



Sindh Curriculum

GENERAL KNOWLEDGE

GRADE I-III

2024



School Education & Literacy Department
Government of Sindh
Directorate of Curriculum, Assessment & Research Sindh
Jamshoro



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PREAMBLE

This reviewed curriculum framework of General Knowledge is a comprehensive guide for various stakeholders, including leaders, educators, learners, textbook creators, reviewers, examiners, and other users. For this purpose, considerable effort has been made to explain the basic components of the framework, the design principles and the rationale for the standards, and benchmarks selected as key learning areas for early Grades I-III. While the document offers general applicability across all school types in the region, it furnishes specific benchmarks and student learning outcomes for each grade level to aid teachers' guidance.

The curriculum aims to enrich the learning experiences for initial three years of schooling in Sindh. Simultaneously, grade-wise student learning outcomes are provided as measurable milestones to assess progress towards benchmarks annually and Standards by the completion of developmental level.

The curriculum anticipates the introduction of new knowledge, alongside opportunities for integrating them with prior learning. It incorporates a progression approach, allowing for the reinforcement and integration of three subjects Islamiat, Social Studies and Science through different pedagogical skills and activities. To enhance usability, instructional and materials development guidelines are outlined for teachers and textbook writers. Additionally, separate guidelines for learning assessment are provided. A glossary aids users in comprehending specific terminology, fostering a deeper understanding of the curriculum components.

Acknowledging the dynamic nature of curriculum development, periodic reviews and updates are necessary to reflect evolving realities and implementation experiences at grassroots levels.

Feedback from users is encouraged to ensure continual refinement, transforming the curriculum into a dynamic and living document rather than a static resource.

1.0 INTRODUCTION OF CURRICULUM

1.1 General Knowledge Curriculum: An Overview

This comprehensive General Knowledge curriculum has been meticulously crafted to provide young learners (Grades I-III) with a solid foundation of knowledge across various subjects and disciplines. In today's dynamic world, possessing a breadth of general knowledge is more important than ever, serving as the cornerstone for academic success, critical thinking, and lifelong learning.

This curriculum is designed to engage students in meaningful exploration, inquiry, and discovery, fostering a deep appreciation for the world around them. By introducing diverse topics and concepts in an accessible and engaging manner, this curriculum aims to ignite curiosity, inspire creativity, and cultivate a passion for learning that extends beyond the classroom. Thus, 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.

Throughout this curriculum, students will embark on an enriching journey across subjects such as General Science, Social Studies and Islamiat/Religious Studies:

- Knowledge of science is drawn primarily from the domains of life sciences, physical sciences, earth and space sciences, and health sciences;
- Knowledge of social studies is drawn primarily from the social sciences strands of history, geography, government, citizenship, economics, culture;
- Knowledge of Islamiat/Religious Studies is drawn from the disciplines of Religious Beliefs, Social Norms/Customs, Festivals and Moral Values.

This Curriculum has been developed with the following emphasis:

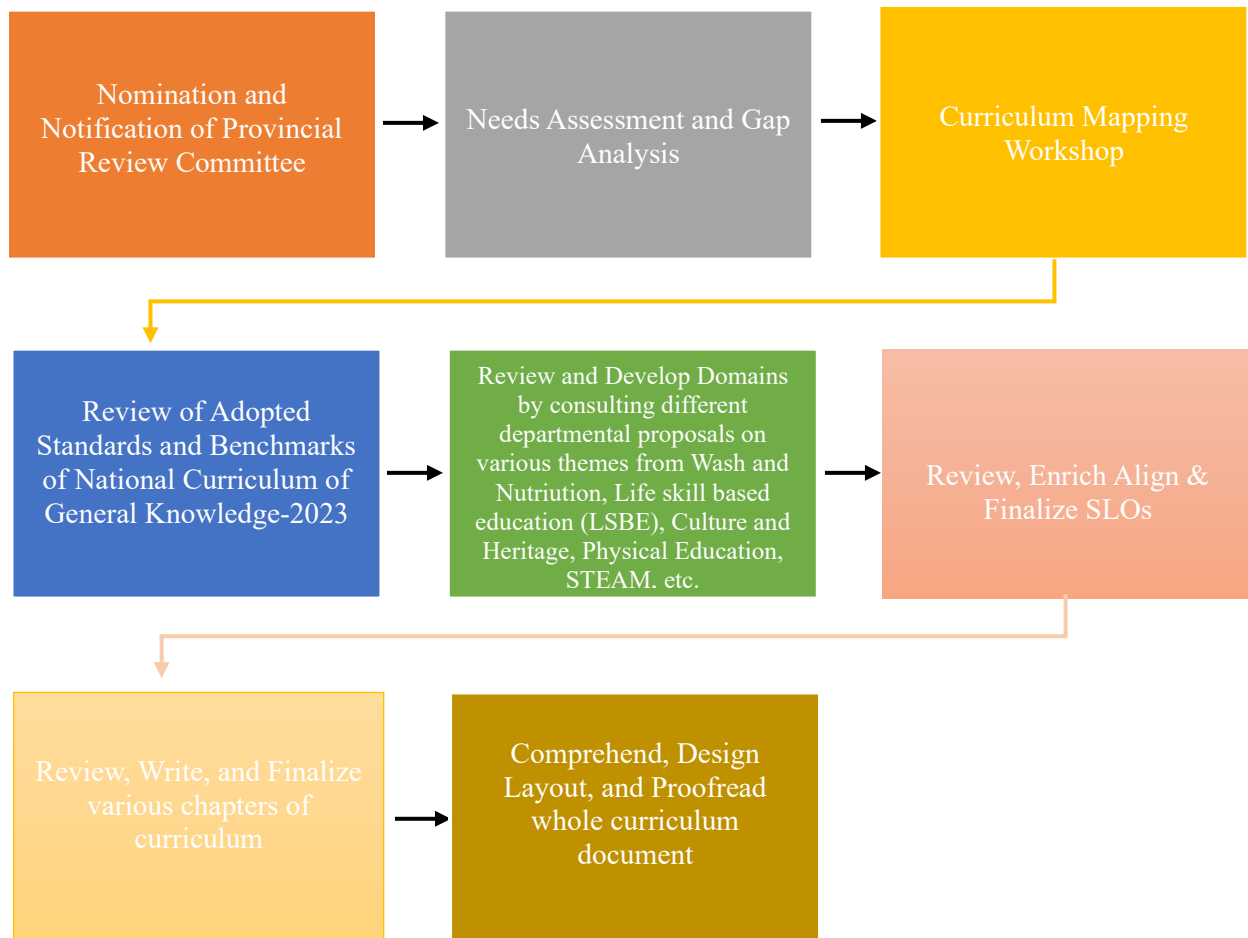
- Broadening the learning space (out of the classroom learning).
- Strengthening the interface with pre-primary and secondary school curricula.
- Developing understanding of ethical values.
- Integrating students' learning experiences with emphasis on patriotism and sustainable development.
- Promoting 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.

In short, student will have the opportunity to explore the wonders of the natural world, unravel the mysteries of the past, navigate the intricacies of different cultures, and unleash their imagination through literature and creative expression.

Our curriculum is not only focused on imparting knowledge but also on developing essential skills such as critical thinking, communication, collaboration, and problem-solving. Through hands-on activities, interactive lessons, and real-world applications, students will not only acquire knowledge but also learn how to apply it in diverse contexts, preparing them to thrive in an ever-changing global landscape. As educators, we understand the immense responsibility and privilege of shaping the minds of the next generation. Therefore, this curriculum is built upon the latest educational research, best practices, and standards, ensuring that it meets the needs of students, teachers, and schools alike.

1.2 Curriculum Development and Review Process

The curriculum development process for Grades I-III involves several key stages, each carefully planned and executed to ensure the creation of a comprehensive and effective educational framework. Here's an overview of the process:



1.3 Guiding Principles for the 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 been traditionally content-stressed thereby neglecting the basic thinking and process skills areas that essentially contribute to an individual's overall comprehension and application of the subject knowledge. Therefore, the General Knowledge 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.

Thus, the following trends have been considered in the development of the General Knowledge Curriculum:

- **Decrease in the number of topics and adoption of a Depth rather than Breadth approach:** In-depth understanding of concepts enables students to have a solid basis upon which to build and acquire new knowledge and solve problems effectively.
- **Making the subject personally relevant to the lives of students:** By incorporating real-life examples and applications, students are encouraged to develop a genuine interest in learning. For example, science students often complain that the science they learn at school plays no role in their lives, and they show little interest in continuing to discover science. By making science personally relevant, students are more likely to engage with the subject matter.
- **Adopting a constructive approach towards learning:** A constructivist curriculum is built on major concepts by revisiting them with increasing sophistication at various levels. This approach not only encourages a logical developmental sequence of important knowledge, skills, and in-depth understanding but also promotes learning in later grades.

By incorporating these trends into the curriculum development process, we aim to create a curriculum that not only addresses the immediate learning needs of students but also prepares them for future academic success and lifelong learning.

This General Knowledge Curriculum for Grades I-III is:

1. **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.
2. **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.

3. **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.
4. **Emphasis on 21st Century Skills:** 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: (i) Active exploration of the environment; (ii) Self-directed and hands-on learning activities; (iii) Balance between individual and group activities; (iv) Regular and supportive interaction with teachers and peers; (v) Balance between active movement and quiet activities; and (vi) 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 can have effects throughout the life.
5. **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.
6. **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.
7. **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.
8. **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.

- 9. 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.
- 10. 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 enable them in understanding of the intertwined nature of learning. Also this Curriculum builds upon what children already know and are able to do (activating prior knowledge) to consolidate their learning and to foster their acquisition of new concepts and skills.

2.0 CURRICULUM FOCUS

2.0 The Core Focus of Our Curriculum

Primary focus of General Knowledge Curriculum is to cultivate students' interest and creativity through everyday experiences and investigations. It encourages the acquisition of thinking skills, fostering healthy attitudes, and instilling ethical and moral values.

2.1 Inquiry-Based Curriculum

The Inquiry-Based Curriculum revolutionizes traditional teaching methods, urging students to actively explore content rather than passively absorb facts. This approach shifts the focus from teacher-transmitted information to "student-constructed" learning, where learners take charge of their educational journey, fostering a sense of ownership and engagement.

At its core, the Inquiry-Based Curriculum prioritizes the development of critical thinking abilities. By immersing students in inquiry methods, it propels them towards sequential thinking, enabling them to discern connections between diverse facts and concepts. It goes further by cultivating independent critical thinking skills, encouraging students to think, question, understand, apply, analyze, and evaluate information. Additionally, the curriculum sparks creativity, prompting exploration of varied perspectives and innovative solutions.

This curriculum marks a significant departure from conventional teaching methodologies, challenging the traditional teacher-centered approach. In an Inquiry-Based setting, educators become facilitators, guiding students through the inquiry process rather than simply delivering information. This shift responds to the evolving needs of education and recognizes the diverse learning styles of students.

Ultimately, the Inquiry-Based Curriculum aims to empower the next generation with essential skills to tackle future challenges. Beyond mere memorization, it instills a profound understanding of how to navigate the expansive landscape of knowledge. This approach not only prepares students academically but also instills a lifelong passion for learning and inquiry. Thus, the Inquiry-Based Curriculum is a dynamic, interactive, and student-driven philosophy that transforms education. It lays the groundwork for a generation of thinkers, problem-solvers, and innovators unafraid to explore and question the world around them.

2.2 The Student-Centered Curriculum

Empowering Learners: Embracing the Student-Centered Curriculum

In the Student-Centered Curriculum, learners take center stage, reshaping the entire learning process. We meticulously design the curriculum to revolve around the student, ensuring that experiences directly relate to their daily lives by incorporating commonplace materials.

At its essence, the Student-Centered Curriculum places a significant emphasis on involving students in decision-making processes, particularly on matters relevant to their immediate environment. We encourage

students to unravel the intricacies of 'how things work,' fostering a hands-on and experiential approach to learning. This paradigm stands in stark contrast to the conventional teacher-centered model. Educators give up the role of sole information providers and adopt the position of facilitators. The focus shifts from teaching compulsions to the imperative task of addressing students' learning needs. This departure acknowledges that effective education is not a one-size-fits-all model rather recognizes individuality of each learner and tailor the educational experience to meet their specific requirements.

By embracing the Student-Centered Curriculum, educators prioritize creating an environment where students actively participate in their learning journey. Through hands-on experiences and decision-making opportunities, students not only grasp theoretical knowledge but also cultivate practical skills that are directly applicable to their lives. Thus, the Student-Centered Curriculum represents a dynamic shift from traditional teaching methods to inquiry approach for construction of knowledge and skills. It redefines the role of educators, placing students at the core and fostering a learning environment where their needs, experiences, and decision-making abilities are paramount. This approach ensures that education is not just about transferring knowledge but empowering learners with skills and insights that resonate with their lives and future endeavors.

2.3 An Outcome-Focused Curriculum

Achieving Excellence: The Outcomes-Focused Curriculum

In the Outcome-Focused Curriculum, the emphasis shifts to post-instruction accomplishments, marking a departure from traditional educational models. This curriculum precisely defines outcomes in Knowledge, Skills, Attitudes, and Values, acting as tangible benchmarks for both students and teachers to strive for. Fundamentally, this approach goes beyond the conventional concept of education as the mere transfer of information. Instead, it places importance on what students can actively accomplish with the knowledge they acquire. These well-defined outcomes become touchstones against which the success of the educational journey is measured.

The Outcome-Focused Curriculum serves as a guide for study programs, providing clear expectations for the acquisition of knowledge, skill, and disposition. It ensures a rigorous and purposeful learning environment, facilitating both teachers and students equally.

Achieving these outcomes seamlessly aligns with the overarching goal of students acquiring General Knowledge. It underscores the practical application of knowledge, emphasizing not only information acquisition but also the effective utilization of it. The processes outlined in this document serve as a strategic framework for achieving these outcomes, reinforcing a holistic approach to education.

