

GENERAL KNOWLEDGE GRADE I-III(2020)

ONE NATION, ONE CURRICULUM



DIRECTORATE OF CURRICULUM AND TEACHER EDUCATION
KHYBER PAKHTUNKHWA ABBOTTABAD

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

CURRICULUM
GENERAL KNOWLEDGE
GRADE I-III
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Khyber Pakhtunkhwa Abbottabad

PREFACE

Education plays a vital role in the National development process. In today's world of knowledge explosion where technology is surging by leaps and bounds, it has become imperative for us to provide up to date knowledge to our younger generation. In fact, the curriculum plays a crucial role in our educational endeavor. It is the road map through which we guide our students to reach their destiny. Curriculum lies at the heart of the educational enterprise. It is a mean through which nations transmit their philosophy of life to their young generations. The process of curriculum development requires inputs from all the stakeholders to fully reflect the needs of the society as well as interests of the learners.

The current document has been developed after having exhaustive consultation and deliberations with experienced and skilled experts, academia and stakeholders, educational institutions, universities, assessment experts, minority communities and representatives of Ittihad Tanzeemat Ul Madaras.

The development of this Curriculum is driven by the key considerations: Teachings of the Holy Qur'an and Sunnah, the vision of Quaid-e-Azam Muhammad Ali Jinnah and Allama Muhammad Iqbal, constitutional framework, national policies, aspirations, and National Standards, alignment with the goals & targets of SDG-4, emerging international trends in teaching, learning & assessment, outcomes-based approach, focus on values, life skills-based, and inclusive education, respect & appreciation for different cultures and religions in a local and global context. Moreover, promotion of intellectual, spiritual, aesthetic, emotional, social, and physical development of learners, move away from rote memorization and focus on Project, inquiry, and activity –based learning, development of 21st century skills including analytical, critical and creative thinking. These were some of the key areas that were brought into consideration while developing this document.

The experts involved in developing, reviewing and refining the Curriculum 2020 deserve enormous appreciation for accomplishing a complex task. The facilitation and cooperation extended by the National Curriculum Council, Ministry of Federal Education and Professional Training Islamabad, is highly appreciated in realizing the dream “one nation - one curriculum”.

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CHAPTER

01 INTRODUCTION

GENERAL KNOWLEDGE CURRICULUM

Single National Curriculum for General Knowledge 2020 for Grade I to III is the result of an effort to review and revise the previous curriculum in line with modern trends and innovations in different fields. It is important to mention here that National Curriculum 2006 for General Knowledge was an integration of General Science, Social Studies and Islamiat. The subject of Islamiat was integrated in General Knowledge in Grades I and II and appeared as a separate subject from grade III onwards.

Keeping in view recommendations from different stakeholders, the government has taken the historic decision to introduce Islamiat (for Muslim students) and Religious Education (for minorities) as separate subjects from Grade I onwards.

As a result of this decision the Single National Curriculum for General Knowledge 2020 is now based on the themes and concepts from General Science and Social Studies.

This Curriculum for General Knowledge aims to provide our students with real life quality learning experiences which is based on inquiry and hands-on activities. It is comprised of concepts from General Science and Social Studies and Ethics:

- Knowledge of science is drawn primarily from the domains of life sciences, physical sciences, earth and space sciences;
- Knowledge of social studies is drawn primarily from the social sciences strands of history, geography, government, citizenship, economics, culture; and ethical values which are essence of Islam and common in all the religions.

1.1 AIMS OF GENERAL KNOWLEDGE CURRICULUM

This Curriculum is designed for the young students to develop basic knowledge, skills, values, interests, and attitudes that will lead them to productively learn and understand the aforesaid areas of knowledge more deeply in later grades. The main goal is to produce young critical thinkers, capable of understanding and evaluating information, developing knowledge, skills, values, positive attitudes, healthy habits, civic sense and making informed decisions.

This Curriculum has been developed with the following emphasis:

- Broadening the learning space (out of the classroom learning).
- Strengthening the interface with pre-primary and secondary school curricula.
- Developing understanding of ethical values.
- Integrating students' learning experiences with emphasis on patriotism and sustainable development.
- Promoting life-long learning and enhancing 21st century skills.
- Developing students' independent learning.
- Enhancing interest and appreciation in society and curiosity in science & technology.
- Putting emphasis on students' holistic development and providing them real life quality experience, based on inquiry and hands-on activities/experiences.
- Developing the understanding about human diversity.

1.2 CURRICULUM DEVELOPMENT

Students in the early grades have a natural curiosity about the world, thus it is appropriate for them to start learning the basics of science and other disciplines at a young age. Early school education (Grades I-III) has traditionally been content-intensive which has hindered the development of effective thinking skills of students. The Single National Curriculum is based on content progression at early levels to prepare the students for conceptual learning at higher grades, supports students to meet International standards and equip them with 21st century skills.

1.3 GUIDING PRINCIPLES FOR THE CURRICULUM DEVELOPMENT

Consistent with the Nature of Learning:

The Curriculum is designed to stimulate students' curiosity and develop their interest in learning and to enable them to learn more about themselves and the world around them through activities. Young children are naturally inquisitive. They have a keen interest in the materials around them and move naturally into activities that involve manipulation of materials, exploration and discovery. Therefore, students in the early school years (Grades I-III) should nurture and extend this curiosity, so that they are able to question, explore and investigate with increasing levels of insight and skills.

Coherent:

This Curriculum has been designed to ensure that the ideas taught within a grade level have a logical and natural connection with each other and with those of higher grades. Efforts have been made to introduce concepts, skills, and attitudes in a well-integrated manner with progressive articulation appropriate to each grade level. This progression is intended to prepare students to understand and use more complex concepts and skills as they advance through the learning process.

Comprehensive and Developmentally Appropriate:

This Curriculum considers the psychological and social readiness of students. It builds from concrete experiences to abstract understanding. Therefore, it focuses on providing experience with concepts that students can explore and understand in depth to lay the foundation for future learning experiences.

The Curriculum is designed to help students develop attributes, essential for 21st century in all areas of the physical, emotional, social, linguistic, aesthetic, and cognitive development. It also emphasizes on:

- Active exploration of the environment;
- Self-directed and hands-on learning activities;
- Balance between individual and group activities;
- Regular and supportive interaction with teachers and peers;
- Balance between active movement and quiet activities; and
- Diverse enough to meet the needs of children with special needs.

These experiences during the early years of school not only influence their later functioning in school but also have effects throughout the life.

Feasible:

This Curriculum can be taught with easily available resources and materials. Teacher's Guide Manual is strongly recommended, which will contain sample lessons on each topic for each grade level. The Teacher's Guide Manual is a document that will grow as teachers add exemplary lessons aligned with the new Curriculum while keeping in view the inquiry approach. In addition, activity-based workbook and other print resources are also recommended.

In addition, activity based learning is recommended as are alternative mode and medium of communication to cater diversity in the classroom.

Useful and Relevant:

Efforts have been made to ensure that General Knowledge Curriculum adopts an integrated approach across disciplines that are socially relevant, intellectually engaging, and personally meaningful to students. The Curriculum contents relate directly to students' needs and interests. Such relevance of content areas to other endeavors will enable students to transfer skills gained from one area of instruction into other subjects and their lives outside the classroom. Therefore, this Curriculum provides skills in a context that enables students to experience the joy of learning.

Effective Assessment Practices:

Students' achievement of the standards and outcomes in this Curriculum are to be best assessed by using a variety of assessment tools and methods. Performance assessments are particularly appropriate to evaluate students' mastery of thinking processes and problem-solving skills. Teachers in conjunction should use variety of classroom assessment approaches with the Criterion Reference Tests. Observation of students engaged in instructional activities is highly recommended to assess students' skills as well as attitudes towards learning. However, nature of the questions posed by students will also provide an important evidence of their understanding which must be encouraged by the teachers.

Reflective of Successful Teaching Practices:

This Curriculum provides broader guidelines for teachers whereby they will accept the responsibility for actively supporting student's development and to provide opportunities for students to acquire important knowledge and skills. Teachers will use their knowledge of child development and learning to identify the range of activities, materials, and learning experiences that are appropriate for a group or individual student. The guidelines also describe various aspects of the teachers' role in making decisions about classroom practices.

Critical Thinking and Problem Solving Skills:

Higher-order thinking skills are developed in the process of teaching subject-matter knowledge within application contexts that call for students to relate what they are learning to their lives outside of school by thinking critically and creatively about it or by using it to solve problems or make decisions. Similarly, learning through role-plays, demonstrations, and investigative activities is vital to the early development of both the mind and the body. This Curriculum, therefore, emphasizes student exploration through inquiry, and thereby calls for a shift from teacher-centered to learner-centered approach.

Meaningful Learning and Engaging:

Children learn best when they have real materials they can manipulate. Through direct sensory involvement with their environment, children learn about topics that are personally meaningful and interesting. Teaching children requires the use of real and relevant materials and experiences. Discovering what works best for all students requires knowledge about each student, various learning styles of the students and clear learning outcomes.

Similarly, effective instructions engage students actively in enjoyable learning experiences. In the early grades, children are forming attitudes and habits for learning. Students are more likely to learn and remember new skills and concepts when they use them in a meaningful context.

Therefore, this Curriculum emphasizes the importance of teaching instructions that should maximize students' potential and enables them in understanding of the intertwined nature of learning.

CHAPTER

02

CURRICULUM FOCUS

Primary focus of General Knowledge Curriculum is to develop students' interest and creativity through everyday experiences and investigations that promote the acquisition of thinking skills as well as the development of healthy attitudes and moral values.

2.1 INQUIRY-BASED CURRICULUM

When students use inquiry to discover content, they not only learn a great variety of facts and concepts, but they also learn how these are related to each other and how it is that we human beings come to understand our world and add to the great body of information, we call knowledge.

Inquiry-based approaches to the early childhood education focus on "student constructed" learning as opposed to "teacher-transmitted" information. An Inquiry-based Curriculum promotes inquiry approaches in teaching, if the development and enhancement of students' ability to think sequentially, critically, and creatively is an expected outcome. Therefore, this Curriculum reflects a paradigm shift from the characteristics of traditional approaches to Inquiry-based approach.

2.2 THE STUDENT-CENTERED CURRICULUM

Student is the centre of learning. Learning experiences need to be relevant to students' daily life. Students are more interested and easily engaged in the learning, which uses everyday materials, when they can make decisions about issues that relate to their immediate environment and to discover 'how things work'. Therefore, this curriculum is designed to be a Student-centered curriculum as opposed to the traditional teacher-centered one, whereby teachers' role is desired to be shifted from a traditional teacher to a facilitator.

2.3 AN OUTCOME-FOCUSED CURRICULUM

Outcomes-focused is a method of curriculum design and teaching that focuses on what students can actually do after they are taught. This curriculum is outcomes-focused and is intended to specify a set of well-defined outcomes in the form of Knowledge, skills, attitudes and values. These Curriculum outcomes have been presented hereunder, for both students and teachers to achieve. These outcomes provide a basis for study programs that will challenge all students and teachers equally and offer them opportunities to achieve these outcomes. However, these outcomes can be attained by following the teaching & learning process explained in this document.

CHAPTER



**CONTENT
ORGANIZATION**



General Knowledge Curriculum is organized around themes that students can relate in their everyday experiences. It is also based on commonly observed phenomena in nature & environment, geography, socio-cultural norms, moral values and practices. The basic aim is to enable students to appreciate the links between different topics and thus allow the eventual integration of ideas.

Therefore, a careful selection of topics/ themes have been made to promote greater understanding instead of covering a “little bit of everything”. The content is organized into standards, which are then divided into themes. The topics under each theme are not to be viewed as compartmentalized blocks of knowledge. In general, there are no clear boundaries between these themes. There may be topics common to different themes for example “Changing World from Past to Present” can be included in theme of both Science and Social Studies. Hence, a conscious effort is needed to demonstrate the relationship between themes whenever possible while writing a textbook. Nevertheless, all of the themes identified are drawn from the standards for General Science Curriculum and Social Studies Curriculum.

Each standard consists of various learning areas or topics, which have intended learning outcomes. Whereas learning outcomes are statements that describe what knowledge, skills and attitudes students are expected to demonstrate as a result of their cumulative learning experiences at each grade level. The learning outcomes for a particular learning area are provided to form a strong foundation for meeting the Benchmarks and Standards for the entry to Grade IV for Social Studies & General Science.

3.1 KNOWLEDGE

Students will develop knowledge and understandings of the following concepts and apply their understandings to interpret, integrate, and extend knowledge.

ETHICS AND VALUES

Standard 1: Students identify aspects of good character and good manners and learn to practice them in their lives.

Benchmarks Grade I-III

Students will:

- 1.1 identify aspects of good character such as using polite words, speaking the truth, practicing kindness, forgiveness and honesty.
- 1.2 understand the importance of kindness, compassion and sharing with others and apply in these values in their daily lives.
- 1.3 recognize etiquettes of eating and drinking.
- 1.4 recognize that all human beings should be equally treated with respect.
- 1.5 understand and practice community services.
- 1.6 resolve conflicts and disputes through peaceful ways

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • Good qualities • Respecting family members • Greeting others • Practicing good qualities • Eating manners • Bathroom etiquettes 	<ul style="list-style-type: none"> • Sharing things • Way of helping others • Need to respect all people • Ways to respect all people • Avoid hurting others • Ways to reduce the hurt • Forgiving others 	<ul style="list-style-type: none"> • Common conflicts/ disagreements • Causes of conflicts/ disagreements • Impacts of conflicts • Resolving conflicts • Preventing conflicts/ disagreements

RESPONSIBLE CITIZENSHIP

Standard 2: Students recognize the need to respect rules and rights, fulfill their responsibilities and appreciating diversity at local and global level.

Benchmarks Grade I-III

Students will:

- 2.1 demonstrate disciplined behavior at home, school, on the road and in the playground.
- 2.2 identify and practice responsible behaviour to keep their home and surroundings clean and green.
- 2.3 recognize role of Government and rights and responsibilities of good citizen.
- 2.4 appreciate diversity at local and global level.
- 2.5 show respect and care for children and adults with special needs.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • Rules of playing games • Common traffic rules • Safety rules and road science • Cleaning homes • Respect for worship places • Obeying school rules 	<ul style="list-style-type: none"> • Roles and responsibilities of government • Right and responsibilities of people/ citizen • Sustainable consumption of water • Ways to save water and land • Fairness and Unfairness • Promoting fairness 	<ul style="list-style-type: none"> • Individuals and community • Key problems in the community • Need of government • Government and People • Good citizenship

DISCOVERING SELF AND IMMEDIATE ENVIRONMENT

Standard 3: Students recognize their own needs, those of others and understand their role within their community and environment

Benchmarks Grade I-III

Students will:

- 3.1 introduce their family members, friends, their interests and characterise places around them.
- 3.2 identify different types of rules for personal safety.
- 3.3 identify the ways of keeping oneself clean and demonstrate healthy habits for personal hygiene.
- 3.4 explain that germs causes disease and how to avoid germs.
- 3.5 understand need of staying safe in daily life situations.
- 3.6 identify the safety rules indoor and outdoor.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • What is neighbourhood? • Key places in neighbourhood • Kinds of houses • Introduction to self • Importance of cleanliness • Way of cleanliness • Cleanliness and health • Family members 	<ul style="list-style-type: none"> • Key characteristics of a village and city life • Comparison of village and city life 	<ul style="list-style-type: none"> • Factors for healthy living • Past and present things • Differences in past and present things • Indoor safety • Outdoor safety

PATRIOTISM AND KNOWLEDGE OF COUNTRY

Standard 4: Students recognize the respect and value of their country Pakistan, its map, its founders, and the significance of its flag.

