EDUCATION IN EMERGENCY

Curriculum Implementation Guidelines



Royal Education Council Paro

March 2020

INTRODUCTION

With the reported case of COVID19 on 5th March 2020, conforming to the National Preparedness and Response Plan, the government announced closure of schools and institutes in Thimphu, Paro and Punakha for two weeks with effect from March 6, 2020. The duration was keeping with the health advisory, which states that people who would have contracted infection from the primary source would develop full-blown infection. Parents were advised to closely monitor the health of their children. Should there be any concern, parents are asked to contact health officials.

As Government monitors the COVID-19 situation within the country and beyond, though the spread of virus is under control in the country, the global development is disconcerting. Therefore, all schools and educational institutes across the country will remain closed starting from March 18, 2020, until further order from the government.

The closure of schools for longer duration is detrimental to our student's continuity of education and learning. Conformation to Education in Emergency Contingency Plan of the Ministry of Education, the Royal Education Council has developed the Curriculum Implementation guideline for Education in Emergency to ensure that our children do not lose instructional hours for achieving some of the key desired learning outcomes for the academic year, 2020. As an alternative to formal mode of delivery, instructions on key learning areas are delivered remotely through the use of broadcast and social media. This mode of lesson delivery may appear to pose inconveniences to assess students' learning. In this juncture, lesson developers and presenters are reminded to make lessons interactive and experiential learning, and pose competency based or thought provoking questions during or at the end of every lesson. Students submit responses to these questions to their respective subjects teachers for assessment and grading their work.

The guideline is envisaged to provide suggestive prioritized learning areas, delivery modes and strategies, and inform lesson developers and presenters of the support mechanism at REC in order to provide access to learning for children during the emergency.

Education in Emergency REC

CURRICULUM IMPLEMENTATION GUIDELINES

RATIONALE

In the event that schools have to be closed down for a longer time due to COVID-19 outbreak in the country, the Royal Education Council has developed a curriculum implementation guideline to continue providing education to our children. This is to ensure that our children do not lose instructional hours for achieving the desired learning outcomes for the academic year, 2020.

The guideline provides prioritized learning areas, delivery modes and strategies, and support mechanisms in order to provide access to learning during emergency.

OBJECTIVES

The Guidelines are developed to fulfill the following objectives:

- 1. Provide a platform for students to access and avail educational services remotely through the use of mainstream and social media.
- 2. Provide guidelines on the learning areas, tools, and support mechanism from the relevant agencies such as MoE, REC, BCSEA, V-ToB, etc.
- 3. Facilitate students the continuity in learning in achieving the desired learning outcome for the academic year, 2020, particularly students attending high stake examinations.
- 4. Engage students productively at home and minimize people-people contact to prevent the spread of virus.

LEARNING AREAS & MODE OF DELIVERY

The different Learning Areas consist of the following. Some learning areas such as Science and Social Sciences have been combined together considering the common themes of the subject.

Key stage	Subjects	
I	Dzongkha, English, Mathematics	
II	Dzongkha, English, Mathematics	
III	Dzongkha, English, Mathematics, General Science, Social Sciences	
IV	Dzongkha, English, Mathematics, Functional Science, Social Sciences	
V	English, Dzongkha compulsory for all	
	Science: Mathematics, Science- Physics, Chemistry, Biology, Environmental Science, and ICT	
Commerce: Accountancy, Commerce, B. Mathematics		
	Arts: History, Geography, Economics, Media Studies, Rigzhung	

During emergency, lessons are delivered through the use of television, radio and other social media in key stages and theme based approach. Lessons are delivered through BBS1 and BBS2 supplemented with Google classroom, Youtube, Wechats and other social media. The suggested broadcast timetable is provided.

There are students who are dealt with 'pull out' and 'push in' strategies alongside the adaptation and modification in curriculum delivery. Therefore, lessons for Wangsel and Muenseling institutes' students are delivered by using tools appropriate for them. Further, lessons for Takste Rigzhung School are de-

livered through Google Classroom, YouTube, WeChat and other means on exception.

Suggested Broadcasting Timetable for BBS 1 and BBS 2.

	Key Stage											
Day	Session	Session	Session	Session	Session	Session	Session	Session	Session	Session	Session	Session
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Mon	Key – I Eng	Key – I Dzo	Key – I Maths	Key II Eng	Key II Dzo	Key-II Maths	Key-III Science	Key-III Social Science	Key-III Eng	Key-III Dzo	Key-III Maths	Key-IV Eng
Tue	Key – IV	Key – IV	Key – IV	Key IV S.	Key V	Key-V	Key-V	Key-V	Key-V	Key-V	Key-V	Key V
	Maths	Dzo	Science	Science	Eng	Dzo	Maths	Physics	Chem	Bio	His	Geo
Wed	Key – V	Key – V	Key – V	Key -V	Key -V	Key-V	Key-V	Key-V	Key-V	Key-V	Key-V	Key V
	Acc	Com	Eco	ES	MS	Dzo	Maths	Physics	Chem	Bio	His	Geo
Thu	Key – V	Key – V	Key – V	Key -V	Key- V	Key-IV	Key – IV	Key – IV	Key – IV	Key IV S.	Key V	Key-V
	Acc	Com	Eco	ES	MS	Eng	Maths	Dzo	Science	Science	Eng	Dzo
Fri	Key-V	Key-V	K-V	Key-V	Key-V	Key -V	Key – V	Key – V	Key – V	Key -V	Key -V	Key- V
	Maths	Physics	Chem	Bio	His	Geog	Acc	Com	Eco	ES	MS	Maths

Note:

Key Stage I: Classes PP-3

Key Stage II: Classes 4-6

Key Stage III: Classes 7-8

Key Stage IV: Classes 9-10 Key Stage V: Classes 11-12

Note:

- 1. Mathematics is inclusive of both Business Mathematics and Mathematics.
- 2. Broadcasting of lessons are suggested as follows:
 - a. BBS 1: 10.00 AM to 3.00 PM (5 hours)
 - b. BBS 2: 4.00 PM to 9.00 PM (5 hours)
- 3. More broadcasting time has been dedicated to Key Stages IV and V due to high stakes examinations.
- 4. The lessons for younger children (Key Stages I and II) be preferably aired before 7.00 PM.
- 5. Both BBS 1 and BBS 2 shall follow the same timetable to air lessons.
- 6. Refer the respective curriculum frameworks while preparing the lesson.

