

III. SCHEME AND STRUCTURE

SEMESTER - 1

Course	Title	Theory (External)	Theory/ Practicum (Internal)	No. of Internal Tests Assignments	Transaction Plan L+T+P per week	Contact Hours per Week	Credits	Total Marks
I	Philosophical Foundations of Education	80	20	2	4+2+0	8	4	100
II	Perspectives in Child Development	80	20	2	4+2+0	8	4	100
III	ICT for enriching Teaching and Learning	80	20	2	4+2+0	8	4	100
IV	Pedagogy of Mathematics/ Social Sciences/ Biological Sciences (Pg1)	40	10	1	2+1+1	6	2	50
V	Pedagogy Physical Sciences/ English/ Telugu/ Urdu (Pg2)	40	10	1	2+1+1	6	2	50
S1P	Practicum (Activities/ Projects/ Records)		100*	-	-	-	4	100
	Total (I Semester)	320	180	8	16+8+2	36	20	500

SEMESTER - 2

Title	Theory (External)	Theory/ Practicum (Internal)	No. of Internal Tests Assignments	Transaction Plan L+T+P per week	Contact Hours Per week	Credits	Total Marks
Sociological Foundations of Education	80	20	2	4+2+0	8	4	100
Learning and Teaching	80	20	2	4+2+0	8	4	100
Classroom Management, Leadership and Action Research	40	10	1	2+1+1	6	2	50
Art Education	40	10	1	2+1+1	6	2	50
Practicum (Activities/ Projects/ Records) Completion of school & community activities specified in courses of I & II semesters	-	125*	-	-	-	5	125
Micro Teaching –five lessons in each pedagogy to develop micro skills of teaching among student Teachers in a simulated situation (college)	-	Pg1 - 25 Pg2 - 25	-	2+2+2+2	8	2	50
School & Community Experience of 4 weeks							
1. Observation of 5 lessons in each pedagogy taught regular school teachers	-	Pg1 - 25 Pg2 - 25	-	-	-	2	50
2. Report on School Activities & Report on Achievement & Attendance	-	25	-	-	-	1	25
Total (II Semester)	240	310	16	16+8+2	36	22	550

SEMESTER - 3

Course	Title	Theory (External)	Theory/ Practicum (Internal)	No. of Internal Tests Assignments	Transaction Plan L+T+P per week	Contact Hours Per week	Credits	Total Marks
X	Pedagogy of Mathematics/ Social Sciences/ Biological Sciences (Pg1)	40	10	1	3+2+1	9	2	50
XI	Pedagogy of Physical Sciences/ English/ Telugu/ Urdu (Pg2)	40	10	1	3+2+1	9	2	50
XII	Learning Assessment	40	10	1	3+2+1	9	2	50
XIII	Understanding the Self	40	10	1	3+2+1	9	2	50
S3P	Practicum (Activities/ Projects/ Records)	-	100**	-	-	-	4	100
	School Internship-8 Weeks. Practice Teaching of Twenty lessons for 6 th & 7 th Classes in each pedagogy subject	-	Pg1 – 100* Pg2 – 100*	-	-	-	8	200
	Observation of five lessons by peer group in each pedagogy subject	-	Pg1 - 25 Pg2 - 25	-	-	-	2	50
	Total (III Semester)	160	390	-	12+8+4	36	22	550

* These marks will be awarded by the teacher educator (40), the guide teacher in the

SEMESTER - 4

Course	Title	Theory (External)	Theory/ Practicum (Internal)	No. of Internal Tests Assignments	Transaction Plan L+T+P per week	Contact Hours Per week	Credits	Total Marks
XIV	Contemporary India and Education	40	10	1	3+2+1	9	2	50
XV	Gender, School and Society	40	10	1	3+2+1	9	2	50
XVI	Inclusive Education	40	10	1	3+2+1	9	2	50
XVII	Environmental Education	40	10	1	3+2+1	9	2	50
S4P	Practicum (Activities/ Projects/ Records)	-	100**	-	-	-	4	100
	School Internship- 8Weeks Practice Teaching of twenty lessons for 8 th , 9 th & 10 th classes in each pedagogy subject Pg1 & Pg2	-	Pg1 – 100* Pg2 – 100*	-	-	-	8	200
	Practical Examination (Teaching) in Pg1 & Pg2	-	Pg1 – 50# Pg2 – 50#	-	-	-	4	100
	Total (IV Semester)	160	440	24	8+10+4	36	24	600