The Outcomes-Focused Curriculum represents a proactive shift towards a results-driven educational paradigm. It empowers students to go beyond theoretical understanding, setting the stage for tangible accomplishments in terms of knowledge, skills, attitudes, and values. This approach not only challenges both educators and learners but also ensures that education translates into real-world capabilities.

3.0 CONTENT ORGANIZATION

The General Knowledge Curriculum takes a thematic approach, aligning topics with students' everyday experiences and common observations in nature, the environment, geography, socio-cultural norms, moral values, and religious beliefs and practices. The primary goal is to foster students' appreciation of the connections between seemingly disparate topics, facilitating the eventual integration of ideas.

Careful consideration goes into the selection of themes to promote deeper understanding rather than superficial coverage. While the curriculum organizes contents into domains, it discourages viewing topics under each domain as isolated blocks of knowledge. Clear boundaries between domain are absent, allowing for common topics to emerge, such as "Life in the past" being relevant to both Science and Social Studies. Consequently, an intentional effort is made to demonstrate the relationships between themes in textbook writing. Nonetheless, all identified themes draw inspiration from the Standards for General Science Curriculum Grades IV-VIII (2006), Social Studies Curriculum Grades V-VI (2007), and Learning Themes from Islamiat Curriculum Grades III-XII (2006).

Each of the ten domains (see Figure.1) encompasses various benchmarks, SLO's (which are categorized in cognitive levels: Knowledge, Understanding, Application). These Learning Outcomes for specific learning domains form a robust foundation for meeting the Benchmarks and Standards for Social Studies and General Science (Grade IV) and Islamiat/Religious Studies (Grade III).



Figure 1. List of Domains

3.1 Progression Grid:

This progression grid comprises **TEN** domains which are categorized into Standards, Benchmarks and SLOs for Grades I-III. Progression covers knowledge, skills and attitude which are detailed below:

3.1.1 Knowledge

Students engaging with our curriculum will cultivate a profound understanding of key concepts, empowering them to interpret, integrate, and extend their knowledge effectively. The core domains of knowledge encompass the following areas (A-J):

DOMAIN A: Our Beliefs						
Standard 1: Students develop awareness of basic beliefs; oneness of Almighty Allah, Rusul of Allah, last Rasool, Holy books, worship places and Namaz.						
Benchmark I: Students will be able to aware of the concept of Almighty Allah						
Benchmark II: Students will be able to aware of Rusul of Allah, last Rasool, Holy books and Namaz						
Benchmark III: Students will be able to recognize the worship places.						
Subtheme	Grade I		Grade II		Grade III	
Oneness of Allah. Rusul of Allah, Holy Books, Places of worship Namaz, Duas	Students will be able to: <ul style="list-style-type: none"> name different creations name 4 Holy books name 4 Rusul of Allah on whom the four books were revealed name the last Rasool of Allah recite Kalma e Tayyaba with translation recognize that everything is created by Allah understand Allah is the only creator name and recite a few Asma ul Husna to understand the concept of Only creator 	K K K K K K K	Students will be able to: <ul style="list-style-type: none"> recognize some blessings of Allah recall the names of 4 Holy books identify the places of worship recognize Azaan a call for Namaz. name 5 times of Namaz name and recite some Asma ul Husna recognize Hazrat Muhammad ﷺ is the last Rasool of Almighty Allah recite Kalma e Shahadah with translation 	K K K K K K K		
	<ul style="list-style-type: none"> practice some duas everyday (Bismillah, Assalam-o-Alaikum & Walaikum Assalam, Jazaka'Allah, Ma'Shah'Allah, In'Shah'Allah) 	A	<ul style="list-style-type: none"> practice some duas everyday (Durood Ibrahimi, Allahu Akbar, Subhan Allah (for going upstairs/downstairs), Rabi'Zidni' Ilma, sleeping prayer, prayers for using toilet). 	A		

DOMAIN B: Discovering Self and Immediate Environment

Standard 1: Students develop basic awareness of self and their environment and understand their role within environment.

Benchmark I: Students will be able to describe themselves, their family members, their friends, their emotions, their interests, and places around them

Benchmark II: Students will be able to explore their languages, living places, food, dress

Benchmark III: Students will be able to identify and practice healthy habits (washing hands, brushing teeth, trimming nails, good sleep etc.) for personal hygiene and healthy environment

Benchmark IV: Students will be able to recognize and practice the need for staying safe in daily life situations

Subtheme	Grade I	Grade II	Grade III	
Myself, My family, My Neighbourhood, My Past and Present Healthy habits, Staying safe	<p>Students will be able to:</p> <ul style="list-style-type: none"> recognize themselves briefly (name, age, likes/dislikes (food, sport/game, music, dress), feelings and what they want to be when they grow up etc. 	K		
	<ul style="list-style-type: none"> describe that individuals have different likes and dislikes. describe the ways in which they are same as and different from others with respect to likes and dislikes. 	U		
	<ul style="list-style-type: none"> describe the ways in which they are same as and different from others with respect to likes and dislikes. 	U		
	<ul style="list-style-type: none"> identify some family members (parents, brothers and sisters, grandparents, aunts, uncles and cousins (paternal and maternal) recognize that they should respect all family members and friends. 	K		
		<ul style="list-style-type: none"> tell the name and location of their school. name and identify the people they interact with in school (teachers, students, principal, service providing staff etc.) identify the different kinds of houses families live in (bungalow, mud house, hut, and apartment). 	<ul style="list-style-type: none"> recognize that the people of Sindh live in different types of areas (villages, cities, towns, and Kachi abadis). recognize that people from different areas, religions, and cultures can be friends. differentiate between lifestyles of people living in different areas (villages, cities, towns, and Kachi abadis). 	<p>K</p> <p>K</p> <p>K</p> <p>U</p>

Subtheme	Grade I	Grade II	Grade III
	<ul style="list-style-type: none"> • identify unhealthy habits that cause common illness like (cough, diarrhea etc.) • list various ways of protecting oneself from common illness. • describe how good hygiene and healthy habits can control the spread of diseases. • practice the ways of personal hygiene (washing hands clipping/trimming nails, brushing teeth, taking bath, combing hair etc. 	<ul style="list-style-type: none"> • list the ways in which they can keep their home, school and surroundings clean. • recognize the importance of drinking clean water, eating healthy food • recognize the importance of use of toilets, the safe disposal of feces and hygienic anal cleansing followed by washing hands with soap. • recognize the ways of keeping their environment clean and healthy. • practice the ways of keeping environment clean, green and healthy. 	<p>Knowledge</p> <ul style="list-style-type: none"> • recognize that present time is different from the past in terms of living style, food, communication, clothes etc. • (Add) sequence events in a narrative in chronological order. • (Add) identify how schools, communities, and transportation have changed over time (from the given pictures).
			<ul style="list-style-type: none"> • recognize the need for personal safety • identify some natural disasters and ways to stay safe. • list the various hazards they can face at home/school (bare wires, damaged roof, broken glass, fire, scissors etc.) • explain the risk and danger associated with the use of electric appliances/ sharp objects/ fire/ strangers, water bodies and animals. • express feelings of discomfort, confusion, fear, and danger to their parents/ teachers/ guardians to stay safe from any unexpected situation. • practice safety measures while using electrical appliances

DOMAIN C: Ethics And Values

Standard I: Students identify and practice good habits and positive values in their lives.

Benchmark I: Students will be able to demonstrate aspects of good habits (greetings, helping others, seeking permission, self-cleanliness, keeping environment clean & green) and etiquettes in their daily lives

Benchmark II: Students will be able to understand how their actions can affect the people, places, animals and environment around them

Subtheme	Grade I	Grade II	Grade III
Good habits Positive values Conflicts and its solutions	<p>Students will be able to:</p> <ul style="list-style-type: none"> identify good qualities in themselves and others (telling the truth; respecting everyone, listening to elder's advice; getting up early in the morning, following rules etc.) recognize and identify the etiquettes of using the washroom. describe the importance of sleep for their health and identify bedtime routines that promote better sleep. use greeting expressions to others by saying Assalam o Alaikum etc. demonstrate the importance of collaboration by participating in group activities such as games. demonstrate aspects of good character (punctuality, speaking politely, kindness, caring, honesty and truthfulness) demonstrate etiquettes of eating (don't waste food, eat with clean hands, don't drop food around). 	<p>Students will be able to:</p> <ul style="list-style-type: none"> recognize the importance of sharing things. list the things they can share with others (toys, books, stationery items, lunch with friends etc.) 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) identify occasions when it is important to wait for one's turn. For example, while speaking, in school, on the bus stop, at canteen and ticketing counters etc. identify factors that affect sleep quality (e.g., screen time, bedtime routine) and make adjustments for better sleep. relate with examples from their daily life the ways in which people are interdependent. 	<p>Students will be able to:</p> <ul style="list-style-type: none"> recognize some disagreements/conflicts that occur at home, in school and in the local community. identify feelings of people in different conflicting situations. identify reasons for disagreements with friends and family members. explain the importance of consistent sleep schedules and develop strategies for overcoming common sleep disturbances. apply discussion and problem-solving methods to work out disagreement. explore the ways in which people resolve conflicts/ disagreements at home and school.
			<ul style="list-style-type: none"> identify that all human beings are similar, but differ by religion,

Subtheme	Grade I	Grade II	Grade III
		family, culture, abilities, ethnicity, professions, and should all be respected. <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, making fun of others, pushing others, bullying using derogatory words etc.) recognize that mistakes are a natural outcome of learning and nothing to be ashamed about or to make fun of. differentiate between fair and unfair behavior in daily lives. demonstrate ways in which they can show respect for all. 	(ask for forgiveness, say sorry, do something special for them etc.) <ul style="list-style-type: none"> recognize that when people apologize for their mistake, they should forgive them. accept responsibility for treating others unfairly and manage their behavior accordingly. accept their behaviour when it is proven unfair through realization.
			U
			A
			A
			U
			A

DOMAIN D: Responsible Citizenship

Standard 3: Students recognize and practice the traits of a good citizen (respect rules, identify and fulfill their rights and responsibilities, and appreciate diversity with tolerance, harmony, peace etc.) and role of local government.

Benchmark I: Students will be able to interpret the traits of a good citizen

Benchmark II: Students will be able to practice traits of a good citizen

Benchmark III: Students will be able to understand the rights and responsibilities of a good citizen

Benchmark IV: Students will be able to recognize the role of the local government

Subtheme	Grade I	Grade II	Grade III
Rights and Responsibilities	Students will be able to: <ul style="list-style-type: none"> identify some basic rights (food, drinkable water, shelter, health and education) 	Students will be able to: <ul style="list-style-type: none"> recognize traits of a good citizen identify some rights of a good citizen (food, drinkable water, shelter, health and education, safety, equality, practice own religion) recognize the role of government and identify some goods and services that the government provides for the people (health, education, clean water, 	Students will be able to: <ul style="list-style-type: none"> identify the role of local government for addressing needs of community identify key local issues in their neighborhood (drinking water, school sewerage system etc.) perform the activities for the welfare of the neighborhood suggest ways the government and people can work together to
Of a good citizen,			K
Safety Rules,			K
Government and its			K
Responsibilities	<ul style="list-style-type: none"> take actions for careful use of water, food and clean environment 		A
			A

Subtheme	Grade I	Grade II	Grade III
		infrastructure, utilities, safety and security, parks and playgrounds etc.) <ul style="list-style-type: none"> describe the responsibilities of a good citizen take actions for careful use of water, food, clean environment, safety, equality follow safety rules while walking on the road, crossing a road, traveling by a bus etc. 	meet people's needs in the area <ul style="list-style-type: none"> demonstrate good citizenship (playing fairly, helping others, following rules, taking responsibility for one's actions and resolving local issues, sense of ownership of public goods).

DOMAIN E: Patriotism and Knowledge of Country

Standard 4: Students recognize the respect and value of our country Pakistan, its map, its founder and pioneers, and the significance of its flag.

Benchmark I: Students will be able to recognize key characteristics of Pakistan (name, date of formation, flag, anthem, provinces and areas (AJK, GB and ICT), religious and cultural festivals).

Benchmark II: Students will be able to identify key personalities and their contributions in the formation of Pakistan

Benchmark III: Students will be able to respect and value key characteristics of Pakistan

Subtheme	Grade I	Grade II	Grade III			
Our country Provinces and Areas of Pakistan Cultures of Pakistan Festivals Personalities	Students will be able to: <ul style="list-style-type: none"> tell the full name of our country and date of formation 	K	Students will be able to: <ul style="list-style-type: none"> recognize the map of Pakistan. 	K	Students will be able to: <ul style="list-style-type: none"> introduce Quaid-e-Azam Muhammad Ali Jinnah as the founder of Pakistan 	K
	<ul style="list-style-type: none"> recognize that all the countries have a flag 	K	<ul style="list-style-type: none"> name the provinces and areas (AJK, GB and ICT) of Pakistan. 	K	<ul style="list-style-type: none"> 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). 	K
	<ul style="list-style-type: none"> identify what the colors and symbols on the flag represent. 	K	<ul style="list-style-type: none"> name the provincial and national capitals of Pakistan 	K	<ul style="list-style-type: none"> introduce Mohtarma Fatima Jinnah as a key figure in the formation of Pakistan 	K
	<ul style="list-style-type: none"> draw the flag of Pakistan. 	K	<ul style="list-style-type: none"> recognize some of the national symbols of Pakistan such as the national animal, fruit, flower, bird, and sport recognize the significance of the national flag. identify festivals celebrated by Muslims in Pakistan and describe how they are celebrated identify festivals of other major religions and cultures in Pakistan and describe how they are celebrated. 	K	<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, some famous poems for children, and the date when he died). 	K

Subtheme	Grade I	Grade II	Grade III
		<ul style="list-style-type: none"> recognize and draw the map of Sindh describe the cultural diversity of all provinces and areas of Pakistan describe your favorite personality (family, local notable, etc.) 	<ul style="list-style-type: none"> introduce Sibghatullah Shah Rashdi as a key figure in the formation of Pakistan. discuss what they have learnt from the major events/contributions of Quaid-e-Azam Muhammad Ali Jinnah. describe your favorite personality (family, local notable, etc.)

