Set (04%)	04	00	00	04
Mechanism (04%)	04	00	00	04
Total (100%)	24	56	20	100

List of Assessment Codes, SLOs and Assessment Strategies

The following processes were used to develop codes.

- The first letters of **C**ognitive Domain "C", **R**emember Cognitive Dimension "R" and **F**actual Knowledge Dimension "F" to form the overall domain code as "**CRF**". Similarly, the first letters of the Cognitive Domain "C", **U**nderstand Cognitive Dimension "U" and **C**onceptual Knowledge Dimension "C" were combined to form the overall domain code as "**CUC**". In this way all the overall domain codes were generated for the cognitive Domain. The same strategy was used for Affective and Psychomotor Domains.

- The overall domain codes were combined with NC Reference to form specific codes for each SLO. For example, for the first SLO, "Establish that all individuals have equal rights, irrespective of religious and ethnic differences." falling in Domain **A** (**A-01**): Citizenship and in **CUC** overall code, the specific code of **CUCA-01** was developed. The same procedure was used for developing codes for all the SLOs falling in cognitive, affective, and psychomotor domains.

- Specific assessment strategies for each of the overall domain code suited for assessing specific SLO were also identified.

This exercise was important to identify the specific domain code in which the SLO was falling so that a valid assessment strategy could be used for assessing each SLO. The table below presents the overall domain code, NC reference, list of SLOs and assessment strategies for each grade level. The codes can also be used as a reference point in different types of assessments.

List of Codes, SLOs and Assessment Strategies

Grade VI

Cognitive Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
CRF Cognitive Remember Factual	G-06-B-01	Recall economic activities related to natural, capital, and human resources. (Forestry, education, and industrialization)	CRFB-01	CRQ's close ended. Short Answer Questions, MCQs Fill in the blank.
CRP Cognitive Remember Procedural	G-06-A-05	Recall the differences between weather and climate.	CRPA-05	Differentiate Matching, MCQs
CUC Cognitive Understanding Conceptual	G-06-B-05	Compare settlements to understand adaptation according to human needs.	CUCB-05	Engage in comparative study of different settlements, Matching, Compare and contrast the life before and after science and technology. Fill in the blank, Map Activity. CRQ's open ended and closed ended Questions. 3D Models, Reasoning Group Activity Differentiate, Contrast and Comparison Mini Research and Data collection. Define different terms. Draw and Label Earth's Tectonic Plates on a World Map sheet. Collect different types of Rocks such as
	G-06-B-10	Understand that advancements in science and technology influence the economic progress of a region.	CUCB-10	
	G-06-A-06	Study some of the elements of weather.	CUCA-06	
	G-06-A-01	Describe Earth's processes & patterns and how landscapes have changed over the time. (Structure and formation of the earth)	CUPA-01	
	G-06-A-07	Study the distribution of climate in the world.	CUPA-07	
	G-06-C-02	Understand and describe the effects of the physical environment on humans. (adaptation & lifestyle)	CUPC-02	
	G-06-C-03	Understand and describe the effects of human activities on the physical environment. (Urbanization, industrialization)	CUPC-03	
	G-06-C-05	Understand that exports generate revenue for a country which is necessary for a country to operate and progress.	CUPC-05	

				Marble, Salt, Coal etc. Give reason and justification about the effects of human activities on the physical environment? MCQs, RRQs and ERQs may used for summative assessment
CAF Cognitive Application Factual	G-06-A-03	Use coordinates to read 6 figure grid references to locate places on a map.	CAFA-03	CRQs, MCQs, ERQs,. Map Activity, Balancing the map,
CAC Cognitive Application Conceptual	G-06-A-02	Use map conventions in different types of maps to gather information about landforms, relief, and resources.	CACA-02	Map activity, CRQs, ERQs and MCQs
CANC Cognitive Analysis Conceptual	G-06-A-08	Investigate how climate is important for different vegetation.	CANCA-08	Mini Research PBL RRQs, ERQs Reasoning CRQ's open ended. Group Activity Discussion Inquire the importance of climate for vegetation. Engage in classroom discussion. Build arguments about the influence of human activity on landforms. Mini Research about the interdependence of resources within the global economy. Inquire about the relationship between
	G-06-B-03	Inquire why landforms are changing due to human activity (Agriculture).	CANCB-03	
	G-06-B-04	Study reasons for selecting a place to develop settlements. (Economic activity, jobs & transport)	CANCB-04	
	G-06-B-06	Use a range of multiple sources such as conventional maps, Google Maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of physical, human, and environmental geography of Pakistan and of the world to reach and support conclusions.	CANCB-06	
	G-06-B-07	Analyze how the scarcity of resources compels people to use resources wisely.	CANCB-07	
	G-06-B-08	Analyze the interdependence of resources within the global economy.	CANCB-08	
	G-06-C-01	Inquire about the relationship between physical & human geography.	CANCC-01	

				physical and human geography.
CANP Cognitive Analysis Procedural	G-06-A-04	Gather information using maps and globes to inquire about geographical changes of a selected region or a landform.	CANPA-04	Report writing CRQ, MCQs, RRQs,ERQs, Open ended Case study Method Develop Action Plan Mini Research. For example, watch the video and answer open and close ended questions. Report writing about the advantages of the forest for Pakistan and the world. Develop an Action Plan to improve the Global environment. e.g., Collect data about the last 25 years about the change in climate. And inquire reasons behind the climate change
	G-06-B-02	Explore the ways in which forests of the world and forests of Pakistan contribute to the economy of the region they belong to.	CANPB-02	
	G-06-B-09	Discover differences in lifestyles of two different settlements to appreciate and respect diversity.	CANPB-09	
	G-06-C-04	Find ways to improve the quality of their own and global environment. (Deforestation, global warming)	CANPC-04	
CEP Cognitive Evaluation Procedural	G-06-A-09	Investigate how and why our climate is changing. (deforestation)	CEPA-09	

Affective Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
AR Affective Receiving	G-06-B-07	Analyze how the scarcity of resources compels people to use resources wisely.	ARB-07	Reasoning CRQ's open ended, observation, discussion, interview, report on social scenarios/senses involving multicultural settings
AV	G-06-B-09	Discover differences in lifestyles of two different	AVB-09	

Affective Valuing		settlements to appreciate and respect diversity.		Differences, Comparison and Contrast

Psychomotor Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
PP Psychomotor Perception	G-06-B-06	Use a range of multiple sources such as conventional maps, Google Maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of physical, human, and environmental geography of Pakistan and of the world to reach and support conclusions.	PPB-06	PBL Reasoning CRQ's open ended
	G-06-C-01	Inquire about the relationship between physical & human geography.	PPC-01	
PS Psychomotor Set	G-06-A-01	Describe Earth's processes & patterns and how landscapes have changed over time. (Structure and formation of the earth)	PSA-01	Model making Map Activity, Labelling CRQ's Open ended and close ended. MCQ's, Discussion Action Plan Model making - Earth Internal structure, Tectonic plates, and Movement of the Earth, Study the maps of different time period. Small research Activity in Group and inquire the importance of climate for vegetation. Engage in classroom discussion. Develop an Action Plan to
	G-06-A-02	Use map conventions in different types of maps to gather information about landforms, relief, and resources.	PSA-02	
	G-06-A-03	Use coordinates to read 6 figure grid references to locate places on a map.	PSA-03	
	G-06-A-04	Gather information using maps and globes to inquire about geographical changes of a selected region or a landform.	PSA-04	
	G-06-A-08	Investigate how climate is important for different vegetation.	PSA-08	
	G-06-B-03	Inquire why landforms are changing due to human activity (Agriculture).	PSB-03	
	G-06-C-04	Find ways to improve the quality of their own and global	PSC-04	

		environment. (Deforestation, global warming)		improve Global environment

List of Codes, SLOs and Assessment Strategies

Grade VII

Cognitive Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
CUC Cognitive Understanding Conceptual	G-07-B-01	Describe economic activities related to natural, capital, and human resources. (Agriculture, land supply, and population)	CUCB-01	Short Q/A Fill in the blank. MCQ's Reasoning/justifications CRQ's opinionated responses CRQ's Close ended and open-ended short Q/A Debate / Discussion Small research project, e.g., Comparative analysis of the market value of the raw material and the finished goods, group discussion
	G-07-B-04	Understand and describe the effects of excess land use (causes and effects of population increase, excessive agriculture, and excessive urbanization).	CUCB-04	
	G-07-B-09	Understand the basic role of global economic systems and interdependence within the global economy.	CUCB-09	
	G-07-B-12	Understand that the economic progress of a region relies upon the specialization of resources through education, scientific research, and technology.	CUCB-12	
	G-07-C-04	Understand that high revenues can be generated by exporting finished goods as per current demand.	CUCC-04	

CUP Cognitive Understanding Procedural	G-07-C-05	Beginning to understand the basic role of global economic institutions. (World Bank & IMF)	CUPC-05	Mini Research, e.g., Gather information about the role of global economic institutions. (World Bank & IMF), MCQs, RRQs and ERQs
CUM Cognitive Understanding Metacognitive	G-07-B-11	Develop a sense of respect for diversity and empathy to tolerate differences in near and far settlements.	CAMB-11	Role play, classroom based activity/discussion, MCQs, True-False, Fill in the blank
CAP Cognitive Application Procedural	G-07-A-03	Gather information using maps, globes, photographs, aerial photographs, satellite images and graphs to inquire about geographical changes of a selected region or a landform.	CAPA-03	Inquiry project Map Activity CRQ's close and open ended. PBL Fill checklist, MCQs, RRQs, True and False, match column
	G-07-A-02	Use map conventions to understand time zones and datelines.	CAMA-02	
	G-07-B-07	Use a range of multiple sources as conventional maps, Google maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of the physical, human, and environmental geography of Pakistan and of the world to develop and support conclusions.	CAPB-07	
CANC Cognitive Analysis Conceptual	G-07-A-04	Investigate how and why our climate is changing. (Excessive agriculture)	CANCA-04	Reasoning and justification Mini research project City Tour Differentiate, compare, and contrast, Case / scenario study Survey / interview Video CRQ's close and open ended, RRQs, ERQs, True and False, Match the column
	G-07-B-03	Inquire why landforms are changing due to human activity (high population, scarcity of liveable land).	CANCB-03	
	G-07-B-06	Compare urban and rural infrastructure to understand adaptation according to human needs.	CANPB-06	
	G-07-B-08	Analyse how the scarcity of resources compels people to wisely use and modify resources.	CANCB-08	
	G-07-B-10	Study reasons for selecting a place to develop settlements. (socio-economic status & lifestyle of people in the city)	CANCB-10	
	G-07-C-01	Inquire why landforms are changing due to the natural processes of the earth. (Causes and consequences)	CANPC-01	
	G-07-C-02	Inquire why landforms are changing due to human activity. (Causes and consequences of pollution)	CANPC-02	
CANP	G-07-A-01	Inquire about Earth's processes & patterns and how landscapes have	CANPA-01	Map Activity

Cognitive Analysis Procedural		changed over time. (weather & climate, natural vegetation)		e.g., Study the maps of different era. CRQ's open ended and close ended. Problem Solving Activities, Discussions, Studying maps of different era, MCQs, RRQs and ERQs
	G-07-B-02	Suggest ways to utilize resources and conserve them.	CECB-02	
CEC Cognitive Evaluation Conceptual	G-07-B-05	Study reasons for selecting a place to develop settlements. (Economic activity, jobs & transport)	CECB-05	Interview and survey Matching
	G-07-C-03	Find ways to improve the quality of their own and global environment. (Deforestation, global warming)	CECC-03	Develop an Action Plan to improve Global environment

Affective Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
ARE Affective Responding	G-07-B-08	Analyse how the scarcity of resources compels people to wisely use and modify resources.	AREB-08	Reasoning CRQ's open ended, Role play Differences, Comparison and Contrast
	G-07-B-11	Develop a sense of respect for diversity and empathy to tolerate differences in near and far settlements.	AREB-11	

Psychomotor Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
PGR Psychomotor Guided Response	G-07-A-02	Use map conventions to understand time zones and datelines.	PGRA-02	Map work Draw and label time Zones and Dateline on Map sheet
	G-07-A-03	Gather information using maps, globes, photographs, aerial photographs, satellite images and graphs to inquire about geographical changes of a selected region or a	PGRA-03	PBL

		landform.		
PM Psychomotor Mechanism	G-07-B-07	Use a range of multiple sources as conventional maps, Google maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of the physical, human, and environmental geography of Pakistan and of the world to develop and support conclusions.	PMB-07	PBL CRQ's open ended. Reasoning and justification

List of Codes, SLOs and Assessment Strategies

Grade VIII

Cognitive Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
CUC Cognitive Understanding Conceptual	G-08-C-02	Identify how places are interdependent on each other and how human activity in one place affects the other. (Deforestation, pollution & climate change)	CUCC-02	MCQs, CRQs, RRQs and ERQs. Gathering information and data Observation Interview and survey Matching e.g., Gather and collect local data related to pollution and climate changes. e.g Observe their
	G-08-B-04	Understand and describe the effects of excess land use.	CUCB-04	
	G-08-B-05	Study reasons for selecting a place to develop settlements. (Economic activity, jobs & transport)	CUCB-05	

				surroundings and collect data about the land use in Karachi and its negative impacts on infrastructure.
CUP Cognitive Understanding Procedural	G-08-C-05	Describe the basic role of global economic institutions. (World Bank & IMF)	CUP C-05	MCQs, RRQs, CRQs open ended questions, true and false, Gather information about the role of global economic institutions. (World Bank & IMF)
CUM Cognitive Understanding Metacognitive	G-08-B-10	Develop a deep sense of empathy for the diverse groups in different settlements.	CUMB-10	Open ended questions, ERQs, Role play Debate and discussion Scenario situation analysis, report on scenario
CAC Cognitive Application Conceptual	G-08-B-08	Demonstrate efficient use of resources in scarcity.	CACB-08	CRQ's Opinionated, Open ended questions Suggest ways to use resources efficiently, RRQs
CAP Cognitive Application Procedural	G-08-B-03	Express opinions on why landforms are changing due to human activity.	CAPB-03	MCQs, RRQs, ERQs, CRQ's Opinionated / open ended e.g., List down the Human activities which have influence on landforms.
CANC Cognitive Analysis Conceptual	G-08-B-09	Analyse and describe basics of global economic systems and interdependence of resources in a selected region.	CANCB-09	MCQs, RRQs, ERQs, Reasoning and justification CRQ's open ended. Mini research Problem solving Activity. Table talks,
	G-08-B-01	[SLO: G-08-B-01] Investigate economic activities related to natural, capital, and human resources. (Fishery, Mineral & Energy resource)	CANCB-01	
	G-08-B-02	Find ways to utilize and conserve resources.	CANCB-02	
	G-08-B-06	Study a selected infrastructure to understand adaptation	CANCB-06	

		according to human needs (CPEC).		Inquire and Collect information. e.g., Suggest ways to resolve resources., Inquire and Collect information about the CPEC. e.g., Table talk after mini research to discuss the impact of overusing resources. e.g., Mini research project about the economic activity
	G-08-C-01	Inquire about the impact of overusing natural and other resources on the environment.	CANC C-01	
CANP Cognitive Analysis Procedural	G-08-A-02	Interpret required information using maps, globes, photographs, aerial photographs, satellite images, and graphs to inquire about geographical changes of a selected region or a landform	CANPA-02	CRQs, open ended questions, discussion of events using maps and photographs, match column, RRQs and ERQs. Collect and gather information. PBL e.g., Collect and gather information about the geographical changes by using multiple sources.,' Gather data about the climate changes over the last 50 years and analyse its effects.
	G-08-A-04	Investigate how and why our climate is changing. (Soil erosion) Examine how weather and climate affect the processes of the earth.	CANPA-04	
	G-08-B-07	Use a range of multiple sources such as conventional maps, Google maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, geographical journals, thematic maps, and field trips to derive information on the physical, human, and environmental geography of Pakistan and of the world to reach and support personal conclusions and critique with credibility.	CANP B-07	
CANM Cognitive Analysis Metacognitive	G-08-B-11	Discover differences in lifestyles of a selected region to understand that cultures are determined according to place, resources, beliefs, climate, technological development, and human needs.	CANC B-11	Classroom activity, discussion, questioning, warm up (questions, problems, sequence). making columns, RRQs, ERQs. Reasoning and

				justification CRQ's open ended
CANM Cognitive Analysis Metacognitive	G-08-C-03	Reflect on their role to improve the quality of their own and global environment. (Managing land and water resources)	CANMC-03	Observations, CRQs, Discussion, questioning, ERQs, Report writing
	G-08-C-04	Analyse that high revenues can be generated by exporting finished goods through technological advancements, marketing trends, and professional ethics.	CANMC-04	Inquire the ways of revenue generation and its main sources.
CEC Cognitive Evaluation Conceptual	G-08-B-12	Evaluate how the economic progress of a region relies upon the specialization of resources through education, scientific research, and technology.	CECB-12	Comparative analysis of the economic progress of 2 countries and present report. Mini research, Report writing on progress of (02) two countries, case study, ERQs
CEP Cognitive Evaluation Procedural	G-08-A-03	Investigate geographical, climatic, political, cultural, and economic aspects of places using geographic representations and geospatial technologies.	CEPA-03	Checklist, CRQs, ERQs, RRQs, inquiry and discussion.
CCP Cognitive Creative Procedural	G-08-A-01	Construct arguments and provide evidence for their understanding of Earth's processes & patterns and how landscapes are changing constantly. (Earthquakes, river systems, water cycle, rock cycle, mineral resources)	CCCA-01	CRQ's Reasoning and justification with evidence. Project work, RRQs, ERQs.

