National School Curriculum

GEOGRAPHY CURRICULUM FRAMEWORK

Classes PP-XII

Department of Curriculum and Professional Development
Ministry of Education
Royal Government of Bhutan

“Your parents, relatives, and friends would be very proud of what you have achieved. At your age, to have completed your studies is your personal accomplishment. Your knowledge and capabilities are a great asset for the nation. I congratulate you for your achievements. Finally, your capabilities and predisposition towards hard work will invariably shape the future of Bhutan. You must work with integrity, you must keep learning, keep working hard, and you must have the audacity to dream big.”

- His Majesty Jigme Khesar Namgyel Wangchuck

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Research and writing of curriculum framework 2017:

1. Bak Bir Rai, Shari HSS, Paro
2. Bodpa Nidup, Jigme Sherubling HSS
3. Chimi Tshering, Jakar HSS, Bumthang
4. Laxman Chhetri, Khasadrapchu MSS, Thimphu
5. Kuenzang Gyeltshen, Samtse College of Education
6. Pema Lhendup, Sherubtse College, Kanglung
7. Rinzin Wangmo, Gonzim Ugyen Dorji CS, Haa
8. Sangay Zangmo, Samtengang CS, Wangdue
9. Ugyen Wangchuk, Jigme Sherubling HSS
10. Sangay Wangdi, Jakar HSS
11. Sonam Palden, Drukgyal HSS
12. Dorji Tshewang, DCRD, Paro
13. Kinley Namgyal, DCRD, Paro
14. Norbu Wangchuk, DCRD Paro

Advisors

1. Kinga Dakpa, Director, DCRD, Paro
2. Tashi Namgyal, Director, DCPD, Thimphu
3. Wangpo Tenzin, Curriculum Specialist, Royal Education Council, Paro

Foreword

COVID-19 has caused unforgiving disruptions in the public education all over the world, and brought about threats of fragmentation in the society due to disparities in accessibility and connectivity in many systems. In Bhutan too, continuity of education and learning has been severely affected as a result of sporadic nationwide school closures, restrictions and health protocols. The disruptions exposed the limitation of the existing ideologies and practices in education. This has deprived children living in poverty worldwide, who rely onthe physical settings of their schools for educational materials and guidance, of the learningand other essential educational services. Cognizant of the global trend to embrace the competency-based learning as education for the 21st century, the current priority of the Government is to transform the knowledge and textbook based learning to competency-based learning through open source and experiential learning.

In the new normal education, human interaction and well-being is a priority. Technology, particularly digital technology that enables communication, collaboration and learning across distance, is a formidable tool though not a panacea but a source of innovation and expanded potentials. As we embrace this exceptional opportunity to transform the education, it is imperative to reimagine the organization of our educational institutions and learning environments. In the post COVID 19 era, we must prioritize the development of the whole person not just the acquisition of academic knowledge. Inspiration for the change can be drawn from the 1996 Delors report, *Learning the treasure within*. Its four pillars of learningas "learning to know", "learning to do", "learning to be", and "learning to live together" are the current global ethos of teaching and learning. Therefore, curricula must be increasingly perceived as an integrated, themes based and problems-based orientation that allows learnersdevelop a strong base of knowledge about one's self and about the world, and find purposeof life and be better able to participate in social and political milieu.

The National School Curriculum is, not just a mere response to the pandemic, but also culmination of the curriculum reform work for the last four years by the erstwhile Royal Education Council. It is an attempt to transform education from the teaching of "what" to learning of "how" and "why" towards empowering learners with the transversal competencies and the 21s t century skills, and preparing them to be lifelong learners. In tandem with this initiative, we are optimistic that the paradigm shift in Geography education orients our education process in empowering young generation with the Geographical mind-set and disposition, and skills towards nurturing nationally rooted and globally competentcitizens.

With this guide, we are optimistic that our learners and teachers are ushered through a life enriching experiential Geography education synchronized as an integral part of their everyday life.

Tashi Delek

Tashi Namgyal
Director

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1. Introduction

1.1 Background

Geography as a discipline was adopted into Bhutanese education system in the 1960s fromthe Indian Council. Ever since its introduction, geography curriculum had not been reviewed. However, in 1980s "A Geography of Bhutan" was introduced for class VI and subsequently in other classes in an effort to Bhutanise and contextualise curriculum to provide opportunity for learners to study the geography of our country.

The Curriculum framework had been the outcome of the National School Curriculum Conference of 2016 which resolved to have in place a curriculum framework for all subjects. During the conference, a group of experts from the field reviewed the curriculum from Class VII – XII with the aim to understand and find out the gaps, overlaps and relevance of concepts and themes in the existing curriculum. The findings of the conference had beencrucial in the development of the curriculum framework that guides in the development ofteaching learning materials and resources for various levels and grades. It is based on the rationalised curriculum that is meant to serve uninterrupted delivery of education during emergencies and as well in the new normal situation.

1.2 Rationale

The National School Curriculum Geography Curriculum Framework has been developed based on the prioritised curriculum that was developed to ensure smooth teaching and learning during COVID-19 situation. The curriculum has been prioritised to 65 percent of the total to allowstudents to learn deeper and engage in lifelong learning. The prioritised curriculum was based on the core and fundamental concepts to engage students for deeper and meaningful teaching and learning.

Geography asks spatial questions—how and why things are distributed or arranged in particular ways on the Earth's surface. It looks at these different distributions and arrangements at many different scales. It also asks questions about how the interaction of different human and natural activities on Earth's surface shape the characteristics of the world in which we live.

It seeks to understand where things are found and why they are present in those places; how things that are located in the same or distant places influence one another overtime; and why places and the people who live in them develop and change in particular ways. Raising these questions is at the heart of the "geographic perspective."

A high-quality geography education should inspire in learners the curiosity and fascination about the world and its people. It instils and equips learners with knowledge, skills andvalues about diverse places, people, resources and natural and cultural environments.Further, as learners' progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, formation and use of landscapes and environments.

The growth in technology has greatly aided geographers in their pursuits in the field of Geography. It has given them increasingly refined techniques for gathering and interpreting data, whether in the field by means of Global Positioning System (GPS) or by using aerial photographs and satellite images.

Spatial relationships are at the heart of geography. The use of technologies like GeographicInformation System (GIS) and Remote Sensing techniques have been greatly assisting geographers and shall remain as tools to analyse spatial relationships among geographical features and phenomena.

People might attempt to modify and control the environment but in the long term, nature would prevail and determine the human destiny. Therefore, geography attempts to bridge the widening gap between the changing physical, biological and cultural phenomena.

The Curriculum Framework for Class PP – XII attempts to provide an overview of geography education in Bhutan. The framework is intended to serve various purposes. Itshall provide teachers, students, educators and employers with clear statements of what learners are expected to achieve as a result of geography education. It is, therefore, a document of statement and communication to all stakeholders in the society, so that theyunderstand the goals and aims of geography education at each key stage and also realise how this is achieved.

In the framework, the learning experiences are organized into four strands;three content strands and one skills or process strand that are as follows:

1. Time and Space
2. Physical Environment
3. People and the Environment and
4. Essential Skills

The framework also encompasses various components of the subject, such as Introduction,Goals, Key Competencies, Guiding Principles, Curriculum Structure and

Organization, Teaching and Learning Approaches, Assessment and Reporting, Enabling Conditions and Cross Curricular Linkages.
Geography helps in the holistic development of learners in the five areas development which are cerebral, physical, social, emotional, and spiritual development. This is a practical model that changes the focus of education to be more holistic and dynamic. The main goal of the five areas of development is to show that education must help learners actualise their potential in cerebral, emotional, physical, social and spiritual areas to help them become constructive, contributory members of their communities.

1.3 Scope of Geography

Geography deals with the study of different people in different locations of the Earth including their activities like agriculture, mining, trading, fishing, manufacturing, construction and other related activities. It also relates to the different peoples of the world, their occupations, cultures, ways of dressing and religion.

Geography is a social science which deals with the study of human, their activities and the environment. Its relevance cuts across many other subjects like Economics, Agricultural Science, Government, History, Environmental Science and so on. It is concerned with the study of the size, shape and movement of the Earth and other celestial bodies, landmass, bodies of water, climate, vegetation and events in different places of the world. It also deals with the spatial distribution of animal and natural resources as well as human activities.

Geography discipline trains and educates an individual to gain success in careers ranging from cartography, business, administration to tourism and planning besides many others depending on the interests of the individual. Geography learners understand the world as an integrated whole. They use a powerful mix of geographical and interdisciplinary skills to solve a range of problems. They analyse and synthesise complex environmental, economic, social, and political information to enable a geographical understanding of humans, environments, and the dynamic relationships between them.

Geography learners acquire skills in a range of research techniques, which includes fieldwork, survey design, statistical analysis, spatial data analysis including Geographic Information Systems, and other forms of qualitative and quantitative analysis. They are proficient at retrieving, synthesising, and communicating information, as well as managing data and drawing on different sources of knowledge. They think critically and creatively and work effectively in teams and on their own initiative.

2. Goals

Geography enables learners to equip with geographic perspective, knowledge, skills and values to engage in ethical action with regard to self and others. It helps to understand the Earth's diverse cultural and natural environments to prepare responsible citizens inspired by national and universal values and practices.