DOMAIN F: 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.

Benchmark I: Students will be able to identify and differentiate among different means of transportation

Benchmark II: Students will be able to understand the importance of various occupations

Benchmark III: Students will be able to recognize the importance of agricultural crops and industrial products in Pakistan

Benchmark IV: Students will be able to identify and distinguish among natural, human and capital resources as a source for goods and services

Benchmark V: Students will be able to interpret the importance of various goods and services in our daily lives.

Subtheme	Grade I	Grade II	Grade III
Transportation Professions Agricultural Crops Industrial Products Natural and Human resources Goods and Services	<p>Students will be able to:</p> <ul style="list-style-type: none"> identify the means of transportation. Understand differentiate between slow & fast means of transportation. (Add) identify the places where buses and trains stop, airplanes land and ships berth. (Add) describe the activities that take place at a bus stop, railway station, airport, and harbor. 	<p>Students will be able to:</p> <ul style="list-style-type: none"> identify some common professions and occupations (farmer, butcher, cobbler, teacher etc.) in their locality through survey, pictures and browsing etc. list the major agricultural crops and livestock in Pakistan. recognize that people process the crops they grow for making products (cotton to thread to cloth to garments). enlist some of the main industrial products (toys, sports equipment, cloths, mobile phones, computers etc.) 	<p>Students will be able to:</p> <ul style="list-style-type: none"> define the term “resources”. state types of resources: natural resources, human resources and capital resources. identify natural resources (plants, animals, water, air, land, forests and soil), human resources (farmers, builders, painters etc.), capital resources (trucks, computers, factory buildings etc.) define the terms: goods, services, buyers and sellers. identify the main goods and services of their local area. describe the need for interdependence as not all goods and services are available in their area. describe scarcity and recognize that people make economic

Subtheme	Grade I	Grade II	Grade III
		<ul style="list-style-type: none"> recognize professional achievements of celebrated Pakistanis including women/ minority groups/differently abled groups comprehend the importance of some common professions in their daily lives. discuss the importance of livestock. explain which profession they like the most and why listening to various professionals such as Barbar, Gardner, etc. 	<ul style="list-style-type: none"> choices because goods and services are limited.

DOMAIN G: Life Sciences

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

Benchmark I: Students will be able to understand the importance of living and non-living things for each other

Benchmark II: Students will be able to recognize parts of a plant and importance of its each part

Benchmark III: Students will be able to recognize different types of animals and their places

Subtheme	Grade I	Grade II	Grade III
My body, Living things and Non things, Places where animals live. basic needs of Living things, Plants and its parts, Animals and their young ones, Habitat, Lifespan of Animals and Plants	<p>Students will be able to:</p> <ul style="list-style-type: none"> name major parts of the human body (head, arms, chest, legs, shoulder, back). name the five senses. recognize living and nonliving things around them in nature. identify some common domestic and wild animals. identify the food which different animals eat recognize the importance of animals as a source 	<p>Students will be able to:</p> <ul style="list-style-type: none"> identify major parts of a plant (root, stem, leaf and flower). tell-the functions of root, stem, leaf and flower. identify different shapes of leaves found around them. identify the fruits which have seeds in them. identify that soil, light, air and water are needed to grow a plant recognize that plants make their own food in the presence of sunlight. identify the roots, stems, flowers, leaves 	<p>Students will be able to:</p> <ul style="list-style-type: none"> recognize the term 'habitat'. recognize the type of habitats for living things (desert, forest, aquatic, polar). name plants and animals that live in each of these different habitats. identify the environmental factors (temperature, light, water) that support life in a habitat. identify the changes in the lifespan of an animal and a plant identify the ways in which human activities affect natural habitats.

Subtheme	Grade I	Grade II	Grade III
	<p>of food, joy, and transport.</p> <ul style="list-style-type: none"> • identify places where different animals are found (desert, jungle, water, mountains etc.) • recognize that some people don't have all the body parts and senses and they are also valuable members of the society. • state the functions of major body parts. • relate their body parts with the five senses (which body part helps them to taste, touch, smell, hear and see). • understand that living things need air, water, and food for growth. • (Add) differentiate between animals that can and cannot be kept at home, with reasons. 	<p>which are eaten by people.</p> <ul style="list-style-type: none"> • recognize the plants/ trees as a source of shade, oxygen, and shelter. • identify the things around that are made up of plants/ trees. • list the animals they see in their surroundings (land and water). • 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. • name different places 'where animals live (nest, den, barrow etc.) • recognize and compare that some plants grow from seeds while others grow from stems or roots • recognize and compare the animals that live on land (including birds) are different in features from those that live in water. • describe and compare how the offspring of different animals grow into adults, including humans, birds, frogs and butterflies. • demonstrate the importance of plants for a clean green environment 	<ul style="list-style-type: none"> • compare different stages of lifespan of plants and animals (from pictures, through observation / video etc.) • research and suggest the ways in which habitats can be protected. • (Add) recognize people who use science in their local area e.g., everyday use of science, restaurant chefs, dietitians, food manufacturers, dairy farmers.
			U
			A
			A

DOMAIN H: Physical Sciences

Standard 7: Students recognize simple forms of matter, machines, force and energy, and their uses.

Benchmark I: Students will be able to identify and differentiate among states of matter (Solid, Liquid and Gas)

Benchmark II: Students will be able to explore the different properties of matter

Benchmark III: Students will be able to recognize different machines

Benchmark IV: Students will be able to define push and pull forces and their impact on different objects

Benchmark V: Students will be able to identify sources of heat and light and their various uses.

Subtheme	Grade I	Grade II	Grade III
Objects around us Machines Matter, its States and Properties Force (Push and Pull) Energy (Heat and Light) Simple Circuit	Students will be able to: <ul style="list-style-type: none"> name different objects in their surroundings (home, school, and Neighbourhood). recognize that objects are different in shape, size, texture and weight. identify materials that can be hard or soft, smooth or rough. identify what makes objects move (push and pull). understand and explore push action moves things away from us while a pull action brings things closer to us. interpret from pictures that force applied by humans and animals for moving vehicles (Tonga, bullock cart, cycle, pushcart) interpret from the pictures/surrounding that machines are needed to move vehicles (bus, motorcycle, car, ship, train and plane etc.) show that an object moves when we push it or pull it classify objects based on the materials they are made of (wood, paper, plastic etc.) 	Students will be able to: <ul style="list-style-type: none"> recognize some common objects made of different materials such as wood, plastic, metal, glass, rock, paper and fabric. recognize that push & pull moves things fast or slow, (push and pull as a force) recognize that greater the force, the greater the change in the motion of an object. identify sources of heat and light in their homes, schools and surroundings. enlist natural and human made sources of light and heat. list the uses of heat and light. recognize that the intensity of heat and light is felt more as they come nearer to the source. differentiate between the natural and man-made materials. describe methods of producing heat (burning and rubbing etc.) explore properties of materials with respect to color, hardness, texture, sink/ floats. explore properties of materials with respect to elastic/non-elastic, magnetic/non-magnetic. 	Students will be able to: <ul style="list-style-type: none"> identify materials as either solids, liquids or gases. recognize basic differences between states of matter recognize that energy is required for doing work. identify natural sources of energy (sun, wood, flowing water, wind, coal, oil, gas). identify how we use electricity and safety measures recognize the basic components of a simple circuit: cells, wires, and bulb discuss different states of water. explore construction of simple circuit demonstrate that energy is present in all matter and in sound, light, and heat. inquire that sources of energy are used for many things (move an object, heating, lighting, transportation, electric appliances, etc.).
	K	K	K
	K	K	K
	K	K	K
	K	K	K
	U	K	K
	U	K	K
	U	U	K
	A	U	A
	A	A	A

Subtheme	Grade I	Grade II	Grade III
		<ul style="list-style-type: none"> observe and describe how motion of an object can be changed by applying force (speed up, slow down, stop, change direction etc.) 	A

DOMAIN I: Earth And Space Science

Standard 8: Students characterize the physical features and environmental changes of Earth and its relationship with celestial bodies in the sky.

Benchmark I: Students will be able to identify physical features of Earth and recognize its rotation and revolution.

Benchmark II: Students will be able to identify other celestial bodies such as sun, moon, the stars and planets in relation to Earth.

Benchmark III: Students will be able to name cardinal directions of Earth

Benchmark IV: Students will be able to recognize the importance of natural resources (environment, fisheries, livestock, agriculture, forest) and describe ways to conserve them

Benchmark V: Students will be able to understand pollution and identify different types of pollution their effects, and practice ways to reduce

Subtheme	Grade I	Grade II	Grade III
The earth Day and Night Solar System Cardinal Directions Shadow Water Pollution Save Natural Resources	<p>Students will be able to:</p> <ul style="list-style-type: none"> recognize that the Earth is covered with land and water. identify celestial objects such as sun, moon, and the stars during the day and night 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. recognize the concept of day and night 	<p>Students will be able to:</p> <ul style="list-style-type: none"> recognize that the Earth is a source of all materials we use, and many useful materials and resources come from it. identify the natural sources of water around themselves. recognize the importance of water resources (lake, river, ocean, rain, etc.). identify the ways in which the land is destroyed due to human activity (deforestation). identify the ways in which human beings waste water. suggest ways to save water 	<p>Students will be able to:</p> <ul style="list-style-type: none"> name the eight planets of solar system recognize the shape of the Earth recognize that heat and light of the Sun helps to sustain life on Earth identify that on Earth, the direction of sunrise is 'East' and the direction of sunset is "West" identify South and North with respect to East and West, namely, South and North. name places towards North, South, East, and West of the school/home. recognize that the size and direction of the shadow can be used to estimate (guess) time define the term pollution list different types of pollution (land, water, air, noise). identify the endangered animals of Pakistan (Indus dolphin, markhor, blackbuck etc.) (Add) identify animals, which are extinct (dinosaurs, etc.)

Subtheme	Grade I	Grade II	Grade III	
			<ul style="list-style-type: none"> explain that our solar system is made of a large star (sun) and eight planets. 	U
			<ul style="list-style-type: none"> explain how the rotation of the Earth causes day and night 	U
			<ul style="list-style-type: none"> describe the formation of shadows 	U
			<ul style="list-style-type: none"> suggest ways to reduce pollution (3 r's) 	A
			<ul style="list-style-type: none"> suggest ways to protect the endangered animals. 	A
			<ul style="list-style-type: none"> (Add) predict what would happen if natural resources were all used up. 	A

Domain J: Health & Well-being

Standard 9: Students practice the ways of maintaining physical and mental health/well-being by making informed lifestyle choice

Benchmark I: Students will be able to identify and choose healthy foods

Benchmark II: Students will understand the importance of personal hygiene and practice it daily.

Benchmark III: Students will engage themselves in regular physical activities to promote fitness and overall well-being.

Benchmark IV: Students will be able to recognize and manage emotions in a positive way.

Benchmark V: Students will understand the effects of substances on the body and make informed choices about their consumption.

Subtheme	Grade I	Grade II	Grade III	
Healthy Food Physical Exercises Personal health and hygiene Behavior Harmful substances	Students will be able to: <ul style="list-style-type: none"> name at least three basic emotions (e.g. happy, sad, angry) and describe simple ways to express and cope with each emotion (e.g. drawing when feeling happy, taking a deep breath when feeling angry). 	K	Students will be able to: <ul style="list-style-type: none"> recognize the importance of use of toilets, the safe disposal of feces and hygienic anal cleansing followed by washing hands with soap. 	K
	<ul style="list-style-type: none"> differentiate between safe/unsafe playing areas (e.g. leveled, smooth clean, free of twigs, bushes, playing on road etc.) and substances (e.g., medicine, cleaning products) 	U	<ul style="list-style-type: none"> describe the potential dangers of common substances (e.g., rotten fruits, expire products, standing water, garbage, smoking). 	K
			<ul style="list-style-type: none"> enlist the benefits of physical activities. 	K
			<ul style="list-style-type: none"> explain why personal hygiene is important for preventing illness and maintaining overall health. 	U
			<ul style="list-style-type: none"> explain why each group is important. 	U
			Students will be able to: <ul style="list-style-type: none"> recognize that healthy living requires eating a healthy food, keeping clean, sleeping well, and exercising regularly, drinking clean water, brushing teeth. explain the misuse of medicine as harmful and identify the strategies for staying safe and preventing the risk related to parks/roads to school and home (such as risk of strangers, snakes, dogs, traffic roads, ditches and bridges etc.) describe different food groups (protein, carbohydrates, minerals etc.) 	K K U

Subtheme	Grade I	Grade II	Grade III
	<ul style="list-style-type: none"> • recognize and classify healthy or unhealthy foods. • engage themselves in games and exercises for better health regularly • apply different ways to keep themselves clean (washing hands before and after meals and after using the toilet, trimming nails, brushing teeth daily, taking bath regularly etc.) 	<ul style="list-style-type: none"> • identify a wider range of emotions (e.g., excited, frustrated, worried) and describe strategies for coping with more complex emotions, such as talking to a trusted adult or writing about their feelings in a journal. • create a simple balanced meal plan (of 3 times) using different food groups • practice variety of physical activities (rope skipping, running, stretching etc.) everyday 	<ul style="list-style-type: none"> • recognize muscular strength and flexibility while moving (e.g. twisting, bending, pushing, and pulling) during physical activities • demonstrate empathy and understanding towards others' emotions and apply problem-solving skills to resolve conflicts peacefully. • demonstrate proper techniques for personal hygiene, including dental care, grooming, and handwashing. • set personal fitness goals and create a plan to achieve them, incorporating different types of physical activities.