Benchmarks Grade I-III

Students will:

- 4.1 demonstrate love and loyalty towards their country.
- 4.2 recognize national flag and understand symbolism in it.
- 4.3 recognize the map of Pakistan and learn the full name of the country, its provinces and areas Azad Jammu Kashmir (AJK), GILGIT BALTISTAN (GB) and Islamabad Capital Territory (ICT).
- 4.4 articulate the distinguished historical figures of Pakistan (Quaid-e-Azam Muhammad Ali Jinnah and Allama Muhammad Iqbal).
- 4.5 recognize the religious and cultural festivals of Pakistan.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • Name the country • Date of existence • Flag of Pakistan. • Significance of the National Flag • Places of worship for Muslims and others 	<ul style="list-style-type: none"> • Reconize the map of Pakistan. • Provinces of Pakistan • Significance of the National Flag. • Religious and cultural festivals of Pakistan. 	<ul style="list-style-type: none"> • Quaid-e-Azam Muhammad Ali Jinnah: events and contributions • Allama Muhammad Iqbal: events and contributions

GOODS AND SERVICES

Standard 5: Students understand the concept of interdependence by classifying the role of goods and services in our lives and the need for respect for all occupations.

Benchmarks Grade I - III

Students will:

- 5.1 analyse the importance and variety of occupations, and demonstrate respect for them.
- 5.2 identify different modes of transportation.
- 5.3 demonstrate disciplined behavior at the public places e.g. bus stop, railway station, airport etc.
- 5.4 differentiate amongst natural, human and capital resources as source of good.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • People in school • Activities in school • Means of transportation • Activities at airport, railway station, bus stop 	<ul style="list-style-type: none"> • Common professions in the village/ city • Processing (making products) • Common professions/ occupations in villages and cities. • Professions/ occupations they like 	<ul style="list-style-type: none"> • Natural resources • Human resources and capital resources • Goods and services • Buyers and sellers • Scarcity

LIFE SCIENCES

Standard 6: Students begin to understand and demonstrate curiosity about basic concepts and processes of the living world around themselves.

Benchmarks Grade I-III

Students will:

- 6.1 differentiate between living and non-living things.
- 6.2 describe body parts and senses by their functions.
- 6.3 describe feature of a healthy life.
- 6.4 differentiate between different plants and animals is a type of living thing and recognize them as a major source of food.
- 6.5 name major crops of Pakistan and their by products.
- 6.6 explain growth and change is a important features that make plants and animals living things.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • Major parts of the human body and their function • Senses (touch, taste, smell, sight and hearing) • Common plants and animals • Need of plants and animals • Importance of plants and animals • Living places of animals • Wild and domestic animals • Food for animals • Caring for things around us 	<ul style="list-style-type: none"> • Living and non living things. • Major parts of a plant and their functions. • Plant and seeds • Growth and change in plants. • Uses of plants • Animals on land and in water • Growth and change in animals • Major crops in Pakistan • Live stock 	<ul style="list-style-type: none"> • Habitats • Kinds of habitats • Eco system • Characteristics of habitats • Life cycle of some animals and plants • Plants' and animals' food • Basic food groups • Balanced diet

PHYSICAL SCIENCES

Standard 7: Students recognize simple forms of Physical phenomena (matter & energy) and relate everyday use to their lives.

Benchmarks Grade I-III

Students will:

- 7.1 understand the physical effects of light (shadows and directions)
- 7.2 recognize states of matter by observing their basic physical properties
- 7.3 recognize the basic sources of energy and uses.
- 7.4 recognize and identify simple machines and their uses.
- 7.5 explain the concept of inventions.
- 7.6 identify push and pull as forces and their effects on objects.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • Slow and fast means of transportation 	<ul style="list-style-type: none"> • Common sources (natural and human made) • Uses of heat and light • Methods of producing heat. • Intensity of heat and light • Importance of resources • Natural materials • Human made objects 	<ul style="list-style-type: none"> • Role of sunlight in the Formation of shadows • Sunrise and sunset • Using the sun for guidance • States of matter • Observing matter • Common sources and uses of energy • Common inventions • Effects of inventions on lives • Simple machines • Push and pull as a force • Uses of force • Force and motion

EARTH AND SPACE SCIENCE

Standard 8: Students characterise the physical features and environmental changes of Earth as aspect of its been that as a relationship with celestial bodies in the sky.

Benchmarks Grade I-III

Students will:

- 8.1 identify features of Earth and other celestial bodies like sun, moon and the stars.
- 8.2 recognize the natural sources and understand importance of their conservation including the protection of animals.
- 8.3 define the term "pollution" and name its types.
- 8.4 recognize the role of humans in reducing pollution in their environment.

PROGRESSION BETWEEN THE LEVELS

GRADE I	GRADE II	GRADE III
<ul style="list-style-type: none"> • Shape of earth • Earth's feature • Celestial objects 	<ul style="list-style-type: none"> • Some natural resources • Importance of natural resources • Importance of water • Sources of water • Human management of water • Natural material and human made • Wastage of water and land • Problems caused by wastage of water and land. 	<ul style="list-style-type: none"> • Pollution • Protecting the endangered animals • Extinct animals • Natural disaster • Human activities and the natural habitats • Changes in the natural environment • Conserving the natural environment

Note: By the end of Grade III, students will have essential knowledge of Science and Social Studies that will become foundation of learning for Grade IV. Science and Social Studies will be introduced as separate subjects from grade IV.

3.2 SKILLS

Students will develop the skills required for inquiry, solving problems, communicating ideas and results, for working collaboratively, and making informed decisions.

Students use a variety of skills in the process of answering questions, solving problems, and making decisions. While these skills are not unique to General Knowledge, they play an important role in development of systematic understandings and in the application of the same to new situations. However, the listing of skills is not intended to imply a linear sequence or to identify a single set of skills required in each investigation. Every investigation and application has unique features that determine a particular mix and sequence of skills involved thereto.

These will assist in the development of skills with their increasing scope and complexity of application in higher grades.

- a. **Initiating and Planning:** These are the skills of questioning, identifying problems, and developing preliminary ideas and plans.
- b. **Performing and Recording:** These are the skills of carrying out a plan of action, which involves gathering evidence by observation and, in most cases, manipulating materials and equipment.
- c. **Analyzing and Interpreting:** These are the skills of examining information and evidence, processing and presenting data interpreting, evaluating, and applying the results.
- d. **Communication and collaboration:** Communication skills are essential at every stage where ideas are being developed, tested, interpreted, debated/ discussed, and agreed upon. Collaboration skills are also important, as the development and application of inductive and deductive ideas are collaboratively processed both in the society and in the classroom.

3.3 ATTITUDES AND MORAL VALUES

Students will be encouraged to develop attitudes that support the responsible acquisition and application of the knowledge to the mutual benefit of self, society, and environment.

Attitudes refer to generalized aspects of behavior that are modeled for students by example and reinforced by selective approval. Attitudes are not acquired in the same way as skills and knowledge. They cannot be observed at any particular moment, but are evidenced by regular, unprompted manifestation over time. Attitude development is a lifelong process that involves the home, the school, the community, and the society at large.

The development of attitudes and moral values generally occurs through the following stages where teacher has a key responsibility:

- being aware of the importance and the need for developing attitudes and values.
- giving emphasis to these attitudes and values.
- practicing and internalizing these attitudes and values.

The attitudes outcome focuses on the following ways in which school education can contribute to attitudinal growth of the young students. These have been articulated as general statements that have guided the development of the learning outcomes, which also provide links to science & technology, society and environment:

3.3.1 Appreciation of interest in science, social studies and ethics:

Students will be encouraged to appreciate the role and contribution of science, technology & behavioral science in their lives, to be aware of their limits and impacts. Students will be encouraged to develop enthusiasm and continuing interest in the study of Science, Social Studies and Ethics. General Knowledge of these disciplines will contribute to attitudinal growth when students are involved in discussion and activities that stimulate their interest and curiosity, thus increasing their motivation for learning and encouraging them to become interested in further education.

3.3.2 Inquiry:

Students will be encouraged to develop attitudes that support inquiry, problem solving, and decision-making. At early grades students will be engaged in partial and full inquiries that are within their developmental capabilities. It can only contribute to attitudinal growth when students are provided with the opportunities for development, reinforcement, and extension of attitudes, which encourage inquiry such as open-mindedness respect for reason and evidence, initiative, perseverance, creativity and inventiveness.

3.3.3 Collaboration:

Students will be encouraged to develop attitudes that support collaborative activities. Students are provided with opportunities to work in groups on real-life problems, thus developing a sense of interpersonal responsibilities, openness to diversity, respect for multiple perspectives, and an appreciation of the role, effort and contribution of others.

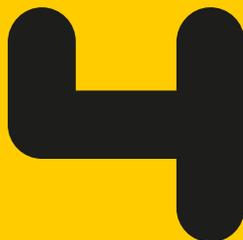
3.3.4 Stewardship:

Students will be encouraged to develop responsibility for the application of their knowledge in relation to Science & Technology, Society and Environment. Education in these disciplines can contribute to attitudinal growth, when students are involved in activities that encourage responsible behavior towards fellow-beings, living things and the environment, and when students are encouraged to consider issues related to sustainability and harmony in the society from a variety of perspectives.

3.3.5 Safety:

Students will be encouraged to demonstrate a concern for safety in their daily life, be at school or otherwise. School education can contribute to attitudinal growth when students are encouraged to assess and manage potential dangers and apply safety procedures in their daily life, thus developing a positive attitude towards safety.

CHAPTER



**LEARNING THEMES
AND STUDENTS'
LEARNING OUTCOMES**

4.1 GRADE – I

4.1 GRADE – I LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES KNOWLEDGE, SKILLS AND ATTITUDES		
THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
My Self <ul style="list-style-type: none"> • Introduction to Self • Good Qualities 	All the students will be able to: <ul style="list-style-type: none"> • describe themselves briefly. For example, their name, age, likes, games, favourite food, what they want to be when they grow up. 	<ul style="list-style-type: none"> • Work in groups and share information about themselves with group members.
	<ul style="list-style-type: none"> • identify good qualities in themselves (telling the truth; respecting elders and listening to their advice; getting up early in the morning etc). • recognize the good qualities of others. 	<ul style="list-style-type: none"> • In pairs identify first their own and then their partner's good qualities. Share the findings with their class fellows.
	<ul style="list-style-type: none"> • identify the ways in which they are same and different from others with respect to likes. 	<ul style="list-style-type: none"> • Work in pairs, and compare their likes about food, colours and sports.

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>My Body</p> <ul style="list-style-type: none"> Major parts of the Human body and their Functions Senses (Touch, Taste, Smell, Sight and Hearing) 	<ul style="list-style-type: none"> name major parts of the human body (eyes, nose, ears, mouth, arms, feet, hands and legs) identify the functions of various body parts 	<ul style="list-style-type: none"> Draw/Identify the body parts and name them on the chart. Group Work: Match the given cut outs of the body parts with their functions
	<ul style="list-style-type: none"> name the five senses identify their body parts which help them to taste, touch, smell, hear and see 	<ul style="list-style-type: none"> Name things they can see, taste, smell, hear and touch
	<ul style="list-style-type: none"> identify the sensory descriptions of each of the five senses (Taste: sweet, sour, bitter, salty; Touch: smooth, hard, soft, rough, cold, warm, hot; Hearing: loud, soft, high, low; Sight: bright, dim and recognize colors; Smell: pleasant, unpleasant) 	<ul style="list-style-type: none"> Categorize various tastes, sounds, smells etc from the given items.
<p>Keeping Ourselves Clean</p> <ul style="list-style-type: none"> Importance of Cleanliness Ways of Cleanliness Cleanliness and Health 	<ul style="list-style-type: none"> identify the ways by which they can keep themselves clean (washing hands before and after meals and after using the toilet, clipping/trimming nails, brushing teeth daily, taking bath regularly etc.) 	<ul style="list-style-type: none"> Demonstrate through role play the steps for washing hands and brushing teeth. Practice and demonstrate cleanliness in the classroom by keeping their seat desk and surrounding area clean.
	<ul style="list-style-type: none"> recognize the importance of keeping themselves, their clothes and surroundings clean for their health. recognize the fact that germs can cause diseases and list ways to avoid germs. identify the unhealthy habits that cause illnesses (like cough and diarrhea etc.) 	<ul style="list-style-type: none"> Design messages related to health and cleanliness and share with family. (link to art work) Narrate personal experiences of students and teachers regarding any illness caused by unhealthy food/ environment. Videos/ pictures can be shown to elaborate the spreading of germs.

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
My Family and Friends <ul style="list-style-type: none"> • Family Members • Respecting Family Members 	<ul style="list-style-type: none"> • identify some family members (parents, brothers and sisters, grand-parents, aunts, uncles and cousins (paternal and maternal). • recognize that they should respect all family members and friends. • narrate the special qualities of some of their friends. 	<ul style="list-style-type: none"> • List family members that live with them. • Name their favorite family member and share the reason. • Draw /Label the family tree • Talk about their favourite friends and share the reason why?
	<ul style="list-style-type: none"> • describe things that their parents did differently in their childhood. 	<ul style="list-style-type: none"> • Discuss/Conduct an interview with parents or grandparents to find out how things were different in the past (food, living style, dressing, means of communication, transportation festivals etc.) and share with their classmates.
Games and Rules <ul style="list-style-type: none"> • Games • Rules of Playing Games 	<ul style="list-style-type: none"> • name the games they like to play. • recognize the importance of collaboration by participating in group activities and games. 	<ul style="list-style-type: none"> • Identify different games from the given pictures. • Participate in team based games
	<ul style="list-style-type: none"> • define rules • recognize the importance of following rules. • observe and identify the rules when playing a game. • understand the importance of playing games and exercise for better health. 	<ul style="list-style-type: none"> • Identify at least three rules of students' favourite game.