Affective Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
AR Affective Receiving	G-08-B-10	Develop a deep sense of empathy for the diverse groups in different settlements.	ARB-10	Role Play Scenario/ situation analysis
AO Affective	G-08-C-04	Analyse that high revenues can be generated by exporting finished goods through technological advancements,	AOC-04	Discussion CRQ's justifications and reasoning

Organizing		marketing trends, and professional ethics.		

Psychomotor Domain

Overall, Domain Code	NCP Reference	SLOs	Codes	Assessment Strategies
PS Psychomotor Set	G-08-A-01	Construct arguments and provide evidence for their understanding of Earth's processes & patterns and how landscapes are changing constantly. (Earthquakes, river systems, water cycle, rock cycle, mineral resources)	PSA-01	3D Model Making Working Model making
PGR Psychomotor Guided Response	G-08-A-02	Interpret required information using maps, globes, photographs, aerial photographs, satellite images, and graphs to inquire about geographical changes of a selected region or a landform.	PGRA-02	Create 3 D / Working models to show the changes. Poster Making Reasoning and justification

CHAPTER THREE

ASSESSMENT DURING INSTRUCTION

Chapter Three

Assessment during Instruction

Designing Classroom Assessment

The design of classroom assessment depends on how classroom learning is approached. The three commonly understood approaches to learning are surface learning, strategic learning, and deep learning approach (Entwistle, 2000). Differences between deep, surface, and strategic learners are summarised below.

Surface Approach	Strategic Approach	Deep Approach
Reproducing Intention – merely to cope with course requirements by: - Treating the course as unrelated bits of knowledge - Memorizing facts and carrying out procedures routinely - Finding difficulty in making sense of new ideas presented - Seeing little value or meaning in either courses or tasks set - Feeling undue pressure and worry about work	**Reflective Organizing Intention** - to achieve the highest possible grades by: - Putting consistent effort into studying - Managing time and effort effectively - Finding the right conditions and materials for studying - Monitoring the effectiveness of ways of studying - Being alert to assessment requirements and criteria - Using previous exam papers and assessments to predict questions	**Seeking Meaning Intention** - to understand ideas by: - Relating ideas to previous knowledge and experience - Looking for patterns and underlying principles - Examining logic and argument cautiously and critically - Actively interacting with the course content - Reading and studying beyond the course requirements - Taking interest

Note: Adapted from Entwistle, 1988; Entwistle and Ramsden, 2015

It is the teachers' responsibility to foster deep and/or strategic learning so that students can engage with the subject with the help of purposeful assessment strategies.

Assessment Strategies

Literature abounds with the different types of assessment strategies. The important question that perplexes teachers is which strategy to use and for what purposes. The simple response is that teachers must align their assessment with the SLOs. However, this alignment is not easy. Chapter Two presents a list of codes aligned with the SLOs and sample assessment strategies.

This chapter presents an explanation and examples of selected assessment strategies, which are aimed at fostering deep approaches to learning.

Formative Assessment for Deep Learning Approach – Meaningful Examples

This framework further elaborates the following four strategies for assessing students' knowledge, skills, and dispositions at the primary school level with examples. This framework provides an example for the formative purposes of the first two strategies and summative purposes of the last two strategies.

1. Portfolio Assessment
2. Group Project Assessment
3. Selected Response (Multiple Choice)
4. Constructed Response (Short and long essay questions)

Portfolio Assessment

A portfolio is a record of the development in learners' thinking and ideas. A portfolio enables learners to assemble examples of their work to tell stories of their learning over a period of time. It enables teachers to assess learners' progress in ideas and understanding that cannot be adequately measured in any other way (Chappuis & Stiggins, 2017; Crockett & Churches, 2017). A portfolio can include the following:

- Examples of students' work with feedback about quality – multiple drafts with revisions
- Students' self-assessment
- Student reflections on their growth as learners

Portfolio Assessment in Geography

Portfolio Assessment can prove to be an effective process in Geography as it involves young learners in decision-making and problem solving about social issues, past and present (Adler 1994). Portfolios can also serve as a means of reflecting on the knowledge learned and on the real-life tasks

Benefits of Portfolios to the Learners

Portfolios offer opportunities for reflection and the development of self-awareness.

Learners develop a sense of ownership of their writing through having some control over both the conditions for writing and the selection of portfolio contents, which leads to a sense of responsibility.

Learners can self-assess their performance with the help of clear criteria and opportunity to revise their work.

Benefits of Portfolios to Teachers

Portfolio assessment becomes an integral part of the instructional process rather than a separate activity.
Portfolios give teachers more information about the learners' whole performance rather than fragmented skills or scores or grades on tests. The variety of activities within a portfolio can give teachers insights into the learners' strengths and weaknesses (Murphy & Camp, 1996).

Essential Elements of a Portfolio

- Cover page
- Introduction to the portfolio
- Table of contents
- Entries with dates
- Drafts of your work (infographics, timelines, maps, projects and assignments, tests, and quizzes, etc.)
- Artefacts (awards and certificates, photos, images, concept maps, etc.)
- Reflections

Adapted from: https://www.slideshare.net/ilovelagrosal/portfolio-assessment-42422639

An Introduction to My Portfolio

Date: _____ I am in Class: _____at _____School

My name is _____ My teacher's name is _____

I live in: _____ (City)

Themes in my portfolio: Please tick all that apply.

Types of Rocks	**Types of Natural features**	**Climate of the world**
Forest of the World	**Natural Disaster**	**Changing Earth and Human Activity**

- You will find different things in my portfolio. These are _____

  _____

  _____

  _____

  _____

- I am making this project because I want to (focus on learning target and the portfolio type)

  _____

  _____

  _____

  _____

  _____

Student's signature: _____

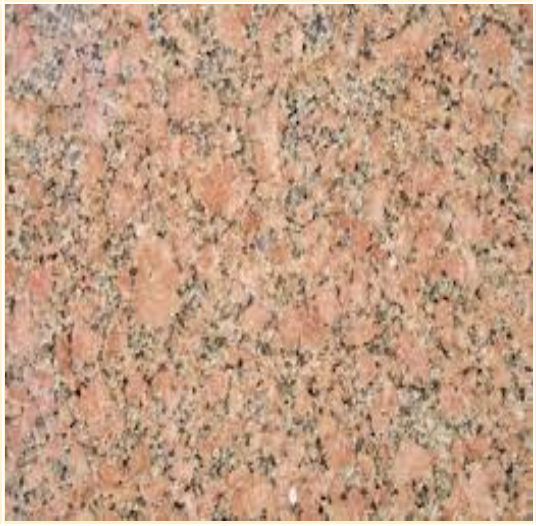
A Sample of a Scrapbook Collage on Cultural Diversity in Pakistan

Source: https://adventurepakistan.com/culture-and-civilization-of-pakistan/

Learners can be encouraged to draw or paste the pictures showing different aspects of Pakistani culture in the form of a collage.

A Sample of the Rock Collection Chart

Rocks / stones	Sample picture / original	Uses
Marble		
Sandstone		

Salt		
Granite		
Gold		

Limestone		

A Sample of information about the Natural Features

Name of Natural Feature	Types	Natural Features Located in Pakistan
Block Mountains		
Fold Mountains		

Volcanic Mountains		
River Valleys		
Glacial Valleys		

Intermontane Plateau		
Volcanic Plateau		
Piedmont Plateau		

A Sample Chart of Climate Change Record over the period of 30 years:

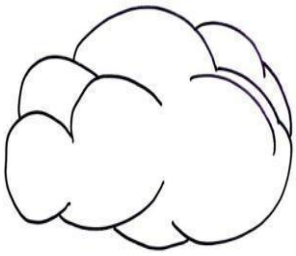
Cities	June 1993	June 2003	June 2013	June 2023	Dec 1993	Dec 2003	Dec 2013	Dec 2013
Karachi								

Lahore								
New Delhi								
Islam Abad								

A Sample of Weekly Weather Forecast Chart

What will the weather be like this week?

	**Days of the week**	**Weather**

Sunny  Snowy  Cloudy  Windy  Rainy	Monday	
	Tuesday	
	Wednesday	
	Thursday	
	Friday	
	Saturday	
	Sunday	

You may increase the complexity in this weather chart by asking students to note down the temperature of the days and can further increase the complexity by noting down the temperature for different times in the day and night.
Source: https://www.tes.com/teaching-resource/weather-chart-6204678

A Sample Chart of the information about the Forests in the world and in Pakistan.

Types of Forest	Characteristics	Pictures of trees	Forest in Pakistan

A Sample Chart of the information gathered about the disasters happened in the world

Collect the information and pictures about the natural disasters happened for the last 25 years.

A sample Chart of the information about the effects of Human Activities on Soil Erosion:

Human Activities	Pictures	Impacts	Suggestions to overcome the impact
Urbanization			

Deforestation			
Agriculture			
Industrialization			

A Sample of Periodic Student Self-Reflection

Prompts to activate Self-Reflection

Portfolio Type	Starters
Celebration	I am happiest/proudest of _____because_____. I really liked doing _____ because _____. What this portfolio says about me... I have learnt that_____. I now understand_____. I can now do_____.

	I now feel_____.
Growth	I have become better at_____, I used to _____, but now I_____. Here is what has helped me improve: _____ Here is what has helped me as a learner: _____. Here is what I learned about myself as a learner: _ _____. Here is what gets in my way as a learner: _____. Here is what is difficult for me: _____ _____. This used to be hard, but now it is easy: _____ Here is what made it easier: _____. Here are "before" and "after" pictures of my learning. The first one shows_____. The second shows _____. _____
Project	Here is what I learnt about myself as a learner while doing this project: _____. I developed the following skills while doing this project: Here is what I liked least/most about doing this project _____Here is why: _____ Here is how my thinking changed about_____ because of doing this project. _____. This project has affected my interest in _____. It has caused me to_____.
Achievement	My selections have shown that I have mastered _____. Here is how they show that _____ My strength in (subjects or learning target) are _____. I still need to work on _____. Here is how I achieved mastery of _____ (learning target): _____. Here how I would change what I did if I had it to do over: _____. Here is what doing _____ has taught me about myself as a learner: _____.

Criterion Referenced Assessment

Criterion referenced assessment (CRA) is the process of evaluating students' learning against some pre-specified qualities or criteria (Brown, 1998; Harvey, 2004). The criteria are presented to the students in the form of a rubric, so that they know what is being assessed. The teacher can also involve the students in developing rubrics.

Course Number(s): _____Date Submitted: _____								
RUBRIC FOR PORTFOLIO-BASED ASSESSMENT__								
Assessment Ratings	**1**	**Does not meet expectations (6 points)**	**2**	**Partially meets expectations (12 points)**	**3**	**Meets expectations (18 points)**	**4**	**Exceeds expectations (24 points)**	**Score**
Sources of Learning *Experiences relevant to learning outcomes*	Documentation and description of learning experiences related to course learning outcomes are ***lacking or substantially inadequate***		Documentation and description of learning experiences related to course learning outcomes are ***not effectively or completely presented.***		Documentation and description of learning experiences related to course learning outcomes. are ***appropriate and effectively presented***		Documentation and description of learning experiences related to course learning outcomes ***exceed expectations***		
Demonstration of Learning *Artifacts*	The portfolio's materials and artifacts are ***not appropriate and/or adequate***, and are not supported by the presentation		The portfolio materials and artifacts are ***not fully supported*** by or connected to the course's learning outcomes		The portfolio includes ***appropriate*** artifacts that support the demonstration of learning outcomes		The presentation of artifacts is ***convincing***, with ***strong support*** for the course's learning outcomes		
Evidence of Learning *Competencies*	The portfolio shows ***little, or no evidence*** of learning tied to sound educational theory.		The portfolio documents some, but ***not sufficient***, learning tied to sound educational theory. (Or grounded in appropriate academic frameworks)		The portfolio ***adequately*** documents learning tied to sound educational theory (or grounded in appropriate academic frameworks)		The portfolio provides ***clear evidence*** of learning tied to sound educational theory (or grounded in appropriate academic frameworks)		

Mastering Knowledge & Skills *Application of Learning*	The portfolio provides ***little evidence*** of the student's ability to use knowledge and skills for the course's learning outcomes in practice	The portfolio demonstrates the student's ability to use the knowledge and skills for the course learning outcomes in practice is ***limited***	The portfolio documents the ***acquisition*** of knowledge and skills for the course learning outcomes, with ***some ability*** to apply them in practice	The portfolio demonstrates the student has ***mastered*** the knowledge and skills for the course learning outcomes and can ***apply them in practice***	
Reflection on Learning *Aligned with course learning outcomes*	The portfolio provides *little or no evidence of reflection* to increase learning aligned with the course learning outcomes for which credit is being sought	The portfolio provides *inadequate evidence of reflection* to increase learning aligned with the course learning outcomes for which credit is being sought	The portfolio provides *evidence of reflection* to increase learning aligned with the course learning outcomes for which credit is being sought	The portfolio shows that the student has reflected with *substantial depth* upon how the prior learning experience is aligned to the course learning outcomes for which credit is being sought	
Presentation *Completeness and quality of the portfolio presentation*	Assembly instructions **have *not been followed*** with critical portfolio elements *not included:* the quality of written, visual and/or digital presentation *does* ***not meet postsecondary standards***	***Most of the expected elements*** are included; the quality of written, visual and/or digital presentation does not meet postsecondary standards with *too* ***many errors*** in spelling, grammar, and punctuation	The portfolio is ***well organized*** with all critical elements included the quality of written, visual and/or digital the presentation is ***competent*** with minor errors in spelling, grammar and punctuation	The portfolio is *well organized* with all critical elements included learning is ***well-documented*** with writing and production skills that *exceed* those of most students	
Overall Assessment	**The recommended cut score for a successful (i.e., passing) portfolio is -----, with a score of at least ------- in each of the six assessment criteria.**				**TOTAL**

Name of Assessor (print): _____ Date: _____

Source: https://www.starkstate.edu/wp-content/uploads/2016/02/REVISED-MASTER-RUBRIC.pdf

Portfolio Assessment Rubric (Alternative)

	Exemplary (20 pts)	Proficient (17 pts)	Partially Proficient (13 pts)	Incomplete (5 pts)
Selection of Artefacts	All artefacts and work samples are clearly and directly related to the geography content.	Most artefacts and work samples are related to the geography content.	Few artefacts and work samples are related to the geography content.	Most artefacts and work samples are unrelated to the geography content.
Use of Graphics	The use of graphics/ photographs is integrated seamlessly into several different artefacts.	The use of graphics/ photographs is included and appropriate.	The use of graphics/ photographs is included but is used randomly and without purpose.	No use of graphics. The photos are distracting from the content of the portfolio.
Reflections	All reflections clearly describe why artefacts in the portfolio demonstrate achievement.	Most of the reflections describe why artefacts in the portfolio demonstrate achievement.	A few reflections describe why artefacts in the portfolio demonstrate achievement.	Reflections are missing, and those that are there do not describe why artefacts in the portfolio demonstrate achievement.
Creativity and purpose of the Index	The index serves its purpose and shows creativity. The layout and design are attractive and well thought out.	The index serves its purpose and shows some creativity	The index serves its purpose but lacks Style	The index does not serve its purpose and lacks style
Organization	The portfolio is well organized and easy to navigate.	The portfolio is somewhat organized and thus little difficult to navigate.	The portfolio is rather messy and quite challenging to navigate.	The portfolio lacks complete organization.

Source: https://www.bhprsd.org/cms/lib02/NJ01001930/Centricity/Domain/352/E-portfolio%20Rubric.pdf

Group Project Assessment

Group projects are based on cooperative learning goals, which are reflected in the diagram below:

In cooperative learning structures, a student can obtain his or her goal only when other students in the group can obtain theirs (Arends, 2007). Project work is a very good example of group work.

According to the Buck Institute of Education (BIK, 2021), students' work on a project over an extended period of time – from a week up to a semester – that engages them in solving a real-world problem or answering a complex question. They demonstrate their knowledge and skills by developing a public product or presentation for a real audience. As a result, students develop deep content knowledge as well as critical thinking, creativity, and communication skills in the context of doing an authentic, meaningful project.