II. SYLLABUS OF DIFFERENT COURSES

Course-I PHILOSOPHICAL FOUNDATIONS OF EDUCATION

Objectives

After completion of the course, the student-teacher will be able to

1. understand the concepts of Education and Philosophy
2. understand the Indian Philosophical thought on Education
3. understand the Implications of various western schools of thought on Education
4. understand the implications made by recent thinkers on education.
5. appreciate the nobility of teaching as a profession.
6. understand the need and importance of values and their role in making an individual a humane.

Course Content

Unit-1: Introduction to Philosophy and Education

- 1.1 Concept and Scope of Philosophy
- 1.2 Concept and Scope of Education
- 1.3 Types and Functions of Education
- 1.4 Relationship between Philosophy and Education.
- 1.5 Philosophy and aims of Education

Unit-2: Indian Education: Historical Perspective

- 2.1 Education during Ancient Period (Vedic Education, Buddhist Education and Jains)
- 2.2 Education during Medieval Period (Including Islamic Education)
- 2.3 Education during Modern Period (Pre-Independent and Post Independent era)
 - i. Rabindranath Tagore
 - ii. Sri Aurobindo Gosh
 - iii. Mohandas Karamchand Gandhi
 - iv. Jiddu Krishna Murthy
 - v. Dr. BR Ambedkar
 - vi. Moulana Abdul Kalam Azad

Unit-3: Eastern Systems and Western Schools of Philosophy

- 3.1 Eastern Systems of Philosophy
 - i. Sankhya
 - ii. Yoga
 - iii. Nyaya
 - iv. Vedanta
- 3.2 Western Schools of Philosophy
 - i. Idealism
 - ii. Naturalism
 - iii. Pragmatism
 - iv. Existentialism

Unit-4: Value Education

- 4.1 Concept of Value
- 4.2 Classification of Values
- 4.3 Value Crisis
- 4.4 Approaches to inculcate Values
- 4.5 Values and Harmonious Life

Unit-5: Teaching as a Profession

- 5.1 Teacher: Professional Competencies and Commitments

- 5.2 Teacher as a Nation Builder
- 5.3 Teacher as a Creator and Facilitator of Knowledge
- 5.4 Professional ethics of teachers
- 5.5 Teacher and the Future Society

Activities

1. Critically review a selected book written by Contemporary Educationalist in India.
2. Thoughts and reflections of Western Philosophical schools and its relevance to the present day Indian Education – A Report
3. Identify the different roles played by an ideal teacher in the classroom, school and community and report
4. Visit nearby schools under different managements and describe the functioning of the schools
5. List out the values which make an individual a righteous human being

Text Books

- Foundations of education, Telugu Academy publications, 2014, Hyderabad.
- Foundations of education, Neelkamal publications, 2013, Hyderabad
- Aggrawal, J.C. (1996) 10th rev. ed. *Theory and Principles of Education*. New Delhi: Vikas Publication.
- Altakar A.S. (1957). *Education in Ancient India*. Varanasi: Nand Kishore Publication.
- Anand, C L. (1993). *Teacher and Education in the Emerging Indian Society*. New Delhi: NCERT.