The goals of Geography curriculum are to:

- Understand the Earth as a unique planet, its movement in space in relation to other celestial bodies in the solar system and how it affects lives.
- Develop contextual knowledge of the location of places – both terrestrial and marine- defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes.
- Generalize and draw conclusion on physical environment to prepare people for harmonious co-existence.
- Realize the importance of relationship among the people and environment to become environmentally responsible citizens and make informed decisions in life.
- Appreciate the Earth as the home of living beings and provide insight for wise decisions on resource management.
- Participate in critical and informed debates on the key concerns and issues that may affect their lives locally and globally.
- Apply knowledge, skills and values to understand, interpret and address the emerging geographical and social issues.
- Develop an understanding of Gross National Happiness (GNH) through geographical perspectives and apply them for making informed decisions.
- Develop the skills of reading maps and globes, to develop drawing and measuring skills, and to develop the skill of using and manipulating geographical instruments.
- Develop a love for nation and to develop cosmopolitan and internationalistic outlook.
- Adjust and aclimatise human life in accordance with geographical circumstances.

The first civilizations appeared in locations where the geography was favorable to intensive agriculture. One of the most important factors in development is geography, where the country is in the world, and climate. It is no coincidence that the poorest countries are in the tropics, where it is hot, the land is less fertile, water is scarce, where diseases flourish.

The arrangement of land and water masses has a profound influence upon the life of human. The way of life of those who live in high mountains differs markedly from that

of those who live near the sea. The differences are exhibited in their food habits, dresses, occupations and even in the festivals they observe.
In nutshell, geography helps in the holistic development of learners in the five areas development which are cerebral, physical, social, emotional, and spiritual development. This is a practical model that changes the focus of education to a more holistic and dynamic education system. The main aim of the five areas of development is to show that education must help learners actualise their potential in cerebral, emotional, physical, social and spiritual areas to help them become constructive, contributory members with knowledge, skills and values to face the challenges of the world.

3. Key Competencies

Competency is more than just knowledge and skills. It involves the ability to solve complex situations by drawing on and mobilising psychosocial resources including skills andattitudes in a particular context. For example, the ability to communicate effectively is a competency that may draw on an individual's knowledge of language, geo-spatial technology, practical IT skills and attitudes towards those with whom s/he is communicating.

The key competencies are:

Competencies are set of intellectual, personal, and social and emotional proficiencies that all students need in order to engage in deep, lifelong learning to live and learn today and inthe future. Competencies are measurable pattern of knowledge, skills, abilities, behaviours,and other characteristics that an individual needs to perform work roles or occupational functions or a course successfully. These competencies are necessary to achieve social, cultural, spiritual, moral, physical and mental development of children to enable them to lead a successful life and create a well-functioning society.

i. Values and Spirituality

Learners lead a virtuous life guided by the foundational principle of Ley-Gyudrey (ལས་$་ཀ&མ་) for the wellbeing and happiness of themselves, others, the environment, and societies. Learners' virtuousness in life is characterised by Tha Damtshig (ཐ་དམ་ཚིག) - and Threl Ngo Tsha, (/ཨང་ཚ) exhibited through compassionate thought, speech, and actions (Gosum). In thought, the learners constantly value and regard the wellbeing of others (Zhenphen gi Sampa) གཞན་ཕན་ཐོག་བསམ་. In speech, the learners communicate truthfully and politely (Drang Zhing Nyenpa) ;ང་ཞིང་=ན་. Learners behave altruistically with simplicity

(Zhi Zhing Duelwa) <<ཞི་བཟང་འབྲེལ་བ>> - to promote a harmonious life for oneself and others, and act with moral and citizen's responsibilities. People's spirituality and shared values strengthen the nation's unique identity and contribute to the health and sustenance of the environment.

Geography helps in developing learners' self-awareness successfully and understanding of the world around them and spiritual questions and issues, they will be developing a set of values, principles and beliefs which may or may not be religious to inform their perspective on life and their behaviour. They will defend their beliefs, challenge unfairness and all that would constrain their personal growth, for example, poverty of aspiration, lack of self-confidence and belief, aggression, greed, injustice, narrowness of vision and all forms of discrimination.

ii. Language and communication

Learners should be able to use both Dzongkha and English languages effectively to representand communicate information, ideas and experiences in different ways and through differentmedia. They should exhibit proficiency in four strands of language - reading, writing, listening and speaking, to make and express meaning and communicate effectively. Learners should be able to understand, interpret and use words, numbers, models, images, movementsand other symbols to communicate in a wide range of contexts across the curriculum, while effectively using appropriate technologies.

The use of language is an integral part of learning geography. It is through language that learners develop their ideas about geography and communicate them. It is every teacher's responsibility to contribute to the development of learner's literacy.

Geography, like any subject discipline, has a very specific language and we should use the particular forms of language and literacy best suited to posing and answering geographical questions. Simply depending on generic, cross curricular, 'literacy strategies' may not always promote geographical understanding – such strategies need to appreciate the language, concepts, structures and aims of the subject to ensure that geographical thinking and understanding are advanced. Therefore, if not sensitively applied, literacy strategies – such as using writing frames, card sorts, DARTs, and others may only marginally improve learners' understanding of the subject.

iii. Transversal Competencies

Transversal competencies are skills that are transferable to different learning areas and contexts. These competences are over and above the content related to any specific

school subject whichcan be used in other areas. They are independent of subjects and based on cross-curricular objectives. They are important to learners for better management of their learning, maintaining social and interpersonal relations and communication. The transversal skills such as information literacy, communication and collaboration, creativity and innovation and digital literacy must be taught to all learners. Interpretation, problem solving, reasoning and analysis are some of the transversal skills and competencies of Geography.

iv. Enterprising and Industrious

The learners should exhibit the value of hard work and possess determination, commitment and resilience to confront challenges and excel in their endeavours. The academic learning and the competence that learners acquire must enable them to identify challenges and confront and address them with divergent thinking, professionalism, fortitude and grit. Learners should be creative, opportunity-oriented, proactive and innovative. They must seize opportunities in different areas of their interest and expertise to transition smoothly to the world of work with dignity of labour, entrepreneurial skills and leadership qualities. Thus, the learners can apply entrepreneurial thought and action both academically as well as in the real world settings.

With such competencies, they can exhibit the value of diligence to be successful in their endeavours besides enhancing their potential to create business opportunities and broadening their scope further to contribute to the national economy, thereby setting a culture of hard workand entrepreneurship.

v. Sustainable Living

The learners should have a sound knowledge and understanding of sustainable living practices.They will engage in sustainable practices and are motivated to learn about conservation and promotion of natural environment. Learners will be encouraged to treat with respect and manage their resources (man-made as well as natural resources) wisely. Learners who understand the concepts of sustainable living, values, skills, and attitudes will commit to sustainable living practices in all aspects of their lives. They will also have a global understanding of the concepts of interdependence and shared responsibilities for the globe in creating a more sustainable future, environmental integrity, economic viability for the present and future generations. Thus, the values, knowledge, skills, and attitudes they develop through this key competency will help students lead a contented and quality life without jeopardising the life of future generations.

vi. Health and Wellbeing

Learners should know how to live a healthy life by making right choices and knowing the consequences of their choices. Wellbeing describes a state of overall mental and physical health, strength, resilience and fitness to function well at work and personally. International studies confirm the following advantages of teaching wellbeing in school:

- It has profound direct effects on student learning and performance.
- It improves relationships with peers, family and teachers. Wellbeing gained at an early age can be used at all stages of an individual's life – wellbeing management is a genuine life skill
- Positive impact on learner attributes as students can better 'understand themselves as learners' which directly influences their ability to learn easily.

vii. Digital Competence and

Digital competence refers to the confidence and critical usage of a range of digital technologiesfor information, communication and basic problem-solving in all aspects of life.

Digital competence consists of technical skills to use digital technologies, abilities to use digital technologies in a meaningful way for working, studying and for everyday life in general, ability to critically evaluate digital technologies, and motivation to participate in the digital culture.

Learning experiences in Geography study are leveraged on digital devices and skills in expanding geographic knowledge, skills and perseverance for the health of the nature.

viii. Converging trends in geography

The five converging global trends are geo-awareness, geo-enablement, geo-technologies, citizen science, and storytelling. These have the potential to offer geography a world audience – attention from education and society that may be unprecedented in the history ofthe discipline. Issues central to geography are now part of the global consciousness.Everyday objects are rapidly becoming locatable, and thus able to be monitored and mapped.Many tools and data sets that were formerly used and examined only by geographers and other earth and environmental scientists are now in the hands of the general public.

Citizens outside academia are becoming involved in contributing data to the scientific community. Multimedia and cloud-based Geographic Information Systems (GIS) have

greatly multiplied the attraction that maps have had for centuries to tell stories. But despite these trends bringing opportunity to geography, geo-literacy is becoming increasingly valued. How can educators, researchers, and practitioners seize the opportunity that these trends seem to present to actively promote geographic content knowledge, skills, and perspectives throughout education and society?

4. Guiding Principles

The guiding principles refer to a set of principles, assumptions, emerging trends and priorities, which direct the curriculum development and implementation. The following are the guiding principles stated in the National School Curriculum Frameworkwhich are the overarching principles.

i. Values

The curriculum should be founded on the values of Tha Dam Tshig and Ley Jum Drey. Thiswill enable the learner to get an in-depth understanding of the Bhutanese culture and appreciate the Bhutanese heritage. Learning geography allows learners to identify and appreciate important events and national and international policies; make better and informed decisions regarding the best use of national resources; and ask relevant questions about policies that optimise the landscape and land use.

ii. Gross National Happiness (GNH)

The principles of GNH should be deeply embedded in the curriculum for the holistic development of the learners. This prepares the learners to participate in and contribute to theculture, society, and economy of the country more meaningfully for a just and harmonious co-existence.

