APPENDIX – 1
STRUCTURE AND CONTENT OF SYLLABUS
(Paper-I and Paper-II)

Paper I (for classes I to V) Primary Stage

I. Child development and pedagogy

Child development : Concept of development and its relationship with learning, Principles of the development of children, Influence of Heredity & Environment.

Socialization processes: Social world & children (Teacher, Parents, Peers)

Concepts of child-centered and progressive education: Piaget, Kohlberg and Vygotsky, constructs and critical perspectives., Critical perspective of the construct of Intelligence, Multi Dimensional Intelligence, Language & Thought.

Gender as a social construct: gender roles, gender-bias and educational practice, Individual differences among learners, understanding differences based on diversity of language, caste, gender, community, religion etc.,

Distinction between Assessment for learning and assessment of learning: School-Based Assessment, Continuous & Comprehensive Evaluation., perspective and practice, Formulating appropriate questions for assessing readiness levels of learners, for enhancing learning and critical thinking in the classroom and for assessing learner achievement.

Concept of Inclusive education and understanding children with special needs: Addressing learners from diverse backgrounds including disadvantaged and deprived addressing the needs of children with learning difficulties, 'impairment' etc., addressing the Talented, Creative, Specially abled Learners

Learning and Pedagogy: How children think and learn; how and why children 'fail' to achieve success in school performance.
Basic processes of teaching and learning: children's strategies of learning, learning as a social activity and social context of learning, Child as a problem solver and a 'scientific investigator'.

Alternative conceptions of learning in children : understanding children's 'errors' as significant steps in the learning process.
Cognition & Emotions, Motivation and learning, Factors contributing to learning – personal & environmental

II. Language I

Language Comprehension Reading unseen passages – Answering the question based on the given unseen passage.(Prose, Drama or Poetry.)

Pedagogy of Language Development: Learning and acquisition, Principles of language Teaching, Role of listening and speaking, function of language and how children use it as a tool .

Critical perspective on the role of grammar in learning a language for communicating ideas verbally and in written form.

Challenges of teaching language in a diverse classroom and Language Skills.

Teaching- learning materials: Textbook, multi-media materials, multilingual resource of the classroom, Remedial Teaching

III. Language – II

Language Comprehension Reading unseen passages – Answering the question based on the given unseen passage.(Prose, Drama or Poetry.)

Pedagogy of Language Development: Learning and acquisition, Principles of language Teaching, Role of listening and speaking, function of language and how children use it as a tool.

Critical perspective on the role of grammar in learning a language for communicating ideas verbally and in written form.

Challenges of teaching language in a diverse classroom and Language Skills.

Teaching-learning materials: Textbook, multi-media materials, multilingual resource of the classroom, Remedial Teaching.

IV. Mathematics Content :

1) Geometrical figures & the knowledge of space
2) 3-D Geometrical figures
3) Numbers
4) Fractions
5) Mathematical operations on numbers and algebraic expressions
6) Measurements- Weight, time and volume
7) Data handling & Measures of central tendency
8) Ratio and proportion
9) Mathematics in daily life
10) Lines & angles
11) Polygons
12) Basic algebra – Linear equations & Identities

Pedagogical issues:
Nature of Mathematics/Logical thinking; understanding children's thinking and reasoning patterns and strategies of making meaning and learning, Place of Mathematics in Curriculum, Language of Mathematics, Community Mathematics, Evaluation through formal and informal methods, Problems of Teaching, Error analysis and related aspects of learning and teaching, Diagnostic and Remedial Teaching.

V. ENVIRONMENTAL SCIENCE

Syllabus :

1. Our Environment :

a) Major components of environment, types of ecosystem, life diversity and its features, food chain, and nature balancing factors, Food web, ecological Pyramids, Plant and animal species, factors of Biodensity, Tropic levels, Types of pollution, reasons-effects- remedial measures, green house effect, green house gasses, sustainable development and its maintenance, waste management measures.
b) Environment movements (Related to state and national level), Important Environment activists, state and national award winning literature and writers related to environment, major environmental phenomena, types of ecological conservation.

2. Living world :

Life processes, classification of organisms. How to organisms reproduce.
Cell, Tissues, organ and organs system.