Reference Books

- Bipan Chandra (2000). *India after Independence*. New Delhi: Roopa.
- M. Keynes, 5th Edition. Cambridge: Cambridge University Press.
- Dhavan, M.L. (2005). *Philosophy of Education*. Delhi; Isha Books.
- Introduction to history of Philosophy, Frank Thilly.
- History of Philosophy, R S Peters, Orient Longman, New York
- Thakur, A. S. & Berwal, S. (2007). *Education in Emerging Indian Society*, New Delhi: National Publishing House.
- Jaffar, S.M. (1972). *Education in Muslim India*. Delhi: Idrah-I-Ababiyat.
- John Brubacher (2007). *Modern Philosophy of Education*. New Delhi: Surjeet Publication.
- Mookerjee, R.K. (1960). *Ancient Indian Education*. Delhi: Moti Mahal.
- Mukherjee, S.N. (1955). *History of Education in India*. Baroda: Acharya Book Depot.
- Mukharji, Shankar (2007). *Contemporary Issues in Modern Indian Education*. Authors Press.
- Nurullah & Naik (1951). *History of Indian Education*. Bombay: Macmillan & Co.
- Passi, B. K. (2004). *Value Education*. Agra: National Psychological Corporation.
- M.L. Dharam, *Philosophy of Education*, Delhi Esha Books
- History of Indian Education, Mumbai (Mc Millan and Co)

**Course-II
PERSPECTIVES IN CHILD DEVELOPMENT**

Objectives

After completion of the course, the student-teacher will be able to

1. compare relative merits and applications of different Approaches of Human Development
2. recognize that childhood is a period of socialization and how socialization practices affect their development
3. critically analyze developmental variations among children placed and exposed to different socio-cultural contexts
4. appreciate the process of development with special focus on childhood and adolescence
5. recognize that adolescence as a period of transition and threshold of adulthood
6. examine characteristics of adolescents and reflect on how their needs act as genesis of certain unique problems
7. illustrate different factors influencing on child development and their applications to education
8. examine different theories of development and their relevance to understand the nature of child

Course Content

Unit-1: Approaches of Human Development

- 1.1 Concept of Growth, Development and Maturation
- 1.2 Principles of Development
- 1.3 Stages of Growth and Development (Infancy Childhood, Adolescence)
- 1.4 Dimensions of Growth and Development (Physical, Cognitive, Emotional, Social, Moral, language)
- 1.5 Longitudinal and cross sectional approaches of understanding development

Unit-2: Theories of Development

- 2.1 Cognitive theory of Development (Piaget's)
- 2.2 Psycho-social theory of development (Erikson).
- 2.3 Theory of Moral Development (Kohlberg's).
- 2.4 Theory of psycho-sexual development (Freud).
- 2.5 Theory of Emotional Development (Goldstein).

Unit-3: Childhood as a period of Socialization

- 3.1 Characteristics of childhood – developmental tasks.
- 3.2 Child development – Physical, cognitive, social, emotional, moral and language development during childhood.
- 3.3 Child in different socio-cultural contexts.
- 3.4 Process of socialization – conflicts resolution and social development.
- 3.5 Stages of Social development – Isolated play, parallel play and social play.
Characteristics of socially matured person.

Unit-4: Adolescence as a period of transition

- 4.1 Characteristics and needs in Adolescence
- 4.2 Genesis of problems during adolescence-Physical, cognitive, emotional, social, moral and language development

4.3 Adolescent Groups – Gangs

4.4 Mechanisms of adjustment with special reference to defense mechanisms and holistic development

4.5 Leadership: Types of Leadership, Development of Leadership qualities in adolescents and its educational implications.

Unit-5: Individual Differences

- 1.1 Dimensions of Individual differences-cognitive abilities, interests, aptitude, creativity, personality and values
- 1.2 Theory of multiple intelligence (Gardner) – Implications for understanding differences in children
- 1.3 Difference in children based on learning styles and socio cultural context (home language and Instructional language)
- 1.4 Individual differences based on cognitive abilities – learning difficulties, slow learners and intellectually challenged, intellectual giftedness - implications for catering to individual variations in view of “differences” rather than “deficits” perspective.
- 1.5 Fostering creativity among children.

Activities

1. Visit a balwadi centre/ NGO centers for orphans/ street children homes and prepare a detailed report on the care taken by these centers
2. Description of cases – 1. A Child with any type of disability and 2. A child from disadvantaged section of the society
3. Describe the salient features of Child Rights Act 2005
4. Interact with five adolescents and collect information about their attitudes, interests, aspirations in respect of their educational and occupational choices

Text Books

Mangal, S.K.(2002). Advanced Educational Psychology, Printice- Hall. of India , Pvt.Ltd., New Delhi.