Geography deals with human-environment relationship, regional development and urban planning, human activities and industries, and spatial distribution of resources and population. All these areas contribute in the promoting sustainable and equitable socio-economic development and environmental conservation of the country.

iii. Inclusiveness

The curriculum should ensure that all types of learners have access to learning. It should value and include the knowledge, perspectives, and backgrounds and experiences of each learner to realise his or her full potential. Inclusive education is defined as a process of addressing the diverse needs of all learners by reducing barriers to and within the

learning environment. Education is intended for all children in Bhutan, and special focus should be given to population groups that live in difficult circumstances in one way or the other. It will mean accepting different starting points, a different pace of learning and ensuring that students are challenged to achieve high standards in ways that complement what they already know, what they can already do, and how they learn the best.

iv. Future focused, dynamic, and relevant

The curriculum must guide students to look to the future by exploring significant future-fcused issues such as sustainability, citizenship, enterprise, and globalisation. A timeline should be setto regularly review the curriculum for each learning area to ensure that it is responsive to

a) theongoing needs of the students and the changing world around them
b) developments inknowledge
c) evidence-based practice and
d) new information about student learning, pedagogy and assessment.

Further, the curriculum should be relevant to the learner's life both current andfuture.
Geography helps us investigate and to think critically and creatively about the complexities of places, and different views and feelings relating to places. Geography is studied through
enquiry, this requires the formulation of effective questions. Fieldwork and outdoor education are essential to geography.
Geographical understanding helps us plan for uncertain futures based on our knowledge of past and current conditions. It helps inform human development illustrating how our very survival relies on the effective functioning of both natural and social systems.

v. Learner-centred and developmentally appropriate

The curriculum should be learner-focused. This implies that curricular contents, teaching techniques, and assessment methods for each grade or level of school education will be selected in accordance with children's developmental stages. Each child is different and the rate at which individual child grows and reach various developmental stages varies, although the patterns and sequences for growth and development are usually the same for all. Children experience continuous progression in their learning from the age of 5 to 18 years. They should be able to progress at the rate that matches their needs and aptitudes. A developmental approach that gives direction to their learning and, at the same time, allow for assessment of students' progress.

Children begin to learn at an early age their "place in the world." Through their natural curiosity and in using their five senses to explore nature, children begin to understand

human-environment relationships: sensing how to get from point A to point B on their own, experiencing the movement of products and people, and observing how places change over time.Parents and teachers can lay the foundations for geographic concepts by understanding what is developmentally appropriate for the early years of childhood and then encouraging rich and playful activities that build skills and knowledge.

vi. Use of ICT and geospatial technologies

With the rapidly changing world, information and communication technology (ICT) hasbecome so vital and is widely used for various purposes. The appropriate use of ICTreinforces and deepens geographical knowledge by adding value to learning and teaching. The use of ICT and geospatial technologies like Global Positioning System (GPS), Geographical Information System (GIS) and Remote Sensing provide additional advantage in analysing and forecasting the Geographical phenomena. Geospatial technology is also asignificant motivational factor in engaging learners.
Hence, the geography curriculum ensures the integration of ICT and geospatial technologyfor effective teaching and learning.

vii. Interdisciplinary nature

Geography is interdisciplinary in nature as it links social and natural sciences. A study of geography enables a person to relate his or her knowledge in terms of history, politics, science, mathematics, sociology, psychology, economics and fine arts among others.
Geography builds on major emphases in spatial analysis, human-environment interaction, and place-based and regional analyses to encourage communication and interaction with myriad other disciplines. The active pursuit of inquiries related to space, place, and interactions, especially dynamics within and across spaces and places, leads many
geographers to range far from the field's core and explore the peripheral realms where geographic perspectives and insights intersect with those from other fields.
To this extent, the curriculum framework is designed to widen learners' breadth of geographical skills and knowledge true to its interdisciplinary nature.

viii. Skills Based Learning

The natural environment around us is a source of knowledge. While some aspects of natural environment are directly observed, others need to be investigated to draw conclusion. In doing so, essential skills, such as observation, investigation, data interpretation, data analysis, mapping and social skills provide opportunities to the learners to develop skills andapply them in their life.
The essential skills in geography are foundations for understanding geographic knowledge.Learners develop skills of mapping and interpretation by engaging in map

making, using maps and photographs.

ix. Rationalised Curriculum

The curriculum has been rationalised to suit the needs of the learners and to foster deeper learning for effective engagement. The national curriculum focuses on the core and fundamental concepts of the subject providing opportunities for enquiry and exploration to the learners. Moreover, this curriculum is also prepared to suit the changing needs of the society for uninterrupted delivery and implementation. As such, it has been envisaged that a minimum of about 30 percent of the content be delivered through virtual or online platform providing opportunity for learners to learn on their own promoting independent learning.

5. Curriculum Structure and Organisation

The concepts and principles of geography for Class PP – VI are delivered through Social Studies, Science, Mathematics and Languages. Geography as a discipline is offered from Class VII onwards.

Geography curriculum is organized in four strands: Time and Space, Physical Environment, People and the Environment, which are content related strands; and EssentialSkills is a process strand. These strands are cross cutting in all the key stages. However, Essential Skills is not to be imparted as a separate component, rather it is integrated in the content strands.

5.1 Strands

Strands represent major themes to show logical flow of learning, starting from the conceptsto natural and human made concerns to management and sustainability. There is a progressive development of concepts from classes PP to XII.
Geography curriculum is organized in four strands: Time and Space, Physical Environment,People and Environment, which are content related strands; and Essential Skills is a processstrand.

Strand I: Time and Space *(The Earth, location, place and region, geographic similarities and differences, celestial bodies and spatial awareness)*

As inhabitants of the world, we relate ourselves to a particular place or region and define in terms of where we are located in relation to the rest of the world. Our understanding of the Earth as a unique planet in the universe will help to unravel thecomplexities of

how the physical environment and spatial components of the world interact and impact life on the Earth.
This should be facilitated through various strategies like discussion, demonstration, case studies, investigation, inquiry and use of ICT.

Strand II: Physical Environment *(Lithosphere, Atmosphere, Hydrosphere and Biosphere)*

The Earth comprises of four spheres. They include lithosphere which mainly consists of rocks and soils; atmosphere consists of gas, dust particle and water vapour; hydrosphere consists of water bodies; and biosphere consists all forms oflife. The interactions amongst these spheres and the processes of endogenetic andexogenetic forces influence the physical features and existence of life on Earth.
The study of spheres through simulations, field work, exploration and use of ICT, helps in understanding the roles of each sphere and how they interact and determinethe existence of various forms of life on the Earth.

Strand III: People and the Environment *(Population and Settlements, Resourcesand Management, Spatial Interaction, Disaster and Management and Geographic Technology)*

The Earth is a home to millions of species but human-beings dominate in changing the complex natural environment. Although the origin of human on Earth is incredibly recent in the geological time, their activities have modified many parts ofthe Earth. The ever increasing human population and their unlimited desires have resulted in over exploitation of resources. The over exploitation of resources has ledto environmental degradation thereby resulting in various disasters.
The advancement in geographic technology helps to develop better understanding of the complex system on the Earth and address the emerging challenges that affectthe health of the natural world.
The approaches like case study, field work, investigation, research, project work and presentation will be used to discuss and enhance learners' understanding of the interaction between people and the environment.

Strand IV: Essential Skills *(Data analysis and interpretation, Map Reading and interpretation, Investigation and Social skills)*

Essential Skills are integrated with three content strands. Skills like investigation,data analysis, mapping, interpretation and social skills are indispensable for geographical studies.
The use of these skills offer an inquiry into the immediate surrounding and beyond, thereby enhancing the understanding of the geographical concepts and principles. The

application of the acquired skills will facilitate the development of positive values and attitudes for the subject.

Essential skills comprise of lifelong learning that is self-initiated education which is focused on personal development. Lifelong learning recognises that human beings have a natural drive to explore, learn and grow and encourages us to improve our own quality of life and sense of self- worth by paying attention to the ideas and goals that inspire us.

5.2 Key Stages

The curriculum is organised into blocks of years called 'key stages', Bhutan follows fivekey stages and these are:

i. Key Stage I (classes PP to III)

In the early years of this key stage, learners develop observation skills using their senses to gather and record information, identify patterns, and talk about their ideas.At this key stage, learners explore and work with materials to develop basic knowledge and skills of their immediate surroundings. In this stage, Geography concepts are learnt through Social Studies, Science, Languages and Mathematics.

ii. Key Stage II (Classes IV – VI)

Learners at this stage are capable of making mental operations, think logically, andare ready for a deeper understanding of concepts. They discover a wide range of things and phenomena, though still predominantly focused on their immediate environment and concrete every day experiences. Simple models and theories are used to explain and make links between ideas.
In this stage, Leanrers explore fundamentals of Geography through Social Studies, Science, Languages and Mathematics.

iii. Key Stage III (Classes VII – VIII)

During this key stage, learners build on their environmental knowledge and understanding to make simple connections with different phenomena. At this stage, learners are able to identify, observe and rationalize to make generalisations.
They use basic ideas and models to explain geographical features, phenomena and events. Basic geographical knowledge is applied to improve the health of the environment and the quality of life.

iv. Key Stage IV (Classes IX – X)

Learners, at this key stage, demonstrate significant developments in terms of logicaland abstract thinking; and are able to comprehend complex situations. A wide range of techniques including ICT are used to carry out investigation and draw conclusions. They discover a wide range of ideas that support geographical studiesin greater depth for solving issues and problems.

v. Key Stage V (Classes XI – XII)

At this key stage, learners acquire cognitive abilities abstract thinking and an understanding of the natural world around them. They are able to use geographictechnologies and ICT to plan and manage complex investigations for addressing geographical issues and problems.