DZONGKHA

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Key Stage	Learning Area and Mode of Delivery	Strategy	Scope
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इब्यम्ब्री

ENGLISH

Key Stages	Learning Areas & Mode of Delivery	Strategies	Remarks/Scope
I (PP - III)	Literacy Skills – Phone- mic awareness » Alphabet sounds » Blending and seg- menting	Use SSP package supplied during CFA Workshop to adapt, develop materials teach sounds. These can also be shared on social media platforms like Wechat	Phonemic awareness is the foundational literacy skill.
	Read Aloud	Conduct Read-Aloud sessions using the Readers. Video tape of Read-Alouds using the Readers for respective classes and share	Build vocabulary and develop reading skill.
	Writing	Use the Workbooks to develop assignments on writing. Example: 1. Picture matching 2. Picture to word matching. 3. Fill in the blanks 4. Sentence completion, 5. Simple picture description.	These activities can also be used as extended activities or follow-up on the Read-aloud sessions.
	Letter formation, esp. for PP.	Share letter formation guide and share with the parents (Use SSP package for practice and progression – start with s,a,t,p,i,n)	Parents should let children practice and share the children's work with the teachers.
	Personal letter writing (class III)	Explain, with a demo, the format and features of a personal letter – ask students to practice.	Parents should guide
II (IV – VI)	Writing » Book reviews » Summaries » Folk-tales	Identify appropriate topics from the text and ask students to read and carry out writing tasks.	
	Creative writing (realistic fiction)	Give as many topics as possible and ask children to choose and write on one topic every fortnight. Teachers should share the features of realistic fiction.	Encourage children to first share paragraphs, instead of the whole written work. This way, it will be easier to monitor and guide. Wherever possible, parents should help children.
	Reading	Select the most appropriate texts (Short stories, essays and poems) Explain the features of the respective genres and demonstrate the skills needed to comprehend the different texts. Ask students to read a certain number of stories, essays and poems from the textbook periodically. Teachers develop appropriate set of prompts/cues to check the understanding.	Let children video/au- dio-tape their readings of stories, essays and poems and share with the teacher and friends for comments and feed- back.
	Listening and Speaking	Share the Resources (Audio/video) on Listening provided by REC and design questions to build/assess listening skills.	

Key Stages	Learning Areas & Mode of Delivery	Strategies	Remarks/Scope
III (VII – VIII)	Writing » reports » summaries » fantasy » narrative essay	Explain the features of each genre of writing. Compile and share as many topics as possible on each genre. Ask students to use the features of the respective genre and write. They should submit at least one complete written work every month for comments and feedback	Focus on narrative writing. In the beginning ask children to submit paragraphs instead of the whole essay. This way, it will be easier for the teacher to monitor and guide.
	Reading	Select the most appropriate texts (Short stories, essays and poems) Explain the features of the respective genres and demonstrate the skills needed to comprehend the different texts. Ask students to read a certain number of stories, essays and poems from the textbook periodically. Teachers develop appropriate set of prompts/cues to check the understanding. Teachers should adjust their prompts and questions according to the level of understanding. Students should also keep a record of other books and texts they read in the form of reviews.	The 'certain' number of texts to be read is to be decided by individual teachers depending on to the extent that students are able to achieve the objectives stated in the Reading & Literature strand.
	Grammar	Refer the objectives and develop lessons accordingly.	Develop exercise and activities for the students to complete and submit for feedback
		Use the audio-visual grammar lesson provided by REC, or other available resources and assign practice questions.	
	Listening and Speaking	Use the listening & speaking resources package provided by REC and design questions or activities for students to listen to the audio/video.	Design and share a set of questions to check the listening skill. Alternately, appropriate and relevant audios can be downloaded from YouTube.

Key Stages	Learning Areas & Mode of Delivery	Strategies	Remarks/Scope
IV (IX – X)	Reading & Literature	Select the most appropriate texts (Short stories, essays and poems) Explain the features of the respective genres and demonstrate the skills needed to comprehend the different texts. Ask students to read a certain number of stories, essays and poems from the textbook periodically. Teachers develop appropriate set of prompts/cues to check the understanding. Teachers should adjust their prompts and questions according to the level of understanding. Ask students to maintain a record of the books/texts read in the form of reviews(Reading portfolio). This is to be used for awarding CA.	
		Design a schedule/timetable to assign students to read a certain portion of the novel. Create a platform where students can share their understanding, doubts and critiques on the novel. The teacher should clarify wherever needed.	
	Writing » Descriptive » Expository	Refer the resource package provided by REC and share essay writing guides and sample essays	
		Share the features of each genre of writing. Compile and share as many topics as possible on each genre. Ask students to use the features of the respective genre and write. They should submit at least one complete written work every month for comments and feedback. (Writing Portfolio)	In the beginning ask students to submit just the introductory paragraph so that teachers can guide and comment on the thesis statement. Use the best written work of individual students for awarding the CA mark
	Language and Gram- mar	Download relevant grammar lessons as per the objectives and share with students.	
		Design grammar activities and questions for students to carry out and complete periodically	
	Listening and Speaking	Use the listening & speaking resources package provided by REC and design questions or activities for students to listen to the audio/video. Design and share a set of questions to check the listening skill. Alternately, appropriate and relevant audios can be downloaded from YouTube.	
		Ask students to audio/video tape their speeches and submit.	Use these to assess their speaking, and award CA accordingly.

Key Stages	Learning Areas & Mode of Delivery	Strategies	Remarks/Scope
		Ask students to prepare speeches and record their deliver. Let them share their speeches with others and the teacher for feedback and comments.	
V (XI - XII)	Reading & Literature.	Select the most appropriate texts (Short stories, essays and poems) Explain the features of the respective genres and demonstrate the skills needed to comprehend the different texts. Ask students to read a certain number of stories, essays and poems from the textbook periodically. Teachers develop appropriate set of prompts/cues to check the understanding. Teachers should adjust their prompts and questions according to the level of understanding.	Refer the objectives and focus on the genres stated therein.
		Use the resources on The Merchant of Venice provided by the REC during the orientation workshop to develop lessons. Ask students to answer the questions given in the package. » Prepare a schedule for students to read a certain portion weekly/ fortnightly. » Create a platform where students can share their understanding, doubts and critiques on the novel. The teacher should clarify wherever needed.	The teacher may design additional questions on the Merchant of Venice and other texts. » Ask students to video/audio tape their renderings of famous dialogues and share with the teacher and friends.
	Writing » Reports » Summaries » Stories » Persuasive essay » Argumentative essay.	Refer the resource package provided by REC and share essay writing guides and sample essays	
		Explain the features of each genre of writing. Compile and share as many topics as possible on each genre. Ask students to use the features of the respective genre and write. They should submit at least one complete written work every month for comments and feedback	In the beginning ask students to submit just the introductory paragraph of their essay. They should develop their writing further only after getting the 'go-ahead' from the teacher.

Key Stages	Learning Areas & Mode of Delivery	Strategies	Remarks/Scope
	Listening and Speaking	Use the listening & speaking resources package provided by REC and design questions or activities for students to listen to the audio/video. Design and share a set of questions to check the listening skill. Alternately, appropriate and relevant audios can be downloaded from YouTube.	
		Ask students to prepare speeches and record their deliver. Let them share their speeches with others and the teacher for feedback and comments.	
	Language and grammar	Select appropriate grammar exercises and activities from the book periodically and ask students to complete them and submit for correction and feedback.	
		Video-tape teaching crucial topics and share.	
		Download relevant grammar lessons and share with students.	