Dandapani (2002). *Advanced Educational Psychology*, Second Edition. New Delhi: Anmol Publication Pvt. Ltd.

Reference Books

Begbie, H.L. and Hunt M. P: Psychological Foundations of Education

Erickson, Eric, H. (1972). *Play and Development*. New York: W. W. Norton

Gardner, H. (1980). *Frames of mind: The theory of multiple intelligence*. London: Paladin Books

Gauvian, M. and M. Cole (eds). Readings on the development of children. New York: W. H. Freeman

Hurlock, E.B. (1999). *Developmental Psychology*. New Delhi: Tata McGraw-Hill Publishing Company Ltd, New Delhi

Piaget, J. (1926). *Psychology of Intelligence*. New York: Basic Books

Sharma, K.N. (1990). *Systems, Theories and Modern Trends in Psychology*. Agra: HPB.

Yakaiah, P. & Bhatia, K.K. (2005). Introduction to Educational Psychology. Ludhiana: Kalyani Publishers.

Course-III
INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) FOR
ENRICHING TEACHING AND LEARNING

Objectives

After completion of the course, the student-teacher will be able to

1. explain the concept of educational technology
2. explain the concept of ICT in education
3. appreciate the influence of ICT for improving the professional competencies
4. comprehend communicative skills and effective classroom interaction
5. use different approaches of ICT integration in education
6. appreciate the application of E-learning in education
7. explain the instructional strategies in instructional strategies and models
8. explain the fundamentals of the operating systems and application software
9. use internet for effective classroom teaching and maintain the ethical values
10. utilize the ICT for professional development of teachers

Course Content

Unit-1: Information and Communication Technology (ICT)

- 1.1 Educational Technology – Concept, Growth, Objectives, Characteristics, Advantages, Challenges and Impact
- 1.2 Information Technology - Knowledge Explosion, Preservation and Retrieval
- 1.3 Communication – Concept, Elements, Process, Barriers & Types – Teaching as Communication - Communication Technology – Its application in Education
- 1.4 Instructional Media and Aids – Aural, Print, Visual and multimedia
- 1.5 Concept, Importance, Characteristics and Scope of Information and Communication Technology (ICT)

Unit-2: ICT in Education

- 2.1 Knowledge Acquisition and Multi-sensory approach
- 2.2 Classroom Communication and Communicative Skills for Teachers and Students - Flander's Interaction Analysis Category System
- 2.3 Individualised Instruction – Concept, Need, Principles and Techniques
- 2.4 Programmed Learning - Principles, Types, modes of presentation, development, application and role of teacher
- 2.5 Changing roles of the learner and the teacher in ICT-Integration and Challenges

Unit-3: Computer Fundamentals and Applications

- 3.1 Types, Characteristics and features of Computers
- 3.2 Components of Computers – Hardware, Software, Memory and Maintenance of computers
- 3.3 Operating Systems - DOS, Windows and Macintosh and Mobile Apps for Teaching
- 3.4 Software for Word Processing, Presentation, Statistical & Graphical, Page Layout, multimedia and webpage creator
- 3.5 Concept, Applications and Challenges of Computer networks, Internet, E-mail and Digital Space

Unit-4: ICT Enriched Learning Experiences

- 4.1 Application of ICT for Enriching Classroom Experiences
- 4.2 Application and use of Multimedia Educational Software for classroom situations
- 4.3 Use of Internet based media for teaching and learning enrichment - Acknowledgement
- 4.4 Project based learning using computers, Internet and Activities
- 4.5 Collaborative learning using group discussion, projects, field visits, blogs, etc.