5.3 Key Stage Competency Based Standards

Competency based standards are concise written description of what learners are expectedto know and able to do, and, apply and transfer their learning to new contexts and situations at a specific stage of their education.

Key Stage I: At the end of this key stage, the students should be able to:

Strand I: Time and Space

i. Identify some celestial bodies to understand their importance.
ii. Explore the facilities in the school to find the location and the direction.

Strand II: Physical Environment

i. Explore different weather conditions to understand the changes in theatmosphere.
ii. Identify the different land forms in the locality to recognize the differentfeatures and how they affect their lives.

Stand III: People and the Environment

i. Demonstrate appropriate use of water for sustainable use.
ii. Examine the importance of wearing dress and listening to music, and relate itto national identity.

Key Stage II: At the end of this key stage, the students should be able to:

Strand I: Time and Space

i. Compare the planets in the solar system to explain its components andeffects on the planets.
ii. Examine the movements of the Earth to understand types and impact on life.

Strand II: Physical Environment

i. Examine the elements of weather to understand its effect on theenvironment.
ii. Design models of landforms to explain their shape and structure.
iii. Explore different resources to locate important sites and explaintheir significance.

Stand III: People and the Environment

i. Analyse the sources and importance of water to understand ways of conservingwater.
ii. Examine the need for participation in cultural programmmes and wearing ofnational dress to recognize its significance for preserving tradition and culture.
iii. Evaluate the causes and consequences of waste to understand ways of disposal by beingaware of its impact on the environment and humans.

Key Stage III: At the end of this key stage, the students should be able to:

Strand I: Time and Space

i. Examine the significance of latitudes and longitudes to explain the weather and climate,and time of a place.
ii. Assess the importance of map reading and interpretation skills to demonstrate spatialreasoning.

Strand II: Physical Environment

i. Analyse the geomorphological processes to infer the significance of land features andits relation to culture.
ii. Examine the structure and composition of atmosphere to understand its significance tothe Earth.

Stand III: People and the Environment

i. Evaluate the importance of natural resources and natural characteristics of a

placefor socio-economic development and its influence on culture and identity.

ii. Analyse the natural characteristics of a place and relate their influence on cultureand identity.
iii. Apply indigenous and scientific knowledge to understand measures to manage andaddress disasters.
iv. Analyse the interaction between human and environment to understand theecosystem for harmonious co-existence.
v. Explore the impact of the atmosphere on the people and environment to explain itssignificance.

Key Stage IV: At the end of this key stage, the students should be able to:

Strand I: Time and Space

i. Explore the significance of solar system to explain the relative motions ofthe planets.
ii. Explore geographical coordinates with reference to location and time tounderstand the geographical characteristics of a place.
iii. Examine the significance of the atmosphere and explain its impact on theEarth.
iv. Apply appropriate technology to design maps for interpretation ofgeographical concepts.

Strand II: Physical Environment

i. Assess the natural resources and their uses to explain the importance ofconserving the ecosystem and sustainable use of resources.
ii. Analyse the role of places and regions in shaping the cultural identity andunifying the societies.

Stand III: People and the Environment

i. Explain the complex interaction amongst the spheres and analyse its impact on thepeople and biodiversity.
ii. Examine the role of human geography to understand spatial diversity for a just andharmonious co-existence.
iii. Apply indigenous and scientific knowledge to explain ways of managing and addressingdisasters.

Key Stage V: At the end of this key stage, the students should be able to:

Strand I: Time and Space

i. Examine the evolutionary behaviour of cosmogony to understand the hypotheticaldescription of astronomy.
ii. Apply knowledge and skills of emerging geospatial technologies to analyse national and global issues.
iii. Apply surveying techniques using available equipment and technology for planningand development of a place.

Strand II: Physical Environment

i. Apply geomorphological knowledge and skills on lithological processes to understand the landforms and their significance.
ii. Apply the knowledge of pedology to explain the biological and physicochemical evolution.
iii. Explore the meteorological elements and anthropogenic action to explain the climate dynamics and how it affects people.

Stand III: People and the Environment

i. Assess the natural resources and their uses to explain the importance of conserving the ecosystem and sustainable use of resources for socio- economic development.
ii. Apply indigenous knowledge and modern technology to suggest ways of managing and addressing disasters.
iii. Analyse the similarities and differences between places and regions to understand the spatial diversity.
iv. Examine the evolution of settlements to understand its significance and balanced socio-economic development of a place.

5.4 Class-wise competencies

Key stage I (Classes PP-III)

i. Explore the facilities in the school to find the location and the direction.
ii. Explore different weather conditions to familiarize the changes in atmosphere.
iii. Identify the different land forms in their locality to recognize the features
iv. Identify some celestial bodies to understand their importance.
v. Demonstrate appropriate use of water for proper usage.
vi. Examine the importance of wearing dress and listening to music for national identity.

Key stage II (Classes IV- VI)

i. Compare the planets in the solar system to comprehendtheir characteristics.
ii. Examine the elements of weather to understand its effect.
iii. Analyze the importance of water for sustainable use.
iv. Examine the movements of the earth to understand its impact
v. Design models of landforms to understand the shape and structure
vi. Explore Google Earth Apps to locate important sites in the locality.
vii. Examine the need for participation in cultural programs and wearing of national dress to preserve tradition and culture.
viii. Evaluate the consequences of waste disposal to understand the human impact.

Key stage III - Class VII

i. Assess the significance of latitudes and longitudes to infer the weather and climate of a place.
ii. Analyse the interaction between human and environment to understand ecosystem for human wellbeing. Use indigenous and scientific knowledge to understand measures to manage and address disasters.
iii. Examine the importance of map reading and interpretation skills to demonstrate spatial reasoning.
iv. Evaluate the importance of natural resources for balanced socio-economic development of a country.
v. Design disaster contingency plan by using mapping skills to apply at home.
vi. Analyze the natural characteristics of a place and its influence on culture and identity.
vii. Explore characteristics of various landforms to understand the process of gradationand relate the landforms to our culture.

Key stage III - Class VIII

i. Examine the significance of latitudes and longitudes to locate and find the time of places.
ii. Analyse the interaction between human and environment to understand ecosystem for human wellbeing.
iii. Use indigenous and scientific knowledge to understand measures to manage and address disasters.
iv. Evaluate the importance of natural and human resources for balancedsocio-economic development of a country.
v. Design disaster contingency plan by using mapping skills.

vi. Explore the natural characteristics of a place and their influence on culture and identity.

vii. Investigate characteristics of various landforms to understand the process of gradation to relate the landforms to our culture.

viii. Advocate ways to overcome waste disposal to understand the negative impact on the environment.

Key Stage IV - Class IX

i. Explore the significance of the solar system to understand the relative motions of the planets.

ii. Assess the significance of geographical coordinates with reference to location and time.

iii. Examine the significance of the atmosphere and its impact on the Earth.

iv. Use appropriate technology to design maps for interpretation of geographical concepts

v. Assess the significance of natural resources to conserve the ecosystem for sustainable use.

vi. Examine human activities to understand spatial diversity for a just and harmonious co-existence.

vii. Analyse the interaction amongst the spheres and its impact on the people and biodiversity.

viii. Use indigenous and scientific knowledge to understand the measures to minimise disasters.

Key Stage IV - Class X

i. Apply appropriate geospatial technology to design maps and interpret geographical concepts.

ii. Examine the origin of the universe to understand astronomical geography.

iii. Examine the significance of geographical coordinates with reference to location and time.

iv. Explore the function of places and regions in determining the cultural identity that unifies the society.

v. Analyse the geomorphic processes to understand the significance of land features.

vi. Analyse the effects of interaction amongst the spheres to understand biodiversity.

vii. Assess the significance of natural resources to understand resource conservation and sustainable use.

viii. Examine the role of human activities to understand distribution of settlement and population.
ix. Use indigenous and scientific knowledge to explain ways of managing disasters.

Key stage V - Class XI

i. Assess the origin of the universe to understand the religious and hypothetical description of astronomy.
ii. Apply knowledge and skills of geospatial technologies to analyse national and global issues.
iii. Demonstrate cartographic skills to analyse geographical information.
iv. Explore climatological elements and human activities to understand climate dynamics.
v. Apply the knowledge of soil science to explain the biological, physical and chemical properties.
vi. Analyse the geomorphological processes to deduce the significance of land features.
vii. Assess different sources of information and data to plan for socio-economic development.
viii. Assess the significance of natural resources to conserve the ecosystem for sustainable use.
ix. Explore similarities and differences between places and regions to understand spatial diversity.
x. Examine the evolution of settlements to understand the significance of it.

Key stage V - Class XII

i. Examine the origin of the universe to understand the scientific account of astronomy.
ii. Apply knowledge and skills of geospatial technologies to analyse global issues.
iii. Apply surveying techniques with available equipment and technology to plan the development of a place.
iv. Apply geological knowledge on physical characteristics of rocks to understand its formation.
v. Apply the knowledge of properties of soil to understand biological, physical and chemical composition.
vi. Analyse the geomorphic processes to extrapolate the significance of land features.
vii. Explore the climatological element and human actions to understand climate dynamics.
viii. Assess the significance of natural resources to understand the measures to conserve the ecosystem.

ix. Examine the function of economic activities to promote socio-economic development of a place.
x. Apply indigenous knowledge and modern technology to support in managing and addressing disasters.
xi. Explore similarities and differences between places and regions to recognise spatial diversity.
xii. Assess the significance of settlements to understand the evolution and characteristics of settlements.