MATHEMATICS

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
I (PP - III)	Numbers and Operations	BBS1 & BBS2	 Representing Numbers Counting and identifying set to five and numeral writing from 1-1000 Use place value chart Meaning of subtraction and addition Division as repeated subtraction Adding and Subtracting 2-digit numbers using various ways Using varieties of strategies to add Calculating change
	Sorting and Pat- terns		 Describing object Describing repeating number pattern Creating pattern Apply patterns to problem based on number, geometry and measurement.
	Measurement		 Measuring and Comparing with non-standard and standard units Introducing and measuring length, volume, and capacity Days, weeks, months and seasons
	Geometry		 Identifying, describing and comparing 3-D shape Identifying, describing and comparing 2-D shape Name and explore geometric shapes according to attributes Polygon, combining polygon
	Data Manage- ment and Proba- bility		 Collecting and organizing data Interpreting and Creating bar graph with scale Using probability language
II (IV - VI)	Numbers and Operations	BBS1 & BBS2	 Place Value: whole numbers to 5 and 7 digits Compare & Order Whole Numbers to 5-digits Mixed Numbers: modeling, use division meaning to change an improper fraction to a mixed number Renaming: simple fractions to decimals Ratio: part to part, part to whole Integers: negative and positive Addition & Subtraction: decimals and wholes choosing most appropriate method (pencil, mental, calculator, estimation Multiplication & Division: decimals and wholes choosing most appropriate method (pencil, mental, calculator, estimation) and as well using various strategies. Multiplication Properties and Facts Addition & Subtraction: simple fractions with common denominators Addition & Subtraction: simple fractions - various denominators Assessment:
			Assign through Google Classroom Solve question assigned and submit response

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
	Sorting and pat- terning		 » Open Sentences: patterns in addition, subtraction, multiplication & division » Computation patterns □, ÷: how a change in either factor affects the computation » Whole Numbers & Decimals: relationship in computation » Equivalent Fractions: multiplicative relationship » Equivalent Ratios: change in one term affects the other term » Area/Perimeter: changing rectangle dimensions » SI Measurement: pattern in changing units » Volume Patterns: explore
	Measurement		 Estimate and measure in mm, cm, dm, m, km Volume: estimate & measure Volume & Capacity: solve simple problems Volume & Capacity: relationships Area: estimate & measure (square cm - symbols) Constant Area - Different Perimeters Area: irregular shapes - estimate & measure Area (of a Triangle): relate to area of a parallelogram Perimeter: polygons Perimeter & Area: rectangles & squares Angles: (meaning) amount of turn Angles: estimate, measure and draw
	Geometry		 Orthographic Drawings: make and interpret shapes Quadrilaterals: sort by properties & make generalizations (concretely) Cross Sections: 3-D shapes (cones, cylinders, prisms, pyramids) Quadrilaterals: sort by attributes Prisms, Pyramids, Cones, Cylinders Nets: draw for rectangular prisms & cubes Slides, Flips, turns (half, quarter): predict & confirm results for 2-D shape Translations & Reflections: generalize & apply Rotations: 1/4, 1/2, 3/4 turns: predict & investigate Reflective Symmetry: generalize for properties of various quadrilaterals Rotational Symmetry properties: squares & rectangles Planes of Symmetry: 3-D shapes Perpendicular lines / segments Bisectors: of angle, segments Congruence: polygons Similarity: name, describe & represent Assessment:
			Assessment: » Assign through Google Classroom. » Solve question assigned and submit response.

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
	Data Manage- ment and Proba- bility		 Collect, Organize & Describe Data: real world issues Evaluate Data: choose appropriate samples Bar & Double Bar Graphs: construct and interpret Mean, Median, Mode: concepts Simple Outcomes: more / less likely Predict Probability: near 0, near 1, near ½ Describe Probability Theoretical Probability: determine Ex Experiments: predict & record results (concrete materials)
			Assessment:» Assign through Google Classroom.» Solve question assigned and submit response.
	Data Manage- ment and Proba- bility		 Collect, Organize & Describe Data: real world issues Evaluate Data: choose appropriate samples Bar & Double Bar Graphs: construct and interpret Mean, Median, Mode: concepts Simple Outcomes: more / less likely Predict Probability: near 0, near 1, near ½ Describe Probability Theoretical Probability: determine Ex Experiments: predict & record results (concrete materials)
III (VII –VIII)	Numbers and Operations	BBS1 and BBS 2	 Positive and negative exponents Problems related to proportions Problems related to percent Problem related to mark up, SI and commission. Problems related to square root Multiplying and dividing integers Adding and subtracting fractions Multiplying and dividing fractions Operation with rational numbers
	Geometry and Measurement		 Pythagoras theorem and its application in measurement and geometry Area of a circle and associated problems Tangrams and making rectangle/square/right-angled triangle using 3, 4, 5 and 7 shapes Volume and Surface Area of a Rectangular Prism Isometric Drawings and Orthographic Drawings Transformations - Dilatations and Combining Transformations
	Data Manage- ment and Proba- bility		 Difference between theoretical and experimental probability Random sampling Complementary events and simulation Representing data using circle graphs, box and whisker plots Scatter plots to express relation between two variables
			Assessment: » Assign through Google Classroom. » Solve question assigned and submit response.

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
	Patterns and Algebra		 » Solving Linear Equations » Describing relationship » Linear Polynomial Assessment: » Assign through Google Classroom. » Solve question assigned and submit response.
IV (IX- X)	Numbers and Operations	BBS1 and BBS 2	Matrices » Concept of Matrix » Adding, Subtracting Matrices and Multiplying Matrices Networks » Concept of networks » Solving network problems Financial Mathematics
			» Making purchasing decisions» Simple and compound interest» Taxation
	Geometry and Measurement		Symmetry » 2-D and 3-D Reflectional Symmetry
			Constructions » Perpendiculars and Bisectors » Medians and Altitudes
			Efficient design » 2-D Efficiency and 3-D Efficiency
			Defining Trigonometric Ratios » The Sine, Cosine, and Tangent Ratios » Trigonometric Identities
			Applying Trigonometric Ratios » Calculating Side Lengths and Angles » Angles of Elevation and Angles of Depression » Areas of Polygon
	Data Manage- ment and Proba- bility		Data Involving One Variable » Histograms and Stem and Leaf Plots » Histograms and Box and Whisker Plots » Data Distribution
			Data Involving Two Variables » Correlation and Lines of Best Fit » Non-Linear Data and Curves of Best Fit
			Probability» Dependent and Independent Events» Calculating Probabilities
	Patterns and Algebra		Linear Functions and Relations » Linear Functions » Applications of Linear Functions » Graphs of Linear Inequalities » Solving Systems of Linear Equations using comparison, substitution and elimination strategies
			Graphing Functions » Graphs of Quadratic Functions in » Transforming Quadratic Function Graphs
			Solving Non- Linear Equations » Solving Quadratic Equations by Factoring

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
V (XI – XII)	Algebra	BBS1 and BBS 2	Binomial Theorem Binomial expansion for positive integral indices; use of Pascal's triangle; and the binomial theorem, i.e. (x + y)n = nC0xn + nC1xn-1y + + nCnyn Binomial theorem for the expansion of binomial expressions having negative or fractional indices Remainder and Factor Theorem Meaning of Rational Integral Function Remainder Theorem and Factor Theorem Quadratic Equations and Functions Solution of Quadratic equations by factorization and use of their graphs/sketches, and formula method Nature of roots – real, complex roots, equal roots Sum and Product of roots Forming quadratic equations with given roots and related data
V (XI – XII)	Algebra	BBS1 and BBS 2	 Determinants of order 2 and 3 » Minors and Co-factors of a determinant » Expansion of a determinant » Properties of a determinant and their use in the evaluation of a determinant » Product of determinants (without proof); » Conditions for consistency of 3 equations in two variables » Solution of simultaneous equations in 2 or 3 variables using Cramer's rule Matrices of order m x n, where m, n≤3 » Types of Matrices » Operations: Addition/Subtraction (Compatibility); Multiplication by a scalar; Multiplication of two matrices (Compatibility) » Adjoint and inverse of a matrix » Application of Matrix multiplication » Use of matrices to solve simultaneous linear equations in 2 or 3 unknowns
			Assessment: » Students can submit pictures of completed tasks through social media platforms such as telegram/ whatsapp etc and/or google classroom » They can make models and submit/reach to a designated place so that teachers can collect and assess
	Trigonometry		 Angles and Arc lengths » Angles: Convention of signs of angles; Magnitude of an angle; » Measures of angles; Circular measures » The relation S = rθ, where θ is in radians; Relation between radians and degrees » Arc length and area of a sector of a circle