Unit-5: Application of Computers in Education

- 5.1 Computer as a learning tool – Concept of E-learning
- 5.2 Web 2.0 Technologies-characteristics, types and examples
- 5.3 Virtual Classroom, Smart Boards, Tools and Opportunities
- 5.4 Open Educational Resources – Concept and Significance
- 5.5 Critical issues in Internet usage – Authenticity, Addiction, Plagiarism, Ethical and Legal Standards

Activities

1. Use various visual aids in the classroom and report their effectiveness on learning of the students
2. Prepare Self Instructional Material on any one topic and analyse its effectiveness for individualized learning
3. Observe and analyse classroom Interaction and report the dynamics of classroom
4. Prepare a computer assisted lesson of your choice from school curriculum

Text Books

- Agarwal J P (2013) – Modern Educational Technology – Black Prints, Delhi
 Barton R (2004) – Teaching Secondary Science with ICT – McGrawhill International
 Das R C (1993), Educational Technology – A Basic Text, Sterling Publishers, New Delhi
 Intel® - Teach to the Future – Pre-service Binder Version 2.0
 Kirwadkar A and Karanam P.(2010) E-Learning Methodology – New Delhi- Sarup Book Publishers

Reference Books

- Agarwal J P (2013) – Modern Educational Technology – Delhi Black Prints –
 Douglas, E C, Computer Networks and Internet, Prentice Hall
 Imison T and Taylor PH (2001) – Managing ICT in Secondary Schools Heinman-Oxford
 Jones, B Technology and Future of Works, Oxford University Press
 Kumar, K L (2000), Educational Technology, New Delhi, New Age International Pvt. Ltd.
 Norton P (2000) Introduction to Computers, New Delhi, Tata McGraw Hill Publications
 Sampath K (1981) Introduction to Educational Technology, Sterling Publishers, New Delhi
 Sharma, R A (1983) Technology of Teaching, IPH, Meerut
 Shukla, Satish S (2005), Basics of Information Technology for Teacher Trainees, Ahmedabad, Varishan Prakashan
 Venkataiah, N (1996), Educational Technology, New Delhi: APH Publishing Corporation

Course-IV
PEDAGOGY OF MATHEMATICS

Objectives

After completion of the course the student will be able to

1. develop insight into the meaning, nature, scope and objectives of mathematics education
2. appreciate the role of mathematics in day to day life
3. understand history, development of mathematics and the contributions of Indian mathematicians to mathematics
4. understand aims and objectives of different branches of mathematics
5. identify the role of branches of mathematics and their implications on the society.
6. understand and practice various methods and approaches of teaching mathematics
7. understand the selection, preparation and uses of learning resources

Course Content

Unit-1: Meaning, Nature, and Scope of Mathematics

- 1.1 Meaning, Nature, and scope of mathematics.
- 1.2 History of Mathematics with special emphasis on teaching of mathematics.
- 1.3 Contributions of Indian Mathematicians a) Aryabhatta b) Brahmagupta c) Varahamihira d) Bhaskaracharya e) Srinivasa Ramanujan.
- 1.4 Contributions of Western Mathematicians a) Euclid b) Pythagoras c) Renedescarte d) Geroge Cantor.
- 1.5 Correlation of Mathematics with other school subjects and with other branches of mathematics.

Unit-2: Aims and objectives of Teaching Mathematics

- 2.1 Need for establishing general objectives for teaching mathematics.
- 2.2 Aims, Values and general objectives of teaching mathematics.
- 2.3 Specific objectives and teaching points of various content areas in different branches of secondary school mathematics.
- 2.4 Recommendations of various Educational Committees and Commissions as regards to Aims and Objectives of Teaching Mathematics.
- 2.5 Meaning and Concept of Academic Standards of CCE.
- 2.6 Linking Blooms Taxonomy with Academic Stands.

Unit-3: Methods, Approaches and Strategies in Teaching and Learning of Mathematical Concepts

- 3.1 Nature of Concepts, types of Concepts, Concept Formation and concept assimilation; distinguishing and stating necessary and sufficient conditions in the process of teaching concepts. Comparing and contrasting. Giving counter example and non example in teaching concepts. Planning and implementation strategies in teaching concepts.
- 3.2 Creating awareness among student teachers on various concepts of Arithmetic, Algebra, Geometry, Trigonometry and Probability and Statistics from classics VI to X.
- 3.3 Methods of Teaching Mathematics: Inductive and Deductive : Analytic and Synthetic: Laboratory. Heuristic, Project Method and Activity Based Teaching.