5.5 Learning Objectives (Core Concepts and Skills)

Learning objectives serve as indicators of achievement at each class level in reference to the competencies and the standards. These objectives are inter-related and it will not normally be possible or desirable to assess them in isolation. Learning objectives encompass knowledge, skills and values for each class level.

Key stage I (Class PP-III)

Learning Objectives	**Core concepts**	**Skills**
Name the village you belong to.	Village, geog	Compass direction,
Describe your home. indicate the basic compass direction.	House, east, west, north, south	Identification
Identify the *dzongkhag* you live in on the map of Bhutan.	Dzongkhag,	Differentiation, drawing
Differentiate day and night (Rising and setting of sun).	Day, night	Drawing
Draw pictures depicting different weather conditions.	Sunny, rainy, cloudy	Diagram
Draw different landforms seen around your locality	Mountains, hills, plains	Demonstration, use ofresources
Represent celestial bodies diagrammatically	Sun, Earth, Mercury, Venus	Display, Naming
Demonstrate correct hand washing steps	Soap, water	Demonstration
Ensure water taps are closed when not in use.	Proper usage	Exhibition
Display ways of wearing gho and kira.	National dress	Demonstration, display
Name at least three types of songs and dances	Rigsar, boedra, Zhungdra	display

Key Stage II (Class IV-VI)

Learning Objectives	Core concepts	Skills
Draw sketch maps of their locality.		Drawing
Draw graphs using data and interpret them		Drawing, interpretation
Describe their family tree.	Father, mother, siblings	description
Describe roles of their family members.	Housekeeping, farm work	observation
Describe a local festival.	Tsechu, Diwali	Observation
Explain the importance of visiting dzongs and monasteries.	Holy and auspicious days	Observation, Investigation
Identify hazards in the community.	Hazards, risks	Investigation
Demonstrate basic life-saving skills during disasters.	Mock drill, duck cover hold	Demonstration
Demonstrate safety practices for self and others.		Practice

Key Stage III (Class VII)

Learning Objectives	Core concepts	Skills
Discuss the nature and scope of geography.	Nature, scope, career	Location, calculation, demonstration, comparison, demonstration Drawing sketches andgraphs, Interpretation, Identification, demonstration
Explain the movements of earth.	Solar system, Rotation, revolution, day, night	
State the importance of latitudes and longitudes. Compare latitude and longitude. Calculate time using longitudes. Locate features using latitudes and longitudes.	Parallels, meridians Local time, standard time, GMT Climate zone, vegetation zone,	
Distinguish between weather and climate	Elements of weather and climate, atmospheric condition	
Explain the structure of the atmosphere and itssignificance. Demonstrate the use of weather instruments.	Atmospheric layers, composition Anemometer, rain gauge	
Describe different types of rocks. Explain the processes of rock formation (rock cycle) Discuss minerals and types.	Sedimentary, Igneous, Metamorphic, weathering, denudation, precious minerals, metallic, organic	Exploration, interpretation, observation

Discuss vegetation and its types Discuss the concept and types of resources. Explain the sustainable use of resources.	Plants species, ground cover, renewable, nonrenewable, alternative resources	Exploration, interpretation, observation
Exhibit life-saving skills during disaster Suggest measures to reduce disasters.	Hazards and disasters Earthquake, windstorm, hailstone, (fire, GLOF, floods)	Exhibition, Suggestion
Explain human population. Explain death rate, birth rate and natural change. Draw a population density map of a given country/region.	Population (natural change), population density	Drawing, interpretation
Describe the concept and types of settlement. Explain the patterns of settlement.	Settlement (rural, urban settlement)	Location, Interpretation
Discuss the river systems Explain the basic processes of land formation. Locate major rivers on an outline map. Describe different types of landforms	River systems Land forms (types of landforms) Mountains, plains, plateaus	
Describe ecosystem and food chain Explain human interaction with the environment. State some ways to combat environmental problems.	Environment, ecosystem, food chain, environmental problems, conservation	Interpretation, suggestion

Key Stage III (Class VIII)

Learning Objectives	Core concepts	Skills
Discuss the key characteristics of earth's motion. Describe the importance of latitudes and longitudes. Identify latitudes and longitudes of places on a map. Calculate time and longitudes. Describe the composition and structure of the atmosphere. Explain the significance of atmosphere. Discuss the factors affecting climate.	Motions of the earth, Rotation, Revolution Latitude and longitude, Atmosphere, Elementsof weather and climate: temperature, pressure, rainfall)	Identification, Calculation, interpretation
Describe soil and its properties. Explain soil forming factors. Classify soils. Explain natural vegetation. Explain types and significance of natural vegetation. Explain the causes of change in population. Analyse the importance of addressing populationchange.	Soils, Natural vegetation. Population change Natural resource	Classification, analysis, Interpretation
Describe volcano and earthquake. Distinguish between hazards and disasters. Differentiate natural hazards from human inducedhazards. Discuss causes and effects of disasters. Suggest measures to mitigate disasters.	Earthquake and volcano Hazards and disasters.	Distinction, suggestion
Classify patterns of settlement. Illustrate patterns of settlement.	Settlement patterns (scattered, clustered and nucleated)	Classification, illustration
Discuss stages of river. Locate different features on a map Illustrate relief features from contour map.	Youthful, mature, old stage, Map reading	Location, Illustration, map reading
Explain components of the environment. Describe the interrelationship that exist among thevarious components Analyse the importance of environmental conservation.	Biotic, abiotic	Interpretation

Key Stage IV (Class IX)

Learning Objectives	Core concepts	Skills
Discuss the uniqueness of the earth. State the evidences to prove the sphericity of the earth. Explain the size of the earth in comparison to other planets in thesolar system. Compare and contrast the earth with other planets in the solar system. Evaluate the importance of latitude. Calculate the time and longitude. Describe the composition of atmosphere. Analyse the characteristics of different layers of atmosphere. Explain the basic working principle of weather instruments withthe help of drawings.	The unique planet Rotation and revolution Latitude and longitude Atmosphere	Comparison, Calculation, Analysis, Drawing
Explain the sources of river with the help of diagram. Describe the river as an important agent of denudation. Draw diagrams to interpret various features formed by rivers indifferent stages. Evaluate the importance of river in the socio-economicdevelopment of a nation.	Rivers and land forms (denudation)	Interpretation, drawing
Interpret topographical maps. Locate the important physical features on a map Represent important human made features on a map.	Map reading and interpretation	Interpretation, representation,map reading
Explain the factors affecting soil formation. Design maps using geo-spatial technology. Explain the properties of different types of soil. Describe the different types of soil found in Bhutan. Describe the importance of soil and the ways to conserve it. Describe the components and types of ecosystem. Explain the structure of ecosystem. Identify the external and internal factors responsible for the change in the ecosystem. Discuss the environmental concerns and	Soil formation Natural environment. Hazard and disasters	Identification, interpretation

conservation measures. Discuss the major disasters and their causes. Describe common disasters in Bhutan. Explain disaster management approaches.		
Interpret population pyramid. Interpret data on distribution of population. Explain the factors affecting the distribution of population. Differentiate nucleated, dispersed, and linear settlement withexamples. Analyse the factors affecting patterns of settlement. Describe various land use pattern. Describe farming as a system. Differentiate between traditional and modern farming. Explain the factors influencing agriculture. Analyse the importance of agriculture. Identify causes and problems associated with farming. Suggest measures to overcome/mitigate problems of farming. Discuss alternative sources of energy in Bhutan.	Population distribution Settlement (dispersed, Nucleated and Linear) Agriculture Farming system	Interpretation, Differentiation, Analysis

Key Stage IV (Class X)

Learning Objectives	Core concepts	Skills
Discuss the origin of the earth with reference to the big bangtheory and solar nebula. Evaluate the significance of latitudes and longitudes. Determine longitude and time. Compare climatic zones with vegetation zones of Bhutan. Discuss the impact of climatic zone on its inhabitants. Represent climatic zones on a map.	The origin of the Earth (Big Bang Theory, Solar Nebula theory) Latitude and longitude Climate	Representation, Comparison, analysis, interpretation
Explain the factors affecting the climate of a place. Explain the components of biodiversity. Compare ecosystem with biodiversity. Analyse the significance of biodiversity. Interpret the topographical map. Interpret diagrams, graphs, illustrations and maps to drawlogical conclusions Demonstrate skills of using geographic technologies and ict. Represent human made features on a map. Explain concept of survey.	Biodiversity Interpretation of topographic maps layout, numbering	Interpretation, demonstration, representation,
Project the population trend. Design maps using geo-spatial technology. Discuss the causes of population growth. Assess the impact of population growth. Discuss spatial distribution of settlement with reference tocentral place theory. Explain migration and its type. Describe common disasters in Bhutan. Suggest mitigation measures to reduce impact of disaster. Demonstrate measures to reduce risk during disaster.	Population Settlement (Central place theory) Hazards anddisasters	assessment, projection, proposition
Explain the formation of himalayan mountain system withreference to continental drift theory and plate tectonics. Apply life saving skills to minimise disaster risk. Interpret the geological time scale.	Formation of Himalayas Continental Drift and Plate tectonics	Interpretation

Classify the different sectors and types of industries. Explain factors affecting location of industries. Analyse the impact of industries. State the importance of agriculture with reference to agro-basedindustries. Discuss mineral resources and its distribution. Discuss groundwater and karst topography. Discuss gradational agents and their activities. Discuss alternative sources of energy in Bhutan. Explore the concept of smart agriculture.	Industries Agriculture Minerals Gradation	Classification, analysis, interpretation