Guidelines for Projects

Step 1: Select a topic: Start by thinking of a current topic about which you would like to read and study and/or think of problems you would like to see solved. The topic should be something you are curious about and may include events, people, or places. It may be helpful to look through newspapers, current magazines, or to listen to news broadcasts and then brainstorm possible topics. There are unlimited topics for study; therefore, care should be taken regarding the scope of the project. It should not be so broad that it cannot be given good in-depth treatment. It should not be too specific as information about the topic may be limited.

Step 2: Formulate an appropriate research question: It may be helpful to list several questions about your topic and then narrow your list to the best research question by considering the following:

1. Is the topic relevant?
2. Can you find information on the topic using multiple resources?
3. Will the answer be of any benefit to you or your community?
4. Do you already know the answer to your question? If so, consider other questions.
5. Did you avoid questions with "yes" or "no" answers?
6. Will you be able to draw some kind of conclusion to the question?

Step 3: Determine the purpose for choosing the topic and question: Why have you chosen the topic?

Step 4: Methods of research: The method of research involves gathering, analysing, and interpreting data needed to answer the research question. In this era of information, selecting resource materials can be an overwhelming task. One project may require only questionnaires to a sample of people and the tabulation of results. Another project may require the study of publications. Resources are available at the school library, the Internet, books, magazines, newspapers, encyclopaedias and through interviews.

Step 5: Conduct the research: Review published materials related to your problem or question. The information/data collected should be organized in a logical format. Making note cards while doing the research will help organize facts and information. When taking notes, write key words that will help you recall information. Write notes in your own words on index cards. It is important to include the sources on each note card. Charts, tables, and other graphic organizers may also be used to record information.

Step 6: Draw a conclusion: Once a sufficient amount of information is gathered and the data is organized, the student may use critical thinking processes to interpret the data and make inferences that lead to a conclusion. The conclusion should include a summary of the arguments and/or key ideas which answer the question.

Source:
https://www.stcharles.k12.la.us/site/handlers/filedownload.ashx?moduleinstanceid=13737&dataid=18923&FileName=Social%20Studies%20Fair%20Project%20Handbook.pdf

Sample Projects

1. Floods in Pakistan

Students will collect information about the flooded areas of Baluchistan and Sindh and will locate those areas on map in groups. Students will be asked to collect information about the causes of heavy floods, that impact lives and property, effects of floods on the whole country's economy. How do floods increase inflation rate in Pakistan? How can we avoid such chaotic situations in future. Give suggestion to government to do long and short tern plannings to reduce the loss and avoid this disastrous situation in future. Students will write a report and publicize report through multiple ways.

2. Global Warming

Students will work in small groups. They will be asked to find one of the major human activities causing global warming. Students will write down the rational and collect data about the role of human activity causing global warming. Students will be further asked as how we can we avoid and what are the alternatives we can use? How can we slow down the process of global warming?
Students will follow the steps:

- Collect information.
- Make presentation.
- Prepare charts, booklet, models, and 3D models.
- Arrange a project day in school and invite parents and community members to share their findings.
- Students can also run a campaign about the impacts and of global warming on climatic conditions.

3. Earthquake in Pakistan

Students will work in groups and collect data about the Earthquake happened in Pakistan in 2005, show earthquake hit areas on map. Students will collect information about the causes of earthquake, its impact on lives and property and on the whole country. How can we keep our lives and property safe while taking precautionary measures as Pakistan is an earthquake prone country. Students will be asked to do research on the practices of other countries such as Japan to reduce the impacts of earthquake on human lives. Give suggestion to government to do long and short tern plannings to reduce the losses and avoid the disastrous situations in future. Students will prepare 3D models to show the causes and effects of earthquake. Students will write a report and disseminate the report through multiple ways.

1. Make a class newspaper as a group project. This newspaper may include informative articles, advertisements, editorials, news items, weather reports, cartoons, jobs, etc. This class newspaper may begin on a smaller scale with coverage of the school and/or be expanded to cover city or country news. This newspaper will highlight events happening in school, the community, and the society. The focus will be on social climatical and environmental issues and/or must reflect a theme in the geography curriculum. For this project students will work in groups on different sections of the class newspaper. Each group may be assigned a different section to work on with guidance from the teacher.

2. Work in small groups and select a landmark of Karachi.

   Gather information about it and find pictures of it. Once you have collected information and pictures, make posters, and have a display wall in the classroom.
   Remember to include details like:
   • when it was built
   • who started the project
   • interesting facts about it
   • how it has changed over the years, etc.

3. Tree planting is a way to increase students' interest to retain natural environment and its impact on human lives. Tree plantation in schools provide students with the opportunity to bring a positive change at their school level and as well as in their communities. This tree planting project is a learning opportunity to get students involved in the natural environment and conservation of our natural resources. This project will need a property which could be the school grounds. School administrators and ground caretakers need to be involved in this project to provide necessary support to take care of these trees. Students may then write reflections on this experience and share these with the rest of the class. They could do a presentation with pictures as well.
   (Source: https://www.cityofvancouver.us/publicworks/page/school-tree-planting)

The assessment in the group project can be done at two levels – the whole group work and presentation and an individual student performance within the project. Rubrics for both levels are given below.

Multimedia Project and Performance Rubrics (Group Performance)

Criteria	Exceeds Expectations (24 points, 4 for each criterion)	Meets Expectations (18 points, 3 for each criterion)	Almost Meets Expectations (12 points, 2 for each criterion)	Does Not Meet Expectation (6 points 1 for each criterion)
Organisation	Students present information in a logical and creative sequence that the audience can follow.	Students present information in a logical sequence that the audience can follow.	Audience has difficulty following presentation because student does not consistently use a logical sequence.	Audience cannot understand presentation because there is no sequence of information.
Subject Knowledge	Students demonstrate complete knowledge by answering all questions with explanations and elaborations.	Students are at ease and provide expected answers to all questions but do not provide elaborations.	Students are uncomfortable with information and are able to answer only rudimentary questions.	Students do not have grasp of information and are not able to answer many questions.
Graphics	Students' graphics explain and reinforce screen text and presentation.	Students' graphics relate to the text and presentations.	Students occasionally use graphics that rarely support the text and presentation.	Student uses superficial graphics or no graphics.
Mechanics	Presentation has no misspellings or grammatical errors.	Presentation has no more than two misspellings or grammatical errors.	Presentation has three misspellings or grammatical errors.	Presentation has four misspellings or grammatical errors.
Eye Contact	Students maintain eye contact with audience, seldom returning to notes.	Students maintain eye contact most of the times, but frequently return to notes.	Students occasionally use eye contact but still read most of report.	Students read all of the report with no eye contact.
Elocution	Student uses a clear voice and	Students' voice is clear and most	Students' voice is not very clear,	Students mumble,

	correct, precise pronunciation of words.	of the words are pronounced correctly.	and they incorrectly pronounce most of the words.	incorrectly pronounce words, and speak in a low tone.

From: Fisher and Frey (2007)

Group Project: Rubric on Group Work Performance (Affective Domain)

(Can serve for self-assessment as well as peer assessment as a group)

Name of group members: _____

CATEGORY	Exemplary	Proficient	Partially Proficient	Unsatisfactory	POINTS
Focus on the Task	3 points	2 points	1 point	0 points	___/3
	Stays on task all of the time without reminders.	Stays on task most of the time. Group members can count on each other.	Stays on task some of the time. Group members must sometimes remind this person to do the work.	Hardly ever stays on task. Let others do the work.	
Work Habits	3 points	2 points	1 point	0 points	___/3
	Member is on time for meetings, turns in all work when it is due. Completes assigned tasks and does not depend on others to do the work.	Member is usually on time for meetings, turns in most work when it is due. Completes most assigned tasks.	Member is sometimes late for meetings, often turns in work late. Does not follow through on most tasks and sometimes counts on others to do the work	Member is late for all or most meetings, and late turning in work. Does not complete tasks. Depends on others to do all of the work.	
Listening, Questioning and Discussing	3 points	2 points	1 point	0 points	___/3
	Member respectfully listens, discusses, asks questions and helps direct the	Member respectfully listens, discusses, and asks	Member has trouble listening with respect and takes over discussions	Member does not listen with respect, argues with teammates, and does not	

	group in solving problems.	questions.	without letting other people have a turn.	consider other ideas. Blocks group from reaching agreement.	
Research and Information-Sharing	3 points	2 points	1 point	0 points	___/3
	Member gathers information and shares useful ideas for discussion. All information fits the group's goals	Member usually provides useful information and ideas for discussion.	Member sometimes provides useful information and ideas for discussion.	Member almost never provides useful information or ideas for discussion.	
Group/Partner	3 points	2 points	1 point	0 points	___/3

Teamwork	Works to complete all group goals. Always has a positive attitude about the task(s) and the work of others All team members contributed equally to the finished project. Performed all duties of assigned team role and contributed knowledge, opinions, and skills to share with the team. Always did the assigned work.	Usually helps to complete group goals. Usually has a positive attitude about the task(s) and the work of others. Assisted group/partner in the finished project. Performed nearly all duties of assigned team role and contributed knowledge, opinions, and skills to share with the team. Completed most of the assigned work.	Occasionally helps to complete group goals. Sometimes makes fun of the task(s) or the work of other group members. Finished individual task but did not assist group/partner during the project. Performed a few duties of assigned team role and contributed a small amount of knowledge, opinions, and skills to share with the team. Completed some of the assigned work.	Does not work well with others and shows no interest in completing group goals. Often makes fun of others' work and has a negative attitude. Contributed little to the group effort during the project. Did not perform any duties of assigned team role and did not contribute knowledge, opinions, or skills to share with the team. Relied on others to do the work.	

Group Project: Rubric on Individual Performance (Affective Domain)

(Can serve for self-assessment as well as peer assessment in group work)

Name of student: _____

Goal	4	3	2	1

Equal Work	Did a full share of work or more	Did an equal share of work	Did almost as much work as others	Did little or no work
Cooperation	Took an initiative in helping the group get organized	Worked agreeably with partners	Could be persuaded to cooperate	Did not cooperate
Participation	Provided many ideas	Participated in discussions and made some suggestions	Listened to others but offered few suggestions	Seemed bored with the discussions and offered no suggestions
Support	Assisted other partners	Offered encouragement to other partners	Seemed preoccupied with own work	Took little interest in others' work
Communication	Clearly communicated ideas	Usually, shared ideas	Rarely expressed ideas	Never expressed any ideas

Other comments:

Source: https://www.pinterest.com/pin/371969250449103194/

Rubric for Assessing Collaboration Fluency (Individual)

Criteria	Phase 1 (Awareness, connection, remembering) (4 points)	Phase 2 (Understanding, applying) (8 points)	Phase 3 (Analysing, evaluating) (12 points)	Phase 4 (Evaluating, creating) (16 points)
Interacts with others to generate ideas and develop products	Listens to others' input and occasionally combines his or her own and peers' concepts to produce an understanding of the task, problem, or issue.	Frequently, listens to others' input and occasionally combines his or her own and peers' concepts to produce an understanding of the task, problem, or issue. Attempts to make sure team members contribute.	Listens to others' input and combines his or her own and peers' concepts to produce an understanding of the task, problem, or issue. Uses techniques to make sure team members contribute. Explains the task to the team members.	Listens to others' input and effectively combines his or her own and peers' concepts to produce an understanding of the task, problem, or issue. Uses suitable techniques to make sure all team members contribute. Uses effective probing questioning to develop a realistic understanding of the task.
Develops and implements effective plans	Shows an awareness of the process and the current stage of development.	Uses checkpoints to measure progress in the project. Describes problems and develops some solutions.	Uses regular checkpoints to measure progress in the project. Defines each person's tasks within the process.	Manages progress on the assigned task using regular checkpoints. Clearly defines each person's roles and responsibilities within each element of the process. Discusses problems and develops suitable solutions.
Works collaboratively toward a common, shared goal or objective	Sometimes works with peers. Is sometimes on tasks when working collaboratively.	Works with peers collaboratively or individually to achieve the group's goal.	Works with peers collaboratively or individually to achieve the group's goal. Analyses individual or group progress against the goals and objectives and sometimes offers appropriate critique.	Works with peers collaboratively and economically or individually to achieve the group's goal. Analyses individual or group progress against the goals and objectives and offers appropriate critique or undertakes suitable actions as required.
Revisits, reflects, and revises group process	Sometimes reflects on overall progress. Struggles to accept feedback.	Reflects on overall progress. Often accept feedback. Sometimes offer useful reflection.	Reflects on overall progress and analyses his or her performance. Accept feedback, sometimes modifies behaviour. Sometimes offer useful reflection.	Reflects on overall progress evaluating his or her contribution and that of peers fairly. Accept feedback, modifying tasks, action and behaviours based on this. Offers critical reflection that are task focussed and appropriate, enabling growth and development.

Source: Adapted from Crockett and Churches (2017)

Summative Assessment for Measurement and Evaluation – Frequently Use Examples

This framework is proposing two teaching terms of four months in a year (see section on Balanced Assessment Schedule for details). There will be a school wide summative assessment at the end of each semester. The key purpose of these summative assessments is to obtain valid and accurate information for evaluating each student's performance. This evaluation is the basis of a student's academic progression.

Measurement accuracy is determined by *what* is being measured and the *instrument* used to make the measurements. For example, a teacher can obtain a more precise measurement of a students' knowledge of parts of speech rather than his or her creative ability.

In addition, the instrument used to make the measurements also determines measurement accuracy. Teacher made tests are the most common form of measurement instruments used at the school level. In the subsequent sections, the framework provides examples of the two most common types of test questions - Multiple Choice Questions (MCQs) from selected response and word problems from the constructed response category.

Selected Response - Multiple Choice (Objective Test Item)

Multiple Choice are the most common type of objective test questions (Linn & Miller, 2005). They are easy to administer and analyse. Multiple choice questions consist of a stem (question or statement) with several answer choices (distracters).

The table below gives four guidelines of developing multiple choice items with an example and a non-example. These have been borrowed from Classroom Assessment course (2018) at https://fcit.usf.edu/assessment/selected/response.html

Guideline One - All answer choices should be plausible and homogeneous.	
Example	**Non-Example**
1. What is the 0^0 line of latitude that divides the earth into two hemispheres called? A: Arctic Circle B: Equator C: North Pole D: Tropic of Capricorn	1. What is the 0^0 line of latitude that divides the earth into two hemispheres called? A: Asia B: Equator C: North Pole D: Pacific Ocean
Guideline Two - Answer choices should be similar in length and grammatical form.	

Example	Non-Example
1. Which of the following is a function of the map scale? A: compares the distances on a map to the actual distances on the Earth's surface B: divides the Earth into the northern and southern hemispheres C: establishes a relationship between lines of longitude and time D: shows the borders between countries and cities	1. Which of the following is a function of the map scale? A: compares the distances on a map to the actual distances on the Earth's surface B: distance C: measures distance D: see the lines of latitude and longitude Bottom of Form
Guideline Three – List answer choices in logical (alphabetical or numerical) order	
Example	**Non-Example**
1. Into how many standard time zones had the world been divided? A: 09 B: 12 C: 18 D: 24	1. Into how many standard time zones had the world been divided? A: 18 B: 09 C: 24 D: 12
Guideline Four – **Avoid using "All of the Above" options**	
Example	**Non-Example**
1. Which of the following maps show us the border between countries and cities? A: Climatic B: Physical C: Political D: Relief Bottom of Form	1. Which of the following maps show us the border between countries and cities? A: Climatic B: Physical C: Political D: None of the above Bottom of Form

In addition, a checklist for reviewing one best MCQ is also given.

One-Best MCQ Review Checklist

#	Overall	Yes*	No*
1	Is appropriate for the level of the learner		
2	Is aligned to the Student Learning Outcome and its number is referenced		
3	Exam specification number is referenced		
4	Concept to be tested is stated appropriately/ Item is aligned with the concept being assessed		
5	The item is conceptually correct		
6	The cognitive level of the item is identified appropriately		
7	The difficulty level of the item is identified appropriately		
8	Assesses an essential (Must Know) or an important (Good to Know) item		
9	Can be answered with the options covered (Cover Test)		
10	**Cannot** be answered with the stem/ case covered (Test for Cognitive Level)		
11	Item author's name is mentioned		
12	An authentic reference is mentioned		
13	There are **no** spelling or grammar mistakes		
14	Task can be completed by the students in the assigned time		
	Stem/ Case		
1	Clearly defined with no ambiguities		
2	Is contextual and relevant		
3	Contains all essential information, however, avoids irrelevant information		
4	Avoids abbreviations, uncommon terminologies, and brand names		
	Lead-in		
1	Focuses on one feature or concept		
2	Avoids negative phrases such as 'Except' and 'Not'		
3	Is clearly understandable at the level of the students		
	Options		
1	Congruent with the lead-in		
2	Aligned with the lead-in in grammar		
3	Are of similar length		
4	Homogenous in content		
5	Distractors are plausible		
6	Listed in an alphabetical order		
7	Use generic and common terms		
8	Mutually exclusive (non-overlapping)		

9	Avoid phrases like ‘all of the above’ and ‘none of the above’		
10	Avoid vague terms such as ‘usually’ and ‘frequently’		
11	Avoids key terms from the stem or lead-in		
12	The key is clearly the best/ correct option for the level of the learners		
13	**The key/ correct answer is identified**		

Source: Aga Khan University Examination Board.