Important Notes:

1. Introduction of Islamiat: By the end of Grade II, students will have acquired essential knowledge of Islamiat, setting the stage for more in-depth exploration starting from Grade III. Islamiat is introduced as a separate subject from Grade III onwards.
2. Foundation for Science and Social Studies: By the end of Grade II, students will possess foundational knowledge in Science and Social Studies, laying the groundwork for advanced learning in Grade IV. Science and Social Studies become separate subjects starting from Grade IV, allowing for a more specialized focus in these critical areas.

3.1.2 Skills

As we tailor our General Knowledge Curriculum for students in Grades I-III, our focus extends beyond the mere transfer of information. We actively foster the development of an array of skills crucial for effective inquiry, problem-solving, communication, collaboration, and decision-making.

In the engaging process of answering questions, solving problems, and making decisions, students will harness a variety of skills. These skills, while not exclusive to the realm of General Knowledge, hold pivotal significance in shaping systematic understandings and applying acquired knowledge to novel situations. Importantly, our approach to skills development rejects a one-size-fits-all mentality. Instead, we recognize that each investigation and application possess unique features, necessitating a tailored mix and sequence of skills. This recognition is fundamental to our commitment to cultivating adaptability and creativity in our students.

Within the framework of Grades, I-III, our curriculum strives to provide a holistic foundation. It equips students not only with versatile tools for inquiry and problem-solving but also with the ability to discern and apply the most suitable skills for each distinct situation. Our approach not only embraces the diversity of skills required in the learning process but also underscores the importance of adaptability and critical thinking as our young learners navigate the complexities of knowledge acquisition and application.

3.1.3 Attitude

Encouraging the development of attitudes and moral values is a key focus in our approach to education. Students will actively cultivate attitudes that support responsible acquisition and application of knowledge for the mutual benefit of self, society, and the environment. Attitudes, defined as generalized aspects of behavior, are modeled through examples and reinforced with selective approval. They manifest over time through regular, unprompted demonstrations and are a lifelong developmental process involving the home, school, community, and society at large.

In guiding the development of attitudes and moral values, teachers play a crucial role through:

- **Awareness:** Recognizing the importance of developing attitudes and values.
- **Emphasis:** Giving due importance and emphasis to these attitudes and values.
- **Practice:** Actively engaging in and internalizing these attitudes and moral values.

The outcomes of attitude development focus on various aspects, such as:

3.3.1 Appreciation of Science, Social Studies, and Islamiat/ Religious Studies:

Fostering an understanding and appreciation of the role and contribution of science, technology, behavioral sciences, and religion in students' lives. Encouraging enthusiasm and ongoing interest in these subjects through discussions and activities.

- **Inquiry:** Encouraging attitudes that support inquiry, problem-solving, and decision-making. Providing opportunities for students to engage in inquiries within their developmental capabilities, fostering open-mindedness, respect for reason and evidence, initiative, perseverance, creativity, and inventiveness.
- **Collaboration:** Developing attitudes that support collaborative activity by providing opportunities for students to work in groups and tackle real-life problems. Cultivating a sense of interpersonal responsibility, openness to diversity, respect for multiple perspectives, and an appreciation of the role, effort, and contribution of others.
- **Stewardship:** Encouraging responsibility for the application of knowledge in relation to Science & Technology, Religion, Society, and the Environment. Involving students in activities that promote responsible behavior towards fellow beings, living things, and the environment, considering issues related to sustainability and harmony from various perspectives.
- **Safety:** Cultivating a concern for safety in students' daily lives, whether at school or elsewhere. Contributing to attitudinal growth by encouraging students to assess and manage potential dangers, and apply safety procedures in their daily lives, fostering a positive attitude towards safety.

4.0 TEACHING AND LEARNING

4.1 The Roles and Responsibilities of Teachers

Teacher has highly important roles and responsibilities in implementing vital trends in the Curriculum. Teachers design and develop and execute learning and teaching strategies for addressing the needs of their students. Hence, teachers must ensure that these strategies achieve the intended learning outcomes. Following are some of the roles and responsibilities of a teacher in implementing the curriculum.

Roles	Responsibilities
Facilitator of Learning	<ul style="list-style-type: none">• Designing and implementing effective learning experiences.• Guiding students in understanding and achieving learning objectives.• Creating an environment that encourages curiosity and exploration.
Classroom Manager	<ul style="list-style-type: none">• Establishing and maintaining a positive and organized classroom environment.• Managing classroom behavior and promoting a positive learning atmosphere.• Organizing resources and materials for effective teaching.
Mentor and Guide	<ul style="list-style-type: none">• Providing guidance and support to students in their academic and personal growth.• Offering feedback and constructive criticism for self-improvement.• Acting as a mentor and role model for students.
Assessor of Student Progress	<ul style="list-style-type: none">• Designing and conducting assessments to measure student understanding.• Analyzing assessment data to identify areas for improvement and adjust teaching strategies.• Providing timely and constructive feedback on student performance.
Collaborator with Stakeholders	<ul style="list-style-type: none">• Collaborating with parents, colleagues, and other stakeholders to support student development.• Participating in meetings and discussions to enhance the overall learning environment.• Communicating effectively with parents about student progress and development.
Continuous Professional Development	<ul style="list-style-type: none">• Engaging in ongoing professional development to stay current with educational trends and best practices.• Reflecting on teaching practices and seeking opportunities and appreciations for improvement. Pursuing advanced education and certifications for personal and professional growth.

4.2 The Changing Nature of Teaching and Learning

Traditional instructional practices often rely on teacher-led activities, including lectures where students passively receive information and extensive use of textbooks. Traditional classrooms commonly center around students completing worksheets and short-answer activity sheets, with teachers adhering to a fixed set of instructional practices for each lesson, neglecting essential elements like reviewing previous lessons, stating objectives, and providing closure. This approach results in a disconnect between school learning and its real-world application, reducing subject knowledge to mere rote memorization.

However, contemporary perspectives on learners and learning signal a shift in roles and responsibilities for both students and teachers. Learning now extends beyond simple fact recall, emphasizing the ability to establish connections among facts and foster conceptual understanding. Teaching for conceptual change requires an understanding of students' preconceptions and the intentional design of intellectually engaging explorations to prompt students to confront and refine their ideas. The curriculum's teaching strategies are crafted to align with these evolving emphases in classroom learning.

In the early grades, the curriculum departs from the traditional emphasis on memorizing the "right" answer. The goal is for students to progress along a learning continuum, deepening their understanding of concepts and processes. Students actively engage in constructing their understanding of each concept, prompting a shift in the primary role of teaching away from conventional methods like lecturing or explaining. The focus now lies in creating situations that encourage students to independently make the necessary mental constructions, fostering a more dynamic and participatory learning experiences.

4.3 Embracing the Essential Principles of Learning

Teachers must stay with the latest trends in teaching methods, engaging in continuous learning, analysis, and evaluation of new developments in education. A noteworthy example is the adoption and adaptation of developmentally appropriate instruction, which centers on viewing the child as an active participant in the learning process. In this approach, children construct meaning and knowledge through interactions with peers, family, materials, and their environment. Teachers play a vital role as active facilitators, guiding students to comprehend the meaning behind various activities and interactions throughout the teaching learning process. This approach necessitates informed decision making in the classroom, where teachers combine their knowledge of child development with an understanding of each child's individuality to achieve desired and meaningful outcomes.

Teachers should also uphold the fundamental principles of accelerated learning, recognizing that:

- 1. A teacher should keep in mind following four basic principles of learning and a teacher must start teaching and learning from:**
 - a. Known to Unknown
 - b. Concrete to Abstract
 - c. Simple to Complex
 - d. Easy to Difficult

- 2. A teacher must understand that the students are not empty vessels but full of experiential and observational knowledge and skills.**
- 3. Learning Involves the Whole Mind and Body:**
It encompasses more than just "head" learning, engaging the entire body/mind with its emotions, senses, and receptors.
- 4. Learning is Creation, Not Consumption:**
Knowledge is not passively absorbed but actively created, integrating new knowledge and skills into the learner's existing structure of self.
- 5. Collaboration Aids Learning:**
Learning is often more effective through interaction with peers, as opposed to competition, which can impede the learning process.
- 6. Learning Takes Place on Many Levels Simultaneously:**
It engages people on multiple levels simultaneously, making use of various receptors and senses, aligning with the brain's parallel processing capabilities.
- 7. Learning Comes from Doing the Work Itself (With Feedback):**
Contextual learning is emphasized, recognizing that learning is best achieved when individuals engage in practical activities with feedback.
- 8. Positive Emotions Greatly Improve Learning:**
The emotional state significantly influences the quality and quantity of learning, with positive feelings accelerating the learning process.
- 9. The Image Brain Absorbs Information Instantly and Automatically:**
The human nervous system is an image processor, making concrete images more graspable and memorable than verbal abstractions. Transforming verbal concepts into vivid images facilitates faster and more accessible learning experiences.
- 10. Learning is not limited to formal textbook oriented but informal experiences and virtual.**

4.4 Teaching Strategies

Research suggests that high quality student learning is most likely to occur when students are involved and engaged in the construction of personal knowledge and in work that has value (application) beyond the school. The key intention of General Knowledge Curriculum is that "Students will value and use their experiential learning as a process of obtaining knowledge based upon observable evidence." Teachers can use a variety of teaching strategies to enhance students' learning; however, these must relate to the outcomes of the General Knowledge Curriculum and be consistent with the teaching role to be adopted. Suggested (not limited) teaching strategies for achieving the outcomes of learning are described as follows.

4.4.1 Inquiry-based teaching method (Teaching Strategy-1):

Inquiry is an approach to learning that involves a process of exploring the natural or material world that leads to asking questions, searching alternate answers, and making discoveries in the search for new understandings. In other words, it provides experiences that help students acquire concepts, skills, and abilities of inquiry, and understanding about inquiry. Inquiry teaching takes children to new levels of awareness and involvement in science through student-centered activities. In inquiry children take ownership of the learning process and inspires them to become more independent learners. As students engage in critical thinking and problem solving, questioning, probing and discovering answers, they gain a more meaningful and longer lasting understanding of concepts and processes.

Shifting Emphasis Away From	Towards a Greater Emphasis On
Demonstrating and verifying content through activities	Investigating and analyzing questions through engaging activities
Limiting investigations to a single class period	Extending investigations over prolonged periods of time
Context-independent application of process skills	Integrating process skills within relevant contexts
Focusing on individual process skills (e.g., observation or inference)	Utilizing a variety of process skills (manipulation, cognitive, procedural)
Solely seeking a correct answer	Utilizing evidence and strategies for developing or revising explanations
Providing answers to questions about content	Communicating comprehensive explanations
Individual and group analysis of data without defending a conclusion	Group analysis and synthesis of data following defended conclusions
Conducting few investigations to cover large content volumes	Conducting more investigations to nurture understanding, ability, and values of inquiry, along with subject content knowledge
Concluding inquiries with experiment results	Applying experiment results to scientific arguments and explanations
Managing materials and equipment	Managing ideas and information

Traditional educational systems have worked in a way that discourages the natural process of inquiry. Students become less prone to ask questions as they move through the grade levels. Here students learn not to ask too many questions, instead to listen and repeat the expected answers.

4.4.1.1 Key Principles of the Inquiry-Based Classroom

Principles of the Inquiry-based Classroom	Description
Learning is student-focused	Inquiry shifts ownership from teacher to student, highlighting the process of learning as crucial, with the teacher acting as a facilitator in the inquiry process.
Students' engagement in inquiry	Students describe, ask questions, devise answers, collect and interpret data, test knowledge reliability, identify assumptions, provide evidence, and justify their work.
Teachers ask questions to encourage inquiry	Open-ended questions like "How do you know?" and "How does your data support your conclusions?" guide students in further exploration and discovery.
Students are engaged in problem-solving, constructing meaningful experiences	Acting as scientists, students solve problems through hands-on exercises and critical thinking activities, constructing meaning from their experiences.
Students gain a greater understanding of the purpose of learning	Inquiry creates a framework where students understand "how" and "why" to ask questions, reflecting on lessons to explain their importance and deepen their understanding.
Inquiry is a creative learning environment using both group and individual discovery techniques	Students set short and long-term goals, adapting them based on interests, exploring through hands-on activities, whole-class instruction, or group collaboration.
Students interact purposefully with each other and the teacher, leading to effective communications	Inquiry-based teaching encourages collaboration, idea communication, question-asking, answer justification, and seeking advice from peers.
Assessment is ongoing	Assessment shifts focus from memorization to understanding, reasoning, and knowledge application. Methods include questioning, observation, checklists, portfolios, and more.
Assessment provides feedback on meeting expectations and classroom lesson effectiveness	Ongoing assessment offers insights into how well students are meeting expectations and provides feedback on the effectiveness of classroom lessons.
Learning is student-focused	Inquiry shifts ownership from teacher to student, highlighting the process of learning as crucial, with the teacher acting as a facilitator in the inquiry process.

4.4.1.2 Major Inquiry Skills

The skills of inquiry include observing, asking questions, gathering data, proposing ideas, experimenting, and interpreting the evidence that is gathered for making conclusions. An inquiry may be initiated in a variety of ways. It may be based on a question or a problem by a teacher or student; or it may arise out of an activity, an interesting observation, an unexplained event or a pattern that appears worth pursuing. Engagement in inquiry is not a linear process; it can have a variety of starting points, and the steps followed may vary from one inquiry activity to another. When an unexpected observation is made or a procedure does not work, there is opportunity for new ideas to emerge and a new set of procedures to be followed.