Key Stage V (Class XI)

Learning Objectives	Core concepts	Skills
Explain the origin of the universe from Buddhist perspective. Examine the significance of the moon for the earth	The origin of the universe (Buddhist perspective). Significance of the Moon.	Examination, interpretation, exploration
Discuss temperature and pressure. Explain the causes and consequences of shift in world pressureand wind belts. Explain different climatic zones of the world	Temperature and pressure World climaticzones	Analysis, interpretation
Analyse the relationship between global warming and climatechange. Discuss the evidences for climate change. Analyse the consequences of climate change and suggestmeasures to minimize the impact. Describe the properties of soil Distinguish soils for various uses. Trace the development of agriculture in Bhutan. Explain features of agriculture. Examine the scope of agriculture in Bhutan. Discuss the history of industrial development. Explain types of manufacturing industries. Discuss the development of tourism industry in Bhutan. Explain the factors affecting tourism. Discuss energy sources. Differentiate between conventional and non-conventional energysources. Discuss geothermal energy. Explain importance and approaches of resource management. Discuss sustainable development. Examine the dichotomy between resource utilisation andsustainable development. Discuss the concept of biomes.	Climate change, global warming, soil formation, soil properties, Agriculture, Industrial development, energy resources, soil properties, types of soils, features of agriculture, conventional and nonconventional energy sources, geothermal energy, nuclear energy	Distinction, tracing, examination, interpretation
Explain the internal structure of the earth with an illustration. Discuss the causes and impacts of volcanism and earthquake. Suggest measures to reduce the risk of earthquake.	Core, mantle, crust, dormant, explosive fissure, Mock drill, preparedness, mitigation	Exploration, examination, observation

Explain remote sensing and GIS. Examine the significance of remote sensing and geographic information system	GIS, Raster, vector, polygon	Explanation, observation, demonstration
Discuss various map projections. Demonstrate the skills of constructing map projection usingdifferent methods. Explain the concept of scales. Convert representative fraction into statement scale and vice-versa. Demonstrate the skills of interpreting topographical maps. Represent natural and human-made features on a map.	Conical, zenithal, Statement, linear, RF	
Analyse the significance of conducting population census. Examine the spatial distribution of population. Discuss population dynamics. Explain the trends of population. Draw population pyramid using a given population data and interpret it. Discuss urbanization. Classify urban centres.	PHCB, survey, population change, migration, Urban sprawl, problems of urbanisation	Analysis, Examination, interpretation,

Key Stage V (Class XII)

Learning Objectives	Core concepts	Skills
Explain cartography and its uses. Discuss surveying. Describe instruments for plane table survey. Explain precautions for conducting plane table survey. Conduct a simple plane table survey. Discuss the use of total station for survey		Conduction, Survey, interpretation
Discuss type of rocks and rock cycle. Classify soils. Discuss the development of hydropower sector in Bhutan. Discuss alternative sources of energy.	Rocks and soils. Water resource and alternative sources of energy	Classification, interpretation
Discuss the concept of creative industries. Explain the sub-sectors of creative industries. Identify and explain the challenges of creative industries. Discuss emerging risks and hazards. Analyse the impact of emerging risks and hazards globally. Suggest measures to mitigate emerging risks and hazards.	Creative industries, cybercrime and bio-terrorism	Analysis, measures, interpretation
Explain fertility and mortality. Suggest measures of fertility and mortality. Analyse the trends of fertility and mortality. Describe the role of working population and its impact onthe economy. Suggest ways to overcome unemployment problem in acountry. Explain migration. Examine the causes and consequences of migration. Suggest measures to mitigate migration. Discuss models of urban centres. Discuss the importance of urbanisation. Analyse the causes and problems of urbanisation. Suggest measures to overcome problems of urbanisation.	Population study fertility, mortality, working population Urbanisation Migration, urban sprawl, squatter settlement	Suggestion, Analysis, examination, interpretation
Describe global positioning system and its importance. Discuss remote sensing and its application. Discuss GIS and its application.		

Demonstrate the use of gis software for spatial and non-spatial data. Locate different biomes on a map with the help oftechnology.		
Discuss glaciers as agent of gradation. Explain third pole in the context of glaciers and globalwarming. Discuss fluvial processes and associated landforms. Discuss cycle of erosion. Explain humidity and air temperature. Calculate relative humidity. Describe different forms of condensation. Discuss types of precipitation Discuss koppen's classification of climate.	Work of glaciers Fluvial processes. Precipitation and condensation Classification of climate (Koppen)	
Explain the origin of universe with reference to gaseousmass hypothesis and electromagnetic theory.	The origin of Universe (Gaseous Mass Hypothesis and Electromagnetic theory)	

6. Teaching and Learning Approaches

In the process of delivering the curriculum, teachers use a variety of approaches or strategiesto teach or instruct. An effective teacher should be able to make a conscious choice and picka particular pedagogical approach that is the most effective to teach a specific topic which will optimise student learning.

An effective pedagogy should equip learners for life, in its broadest sense; build inter-disciplinary and cross-curricular skills, concepts, knowledge, and values; facilitate integration of knowledge, skills, and values within and across the disciplines; promote enduring understanding and deeper learning; and promote collaboration, cooperation, and shared learning, thus promoting active engagement of learners in the learning process.

i. Competency based Learning

Competency-based learning is an approach to education that focuses on the student's demonstration of desired learning outcomes as central to the learning process. It is concernedmainly with a student's progression through curriculum at their own pace, depth, etc. As competencies are proven, students continue to progress. It is similar to mastery-based learning, with the primary difference being that competency-based learning often focuses on observable skills or 'competencies,' while mastery learning may be academic– as likelyto focus on concepts as skills.

ii. Creating an enabling and conducive learning environment

Learning and development do not occur in a sequential, linear fashion nor is one approach of learning equally effective for all learners. Therefore, teachers should create a learning environment which appeals to children's interests and is relevant to their day-to-day experiences. The pedagogical approaches should create a positive psychosocial ambience where individual learners feel included and safe.

This may call for teachers to use differentiated instructions and a variety of teaching strategies to make learning accessible to all. Direct hands-on experiences encourage children to interact, engage and involve, which in turn, lead to improved understanding and development of mental representations.

iii. Making learning relevant and meaningful

Relevance is a crucial factor in all kinds of learning. Students learn the best when they feel what they are studying is worthwhile because it is meaningful and relevant to their lives. At the same time, students must see the usefulness and potential application of the knowledge they acquire to their everyday lives. Effective teachers use pedagogies that connect classroom learning to life, thus making learning more meaningful. Students should also be exposed to contexts and contents that are local, regional, and
international which would be of relevance to them in their higher education and career opportunities, thus making them part of the global village.

Learning can also be made relevant and meaningful by connecting prior learning to new learning. Learners come to the classroom with a broad range of pre-existing knowledge, skills, beliefs, and attitudes, which influence how they interpret and organise new information. How they process and integrate this information will, in turn, affect how they remember, think, apply, and create new knowledge. Since new knowledge and skill are dependent on pre-existing knowledge and skill, knowing what learners know and can do when they come into the classroom or before they begin a new topic of study, can help us craft instructional activities that build on students' strengths and acknowledge and address their weaknesses.

iv. Fostering reflective practices

Effective pedagogies enable learners to reflect on their learning process. Such pedagogies allow learners to participate in empowering activities through which they understand that learning is a process and mistakes are a natural part of learning. Teachers incorporate learner experiences, interests, and real-life situations in instructions. Reflection, particularly at higher levels, can lead to greater self-awareness, which, in turn, is the first step to positive change.
Taking time to reflect can help students identify approaches that work well, and in that way reinforce good practices and reflect on why some approaches do not work. Such metacognitive strategies can enable students to transfer learning to other disciplines and domains.

v. Promoting inquisitiveness

Effective pedagogies should support and encourage the learner's commitment to initiate and complete complex, inquiry-based learning requiring creative and critical thinking with attention to problem-solving. Teachers orchestrate effective classroom discussion, questioning, and learning tasks that promote higher-order thinking skills. Teachers challenges learners to think deeply about problems and encourages or models a variety of approaches for a

solution. Teachers integrate a variety of learning resources with classroom instruction to increase learning options. Teachers clarify and share with students learning intentions/targets and criteria for success. Through these strategies, students become, among others, self-directedlearners. All pedagogical approaches that teachers use should be based on evidence of efficacy.

vi. Providing Autonomy and flexibility

The curriculum should be flexible to accommodate localised school-based innovation and creativity for effective implementation and delivery. It should allow flexibility to teachers to customise the curricular contents to local contexts and adopt different teaching strategies to develop their professional knowledge and apply them accordingly. Teachers should have the autonomy to devise alternative assessment tools to assess learners' competencies as they learnand to inform future learning.

vii. Promoting holistic education

Child development needs to be holistic as all the domains of development are interdependentand should not be compartmentalised. Health, nutrition, social, emotional, and spiritual development, and other specific variables are inter-related. Development in one domain will impact development in other areas. The core values of self-discipline, relationship with natureand others in society must be reflected in the curriculum.

Some of the teaching learning approaches for geography are:

a) Group presentation

Group presentation are carried out in small group consisting of not more than five students. Students can divide the main sub-topics of the chapter within the group, and do aresearch and write up either by visiting library or by browsing online resources individually.