- 3.4 Problem solving- Stages and Steps in problem solving; Discovering or Exploring various options for solving a given problem in Algebra, Arithmetic, Geometry, Trigonometry, Probability and Statistics.
- 3.5 Concept Attainment Model of Jerome Bruner.

Unit-4: Planning for Teaching – Learning Mathematics

- 4.1 Microteaching: Concept, Definition, Microteaching cycle, Components of Microteaching, Merits and Limitations.
- 4.2 Microteaching Skills: Introducing a lesson, Explaining a Concept, Stimulus Variation, Illustrating with Examples, Probing Questioning, Reinforcement, Structuring Classroom Questions, and Blackboard writing.
- 4.3 Planning of Instruction: Unit plan, Period plan based on Blooms Taxonomy and academic standards.
- 4.4 Technology Integrated Lesson-Planning the Lesson by digital technology.

Unit-5: Learning Resources in Mathematics

- 1.1 Mathematics Text Book – Importance and Criteria of good Mathematics text book.
- 1.2 A Critical Analysis of existing Secondary School Mathematics Text Books.
- 1.3 Audio, Visual and Multimedia resources – Selection and designing.
- 5.4 On line Resources – ICT based Pedagogical tools.
- 5.5 Using community resources for mathematics learning. Visits, mathematical field trips and excursions.
- 5.6 Handling hurdles in utilizing resources.

Activities

1. Create different activities to realize concept attainment by children in any unit from Mathematics Text books of 6-10 classes
2. Each student has to collect and present history and contributions of one Indian or Western mathematician
3. Preparation of T.L.M. for any one topic from classes 6-10 mathematics
4. Preparation of power point presentation (PPP) for any one topic from a different branch of mathematics
5. Identifying suitable methods/ approaches of teaching different topics from mathematics text of any one class (Inductive/ Deductive/ Analytic/ Synthetic/ Laboratory/ Heuristic/ Project methods and Activity based learning)

Text Books

- Davis, David R. The Teaching of Mathematics. New Delhi: Surjeet Publications
 Mangal, S.K. (1993). Teaching of Mathematics. New Delhi: Arya Book Depot.
 NCERT (2012). Pedagogy of Mathematics, New Delhi: NCERT
 Siddu, K.S. (1990). Teaching of Mathematics. New Delhi: sterling Publishers.

Reference Books

- Benjamin, S. Bloom, Ed. (1958). Taxonomy of Educational Objectives – Handbook 1 – Cognitive Domain. New York: Harcourt Brace & World Inc.
- James, Anice. Teaching of Mathematics. Hyderabad: Neelkamal Publications Pvt. Ltd.,
- Kulshrestha, A.K. & Puneetha Kumar. Teaching of Mathematics. Meerut: R. Lal Book Depot.
- NCERT (2000). National Curriculum Framework for Teacher Education. New Delhi: NCERT
- NCERT (2005). National Curriculum Framework. New Delhi: NCERT
- NCTM (1970). The Teaching of Secondary School Mathematics, XXXIII Yearbook Washington: NCTM.
- Packiam, S. Methods of Teaching Mathematics.
- Rao, N.M. Mathematics Projects and Mathematics Laboratory, New Delhi: NCERT
- SCERT (2011) Andhra Pradesh Curriculum Framework, Hyderabad: SCERT, Government of AP
- SCERT (2011). Position papers for Mathematics. Hyderabad: SCERT, Government of A.P

**Course-IV
PEDAGOGY OF SOCIAL SCIENCES**

Objectives

After completion of the course, the student-teacher will be able to

1. understand the meaning and scope of Social Sciences
2. develop general and specific aims of teaching social sciences
3. inculcate values through teaching of Social Sciences
4. understand major concepts and develop critical thinking through teaching inter disciplines of Social Sciences
5. acquire knowledge on different strategies and approaches of teaching and developing skills in connection of resources.