Major Inquiry Skills	Description
Questioning	Posing relevant and insightful questions that drive the search for knowledge.
Information Collection and Evaluation	Proficiently collecting and evaluating information from various sources, discerning the reliability and credibility of data.
Hypothesis Formulation and Logical Argumentation	Formulating hypotheses and constructing logical arguments, enabling individuals to draw informed conclusions and make evidence-based decisions.
Communication	Effectively articulating findings, engaging in meaningful discussions, and collaborating with others in the exchange of ideas.
Analytical Thinking	Employing analytical thinking to critically assess information, identify patterns, and draw connections between different pieces of knowledge.
Reflection	Reflecting on the learning process, evaluating the effectiveness of strategies, and continuously refining the approach to inquiry-based tasks.
Observing, Asking Questions, Proposing Ideas, Experimenting, and Interpreting Evidence	Key skills within the inquiry process, involving active observation, question formulation, idea generation, experimentation, and interpretation of gathered evidence.
Questioning	Developing the skill of asking questions, reflecting students' innate curiosity and practical-mindedness, leading to a deeper understanding of the world beyond passive learning.
Conducting Investigations	Encouraging students to design experiments based on their questions and hypotheses, with teachers serving as mentors, allowing students to make decisions and draw conclusions.
Continuous Inquiry Process	Emphasizing the evolving nature of inquiry, where students may not always arrive at complete answers, but gain valuable experiences, conduct investigations, connect with experts, and continue asking questions.

4.4.2. Learning-by-Doing Approach (Teaching Strategy-2):

Engaging children in hands-on activities fosters active participation in science, aligning with the philosophy that physical involvement promotes mental engagement. This approach, often referred to as "hands-on, minds-on" or the "learning-by-doing approach," encourages students to think critically about their actions. Mastery in any skill comes from consistent practice, and this principle holds true for learning as well. To excel in applying concepts to new situations, students must practice applying them in diverse contexts. If limited to repetitive exercises or unrealistic word problems, their understanding will be confined accordingly. Furthermore, essential skills such as critical thinking, information analysis, effective communication, logical argumentation, teamwork, and others can only be developed through repeated practice in varied scenarios. Encouraging and permitting students to engage in these activities repeatedly is crucial for their holistic skill development.

The learning-by-doing approach is advocated for its effectiveness in knowledge retention and skill development. This is supported by the following statistics:

- **20% of what we read:** Reading alone has a relatively low retention rate, as it primarily engages the visual and cognitive aspects of learning.
- **20% of what we hear:** Listening to information also has a limited impact on retention, emphasizing the need for multi-sensory experiences.
- **30% of what we see:** Visual learning improves retention compared to reading or listening but is still less effective than hands-on experiences.
- **50% of what we see and hear:** Combining visual and auditory stimuli enhances learning, but more interactive methods yield even better results.
- **70% of what we see, hear, and discuss:** Engaging in discussions further improves understanding as it involves verbalizing concepts and interacting with others.
- **90% of what we see, hear, discuss, and practice:** The most effective learning occurs when individuals actively practice what they have seen, heard, and discussed. This hands-on, practical application cements knowledge and skills, leading to higher retention rates.

The learning-by-doing approach comes with several advantages:

- **Integration of Multiple Teaching/Learning Methods:** This approach allows for the incorporation of various teaching and learning methods, catering to diverse learning styles and preferences.
- **Student-Centered:** It is highly student-centered, emphasizing active participation and engagement. Students take a more proactive role in their learning, contributing to a more personalized educational experience.
- **Builds Self-Esteem through Discovery:** The process of "discovery" inherent in hands-on activities contributes to building students' self-esteem. When they actively explore and learn, it instills a sense of accomplishment and confidence.
- **Enhances Enjoyment of Learning:** Learning becomes more enjoyable for students, and teaching becomes a more engaging and enjoyable experience for educators. The interactive nature of the approach fosters a positive learning environment.
- **Development of Life Skills:** Beyond subject-specific content, the learning-by-doing approach facilitates the acquisition of essential life skills. Students learn problem-solving, critical thinking, teamwork, and communication skills through practical application.

However, it is important to note that implementing this approach effectively requires systematic preparation, patience, and guidance from teachers. There may not always be a single "right" answer, necessitating flexibility in the learning process. The success of this approach lies in the teacher's ability to provide structured guidance and foster an environment where exploration and learning through doing are encouraged.

4.4.2.1 Teacher's Role in Learning by Doing Process

Teacher plays a crucial role in facilitating the learning-by-doing process. Rather than providing immediate answers to problems or questions, the teacher serves as a group leader, guiding students through a process of self-discovery. Here are the key roles of the teacher at each step of the learning-by-doing process:

Teacher's Roles	Description
Experience (Doing)	The teacher initiates the process by vividly describing the experience or activity students will undertake, withholding the "how" to encourage active engagement.
Share (What happened?)	After the completion of the activity, the teacher crafts questions to prompt students to share their experiences and articulate their reactions to the task.
Process (What's important?)	Continuing the guidance, the teacher formulates questions probing students about elements they deemed significant during the experience, fostering reflective thinking.
Generalize (So what?)	The teacher encourages a broader understanding by posing questions that help students connect the experience to their own lives, exploring the implications of the task.
Apply (Now what?)	In the final phase, the teacher stimulates critical thinking by developing questions that challenge students to contemplate how they can apply the gained knowledge in various situations.

4.4.3. Utilizing Demonstrations as an Effective Teaching Strategy

Incorporating in-class demonstrations is a valuable teaching strategy, injecting an element of fun and entertainment into ongoing lessons while simultaneously fostering student interest and curiosity. To maximize the effectiveness of in-class demonstrations and promote conceptual understanding, active participation and interaction from students are crucial components during these sessions.

Conducting an Interactive Demonstration:

1. Define the Purpose: Clearly establish the objective of the demonstration and what specific outcomes you aim to achieve.
2. Personal Demonstration: Before presenting to students, conduct the demonstration yourself to ensure desired results and smooth execution.
3. Prepare Curricular Materials: Design worksheets or curricular materials that encourage both student-student and student-teacher interactions during the demonstration.
4. Perform the Demonstration: Execute the demonstration, actively involving students and encouraging engagement.
5. Post-Demonstration Activities: Upon completion, task students with worksheet activities, involving predictions, diagram drawing, and responding to multiple-choice questions.
6. Class Discussion: Facilitate a comprehensive class discussion, providing explanations to clarify or extend students' learning based on the demonstration.

It's essential to recognize that sophisticated and expensive equipment is not always a prerequisite for effective teaching. While certain subjects may require specific tools, the General Knowledge Curriculum can often be conveyed using simple, inexpensive, and readily available materials such as paper clips, straws, balloons, and more. Additionally, leveraging outdoor environments like farms, gardens, or parks offers a rich resource for experiential learning, enabling students to explore concepts related to plants, animals, weather, seasons, and other phenomena beyond the confines of the classroom.

4.4.4. Embracing Cooperative Learning (Teaching Strategy-4)

Cooperative learning stands as a powerful strategy, engaging students in small groups to enhance their individual and collective learning experiences. In cooperative classrooms, students assume a dual responsibility: not only to grasp and complete assigned materials but also to ensure the success of every group member. This approach yields a multitude of academic, social, and psychological benefits, including heightened self-esteem, increased on-task time, elevated higher-order thinking, improved understanding of material, adeptness in group collaboration, and enhanced attitudes towards school and teachers. Furthermore, cooperative learning serves as a platform for students to acquire and master the social skills crucial for leading productive and fulfilling lives.

Think-Pair-Share: The Think-Pair-Share is an activity of cooperative learning that unfolds in three key stages:

1. **Think (Alone):** Students ponder a question or problem individually, reflecting on their answers and expressing their thoughts in writing.
2. **Pair (Together):** Students pair up with a fellow student, functioning as partners to discuss the question or problem, actively listening to and expanding on each other's ideas.
3. **Share (Collectively):** Students share their potential answers or solutions with the entire class, fostering a collaborative exchange of perspectives.

Effective implementation of Think-Pair-Share hinges on equitable student participation, where each member contributes to the discussion, practices social skills, and individually showcases their learning acquired from their partners.

Evaluation of academic success involves random questioning, checking of individual work, or conducting tests and quizzes. On the social skills front, assessment occurs through teacher observations and self and group evaluations, ensuring a comprehensive understanding of individual and collective effectiveness.

4.4.5. Engaging Through Role-Play (Teaching Strategy-5)

Role-playing serves as a dynamic teaching strategy wherein students learn through active participation, acting out scenarios in front of the class. This approach not only imparts content knowledge but also nurtures problem-solving, communication, initiative, and social skills. As students explore their own and others' feelings, attitudes, and perspectives, they gain a deeper understanding of themselves and their peers. Encouraging students to script role-plays themselves enhances their information collection, processing skills, and creativity. However, for younger grades, teachers need to guide the role-play process.

Conducting Role-plays:

1. **Determine Purpose and Appropriateness:** Identify the purpose of the role-play, ensuring alignment with objectives and suitability for the age group.
2. **Write a Role-play:** Craft a role-play, either by the teacher or students, focusing on a realistic situation (e.g., newscast, courtroom scene, press conference).
3. **Define the Problem or Issues:** Clearly define the problem or issues within the role-play scenario that participants will address.
4. **Determine Number of Role-players:** Specify the required number of role-players based on the scenario.
5. **Develop Short, Specific Roles:** Assign short, specific roles for each participant, ensuring clarity in their responsibilities.
6. **Set Time for Each Role-play:** Allocate specific time for the enactment of each role-play.
7. **Prepare Post Role-play Questions:** Develop a set of questions for the post role-play discussion.

While students are acting, ensure attentive observation from the rest of the class. Allow adequate time for students to understand their roles and prepare for enactment. Encourage class involvement by soliciting questions for the post-discussion.

After the role-play, review it with the class, opening the floor for a focused discussion on the content. If addressing a problem, students can explore alternative solutions. Summarize the role-play, emphasizing students' comprehension of the dramatized problem or issue and their attempts to solve it.

Assessment involves evaluating concept understanding, communication skills, and problem-solving abilities through observation and questioning. Social skills developed during role-play preparation and execution can be assessed using a checklist.

4.5 Additional Classroom Teaching and Learning Practices:

The recommended classroom teaching strategies are not exhaustive. It is anticipated that teachers will also discover and incorporate other research-based instructional designs and practices suitable for their students. These approaches should encourage students to focus on the significant aspects of their experiences, observations, and the concepts they are exploring, fostering critical engagement and progress toward desired learning outcomes.

4.6 Various Instructional Designs and Practices:

1. **Model Building:** Utilizing models to visually represent concepts and ideas.
2. **Consequence Maps:** Mapping out the potential outcomes and consequences of actions.
3. **Concept Mapping:** Creating visual representations to illustrate relationships between concepts.
4. **Brainstorming:** Encouraging creative thinking through spontaneous idea generation.
5. **Predict-Observe-Explain:** Engaging students in predicting outcomes, observing, and explaining observed results.
6. **Small Group Research:** Facilitating collaborative research projects within small groups.
7. **Information Technology Integration:** Leveraging technology for enhanced learning experiences.
8. **Drill and Practice:** Repeated exercises to reinforce and practice specific skills.
9. **Process Writing:** Focusing on the stages of the writing process.
10. **Storytelling:** Narrating stories to convey concepts and engage students.
11. **Show and Tell:** Allowing students to showcase and explain items or projects.
12. **Class Discussions:** Encouraging open conversations to explore ideas and viewpoints.

13. **Creative Writing:** Promoting imaginative expression through writing.
14. **Computer Simulations:** Using virtual simulations for interactive learning experiences.
15. **Posters:** Creating visual displays to reinforce learning.

These practices contribute to ensuring that students have enriching and diverse learning experiences. It is essential to incorporate safety practices, particularly for hands-on activities, experiments, and demonstrations. While these methods offer exciting teaching and learning opportunities, teachers and schools must establish a positive environment where risks are evaluated and minimized to an acceptable, safe level. Additionally, vigilance is crucial during fieldwork and field trips, emphasizing traffic and road safety considerations.

4.7 Key Learning Theories and Classroom Applications

Understanding and implementing learning theories is crucial for teachers to enhance their classroom practice and foster effective learning environments. Here are key learning theories that teachers can consider:

4.7.1 Behaviorism:

Overview: Behaviorism focuses on observable behaviors and suggests that learning is a result of external stimuli and responses. Reinforcement and punishment play a key role in shaping behavior.

Implementation: Teachers can use positive reinforcement, rewards, and clear expectations to encourage desired behaviors. Consistency in consequences helps in behavior modification.

4.7.2 Cognitivism:

Overview: Cognitivism emphasizes mental processes such as memory, problem-solving, and critical thinking. It views learning as an active process of organizing and interpreting information.

Implementation: Teachers can engage students in activities that promote critical thinking, use concept mapping for visual representation, and provide opportunities for problem-solving.

4.7.3 Constructivism:

Overview: Constructivism posits that learners actively build their own knowledge by connecting new information to existing mental models. It emphasizes hands-on and collaborative learning.

Implementation: Teachers can facilitate group projects, encourage discussions, and provide real-world examples. Problem-based learning and inquiry-based methods align well with constructivist principles.

4.7.4 Social Learning Theory:

Overview: Social learning theory, developed by Albert Bandura, suggests that individuals learn by observing others and imitating their behaviors. It incorporates elements of both behaviorism and cognitive theory.

Implementation: Teachers can create a collaborative classroom environment, encourage peer teaching, and model positive behaviors. Using cooperative learning strategies supports social learning.

4.7.5 Connectivism:

Overview: Connectivism is relevant in the digital age, emphasizing the role of technology and networks in learning. It posits that learning is distributed across networks of people and resources.

Implementation: Teachers can integrate technology into lessons, foster online collaboration, and guide students in navigating digital information. Emphasizing the development of a personal learning network is crucial.

4.7.6 Experiential Learning:

Overview: Experiential learning theory, proposed by David Kolb, suggests that learning is a process involving concrete experiences, reflective observation, abstract conceptualization, and active experimentation.

Implementation: Teachers can incorporate hands-on activities, field trips, and reflective exercises. Designing lessons that cycle through these stages caters to diverse learning preferences.

4.7.7 Humanism:

Overview: Humanism focuses on the individual's potential for growth and self-actualization. It emphasizes the importance of personal agency, autonomy, and the holistic development of learners.