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Neighbourhood</p> <ul style="list-style-type: none"> • What is neighbourhood? • Key Places in a neighbourhood • Kinds of Houses • Cleaning Homes 	<ul style="list-style-type: none"> • recognize that many families living in a locality make a neighbourhood. • describe their neighbourhood (in terms of people, farms, shops, streets, parks and playgrounds etc.). • identify key places on a pictorial map of a neighbourhood. • identify the different kinds of houses (bungalow, mud house, hut, and apartment). • describe their home. • identify what makes the neighbourhood clean or dirty. • Understand and Practice the idea of keeping their homes and neighbourhood clean. 	<ul style="list-style-type: none"> • Prepare a checklist of 'how I am helpful to keep my home, school and neighbourhood clean'. • Make a waste paper basket for the class. • Draw a picture of their house and colour it.
<p>Place of Worship</p> <ul style="list-style-type: none"> • Places of worship for Muslims and others • Respect for worship places 	<ul style="list-style-type: none"> • identify the Masjid in their neighbourhood as a place of worship for Muslims • inquire about other places of worship (church, temple, gurdwara etc) • recognize that they should respect all places of worship and all religions 	<ul style="list-style-type: none"> • Consult/Interview any elder to get information about places of worship of different religions.

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Our Country:</p> <p>Pakistan</p> <ul style="list-style-type: none"> • Name of the Country • Date of Existence • Flag of Pakistan • Significance of the National Flag 	<ul style="list-style-type: none"> • tell the full name of our country and date of existence. • recognize that all the countries have a flag • draw the flag of Pakistan. • identify what the colours and symbols on the flag represent. 	<ul style="list-style-type: none"> • Gather any information about Pakistan and share with the class. • AJK students need to recognize and draw their own flag along with the country (Pakistan) flag. • Ask the students if they know anyone from a different faith than their own to understand the significance of the white part of our flag and share in the class and assembly
<p>School</p> <ul style="list-style-type: none"> • People in School • Activities in School • Obeying Rules 	<ul style="list-style-type: none"> • tell the name and location of their school. • identify the people they interact with in school (teachers, students, principal, service providing staff etc.) 	
	<ul style="list-style-type: none"> • describe the activities they engage in at school. • share and understand the rules they follow in class and school. • understand why following the rules is important 	<ul style="list-style-type: none"> • make at least five school rules to follow them with the help of the teacher.
	<ul style="list-style-type: none"> • appreciate diversity by understanding that they make different friends in school and these friends can be from different social and religious backgrounds • recognize that they should respect everyone in their school (teachers, class fellows, service providing staff etc.) regardless of their faith, ethnicity and social background. • Know the importance of keeping their school clean. 	<ul style="list-style-type: none"> • Guess Who am I? Activity: identify school personnel through oral prompts or flashcards.

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Getting Around Transportation <ul style="list-style-type: none"> • Means of Transportation • Slow & Fast Means of Transportation • Activities at Airport, Railway Station, Bus stop etc. 	<ul style="list-style-type: none"> • identify the means of transportation which people use. • differentiate between slow & fast means of transportation. 	<ul style="list-style-type: none"> • Bring pictures/ toys of fast and slow means of transportation and share the difference. • Arrange the pictures from slowest to fastest means of transportation.
	<ul style="list-style-type: none"> • identify the places where buses and trains stop, aeroplanes land and ships berth. • describe the activities that take place at a bus stop, railway station, airport, and harbour. 	<ul style="list-style-type: none"> • Show videos/ pictures related to airport, bus stop, railway station and harbor. • Observe the activities happening at these places to share with the class.
Traffic Rules <ul style="list-style-type: none"> • Common Traffic Rules • Safety Rules and Road Sense 	<ul style="list-style-type: none"> • identify some traffic rules • identify the safety rules they should follow while walking on the road, crossing a road, traveling by a bus etc. 	<ul style="list-style-type: none"> • Recite the poem on traffic signs wearing traffic signs masks.
Good Manners and Habits <ul style="list-style-type: none"> • Greeting Others • Practicing Good Qualities • Eating Manners • Bathroom Etiquettes 	<ul style="list-style-type: none"> • greet others by saying Assalam o Alaikum, Hello, Good Morning etc. 	<ul style="list-style-type: none"> • Make a chart of classroom rules (using courtesy words) • Use please and thank you when asking for and receiving something and sorry for mistakes and excuse me to address.
	<ul style="list-style-type: none"> • identify various aspects of good character. (punctuality, speaking politely, kindness, honesty and truthfulness). • Recognise the importance of good manners. • Demonstrate etiquettes of eating (don't waste food, eat with clean hands, don't drop food around). 	<ul style="list-style-type: none"> • Divide students in groups and assign one topic of good character for role play with the help of teacher. • Narrate stories about how and when they shared something with a friend or vice versa. • Talk about the importance of sharing with others • Arrange a class activity where students share with each other. (food, stationery, books etc.)

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
	<ul style="list-style-type: none"> Understand the hazards of eating unhealthy food. recognize the etiquettes of using the washroom. 	<ul style="list-style-type: none"> Work in groups and make a list of some additional good manners.
<p>Things Around us (Plants and Animals)</p> <ul style="list-style-type: none"> Common Plants and Animals Need of Plants and Animals Importance of Plants and Animals Living Places of Animals Wild and Domestic Animals Food for Animals Caring for Things around Us 	<ul style="list-style-type: none"> recognize living and non-living things around them identify the plants they see around them. recognize the differences between the plants they see around them. 	<ul style="list-style-type: none"> Observe and differentiate between living and non-living things Visit school (or any other) garden in groups to compare different types of plants and share the similarities and differences with the rest of the class.
	<ul style="list-style-type: none"> recognize the importance of plants/ trees as a source of food, shade, and shelter 	<ul style="list-style-type: none"> Discuss importance of these plants and trees.
	<ul style="list-style-type: none"> identify the things around them that are made up of plants/ trees identify the differences between common, domestic and wild animals in terms of physical features 	
	<ul style="list-style-type: none"> identify some common domestic and wild animals 	<ul style="list-style-type: none"> Draw or bring picture of your favorite pet animal and tell your class fellows how you take care of it.
	<ul style="list-style-type: none"> identify the food which different animals eat. 	
	<ul style="list-style-type: none"> recognize the importance of animals as a source of food, joy and transport. 	

4.1 GRADE - I
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
	<ul style="list-style-type: none"> • identify the homes of animals (desert, jungle, water, mountains etc.) • differentiate between animals that can and cannot be kept at home with reasons. 	
	<ul style="list-style-type: none"> • identify measures for better care of domestic and wild animals and plants. 	
Earth and Sky <ul style="list-style-type: none"> • Shape of the Earth • Earth's features • Celestial objects 	<ul style="list-style-type: none"> • identify Earth as a planet. • recognize the shape of the Earth. • recognize that the Earth is covered with land and water. 	<ul style="list-style-type: none"> • Draw Earth and identify the land and water portion. • Observe the globe to understand the shape of earth.
	<ul style="list-style-type: none"> • identify celestial objects in the sky during day and night. 	<ul style="list-style-type: none"> • Draw Sun, moon and stars on a paper or chart.
	<ul style="list-style-type: none"> • recognize that the sun shines very brightly during the day and gives us heat and light. • recognize that the moon and stars shine at night. 	<ul style="list-style-type: none"> • Observe the objects in the sky during the day and the night

4.2 GRADE – II

4.2 GRADE – II LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES KNOWLEDGE, SKILLS AND ATTITUDES		
THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Our Country: Pakistan</p> <ul style="list-style-type: none"> Map of Pakistan Provinces of Pakistan Significance of the National Flag 	<p>All the students will be able to:</p> <ul style="list-style-type: none"> recognize the map of Pakistan. name the provinces and areas (AJK, GB and ICT) of Pakistan. depict the cultural diversity of all provinces and areas of Pakistan. recognize the significance of National flag. 	<ul style="list-style-type: none"> Collect pictures depicting the cultural diversity of Pakistan Make a collage Organize a presentation on different cultures of Pakistan
<p>Villages and Cities</p> <ul style="list-style-type: none"> Lives in the villages and cities Key Characteristics of a Village and City Comparison of Village and City Life Common Professions and Occupations in the Village/ City 	<ul style="list-style-type: none"> recognize that the people of Pakistan live in villages and cities. identify key characteristics of a village (buildings, facilities, environment and the work people do) 	<ul style="list-style-type: none"> Visit any nearest village/ Urban area/ town/ city and describe its key characteristics.
	<ul style="list-style-type: none"> identify key characteristics of a city compare village and city life 	<ul style="list-style-type: none"> indicate choice of place to live and give reasons
	<ul style="list-style-type: none"> identify some common professions and occupations of a village/ city (tailor, butcher, cobbler, musician etc.) 	
<p>Role and Responsibilities</p> <ul style="list-style-type: none"> Role and Responsibilities of Government Rights and Responsibilities of People/ Citizen. 	<ul style="list-style-type: none"> define government identify some goods and services that government provides for the people (health, education, clean water, infrastructure, utilities, safety and security, parks and playgrounds etc.) 	<p>Role Play: Dialogue between a government officer and a citizen regarding roles and responsibilities of government and other citizens.</p>

4.2 GRADE - II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
	<ul style="list-style-type: none"> list any three rights of the citizens (Right to food, free education, protection, equality and health care) understand that everyone has a right to practice their own religion freely 	
	<ul style="list-style-type: none"> identify their responsibilities with respect to each right (careful use of food, water and other resources, regularity and hard work towards education, taking care of surroundings and hygiene, treating everyone equally, and following rules and regulations) 	
<p>Religious Festivals in Pakistan</p> <ul style="list-style-type: none"> Eid-ul-Fitr & Eid-ul-Azha Other Cultural and Religious Festivals 	<ul style="list-style-type: none"> understand why Muslims celebrate Eid-ul-Fitr and Eid-ul-Azha describe how people celebrate Eid-ul-Fitr and Eid-ul-Azha 	<ul style="list-style-type: none"> Arrange Eid-Milan Party at school Charity campaigns may be organized to inculcate the concepts of sharing and sacrifice
	<ul style="list-style-type: none"> identify other religious and cultural festivals of other faiths celebrated in Pakistan 	<ul style="list-style-type: none"> Collect information about religious festivals of different faiths and share with the class
<p>The Natural Environment and Resources</p> <ul style="list-style-type: none"> Living and non-Living Things Some Natural Resources Importance of Natural Resources Natural material and human made objects 	<ul style="list-style-type: none"> recognize that the natural environment comprises of living and non-living things recognize that natural resources are essential for the survival of human being (land, water, air, sun etc.) 	<ul style="list-style-type: none"> Divide the students into groups who will select one natural resource each (within the school) and ask them to discuss and share the ways to conserve that (Sustainable consumption of resources)

4.2 GRADE – II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
	<ul style="list-style-type: none"> recognize the importance of natural resources. differentiate between the natural and human made materials. recognize that people manufacture different things from natural resources to serve human needs. 	<ul style="list-style-type: none"> Take a round of the school and list natural and human made resources. list the ways in which people use natural resources
<p>Water</p> <ul style="list-style-type: none"> Importance of Water Sources of Water Human management of Water 	<ul style="list-style-type: none"> recognize that living things need water to stay alive. identify simple uses of water in everyday life. 	
	<ul style="list-style-type: none"> identify the natural sources of water around themselves. 	<ul style="list-style-type: none"> Integrate the following activities with ART period Design a poster for careful use of water. Draw main sources of water in their locality.
	<ul style="list-style-type: none"> recognize the importance of water resources. 	<ul style="list-style-type: none"> list the daily activities in which they use water.
	<ul style="list-style-type: none"> narrate how water gets from a natural source to the taps in their home. 	<ul style="list-style-type: none"> Flow charts, pictures, models and videos can be used.
	<ul style="list-style-type: none"> recognize that clean water should be used for drinking and cooking purposes understand that boiling, filtering etc. are methods of purifying water recognize that some areas of Pakistan experience shortage of water. 	<p>Role play:</p> <ul style="list-style-type: none"> Design a role play to create awareness among the students regarding hazards of using unclean water Get information about the areas in the country where people are facing shortage of water

4.2 GRADE - II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Plants</p> <ul style="list-style-type: none"> • Major Parts of a Plant and their functions • Plant and Seeds • Growth and Change in Plants • Uses of Plants 	<ul style="list-style-type: none"> • identify major parts of a plant. (root, stem, leaf and flower) • list the functions of root, stem, leaf and flower 	<ul style="list-style-type: none"> • Soak a few bean seeds in a jar, fill with mud and observe over a few weeks • Record/draw their findings. How did the seed change into a plant?
	<ul style="list-style-type: none"> • identify different shapes of leaves found around them 	<ul style="list-style-type: none"> • Collect different types of leaves and paste them on a chart with names • Trace the outlines of leaves on a chart and colour them • Cut out the coloured leaves and display in the classroom
	<ul style="list-style-type: none"> • identify the roots that are eaten by people • name a few plants around them which have flowers, and which do not have flowers 	
	<ul style="list-style-type: none"> • identify the fruits which have seeds in them • recognize that some plants grow from seeds while others grow from stems or roots 	<ul style="list-style-type: none"> • Bring some plants or their pictures which grow from seeds/ stem/ roots
	<ul style="list-style-type: none"> • identify that soil, light, air and water are needed to grow a plant 	<ul style="list-style-type: none"> • Take two pots with growing plants. Provide one with all the factors necessary to grow while keep other away from light, water etc. • Observe the plants over time and record their findings
	<ul style="list-style-type: none"> • highlight the importance of plants for climate change 	<ul style="list-style-type: none"> • Students to conduct a plantation activity in school and take care of the plants they have planted

4.2 GRADE - II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Animals <ul style="list-style-type: none"> • Animals on Land and in Water • Growth and Change in Animals • Places for Animals 	<ul style="list-style-type: none"> • list the animals they see in their surroundings (land and water) 	
	<ul style="list-style-type: none"> • recognize the animals that live on land are different in features from those that live in water • recognize that all animals have young ones that grow into adults 	<ul style="list-style-type: none"> • Visit the zoo/ farm /animals shed and observe what different animals look like. Share your findings with the class. • Alternatively cut out pictures of different animals and paste them on a chart to make a zoo.
	<ul style="list-style-type: none"> • recognize different animals and their young ones. For example, horse and foal, cat and kitten, dog and puppy, hen and chick, frogs and tadpoles, butterflies and caterpillars etc.) 	<ul style="list-style-type: none"> • Color the pictures of animals and their young ones.
	<ul style="list-style-type: none"> • identify that some young animals do not look like their parents (frogs and butterflies etc.) 	Match pictures of young animals with their parents
	<ul style="list-style-type: none"> • list the animals that feed their young ones and look after them 	
	<ul style="list-style-type: none"> • name different places where animals live (nest, den, barrow etc.) 	