Constructed Response – Descriptive Questions (Subjective Test Item)

Constructed-response questions are assessment items that ask students to apply knowledge, skills, and critical thinking abilities to real-world, standards-driven performance tasks. Sometimes called “open-response” items, constructed-response questions are so named because there is often more than one way to correctly answer the question, and they require students to “construct” or develop their own answers without the benefit of any suggestions or choices. Therefore, constructed response assessments are suitable higher level thinking skills. Constructed response assessments may include short quizzes, essays, art projects, personal communication, etc.

Sample CRQ 01

A large number of people shifted from rural areas to urban areas. The main reason of urbanization is lack of basic civic facilities in rural areas such as employment, sanitation, medical, education and the poor infrastructure. This shift causes many issues in the urban areas and has increased the burden on the limited resources. Give suggestion to the government to increase civic facilities in the rural areas to avoid the migration of rural people and to increase the resources and facilities for the people of urban areas so that they do not suffer from the massive movement of the people from rural areas to urban areas.

Ali and Sarim are the best friends, and they play together. They go to school together and even sit in the same class. However, one day they had a fight and they stopped talking to each other. Suppose being one of their class fellows, you feel sad that they are not friends any more. How could you initiate a discussion and negotiation to help Ali and Sarim become friends again?

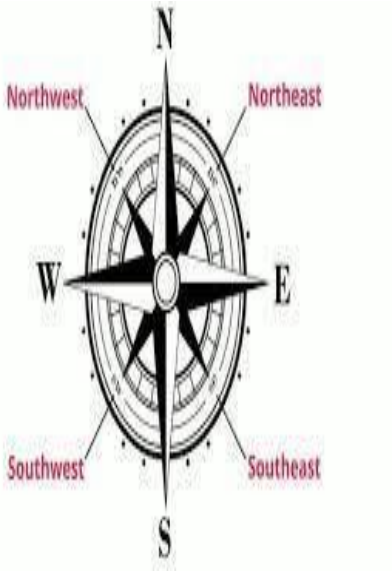
Sample CRQ 02

Constructed-response items can be very simple, requiring students to answer with only a sentence or two, or quite complex, requiring students to read a prompt, reflect on the key points, and then develop meaningful information of their own. Whether simple or complex, all constructed-response questions measure students' ability to apply, analyze, evaluate, and synthesize the knowledge that they have acquired in a more abstract way.

1. Name any two means of communication which you use the most to communicate with your family.
2. State any two disadvantages of overusing the mobile phone.
3. How has the internet made our communication easier during the pandemic situation? Give two examples.
4. Suppose a student from your class missed his online classes due to electricity breakdown. He has to complete his work. List any two ways of communication that you will use to help him to complete his work.
5. Differentiate between Physical and Human Geography?
6. What are the advantages and disadvantages of biogas?
7. Compare hot and cold deserts.
8. Give suggestions to stop deforestation?
9. Explain processes responsible for the change in the landscape?

Sample CRQ 03

1. **With reference to the map shown below, use the compass of cardinal directions to respond to the questions.**



Map source: https://www.pinterest.com/pin/65231894572394313/

1. Which continent is in the north of Africa?

_____.

2. Which continent is in the south of all the continents?

_____.

3. Which Ocean is in the north of Asia?

_____.

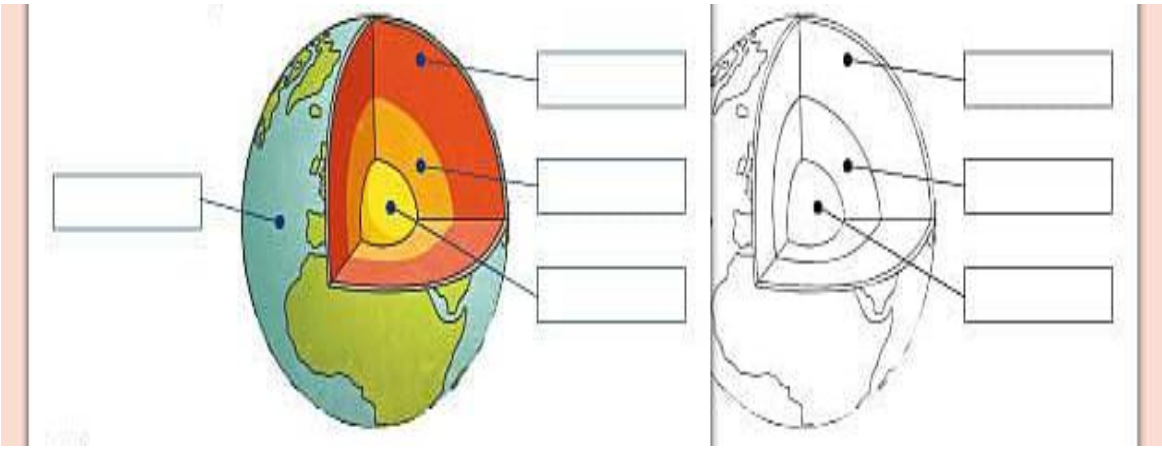
4. Which Ocean is west of the North and South America?

_____.

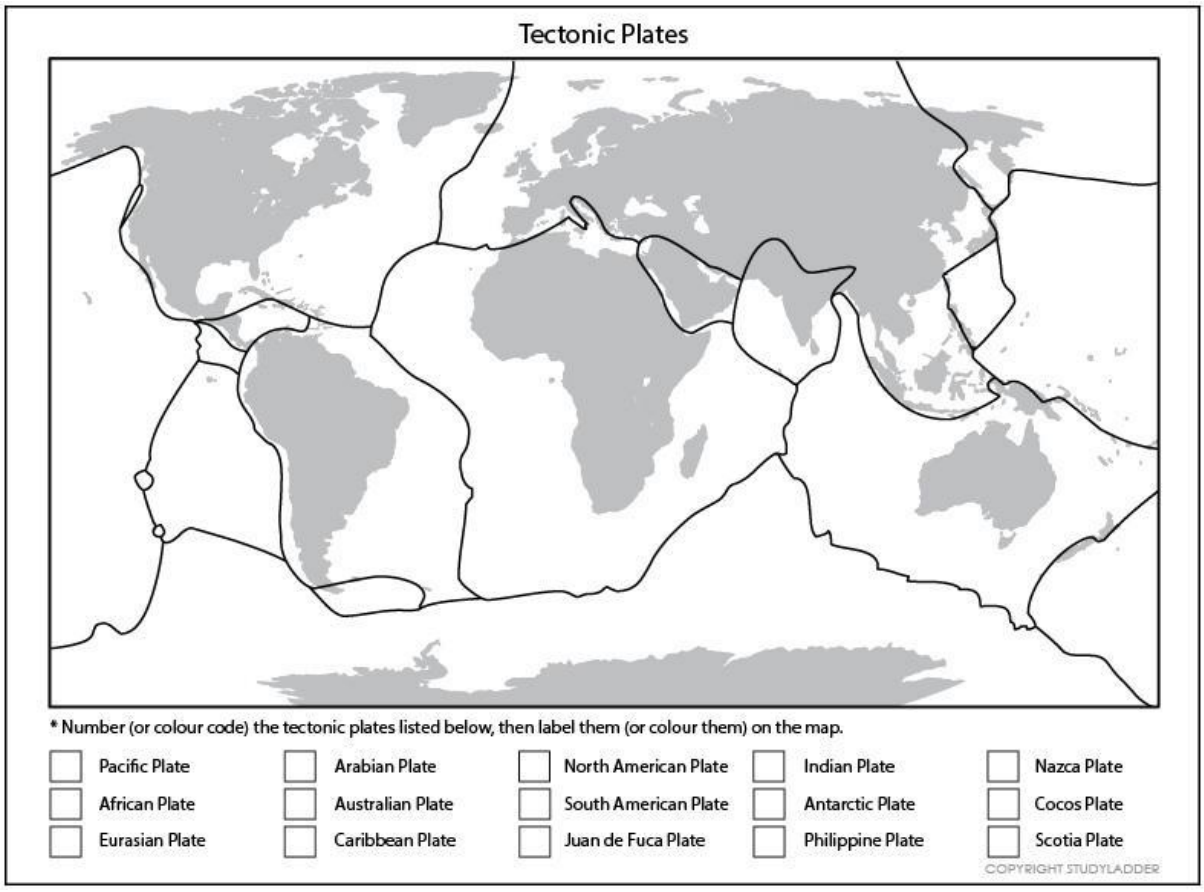
5. Which continent is directly east of Europe?

_____.

2. **Label and colour layers of the Earth**



3. **Identify and Label Earth Tectonic Plates:**



Map source: https://www.studyladder.com/games/activity/tectonic-plates-map-30273

4. Video: https://youtu.be/hos7w8xrcEs

Watch the video and engage in discussion about the change in the world geography.

Role Play

The protocol is designed to help students better understand a text and its characteristics by acting out or dramatizing a section of the text. It is an especially helpful way for students to engage and understand it more deeply by acting out key moments from the text.

Material

Text under study

Procedures

1. Move students into pairs and have them face each other.
2. Reread a section of the text aloud.
3. Ask students to determine which students will be which character.
4. Invite students to think silently and then talk with their partner about what their character is saying and doing.
5. After giving the signal (e.g., "actions") have student act out what the character are saying and doing. Give reminder about safe and responsible movement as necessary.
6. After giving the signal (e.g., "cut") have student stop moving and speaking and make a tent with their arm.
7. Have students a switch role and act out the same action of the text again or repeat step 4 – 6 with the new section of the text.

Variations:

- Have students reread a section of the text aloud within their partnership.
- Create puppets or use simple props for students to use.
- Use this protocol during a close reading or before students write about a text.
- For text with more than two characters, consider placing students in small groups or acting out passages as a whole group.

Reference: EL Education: Classroom Protocols

Sample Test
Grade VI

Max Marks: 60 **Max Time: 2.5 Hours**

Name: _____ Section: _____ Roll no: _____Date: _____

Instructions:

- Read the paper carefully.
- Attempt all the questions.
- Attempt Q. 6 and Q. 7 on a separate sheet.

Section A (Objective)

Q.1. Choose the correct answer by circling the appropriate alphabet. [10]

1. **Tectonic Plates are floating over _____?**
   A: Asthenosphere
   B: lithosphere
   C: Continents
   D: Tectonic Plates

2. **Which of the following is a function of the map scale?**
   A: compares the distances on a map to the actual distances on the Earth's surface
   B: divides the Earth into the northern and southern hemispheres
   C: establishes a relationship between lines of longitude and time
   D: shows the borders between countries and cities

3. **What is the 0^0 line of latitude that divides the earth into two hemispheres called?**
   A: Arctic Circle
   B: Equator
   C: North Pole
   D: Tropic of Capricorn

4. **Coniferous trees grow in _____areas of Pakistan.**
   A: Sindh Coast
   B: Punjab Plains
   C: Baluchistan Coast
   D: Gilgit Baltistan

5. **Into how many standard time zones had the world been divided?**
   A: 09
   B: 12
   C: 18
   D: 24

6. **Which of the following maps show us the border between countries and cities?**
   A: Climatic
   B: Physical
   C: Political
   D: Relief

7. **Which of the following is the longitude of the eastern most point of Pakistan?**
   A: 23.45^0 N
   B: 36.75^0 N
   C: 61^0 E
   D: 75.5^0 E

8. **Physical weathering is also known as _____weathering.**
   A: Organic
   B: biological
   C: chemical
   D: mechanical

9. **Which of the areas of Pakistan is more vulnerable to earthquakes?**
   A: Potowar Plateau
   B: Indus Plains
   C: Thal
   D: Northern Mountains

10. **3 Rs principles helps in _____ of natural resources.**
    A: Saving
    B: Consuming
    C: Burning
    D: Depletion

Q.2. Match each of the brief descriptions in column A with its correct physical region in column B. [5]

Column A	Column B
This region in the north of Pakistan contains several mountain ranges.	The Coastal Region
This region contains high but flat land. This area generally receives little rainfall and so is not suitable for agriculture.	The Desert Region
This is a region of flatland built by years of sediment deposit from the river Indus and its tributaries. It is farmed for wheat, rice, sugarcane, etc.	The Mountainous Region

This region of Pakistan stretches from Balochistan to Shah Bander in Sijawal, Sindh. It is nearly 1050 kilometres long.	The Indus Plain
This region contains the driest parts of the country. It receives the least rainfall. Here temperatures are extreme.	The Plateaus

Q.3 With reference to the map given below answer the questions that follow in one or two sentences. [5]

Retrieved from: https://www.teacherspayteachers.com/FreeDownload/Social-StudiesGeography-Constructed-Response-equator-and-climate-1801866.

The equator is an imaginary line that runs from east to west on the Earth's surface and is exactly halfway between the North and South Poles. The climate of areas close to the equator is different from the climate of areas far away from the equator.

a. Explain the climate feels close to the equator.

_____.

b. Explain the feels far away from the equator.

_____.

c. Mention the name of a country located on the equator.

_____.

Q.4. Identify whether the statement is true or false and complete the sentence by making it correct. [5]

1. Rising sea level is a great threat to Mountain and Hills.

_____

2. Remote sensing cannot acquire information without having any physical contact with the object.

3. When two plates move towards each other Magma rises to fill the space.

4. Biological Weathering is breaking down of rocks occurs due to the activities of living organism.

5. The Tundra is in the northernmost lands of the Earth have large number of trees.

Section B (Subjective)

Q.5. Write short answers to the following questions: CRQ'S Open ended and close ended.

1. Why do geographers use GIS? **[15]**

2. Discuss the effects of climatic zones of Pakistan on lifestyle and economy?

3. What is the main difference between physical and chemical weathering?

4. List any 3 major natural disasters.

5. Describe any one factor that affects population increase in Pakistan.

_____

_____

_____

Q.6. **Write detailed answers to the following questions: CRQ'S Open ended high order thinking questions.** **[10]**

1. Compare two characteristics of mountains and plateaus.
2. Differentiate between physical geography and human geography?
3. Suggest measure to reduce the impact of natural disaster? (Any 2)
4. Propose solutions to deforestation. (Any 2)
5. Suggest ways to improve the quality of global weather.

Q.7. Give reasons. **[15]**

1. The acceleration of urbanization multiple the chances of soil erosion.
2. Rearing of animals (goat and sheep) is a major occupation of people living in Baluchistan Plateau.
3. The developing countries are more vulnerable to natural disasters.
4. Mangroves Forest are very important.
5. Climate of Pakistan impacts on lifestyle of people.

Assessment Validity

The assessment must be valid, that is, it should actually measure what it is supposed to measure. There are three kinds of validity evidence considered during assessment. These are:

- Criterion
- Construct
- Content

Criterion and construct validity measures are beyond the scope of a class teacher's work. They should best be done by assessment experts. For purposeful assessment, content validity is extremely important and can be controlled by teachers.

Content Validity

As the name suggests, a valid assessment covers the content completed in the class. This means that a valid assessment covers all relevant parts of a subject. If any part, covered in the subject, is left out or if any irrelevant part, not covered in the subject is included, then it is not a

valid assessment. The entire purpose of developing a list of codes and tables of specification and aligning them with the assessment strategies was to ensure content validity of the assessment. The assessment should be written at the level of difficulty required by the standards and student learning outcomes covered in the term. The assessment must also be in a format that allows students to demonstrate the particular ability being assessment. For example, if a teacher wishes to assess how a student has improved her writing abilities, then MCQ is not the best option.

Ways to Improve Content Validity

Clearly defined objectives. Student learning outcomes should be clearly defined and operationalised.

Alignment. Assessment measures must be matched with student learning outcomes.

Review by Subject Matter Experts (SMEs). Subject experts may be asked to rate each question on a scale from very relevant/very essential to not relevant/not essential at all. The more SMEs agree that items are essential, the higher the content validity.

Objective Review. The test/assessment question/instrument can be reviewed by faculty at other schools to obtain feedback from an outside party who has not been involved in the instrument development.

Item Analysis. Item analysis is helpful in analysing student responses to individual test/exam questions with the intention of evaluating test/exam quality.

Review and update tests frequently. Many tests that were valid two years ago, are not valid today. It is important to review and update or retire questions that are no longer relevant.

Item Bank. An item bank facility is important to manage and update questions.