Implementation: Teachers can create a positive and supportive classroom culture, provide choices in assignments, and encourage self-directed learning. Recognizing and celebrating individual achievements contributes to a humanistic approach.

5.0 ASSESSING AND EVALUATING STUDENTS' LEARNING

5.1 Assessment and Evaluation

Assessment in education is a continuous and systematic process of collecting, interpreting and utilizing information about students' progress and performance. It encompasses a range of formative and summative methods aimed at understanding and enhancing learning outcomes. Formative assessment provides ongoing feedback for instructional improvement, while summative assessment evaluates overall achievement at the conclusion of a designated period. As for as the Evaluation is concerned it refers to the comprehensive and systematic examination of educational programs, activities, or outcomes to ascertain their effectiveness, value and quality. It involves the methodical collection and analysis of data to make informed judgments about the success and impact of an educational endeavor. Evaluation can encompass both formative aspects, focused on ongoing improvement as well as summative elements, providing an overall assessment of the initiative.

Assessment is like a way of checking how well students have learned things. It helps us find out how much they've learned and how well they've learned it. It also helps us figure out how well we taught them. The goal is to see if they've reached the learning goals, we set for them.

Learning is not always a straight line. It is more about connecting what we already know with new things we are learning, rather than just adding facts one by one. So, a good assessment should look at how well students understand and connect ideas, not just how many facts they remember.

Evaluation is a crucial part of teaching and learning. It means gathering information in different ways to make fair judgments and good decisions. Assessments provide teachers information about how well students are doing compared to what they were supposed to learn. With this information, teachers can decide how to help students in learning or improve how they teach.

In the early school years (Ages 5-8 years) kids learn a lot. They are figuring out how to read, write, and understand different subjects. This is also the time when we start to see how well they are doing in relation to what they are supposed to learn. We want to assess them in ways that make sense for their age, considering how young kids show what they know.

Traditional tests, like the ones with single-answer questions and strict time limits, can stress out young learners. This stress can make it hard for them to think clearly and it might not show how much they really know. So, teachers need to find different ways to assess their learning.

5.2 The Changing Paradigm in Educational Assessment

The present Curriculum elaborates that the ultimate outcome for the school education is that students will learn the skills and competencies needed to succeed in today's world such as the skills of inquiry, reasoning, problem solving, decision-making and collaborative learning. To meet these outcomes, teachers need to provide students with learning experiences that are more authentic. If we want an accurate appraisal of how

well teachers are helping students to achieve these outcomes, they must make changes in assessment that reflect the changes in curriculum and instruction.

The traditional assessment often relies on quick, standardized tests such as multiple-choice or short-answer questions. While these tests can check if students know facts and basic skills, they often miss important things like critical thinking, creative thinking, and problem-solving skills. The usual way of testing also does not really show how students are learning. This might not make students excited about learning because they know they are just being tested on remembering facts or doing simple tasks.

On the other hand, alternative assessment is a different approach. It uses methods like performance tasks, portfolios, students reflecting on their own work, and reviewing each other's work. This type of assessment is seen as a valuable addition to the usual tests. The idea behind alternative assessment is to collect evidence from real-life situations, use different assessment methods to understand learning, and give ongoing feedback to students. This way of assessing is considered better at figuring out how well students are learning and how effective the teaching is compared to the traditional methods. Research on assessment tells us that it is crucial to align what is being taught, how students learn and how they are assessed.

5.3 Incorporating Assessment into the Learning Process

Integrating assessment with instructions, which means incorporating it into the learning process, is crucial for the complete implementation of this curriculum. To enable students to actively build their understanding in the classroom through genuine experiences, assessment must be:

1. Providing opportunities for open-ended discussions and the refinement of newly acquired knowledge.
2. Embracing diverse perspectives by encouraging students with different levels of understanding and emphasizing the idea that there is no singular "correct answer."
3. Presented through various modes, not restricted to conventional paper-and-pencil responses to restrictive questions.
4. Structured to encourage analysis, comparison, generalization, prediction, and adaptation based on grade and developmental levels.
5. Capable of promoting collaboration and teamwork in demonstration of competency.
6. Continuous and cumulative, demonstrating progress and development over time.

Thus, assessment should be conducted regularly using a variety of methods such as oral questionnaires, surveys and practical observations, project-based learning, and written tests. Conducting regular surveys provides the necessary information to plan the teacher's daily instruction.

Based on the findings of the assessment, a teacher may decide to move on to the next teaching lesson/topic, develop remedial teaching, write a refreshing exercise/exercise or modify the teaching method.

Assessment practices also include what is important and valuable in primary education (grades 1-3). For example, assessment that emphasizes the acquisition of true knowledge suggests that facts are important, whereas assessment that focuses on inquiry so indicates the need for scientific research. Access to progressive feedback should reflect the way teachers teach and explain what students need to learn.

The primary purpose of classroom assessment for this grade is not only to evaluate and categorize student performance, but also to inform and improve learning, and to track student achievement in end-of-year academic achievement.

5.4 The Assessment Process

In order to apply assessments effectively to determine whether student learning is expanded or improved, an assessment plan needs to be developed that incorporates assessment opportunities throughout the learning process. In the early grades to be effective, assessment cannot be an afterthought or instructional add-on. It needs to be embedded, contextualized, and executed within the learning process. Effective teachers should outline the process for developing and implementing an assessment plan for measuring students' learning. The procedure to follow for research and implementation for example is as follows:

- 1) Choose educational goals from a specific course and grade level.
- 2) Create assessments to evaluate the achievement of learning goals.
 - Identify the goals to assess,
 - Define the purpose of the assessment,
 - Choose the assessment method,
 - Specify the type of assessment data to collect.
- 3) Develop educational activities aligned with the identified learning goals.
- 4) Integrate assessment tasks within the instructional designs.
- 5) Deliver learning.
- 6) Evaluate both learning and the effectiveness of learning activities.
- 7) Collect and organize data generated by assessment tasks.
- 8) Analyze the assessment data to derive meaningful insights.
- 9) Use assessment data to make decisions at the student, classroom and course level.

Teachers can modify this process depending upon their professional competencies and need of the students. However, the effective assessment strategies should encompass various practices accommodating diverse learning styles among the students. It should be a continuous, productive, and constructive process, actively monitoring and guiding student progress towards achieving desired outcomes.

The assessment approach should align with and be grounded in the diverse learning experiences of all students. It must be comprehensive, covering a wide range of aspects. Additionally, it should demonstrate validity and reliability, ensuring that the assessment is both effective and manageable for both educators and students. The assessment process should contribute to the enhancement of teaching strategies, constantly monitoring strengths, and identifying areas for further development. Consistency with established teaching strategies is crucial, involving negotiation between teachers and students to create an inclusive environment. Students should be prepared for active participation in their own record-keeping as well. Above all, the language used in assessments should be clear and understandable to ensure the effective communication of feedback and progress.

5.5 Assessor(s)

The teacher, the student doing self-assessment, or the student(s) assessing a peer or group, can do the assessment.

A. Teacher Assessment

The teacher assesses individual students or groups of students using a variety of assessment tools to implement the various assessment strategies.

B. Self-Assessment

The self-assessment is a process by which students gain a clear understanding of their expected achievements and how to demonstrate their knowledge. They recognize the connection between acquiring content, mastering skills and the opportunities for assessment. By focusing on demonstrating their understanding, students can easily identify the relevance and connections in their work.

Additionally, students document their observations and write reflective notes on how learning experiences contribute to their comprehension of concepts and principles. They take on the role of a researcher, applying critical thinking skills to find facts and draw inferences to reach conclusions. This active engagement contrasts with passive information reception and rote memorization. In the early grades, students employ established criteria to reflect on and assess their own progress, with the teacher facilitating this role.

The developing self-assessment skills enables students to learn accuracy and accountability. Other advantages of self-assessment include setting a critical programming goal for lifelong learning. It helps students understand established criteria, especially for psychomotor skills where cognitive understanding is a crucial step. Self-reflection, integral to self-assessment, involves personal responses and reflections on oneself or the learning process. These reflections and responses can be documented in student learning logs, journals, and portfolios.

C. Peer Assessment

The peer assessment is an effective way to collect reliable information in a short time. Evaluating the work of others is a valuable learning experience for the student who is doing the assessment. While students make systematic judgments about each other's performance. It also helps to extend teacher's knowledge about an individual or group. However, peers must be knowledgeable about the criteria for assessment and willing to take their responsibility seriously. In assessing their peers, students need to start with a limited role and use simple checklists, rating scales and frequency indexes.

D. Group Assessment

The group assessment is similar to peer assessment; however, group assessment involves using groups of students to assess other groups or using one student to assess a group.

E. Authentic Assessment

Task, Problem, or Project is authentic if it:

- A. Is realistic: The task replicates the ways in which a persons' knowledge and abilities are "tested" in real world situations.

- B. Requires Judgement and Innovation: The student has to use knowledge and skills wisely and effectively to solve unstructured problems such as when a plan must be designed, and the solution involves more than following a set routine or procedure or plugging in knowledge.
- C. Ask students to do the task: Instead of reciting, restating or replicating through demonstration what he or she was taught or what is already known, the student has to carryout exploration within the discipline or thematic concept.

5.6 Classroom Assessment Strategies

Assessment is an integral and continuous part of classroom activities. It entails observing students active working, listening and their contributions. Additionally, it involves analyzing student work based on specific criteria, emphasizing an understanding of their thought processes and addressing both their reasoning and areas of confusion. Effective assessment engages students as active participants in all kind of activities.

The classroom assessment strategies play very important role in providing ongoing feedback to both learners and teachers. They illuminate what concepts are clear and what learners find challenging. It offers valuable insights for teachers to adjust and modify courses or learning plans accordingly.

Teachers come to know about the student progress not solely through formal tests but also through continuous, moment-by-moment observation of students in action during instructional activities. In order to assess student knowledge, skills and attitudes, teachers employ various tools and approaches. The following section outlines some of the classroom assessment strategies.

A. Observation

The observation in the classroom is a dynamic and versatile strategy that supports effective teaching by providing real-time insights into student learning, engagement and behavior. It enhances the overall assessment process and contributes in creating a student-centered learning environment.

B. Performance Tasks

Performance includes activities such as skill demonstrations, games, routines, drawings, projects and presentations. With the help of these tasks, students actively perform, create, construct, produce and engage in specific activities. It also helps in the development of deep understanding and higher-order thinking skills. The nature of performance tasks involves substantial work, often spanning days to weeks for completion and necessitates students to describe their work. The performance is directly observable and it allows for a clear evaluation of students' abilities. Moreover, the criteria for assessment are explicitly specified and communicated to students for detailed explanation of the task.

Performance-based Assessments

Performance-based assessments are evaluation methods that measure students abilities to apply their knowledge and skills in practical, real-world scenarios. Unlike traditional assessments that rely on standardized tests and multiple-choice questions, performance-based assessments require students to actively demonstrate what they have learned through various tasks and activities. These

assessments emphasize the application of knowledge rather than rote memorization, providing a more authentic measure of a student's understanding and competence.

One key characteristic of performance-based assessments is the emphasis on higher-order thinking skills, such as critical thinking, problem-solving, creativity and effective communication. These assessments not only evaluate what students know but also how well they can apply that knowledge to solve practical problems.

Performance-based assessments offer a more comprehensive and authentic way to evaluate students' abilities by focusing on practical application and higher-order thinking skills. It provides accurate representation of a student's understanding but also contribute to the development of critical skills necessary for success in various aspects of life.

C. Questioning/Interviews

Questioning and interviews serve as dynamic and insightful classroom assessment strategies, contributing to a comprehensive understanding of students' knowledge, skills as well as critical thinking abilities. In the General Knowledge Curriculum, these approaches transcend the traditional recall of facts with purpose aiming to foster in-depth understanding and practical application of concepts. This assessment technique not only measures students' knowledge but also serves as a platform for enhancing verbal presentation skills as well. Interviews offer students an opportunity to showcase their ability to articulate their understanding and clarify concepts. Overall, questioning and interviews play a pivotal role in promoting critical thinking, enhancing communication skills and providing valuable insights into student learning within the classroom.

D. Journals/Learning Logs/Reflections:

Engaging in journal writing, learning log entries and reflections offers students a valuable avenue to document their personal record (thoughts, choices, feelings, progress and participation).

With the help of words and pictures students can describe their understanding. These recorded entries identify most effective learning styles of the students. Additionally, journal entries provide indicators of developing attitudes toward concepts, processes, skills and their potential applications in societal contexts. Embracing self-assessment through journaling allows students to reflect on strengths, weaknesses, attitudes, interests and new ideas, fostering a deeper understanding of their own learning journey.

E. Portfolios:

Portfolios present an alternative and comprehensive method for assessing students' progress in meeting Curriculum Outcomes over an extended period. This form of assessment places the student at the center of the process. It allows collaborative decision-making between the student and teacher regarding the portfolio's content. Portfolios can encompass a diverse range of items such as artifacts which student collect for strengthening his learning capabilities. Portfolios also facilitate individual reflection and self-assessment. Moreover, sharing portfolios with others, particularly for younger students, becomes an exciting opportunity to review and witness their developmental journey over time.

F. Paper and Pencil Tasks:

Paper and pencil tasks include different ways teachers check what you know, like answering questions (which can be multiple-choice, true or false, open-ended, or matching) and doing things like drawing or labeling pictures.

These tasks can serve both formative and summative assessment purposes and may take the form of written assignments or tests. It is crucial for students to be aware of the expectations and the rubric by which their work will be assessed. While these tasks are effective in assessing knowledge, understanding, and application of concepts.

5.7 Assessment Tools

Assessment tools are instrument for measurement or making judgments, based on the interpretation of evidence for determining how well the student is performing or learning. Such tools include the performance criteria to determine the level of students' progress and achievement. Examples of assessment tools are checklists, rating scales, scoring rubrics, frequency indexes, inventories and anecdotal notes.