4.2 GRADE - II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Agriculture and Live Stock.</p> <ul style="list-style-type: none"> • Major Crops in Pakistan • Processing (Making Products) • Live stock 	<ul style="list-style-type: none"> • list the major crops in Pakistan. • recognize that people process the crops they grow for making products (cotton to thread to cloth to garments). • recognize the importance of livestock. 	<ul style="list-style-type: none"> • Collect the seeds of major crops for identification. (wheat, maize, rice, cotton and pulses.) • Collect pictures and make a list of livestock.
<p>Conservation of the Earth's Resources</p> <ul style="list-style-type: none"> • Wastage of Water and Land • Problems caused by Wastage of Water and Land • Ways to Save Water and Land 	<ul style="list-style-type: none"> • identify the ways in which human beings waste water. 	
	<ul style="list-style-type: none"> • identify problems caused by wastage of water. • suggest ways to save water 	Organize a speech contest/ poster making competition on conservation of resources
	<ul style="list-style-type: none"> • recognize the importance of forests for human beings 	
	<ul style="list-style-type: none"> • identify the ways in which the land is destroyed due to human activity (deforestation). • suggest ways to reduce deforestation. 	

4.2 GRADE – II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Heat and Light <ul style="list-style-type: none"> • Common Sources (Natural and Human made) • Uses of Heat and Light • Methods of Producing Heat • Intensity of Heat and Light 	<ul style="list-style-type: none"> • identify sources of heat and light in their homes, schools and surroundings. • group sources of light and heat into natural and human made. 	<ul style="list-style-type: none"> • Observe & identify the light sources and list them. • Rub hands and observe how heat is produced.
	<ul style="list-style-type: none"> • describe methods of producing heat (burning and rubbing etc.) 	
	<ul style="list-style-type: none"> • list the uses of heat and light. 	
	<ul style="list-style-type: none"> • recognize that the intensity of heat and light is felt more as they come nearer to the source. 	
Helping Others <ul style="list-style-type: none"> • Sharing Things • Ways of Helping others 	<ul style="list-style-type: none"> • understand the importance of sharing things. • list the things they share with others (toys, books, stationery items, lunch with friends etc.) 	
	<ul style="list-style-type: none"> • identify from given pictures and stories the ways in which people help each other (at home, in classroom, in village/city, at the time of any need or disaster) 	<ul style="list-style-type: none"> • Narrate an incident when they helped someone in any way.
	<ul style="list-style-type: none"> • identify from their daily life, the ways in which people are interdependent. 	<ul style="list-style-type: none"> • Teacher will provide different situations to students in groups. They will be asked to share their ideas how they are dependent on others. (It could be a role play, an oral presentation or charts presentation).

4.2 GRADE - II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Professions/ Occupations around Us</p> <ul style="list-style-type: none"> • Common Professions/ Occupations • Professions/ Occupations they like 	<ul style="list-style-type: none"> • identify some professions from pictures (teaching, farming, medicine etc) • recognize the role of some common professions in their daily lives. • state which profession they like the most and why 	<ul style="list-style-type: none"> • State what they would like to be when they grow up (role play)
<p>Respecting Others and Appreciating their Diversity (elders, religion, ethnic groups, gender, social class)</p> <ul style="list-style-type: none"> • Need to Respect all People • Ways to Respect all People 	<ul style="list-style-type: none"> • recognize that all human beings are equal and important. • identify that all human beings are similar, but differ by family, culture, ethnicity, religion and should all be respected. 	
	<ul style="list-style-type: none"> • recognize the need to respect all people as they are born equal and with dignity 	
	<ul style="list-style-type: none"> • identify ways in which they can show respect for all 	
	<ul style="list-style-type: none"> • identify occasions when it is important to wait for one's turn. For example, while speaking, in the school, on the bus stop, at canteen and ticketing counters etc. • understand that it is necessary to show respect for others' needs, interests, opinions and feelings 	<ul style="list-style-type: none"> • To demonstrate the importance of taking turns the teacher will place the students' notebooks on a table and ask the students to collect them. Teacher will monitor the behavior of the students and will remind them if necessary. It may be followed by a discussion on importance of taking turns.

4.2 GRADE - II
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>Forgiveness and Forgiving others</p> <ul style="list-style-type: none"> • Avoid hurting others • Ways to reduce the Hurt. • Forgiving Others. 	<ul style="list-style-type: none"> • recognize what they say and do, can hurt others, and what others do and say, can hurt them (telling lies, pushing others, bullying using derogatory words etc.) 	<ul style="list-style-type: none"> • narrate any incident of forgiveness from the life of Hazrat Muhammad 
	<ul style="list-style-type: none"> • recognize that mistakes are a natural outcome of learning and nothing to be ashamed about or to make fun of • recognize that making fun of others can cause distress and hurt others. 	
	<ul style="list-style-type: none"> • identify ways in which we can redress the hurt caused to others (ask for forgiveness, say sorry, do something special for them etc.) • recognize that when people apologise for their mistake they should forgive them. 	<ul style="list-style-type: none"> • Share an incident from their personal lives when they forgave someone or requested someone for forgiveness
<p>Being Just and Fair</p> <ul style="list-style-type: none"> • Fairness and Unfairness • Promoting Fairness 	<ul style="list-style-type: none"> • identify fairness and unfairness in their daily lives. • identify ways of making unfair situations fair. • accept responsibility for treating others unfairly and man their behaviour accordingly. 	<ul style="list-style-type: none"> • Tell any moral lesson-based story in the class and discuss the lesson learnt. (group activity)

4.3 GRADE – III

4.3 GRADE – III LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES KNOWLEDGE, SKILLS AND ATTITUDES		
THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Habitat <ul style="list-style-type: none"> • Kinds of Habitats • Eco system • Characteristics of Habitats • Human Activities and the Natural Habitats 	All the students will be able to: <ul style="list-style-type: none"> • recognize that heat and light of the Sun helps to sustain life on Earth which is the only known planet where life exists. 	
	<ul style="list-style-type: none"> • define the term habitat. • describe the different habitats for living things (polar regions, desert, forest, aquatic) • name plants and animals that live in each of the different habitats. • briefly introduce what an ecosystem is. 	<ul style="list-style-type: none"> • Collect pictures of different habitats, relevant animals and plants
	<ul style="list-style-type: none"> • identify the environmental factors (temperature, light, water) that support life in a habitat. 	<ul style="list-style-type: none"> • Place one plant in light, one in dark and one covered with polythene sheet and observe for a week.
	<ul style="list-style-type: none"> • understand the ways plants and animals have certian features adapted to their habitat (camel, fish, polar bear, cacti, lotus, pine trees etc.). 	<ul style="list-style-type: none"> • Make an aquarium or any other habitat and present that to the class. (Project Work)
	<ul style="list-style-type: none"> • identify the ways human activities affect the natural habitats. 	

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Changes in Living Things <ul style="list-style-type: none"> Life cycle of some animals and plants 	<ul style="list-style-type: none"> compare different stages of lifespan of plants and animals (from pictures, through observation / Video etc.) 	<ul style="list-style-type: none"> Draw and sequence the stages of the life cycle of a plant/animal.
	<ul style="list-style-type: none"> identify the changes in the lifespan of an animal and a plant. 	<ul style="list-style-type: none"> Draw or interpret diagrams of the life cycles of animal and plants, from their own surrounding, to identify the different stages.
The Sun <ul style="list-style-type: none"> Sunrise and Sunset Role of Sunlight in the Formation of Shadows Using the Sun for Guidance 	<ul style="list-style-type: none"> identify South and North with respect to East and West, namely, South and North. identify that on Earth, the direction of sunrise is 'East' and the direction of sunset is 'West'. 	<ul style="list-style-type: none"> Draw a map of your neighbourhood showing position of your school/home
	<ul style="list-style-type: none"> name places towards North, South, East and West of the school/home. 	
	<ul style="list-style-type: none"> describe the formation of shadows recognize that the size and direction of the shadow can be used to estimate (guess) time 	<ul style="list-style-type: none"> Fix a pole in school ground and observe the size of the shadow with the position of the sun and time of day.
Matter <ul style="list-style-type: none"> States of Matter Observing Matter 	<ul style="list-style-type: none"> identify matter and its states recognize basic differences between states of matter, such as water, through physically observable properties (shape and size) 	<ul style="list-style-type: none"> Name a solid, liquid and gas around themselves Use a balloon to help students understand how gas or liquid feels inside a balloon and how a solid balloon feels when it is empty

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Energy and its sources <ul style="list-style-type: none"> Common sources and uses of energy 	<ul style="list-style-type: none"> recognize that energy is required for doing work. understand that sources of energy are used for many things (move an object, heating, lighting, transportation, electric appliances etc.). identify natural sources of energy (e.g. the sun, wood, flowing water, wind, coal, oil, gas). 	Students will make a list of tasks performed in their daily life that require energy
Resources and thier types <ul style="list-style-type: none"> Types of Resources Natural resources, Human Resources, and Capital Resources Goods and Services Buyers and Sellers Scarcity 	<ul style="list-style-type: none"> define the term "resouces" state type of resources, natural resources, human resources and capital resources 	
	<ul style="list-style-type: none"> identify natural resources (plants, animals, water, air, land, forests and soil) human resources (farmers, builders, painters etc.), capital resources (trucks, computer, factory buildings etc.). 	<ul style="list-style-type: none"> Collect the pictures of natural, human and capital resources. Paste on a chart or booklet and present in the classroom
	<ul style="list-style-type: none"> define the terms: goods, services, buyers and sellers. 	<ul style="list-style-type: none"> Role play: Buyer and seller
	<ul style="list-style-type: none"> identify the main goods and services of their local area 	<ul style="list-style-type: none"> Visit nearest market and list what is being sold there.
	<ul style="list-style-type: none"> recognize the need for interdependence as not all goods and services are available in their area. 	
	<ul style="list-style-type: none"> define scarcity. 	<ul style="list-style-type: none"> Group Activity: identify the scarce resources in their surroundings.
	<ul style="list-style-type: none"> recognize that people make economic choices because goods and services are limited. 	

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Conservation of Natural Resources <ul style="list-style-type: none"> • Changes in the Natural Environment • Pollution • Conserving the Natural Environment • Protecting the Endangered Animals • Extinct Animals (Dinosaurs) 	<ul style="list-style-type: none"> • describe ways in which humans have changed the natural environment • define the term pollution • list different types of pollution (land, water, air, noise). 	
	<ul style="list-style-type: none"> • suggest ways to save natural resources 	<ul style="list-style-type: none"> • Make a presentation on what would happen if there was no water/ gas/ electricity at school or in their locality.
	<ul style="list-style-type: none"> • predict that what would happen if natural resources were all used up 	<ul style="list-style-type: none"> • Design a poster to communicate ways to conserve natural resources
	<ul style="list-style-type: none"> • identify the endangered animals of Pakistan. (Indus Dolphin, Markhor, Blackbuck etc.). • suggest ways to protect the endangered animals. 	<ul style="list-style-type: none"> • Group Activity: Make a pictorial presentation on endangered animals.
	<ul style="list-style-type: none"> • identify animals, which are extinct (Dinosaurs etc.). 	
Food <ul style="list-style-type: none"> • Plants' and Animals' Food • Basic Food Groups • Balanced Diet • Factors for Healthy living 	<ul style="list-style-type: none"> • recognize that plants make their own food in the presence of sunlight. • recognize that different animals eat different kinds of food. 	
	<ul style="list-style-type: none"> • identify certain food groups as fruits, vegetables, grains, dairy product, meat and dry fruit. • define a balanced diet. 	

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
	<ul style="list-style-type: none"> recognize that healthy living requires eating a balanced diet, keeping clean, sleeping well, and exercising regularly 	<ul style="list-style-type: none"> Prepare a flyer to educate others of the importance of cleanliness for healthy living.
	<ul style="list-style-type: none"> identify the ways to get sufficient exercise to stay healthy. 	<ul style="list-style-type: none"> Make a personal timetable mentioning time for study, exercise, play, leisure and rest.
<p>Quaid-e-Azam Muhammad Ali Jinnah</p> <ul style="list-style-type: none"> Major events in life of Quaid-e-Azam Muhammad Ali Jinnah Contributions 	<ul style="list-style-type: none"> introduce Quaid-e-Azam Muhammad Ali Jinnah as the founder of Pakistan narrate the major events in the life of Quaid-e Azam Muhammad Ali Jinnah (date of birth, founder of Pakistan, few major contributions, and the date when he died). 	<ul style="list-style-type: none"> Sketch out Quaid-e-Azam's Muhammad Ali Jinnah character through Role play.
<p>Allama Muhammad Iqbal</p> <ul style="list-style-type: none"> Major events in life of Allama Muhammad Iqbal Contributions 	<ul style="list-style-type: none"> introduce Allama Muhammad Iqbal as a personality who expounded the idea of Pakistan. narrate the major events in the life of Allama Muhammad Iqbal (date of birth, national poet, famous poems for children, and the date when he died). 	<ul style="list-style-type: none"> Recite any of Allama Muhammad Iqbal's poem. Interview your parents/ grandparents/ elder brother or sister to investigate about Allama Muhammad Iqbal's life.
<p>Changing World</p> <ul style="list-style-type: none"> Past and Present Things Differences in Past and Present Things 	<ul style="list-style-type: none"> recognize that present time is different from the past in terms of living style, food, communication, clothes etc. 	
	<ul style="list-style-type: none"> identify how schools, communities, and transportation have changed over time (from the given pictures). 	<ul style="list-style-type: none"> Collect and paste the pictures of past and present means of transportation.
	<ul style="list-style-type: none"> sequence events in a narrative in chronological order. 	<ul style="list-style-type: none"> Visit a museum/ historical places and observe what changes occurred in people's lives.

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Inventions <ul style="list-style-type: none"> • Common Inventions • Effects of Inventions on lives 	<ul style="list-style-type: none"> • describe what an invention is. 	<ul style="list-style-type: none"> • List a few favorite inventions.
	<ul style="list-style-type: none"> • identify major recent inventions (e.g. aeroplane, computer, internet etc.) 	
	<ul style="list-style-type: none"> • analyse recent inventions (electricity, computers, phone, internet etc.) have changed the lives of people. 	<ul style="list-style-type: none"> • Discuss how a future invention could change life of the people.
Force and Machines <ul style="list-style-type: none"> • Simple Machines • Push and Pull as a Force • Uses of Force • Force and Motion 	<ul style="list-style-type: none"> • define tool as an instrument to make people's work easier 	<ul style="list-style-type: none"> • Identify some tools of the past that are still in use today
	<ul style="list-style-type: none"> • name and identify different forms of simple machines (inclined plane; lever; pulley; wheel - and - axel; wedge, screw) 	<ul style="list-style-type: none"> • Draw some simple machines used in daily life (e.g. screwdriver; hammer; plier; scissors)
	<ul style="list-style-type: none"> • recognize that push & pull moves things fast or slow. (push and pull as a force) 	<ul style="list-style-type: none"> • Push and pull the door and explain the intensity of force and quantity of change. • Play tug of War to explain push and pull
	<ul style="list-style-type: none"> • recognize from pictures of the past that force applied by humans and animals moved vehicles (Tonga, bullock cart, cycle, pushcart) while today vehicles are moved by machines (bus, motorcycle and car etc.) 	
	<ul style="list-style-type: none"> • recognize that greater the force, the greater the change in the motion of an object. 	
	<ul style="list-style-type: none"> • observe and describe how motion of object can be changed by applying force (speed up, slow down, stop, change direction etc.) 	