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
			Trigonometric Functions Trigonometric ratios; Relationship between trigonometric ratios Proving simple trigonometric identities Signs and limits of trigonometric ratios Trigonometric ratios of standard angles and allied angles Periods of trigonometric functions Graphs of simple trigonometric functions (only sketches) Practical problems based on angle of elevation and depression (in 2 - D)
			Properties of Triangles » Sine Rule (including ambiguous case for triangles) and Cosine Rule » Projection formula » Napier's Formula for the area of a triangle (Proof and use)
			Compound and Multiple Angles » Addition and Subtraction formulas: » Sin (A ± B); Cos (A ± B); Tan (A ± B); Tan (A + B + C), etc » Double angle, triple angle, half angle and one third angle formula as special cases » Sums and differences as products: » e.g Sin C+Sin D=2 Sin ((C+D))/2 Cos ((C-D))/2 » Product to sums or differences: » e.g. 2 SinA CosB = Sin (A + B) + Sin (A - B) etc » Conditional identities (involving angles of triangles)
			Inverse Trigonometric functions » Meaning of inverse trigonometric functions » (Sin-1x, Cos-1x, Tan-1x, Cot-1x, Cosec-1x, Sec-1x) » Principal values (use of graphs in explanation) » Properties of inverse trigonometric functions (without proof) Assessment: » They can make models and submit/reach to a designated place on that teachers are called and assessment.
V (XI – XII)	Calculus	BBS1 and BBS 2	nated place so that teachers can collect and assess Functions » Concept of real valued functions; Domain and Range; » Classification of functions; Inverse functions; » Sketch of graphs of exponential functions, logarithmic functions, step functions, and simple trigonometric functions like Sinx, Cosx, and Tanx
			 Limits and Continuity Notion and meaning of limits; Fundamental theorems on limits; Limits of algebraic and trigonometric functions Continuity of a function at a point x = a, and continuity of a function in a range

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
			 Differentiation » Meaning and geometrical interpretation of derivatives; » Differentiation from first principle; » Derivative of simple algebraic and trigonometric functions and their formulae; » Derivative of sums, differences, products and quotients of functions; » Derivatives of trigonometric, logarithmic, and exponential functions » Derivatives of composite, absolute value, implicit and parametric functions » Interchange of independent and dependent variables » Differentiating function with respect to another function Logarithmic differentiation
			 » Successive differentiation up to 2nd order » Maxima and Minima and application of maxima and minima to practical problems » Application of derivatives: Equation of tangent and normal; Approximation; Rate measure; » Derivatives of inverse trigonometric functions reducible to simple form by substitution
			Integration Indefinite integral: integration as the inverse of differentiation; Anti-derivatives of polynomials and functions like (ax + b) ⁿ , Sin(x), Cos(x), Sec2(x), Cosec2(x) Integration by simple substitution for simple polynomial functions and simple trigonometric functions Standard method of integration of 1/x, ex, Tan x, Cot x, Sec x, Cosec x, (ax + b) ⁿ , where n ∈ Q Integration using substitution, using partial fractions and by parts Integrals of the type Sin2x dx, Sin3x dx, Cos2x dx, Cos3x dx, f'(x)[f(x)] ⁿ dx Definite integral as a limit of sum Properties of Definite Integrals Application of definite integrals - area of a curve included between x or y axis, volume of revolution about the x-axis or y-axis or about a line

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
			Differential Equations Meaning. Order and Degree of differential equation; Solution of differential equation of 1st order and 1st degree Variable separable Homogenous equations and equations reducible to homogenous form; dy/dx+Py = Q, where P and Q are functions of x only Solution of differential equations of second order (d² y)/(dx²) = f(x)
			Assessment: » Students can submit pictures of completed tasks through social media platforms such as telegram/ whatsapp etc and/or google classroom » They can make models and submit/reach to a designated place so that teachers can collect and assess

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
V (XI – XII)	Co-ordinate Geometry	BBS1 and BBS 2	Points and their coordinates in 2-Dimensions Cartesian system of coordinates Distance formula, Section formula Centroid of a triangle, In-center of a triangle Area of a triangle using its three vertices, Area of a quadrilateral Slope or gradient of a line Angle between two lines Conditions of perpendicularity and parallelism of two lines The Straight line Various forms of equation of lines: point slope form; two points form; intercept form; perpendicular/normal form; general equation of a line; slope/gradient; distance of a point from a line; distance between parallel lines; Angles between two lines; equations of lines bisecting the angle between the lines; identical Lines Family of lines: Lines parallel to ax + by + c = 0 are of the form ay + bx + k = 0; Lines perpendicular to ax + by + c = 0 are of the form ay - bx + k = 0; Any line through the intersection of two lines L1 and L2 is of the form L1 + KL2 = 0, where K ∈ R Pairs of Straight Lines General equation of a family of lines passing through the intersection of two lines L1 and L2: L1 + kL2 = 0, k ∈ R; finding k using additional condition General equation of second degree equation to represent a pair of lines Conditions for general second degree equation to represent a pair of straight lines; Conditions for two lines to be perpendicular or parallel Point of intersection and angle between two lines represented by a second degree equation in x and y Equation of the bisector of the angle between a pair of given straight lines Conics As a section of a cone Definition and understanding of Foci, Directrix, Latus Rectum Recognition of Equation of a Circle, Parabola, Ellipse and Hyperbola in standard form Finding basic information like foci, directrix, etc from a given equation.

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
			Equations of Circles » Equation of a circle in: Standard form; diameter form; general form; parametric form » Find the centre and the radius of a circle from given equation » Finding the equation of a circle, given 3 non-collinear points; and given other sufficient data
			Theorems on Circles » Theorems on chords of a circle » Theorems on arcs and angles » Theorems on angles in alternate segment » Theorems on congruent arc and chords » Theorems on tangent lines and circles
			Points and their co-ordinates in 3-Dimensions » Distance between two points; Section and mid-point formulas; » Direction cosines and direction ratios of a line; » Angle between two lines; » Conditions for lines to be parallel or perpendicular
			Plane
			 General equation of a plane, as ax + by + c = 0, where a, b, c are direction ratios of the normal to the plane Equation of a plane: One-point form; Normal form; Intercept form Distance of a point from a plane Angle between two planes, and angle between a line and a plane Equation of a plane though the intersection of two planes Finding the equation of a plane given a point and direction cosine/ratios of the normal and other sufficient data
			Assessment: » Students can submit pictures of completed tasks through social media platforms such as telegram/ whatsapp etc and/or google classroom » They can make models and submit/reach to a designated place so that teachers can collect and assess