Once every student member has done their part, they can sit together and share their findings and compile them into sequence as required for presentation. Finally, they do thepresentation to class by taking turn or by a chosen presenter but all the members must know what ever the presenters are presenting. Other groups must take active participationby listening and asking question to the members of the particular group. The subject teacher has to guide and facilitate group presentation for effective teaching and learning.

b) Team teaching and learning

Team teaching to be carried amongst the subject teachers as a team in turns. This will create effective, variety and fun learning for students. Teachers share the topics amongst themselves based on the basis of their content knowledge, confidence and skills. Teacherscan be more creative and learn for one another. It can also boost the morale of individual teacher and improve their confidence.

c) Field Trip

Geography can be taught better through real life field observation and learning. Most of the topics in geography can be taught through field visit where students see, feel and get real life experience. Field trip has to be properly planned and monitored by subject teacher as guide and escort. Students learn more by asking questions to the people in thefield and recording answers during such visits.

d) Integration of ICT

ICT is an indispensable tool for 21st century teaching and learning process. Geography can be taught by integrating ICT anywhere provided ICT facilities are available. By using ICT, all teaching learning materials like audio-visual materials, facts and figures, write upsand other additional information can be put into use. Students can learn geography more readily and with enthusiasm through the integration of ICT. Teachers need to teach the latest updates in geography as well as past geographical phenomena in audio- visual formsby either online or offline.

e) Discussion Methods

Discussion methods are a variety of forums for open-ended, collaborative exchange of ideasfor the purpose of furthering students thinking, learning, problem solving, understanding, orliterary appreciation. Participants present multiple points of view, respond to the ideas of others, and reflect on their own ideas in an effort to build their knowledge, understanding, or interpretation of the matter at hand. A defining feature of discussion is that students haveconsiderable agency in the construction of knowledge, understanding, or interpretation.

f) Peer Support

Peer support is one way in which educational institutions are supporting and encouraging students to support each other, through a formalised framework. The interactions with peers, increases academic engagement, improved progress on individualised social goals, increases social participation in class and the formation of new friendships. Peer-Assisted Learning Strategies (PALS) is a class wide peer

tutoring program. Teachers carefully partner a student with a classmate. The pair works on various activities that address the academic needs of bothstudents. Pairs change over time. The main benefits of peer teaching are students receive more time for individualized learning; direct interaction between students promotes active learning.

g) Online Teaching

Online teaching and learning is education that takes place over the digital platform. AudioVisual recordings and other teaching learning materials can be uploaded in online platforms (Google) and other social media. Tests and quizzes can be conducted to engage thestudents for active participation.

h) Laboratory Method

The laboratory method of teaching places primary emphasis upon equipment and its use. In this method the role of the teacher is that of a guide and helper rather than that of taskmaster. In this method, students 'learn by doing' as students experience the basis of real learning. Theuse of this method helps to develop valuable personal qualities such as balance judgment and consideration for others.

i) Project Method

Project method involves investigation and solution of problems and uses physical materials. Itis for the development of inherited traits of child providing the most natural conditions. It develops social values like cooperation, collaboration and being sociable. Project method provides the students training in research work.

j) Research Method

Research method of teaching can be used to teach the topics that require gathering additional information. Students develop simple questionnaire and go to field to gather information, observe and survey. They interpret and analyse data and compile the findings.

7. Assessment and Reporting

Assessment in education is the process of gathering, interpreting, recording and using information about students' responses to an educational task. It is the crucial link betweenlearning outcomes, content, competency, and teaching and learning activities.

7.1 Purpose of Assessment

The purpose of assessment is to improve students' learning and teachers' teaching. It is an ongoing process that arises out of the interaction between teaching and learning. The purposesof assessment are:

i. Assisting student learning
   - Provide feedback to improve student learning
   - Motivate student
   - Diagnose students' strength and weaknesses

ii. Evaluating and improving teaching and learning programmes
   - Provide feedback to the teacher
   - Inform the need to improve teaching strategy
   - Monitor students' progress
   - Ascertain if the learning objectives are achieved

iii. Providing evidence of student achievement and completion of the level.
   - Promote students to the next higher class.
   - For appropriate placement.
   - For selection of students for relevant course.
   - To reward students for their learning.

7.2 Principles of Assessment

i. Reliability

Reliability refers to the extent to which assessments are consistent. An assessment isreliable when assessors using the same criteria and marking scheme arrive at exactlythe same judgment about a given piece of work.

ii. Validity

Validity refers to credibility of an assessment. It ensures that assessment task and associated criteria effectively measure students' attainment of the

intended learningoutcomes at an appropriate level.

iii. Relevancy

Relevancy is the appropriateness of assessment in relation to the content of curriculum. Assessment task should reflect the nature of the subject and ensure thatstudents develop a range of skills and capabilities.

iv. Transparency

Transparency refers to how clear the assessment expectations are for learners and stakeholders. Assessment should be clear, accurate and fair. Timely information onassessment task and procedure should be made available to them.

v. Inclusive

It is an approach to an assessment to promote diverse learning needs without compromising the academic standards. Inclusive and equitable assessment shouldensure that assessment task and procedures do not disadvantage any group or individual student.

7.3 Types of Assessment

Assessment in various forms is integral to learning and teaching to facilitate learning andimproving instruction. It is generally divided into three types: diagnostic assessment, formative assessment and summative assessment.

i. Diagnostic Assessment

Diagnostic assessment is assessment for learning. It assesses what the learners already know and the nature of difficulties that the learners might have, which, if undiagnosed,might limit their engagement in new learning. It also helps to determine students' strength and learning needs in order to plan and adjust learning and teaching.

ii. Formative assessment

Formative Assessment is assessment for learning. It is administered throughout the process of instructional hours, wherein teachers assess and provide task based guidance and feedback.

Formative assessment also includes assessment as learning, where students reflect on,monitor their own progress and set goals for their learning. The information gained also guides teachers' decisions in enhancing learning and teaching.

iii. Summative assessment

Summative assessment is assessment of learning. It is administered at the end of instructional periods to gauge the level of students' achievements and performance. The task assigned for the assessment includes set of questions, or the task to demonstrate their mastery and knowledge of the course content. It provides information about the learners' level of learning and grade learners; and to analyse theeffectiveness of teaching.

7.4 Assessment Techniques and Tools

Geography is an inter-disciplinary subject and requires various types of assessment tools toensure that the performances of learners are assessed at the cognitive and procedural levels. Therefore, the suggested assessment techniques and tools in geography include:

a. Anecdotal records**:** objective, narrative records of learner's performances, strengths,needs, progress and negative/positive behaviour.
b. Self and peer assessment**:** assessment by learners for self and others relative to statedcriteria and program outcomes.
c. Portfolios**:** collections of learner's work that exhibit their efforts, progress andachievements in one or more areas.
d. Simulations**:** presentation of an artificial problem, event or situation or object that duplicates reality. For example earthquakes, volcanoes, fire, geysers and hot springs.
e. Project works: an extended investigation carried out by learners on a topic agreed bylearner and teacher.
f. Assignment: a learning task undertaken by learners, allowing them to learn a fixedsection of the curriculum. Different ways of presenting the results can be used depending on the nature of the task – a report (oral, written and audio-visual).
g. My exploration: explore the physical and natural environment and prepare a record ofwhat learners observe and collect in the form of journal.
h. Field work: visit to a place outside the classroom to get first-hand experience in whichopen inquiry techniques and learners' experimentation can take place.
i. Tests: finding out the level of knowledge, skills and values learners have acquired.
j. Observation: observation of geographical features and phenomena to draw inference.
k. Checklist: is a to-do list that helps to ensure consistency and completeness in carryingout a task.

l. Conference: exchange of information and ideas on geographical topics.
m. Debate: presenting ideas to support or argue on a given issue or aproblem.
n. Quiz: questions to assess learners' knowledge, skills and attitude.
o. Seminar: presentation and discussion on geographical themes.
p. Survey: collection of information and data on geographical issues for decisionmaking.
q. Demonstration and Exhibition: practical exhibition and explanation of how thingswork or function and display geographical works.
r. Research and Presentation: collect data and information, interpret and share thefindings.
s. Problem solving activities: studying and finding solutions to difficult or complexgeographical issues.
t. Geography Olympiad: competency test to motivate learners' interest in learninggeography and prepare for higher competitions.
u. Rating scale: A rating scale is one of the most commonly used questionnaire types for online as well as offline surveys. It consists of close-ended questions along with a set of categories as options for respondents. A rating scale helps gain information on the qualitative and quantitative attributes.
v. Rubric: A rubric is a scoring tool that explicitly represents the performance expectations for an assignment or piece of work. A rubric divides the assigned work into component parts and provides clear descriptions of the characteristics of the work associated with each component, at varying levels of mastery.

7.5 Assessment Reporting

Reporting is a process used to communicate knowledge gained from assessing student learning. The purpose of reporting is to provide relevant information about a student's progress to students, parents, support staff and other teachers.

Schools are responsible for awarding a grade for each student who completes a year to represent their achievement. These grades are determined by the student's performance in relation to their academic and competency achievement. Teachers make professional, balance judgments about which grade description best matches the standards the students have demonstrated by the end of the year.

Teachers are required to ensure that the grades awarded are consistent with the learning standards specified in the curricular framework. The grade awarded is reported on the student's Progress Report, a cumulative credential that allows students to accumulate theiracademic results until they complete academic year.