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
<p>The Role of the Government and Citizens</p> <ul style="list-style-type: none"> • Individuals and Community • Key Problems • Need of Government • Government and People • Good Citizenship 	<ul style="list-style-type: none"> • define community and its importance. • describe the activities that individuals perform for the welfare of the community. 	
	<ul style="list-style-type: none"> • identify key problems in their local area (shortage of drinking water, lack of health and educational facilities, poor sewerage system etc.) 	<ul style="list-style-type: none"> • Group activity: inquire about a problem in the community, identify its causes, suggest solutions and take a responsible action to solve the issue. (one problem per group)
	<ul style="list-style-type: none"> • recognize that citizens organize themselves to meet their needs 	
	<ul style="list-style-type: none"> • describe what the government does to meet the needs of the citizens 	
	<ul style="list-style-type: none"> • suggest ways the government and people can work together to meet people's needs in the area • identify ways they can demonstrate good citizenship (playing fairly, helping others, following rules, taking responsibility for one's actions). 	<ul style="list-style-type: none"> • Prioritize three problems from the previous activity in groups and identify for local
	<ul style="list-style-type: none"> • identify the personal traits of good citizens (trustworthiness, respect for law, responsibility, honesty, tolerance, gender equality and respect for others' rights). 	<ul style="list-style-type: none"> • Make a chart of the qualities of a good citizen.

4.3 GRADE - III
LEARNING THEMES AND STUDENTS' LEARNING OUTCOMES
KNOWLEDGE, SKILLS AND ATTITUDES

THEMES	STUDENTS' LEARNING OUTCOMES	ACTIVITIES
Working out Disagreement <ul style="list-style-type: none"> • Common Conflicts/ Disagreement • Causes of Conflicts/ Disagreement • Impact of Conflicts/ Disagreement • Resolving Conflicts/ Disagreement • Preventing Conflicts/ Disagreement 	<ul style="list-style-type: none"> • recognize disagreements/ conflicts that occur at home, in school and in the local community. 	
	<ul style="list-style-type: none"> • identify feelings of people in different conflicting situations. 	<ul style="list-style-type: none"> • Draw various face expressions to show different feelings (happy, sad, angry etc.)
	<ul style="list-style-type: none"> • identify reasons for disagreements with friends and family members. 	
	<ul style="list-style-type: none"> • identify the ways in which people resolve conflicts/ disagreements at home and school. 	
	<ul style="list-style-type: none"> • apply discussion and problem-solving methods to work out disagreement. 	<ul style="list-style-type: none"> • Resolve a class conflict through a role play with different situations highlight the traits of tolerance, flexibility and pluralism. (Group Work)
Safety <ul style="list-style-type: none"> • Personal Safety • Indoor Safety • Outdoor Safety • Natural Disaster 	<ul style="list-style-type: none"> • recognize the need of personal safety • understand the risk and danger associated with the use of electric appliances/ sharp objects/ fire. • practice safety measures while using electrical appliances. • list the various hazards they can face at home (bare wires, damaged roof, broken glass, fire, scissor etc.) • understand the ways of being careful and staying safe • identify some common disasters and ways to stay safe. • understand that they should not hide anything from their parents/ teachers/ guardians to stay safe from any unexpected situation. 	<ul style="list-style-type: none"> • Demonstrate through a role play how to rescue themselves and others during a disaster (Earthquake, flood and fire). • Show a video to the students related with stranger danger and generate discussion • Identify potential hazard areas in their school and home (bare wires, broken glass etc.) and recommend ways to make their home and school safe

CHAPTER

05

**TEACHING
AND LEARNING**

5.1 TEACHING AND LEARNING

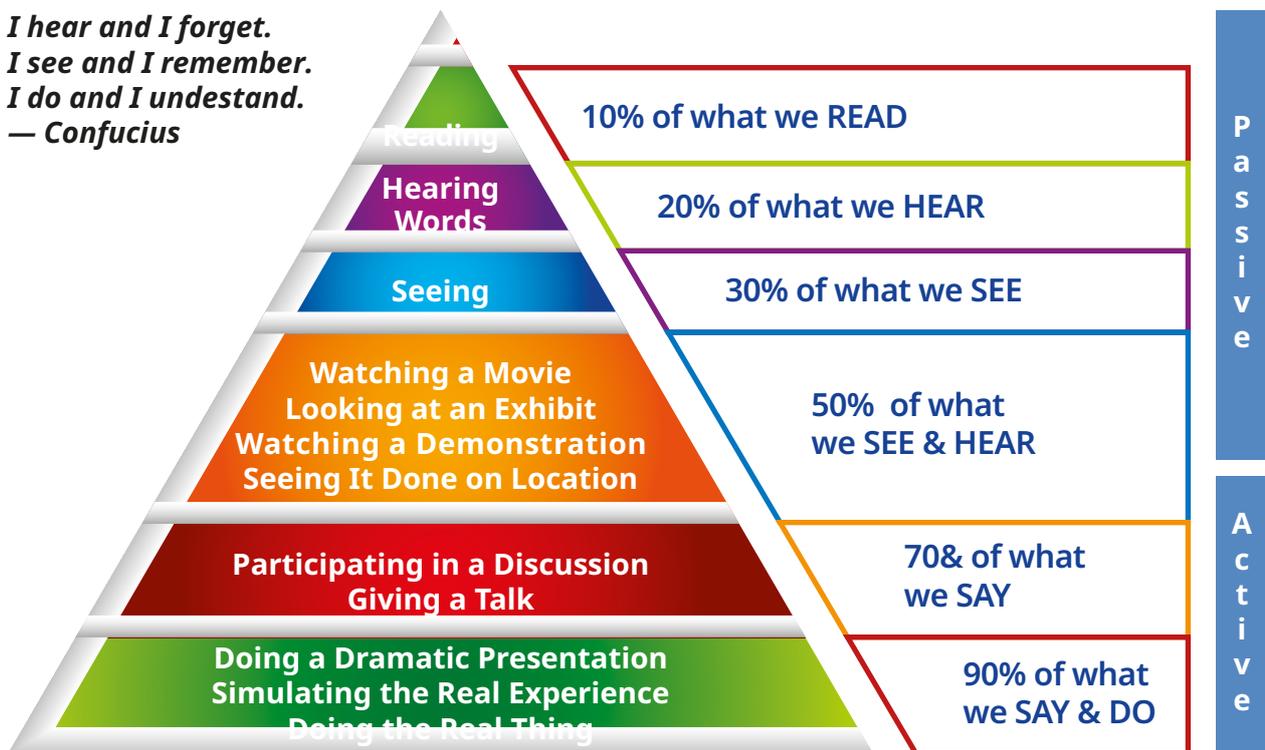
We encourage curriculum users to adopt participatory approaches to teaching as we believe that activity based, hands-on approach lie at the core of effective teaching and learning. Teaching and learning supports, encourages and provides meaningful environment to enhance students’ skills and at the same time enable them to contextualize what they learn both in a given subject as well as to their longer-term future prospects.

The Cone of Learning

sparkinsight.com

After 2 weeks,
we tend to remember ...

*I hear and I forget.
I see and I remember.
I do and I understand.*
— Confucius



Source: Edgar Dale (1969)

The Learning Pyramid

TEACHING STRATEGIES

A. Lecture Method

An Effective Lecturing Strategy

The basic purpose of lecturing is the dissemination of information. Therefore, lecturing is like spoon-feeding students without developing their power of reasoning unless used with different activities and exercises that call for students' participation. A carefully prepared lecture can stimulate students intellectually and facilitate learning. Using transitions or links ("therefore," "because," "as a result") show how pieces of lecture information relate to each other. Verbal or oral cues also alert students to more significant information. Inclusion of audiovisual aids / creative effective visuals, analogies, demonstration and example to reinforce the main points assist students' learning. Emphasizing objectives and key points in the beginning and sharing the outline with students further clarifies the purpose of the topic or lecture, which helps maintain the attention of students as the teacher covers those points and gives a summary of important points at the end of the lecture.

Posing questions

In order to keep students engaged in a lecture, ask a question at the end of each theme/subtopic. The teacher should devise some thought provoking questions applicable to real life scenarios. This can stimulate students' analytical thinking and learning process.

Brain storming

It is crucial to provide opportunities for active learning during any instruction, including lecture. Active learning allows students with the opportunity to practice using the lecture information and obtain feedback on the accuracy of their responses. During the lecture the teacher may ask questions that encourage students to use the insights and learning they should have gained from the lecture.

Assessing students' learning from a lecture:

Students' learning can be assessed through:

1. Group activities
2. Writing down reflections after the activity
3. Quizzes and written work
4. Class participation

B. Learning by Discussion

Discussion is a unique form of group interaction where student's join to address a topic or question regarding something they need to understand, appreciate or decide. They exchange and examine different points of views, experiences, ideas, opinions, reactions and conclusions with one another during the discussion. There are several benefits of learning by discussion. Students increase their knowledge of the topic; explore a diversity of views which enables them to recognize and investigate their assumptions in the light of different perspectives; develop their communication competence, listen attentively, speak distinctly and learn the art of democratic discourse.

Preparation for discussion

Choose a question or a problem on a topic, framing it as an interrogative statement. For example, What are the major reasons or causes for the high rate of unemployment in developing countries? How can we stop discrimination against women in our country? It is important that students have some prior knowledge of the topic chosen for discussion. Effective ways of ensuring this are: asking students to read an article on the topic, interview concerned individuals, engage in observations and make their own conclusions based on the data they collect.

Conducting the discussion

Present the question verbally and in writing, give students time to think, and then start the discussion by repeating the question. While students share their own views write down all answers on the classroom board to keep track of the threads emerging and guide the discussion. It is also valuable to summarize ideas, conclusions and the general direction of the discussion which helps to ensure that everyone is following the development of ideas.

Concluding the discussion

Good discussions end with a summary so students know the important points that have been covered. In addition to showing students why the discussion is important to their learning, a summary provides an opportunity to fill in points not covered, and to praise the class for the quality of their responses. It should also allow for space for respect for disagreements and the concept of agreeing to disagree.

Assessing students' learning from a discussion

Discussion can provide teachers with an opportunity to assess students understanding of course material. Discussion allows students to actively participate in the learning process which makes learning more interesting and students are often more motivated when they are actively involved in using the course material. The knowledge, skills and values developed through discussion can be assessed during and after the discussion session by using different assessment strategies, for example a checklist. Assessment of learning through discussion should be based on students learning capabilities and way of expression.

C. Role-play

Role-playing is a teaching strategy or technique that allows students to explore realistic situations by observing and interacting with other people and acting. Students explore, collect and learn the content being presented which can help develop research, problem-solving, communication, observational and social skills. Asking students to write role-playing content themselves can enable them to be more creative and to collect and process information more effectively.

Conducting Role-plays

Preparation for role-plays

1. Determine the purpose of the role-play.
2. Write a role-play activity.
3. Determine the time duration for each role-play.
4. Develop a set of questions for the post role-play discussion.

Introducing students to role-plays

1. Describe the role-play's purpose, story and problem briefly and clearly.
2. Select role-players.
3. Allow students enough time to read and understand their roles and prepare to enact it.
4. Involve the rest of the class by having them suggest questions for the discussion to follow.

Enacting and monitoring the role-play

While students are acting, ensure all sit quietly and observe the role-play. Students should be observed and necessary interventions made if some students are struggling with understanding the purpose or process of the role-play.

Discussion following the role-play

Discuss the role-play's content, observations, challenges and learning. Summarize the role-play, focusing on students' understanding.

Assessing students' learning after a role-play

Following the role-play, students can be asked to write a reflections assignment outlining the arguments in the discussion of an issue or problem faced by the character they were playing, or identifying the feelings, attitudes and perspectives of one of the characters. If students write the role-play scripts themselves, the teacher can assess the script for its content, ability to communicate an issue/problem, problem-solving skills, etc. Learners can be asked what they would do in the scenario of the role-play and why. They should also be asked how they would feel playing a different character in the role-play and why.

D. Cooperative Learning

Cooperative learning is a strategy in which students work together in small groups to maximize their own and each others' learning. In cooperative classrooms students have two responsibilities:

- To learn and complete assigned task and,
- To make sure that all members of the group do so as well.

A score of academic, social and psychological benefits are associated with working collaboratively in groups such as improved self-esteem, increased on-task time, increased higher order thinking, better understanding of material, ability to work with others in groups and improved attitudes towards peers, school and teachers. Cooperative learning creates opportunities for students to use and master social skills necessary for living productive and satisfactory lives.

Ways of using cooperative learning in the classroom

Think-write-pair-share

To begin think-write-pair-share you must first pose a question to the class that requires students to think critically.

- ✓ Think: Students 'think' alone about the answer to the question for a specified amount of time.
- ✓ Write: Students write their answers to show what that they thought about the question individually.
- ✓ Pair: Students 'pair' up with a partner to discuss the question, listen to and expand on one another's ideas.
- ✓ Share: Students 'share' their answers to the question with the entire class.

Think-write-pair-share structures are effective only when students participate equally, practice social skills, and individually demonstrate what they have learned from their partners.

Jigsaw

Research indicates that students learn best when they teach others what they have learnt. Jigsaw is a method by which students learn and teach each other. It has four steps:

- ✓ Form cooperative groups called HOME groups. Each HOME group member is given different material to learn and teach to the rest of the group. For example, the first group member must learn page 1 of an assigned text, the second member page 2, etc.
- ✓ EXPERT groups are formed by grouping students with the same assigned material together. EXPERT group members must study their material together, and plan ways to teach the material to their HOME group members and check for understanding.
- ✓ Students return to their HOME groups and take turns teaching their HOME group members the material they were assigned with and are now experts on. The group goal is for every member of the group to master all the material presented.

Assessing students' learning in Cooperative/Collaborative learning

Success on the academic task is assessed by randomly asking students questions, checking their work, or through individual tests or quizzes. For the social assessment tests, students are evaluated through teacher's observation and students' self-evaluation and group effectiveness. Peers may also evaluate each other in line with their particular mutual expectations. This is also likely to bring to light bullying or discrimination that may prevail within the classroom and develop students' awareness of these issues and how they can be eliminated from interaction in their daily lives.