Key Stages	Theme/Topic	Pedagogy/ Strategy/Tools	Remarks/Scope
V (XI – XII)	Data manage-ment and probability	BBS1 and BBS 2	Measures of Central Tendency Mean, Median, Mode; finding by direct methods, formulas, and graphs Dispersion Range: Quartiles, inter quartiles Standard deviation - by direct method, short cut method and step deviation method; the meaning of Standard deviation should be emphasized Measures of dispersion Meaning of dispersion; quartile deviation; standard deviation, coefficient of variation; Mean deviation from the mean or median Combined mean and standard deviation of two groups only Correlations Definition and meaning of correlations coefficient Use of scatter diagram and Line of best fit Calculation of coefficient of correlation by Karl Pearson's method for ungroup data Calculation of rank correlation coefficient by Spearman's method, for both repeating and non-repeating data Calculation of regression coefficient and the two lines of regression by the method of least squares; use of lines of regression for prediction Probability Random experiment and their outcomes Events: sure events, impossible events, mutually exclusive events, independent and dependent events Definition of probability of an event Laws of probability: addition and multiplication laws; conditional probability. Assessment: Students can submit pictures of completed tasks through social media platforms such as telegram/ whatsapp etc and/or google classroom They can make models and submit/reach to a designated place so that teachers can collect and assess

SCIENCE

Key Stages	Topics/Theme	Pedagogy/Strategies/Tools	Remarks/Scope
III (VII - VIII)	Life Processes	BBS-I and BBS- II » Use webinar session (Zoom app). » Conduct live teaching through the zoom app. » Record lesson through the feature available in Zoom app. » Share the video through other social media (Whatsapp, Wechat, You tube that students are accessible). Assessment » Use worksheet. » Assign through Google Classroom. » Solve questions assigned and submit response.	 Cell, tissues, organs, organ system and organism Process and parts of digestive system. Respiratory organs, process of breathing and respiration Photosynthesis, factors affecting photosynthesis Asexual and sexual reproduction in plants and animals.
	Materials and their Properties	BBS-I and BBS- II Strategies: » Interactive Lecturing » Cooperative learning » Peer teaching » Blended learning » Mobile learning » Ubiquitous learning » Collaborative work through google drive, google classroom, slack etc Assessment » Use worksheet. » Assign through Google Classroom. » Solve questions assigned and submit response.	 Elements of atomic numbers from 1 to 30 with names and symbols, metals and non-metals. Atomic structure, mass number, atomic number, isotopes and arrangement of atoms during chemical reaction. Homogenous and heterogeneous mixture and their separation technique. Acids and bases in the fruits and food items. Reactions of metals and bases (including metal carbonates) with common acids (word equations and chemical equations.)
	Physical Processes	BBS-I and BBS-II Pedagogy and Strategies: » Interactive Lecturing » Cooperative learning » Peer teaching » Collaborative work through google drive, google classroom, slack etc Assessment » Use worksheet.	 Turning force, its application to levers and relate it to the working of simple machines Relationship between force, area and pressure and its application in people's daily life Density, relative density, and relate it to everyday life Work, energy and power, and relationship between work, force and distance. Current, voltage and resistance calculation using Ohm's Law, common electrostatic phenomena, direct current (d.c.) and alternating current (a.c.). Formation of an image by spherical mirrors and lenses, prove that the white light is a composite light.

Key Stages	Topics/Theme	Pedagogy/Strategies/Tools	Remarks/Scope
IV (IX - X)	Life Process	BBS-I and BBS-II » Web-based ICT tool such as Phet, Virtual Lab, MyPhysicsLab, Physics Classroom » Use webinar session (Zoom app). » Conduct live teaching through the zoom app. » Record lesson through the feature available in Zoom app. » Share the video through other social media (Whatsapp, Wechat, Youtube that students are accessible). » Maintain journal of lesson learnt. » Use webinar session. » Use Edcite database to assign the task and grade. » Maintain journal. Assessment » Use worksheet. » Assign through Google Classroom. » Solve questions assigned and submit response.	 Mitosis and meiosis. Composition and functions of blood, structure and function of heart and blood vessels, structures and functions of the nervous system. Insulin, adrenalin and sex hormones. Functions of plant hormones in the control of plant's growth and development. Structure and function of DNA. Interdependence, adaptation, competition and predation the distribution and relative abundance of organisms in a habitat Organisation interactions (Predation, Competition, Parasitism, Commensalism) Levels of biodiversity and Importance of biodiversity Concept and principles of Sustainable development
	Materials and their Properties	 BBS-I and BBS-II Google classroom, video tutorial, wechat, etc Assessment Use worksheet. Assign through Google Classroom. Solve questions assigned and submit response. 	 » Boyle's Law, Charles' law and simple calculations based on the laws » Covalent bond, ionic bond and metallic bond » Alkane, alkene and alkyne » Carbon cycle and nitrogen cycle and their significance » Periodic table and periodicity
	Physical Processes	Pedagogy and Strategies: BBS-I and BBS- II » Interactive Lecturing » Cooperative learning » Peer teaching » Collaborative work through google drive, google classroom, slack etc Assessment » Use worksheet. » Assign through Google Classroom. » Solve questions assigned and submit response.	 » Speed, velocity, acceleration, terminal velocity and laws of motion. » Principle of moments to solve problems involving forces acting in two dimensions. » Density of irregular solids by Archimedes' principle. » Application of Pascal law » Work, power and the efficiency of a machine(simple calculation) » Ohm's Law and simple calculations. » Working of electric motor and generators » Current and flow of electrons » Electromagnetic spectrum, reflection, refraction and diffraction of electromagnetic spectrum.

Key Stages	Topics/Theme	Pedagogy/Strategies/Tools	Remarks/Scope
V (XI - XII)	Life Process	BBS-I and BBS- II	» Biomolecules (carbohydrates, proteins,
V (AI - AII)	Life Process	Strategies: » Interactive Lecturing » Cooperative learning » Blended learning » Mobile learning » Ubiquitous learning » Collaborative work through google drive, google classroom, slack etc Assessment » Use worksheet. » Assign through Google Classroom. » Solve questions assigned and submit response.	subornolectules (carbonydrates, proteins, fats, and DNA and RNA). structure of the mammalian heart; and explain the main substances transported by the circulatory system. Antagonistic skeletal muscles on the joints and the sliding filament model of muscular contraction Transmission of nerve impulse through myelinated neuron. Negative and positive feedback mechanisms of hormonal action. Structure and function of the mammalian brain and spinal cord. Formation of urine in the kidney, including ultrafiltration in the renal capsule and selective re-absorption in the proximal convoluted tubule. Immune response, the roles of the body's primary defense against pathogens Photosynthesis as a process, in which, light energy is used to produce complex organic molecules in the two-stage process in the chloroplasts. Semi-conservative mechanism of DNA replication and production of messenger RNA in transcription Genetic mutation and its importance. Role of mitosis and meiosis. Process of fertilization to form embryo and the process of implantation. Pollination and the mechanism to ensure the cross pollination, and describe the double fertilization and the structural changes which occur after fertilisation. Solving the puzzles of monohybrid and dihybrid crosses, incomplete dominance, codominance and multiple alleles Gene cloning via genetic engineering (fragments of DNA can be produced by the conversion of mRNA to cDNA, using reverse transcriptase) and PCR. Process of carrying out genetic finger-printing and its application. Selection or forces of natural selection: stabilizing (sickle-cell anaemia in malarial countries), directional (antibiotic resistance in bacteria) or disruptive (the two morphs of the peppered moth, Biston betularia). Factors that contribute to speciation and the differences between sympatric speciation and allopatric speciation. Role of gene banks; impacts of unsustainable cropping practices, overgrazing, deforestation and intensive farming, including the use of fertilizers, and herbicid