A. Checklist:

A checklist is a tool used to keep track of specific things students should know or be able to do. It lists clear criteria (like guidelines) for behaviors and performance related to what students are supposed to learn. The criteria in checklists should be easy to understand and observable by students. Students can even help make the checklist or add new items for different assessments.

B. Rating Scales:

Rating scales are lists of criteria that help judge how well students are performing along a scale. These scales can use words like "always," "frequently," "rarely," or numbers like 5, 4, 3, 2, 1 (where 5 is the best and 1 is the lowest).

C. Scoring Rubrics:

Scoring rubrics have sets of criteria for different levels of performance. They usually have three to five levels and students can help create the criteria for each level. Rubrics give more details than rating scales or checklists. However, they take more time to make. There are different types, like two-point rubrics (e.g., yes, no, developing, developed), three-point rubrics (e.g., proficient, competent, improvement desired), four-point rubrics (e.g., outstanding, good, okay, novice) and five-point rubrics (e.g., consistently, frequently, sometimes, rarely). Holistic rubrics look at the overall performance, while analytical rubrics break down performance into specific elements for feedback.

D. Frequency Indexes:

A frequency index helps teachers keep track of how often students show certain skills, behaviors and attitudes. Using a class list, teachers can add check marks each time a student does something specific. For instance, teachers might mark when a student:

- correctly performs a task in the classroom
- supports fair or unfair play
- collaborates well with others

- is active or inactive; and
- follows safety rules and school/game regulations.

E. Inventories:

An inventory is a tool given to students to learn about what they already know, their past experiences, abilities and current interests in a particular activity or area. Inventories can be verbal (spoken) or written and may include questions or statements that require responses. For example, teachers might use questionnaires, surveys or ask students to show their interest in specific topics, like favorite sports, food preferences, or leisure-time activities.

F. Anecdotal Notes:

An anecdotal note is a short, narrative description of observations that gives information about a student's learning, development, behaviors, or needs. It captures important details that might be easily forgotten. While taking anecdotal notes can take time, an organized approach can help. Teachers may use:

- A list of students for each class, divided into three columns: date, observation, planned action.
- Brief, focused, and objective notes.
- Codes for quick recording (e.g., C for cooperation, FP for fair play, IA for inattentive).
- Self-adhesive notes or comment forms that students fill out, including date, name, and a description of their behavior (positive or negative). These notes can be placed on a class record-keeping sheet.
- Computer technology, such as software programs for creating class recording lists and using laptops or other computers.

Evaluating Affective Traits and Dispositions:

Affective traits and dispositions encompass attitudes, values, motivation, social relationships, classroom environment, and one's own concept of academic ability. These factors, involving students, teachers, and the classroom, shape how students learn.

Developed and positive affective traits inspire effective learning in the short and long term. Students with well-established affective traits tend to possess a positive self-concept, show increased productivity and become more engaged citizens in their community. Additionally, they reflect on and refine their behaviors and dispositions. Despite the understanding that students with positive affective traits learn better, gain confidence, and enjoy learning, few teachers assess these traits. Challenges include the perception that subject matter knowledge and skills are the primary focus of education, the difficulty of defining personal and individual affective targets, the influence of transient moods on assessment, and students not taking self-reporting seriously or providing responses to please teachers.

Affective traits can be assessed through self-reporting, teacher observation and peer evaluation. Recognizing that no assessment technique is perfect, various methods can be employed together to comprehensively evaluate students' overall growth in intellectual, moral, physical, emotional and social domains.

6.0 TEACHING AND LEARNING RESOURCES

In a general classroom, students and teachers' interaction is limited to reading, writing, and speaking. The prescribed textbook is the only resource for instructional practices. To enhance students learning, the teachers must explore and utilize a variety of accessible and affordable resources beyond textbooks. These resources include; textbooks, teacher's guides/manuals, student workbooks, and audio-visual aids (concrete material, real objects, pictures, models, movies, videotapes, etc.), online learning, library, games, experiences of the students and other stakeholders, field trips and so on. Deeper learning through engaging students is the ultimate focus and purpose of effectively utilizing the resources. By incorporating these diverse resources, teachers can create a dynamic and interactive learning environment for addressing learning needs and demands of current and future. Above discussed significant importance of a prescribed textbook guided us in drafting following guidelines for developing/writing a textbook and evaluating the same.

6.1 Guideline for Writing a Textbook.

As discussed above, the prescribed textbook is the most important resource for day-to-day teaching, learning and assessment strategies and activities. For quality formal schooling, it is imperative that both the content quality and presentation of the content meet the needs and demands of the students and society at large.

In the early grades, young learners heavily rely on their immediate personal experiences and observations as the foundation for exploring new concepts and acquiring knowledge and skills. They derive pleasure from appealing stories, whether contemporary or historical, and find value in exploring into the lives of notable figures through listening and reading autobiographies and biographies. Also, they get engage and involve with the manipulation of material, asking questions, and presenting their thoughts. Therefore, it is essential to incorporate elements such as short stories, pictorial representations, exploring the world around, exposure to various media, and hands-on and minds-on activities to provide firsthand engaging learning experiences to the students.

Given that the textbook serves as a guiding framework for teaching, learning and assessment throughout the academic year, following essential features necessitate careful consideration:

1. **Introduction:** A clear explanation for effective use of the textbook.
2. **Table of Contents:** A comprehensive and clear list of chapters, topics subtopics.
3. **Alignment with Curriculum:** Adherence to the Sindh Curriculum for General Knowledge 2024.
4. **Audio-Visual Appeal:** Ensuring the textbook is audio-visually appealing to captivate students' interest.
5. **Conciseness:** Keeping written content to a minimum, particularly for Grades I to III students.
6. **Illustrations:** Utilizing simple, clear, coherent, colorful, and non-repetitive content appropriate content.
7. **References:** Including appropriate references within illustrations when necessary.
8. **Simplified Activities:** Ensuring activities are within the capabilities of students for Grades I-III.
9. **Teacher Guidance:** Providing clear instructions or notes for teachers for execution of the activities.

10. **Accuracy:** Ensuring all materials contain accurate and up-to-date information.
11. **Error-Free:** Guaranteeing the textbook is free from all kinds of errors.
12. **Diverse End-of-Chapter Exercises:** Encouraging exploring the world, thinking skills including critical thinking, and hands-on and minds-on practical knowledge and its application.
13. **Contextual Relevance:** Ensuring content, exercises and questions are contextually relevant, age appropriate, feasible for classroom use, and affordable for all public and private sector schools with examples drawn from students' context to enhance their interest, relevance and comprehension.

By integrating above essential features (not limited to), a textbook can effectively support the teaching and learning processes, fostering an environment conducive to student engagement for their academic progress and holistic development.

6.1.1 Guideline for planning and writing a chapter

This General Knowledge curriculum comprises Ten (10) domains and is a guide to the author(s) for writing an age-appropriate textbook of General Knowledge for Grades 1-3. While writing the textbook and chapters, all 10 Domains may be treated as the Units and sub-themes of the domains may be treated as the Chapters. To cover the Student Learning Outcomes (SLOs), the authors are free to decide age-appropriate interdisciplinary content under each Domain/Unit.

The authors must remember that some SLOs cannot be fully covered in the text alone. To prevent mere memorization, though provoking questions, exploring ideas and practical activities should be included within each chapters mainly at the end of each chapter. For instance, students could be asked to predict the effects of natural resource scarcity on the growth of living things. Additionally, an activity might involve students designing posters to promote natural resource conservation.

By incorporating such interactive elements, the textbook must encourage active learning and deeper understanding of the concepts among students, aligning with curriculum objectives.

- Start each chapter with clear student learning outcomes.
- Outline topics and subtopics.
- Determine key ideas, facts, concepts, skills, and values.
- Choose appropriate illustrations that clearly convey concepts.
- Design activities that promote diverse learning including inquiry and problem-solving skills suitable for each grade level.
- Ensure content is accurate, up-to-date, and developmentally appropriate.
- Align content with chapter outcomes.
- Exclude biases: Gender, race, Ethnicity, etc.
- Use consistent, culturally appropriate, and grammatically correct language.
- Avoid disparaging, patronizing, or stereotypical language regarding religion, ethnicity, gender, ability, or any community.
- Engage readers with captivating language.
- Keep text minimal for Grades I and II.
- Incorporate previous learning where applicable.

- Structure writing with simple sentences and single-idea paragraphs.
- Provide a summary or concept map at the end of each chapter to review key knowledge and skills.
- End each chapter with exercises that:
 - Review and integrate previous learning.
 - Foster creativity and engagement.
 - Encourage higher-order thinking.
 - Cater to multiple intelligences.
 - Are contextually relevant to local teaching and learning practices.

6.2 Guidelines for Choosing a Textbook

There may be many textbooks published by different publishers in the market. Head of institutions and Teachers need to make a choice of the text from among them. Following key questions may help in choosing the textbook.

Sr. No.	Keys Questions	Yes / No
1.	Is the textbook attractive and appealing with quality paper, images and double-binding?	
2.	Are the guidelines for utilizing a textbook provided in the beginning of the textbook?	
3.	Is the sample lesson plan for teachers provided?	
4.	Is the content accurate, up to date and age appropriate?	
5.	Does it focus important knowledge, skills and aptitudes?	
6.	Do the illustrations (maps, pictures, drawings, graphs) help us understand the content better?	
7.	Do the end-of-the-chapter exercises encourage students to think creatively and critically, to develop their skills and imagination?	
8.	Are activities suitable for the needs of the learner?	
9.	Do activities include students' participation in addressing real life issues?	
10.	Do activities promote required skills (collaboration, critical thinking, problem solving, interpersonal, adaptability, flexibility, leadership, ethos/pathos etc.)?	
11.	Is a variety of assessment strategies suggested? (e.g., binary, selected response questions, multiple-choice items, completing picture/map items, project work, exhibitions, interpretive exercises, Constructed response question (CRQs) and Extended response question (ERQs) etc.)	
12.	Are there any biases in the textbook? e.g. religion, race, caste, gender, occupation, class etc.	
13.	Do the textbook present issues from many perspectives?	
14.	Does it include current issues, problems, and happenings?	
15.	Is it aligned with student learning outcomes (SLOs) of the Sindh Curriculum?	
16.	Is/Are a teacher's guide/notes included (such as instructed activities, icebreaker, brainstorming, formative assessment)?	

17.	Are the contents relevant to the needs, age, and level of understanding of the students?	
18.	Does the textbook contain appropriate headings and subheadings including introduction, subthemes, summary etc.?	
19.	Does it have an introduction explaining its organization, table of contents etc.?	
20.	Are there suggestions for further reading in the area or websites for further information?	

7.0 TEACHERS' GUIDELINE

7.1 A Guideline for Developing "Teacher's Guide"

A textbook should be enriched with a 'Teacher Guide' aimed at informing teachers how the textbook is written, organized and how best to use it to facilitate student learning. A Teacher Guide provides detailed explanation of key concepts and how to teach a particular topic with examples that could be given to facilitate learning, relate concepts with daily life situations. Also, it helps teachers to reinforce development of attitudes and values among students. Teacher Guide serves to educate teachers and thus could be seen as a means of helping teachers develop professionally. Teacher Guide must be easy to understand and use, expand and develop teachers' repertoire of knowledge and skills.

Basic features of a Teacher Guide

- Helps teacher to teach the content and extend activities by keeping in view the contextual realities.
- Identify and implement textbook oriented, appropriate and contextually relevant teaching and learning strategies for enhancing students learning.
- Identify which teaching strategies are suitable for teaching domains related to Knowledge, Skills, and Dispositions in each chapter.
- Identify what extended activities students could do with and without teacher's help to develop targeted knowledge, skills and dispositions.
- Identify resources needed for teaching and learning process and explain how to use the resources.
- Explain how and where teachers can develop low-cost and or no-cost resources.
- Describe extended activities and how to conduct them.
- Explain how to implement each instructional strategy (Give clear, sequential instructions for each activity, adding resources where necessary).
- Explain various assessment strategies and give examples of questions/tests.
- Give teachers choices of strategy/activity for each chapter (let them decide which to use).
- Decide where illustrations are needed and prepare brief information for illustrator.
- Check that "guide" is error-free and contextually relevant.
- identify sources of information teachers can use to develop their knowledge (content and pedagogical) and skills (pedagogical).

8.0 TEACHERS' PROFESSIONAL DEVELOPMENT

8.1 Teacher Training and Professional Growth

Teacher is the most important variable for ensuring effective teaching and learning environment at classroom and school. Teachers are expected to use and apply different strategies of teaching and learning according to situations, age appropriateness, and students' prior knowledge.

Curriculum and textbook are the supporting resources for creating a conducive learning environment. In order to make a meaningful contribution towards the national development, it is important to initiate and implement out-come oriented teaching and learning activities. To do so, it is expected that the teachers are knowledgeable, life-long learners, skilled with pedagogical practices, understand child psychology and able to create and sustain positive learning and nurturing environment. In order to achieve these expectations, the teachers need continuous professional develop and Teacher must develop managerial skills regarding new and existing resources. Teachers need to develop activities that enhance concepts of students and match with the level and interest of a learner. Following are some of the opportunities for teachers' professional development.

Teacher Training Institutions: Various public and private sector universities and institutions offering various pre-service and in-service professional development programmes for the teachers. For example, PITE, STEDA, RSU, SIBAU, AKU-IED, TRC, etc.

In this digital age online learning is the greatest source of professional development. Some of the online opportunities include Coursera, EdX, Khan Academy, Mobile applications, Knowledge Platform, Sabaq Foundation, etc.

Besides, professional development opportunities include, reading books and articles on teaching methods, watching educational movies like Tare-e-Zameen par, writing reflective loge/diary, microteaching sessions, workshops, meetings, conferences, etc.

Also, teachers need to learn how to develop age-appropriate outcome-oriented activities, which is not easy. Therefore, teacher learning is not a one-day task, but a continuous learning process. Teachers are requested to keep on learning and facilitating the students for their better future.