E. Inquiry / investigation

Inquiry/ investigation is a process of framing questions, gathering information, analyzing it and drawing conclusions. An inquiry classroom is one where students take responsibility for their learning and are required to be active participants, searching for knowledge, thinking critically and solving problems. The inquiry approach develops students' knowledge of the topic, enhance investigative /inquiry techniques, skills of questioning, hypothesizing, information gathering, critical thinking, analyzing the situations, reporting and presentation skills.

Assessing students' learning from an inquiry/investigation

The outcome of an inquiry can be assessed through:

- Observation: students' abilities and skills can be observed during each stage of the inquiry/investigation. For example, you can observe a student conducting an interview, looking for relevant information in the library or making a graph. Teachers can provide detailed descriptive feedback to the students on their abilities and skills observed.
- Documents' analysis: Teacher can ask students to share anything they have documented during the process of inquiry, including notes made from material read, analysis of findings, etc. Teachers can give marks on the relevance of material accessed, and analysis of information etc.
- Written or oral presentations: written or oral presentations can be marked in terms of the quality of content, creativity in the presentations, ability to answer questions.

Teaching Learning Resources

In most classrooms student-teacher interaction is limited to reading, writing and speaking. Students remember some of what they hear, much of what they read and more of what they see. Actual learning is assimilated when students experiment, remember and understand content. Because each student is unique and learns differently, some students must touch or do in order to experience learning. Using multiple and varied quality teaching learning resources are integral to a student's experience as they develop their multiple intelligences.

There are a number of teaching and learning materials required for effective teaching of particular subjects. It is important that the teachers review and ensure the quality of any additional resources.

some examples of primary and secondary source material are: Maps/Globe (different kinds), case studies, novels, plays, radio programs, lectures, speeches, audio-video media, encyclopedias, documentaries, museums, and newspaper/news magazines.

5.2 ACTIVE LEARNING IN THE CLASSROOM

Below are some features of active learning in the classroom.

A range of teaching and learning approaches are used.

Learners should experience a wide range of learning and teaching approaches. Tasks are challenging, creative and investigative. Learners engage confidently in activities and are prepared to take risks.

Learning is made relevant and meaningful to pupils.

Explanations of new topics should make appropriate links with previous learning and be relevant to the context of the learner. Learners are encouraged to explain key ideas and concepts in their own words. Curriculum topics are linked to real-life situations and are made meaningful.

Learning outcomes are understood.

Teachers' questions focus on key learning aims and outcomes and they invite learners to think about them. Learners understand and can describe these aims and success criteria.

Active participation of learners in activities.

Tasks and activities involve learners in learning through thinking and doing, rather than by rote such as conducting interviews, going for field trips and group studies. Learning can be applied in new situations. Learners can work well independently and as part of a group.

Class discussions are interactive.

Class discussions are interactive and involve an appropriate range of learners within the class. All learners understand that their individual responses will be valued. Learners as well as teachers ask each other questions. Those who are not involved in discussion participate actively by listening, thinking and reflecting. Learning should not be limited to textbooks rather than out of book questions should be encouraged.

Learners lead their own learning.

Teachers adopt approaches which ensure learners are leaders in their own learning. Learners have independent learning skills and can reflect on their own learning. They draw their own informed conclusions. They know what they are trying to achieve and seek help at appropriate times. Learners have choices in their learning. Cramming at any stage should be discouraged. Understanding of the lesson and its concepts should be encouraged.

Use of technology

Computers and related technology help to engage and challenge students. It is a very important resource for learning the concepts and processes of science through simulations, graphics, pod casting, data manipulation, and model building through various websites and soft-wares available.

Values and attitudes in classroom

Science teaching also highlights areas which support and cater to the development, reinforcement, and extension of attitudes that also support scientific inquiry such as open- mindedness and respect for evidence, initiative and perseverance, and creativity and inventiveness.

Home assignment

It extends the opportunity for learners to think scientifically so that they contribute in personal growth self-discipline and learning responsibility. It reinforces the ideas and skill processes so that the learner feels confident in their ability to work without help and reflect their understanding.

5.3 SHIFTING ROLE OF A TEACHER

In an active classroom environment, the role of a teacher is often that of a facilitator that promotes learner centered approach. It should enable learners to build knowledge through talking, reading and writing, with use of dialogue, discussion and group work important in fostering whole-class understanding. Teachers will set their teaching in real-world contexts, and they will find out learners' starting point of understanding before they plan how to enable them to learn. Because of this, a learner-centered approach will focus on differentiation, and will use strategies associated with assessment for learning, including:

- effective questioning
- sharing of assessment criteria
- provision of feedback
- provision of peer assessment and self-assessment
- Using assessment information to adapt their teaching

Teacher-centered classroom		Learner-centered classroom
Product-centered learning		Process-centered learning
Teacher as a transmitter of knowledge		Teacher as an organizer of knowledge
Teacher as a 'doer' for learners		Teacher as an 'enabler'
Subject-specific focus		Teacher as an 'enabler'

5.4 SHIFTING ROLE OF A LEARNER

The active class room environment engages students to become inquirers and independent learners.

Being passive recipients of knowledge		Active and participatory learners
Answering questions		Asking questions
Being 'spoon-fed'		Taking responsibility for their own learning
Competing with other learners		Collaborating with other learners
Learners of individual subjects		Connecting their learning

More examples of active learning

5.5 THE FLIPPED CLASSROOM

The flipped classroom approach is a pedagogical model which aims to shift the focus from passive to active learning. There are varying definitions of the term 'flipped classroom', and it can depend on variables such as class size, resources, support, etc. The flipped classroom can encourage:

- learners to take more responsibility for their own learning and explore core content (individually or in groups, at home or at school) and then apply knowledge and skills to a range of activities using higher-order thinking.
- learner-centered learning, collaboration and significant learning opportunities can be gained through facilitating active learning, engaging learners, guiding learning, correcting misunderstandings and providing timely feedback using a variety of pedagogical strategies.
- a greater focus on concept exploration, meaning-making and demonstration or application of knowledge while in the classroom, with less focus on didactic teaching.

Technological advancements have also enabled teachers to experiment more with this model, enabling learners to access materials (for example, instructional videos and audio recordings) beyond the classroom.

CHAPTER

06

**ASSESSMENT
AND EVALUATING
STUDENTS' LEARNING**

6.1 WHAT IS ASSESSMENT ?

Assessment is a way of providing feedback to the various stakeholders in the education system and a way of communicating the expectations of that system to all concerned. Assessment in the classroom is a process that reveals what learners are learning, how they are learning and identifies potential obstacles to their optimal understanding. The results of assessment provides feedback to: students on how well they are meeting expectations; teachers with how well students are learning; educational authorities (head teachers and educational officers) with the effectiveness of the teaching and learning taking place; and policy makers on the effectiveness of policies, resources and the curriculum. Assessment of learning should be accessible and flexible and adapted by the teacher keeping in view students' learning outcomes. Assessment can be either formal or informal:

Formal Assessment	Informal Assessment
Usually involves a written document: a test, a quiz, an examination paper, written instructions.....	This often involves teacher reports, observations, inventories, checklists, portfolios of performance, evidence of participation, peer and self-evaluation, discussion
Often gives a numerical score or a grade, reflecting student performance	Often does not contribute to student final grade, despite being the valid and reliable.

Assessment can be criterion referenced or norm referenced

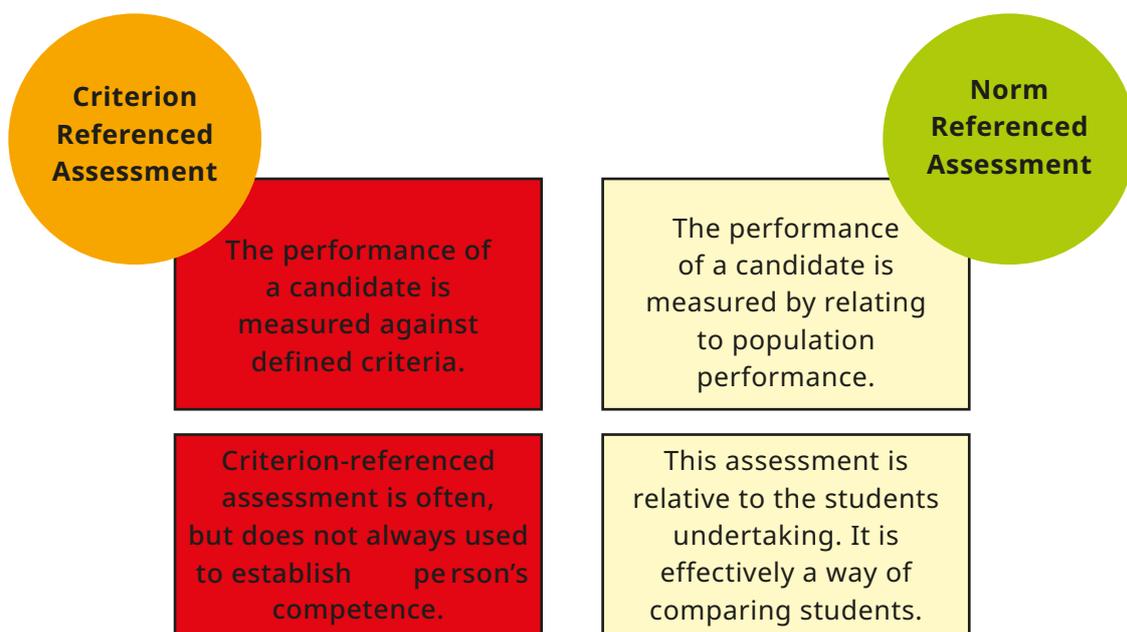


Figure 1. Bases of Comparison

Key Questions about Assessment

Four key questions need to be addressed in assessment

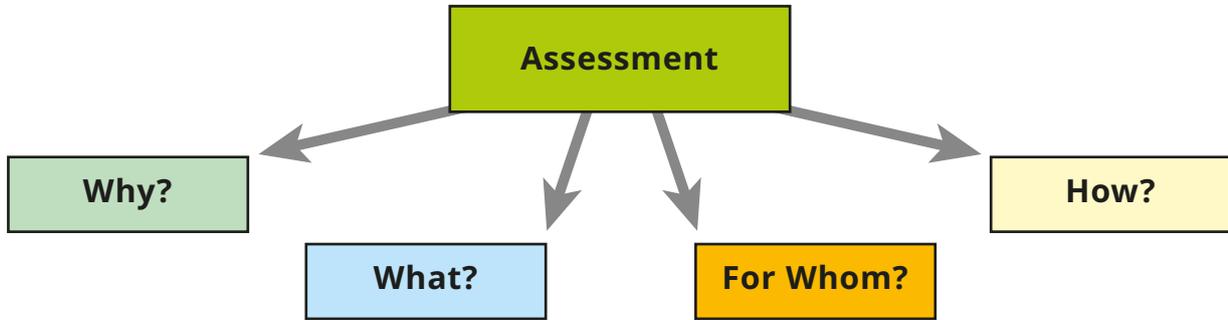


Figure 2. Key Question

6.2 TYPES OF ASSESSMENT

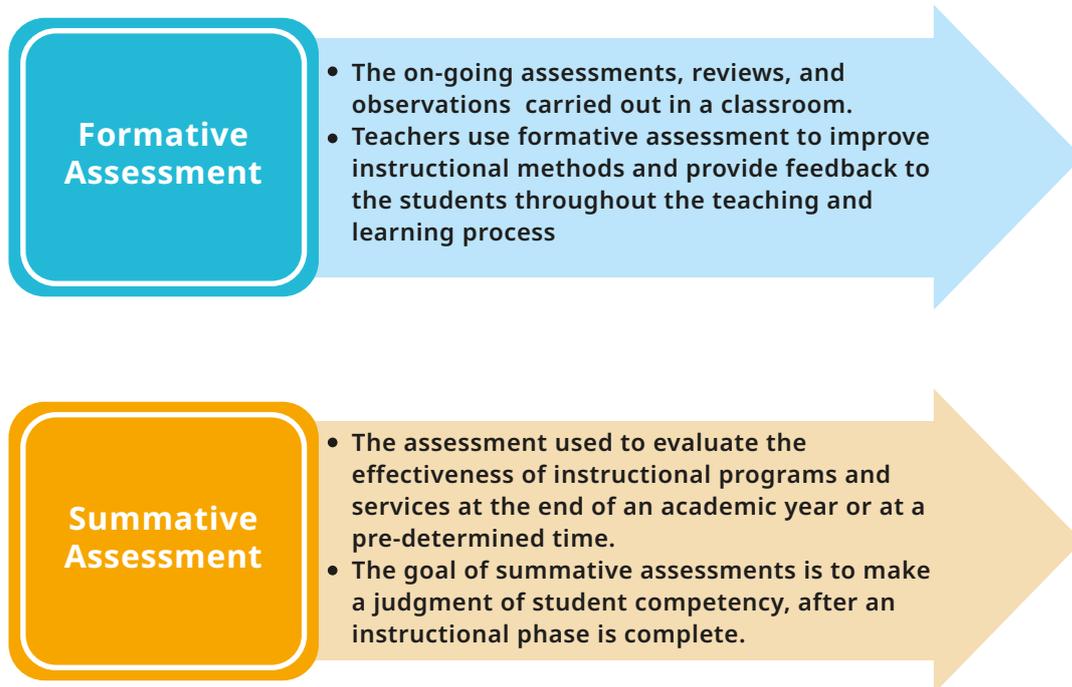


Figure 3. Bases of Comparison

Note: Formative and summative assessment of students, learning outcomes related to General Knowledge should be flexible to obtain output from all learners keeping in view their capabilities.