Course Content

Unit-1: Social Sciences as an integrated area of Study

- 1.1 Meaning, Nature and Scope of Natural and Social Sciences
- 1.2 Distinction between Natural and Social Sciences
- 1.3 Meaning, History, Nature, Scope and Development of Social Studies
- 1.4 Distinction between social sciences and social studies
- 1.5 Understanding society through various social sciences

Unit-2: Aims Objectives and Academic Standards of Social Sciences

- 2.1 Major aims and objectives of teaching Social Sciences
- 2.2 Bloom's taxonomy of Educational Objectives
- 2.3 Academic Standards and Learning outcomes of teaching Social Sciences
- 2.4 Recommendations of NPE 1986, NCF 2005, APSCF 2011
- 2.5 Values of Teaching Social Sciences

Unit-3: Approaches, Methods, Strategies and Techniques of Teaching Social Sciences

- 3.1 Meaning, need and significance of various approaches, methods, strategies and techniques of Teaching Social Sciences
- 3.2 Teacher Centred Approaches – Lecture, Lecture-demonstration, Source and Supervisory Study
- 3.3 Learner centered approaches –Project, Problem Solving, Discussion, Inductive and Deductive, Observation, Constructivistic Approach
- 3.4 Strategies / Techniques - Brain Storming, Team Teaching, Mind Mapping, Questioning
- 3.5 Activities – Dramatisation, Role play, Field Trips, Social Science Clubs, Exhibitions

Unit-4: Planning in Teaching Social Sciences

- 4.1 Microteaching – Meaning, Concept and Steps
- 4.2 Microteaching Skills - Introduction, Explanation, Questioning, Reinforcement, Stimulus Variation
- 4.3 Year Plan and Unit Plan
- 4.4 Need and Importance of Lesson Planning (Period Planning)
- 4.5 Technology Integrated Lesson Planning

Unit-5: Teaching Learning Resources in Social Sciences

- 5.1 Community Resources – Human and Material
- 5.2 Social Science Library, Laboratory and Museum
- 5.3 Need and Significance of Current and Controversial issues in teaching social sciences
- 5.4 Handling hurdles in utilizing resources
- 5.5 Professional Development of Social Sciences Teacher

Activities

1. Identify values in depicted in the lessons of social sciences of any one class and prepare a report
2. Select and plan appropriate strategies for teaching a lesson of social science of your choice and submit
3. Identify any village/ward/ colony and make social survey and find out the literacy rate, adult education programmes, electricity, toilets, sanitary and water facilities, maintenance of roads, etc and submit village/ward description report
4. Organise a programme in the school in connection with celebration of national festivals, birthdays of social scientists/ National leaders, etc.

Text Books

- Telugu Academy – 2002 – B.Ed. Methods of Teaching Social Studies – Hyderabad
- Aggarwal J.C(1993) – Teaching of Social Studies – a practical approach, second edition, New Delhi, Vikas Publishing House
- Aggarwal J.C (1983) - Teaching of History New Delhi, Vikas Publishing House
- Kochhar, SK(1988) Teaching of Social Studies, New Delhi, Sterling Publishers Private Ltd
- Bining, A.C and Bining BH (1952) Teaching of Social Studies in Secondary schools
3rd Ed., Bombay, TATA Mc Graw- Hill publishing Company Ltd.

Reference Books

- Aggarwal D.D (2008) – Modern Methods of Teaching Geography new Delhi current publications
- Edwin, Fenton (1967) – The New Social Studies in Secondary Schools – An Inductive Approach – New York – Holt Binchart and Winston Inc.
- Martorella, Peter M (1976) – Social Studies Strategies – Theory into Practice, New York, Harper and Row Publishers Inc.
- Mechlinger M D (1981) – UNESCO Handbook of Teaching Social Studies – London – Croom Helm
- Moffat, M P (1955) – Social Studies Instruction – 2nd Ed. New York – PHI
- NCERT (1990) – Teaching History in Secondary Schools – New Delhi
- Ruhela, S P (2009) – Techniques of Teaching Social Sciences – Hyderabad – Neelkamal Publications
- Edgar B W & Stareky, P W (1958) – Teaching Social Studies in High Schools – Health and Company, Boston 11C
- Dr Rambhai N Patel, Educational Evaluation – Himalaya Publishing House, Mumbai