Key Stages	Topics/Theme	Pedagogy/Strategies/Tools	Remarks/Scope
	Materials and their Properties	BBS-I and BBS-II » Google classroom, video tutorial. Wechat, etc Assessment » Use worksheet. » Assign through Google Classroom. » Solve questions assigned and submit response.	 » s, p, d and f orbitals and block elements » Coordinate bonding » Shape of the molecules based on the concept of hybridisation » Electronegativity and Polar molecules » Homologous series and IUPAC nomenclature » Isomerism » Addition and substitution and with reference to alkanes, alkenes and alkynes » Oxidation of primary, secondary and tertiary alcohols » Substitution and elimination reactions in haloalkanes » Structure and nomenclature of aromatic compounds (benzene and their derivatives) » Electrophilic substitution reaction in aromatic compounds » Formaldehyde, acetaldehyde and benzaldehyde and their simple properties » Carboxylic acid, the derivatives of the acids and their simple properties » Carboxylic acid, the derivatives of the acids and amino acids » First and second law of Thermodynamics, entropy and enthalpy » Collision Theory and factors affecting the rate of chemical reactions » Lechatlier 's principle with reference to chemical equilibrium » Ideal and non-ideal solution, vapour pressure and Raoult's law » Bronsted and Lowry concept of acid and base, strength of acid and base in terms of Ka and Kb, pH and buffer solution and the mechanism of buffer, » Redox reaction and electrochemical cells » Radioactive decay and half life » Importance of mass spectrometry and chromatography

Key Stages Topics/Theme Pedagogy/Strate	gies/Tools Remarks/Scope
Rey Stages Topics/Theme Pedagogy/Strate Physical Processes BBS-I and BBS- Interactive Lec. Cooperative lec. Peer teaching Collaborative wigoogle drive, giroom, slack etc. Assessment Use worksheet Assign through Classroom. Solve question and submit res	 Resultant forces and components of two coplanar vectors by using a vector triangle Derivation of kinematics equations for acceleration in a straight line Basic concept of projectile motion Newton's three laws of motion and relate to everyday phenomena, Fluid resistance and surface tension in capillary tubes Bernoulli's principle and Stoke's Law Poisson's ratio for the expansion of materials under stress Hooke's law and the force constant

 $Note:\ Refer\ the\ science\ curriculum\ framework\ while\ preparing\ the\ lesson.$

ENVIRONMENTAL SCIENCE

Key Stages	Themes/Topics	Pedagogy/Strategies/Tools	Remarks/Scope
V (XI-XII)	System in Nature Chap	oter	
	Ecosystem – Structure and functions	 Use webinar session (Zoom app). Share the video through other social media (Whatsapp, Wechat, Youtube that students are accessible). Assessment with thought provoking summary 1- 2 questions BBS1/BBS2	 Spheres of the Earth Biomes and Ecosystem Biodiversity and Endemism Bhutan's rich biodiversity and ecosystem services
	Balance in Nature	 » Use Google Classroom. » Use e-library. » Maintain journal. » Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 Energy Flow in an Ecosystem Biogeochemical cycles Disturbances and ecological succession.
	Environmental Issues a	and Concern	
	People and Environ- ment	 Use Youtube lesson Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 Dependency on Natural Resources Interdependency of humans and environment Land degradation
	Natural resource degradation	 Maintain journal regarding the natural resources degradation. Refer newspapers and write feedbacks and opinion. Assessment with thought pro- voking summary 1- 2 questions BBS1/BBS2 	 » Natural Resources and its Exploitation Ecological Footprint
	Pollution	 Use Webinar session Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 » Natural Resources and its Exploitation » Health Hazards of Toxic Substances » Understanding Climate Change
	Climate Change Disaster and Environ- ment	 Use webinar session. Use online quiz for assessment. Assessment with thought provoking summary 1- 2 questions BBS1/BBS2	 » Climate Change » Phenology and Climate Change » Disaster and its Reduction
	Natural Resource Man	agement	
	Disaster and Environment	 Use Google Classroom. Maintain journal Assessment with thought provoking summary 1- 2 questions BBS1/BBS2	» Hazards and Disasters» Disaster reduction» Hazards and Disasters

Key Stages	Themes/Topics	Pedagogy/Strategies/Tools	Remarks/Scope
	Biodiversity and Measurement Land use and management	 Use webinar session (Zoom app). Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 Measuring Biodiversity Management-Land and water Water conservation techniques Water conservation for irrigation
	Biodiversity Conservation	 Digital story telling. Question and answer Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 Conservation of Biodiversity Biodiversity Conservation (Protected Areas) and Poverty Alleviation
	Water and Land Management & Energy Resources	 Use Environmental Profile Maintain journal of energy uses at home. Assessment with thought pro- voking summary 1- 2 questions BBS1/BBS2 	 Land Waste Management Entrepreneurship and Waste Management Methods to conserve energy
	Energy Conservation	 Use Webinar session Quiz Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 Energy Management and Efficiency Energy Effi- ciency and Technology. Energy Efficient ways and devices
	Sustainable Developm	ent	
	Environment and Development	 Use Google Classroom Share Youtube links. Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	» Development» Green Economy
	Sustainable Develop- ment	 » Use webinar. » Maintain journal. » Assessment with thought provoking summary 1- 2 questions BBS1/BBS2 	 » GNH and Sustainable Development Sustainable Development » Relationship - Development and Environment

SOCIAL SCIENCES

(History, Geography and Economics)

Key Stage	Themes	Topics	Pedagogy/Strategy/ tools	Remarks/Scope
I (PP-III) II (IV-VI)	Key stage I and II to be focused on literacy and numeracy	Key stage I and II to be focused on literacy and numeracy	NA	In key stage I and II, focus will be on literacy and numeracy subjects
III (VII-VIII)	Resources and Sustainable devel- opment	Population and its importance	BBS I &II Youtube, google class- room (1-2 thought provoking and competency based questions to assess student learning)	Death rate, birth rate, natural change, causes of change and impact of change.
	Spatial interaction	Trade, Transport and Communica- tion	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Concept of trade, transport and com- munications
	Government, Civil Society and Media in Bhutan	State and Govern- ment	BBS I &II Youtube, google class- room (1-2 thought pro- voking and competency questions to assess student learning)	Forms of Govern- ment Constitution and Citizens
	The Earth and its people	Settlement and its evolution	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Types, patterns of settlement and classification
	Bhutan as a Nation-State and Importance of Monarch	Institution of Mon- archy	BBS I &II Youtube, google class- room (1-2 thought provoking competency based questions to as- sess student learning)	Zhabdrung and Chhoesid system (Making a Na- tion-State) Institution of Monarchy and the successive Druk Gyalpos
	Economic sectors	Economic sectors	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Sectors of economy
IV (IX-X)	Resources and Sustainable devel- opment	GNH, Economic Growth and Devel- opment	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Population and economy, economic growth

Key Stage	Themes	Topics	Pedagogy/Strategy/ tools	Remarks/Scope
	Spatial interaction	Trade, Transport and Communica- tion	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Concept of trade, domestic and international trade, balance of pay- ment, development of communication and transport in Bhutan, impact of trade, transport and communica- tions
	Government, Civil Society and Media in Bhutan	Bhutanese Government System, world development since 1945 (Role of UN)	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	The Legislature, The Executive, The Judiciary, the Constitutional Bodies and Local Government) World develop- ment since 1945 – Important topic in World History
	The Earth and its people	Climate and its impact	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Factors affecting climate, winds, climatic zones of Bhutan, climate change, climate change and environmental problems
	Bhutan as a Nation-State and Importance of Monarch	Institution of Mon- archy	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Institution of Monarchy and the successive Druk Gyalpos
	Economic sectors	Role of economic sectors for the economy	BBS I &II Youtube, google class- room (1-2 thought provoking and compe- tency based questions to assess student learning)	Introduction to Economics, Under- standing economy, Factor earning, Public finance,
V (XI-XII)	Resources and Sustainable devel- opment	GNH, Economic Growth and Devel- opment	BBS I &II Youtube, google class- room (2-3 thought provoking and compe- tency based questions to assess student learning)	Bhutanese economy, Money and Banking, Public finance, development planning
	Spatial interaction	Trade, Transport and Communica- tion	BBS I &II Youtube, google class- room (2-3 thought provoking and compe- tency based questions to assess student learning)	Means of trans- port and commu- nication, impact of transport and communications