Types of Objective and Subjective Assessments

Objective Formats	Comment	Other Formats	Comment
<i>Multiple Choice</i>	Almost completely useless as reliability is highly suspected They tend only to indicate recall-recognition.	<i>Short Answer</i>	Can indicate what they know, can do or, to a limited extent, what they understand.
<i>True-false</i>	Very limited and open to an enormous extent of guessing.	<i>Extended answer</i>	Versatile, can be used to explore understanding, skills, thinking and evaluation.
<i>Matching items</i>	Tend only to recall-recognition.	<i>Practical Tests</i>	Can assess cognitive skills (as in mathematics procedures) as well as practical skills.
<i>Partial knowledge multiple choice</i>	More reliable, can be used to give some indication of understanding.	<i>Observation</i>	Very insightful but very difficult to reduce to scores.
<i>Structural Communication Grids</i>	Powerfully diagnostic, can measure many things but especially good at conceptual areas.	<i>Essay</i>	Can assess almost anything but the problem is how to mark fairly. Better marking methods now available.
<i>Electronic assessments</i>	A growing area, with huge potential.	<i>Dissertation</i>	Offers enormous scope. Good marking methods now available.
<i>Duly performed</i>	The completion of the task gives the credit. Enormous potential.	<i>Project</i>	This can reflect extended work and offers many insights. Good marking methods now available.
Open book assessments: Here all the information is available and the assessment tests how well the student can use the information			

Table 4. Some objective and subjective assessment types

According to McTighe and Ferrara (1994) the choice of the particular assessment methods for effective classroom assessment vary according to the purpose of the assessment, the content of the curriculum, and the age levels of the students etc. Regardless of the particular methods employed, **effective classroom assessment is guided by three fundamental principles that it should (i) promote learning, (ii) use multiple sources of information, and (iii) provide fair, valid and reliable information.**

Framework of Assessment Approaches and Methods

SELECTED RESPONSE ITEMS	PERFORMANCE - BASED ASSESSMENTS			
	CONSTRUCTED RESPONSES	PRODUCTS	PERFORMANCES	PROCESS FOCUSED
<ul style="list-style-type: none"> <input type="checkbox"/> multiple-choice <input type="checkbox"/> true-false <input type="checkbox"/> matching 	<ul style="list-style-type: none"> <input type="checkbox"/> fill in the blank <ul style="list-style-type: none"> <input type="radio"/> word (s) <input type="radio"/> phrase(s) <input type="checkbox"/> short answer <ul style="list-style-type: none"> <input type="radio"/> sentence(s) <input type="radio"/> paragraphs <input type="checkbox"/> label a diagram <input type="checkbox"/> 'show your work' <input type="checkbox"/> visual representation <ul style="list-style-type: none"> <input type="radio"/> web <input type="radio"/> concept map <input type="radio"/> flow chart <input type="radio"/> graph/table <input type="radio"/> matrix <input type="radio"/> illustration <input type="radio"/> multimedia 	<ul style="list-style-type: none"> <input type="checkbox"/> essay <input type="checkbox"/> research paper <input type="checkbox"/> log/journal <input type="checkbox"/> lab report <input type="checkbox"/> story/play <input type="checkbox"/> poem <input type="checkbox"/> portfolio <input type="checkbox"/> art exhibit <input type="checkbox"/> science project <input type="checkbox"/> model <input type="checkbox"/> video audiotape <input type="checkbox"/> spreadsheet 	<ul style="list-style-type: none"> <input type="checkbox"/> oral presentation <input type="checkbox"/> dance/movement <input type="checkbox"/> science lab demonstration <input type="checkbox"/> athletic competition <input type="checkbox"/> dramatic reading <input type="checkbox"/> enactment <input type="checkbox"/> debate <input type="checkbox"/> musical recital 	<ul style="list-style-type: none"> <input type="checkbox"/> oral questioning <input type="checkbox"/> observation ("kid watching") <input type="checkbox"/> interview <input type="checkbox"/> conference <input type="checkbox"/> process description <input type="checkbox"/> "think aloud" <input type="checkbox"/> learning log

Source: Adopted from Mctighe and Ferrara (1994) National Educational Association

Self-assessment refers to students evaluating themselves. In self-evaluation of academic achievement, students rate their own performance in relation to established standards and criteria. Students may also be asked to answer questions that reveal their attitudes and beliefs about themselves or other students as a part of their self-reporting. Most teachers are aware of and generally use selected response, brief constructed response and essay items to assess students, because of teacher's familiarity with these.

Performance-based Assessments

Performance-based assessments involve teachers observing and assessing students' demonstration of a skill/process and/or competency in creating a product/making a presentation as a result of a skill/process.

Characteristics of performance-based assessments

- Students perform, create, construct, produce, or do something.
- Deep understanding and/ or higher order thinking skills are needed.
- Involves significant work that usually takes days/weeks to complete.
- Calls on students to explain, justify, and defend.
- Performance is directly observable.
- Involves engaging ideas of importance and substance.
- Criteria and standards are specified and explained to students along with the task.
- There is no single best product or correct process.
- Usually students work with real-world contexts and constraints.

Strengths and Weaknesses of Performance-based Assessment	
Strengths	Weaknesses
<ul style="list-style-type: none"> • Can assess communication, presentation and psychomotor skills • Through products, can assess performance of process/skill, and also see what learning students got from it. • Teaching and learning students what got from it. • Students find real-life application and contexts engaging. • Provide a different way for students to show what they know and can do. • Students learn how to ask questions, and since such tasks often involve group work, to work effectively with others. • Emphasis on higher order thinking and application-allows in-ideas. • Forces teachers to establish specific criteria to identify successful performance. • Encourages re-examination of instructional goals and purpose of schooling. 	<ul style="list-style-type: none"> • Scoring may be very subjective. • Inconsistent student performance across time may result in inaccurate conclusions. • Few samples of student's achievement. • Requires considerable teacher's time to prepare and student time to complete. • Difficult to plan for amount of time needed because students use new method, students work at different paces, and use different processes. • Cannot generalize proficiency to include other knowledge or skills. • Difficult with time constraints to give each student meaningful feedback at different times as they work on the process. • Needs significant energy and resources from both teachers and students.

Hints for creating engaging, real-world performance-based tasks with real teaching and learning benefits (teachers should be able to answer 'yes' to each checklist question).

- ✓ Is performance-based assessment appropriate for the given learning targets?
- ✓ What essential content and skills targets should be integrated?
- ✓ Are multiple targets included?
- ✓ Has the kind of task been decided/restricted? (Target a narrowly defined skill with a brief response) or extended (more complex, involve more skills and knowledge)?
- ✓ Have clear, detailed description of the task and its context been developed to indicate what process (es) and/or products(s) are wanted, whether work is individual or in groups, if help is allowed, what resources are needed, what the teacher's role will be?
- ✓ Does the task question given to students identify the context, the final outcome, what students should do, and the scoring criteria?
- ✓ Is the task feasible? Will students be able to complete it successfully?
- ✓ Are multiple products and processes possible so that exploration and judgment are necessary?
- ✓ Is the task integrating, challenging, stimulating, requiring inquiry and innovation?
- ✓ Is the task cyclic, with repeated performance-feedback-revision occurring?
- ✓ Does the task have long-term value beyond school?
- ✓ Are constraints for completing the task included?
- ✓ Are criteria for scoring included?

Scoring Rubrics

In performance-based assessment, teachers must be able to evaluate the process and/or the product. To do this validly, reliably and fairly, teachers must establish scoring rubrics and share these with students before they begin the task. Scoring rubrics consist of performance criteria and a way to rate it.

RUBRICS = PERFORMANCE CRITERIA + RATING

What to score and what each score means (distinguish and describe different levels of quality)

- Are there important traits that are looked for in students' work or products.
- Used to evaluate for student proficiency.
- Must reflect learning targets, teachable and observable aspects of task.
- What essential features will I see if students have done the task excellently, averagely, poorly?

CHECKLIST

- Teacher checks whether the criteria selected were present or not.

SCALE

- Teacher checks the intensity of criteria (how good, how often, how much).

QUANTITATIVE

QUALITATIVE

(Uses brief verbal descriptions)

HOLISTIC

- All criteria assessed but single score give overall impression
- Difficult to give feedback
- How to judge a student that is between two categories?

ANALYTIC

- Each criteria checked and scored separately
- In-depth description of each criterion.

Hints for writing and implementing Rubrics (Teachers should be able to answer 'yes' to each checklist question).

- ✓ Do criteria focus on the most important aspects of the performance?
- ✓ Is the type of rating matched with purpose of the assessment?
- ✓ Are the traits directly observable? (Have criteria such as attitude, interest and effort, that are easily and objectively evaluated. Ensure that bias has been avoided?)
- ✓ Are the criteria understandable? (teachers can give students examples of work that shows criteria they are looking for)
- ✓ Are the traits clearly defined?
- ✓ Is bias minimized? (teachers can use colleagues' reviews and student's self-evaluation or peer evaluation)
- ✓ Is the scoring system feasible?

Performance-based Task

1. Ask students to pair up with a partner. Ask each pair to choose a social issue and collect information about it to prepare an oral presentation.
2. Provide each student a copy of the student handout, "Making an oral presentation" and ask students to prepare for their presentation using it as a guide. Encourage students to use a visual aid such as a chart, photographs, an OHP or power point. Remind students of the time for each presentation and that they should be prepared for a short question-answer session.
3. Encourage each pair to rehearse the presentation on their own or present it to their friends and get constructive feedback to improve" content, structure, time, clarity and audibility of voice and use of visual aids.
4. Have each pair make their oral presentations to the class. Encourage the audience (students) to listen to the presentations attentively. Provide each student with a copy of the student handout "peer evaluation of oral presentations" and ask them to evaluate the presentations of their fellow students, using the handout. Use the Teacher Resource "Evaluation of oral presentation" for evaluating the presentations and provide constructive feedback to each pair.

Making an oral presentation

1. Preparing an oral presentation:
 - Select a topic.
 - Identify the objectives.
 - Carry out research.
 - Make an outline, review it, add important information and remove the irrelevant one.
 - Make notes of important points on the cards to cover (These should serve as reminders only and are not to be read)
 - Plan an effective and interesting opening
 - Oral presentation must be adapted by the class teacher keeping in view students, level of output.
2. Practice:
 - Speak clearly and distinctly
 - Time the length of the report
 - Make sure you are audible
 - Vary your voice, according to need, and avoid monotonous pattern
 - Speak slowly rather than quickly, pausing occasionally
 - Practice in front of those who can give constructive feedback
3. Delivery of the presentation:
 - Look at the audience (establish eye contact)
 - Start slowly
 - Aim voice at someone at the back of the room
 - Be enthusiastic and confident since this helps keep the attention of the audience.

Evaluation of Students' Oral Presentations using a rubric

Performance Criteria

Put a () in the column when students demonstrate the skills	Students name	Students name	Students name
1. Introduction was short, clear and interesting			
2. Topic was clearly explained			
3. Used relevant information			
4. Used facts and examples to support claims			
5. Spoke clearly and distinctly			
6. Was confident throughout the presentation			
7. Maintained eye contact with the audience			
8. Used visual aids (charts, OHP, slides) effectively			
9. Handled questions and comments properly			
Note: this can be adapted as evaluation <ul style="list-style-type: none"> • "Agree/Disagree/Don't know" for peer • Description and points for criteria 1-9 for analytic format 			

Assessing Affective Traits and Dispositions

Attitudes, Values, motivation, social relationship, classroom environment, concept of one's own academic ability are effective traits and disposition which can be assessed through teacher observation, self-reporting and peer evaluation.

Teacher's observations are so common that they are often ignored as a form of assessment. However, teachers constantly observe and listen to students as they work. In addition, nonverbal communication, such as inattention, looks of frustration, and other cues, give greater insight than verbal feedback. Observation is also important in assessing performance tasks, classroom climate, teacher's effectiveness, and other dimensions of the classroom.

So, what is observation? Observation is watching, listening and recording what a student says and/or does. Planned observation focuses on specific behavior(s). It can be done as a spectator or as a participant. Observational tools include:

Anecdotal Tools

Anecdotal tools are ways of recording descriptions of what the student says and does. Anecdotal recording may be done as a spectator or as a participant. Three anecdotal tools, frequently used by teacher are:

At-A-Glance Sheet

At-A-Glance is a very brief anecdotal jotting made on each student on a regular basis (e.g., weekly). This tool is especially useful for doing a regular observational "scan" of all your students. It provides a format for recording very brief anecdotal observations on each student, and it allows you to see "at-a-glance" which of your student has not yet been observed. You should try for weekly observation of each student. An at-a-glance approach can be used for recording either planned or incidental observations. If you are using this as a new approach, start small! Target only a few students, and limit the number of behaviors you observe.

Checklist

It is useful to have a listing of pre-selected behaviors/skills as a part of an assessment toolkit. After observing, the teacher checks off whether each item listed was shown or not shown.

Rating Scale

Like the checklist, a rating scale is a listing of pre-selected behavior/skills. However, after observing, the teacher makes a decision about the degree or frequency with which each listed item was shown.

- Checklist same as in performance -based assessment (scoring rubrics)
- Rating Scale pre-selected behaviors to be observed are assessed, instead of performance criteria.

Strengths and Weaknesses

- Requires background knowledge of individual students.
- Cannot gauge all behaviors for all students through just one observation – time must be invested.
- Especially useful for assessing young children, students needing special attention and in performance-based tasks (process).
- Done as a continuous process, gives deeper understanding into students' growth (or lack of it).
- Gives specific examples of actual, spontaneous behavior.
- Difficult to stay objective.
- Anecdotal recording is usually unstructured, unsystematic – especially if behaviors are not pre-selected.
- Tendency to emphasize on negative behavior.
- Helpful in planning and reporting instruction and outcomes.

Hints for better observation (Teachers should be able to answer 'yes' to each checklist question).

- ✓ Is observation appropriate to assess the behaviors specified?
- ✓ Are the behaviors to be focused on easily observable, clearly specified, and appropriate (considering students' age, background and grade)?
- ✓ Are the number of behaviors and students, to be observed manageable?
- ✓ Are unusual, positive and negative, absent behaviors also noted?
- ✓ Have all students been observed at some point?
- ✓ Has each student been observed at different times in different situation (so that exceptional behavior is not generalized)?
- ✓ Is the tool for observation (anecdotal, rating scale, checklist) appropriate for the specified behaviors?

CHAPTER

07

**TEACHING -
LEARNING RESOURCES**

This Curriculum has been prepared to develop students' knowledge, skills and dispositions and encourages them to take actions to address personal & social issues.

To capture the true essence and spirit of this curriculum textbook writers require a new way of writing textbooks. The textbook author is free to decide the title of each chapter and can choose to cover Student Learning Outcomes (SLOs) from any themes in developing the content of a chapter.

The textbook author must also keep in mind that the entire range of SLOs cannot be addressed in the text (as if this is done it would lead students to simply memorize the text and not serve the purpose of implementing the curriculum in its true spirit). Many SLOs could be realized through questions and practical activities at the end of the chapter exercise.

For example, students could be given a question to predict future explorations & potential changes. Similarly, an activity could ask students to engage in an inquiry and prepare a tourist guide book as a product of the inquiry.

A textbook is an important teaching and learning resource and one of the most extensively used resources in Pakistani classrooms. Both the quality of content and physical attributes of textbooks have often been criticized. It is therefore important that both of them be improved.