3. Sources of Energy : Solar Energy, Wind Energy, Tidal Energy, Geothermal Energy, Biodegradable wastes, non biodegradable wastes, Chemicals in our daily life**.**

4. Human Health and Hygiene :

Carbohydrates : Types of Monomers, lipids, proteins, Vitamins, Minerals, Deficiencies.

5. Natural Phenomena : Motion, Force, Gravitation, Newton's laws of motion, distance – speed graphs.

6. How do things works :

Electricity : Definitions of important terminologies, SI units, Numericals.

7. Pedagogy of Environmental Science :

- Important methods of teaching
- Current teaching learning interaction.
- Main features of NCF-2005
- Features and uses of practical methods.
- Values which are to be integrated in classroom learning process.
- Evaluation methods, existing evaluation methods and maintenance of records.

VI Social Studies : (For Visually impaired instead of mathematics and EVS)
Concepts, content and pedagogy of social studies pertaining to classes 6 to 8 and difficulty level upto secondary level (class 10).

Content:

History : When, Where and How, The Earliest Societies , The First Cities, Early States, New Ideas, The First Empire, Contacts with Distant lands, Political Developments, Culture and Science, New Kings and Kingdoms, Sultans of Delhi, Architecture, Creation of an Empire, Social Change, Regional Cultures, The Establishment of Company Power, Rural Life and Society, Colonialism and Tribal Societies, The Revolt of 1857-58 ,Women and reform, Challenging the Caste System, The Nationalist Movement, India After independence.

Geography: Geography as a social study and as a science, Planet- Earth in the solar system, Globe, Environment in its totality: natural and human environment, Air, Water, Human Environment - settlement, transport and communication, Resources- Types-Natural and Human, Agriculture.

Social and Political Life: Diversity, Government, Local Government, Making a Living, Democracy, State Government, Understanding Media, Unpacking Gender, The Constitution, Parliamentary Government, The Judiciary, Social Justice and the Marginalized.

Pedagogical issues: Concept & Nature of Social Science/Social Studies, Class Room Processes, activities and discourse, Developing Critical thinking, Enquiry/Empirical Evidence, Problems of teaching Social Science/Social Studies, Sources – Primary & Secondary, Project Work, Evaluation.

Paper II (for classes VI to VIII) Higher Primary

I. Child Development and Pedagogy

Child development : Concept of development and its relationship with learning, Principles of the development of children, Influence of Heredity & Environment.

Socialization processes: Social world & children (Teacher, Parents, Peers)

Concepts of child-centered and progressive education: Piaget, Kohlberg and Vygotsky, constructs and critical perspectives., Critical perspective of the construct of Intelligence, Multi Dimensional Intelligence, Language & Thought.

Gender as a social construct: gender roles, gender-bias and educational practice, Individual differences among learners, understanding differences based on diversity of language, caste, gender, community, religion etc.,

Distinction between Assessment for learning and assessment of learning: School-Based Assessment, Continuous & Comprehensive Evaluation., perspective and practice, Formulating appropriate questions for assessing readiness levels of learners, for enhancing learning and critical thinking in the classroom and for assessing learner achievement.

Concept of Inclusive education and understanding children with special needs addressing learners from diverse backgrounds including disadvantaged and deprived addressing the needs of children with learning difficulties, 'impairment' etc., addressing the Talented, Creative, Specially abled Learners

Learning and Pedagogy: How children think and learn; how and why children 'fail' to achieve success in school performance.
Basic processes of teaching and learning, children's strategies of learning, learning as a social activity and social context of learning, Child as a problem solver and a 'scientific investigator'.

Alternative conceptions of learning in children, understanding children's 'errors' as significant steps in the learning process.

Cognition & Emotions, Motivation and learning ,Factors contributing to learning – personal & environmental

II. Language I

Language Comprehension Reading unseen passages – Answering the question based on the given unseen passage.(Prose, Drama or Poetry.)
Pedagogy of Language Development: Learning and acquisition, Principles of

language Teaching, Role of listening and speaking, function of language and how children use it as a tool .

Critical perspective on the role of grammar in learning a language for communicating ideas verbally and in written form.

Challenges of teaching language in a diverse classroom and Language Skills.

Teaching- learning materials: Textbook, multi-media materials, multilingual resource of the classroom, Remedial Teaching

III. Language – II

Comprehension: Two unseen prose passages (discursive or literary or narrative or scientific) with question on comprehension, grammar and verbal Ability.