Key Stage	Themes	Topics	Pedagogy/Strategy/ tools	Remarks/Scope
	Government, Civil Society and Media in Bhutan	Bhutanese Government System	BBS I &II Youtube, google class- room (2-3 thought provoking and compe- tency based questions to assess student learning)	Society, State and Nation Forms of govern- ment Constitution Role of the Mon- arch in a Demo- cratic Constitution- al Monarchy
	The Earth and its people	Climate and its impact	BBS I &II Youtube, google class- room (2-3 thought provoking and compe- tency based questions to assess student learning)	World climate, climate types and zones, impact of climate change
	Bhutan as a Nation-State and Importance of Monarch	Institution of Monarchy- Role of Monarch in Demo- cratic Constitution- al monarchy	BBS I &II Youtube, google class- room (2-3 thought provoking and compe- tency based questions to assess student learning)	Role of Monarch in Democratic Consti- tutional monarchy Bhutan and inter- national Organisa- tions
	Economic sectors	Role of economic sectors for the economy	BBS I &II Youtube, google class- room 2-3 thought pro- voking and competency based questions to assess student learning)	National Income, Bhutanese econ- omy.

ACCOUNTANCY

Key Stages	Topics	Strategies/tools	Remarks/Scopes
V (XI-XII)	Accounting Theory	BBS I & BSS II	 Identification of stakeholders in business Underlying assumptions and convention used in preparation of financial statement Qualitative characteristics of useful financial information Elements of financial statement Meaning and purposed of AS Eg. Assessment: Study a financial statement of a company and validate it quality.
	Accounting Equation	BBS I & BSS II	 Identification of accounts in a transaction and prepare equation Relate accounting equation with financial statement Eg. Assessment: Solve a practical problem from the textbook
	Journal, Ledger and Trial balance	BBS I & BSS II	 » Vouchers » Categorise of accounts » Dual concepts » Pass journal entries » Prepare ledger and trial balance » Eg. Assessment: Solve a practical problem from the textbook
	Accounting for PPE	BBS I & BSS II	 » Recognition criteria for PPE » Depreciation » Prepare depreciation schedule » Eg. Assessment: Make a visit around your place and identify different items of PPE.
	Financial State- ments	BBS I & BSS II	 » Elements of financial statement » Prepare financial statement » Eg. Assessment: Solve a practical problem
	Costing	BBS I & BSS II	 Classify the elements of cost- material cost, labour cost and overheads. Prepare cost sheet. Eg. Assessment: Make a visit to a construction place in your area and identify different cost involved.

COMMERCE

Key Stages	Topics	Strategies/tools	Remarks/scope
V (XI - XII)	Business, Trade and Commerce	BBS I and II	 Classification of human activities Business Employment Profession Classification of business Industry Commerce Commerce and its branches Purpose of business organisations Types of business organisation Soles proprietorship Partnership Company Cooperatives Concepts of trade Types of trade Eg. Assessment: Identify different types of trades in your locality
	Financing		 » Why trade is essential for our livelihood? » Types of finance for the business » Sources of business finance » Services of commercial banks Eg. Assessment: » Identify different banks offering finance to business in the country » Think of a situation where there is no bank in the country
	Management and Communication		 Meaning of management Functions of management Need for effective business communication Different modes of business communication Principle of effective business communication Barriers to communication Eg. Assessment: Considering your house as business entity, relate management household with business organisation.
	Marketing		 Concepts of marketing Importance of marketing for business Different medium for marketing Eg. Assessment: Identify different marketing carried for a product around your place and design a marketing strategy for a product

MEDIA STUDIES

Key satge	Topics/Themes	Pedagogy/Strategy/ Tools	Scope/Remarks			
V (XI - XII)	Media and Information Literacy	areas would be aired through BBS Tutorial clip (Video) would be delivered through Youtube play list or any other social media group. Audio materials shall be delivered through sound cloud or other social media group Print materials shall be delivered through appropriate social media: email, facebook, Group Discussion amongst the students for exchange of ideas would be encouraged through appropriate social media: wechat group, whatsapp group, telegram group Assessments Assignments such as; write-ups, textual analysis, etc would be assigned and evaluated through Google Classroom. Questions & Answer would be conducted at the end of learning areas to check students' understanding using Google Classroom Online quiz questions would be used for students' self-assessment through internet tool like google form.	» Evolution of Media» Types of Media» Information and information Literacy			
	Understanding Media Messages and Infor- mation		 Audio materials shall be delivered through sound cloud or other social media group Print materials shall be delivered through appropriate social media: email, facebook, Group Discussion amongst the students for exchange of ideas would be encouraged through appropriate social media: wechat * Under through through appropriate shall be delivered Literacy Nature of Me Basic Persuaniques Key Question Media Visual Literacy 	 » Audio materials shall be delivered through sound cloud or other social media group » Print materials shall be delivered through appropriate social media: email, facebook, » Group Discussion amongst the students for exchange of ideas would be encouraged through appropriate social media: wechat 	 » Audio materials shall be delivered through sound cloud or other social media group » Print materials shall be delivered through appropriate social media: email, facebook, » Group Discussion amongst the students for exchange of ideas would be encouraged through appropriate social media: wechat » Mature of Medies » Basic Persuaniques » Key Question Media » Visual Literac » Visual Literac 	» Nature of Media Messag-
	Media and Language					» Key Questions to Look at
	Representation in Media and Information		 » Who Should Media Represent? » Determining News Values » Analyzing Representation » Methods and Technology Media Adopt 			
	Traditional Media and New Media		 » Questions & Answer would be conducted at the end of learning areas to check students' understanding using Google Classroom » Online quiz questions would be used for students' self-assessment through internet tool like google form. » TM an tion fo » Digital » Use of in Soc » New Modite » Princip » Resea Media 	conducted at the end of learning areas to check students' understanding using Google Classroom Nonline quiz questions would be used for students' self-assessment through internet tool like google form. tion for Digital New M Citizen Uses of	 » TM and NM – Collaboration for Success » Digital as New Media » Use of NM Technologies in Society » New Media World and Citizenship Orientation » Uses of Multimedia Tools 	
	Journalist Code of Ethics and Research Ethics			 » Principles of Journalism » Research Ethics verses Media Ownership » Process of New Publication 		
	Media and Global Village		 » Global Economy and Media Ownership » Technology Convergence and Media Conglomer- ates 			