CHAPTER FOUR

SUPPORTING RESPONSIVE TEACHING AND LEARNING THROUGH FEEDBACK

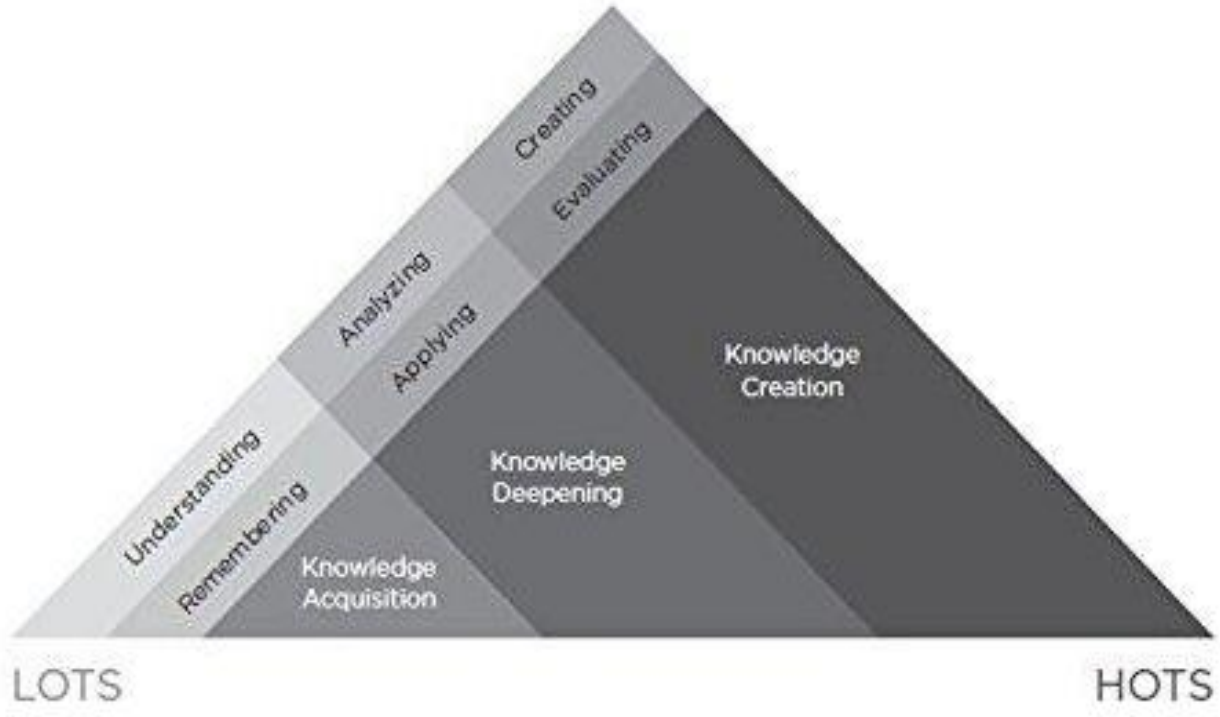
Chapter Four

Supporting Responsive Teaching and Learning through Feedback

Feedback to Students

In order to help students, succeed in the 21st century world, teachers must see their teaching as a response to learning, rather than seeing learning as an outcome of teaching (Crockett & Churches, 2017). This calls for the integration of classroom assessment processes into teaching in ways that enhance students' achievement and their motivation to learn.

Formative feedback is individual and personalised. This is because each child is at a different level of achievement. It is the teachers' responsibility to help the learner to know where he or she is now in terms of high-quality work and where he or she ought to be. This gap analysis facilitates learners' progression from Bloom's lower-order thinking skills (LOTS) which focuses on knowledge acquisition to higher-order thinking skills (HOTS) where the learners are able to create knowledge.



Source: Crockett & Churches (2017)

Hattie's (2012) findings from his meta-analysis of hundreds of education papers indicate that providing formative evaluation and feedback has some of the largest effects on student learning. For an assessment to be formative, students must be receptive to the feedback and use it to adjust their learning. "Without feedback, assessment is not a learning activity; it is a compliance task" (Crockett & Churches, 2017, p. 21).

Churches (n.d.) outlines five characteristics of high-quality feedback. These are:

Timely: The end of the task is too late. Feedback must be provided often and in detail during the process.

Appropriate and reflective: Feedback must reflect the students' ability, maturity, and age. It must be understandable.

Honest and supportive: Receiving a critique that identifies weaknesses of one's work can be very disheartening. The feedback must provide encouragement to continue and guidance on how to achieve the desired goals.

Focused on learning: The feedback should provide information which allows the learner to close the gap between the current and desired performance. The clarity and descriptive nature of the feedback the teacher presents are major influences on students' achievement (Hattie, 2012).

Enabling: Receiving feedback without the opportunity to act on it is frustrating, limiting, and counterproductive. Students must be able to learn from the formative assessments and apply the feedback and corrections.

One of the best models of feedback is developed by Dr Jodie Nyquist (Crocket & Churches, 2017). This model of effective feedback has five stages going from weakest to strongest.

The teacher who provides feedback at the Kore and a specific action or ideally KCR+e and an immediate activity gives the learners opportunity to maximise their learning. Based on the above model, three specific criteria for good and bad feedback can be developed.

Criteria for Good and Bad Feedback

Good Feedback	Bad Feedback
• Being positive • Even when criticizing, being constructive • Giving suggestions (not prescriptions or pronouncements)	• Finding fault • Describing what is wrong and offering no suggestions about what to do. • Punishing or denigrating students for poor work

Examples of Good and Bad Feedback

Feedback	Good or Bad
Your answer is the best one in the class.	This is an example of bad feedback. It does not tell the student what is good about the answer.
Your details strongly support your claim that we should recycle newspapers. That's great. Where did you find all those facts?	This is an example of good feedback. It confirms for the students that the work meets one of the targets (strong supporting details) and connects the success to students' effort (the student researched to find out facts, and the teacher noticed).
Your answer was the shortest in the class. You didn't put enough in it.	This is an example of bad feedback. It implies that the student is competing with others (as opposed to aiming for a learning target) and the reason the work is poor is that the student "did something bad." The student ends up feeling judged and not motivated to improve.
The answer probably would not convince a reader who did not already agree we should recycle. I would want to know more about the effects on the environment and the cost of recycling.	This is an example of good feedback for a student who the teacher believes does not know what is missing in his or her answer. It suggests what the student could do to improve the answer.
Your report is late. What is the matter with you?	This is an example of bad feedback. It may not inspire the student to complete his or her work and turn it in for assessment.
[Name], I do not have your answer sheet. Can you tell me what happened?	This is a better example than the previous one of feedback to deliver the message that the work is late.

Feedback to Parents

The most common form of communicating grades to parents is the report card. The report card at the primary level should also provide information on satisfactory or unsatisfactory performance in other dimensions.

A report card is only one way of sharing feedback to parents about their students' performance. A written report is another way of communicating with students. The reports should be written in a positive, direct and easy to understand manner.

The most effective way of communicating with parents is through a conference, generally known as parent-teacher meeting, which allows the parent to ask questions and the teachers to provide explanation. Conferences provide avenues to teachers to learn about students' home environment and to parents to be more involved in their children's learning.

Sample Report Card

(Front Page)

School’s Name

School’s Logo

Annual Report Card

[Month] 2022 – [Month] 2023

(First inside Leaflet)

Name: ABC_____ Term One: _____ [Date] _____

Class: _____

 Rarely  Sometimes  Most of the times  Always

Your child as a learner				
				
Interested in learning				
Listens carefully				
Works well independently				
Keeps trying even when tasks are difficult				
Teachers' Comment:				

Your child's social and personal development				
				
Happy at school				

Behaves well in the class				
Mixes well with other children				
Behaves well in the playground				
Manages and expresses own feelings well				
Teachers' Comments:				

(Second inside Leaflet – Sample for Grades VI, VII & VIII)

	Key Themes	Child's Performance					
		Term I Marks			Term II Marks		
		Formative	Summative	Total	Formative	Summative	Total
1	Citizenship	08 Marks	12 Marks	20 Marks	08 Marks	12 Marks	20 Marks
2	Culture and Diversity	06 Marks	8 Marks	14 Marks	07 Marks	8 Marks	14 Marks
3	State and	04 Marks	5 Marks	9 Marks	04 Marks	5 Marks	9 Marks

	Government						
4	History	04 Marks	06 Marks	10 Marks	04 Marks	06 Marks	10 Marks
5	Geography	12 Marks	18 Marks	30 Marks	12 Marks	18 Marks	30 Marks
6	Economics	07 Marks	10 Marks	17 Marks	07 Marks	10 Marks	17 Marks
Total Marks Obtained							
Out of Total Marks		40 Marks	60 Marks	100 Marks	40 Marks	60 Marks	100 Marks
Teacher's Comments (Term I):							
Teacher's Comments (Term II):							

[Same types of tables will be prepared for all the subjects)

Last Leaflet – Sample for Grade (VI)

Term I Marks					**Term II Marks**				
Formative		**Summative**		**Total**	**Formative**		**Summative**		**Total**
Portfolio	**PBL**	**Obj**	**Sub**		**Portfolio**	**PBL**	**Obj**	**Sub**	
10	**10**	**15**	**15**	**50**	**10**	**10**	**15**	**15**	**50**

Students Comment (My Learning in School)

Parents' Comments (How can you further support your child's learning)

Teacher's Overall Comment:	
Attendance	**Punctuality**

Teacher's Signature: _____ **Date:** _____

Principal's Signature: _____ **Date:** _____

Parent's Signature: _____ **Date:** _____

CHAPTER FIVE

POST ASSESSMENT: REDEFINED GOALS/CURRICULUM

Chapter Five

Post Assessment: Redefined Goals/Curriculum

The Real Purpose of Purposeful Assessment

This manual provides a framework of purposeful assessment. It brings forth the philosophy, the principles, the policy, and the practice of purposeful assessment for evaluating teaching and learning targets at the classroom level, the school and national level. However, unless the evaluation is constructively utilised to inform changes to curriculum, learning targets and teaching methodology in a balanced manner, its real purpose will not be achieved.

Balanced Assessment System

The success of any assessment system will depend on how formative and summative assessments are balanced to meet the need of all stakeholders. The tables below summarize the use of the two types of assessments across three levels – the classroom, school, and district/province.

Elements of a Balanced Assessment System

Level of Assessment	Purpose of Assessment	User of Information	Type of Assessment
Classroom assessment	To measure level of student achievement on learning targets taught. To diagnose student strengths and areas needing further work.	Teacher Teacher Student	Summative: To determine grades for reporting purposes. Formative: To revise teaching plans for next year/semester. Formative: To plan further instruction. Formative: To provide feedback to students. Formative: To self-assess and to set goals for the next steps.
School based exam	To measure the level of student achievement on pre-set content standard.	Teacher School Leadership District Education Office	Summative: To evaluate the achievement level of each student and summarise across students. Summative: To determine the programme or curriculum effectiveness Formative: To identify programme or curriculum needs.
District, provincial or national large-scale assessments	To measure level of student achievement toward content standards and/or international standards. To identify students and/or portions of the curriculum needing additional/different instruction.	Teacher School Leadership District Education Office	Summative: To evaluate programme effectiveness. Formative: To identify standards in need of more effective programmes. Formative: To plan interventions for groups or individuals.

Source: Chappuis and Stiggins, 2017

Implicit within this balanced assessment system is the cyclic approach to assessment, which emerges as a response to teaching and learning and further informs teaching and learning.

The following section presents schedules of assessment for grades VI to VIII to illustrate how the three streams or levels of assessment can be employed in a balanced manner during an academic year. The schedule is also aligned with the SLOs.

Balanced Assessment Schedule for Grade VI-VIII

<table>
<tr><th>Overall Domain Code*</th><th colspan="6">Assessment Schedule</th></tr>
<tr><td></td><td>One Month</td><td>Term I (4 Months)</td><td>One Month</td><td>Term II (4 Months)</td><td>One Month</td><td>One Month</td></tr>
<tr><td>CRF
CRP
CUC
CUP
CUM
CAF
CAC
CAP
CANC
AR
PP</td><td rowspan="2">Pre-Assessment

Pre-Assessment</td><td>Formative Assessment (40% Marks based on Ongoing)</td><td>School based Summative Assessment (60% Marks)</td><td></td><td></td><td rowspan="2">Post Assessment - One Month After Term II