Assessment structure for key stages revised in 2021

Subject	Key Stage	Continuous Assessment	Terms and Terminal Examinations	Remarks
Geography	III	40	60	100
	IV	40	60	100
	V	30	70	100

Assessment Breakdown (continuous assessment and summative assessment)

Subject	Key Stage	Term I			Term II		
		CA	Mid Term	Total	CA	Annual Exams	Total
Geography	III	20	30	50	20	30	50
	IV	20	30	50	20	30	50
	V	15	35	50	15	35	50

8. Enabling Conditions

Enabling conditions are characteristics of a school that facilitate effective teaching and learning. Teaching and learning processes include classroom level factors that directly affect student learning, including learning time, teaching strategies, and student assessment. To achieve these aims, the school education must ensure in which:

- Learners can master rigorous curricular contents, skills, and values.
- Teaching and learning are relevant to life outside of school.
- Individual needs are catered to and learners have the opportunity to explore their interests, develop their potential, and build their capacities as lifelong learners.
- Learners develop and use learning skills, information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills that lead to high levels of achievement in school and in life.
- Professional development and teaching strategies enable educators to help students gain the knowledge, skills, and values that they need in the 21st century.
- Students, teachers, and caregivers have access to 21st century tools and technologies and use them to work efficiently and productively.

- 21st century tools and context are embedded in core learning areas and assessments.

Besides the general facilities provided by the government to each school, the following conditions need to be created for effective implementation of the national curriculum.

i. Infrastructure

Infrastructure must accommodate various types of teaching pedagogies. Learning is shifting from information (knowledge) transfer to knowledge construction. School designs, therefore, also must respond to schooling that facilitate high engagement and high achievement by creating a culture of learning (knowledge construction), rather than a culture of teaching (knowledge transfer).

The following are some enabling conditions that must be fulfilled to facilitate high standard learning and achievement for all children:

ii. Human Resources

For the successful implementation of the curriculum, it is vital to have adequate qualified and competent human resources: school leaders, teachers, and support staff.

iii. School Leaders

1. Competent school leaders with provision for timely and continuous professional development programmes.

2. School leaders who understand the content of the curriculum and make management decisions within their areas of responsibility to support its delivery. They should encourage and support teachers in adopting new and innovative teaching practice.

3. School leaders who support shared responsibilities and make space for their Lead Teachers to consider the curriculum and its implementation in depth with the teachers in their teams. This is vital in ensuring that teachers are not guided only by textbooks but that they are co-creating the curriculum with their Lead Teacher, teacher colleagues, and learners.

iv. Teachers

1. Schools should have trained and qualified teachers to teach subjects of specialisation, including specialists and counsellors.

2. All teachers should receive timely and continued professional development to update and enhance their professional competencies.

3. Provisions must be created to validate and facilitate the promotion of innovative teaching and learning approaches.

4. Provision for instituting mentor and mentee teachers to support and guide novice teachers (including teacher trainees on practicum)

v. Support staff

School support staff play an important role in ensuring that students learn in a safe and supportive learning environment. They can foster positive, trusting relationships with studentsand improve school climate by encouraging parent and family involvement in education. Schools rely on the professional input and expertise of a range of support staff. Some work alongside teachers and some work behind the scene to ensure that there is an efficient infrastructure within which effective teaching and learning can take place.

a. Students

In contemporary teaching, learning and assessment practice, students are no longer seen as passive recipients of knowledge. Students should be engaged and they should become contributors to teaching, learning, and assessment processes.

b. Parents

Effective implementation of curriculum requires active involvement of parents in the educationof their children. Parental involvement entails seeing parents as active collaborators in their own children's learning and development and ensuring that they are well-informed about theirchildren's school lives and clear about the ways in which they can work with the school.

Parents should establish high expectations that guide their children throughout their years in school, encourage and support their children to attain these expectations. Cultivate a positive relationship with the school that allows them to closely monitor their children's progress.

vi. Other stakeholders

All the relevant stakeholders require to play their responsibility in supporting and creating a conducive learning environment in terms of infrastructure as well as human resources and timely support and interventions. Some of the stakeholders are the Local Governments (Dzongkhag and Gewogs), business community, local community, BCSEA, and other stakeholders. The role of the stakeholders is crucial in supporting the school administration and the learners in guiding them and providing timely feedback and suggestions.

9. Cross Curricular Linkages

Geography is interdisciplinary in nature as it links social and natural sciences. The study of geography enables a person to relate his or her knowledge in terms of history, politics, science, mathematics, sociology, psychology, economics and fine arts among others.

Geography is a broad subject spanning the arts and sciences, and as such can provide the perfectstarting point for a well-planned and well-implemented topic, concept-based, integrated, creative or thematic curriculum. All these approaches provide opportunities for amazinglearning experiences across all subject areas, as well as the hidden curriculum of values, attitudes and personal development, and they can all be driven by real-world geographical themes. The use of learners' personal experiences of places, awe-inspiring 'experts', news items or exciting global sporting events such as the Olympics, enable learning to become embedded in learners' memories because of the meaningful links to their interests and authentic real-world issues.

Geography builds on major emphases in spatial analysis, human-environment interaction, andplace-based and regional analysis to encourage communication and interaction with myriad other disciplines. The active pursuit of inquiries related to space, place, and interactions, especially dynamics within and across spaces and places, leads many geographers to range farfrom the field's core and explore the peripheral realms where geographic perspectives and insights intersect with those from other fields.

'Topics can build on learners' natural curiosity about the world at a range of scales, from the local to the global. Topics can relate to learners' everyday experiences in their valued places, like the park; their passions for reading music or sport; the people and places they are fascinatedby, in real and virtual localities'.

It is easy to label any trip out of school as 'geography', even if it is to a museum to study the historic rise and fall of the Napolean. However, there must be meaningful geographical thought and action and all trips provide a great opportunity for this. For example, for a museum trip:

- discuss the route from school
- speculate why the museum is located where it is and what is nearby (transport hubs,large population, similar services, etc.)
- consider the functionality of the building and the other services it provides
- use or even create a plan view map of the building– learners might also reflect on what they would add, replace or remove from the site.

This is all before you get to the 'academics': what influence did the physical landscape and climate have on the way people dress, shelter, farm and use natural resources such as iron and bronze, etc. and how is life today governed by similar restrictions? To this extent, the curriculum framework is designed to widen learners' breadth of geographical skills and knowledge true to its interdisciplinary nature.

Glossary

Transversal skills – is an ability or expertise which may be used in a variety of roles oroccupations

Competency based education- is an approach to teaching, learning, and assessment that focuses on the student's demonstration of learning outcomes and attaining proficiency in particular competencies in each subject

GNH - Gross National Happiness

Strands - Strands represent major themes to show logical flow of learning, starting from the concepts to natural and human made concerns to management and sustainability

Key stage – any of the five fixed stages into which the national curriculum is divided, eachhaving its own prescribed course of study.

GPS – Global Positioning System, a global navigation satellite system that provides location,velocity and time synchronisation

GIS – Geographic Information System is a framework for gathering, managing, and analysing data.

Geo- Inquiry – Ask, Acquire, Explore, Analyse and Act.

Geospatial Technology - an emerging field of study that includes Geographic Information System (GIS), Remote Sensing (RS) and Global Positioning System (GPS).

RS – Remote Sensing

Dzongkhag – District

NSCF – National School Curriculum Framework

DCPD – Department of Curriculum and Professional Development

REC – Royal Education Council

MoE – Ministry of Education

BCSEA – Bhutan Council of School Examination and Assessment

Bibliography

i. Baerwald, T.J. (2010). *Prospects for Geography as an Interdisciplinary Discipline.Annals of the Association of American Geographers* Vol. 100. Iss. 3, 2010.

ii. Department of Education, 2006. *Social Studies New Hampshire Curriculum Framework K-12*. Department of Education, New Hampshire.

iii. Institute of Australian Geographers, 2022. *Geography Career*. https://www.iag.org.au/geography-careers.

iv. Kerski, Joseph J. (2014). *Geo-awareness, Geo-enablement, Geotechnologies, Citizen Science, and storytelling: Geography on the World stage,* Colorado, USA.

v. National Research Council, 1996. *National Science Education Standards*. National Academy Press, Washington, DC.

vi. Parker, Edith P, 1933. *Principles Underlying the Construction of a Geography Curriculum,* Journal of Geography iv.

vii. Royal Education Council (2021). *The National School Curriculum Framework*. Royal Education Council, Paro.

viii. Soto, Victor J, (2010). *Writing Instructional Objectives; Student Learning Outcomes*. Mountain View College, Dallas, USA.

ix. Sturgis, C & Casey, K. (2018). *Quality Principles for Competency-Based Education*, Vienna. https://aurora-institute.org/wp-content/uploads/Quality-Principles-Book.pdf-

x.

xi. Wyatt, H, July 1973. *A Resource Centre in Geography Teaching*. Geographical Association. https:www.jstor.org/stable/40568119.

xii. The Glossary of Education Reform, LAST UPDATED: 02.04.14. *Learning Standards.* Portland, Maine. www.edglossary.org/learning-standards.

Appendix

Research and writing of curriculum framework in 2020 (provisional edition):

1. Tshering Dorji, Motithang HSS. Thimphu
2. Kalpana Giri, Yangchenphu HSS, Thimphu
3. Cheku, Woochu LSS, Paro
4. Norbu Wangchuk, REC

Research and writing of curriculum framework in 2022 (first Edition):

1. Bida Tamang, Yangchenchug HSS
2. Bhim Prasasd, Karma Academy
3. Cheku, Woochu LSS
4. Dorji, Dashiding HSS
5. Lhakpa, Gaselo HSS
6. Karma Nidup, Wanakha MSS
7. Kalapana, Yangchenphug HSS
8. Kelzang Wangdi, Shaba HSS
9. Samtem Dorji, Gaselo HSS
10. Sonam Wangdi, Doteng LSS
11. Tshewang Dorji, Zilukha MSS
12. Ugyen Thinley, Wangbama HSS
13. Norbu Wangchuk, DCPD