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

Comprehensive Understanding of Teaching Methods

Teacher should have full command over different methods of teaching. For example, they are taught to promote inquiry by participating in "inquiry experiences" like those they will eventually provide for their students. They must have understanding of elements of constructive teaching practices, and various inquiry

approaches. Still, knowledge of methods is not enough, but a person who teaches must have full understanding about the philosophy of each teaching method.

Experienced and effective teachers know that their method and style have to be adapted and transformed to fit the local situation and external factors that may impinge on a lesson.

Time Management

Time management is essential for implementation of teaching and learning practices.

Teacher should have command on time management with small and large groups, for inquiry/investigative activities, role-plays as well as for assessing and evaluating students' learning and its documentation.

Teachers' ought 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.

9.0 EDUCATIONAL RESOURCES

9.1 Other Educational Resources

Technology and Digital Resources: There are an increasing variety of resources such as videos, animations, computer software, projector, online learning platforms, YouTube, TEDx, Khan academy, etc., offer simulations and models of real-life situations that permit the investigation of phenomena that are not easily available because of cost, safety, or accessibility. Computers and related technologies such as laptop, tablet, smartphones, offer students a very important resource for learning the concepts and processes of science through simulations, graphics, sound, data manipulation, and model building.

Educational Tours (visits): Keeping in view that students link their learning experiences with real-life situations pertaining to environment, community, resources and local expertise, explorative activities for example, a quick field trip/visit to the schoolyard or nearby field/park, railway station etc. are recommended. All such activities are characterized by active student involvement in attempting to find answers to questions about the natural and constructed world. For this, teacher has to plan a tour and identify and contact appropriate authorities to seek written permission from parents, principal at school, and management at place of visit). Explain them about the purpose of the tour. Develop a task sheet to be completed by students. Evaluate and record the students' outcomes.

Guest Speakers: Guest speakers from laboratories/factories or some community personnel (not only professional but people with special skills such as carpenter) can be invited to the school that could help students develop interest in learning.

(e)Libraries: Great reads make great writers and leaders; great writers make great communicators and persuaders. Libraries are great sources for promoting reading and writing skills among students to become great readers and writers. The schools and teachers must provide leisure reading resources and time to the students. Reading should be encouraging through a variety of ways like Book Reviews, Stories etc.

10.0 GLOSSARY

This glossary is intended to ensure that terms commonly used in the context of learning outcomes are appropriately interpreted. Words and terms defined in the glossary are found throughout the document. The curriculum review committee provided definitions for users to ensure that the meaning of each term is consistent. These definitions are not vocabulary words to be taught to students in isolation; they represent the terminology students will learn through the lessons prepared by the teacher.

Term	Description
Abilities	Skills and capacities possessed by individuals to perform tasks effectively.
Achievement	Level of success or accomplishment attained by individuals in various endeavors.
Analytical	Ability to examine and evaluate information systematically to understand its components and implications.
Attitudes	Feelings, beliefs, and opinions held by individuals towards people, objects, events, or ideas.
Awareness	State of being conscious of oneself, others, and the surrounding environment.
Behaviorism	Psychological theory emphasizing observable behaviors in learning and development.
Checklist	Tool used to systematically record and track completion of tasks or activities.
Cognitivism	Psychological theory focusing on mental processes such as perception and memory in learning.
Collaboration	Act of working together with others to achieve common goals or objectives.
Concept mapping	Visual representation of concepts and their relationships to organize and clarify information.
Connectivism	Learning theory emphasizing connections and networks in knowledge acquisition.
Constructivism	Learning theory positing that learners actively construct their own understanding of the world.
Curriculum	Planned sequence of learning experiences and materials designed to achieve educational goals.
Decision-making	Process of selecting among alternative courses of action based on available information and preferences.
Diversity	Presence of differences among individuals or groups in various characteristics.
Embracing	Accepting and celebrating diversity and differences in individuals or groups.
Ethnicity	Cultural, racial, or national identity of individuals or groups based on shared characteristics.
Etiquettes	Customary rules and conventions of polite behavior and social interaction within a culture or society.
Exercises	Activities or tasks designed to practice and reinforce learning, skills, or physical fitness.
Feedback	Information or responses provided to individuals regarding their performance or behavior.
Formative Assessments	Ongoing tasks conducted during learning to monitor progress and provide feedback.

Guidance	Support, advice, and assistance provided to individuals to navigate challenges and achieve goals.
PBL (Project Based Learning)	Teaching method involving students working on real-world projects to explore and apply knowledge.
Rubrics	Scoring guides used to evaluate performance or assess quality in various contexts.
Summative Assessments	Evaluations conducted at the end of a learning period to measure student achievement or mastery of specific objectives.

ACKNOWLEDGMENTS

The General Knowledge subject plays a vital role in shaping young learners, fostering curiosity, and promoting critical thinking skills. Through the exploration of various topics, students develop a deeper understanding of the world around them and cultivate a sense of inquiry.

The General Knowledge curriculum for Grades I to III (2023-2024) emphasizes a comprehensive approach to knowledge acquisition, aimed at equipping students with a broad understanding of diverse subjects. This curriculum encompasses three subjects including science, social studies and Islamiat. These various subjects comprise of different domains, standards, benchmarks and SLOs according to the cognitive abilities and interests of young learners.

Updated curriculum involves revisiting standards, benchmarks, and learning outcomes to ensure alignment with national core standards. Specific and measurable outcomes have been established, catering to the age-appropriate development of students.

Guidelines for implementing the curriculum across different instructional methods, including assessments, teacher training, textbooks, and supplementary resources, have been updated to enhance effectiveness.

The Directorate of Curriculum Assessment & Research acknowledges the invaluable contributions of the Provincial Review Committee under the Chairmanship of Dr. Ali Gohar Chang and allied institutions (The Aga Khan University Institute for Educational Development (AKU-IED) Karachi, Sukkur IBA University, The Citizens Foundations, in the development and refinement of the General Knowledge curriculum. The collaboration of stakeholders, including the School Education Department and allied institutions, has been instrumental in facilitating this process.

Director

Directorate of Curriculum Assessment & Research

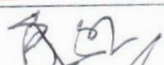

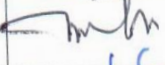

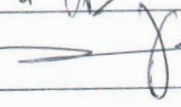



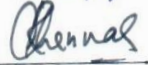
MINUTES OF THE MEETING

4th MEETING OF PROVINCIAL REVIEW COMMITTEE (PRC) FOR CURRICULUM DEVELOPMENT OF SINDH GENERAL KNOWLEDGE (GK) GRADE I TO III.

The Directorate of Curriculum, Assessment & Research DCAR Sindh, Jamshoro scheduled Three (03) days meeting of the Provincial Review Committee (PRC) from 7th – 9th March, 2024 of Sindh General Knowledge Curriculum Grades I-III to finalize the **Standards, Benchmarks, Domains, Themes and Students Learning Outcomes including Assessment** as per the guideline given by the School Education and Literacy Department, Sindh to align the Standards of the National Curriculum of Pakistan-2023.

The following Committee members attended the meeting:

Provincial Review Committee of General Knowledge Curriculum 2023-24

Sr.#	Name of Members		Signature
1.	Dr. Ali Gohar Chang Principal Public School Sukkur	Chairman	
2.	Mr. Khalid Mehmood Memon Deputy Director, PEACe DCAR Sindh, Jamshoro	Member	
3.	Dr. Ashique Hussain Memon Subject Specialist, DCAR Sindh, Jamshoro.	Member	
4.	Mr. Ali Gohar Qazi, AKU, IED, Karachi	Member	
5.	Mr. Muzamil Shaikh Govt. Delhi College FB Area Hussainabad, Karachi	Member	
6.	Mr. Zain Ul Abiden GBPS Mirza Qaleech Baig, Hyderabad	Member	
7.	Ms. Naheed Rao Aga Khan Higher Secondary School, Hyderabad.	Member	
8.	Mr. Ali Muhammad Sahar Representative from Sindh Textbook Board, Jamshoro	Member	
9.	Ms. Rozina Channar Subject Specialist, PEACe DCAR Sindh Jamshoro.	Desk Officer	

Agenda/TORs of the Meeting:

- To finalize Curriculum Content i.e., Assessment and learning, Guidelines for teachers, Guidelines for Authors, Teaching learning resources, etc.
- To finalize Cognitive distribution of SLOs
- To compile, design and edit whole document.
- Proofreading and coherence of whole document.

The PRC engaged in detailed discussions to identify areas of divergence and alignment between the existing National Curriculum 2007 and the National Curriculum Standards of General Knowledge. Through collaborative efforts, Committee carefully adapted the standards, benchmarks, and domains prescribed by the National Curriculum Framework into the existing General Knowledge Curriculum. Assessment strategies were modernized to accurately gauge student learning outcomes, while guidelines were formulated to provide clear directives for authors, textbook developers, and teachers in implementing the updated curriculum. Furthermore, teacher-training materials were aligned to equip educators with the necessary skills and resources to effectively deliver the revised curriculum content.

After incorporating necessary changes and aligning all components with the National Curriculum Framework of 2023, the committee conducted thorough proofreading of the revised curriculum document. It is ensured that the materials were free from errors and maintained coherence and clarity. The committee unanimously agreed to strongly recommend the notification and upload of the Provincial General Knowledge Curriculum of 2024. The committee emphasized the importance of disseminating the updated curriculum promptly to facilitate its implementation across educational institutions.

NOTIFICATION



GOVERNMENT OF SINDH SCHOOL EDUCATION & LITERACY DEPARTMENT

Karachi, dated: 04th October 2023

NOTIFICATION

NO.SO(C)SELD/ERC/ 18/2023: School Education & Literacy Department, Government of Sindh, is pleased to notify the Provincial Review Committees to review the Curriculum and Textbook of **General Knowledge** Grade I-III with the following composition and TORs:

1	Dr. Ali Gohar Chang Principal Public School Sukkur	Chairman
2	Mr. Khalid Mahmood Memon Deputy Director (PEACe) DCAR Sindh Jamshoro	Member
3	Dr. Ashique Hussain Memon Subject Specialist DCAR Sindh Jamshoro	Member
4	One Expert from CF School System Karachi.	Member
5	One Expert from IED-AKU/ TCF Karachi.	Member
6	Mr. Muzamil Shaikh Lecturer, Govt. Dehli College FB Area Hussainabad Karachi	Member
7	Language Expert (English/Sindhi/Urdu)	Member
8	Representatives from STBB Jamshoro	Member
9	Working Teachers of Particular Grade/ Level	Member
10	Representatives from Private Schools	Member
	Ms. Rozina Channar Subject Specialist, (PEACe) DCAR Sindh Jamshoro.	Focal Person/ Desk Officer

ToRs

1. To design, develop, update and finalize the Curriculum of General Knowledge for the Grade I-III focusing on local, National and global needs.
2. The Curriculum promote, knowledge for creative, constructive, communicative and reflective individuals.
3. The Curriculum support in creating just civil society that respect diversity through disciplined enlightened citizens.
4. The Curriculum promote inclusive, quality Education and continuous learning through modern technology base environment.
5. The Curriculum/ Textbook promote local, regional & national folk and cultural values and norms.
6. The Textbook should be free from linguistic typographical, logical mistakes and reflect quality layout and design according to age relevance of learners.
7. Review/ Quality Assurance of the Textbooks aligned with Curriculum, promotes creativity and innovation.
8. The Textbook caters the social, cultural, psychological, physical and emotional needs of the learners.
9. The Textbook free from hatred, biases (Gender, Ethics, Cultural occupational and Socio-economic status) ensure respect for diversity and promote harmony among masses/community.

DR. SHEREEN MUSTAFA
SECRETARY TO GOVERNMENT OF SINDH

NO.SO(C)SELD/ERC/ 18/2023

Karachi, dated: 04th October, 2023

A copy is forwarded for information & necessary action to:

1. Principal Secretary to Chief Minister Sindh.
2. Chairman Sindh Text Book Board Jamshoro.
3. Executive Director Sindh Teacher Education Development Authority (STEDA)
4. Deputy Secretary (Staff) to Chief Secretary Sindh @ Karachi.
5. Chairperson and member concerned.
6. Director Directorate of Curriculum, Assessment and Research Sindh @ Jamshoro
7. PS to Minister Education and Literacy Department, Govt. of Sindh @ Karachi.
8. PS to Secretary School Education and Literacy Department, Govt. of Sindh @ Karachi.
9. PA to Chief Advisor Curriculum Wing, School Education and Literacy Department, Govt. of Sindh @ Karachi
11. Official Web site



SECTION OFFICER (C)

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**GOVERNMENT OF SINDH
SCHOOL EDUCATION & LITERACY DEPARTMENT**

Karachi, dated the 26th, March 2024.

NOTIFICATION

NO. SELD/HCW/18/2018: In compliance with the Section 3, sub-section (4), (e) of Sindh School Education Standards & Curriculum Act 2014, Sindh Act No. IX of 2015. School Education & Literacy Department, Government of Sindh is pleased to accord **No Objection Certificate** for approval of **General Knowledge Curriculum for Grade I to III and developing & printing of Textual Material as per the approved Curriculum**, after review by the review committee for General Knowledge.

**ZAHID ALI ABBASI
SECRETARY TO GOVERNMENT OF SINDH**

NO. SELD/HCW/18/2018:

Karachi, dated the 26th, March 2024.

A copy for information and necessary action to:

1. The Chairman, Sindh Textbook Board, Jamshoro.
2. The Chief Advisor Curriculum Wing, School Education & Literacy Department, Government: of Sindh, Karachi.
3. The Director, Directorate of Curriculum, Assessment & Research, Jamshoro.
4. The P.S to Secretary School Education & Literacy Department, Government: of Sindh, Karachi.
5. The official website.
6. The office file.



Zahid Ali Abbasi 26/03/2024.
**SECTION OFFICER (CURRICULUM-A&T)
For SECRETARY TO GOVERNMENT OF SINDH.**

THE END...