Post</td></tr>
<tr><td>CANP
CANM
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PM</td><td></td><td></td><td>Formative Assessment (40% Marks based on Ongoing)</td><td>School based Summative Assessment (60% Marks) And/or Large scale assessments wherever required</td></tr>
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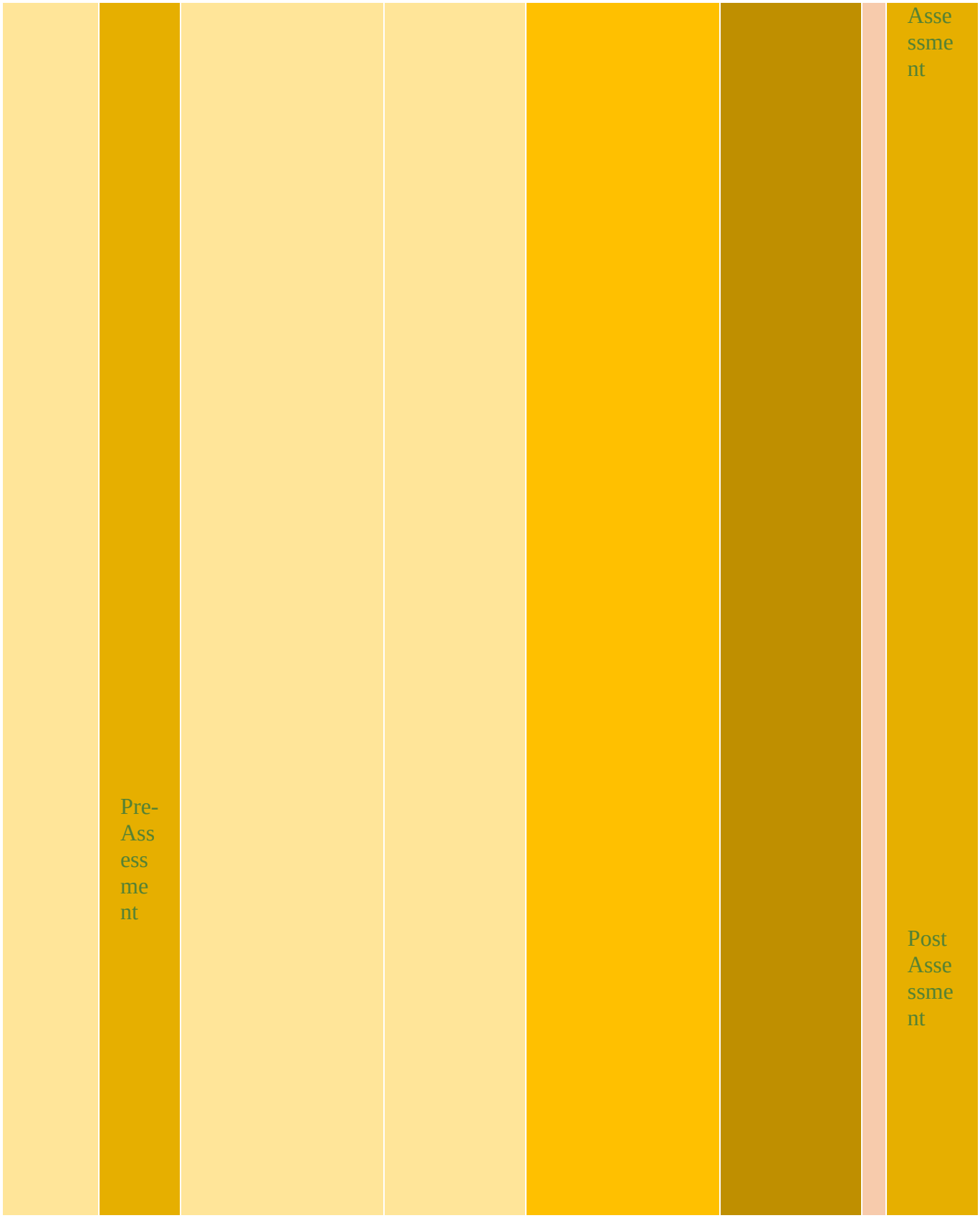
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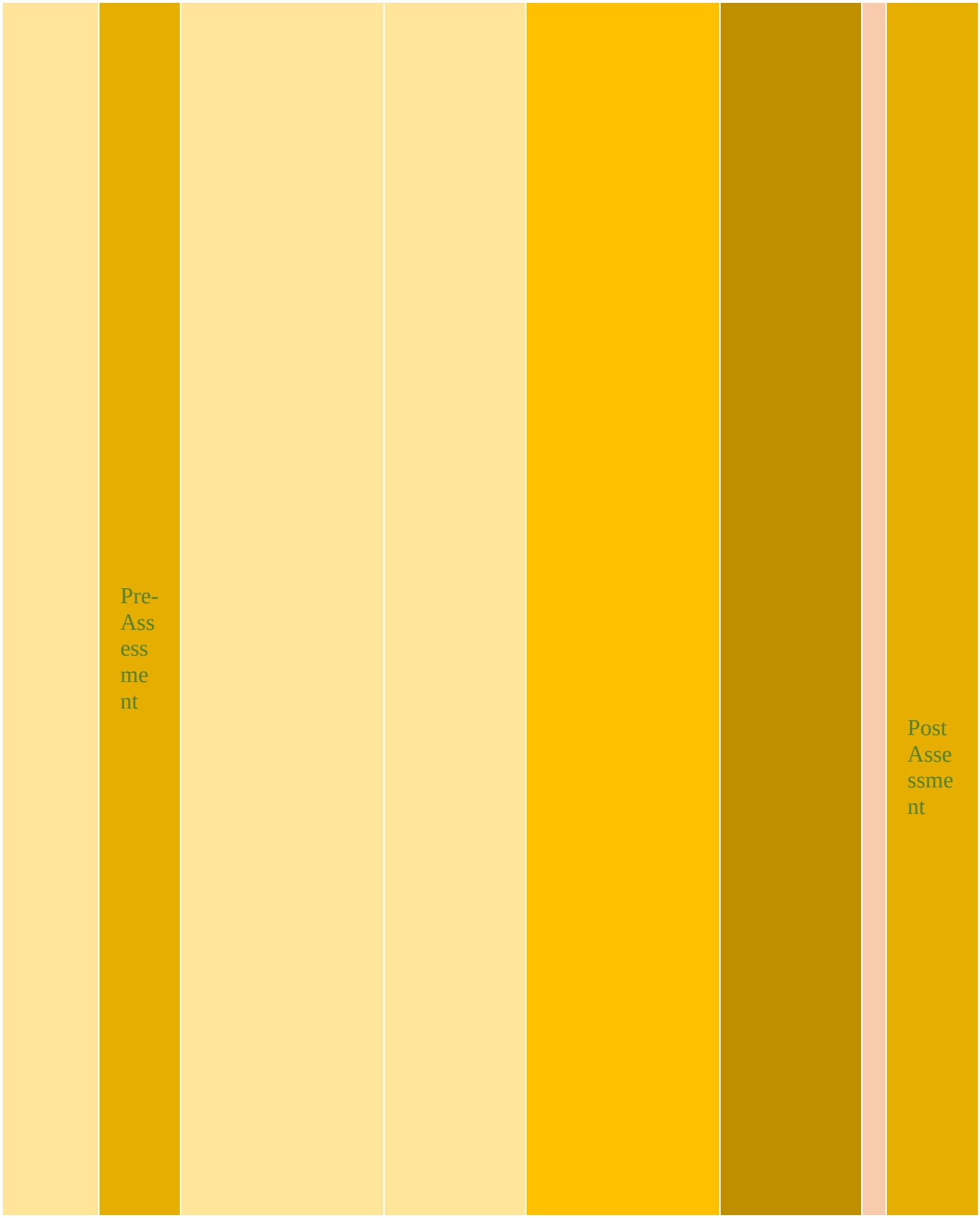
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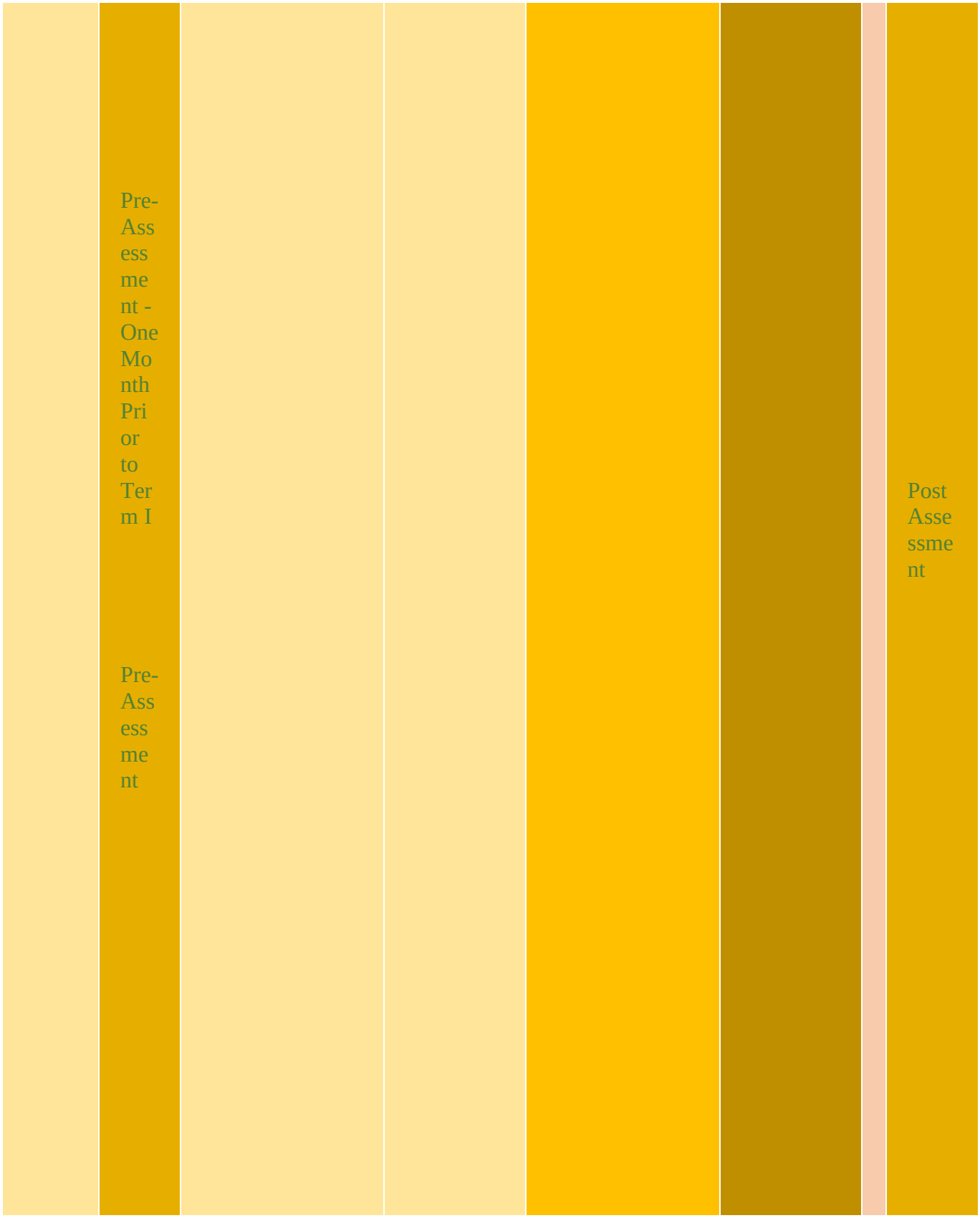
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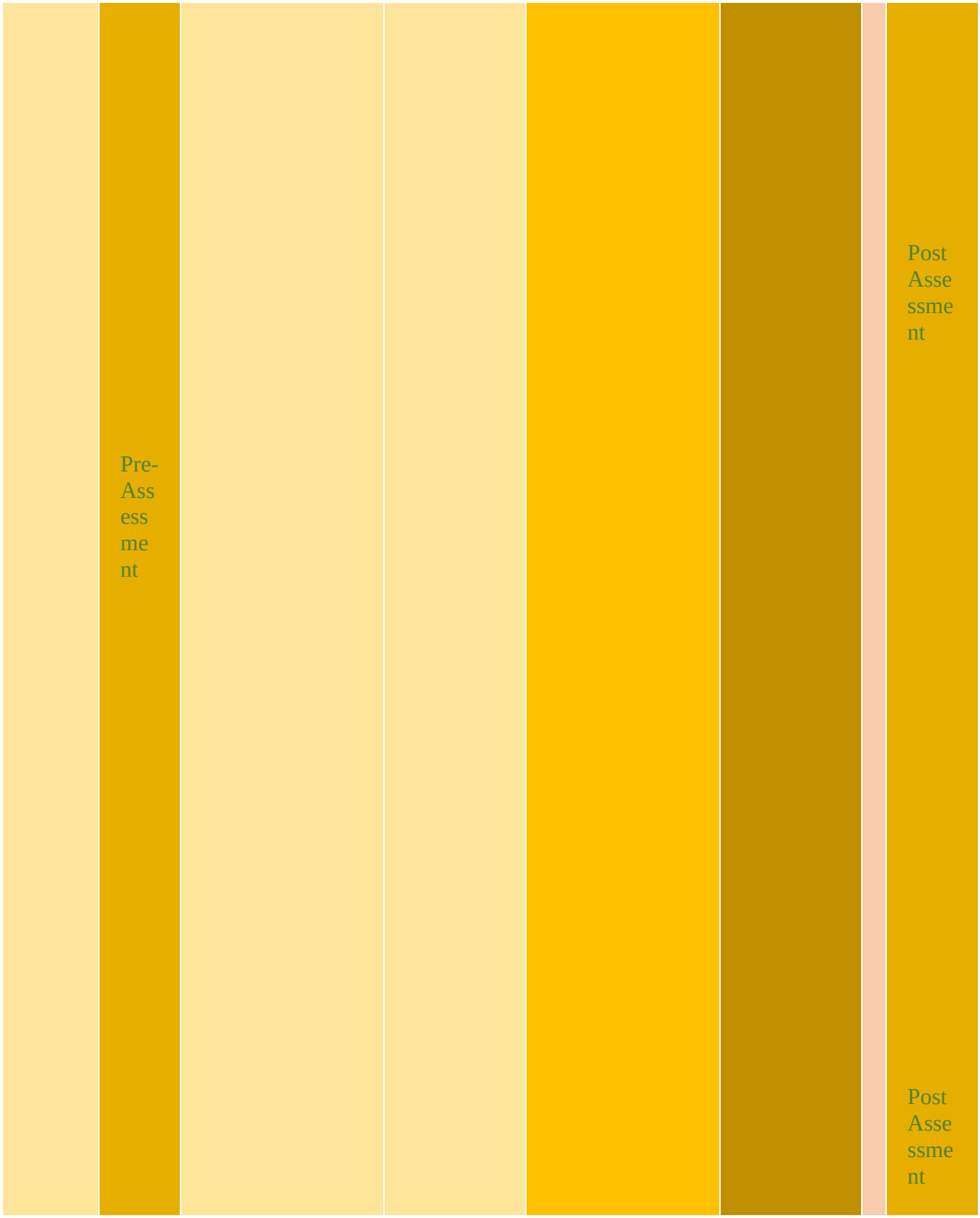
Pre-Assessment
Post Assessment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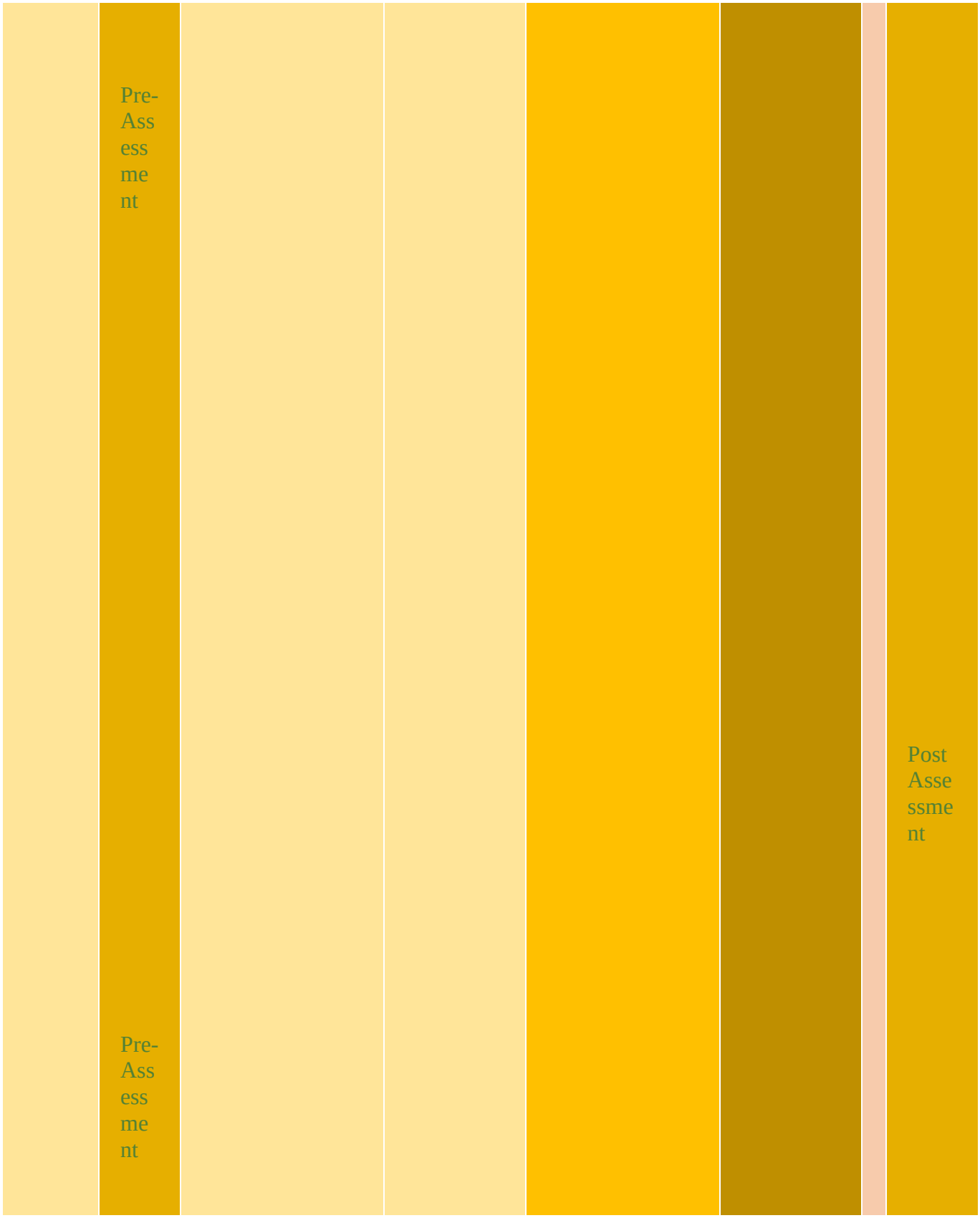
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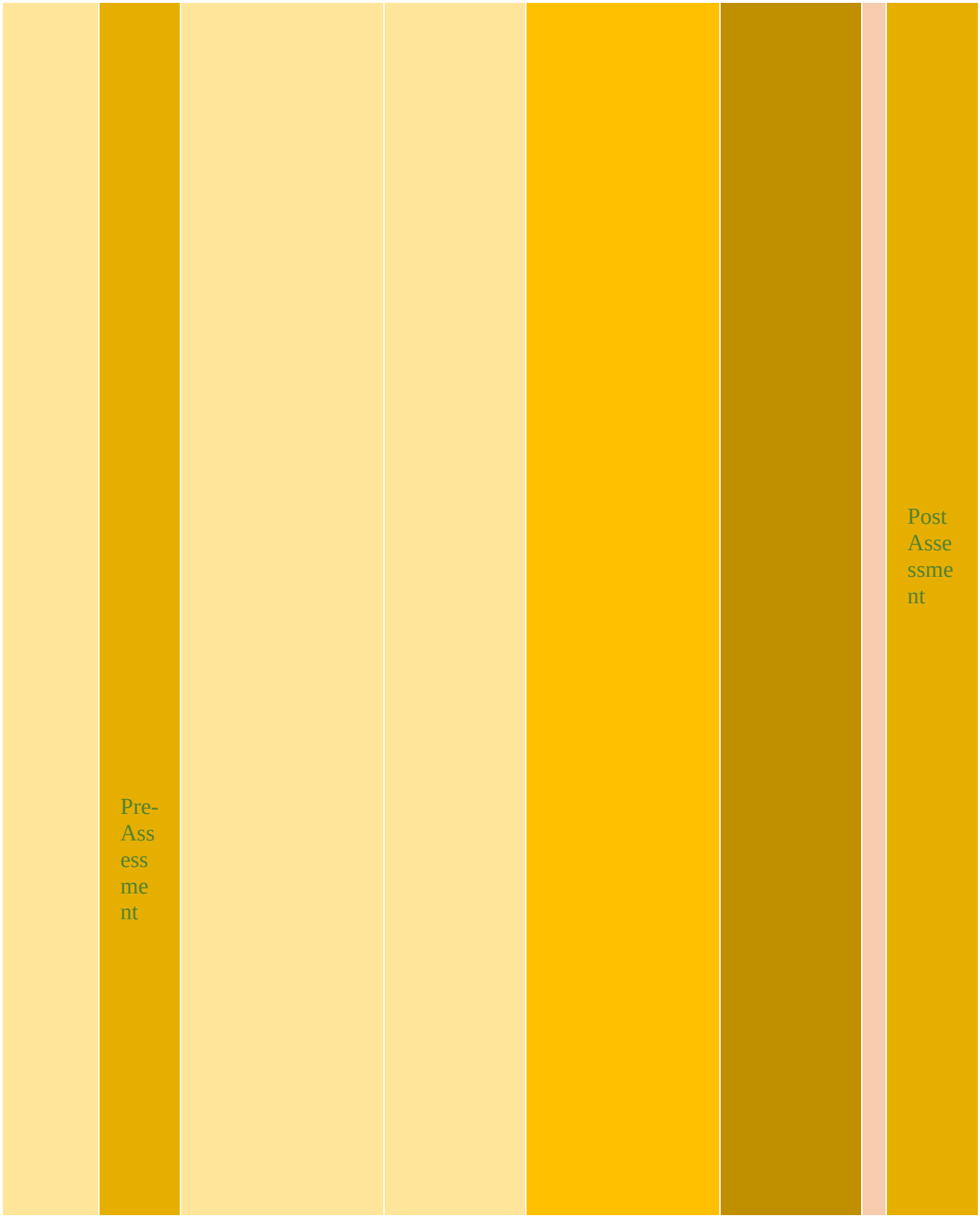
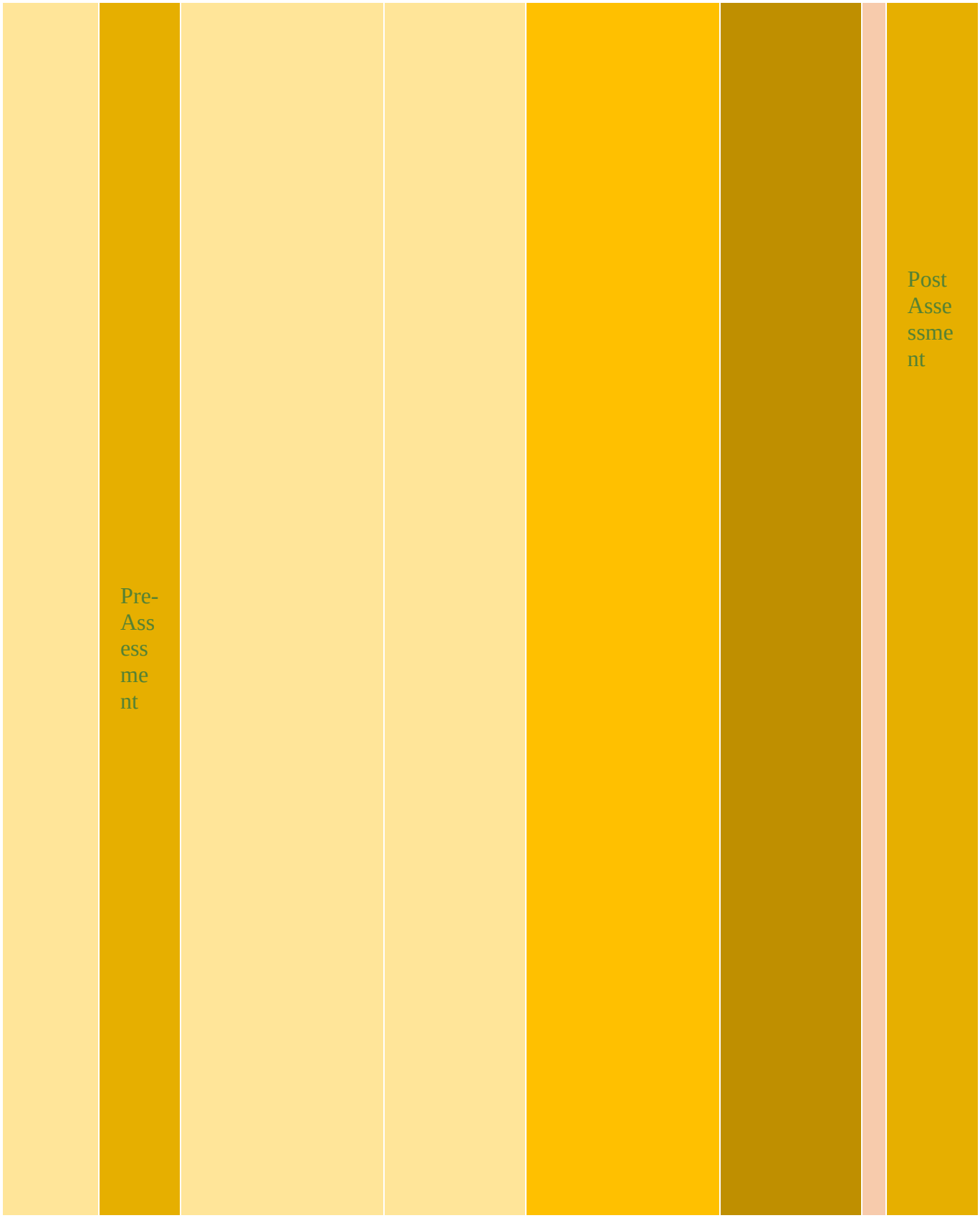
Post Assessment