RIGZHUNG

ग्वस्थः देखा	ૡૢ૱ૹ૾ૢૼૼૼૼૼૢૹઌ૱૱૽૽ૼઌઌ૽ૺ૽ૼ૱ઌૼ૱૱૽ૼ૱	র্মুন'র্মুক'ঘনঝ'এঝ
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	क्रीत्राज्याक्ष्यं क्ष्यं क्ष्यं त्यात्र व्यात्र व्यात्य व्यात्र व्यात्र व्यात्य व्यात्य व्यात्य व्यात्र व्यात्य व्यात्य व्यात्य व्यात्य व्यात्य व्यात्य व्यात्य व्या	য়ৢয়ৼয়য়ঀয়
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द्धियःश्चिरःत्वरः स्रमःश्चिरःत्वरः द्धियःश्चिरःत्वरः ર્શ્વેય. તુંત્રાન્ટ્રાન્ય ક્વાનાવેરાન્ય ત્રાવેરાન્ટ્રેસ્ટર્યાન્ટ્રાન્ટ્રેસ્ટર્યાન્ટ્રિક્ટર્યાન્ટ્રેસ્ટ્રિસ્ટ્રિસ્ટ્રેસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રેસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્ર્યાન્ટ્રેસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ્ટ્રિસ

इब्यश्

દ્દાના મુદ્દાન સ્વારા કર્યા કરા કર્યા કર્યા કર્યા કર્યા કર્યા કર્યા કર્યા કર્યા કર્યા કર

EDUCATION IN EMERGENCY FOR LEARNERS ON SEN PROGRAMME

Other than Muenselling Institute and Wangsel Institute, most of the students in the schools with Special Educational Needs Programme have mild to moderate disabilities. However, there are students also who are dealt with 'pull out' and 'push in' strategies alongside the adaptation and modification in curriculum delivery.

Hence, education in emergency shall be executed in the following manner.

General Schools with SEN Programme

Group A

Those learners who can cope with general curriculum shall follow the educational package like any other general school learners with adaptation and modification in the curricula materials to suit the learners accessing education from home.

Group B

Those learners who cannot cope with the general curriculum shall be offered Daily Living Skills.

Mode of delivery

The materials shall be presented via youtube or Google classroom where students and mentors can access using smart devices.

Muenselling Institute

Group A

For children who have vision problem, shall be offered adapted curriculum in accessible formats such as audio materials and high resolution print materials, which can also be listened to using a smart devices with Accessibility Talk Back features (Text to Speech).

Group B

Those learners who cannot cope with the general curriculum shall be offered Daily Living Skills.

Delivery mode

The materials shall be presented via youtube or Google classroom where students and mentors can access using smart devices.

Wangsel Institute

Wangsel Institute is a special institute which caters to Deaf and Hard of Hearing students. The Institute offers all subjects based on the curriculum framework developed for them according to their learning needs. The learning areas, strategies of presentation and assessment techniques are carefully selected from the curriculum considering the feasibility of implementation especially in regards to the availability of time and resources.

Therefore, Royal Education Council considers a separate Curriculum Implementation Plan for Wangsel Institute. The Curriculum Implementation Plan consists of key learning areas, pedagogies and techniques of assessment.

Bhutanese Sign Language

Key Stage I to II

Strands/ Key Learning Areas	Pedagogies/ Strategies	Remarks
Strand 1: Receptive Comprehend the concrete and abstract concepts of self, home, school, community, Dzongkhags and country through signs, phrases, sentences and dis- courses	Interaction through sign lan- guage Guided Writing	Core research team will need to sit and decide further to finalize.
Strand 2: Expressive / Productive Express and construct concrete and abstract concepts of self, home, school, community Dz- ongkhags and country through signs, phrases, sentences and discourses related to their knowledge and experiences.	Interaction through sign language Individual work	
Strand 3: Literacy through BSL Use BSL to enhance reading and writing at word, phrase and sentence level, make connection between BSL and written language (English / Dzongkha) and translate BSL into written language (English / Dzongkha).	Demonstration/ Alphabet cards Guided Writing	
Strand 4: Deaf culture Comprehend history of Deaf education and Deaf community. Learners are able to apply the knowledge and skills of assistive technology for Deaf people.	Demonstration Interaction Individual work	

Key Stage III to IV

Strands/ Key Learning Areas	Pedagogies/ Strategies	Remarks
Strand 1: Receptive Comprehend the concrete and abstract concepts of self, home, school, community and nation through signs, phrases, sentenc- es and discourses.		
Strand 2: Expressive / Productive Express and construct concrete and abstract concepts of self, home, school, community and nation through signs, phrases, sentences and discourses related to their knowledge and experiences		

Strands/ Key Learning Areas	Pedagogies/ Strategies	Remarks
Strand 3: Literacy through BSL Use BSL to enhance reading and writing at word, phrase, sentence and discourse levels, make connection between BSL and written language (English / Dzongkha) and translate BSL into written language (English / Dzongkha).	Question and answer Making family tree Guided writing Demonstration	
Strand 4: Deaf culture Understand sign language, Deaf rights, and advocacy and career opportunities for the Deaf.		

ONLINE ASSESSMENT

In the process of delivering online lessons, 2 to 3 competency based or thought provoking questions are posed for students to assess their learning. The presenter must inform students about the assessment modality and instruct them to answer and submit responses to their respective subject teachers.

Assessment modality

Upon the completion of the lesson, students are required to answer the questions posed and email or share responses through social media forum to their respective subject teachers. This mandates the concerned subject teachers watch every lesson broadcast through BBS1 and BBS2. Based on the information, the subject teacher assesses students' learning through their responses. The subject teacher grades each and every responses of a student out of 10 marks based on the following suggested criteria.

Assessment criteria and marks

Originality 2Critical thinking 3Time bound 2Content 3

Assessment descriptors

Originality (2)	Critical thinking (3)	Time bound (2)	Content (3)
The writer-up is student's own expression and language.	The write-up contains coherent and logically organized ideas justified in relationship with their daily life.	The assignment is submitted on the deadline given by the subject teacher.	The work explains concepts, ideas and application of the topic with appropriate examples

The teacher provides feedback and suggestion for improvement. The teacher is also required to maintain a records of each student for reference.

SUPPORT MECHANISM

The following support mechanisms are proposed for the effective implementation of curriculum in Education in Emergency.

- 1. The following focal persons can be consulted for any issues and concerns related to curriculum:
 - a. Social Sciences: Social Studies, Geography, Values Education, HPE, Economics, History Mr Norbu Wangchuk, Curriculum Specialist
 - Contact: Email ID norbuwangchuk@rec.gov.bt; Mobile # 17641298
 - b. STEM: Mathematics, General Sciences, Biology, Physics, Chemistry, Environmental Science, & ICT Mr Bhoj Raj Rai, Curriculum Specialist
 - Contact: Email ID bhojrajrai@rec.gov.bt; Mobile # 17642838
 - c. Language: Dzongkha, English & Rigzhung Lop Dorji, Curriculum Developer
 - Contact: Email ID dorji@rec.gov.bt; Mobile # 17435998
 - d. TVET & Commercial Studies: Accountancy, Commerce, Agriculture for Food Security, TVET, Media Studies Mr Kinley Namgyal. Curriculum Developer
 - Contact: Email ID kinleynamgyal@rec.gov.bt; Mobile # 17645310
 - e. SEN: Special Education needs Karchung, Curriculum Developer
 - Contact: Email ID karchung@rec.gov.bt; Mobile # 17716722
 - Overall Education in Emergency Coordinator: Wangpo Tenzin, Curriculum Specialist & Dean, CDC
 - Contact: Email ID wangpotenzin@rec.gov.bt; Mobile # 17601736
- 2. Use REC Toll Free # 1850, Wechat, Facebook, Telegram, WatsApps, etc.
- 3. Focal persons maintain records of type of issues and concerns and responses provided to users.