7.1 Basic features of a textbook

- The textbooks serve as a framework for teaching throughout the year.
- Must have accurate and up-to-date material
- The material must be sufficient to give students the knowledge they need to understand the concepts, develop the skills and engage in higher order thinking
- The material should help students understanding the world in which they live, prepare for exams, prepare for life, raise their standard.
- The materials must be mistake free so it can be trusted.
- The material must be unbiased.
- The book must be attractive and engaging
- Illustrations must vary from page to page.
- Activities suggested must vary from page to page.
- End-of-chapter exercises must vary from chapter to chapter. They should encourage students to think, develop skills and use information for a variety of purposes.
- Table of contents should ideally include subtopics.
- Index
- Glossary

- Introduction to textbook explaining how to use the textbook.
- Must be contextually relevant (feasible to use in classrooms, affordable, examples from context to increase relevance and meaning)

7.2 How to start writing a textbook

Planning

- Decide on a topic (in relation to the Curriculum)
- Review the curriculum to identify learning outcomes that are to be met for each chapter.
- Decide on the key ideas to be included in each chapter
- Organize the key ideas
- Decide which facts and concepts are to be included, what vocabulary/terms will be used, what values and skills can be developed.
- Decide which illustrations are to be used and prepare an art brief for the illustrator and designer.
- Decide which activities would develop further understanding of the concepts

Writing

- Write as if talking to a group.
- Ensure accuracy and authenticity of facts
- Edit in line with Curriculum and the local teaching/learning environment
- Check to ensure that the meaning hasn't changed even if words have.
- Include activities and fun elements to engage students.

Design

- Designer finalizes layout of the text. Illustrator prepares illustration.
- To make writing and studying the textbook easy, color coding, different levels of heading, etc. can be used.

Edit

- Check clarity of illustration, captions, activities etc.
- Do they show what they are supposed to show?
- Do they add anything to the text?

Review

- Have peers (experts) review and provide critic-constructive feedback?
- Incorporate relevant feedback.

Pilot test

- Have teachers teach, observe and make changes as required.

7.3 Guidelines for writing a chapter

How to write

Planning

- Decide which learning outcomes the chapter will realize (put at the beginning of the chapter)
- Identify topics and subtopics that will be included (Develop outline)
- Decide on key ideas, facts, concepts, skills, values that can be developed.
- Decide potential illustrations
- Decide upon the activities – nature of activities that call student to do inquiry.

Writing

- Ensure that the content is up to date, accurate and developmentally appropriate.
- Inclusion of otherwise excluded (women, minorities, disabled, and other perspectives)
- Language should be consistent, culturally appropriate, non- disparaging, non-patronizing. It should also avoid stereotypes about any religion, ethnic group, sex, people of differing abilities or any other communities. Keep gender neutrality as a core principle. Ensure that it is grammatically correct and is vocabulary and style wise age appropriate
- Engage and hold readers' attention
- Recall previous learning, where possible, to ensure links and gradual buildup of concepts
- Structure writing, so that sentences are simple. For example, paragraphs deal with single idea etc.
- Write a summary/concept map at the end of chapter reviewing key knowledge and skills
- Decide illustrations required with relevance and aesthetics in mind, so they aid reading and comprehension
- End-of-chapter exercises:
 - ✓ Recall and integrate previous learning
 - ✓ Engage students and develop their creativity
 - ✓ Move from lower to higher order thinking
 - ✓ Develop multiple intelligences
 - ✓ Contextually relevant in keeping with local teaching and learning

Instructions for the text book writers:

It is strongly recommended that the writer's qualification must at least be M.Sc./M. A in the relevant subject. In case of integrated subjects, such as Social Studies, each section has to be written by the relevant subject expert. It will be of value in terms of relevance and effectiveness that the textbook writer be a working teacher and subject specialist. The book must contain the following.

- Info inbox
- Pictures and diagrams (relevant)
- Statistical diagrams
- Glossary

Note: In case of special students scoring criteria may be flexible and may be adapted by the class teacher accordingly. UDL is framework to accommodate all learners with special needs.

7.4 Guidelines for choosing a textbook

Following indicators can be used to determine the quality of a textbook.

1. Does the book follow the outcomes of the curriculum?
2. Is the content accurate and up to date?
3. Are important skills developed?
4. Do the illustrations (maps, pictures, drawings, graphs) help understand the content better?
5. Do the end-of-the-chapter exercises encourage students?
 - a. To think
 - b. To develop their skills
 - c. To be creative
 - d. To be research oriented
6. Activities?
 - a. Are activities suitable for the needs of the learners?
 - b. Do activities include student participation in real life issues?
 - c. Do activities promote 21st century skills?
7. Is a variety of assessment strategies suggested? (e.g., binary and multiple choice items, completing picture/ map items, project work, exhibitions, interpretive exercises, open-ended and divergent responses, etc.)
8. Does it motivate students to think?
9. Do the text, questions and suggested activities stimulate interest that would lead to further study?
10. Is the book free from biases?
 - a. Religious | b. National/Ethnic Origin | c. Gender | d. Occupation | e. Class etc.
11. Do the textbooks present issues from different perspectives?
12. Does it include current issues, problems, latest information and happenings?
13. Is a teacher's guide/ teaching notes included?
14. Is it attractive and appealing to children?
15. Is the language readable, understandable, and easy to follow? Is it appropriate for the level of target learners?
16. Are the contents relevant to the needs, age and level of understanding of the student?
17. Is there an introduction and summary?
18. Does it have an introduction explaining its organization, table of contents etc.?
19. Are there suggestions for further reading in the area or websites for further information?

7.5 A GUIDELINE FOR DEVELOPING “TEACHER’S GUIDE”

Textbooks should ideally be accompanied by a teachers’ guides that is aimed at informing teachers about how the textbook is written and how best to use it to facilitate student learning. Teachers’ guides include detailed explanations of key concepts and the methodologies to teach particular topics. They provide further examples that could be given to facilitate learning, relate concepts with daily life situations and to reinforce development of attitudes and values. Teachers’ guides serve to educate teachers and thus can be seen as a mean of helping teachers develop professionally. A teacher guide should include introduction to guide explaining how to use it. It must be easy to understand and use, expand and develop teacher’s repertoire of knowledge and skills.

Basic features of a teacher’s guide

A teacher’s guide:

- Helps teachers to plan and sequence the lesson in order to teach the text effectively.
- Provides teachers with relevant background knowledge essential for teaching the concepts.
- Outlines the learning outcomes to be achieved from each planned lesson.
- Identify teaching strategies appropriate to the context of teaching and learning according to the textbook.
- Provides step by step guidelines for teaching strategies that are suitable for teaching knowledge, skills, and dispositions in each chapter.
- Identifies what extended activities students could do with teacher’s help to reinforce and build upon the target knowledge, skills and dispositions.
- Identifies the resources needed for teaching strategies and extension activities.
- Identifies sources of information teachers can use to develop their knowledge (content and pedagogical).
- Explains how and where teachers can develop low-cost or no-cost resources.
- Includes Materials that teachers can photocopy (PCM), use themselves or for students.
- Identify constraints and strength of each strategy or activity, especially if likely to be new for teacher.
- Includes various assessment strategies (strengths, weaknesses, how to implement etc.) and give examples of questions/ tests.
- Provides teachers with choices of strategy/ activity for each chapter (let them decide which to use).
- Needs to be error free and contextually relevance.
- Includes Relevant website links
- Includes revised Bloom’s Taxonomy Pyramid to support the teachers in designing tasks and questions in line with the progression in the lesson.
- Includes some other resources/ websites/ appropriate online resources at the end of each topic/ theme.

7.6 TEACHER TRAINING AND PROFESSIONAL GROWTH

Teachers are important variable for effective implementation of Outcomes of any Curriculum. In order that education can make a meaningful contribution towards the national development efforts and become more relevant by linking it with real-life problems and environment, additional competencies are needed for the teachers to play their new role as they are not to be seen only as someone “imparting instructions” but as a guide and facilitator for the students.

Teacher training programs therefore need to be critically analyzed and restructured to provide for experiences, which will help develop these competencies. The efforts for reforming teaching and learning strategies in the interest of promoting students’ understanding must be long-term and must explore teachers’ prior knowledge and experience. Teacher professional development must utilize collaborative problem-solving approaches, and must work toward the redefinition of student’s and teacher’s roles in the classroom.

Teacher training programs, training for pre-service as well in-service teachers must among other factors, focus on these guidelines:

7.6.1 Comprehensive understanding of teaching methods

Teachers should have full command over different methods of teaching. For example, promoting inquiry by participating in “inquiry experiences” similar to those they will eventually provide for their students. They must have understanding of elements of constructive teaching practices and various inquiry approaches. Knowledge of methodologies must be accompanied by a full understanding about the philosophy and rationale of each teaching method.

7.6.2 Use the application of different methods in different situations

Teachers need to use and apply different strategies of teaching and learning according to different situations, age appropriateness, and students’ prior knowledge. Experienced and effective teachers know that their method and style needs to be adapted and transformed to fit the local situation and external factors that may impinge on a lesson.

7.6.3 Resource Management

Teachers must be trained to develop skills for managing the new and existing resources that they may require to enrich their teaching styles. Teachers need to arrange resources that are required for activities that enhance concepts of students and match these with the level and interests of the learners.

7.6.4 Time Management

Time management is essential for implementation of teaching and learning practices. Teachers should be able to effectively manage time while working with small and large groups, for inquiry/ investigative activities, role-plays as well as for assessing and evaluating students’ learning and its documentation.

Teachers must be taught to evaluate their own teaching practices and subject knowledge in the light of information about the content standards and students’ learning outcomes. They improve their teaching practices by soliciting feedback and engaging in cycles of planning, teaching, reflecting, discerning problems, and applying new trends and strategies. Teachers use reflection and feedback to formulate and prioritize goals for increasing their subject knowledge and teaching effectiveness.

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NOTIFICATION

Dated Abbottabad the, 8th February, 2021

No. 694-711/AD (C&TR): In pursuance of the following decisions of the Provincial Cabinet and recommendations of the Review Committees notified by this Directorate vide No. 5305-09 dated 01.12.2020:

- i. The Provincial Cabinet decision on the Agenda Item No "10", taken in its 39th meeting held on 21st July, 2020, regarding approval of the Concurrence of Single National Curriculum (SNC Pre I-V) developed by the Ministry of Federal Education & Professional Training, Islamabad (MoFE&PT), the minutes whereof circulated vide the Establishment & Administration Department (Cabinet Wing), Govt. of Khyber Pakhtunkhwa letter No. SOC (E&AD) 9-39/2020 dated 27th July 2020, conveyed through the Elementary & Secondary Education Department, Govt. of Khyber Pakhtunkhwa Peshawar letters No. SO (B/T) E&SE/8-5/2019/NEC dated 29th July, 2020.
- ii. The Provincial Cabinet decision on the Agenda Item No "23", Case No. 2021/49/23 (A), taken in its 49th meeting held on 27th January, 2021 regarding in principal approval of the adoption of the National Curriculum with modifications/additions recommended by DCTE for notification as Curricula (Grades Pre I-V) for all educational institutions in Khyber Pakhtunkhwa, the minutes whereof circulated vide the E& AD (Cabinet Wing), Govt. of Khyber Pakhtunkhwa letter No. SOC (E&AD) 9-49/2020 dated 1st February, 2021, conveyed through the E& SED, Govt. of Khyber Pakhtunkhwa letter No. SO (B/T) E&SE/8-5/SNC dated 04.02.2021.

Consequently, the Directorate of Curriculum & Teacher Education Khyber Pakhtunkhwa Abbottabad, being the Competent Authority under the Khyber Pakhtunkhwa Supervision of Curricula, Textbooks and Maintenance of Standards of Education Act. 2011, has been pleased to notify the Eight (08) Subject Curricula, as reflected here-under, for Grades Pre I-V for Academic Year 2021-22 & onward:

1. Early Childhood and Care Education (ECCE)	2. Urdu	3. Mathematics
4. English	5. General Knowledge	6. Islamiyat
	7. General Science	8. Social Studies

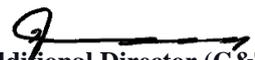
2. All the educational intuitions in Khyber Pakhtunkhwa shall follow the Curricula 2020, Textbooks subsequently revised/developed and duly approved by the Directorate of Curriculum and Teacher Education (DCTE) Khyber Pakhtunkhwa, Abbottabad.
3. The Khyber Pakhtunkhwa Textbook Board shall develop/revise the Textbooks from Grades Pre I-V as per Curricula 2020 in the light of existing rules and policies.
4. All Publishers shall obtain prior approval/NOC for publishing Textbooks and Supplementary Reading Materials develop/revise based on the Curricula 2020 (Grades Pre I-V) from DCTE Khyber Pakhtunkhwa Abbottabad for circulation in the educational institutions of Khyber Pakhtunkhwa and Newly Merged Districts.
5. Provincial Institute for Teacher Education, Fata Institute for Teacher Education, Regional Institutes for Teacher Education, Elementary Colleges of Khyber Pakhtunkhwa and all Development Partners shall align all of their training manuals/materials with the Curriculum 2020 and the Textbooks developed thereof.
6. In case of non-compliance, the institutions/ firms at fault shall be proceeded against under Section (4) of the Khyber Pakhtunkhwa Supervision of Curricula, Textbooks and Maintenance of Standard of Education Act. 2011.

DIRECTOR

Endst: of even No. & Date.

Copy forwarded for information and necessary action to the:

1. Secretary to Government of Khyber Pakhtunkhwa E&SE Department, Peshawar
2. Director, Elementary & Secondary Education Khyber Pakhtunkhwa, Peshawar
3. Chairman, Khyber Pakhtunkhwa Textbook Board Hayatabad, Peshawar
4. Director General, Information & Public Relations Khyber Pakhtunkhwa, Peshawar
5. Director General Education Monitoring Authority Shami Road Peshawar
6. Managing Director, Elementary & Secondary Education Foundation Hayatabad, Peshawar
7. Managing Director Private School Regulatory Authority University Town Peshawar
8. Director, EMIS E&SE Department Peshawar, with the request to upload on the w/site of E&SED
9. Comptroller Government Printing Press Peshawar.
10. PSO to Chief Secretary Khyber Pakhtunkhwa, Peshawar
11. P.S to Principal Secretary to Chief Minister Government of Khyber Pakhtunkhwa C.M Secretariat Peshawar
12. All District Education Officers (M&F) in Khyber Pakhtunkhwa and Newly Merged Districts
13. Director, PITE & FITE Peshawar & Jamrud
14. All Development Partners working in Education Sector Khyber Pakhtunkhwa
15. All Principal RITEs /Elementary Colleges (M&F) in Khyber Pakhtunkhwa
16. Taj Mohammad Section Officer (Cabinet) E&AD Government of Khyber Pakhtunkhwa Peshawar
17. P.S to Minister for Elementary & Secondary Education Khyber Pakhtunkhwa Peshawar
18. P.S to Director, Local Directorate


Additional Director (C&TR)



Directorate of Curriculum and Teacher Education
Khyber Pakhtunkhwa Abbottabad