Pre-Assessment
Post Assessment


Pre-Assessment
Post Assessment

* This includes all the SLOs contained within the Domain Code

Concluding Remarks – Exit to the Next Cycle

The assessment framework elaborated on this document can be considered a blueprint of an assessment programme for elementary/middle school level. In its role as an extension of the framework developed from Grades I-V, the assessment framework for Grades VI-VIII aims to provide a broad overview of policy guidelines for assessment framework 2022 while guiding the alignment of student learning outcomes with assessment strategies. It identifies the learning targets, the deep learning approaches, and the strategies for assessing the same. Therein it ensures that the assessments are interconnected and purposeful.

While the blueprint is necessary as an overarching guide, its enactment, as in the case of enactment of any curriculum and related assessment framework, will require professional judgement. Its real purpose will be realised when teachers use it at the classroom level to modify their teaching to match students' learning needs, when school leaders use it to accomplish their goals more effectively by replacing some programmes or practices with better ones (Fullan, 2001) and when the public education departments use it to invest in practices that yield positive results. The education practices, redefined in this manner, are again put to the test and the process of ongoing purposeful assessment continues.

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Appendices

Appendix A

Bloom's Revised Taxonomy Model – Cognitive Domain

Cognitive Dimension	The Knowledge Dimension			
	Factual The basic elements a student must know to be acquainted with a discipline or solve problems in it.	**Conceptual** The interrelationships among the basic elements within a larger structure that enable them to function together.	**Procedural** How to do something, methods of inquiry, and criteria for using skills, algorithms, techniques, and methods.	**Metacognitive** Knowledge of cognition in general as well as awareness and knowledge of one's own cognition
Remember Recall or retrieve previous learned information from long-term memory	**List** primary and secondary colours.	**Recognize** action words.	**Recall** how to perform a sum based on four operations.	**Identify** strategies for retaining information
Key Words (Verbs)	labels, lists, names, outlines, states	Defines, describes, identifies, knows,	Recalls, recognizes, matches,	reproduces, selects.
Sample Assessment	MCQs, Fill in the blanks, tables, rules,	Comprehension passage, CRQs, problem solving	Solving maths sums, using words in sentences, performing experiments, hands on activities	Retelling stories, word problems
Understand Construct meaning from instructional messages, including oral, written, and graphic communication.	**Summarize** features of a new product.	**Explain** the main ideas of a play or piece of literature.	**Explain** in one's own words the steps for performing a complex task.	**Predict** one's response to a performance.
Key Words (Verbs)	***Summarizing*** (Abstracting, generalizing)	***Classifying*** (Categorizing, subsuming) ***Exemplifying***	***Interpreting*** (Clarifying, paraphrasing,	***Inferring*** (Concluding, extrapolating, interpolating, predicting)

	Explaining (constructing models)	(Illustrating, instantiating)	representing, translating) ***Comparing*** (contrasting, mapping, matching)	
Sample Assessment	Write an essay	Group Work/Cooperative Learning	Project Work	Story telling
Apply Carry out or use a procedure in a given situation.	**Respond** to frequently asked questions.	**Provide** advice to juniors.	**Divide** one whole number by another whole number, both with multiple digits	**Use** techniques that match one's strengths. **Use** class rules in situations in which it is appropriate.
Key Words (Verbs)	Demonstrates, discovers,	Constructs, relates,	Computes, demonstrates, manipulates, operates, prepares, produces, solves	Changes, discovers, modifies, predicts, uses
Samples Assessment	Responds to questions	Match, complete sentences	Solves sums; role play	Create a blog
Analyze Break material into its constituent parts & determine how the parts relate to-one another and to an overall structure or purpose.	**Select** the most complete list of activities.	**Distinguish** between relevant and irrelevant numbers in a mathematical ward problem	**Compare and contrast** four ways of serving foods made with apples and examine which ones have the highest health benefits.	**Determine** the point of view of the author of an essay.
Key Words (Verbs)	Focusing, selecting	Differentiating (discriminating, distinguishing)	Organizing (finding, coherence, integrating, outlining, structuring)	Attributing (deconstructing)
Samples Assessment	Library search	Developing an argument; debating	Summarizing data in the form of graphs, pictures, tables etc.	Review of a written piece of work, oral discourse, story, movie etc.
Evaluate Make judgments based on criteria and standards.	**Select** the most complete list of activities.	**Determine** which kinds of apples are best for baking a pie, and why	**Judge** which of two methods are the best way to solve a given problem	**Reflect** on one's progress.
Key Words (Verbs)	Describes, explains	Checking (coordinating,	Interprets, justifies,	critiquing (judging)

		detecting, monitoring, testing)	relates, summarizes, supports	
Sample Assessment	Group discussion	Survey	Interpreting a graph, a picture etc.	Blogs; self-evaluation
Create Put elements together to form a coherent or functional whole; reorganize elements. into a new pattern or structure	**Generate** a log of daily activities.	**Compose** a story	**Design** an efficient project workflow.	**Inventing** a product
Key Words (Verbs)	Compiles, explains, reorganizes, summarizes,	planning (designing)	producing (construct)	generating (hypothesizing)
Sample Assessment	Game; network with others	Write a story	Create a new model	Create a learning portfolio.

Appendix B

Bloom's Revised Taxonomy Model – Affective Domain

Affective Domain			
Dimension	**Examples**	**Key words/Verbs**	**Sample Assessment**
Receiving The lowest level. Awareness of feelings, emotions, ideas, material, and phenomenon etc. Passively paying attention.	Demonstrates a willingness to participate in the activity	Asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, replies, uses, acknowledge, attentive, courteous, dutiful, follows, listens, understands	Listening exercises; Listen for and remember the name of newly introduced people; watching a movie or another student's presentation, and then write a summary.
Responding The student actively participates in the learning process, not only attends to a stimulus; the student also reacts in some way.	Shows interest in the objects, phenomena, or activity by seeking it out or pursuing it for pleasure.	answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, tells, practices, presents, reads, recites, reports, selects, writes.	Completion of class tasks/homework; participation in class/group discussion; presentation; response to questions; compliance with class rules and certain procedures.
Valuing The worth or value a person attaches to a particular object, phenomenon, or behaviour. This ranges from simple acceptance to the more complex state of commitment.	Simpler acceptance could be being part of the team, while more complex level of commitment may include being responsible for the overall improvement of the team.	appreciates, cherish, treasure, demonstrates, initiates, invites, joins, justifies, proposes, respect, shares Completes, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, studies, works.	Write an opinion piece on any issue, explaining one's own stance and reasons supporting that stance; seeking out information in popular media related to a particular topic; proposing a plan to improve team skills.
Organizing Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values.	The student can put together different values, information, and ideas, and can accommodate them within his/her own schema; the student is comparing, relating, and elaborating on what has been learned.	compares, relates, synthesizes, adheres, alters, arranges, combines, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares,	Explains the role of systematic planning in solving problems. Accepts ethical standards. Spending more time studying than playing sports; organizes and compares different cultures, evaluating the differences between them

Characterizing Highest level. Internalizing values. Student has a value system that controls their behaviour. The behaviour is pervasive, consistent, predictable.	Shows self-reliance when working independently, cooperates in group activities (displays teamwork); uses an objective approach in problem solving; follows rules and regulations on daily basis.	acts, discriminates, displays, influences, modifies, performs, qualifies, questions, revises, serves, solves, verifies	Group work and group project.

Sources:
https://www.astate.edu/dotAsset/7a3b152c-b73a-45d6-b8a3-7ecf7f786f6a.pdf

https://teaching.uncc.edu/services-programs/teaching-guides/course-design/blooms-educational-objectives

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https://thepeakperformancecenter.com/educational-learning/learning/process/domains-of-learning/affective-domain/

Appendix C

Bloom's Revised Taxonomy Model – Psychomotor Domain

Affective Domain			
Dimension	**Examples**	**Key words/Verbs**	**Sample Assessment**
Perception (awareness) The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation, through cue selection, to translation.	Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball.	chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects.	A game of dodgeball; reading expressions.
Set Readiness to act. Mental, physical, and emotional dispositions that make one respond in a certain way to a situation.	Knows and acts upon a sequence of steps in a process. Shows desire to learn a new process Attend project exhibition. Observe demonstrations through audio, videos, visuals. Set-up lab equipment for experiments.	Begins, displays, explains, moves, proceeds, reacts, shows, states, volunteers.	Pre-lab assessment; self-criteria; summary of demonstration and set-up process
Guided Response The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing.	Performs a mathematical equation as demonstrated. Follows instructions to build a model.	Copies, traces, follows, react, reproduce, responds.	Evaluate accuracy with criteria on standard performance. Run for 25 minutes steadily. Determine the density of a group of sample metals with regular and irregular shapes.
Mechanism (basic proficiency) This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence &	Use a personal computer. Repair a toy. Drive a bicycle. Holding a pencil	Assembles, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.	Performance test (performance indicators). Self-evaluation on performance (based on progress and confidence). Performance in a game (football, hockey). Solving a problem, using pre-set procedures

proficiency.			
Complex Overt Response Performs task or objective in a confident, proficient, and habitual manner	Control and use correct movements when playing instruments, drawing with pencil, and painting proficiently. Operate and run machines (e.g., computer) efficiently. Use equipment with confidence.	Assembles, builds, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches. NOTE: The Key Words are the same as Mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc.	Clinical exams Final project (ex. Create project exhibition) Performance in a role play.
Adaptation Skills are well developed, and the individual can modify movement patterns to fit special requirements.	Use tools for situations outside typical discipline. Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners.	Adapts, alters, changes, rearranges, reorganizes, revises, varies.	Field based tasks. Revise and improve procedures of movements. written responses Portfolio
Origination Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.	Constructs a new theory/story. Develops a new teamwork approach. Creates a new project; a new programme	Arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates.	Story writing; project work; models; work plans;

Sources:

https://www.astate.edu/dotAsset/7a3b152c-b73a-45d6-b8a3-7ecf7f786f6a.pdf
https://teaching.uncc.edu/services-programs/teaching-guides/course-design/blooms-educational-objectives
https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/planning-courses-and-assignments/course-design/blooms-taxonomy
http://www.nwlink.com/~donclark/hrd/Bloom/psychomotor_domain.html

Appendix D

Curriculum Mapping

NATIONAL CURRICULUM OF PAKISTAN

Grade VI

COGNITIVE DOMAIN

Low Order Taxonomies (Cognitive)						High Order Taxonomies (Cognitive)						
Remember	**No**	**Understand**	**No**	**Apply**	**No**	**Analyse**	**No**	**Evaluate**	**No**	**Create**	**No**	**Total**
Domain A: Physical Geography												
Earth Processes & Patterns												
		[SLO: G-06-A-01] Describe Earth's processes & patterns and how landscapes have changed overtime. (Structure and formation of the earth) (P)	01									**01**
				[SLO: G-06-A-02] Use map conventions in different types of maps to gather information about landforms, relief, and resources.	01							**01**

				(C)								
				[SLO: G-06-A-03] Use coordinates to read 6 figure grid references to locate places on a map. (F)	01							**01**
						[SLO: G-06-A-04] Gather information using maps and globes to inquire about geographical changes of a selected region or a landform. (P)	01					**01**
Total Frequency	**00**		**01**		**02**		**01**		**00**		**00**	**04**
Weather & Climate												
[SLO: G-06-A-05] Recall the differences between weather and climate. (P)	**01**											**01**