Pedagogy of Language Development: Learning and acquisition, Principles of language Teaching, Role of listening and speaking; function of language and how children use it as a tool, Critical perspective on the role of grammar in learning a language for communicating ideas verbally and in written form, Challenges of teaching language in a diverse classroom; language difficulties, errors and disorders, Challenges of teaching language in a diverse classroom; language difficulties, errors and disorders, Evaluating language comprehension and proficiency: speaking, listening, reading and writing, Teaching– learning materials: Textbook, multi-media materials, multilingual resource of the classroom, Remedial Teaching.

IV. Mathematics and Science:

Mathematics

Content:

1) Arithmatic Progression
2) Number system
3) Statistics & Probability
4) Trigonometry
5) Co-ordinate geometry
6) Identifies
7) Pair of linear equations in two variables
8) Quadratic equations
9) Polynomials
10) Mensuration
11) Triangles
12) Quadrilaterals
13) Circles
14) Area related to circles

Pedagogical issues: Nature of Mathematics/Logical thinking, Place of Mathematics in Curriculum, Language of Mathematics, Community Mathematics, Evaluation, Remedial Teaching, Problem of Teaching

Science

Content :

1. Physics

Motion : Definitions, Types of motion, Law & Equations of motion.

- Laws and numericals.

Gravitation : Law, numericals.

How do things work :

Light - Reflection

- Refraction

Lens - Concave, Convex

Mirror - Concave, Convex

- Images formed in Spherical mirrors and lens

Electricity and Electric Circuits -Definitions, units, derivations.

Resistors - Numericals, circuit diagrams.

Magnetism - Definition, Various laws, numericals, AC, DC motors and generators.

Natural phenomenon : Eye, Eye defects.

: TIR, Dispersion.

2. Chemistry

Materials & Materials in our daily life – Metals, non metals.

- Physical and chemical properties

Acids, Bases and Salts: Physical and chemical properties.

Atoms and Molecules : Formulae, Masses, electronic configuration.

Polymers : Artificial, natural, uses.

Natural resources : Types and applications.

Chemicals in our daily life : Soaps, detergents, Sweeteners, medicines, Drugs.

3. Biology

Food - Definition of food

- Food and its importance
- Food chain
- Food web
- Food pyramid

Food and its sources - Plant source and animal source implications.

Food and its constituents :

Energy giving food - Carbohydrates & lipids

Body building food - Proteins

Body protectors - Vitamins & minerals, Roughage and water.

Living World : Micro organisms

Plant kingdom - Thallophyta

Animal kingdom - Bryophyta

Pteriodophyta

Gymnosperms

Angiosperms

Protista, Protozoa, Fungi Prokaryotic and Eukaryotes.

Animal kingdom :

Vertebrates	Invertebrates
Pisus	Porifera
Amphibia	Coclenorata
Reptiles	Platynelminthes
Aves	Nematoda
Mammals	Aanelia
	Arthropoda
	Mollusca
	Echino dermata

Cell : Plant cell and Animal cell

-Tissues, organ, organ system.

Pedagogical issues : Nature & Structure of Sciences, Natural Science/Aims & objectives, Understanding & Appreciating Science ,Approaches/Integrated Approach, Observation/Experiment/Discovery (Method of Science), Innovation, Text Material/Aids, Evaluation.- problems and remedial teaching.

V. Social Studies/Social Sciences

Content:

History : When, Where and How, The Earliest Societies , The First Cities, Early States, New Ideas, The First Empire, Contacts with Distant lands, Political Developments, Culture and Science, New Kings and Kingdoms, Sultans of Delhi, Architecture, Creation of an Empire, Social Change, Regional Cultures, The Establishment of Company Power, Rural Life and Society, Colonialism and Tribal Societies, The Revolt of 1857-58 ,Women and reform, Challenging the Caste System, The Nationalist Movement, India After independence.

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Pedagogical issues: Concept & Nature of Social Science/Social Studies, Class Room Processes, activities and discourse, Developing Critical thinking, Enquiry/Empirical Evidence, Problems of teaching Social Science/Social Studies, Sources – Primary & Secondary, Project Work, Current methods of Evaluation.

Commissioner
Department of Public Instruction