		[SLO: G-06-A-06] Study some of the elements of weather. (C)	**01**									**01**
		[SLO: G-06-A-07] Study the distribution of climate in the world. (P)	**01**									**01**
					[SLO: G-06-A-08] Investigate how climate is important for different vegetation. (C)	**01**						**01**
							[SLO: G-06-A-09] Investigate how and why our climate is changing. (deforestation) (P)	**01**				**01**
Total Frequency	**01**		**02**	**00**		**01**		**01**				**05**
	01		**03**	**02**		**02**		**01**				**09**
Domain B: Human Geography												
Natural, Capital, and Human Resources												
[SLO: G-06-B-01] Recall economic activities related to	**01**				[SLO: G-06-B-02] Explore the ways in which forests of the world and	**01**						**02**

natural, capital, and human resources. (Forestry, education, and industrialization) (F)			forests of Pakistan contribute to the economy of the region they belong to. (P)				
Total Frequency	**01**	**00**	**00**	**01**	**00**	**00**	**02**
Human Activities and Changing Landforms							
			[SLO: G-06-B-03] Inquire why landforms are changing due to human activity (Agriculture). (C)	**01**			**01**
Total Frequency	**00**	**00**	**00**	**01**	**00**	**00**	**01**
Settlements							
			[SLO: G-06-B-04] Study reasons for selecting a place to develop settlements. (Economic activity, jobs & transport). (C)	**01**			**01**
	[SLO: G-06-B-05] Compare settlements to understand	**01**					**01**

		adaptation according to human needs. (C)					
				[SLO: G-06-B-06] Use a range of multiple sources such as conventional maps, Google Maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of physical, human and environmental geography of Pakistan and of the world to reach and support conclusions. (C)	**01**		**01**
Total Frequency	**00**		**01**		**02**		**03**
Responsible use of resources							
				[SLO: G-06-B-07] Analyse how the	**01**		**01**

			scarcity of resources compels people to use resources wisely. (C)			
			[SLO: G-06-B-08] Analyse how the interdependence of resources within the global economy. (C)	**01**		**01**
Total Frequency				**02**		**02**
Cultures of the Settlement						
			[SLO: G-06-B-09] Discover differences in lifestyles of two different settlements to appreciate and respect diversity. (P)	**01**		**01**
Total Frequency				**01**		**01**
Role of Science and Technology in Economy						
	[SLO: G-06-B-10] Understand that advancements in science and technology	**01**				**01**

		influence the economic progress of a region. (C)				
Total Frequency			**01**			**01**
	01		**02**	**07**		**10**
Domain C: Environmental Geography						
Environmental Changes						
				[SLO: G-06-C-01] Inquire about the relationship between physical & human geography. (C)	**01**	**01**
		[SLO: G-06-C-02] Understand and describe the effects of the physical environment on humans. (adaptation & lifestyle) (P)	**01**			**01**
		[SLO: G-06-C-03] Understand and describe the effects of human activities on the physical environment. (Urbanization,	**01**			**01**

		industrialization) (P)										
Total Frequency			**02**			**01**						**03**
Managing & Changing Environment												
					[SLO: G-06-C-04] Find ways to improve the quality of their own and global environment (Deforestation, global warming) (P)	**01**						**01**
Total Frequency						**01**						**01**
Patterns of Global Economic Interactions												
		[SLO: G-06-C-05] Understand that exports generate revenue for a country which is necessary for a country to operate and progress. (P)	**01**									**01**
Total Frequency			**01**									**01**
			03			**02**						**05**
Overall Total	**02**		**08**		**02**	**11**		**01**				**24**

AFFECTIVE DOMAIN

From Lower Order Taxonomies to Higher Order Taxonomies										
Receiving	**No**	**Responding**	**No**	**Valuing**	**No**	**Organizing**	**No**	**Characterizing**	**No**	**Total**
Domain B: Human Geography										
Responsible use of resources										
[SLO: G-06-B-07] Analyse how the scarcity of resources compel people to use resources wisely.	**01**									**01**
Total Frequency	**01**									**01**
Cultures of the Settlement										
				[SLO: G-06-B-09] Discover differences in lifestyles of two different settlements to appreciate and respect diversity.	**01**					**01**
Total Frequency					**01**					**01**
Total overall	**01**				**01**					**02**

PSYCHOMOTOR DOMAIN

From Low Order Taxonomies to High Order Taxonomies														
Perception	**No**	**Set**	**No**	**Guided Response**	**No**	**Mechanism**	**No**	**Complex Overt Response**	**No**	**Adaptation**	**No**	**Origination**	**No**	**Total**
Domain A: Physical Geography														
Earth Processes & Patterns														
		[SLO: G-06-A-01] Describe Earth's processes & patterns and how landscapes have changed over time. (Structure and formation of the earth)	**01**											**01**
		[SLO: G-06-A-02] Use map	**01**											**01**

		conventions in different types of maps to gather information about landforms, relief, and resources.												
		[SLO: G-06-A-03] Use coordinates to read 6 figure grid references to locate places on a map.	**01**											**01**
		[SLO: G-06-A-04] Gather information using maps and globes to inquire about geographical changes of a selected region or a	**01**											**01**

		landform.												
Total Frequency			**04**											**04**
Weather & Climate														
		[SLO: G-06-A-08] Investigate how climate is important for different vegetation.	**01**											**01**
Total Frequency			**01**											**01**
			05											**05**
Domain B: Human Geography														
Human Activities and Changing Landforms														
		[SLO: G-06-B-03] Inquire why landforms are changing due to human activity (Agriculture).	**01**											**01**
Total Frequency			**01**											**01**
Settlements														
[SLO: G-06-B-06]	**01**													**01**

Use a range of multiple sources such as conventional maps, Google Maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of physical, human and environmental geography of Pakistan and of the world to reach and support conclusions														
Total Frequency	**01**													**01**

Domain C: Environmental Geography													
Environmental Changes													
[SLO: G-06-C-01] Inquire about the relationship between physical & human geography.	**01**												**01**
Total Frequency	**01**												**01**
Managing and Changing Environment													
		[SLO: G-06-C-04] Find ways to improve the quality of their own and global environment. (Deforestation, global warming)	**01**										**01**
Total Frequency			**01**										**01**
Patterns of Global Economic Interaction													
Total Frequency	**01**		**01**										**02**

Total overall	**02**		**07**											**09**

Appendix E

CURRICULUM MAPPING

Grade VII

COGNITIVE DOMAIN

Low Order Taxonomies (Cognitive)						High Order Taxonomies (Cognitive)						
Remember	**No**	**Understand**	**No**	**Apply**	**No**	**Analyse**	**No**	**Evaluate**	**No**	**Create**	**No**	**Total**
Domain A: Physical Geography												
Earth Processes & Patterns												
						[SLO: G-07-A-01] Inquire about Earth's processes & patterns and how landscapes have changed over time. (weather & climate, natural vegetation) (P)	01					01
				[SLO: G-07-A-02] Use map conventions to understand time zones and datelines. (P)	01							01

				[SLO: G-07-A-03] Gather information using maps, globes, photographs, aerial photographs, satellite images and graphs to inquire about geographical changes of a selected region or a landform. (P)	01						01
Total Frequency					02		01					03
Weather & Climate												
						[SLO: G-07-A-04] Investigate how and why our climate is changing. (Excessive agriculture) (C)	01					01
Total Frequency							01					01
Domain B: Human Geography												
Natural, Capital, and Human Resources												
	[SLO: G-07-B-01] Describe economic activities related to natural, capital,	01										01

	and human resources. (Agriculture, land supply, and population) (C)						
			[SLO: G-07-B-02] Suggest ways to utilize resources and conserve them. (P)	01			01
Total Frequency		01		01			02
Human Activities and Changing Landforms							
			[SLO: G-07-B-03] Inquire why landforms are changing due to human activity (high population, scarcity of liveable land). (C)	01			01
	[SLO: G-07-B-04] Understand and describe the effects of excess land use (causes and effects of population increase, excessive agriculture, and excessive	01					01

	urbanization). (C)									
Total Frequency		01				01				02
Settlements										
							[SLO: G-07-B-05] Study reasons for selecting a place to develop settlements. (Economic activity, jobs & transport) (C)	01		01
				[SLO: G-07-B-06] Compare urban and rural infrastructure to understand adaptation according to human needs. (P)	01					01
		[SLO: G-07-B-07] Use a range of multiple sources as conventional	01							01

	maps, Google maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of the physical, human, and environmental geography of Pakistan and of the world to develop and support conclusions. (P)					
Total Frequency	01	01	01			03
Responsible use of resources						
	[SLO: G-07-B-08] Analyse how the scarcity of resources compels people	01				01

			to wisely use and modify resources. (C)				
	[SLO: G-07-B-09] Understand the basic role of global economic systems and interdependence within the global economy. (C)	01					01
Total Frequency		01		01			02
Cultures of the Settlement							
			[SLO: G-07-B-10] Study reasons for selecting a place to develop settlements. (socio-economic status & lifestyle of people in the city) (C)	01			01
	[SLO: G-07-B-11] Develop a sense of	01					01

	respect for diversity and empathy to tolerate differences in near and far settlements. (M)				
Total Frequency		01	01		02
Role of Science and Technology in Economy					
	[SLO: G-07-B-12] Understand that the economic progress of a region relies upon the specialization of resources through education, scientific research, and technology. (C)	01			01
Total Frequency		01			01
Domain C: Environmental Geography					

Environmental Changes						
		[SLO: G-07-C-01] Inquire why landforms are changing due to the natural processes of the earth. (Causes and consequences) (P)	01			01
		[SLO: G-07-C-02] Inquire why landforms are changing due to human activity. (Causes and consequences of pollution) (P)	01			01
Total Frequency			02			02
Managing & Changing Environment						
				[SLO: G-07-C-03] Find ways to improve the quality of their own and global environment . (Deforestation, global warming) (C)	01	01

Total Frequency								01				01
Patterns of Global Economic Interactions												
	[SLO: G-07-C-04] Understand that high revenues can be generated by exporting finished goods as per current demand. (C)	01										01
	[SLO: G-07-C-05] Beginning to understand the basic role of global economic institutions. (World Bank & IMF) (P)	01										01
Total Frequency		02										02
Overall Total		07		03		09		02				21

AFFECTIVE DOMAIN

From Lower Order Taxonomies to Higher Order Taxonomies										
Receiving	**No**	**Responding**	**No**	**Valuing**	**No**	**Organizing**	**No**	**Characterizing**	**No**	**Total**
Domain A: Physical Geography										
Responsible use of resources										
		[SLO: G-07-B-08] Analyse	01							01

		how the scarcity of resources compels people to wisely use and modify resources. (C)									
Total Frequency			01								01
Total Frequency											
Cultures of the Settlement											
		[SLO: G-07-B-11] Develop a sense of respect for diversity and empathy to tolerate differences in near and far settlements. (M)	01								01
Total Frequency			01								01
Total overall			02								02

PSYCHOMOTOR DOMAIN

From Low Order Taxonomies to High Order Taxonomies														
Perception	**No**	**Set**	**No**	**Guided Response**	**No**	**Mechanism**	**No**	**Complex Overt Response**	**No**	**Adaptation**	**No**	**Origination**	**No**	**Total**
Domain A: Physical Geography														
Earth Processes & Patterns														

				[SLO: G-07-A-02] Use map conventions to understand time zones and datelines. (M)	01									01
				[SLO: G-07-A-03] Gather information using maps, globes, photographs, aerial photographs, satellite images and graphs to inquire about geographical changes of a selected region or a landform. (M)	01									01
Total Frequency					02								02	
Settlements														
				[SLO: G-07-B-07] Use a range of multiple sources as conventional maps, Google maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, thematic maps, and field trips to derive information of the physical, human, and environmental geography of	01								01	

				Pakistan and of the world to develop and support conclusions. (P)										
Total Frequency					01									01
Total overall					03								03	

Appendix F

CURRICULUM MAPPING

Grade VIII

COGNITIVE DOMAIN

Low Order Taxonomies (Cognitive)						High Order Taxonomies (Cognitive)						
Remember	**No**	**Understand**	**No**	**Apply**	**No**	**Analyse**	**No**	**Evaluate**	**No**	**Create**	**No**	**Total**
Domain A: Physical Geography												
Earth Processes & Patterns												
										[SLO: G-08-A-01] Construct arguments and provide evidence for their	01	01

										understanding of Earth's processes & patterns and how landscapes are changing constantly (earthquakes, river systems, water cycle, rock cycle, mineral resources) (P)		
						[SLO: G-08-A-02] Interpret required information using maps, globes, photographs, aerial photographs, satellite images, and graphs to inquire about geographical changes of a selected region or landform. (P)	01					01
								[SLO: G-08-A-03] Investigate geographical, climatic, political, cultural, and	01			01

								economic aspects of places using geographic representations and geospatial technologies. (P)				
Total Frequency							01		01		01	03
Weather & Climate												
						[SLO: G-08-A-04] Investigate how and why our climate is changing. (Soil erosion) Examine how weather and climate affect the processes of the earth. (P)	01					01
Total Frequency							01					01
Domain B: Human Geography												
Natural, Capital, and Human Resources												
						[SLO: G-08-B-01] Investigate economic activities related to natural, capital, and human resources. (Fishery, Mineral &	01					01

				Energy resource) (C)			
				[SLO: G-08-B-02] Find ways to utilize and conserve resources. (C)	01		01
Total Frequency					02		02
Human Activities and Changing Landforms							
			[SLO: G-08-B-03] Express opinions on why landforms are changing due to human activity. (P)	01			01
	[SLO: G-08-B-04] Understand and describe the effects of excess land use. (C)	01					01
Total Frequency		01		01			02
Settlements							
	[SLO: G-08-B-05] Study reasons for selecting a place to develop settlements.	01					01

(Economic activity, jobs & transport) (C)					
	[SLO: G-08-B-06] Study a selected infrastructure to understand adaptation according to human needs (CPEC). (C)	01			01
	[SLO: G-08-B-07] Use a range of multiple sources such as conventional maps, Google maps, satellite images, photographs, diagrams, GPS, GIS, newspaper articles, geographical journals, thematic maps, and field trips to derive information on the physical, human and environmental geography of Pakistan and of	01			01

				the world to reach and support personal conclusions and critique with credibility. (P)			
Total Frequency		01			02		03
Responsible use of resources							
		[SLO: G-08-B-08] Demonstrate efficient use of resources in scarcity. (C)	01				01
				[SLO: G-08-B-09] Analyse and describe basics of global economic systems and interdependence of resources in a selected region. (C)	01		01
Total Frequency			01		01		02
Cultures of the Settlement							
	[SLO: G-08-B-10] Develop a deep sense of empathy for the diverse	01					01

	groups in different settlements. (M)							
			[SLO: G-08-B-11] Discover differences in lifestyles of a selected region to understand that cultures are determined according to place, resources, beliefs, climate, technological development, and human needs. (M)	01				01
Total Frequency	01			01				02
Role of Science and Technology in Economy								
					[SLO: G-08-B-12] Evaluate how the economic progress of a region relies upon the specialization of resources through education, scientific	01		01

					research, and technology. (C)		
Total Frequency		01				01	01
Domain C: Environmental Geography							
Environmental Changes							
			[SLO: G-08-C-01] Inquire about the impact of overusing natural and other resources on the environment. (C)	01			01
	[SLO: G-08-C-02] Identify how places are interdependent on each other and how human activity in one place affects the other. (Deforestation, pollution & climate change) (C)	01					01
Total Frequency		01		01			02
Managing & Changing Environment							
			[SLO: G-08-C-03] Reflect on	01			01

				their role to improve the quality of their own and global environment. (Managing land and water resources) (M)			
Total Frequency					01		01
Patterns of Global Economic Interactions							
				[SLO: G-08-C-04] Analyse that high revenues can be generated by exporting finished goods through technological advancements, marketing trends, and professional ethics. (M)	01		01
	[SLO: G-08-C-05] Describe the basic role of global economic institutions. (World Bank & IMF) (P)	01					01
Total Frequency		01			01		02

Overall Total			05		02		11		02		01	21

AFFECTIVE DOMAIN

Receiving	No	Responding	No	Valuing	No	Organizing	No	Characterizing	No	Total
Domain A: Physical Geography										
Cultures of the Settlement										
[SLO: G-08-B-10] Develop a deep sense of empathy for the diverse groups in different settlements. (M)	01									01
Total Frequency	01									01
Patterns of Global Economic Interactions										
						[SLO: G-08-C-04] Analyse that high revenues can be generated by exporting finished goods through technological advancements, marketing trends, and professional ethics. (C)	01			01
Total Frequency										
Total overall	01									01
							01			02

PSYCHOMOTOR DOMAIN

From Low Order Taxonomies to High Order Taxonomies														
Perception	**No**	**Set**	**No**	**Guided Response**	**No**	**Mechanism**	**No**	**Complex Overt Response**	**No**	**Adaptation**	**No**	**Origination**	**No**	**Total**
Domain A: Physical Geography														
Earth Processes & Patterns														
		[SLO: G-08-A-01] Construct arguments and provide evidence for their understanding of Earth's processes & patterns and how landscapes are changing constantly (earthquakes, river systems, water cycle, rock cycle, mineral resources)	01											01

		(P)												
1				[SLO: G-08-A-02] Interpret required information using maps, globes, photographs, aerial photographs, satellite images, and graphs to inquire about geographical changes of a selected region or a landform. (P)	1									01
Total Frequency			01		1									02
Total overall			01		1									02