**Course-IV
PEDAGOGY OF BIOLOGICAL SCIENCES**

Objectives

After completion of the course, the student-teacher will be able to

- 1.1 develop an insight on the meaning, scope, nature and aims of biological science
- 1.2 identify and relate everyday experiences with the learning of biological science
- 1.3 integrate the knowledge of biological science with other school subjects
- 1.4 facilitate the development of scientific attitude in the learners of biological science
- 1.5 develop competencies for teaching and learning biological science through Herbartian and Constructivist approaches
- 1.6 stimulate curiosity, creativity and inventiveness in the learners towards biological science

Course Content

Unit-1: Introduction to Science

- 1.1. Meaning and Functions of Science
- 1.2. Nature and Scope of Science
- 1.3. Structure of Science
- 1.4. Branches of Science
- 1.5 History of Biological Science

Unit-2: Aims and Values of Biological Science

- 2.1. Aims of Teaching Biological Science
- 2.2. Values of Teaching Biological Science
- 2.3. Competences of a Biological Science Teacher
- 2.4. Correlation of Biological Science with other school Subjects

Unit-3: Objectives of Teaching Biological Science

- 3.1. Meaning and Importance of objectives
- 3.2. Revised Blooms Taxonomy of Educational Objectives.
- 3.3. Instructional Objectives and specifications with examples
- 3.4. Academic Standards mentioned in the school biological science text
Book published by government of Andhra Pradesh

Unit-4: Methods and Techniques of Teaching Biological Science

- 4.1 Micro Teaching Techniques
- 4.2 Lecture Method, lecture Demonstration Method, and Laboratory Method
- 4.3 Scientific Method (Inductive and Deductive Method)
- 4.4 Project Method

Unit-5: Planning for Teaching Biological Science

- 5.1 Year Plan
- 5.2 Lesson Plan
- 5.3 Period Plan (Herbartian and Constructivist approach and CCE Model)
- 5.4 Learning Experiences
- 5.5 Planning ICT Applications in Learning Biology

Activities

1. Visit any zoological park/Botanical Garden/Agro based industry/ food park/ institution of scientific interest or Science and Technological Museum in your vicinity and report.
2. Identify and write the objectives and specifications under the three domains on any topic of your choice
3. Sketch the life history and write his/her contributions of any one Biologist
4. Name any common branch of both Botany and Zoology and explain how you integrate the pedagogy in dealing with the content.
5. Organize an event on Earth Day/ Environment Day/ Population Day, etc. in the school during the internship and report.

Text Books

- Agarwal,D.D.(2001). Modern Methods of teaching Biology.Newdelhi: Sarup& Sons
- Ahmed,J.(2011). Teaching of Biological Science . New Delhi:PHI Learning Pvt.Ltd.
- Benjamin,S.Bloom,Ed.(1958). Taxonomy of educational objev=ctives- handbook I –Cognitive Domain, New York: Harcourt Brace & World Inc.
- Chikara,M.S. and S. Sarma (1985) Teaching of Biology ,Ludhiana: prakesh Brothers.
- Gupta,S.K.(1983) technology of science Education, New Delhi: Vikas Publishing House Pvt.Lt

Reference Books

- Hassard,J. (2000) science as Inquiry , New Jersey: Good Year Books.
- Krathwohl, David R.,Ed (1964) Taxonomy of Educational Objectives , Hand Book II – Affective Domain, New York: David McKay.
- Mohan,R.(2004)Innovative Science Teaching for Physical Science teachers. New Delhi: Practice-Hall India Ltd.
- New UNESCO Source Book for science teaching (1978).New Delhi: Oxford & IBH Publishing House.

Course-V
PEDAGOGY OF PHYSICAL SCIENCES

Objectives

After completion of the course, the student-teacher will be able to

1. know the nature of science, structure, value and correlation with other school subjects.
2. draw the attention on development of science and the contributions of western and Indian scientists.
3. understand the aims and objectives of teaching physical sciences.
4. develop the skill of organizing science curriculum and critique on the present secondary school physical sciences curriculum.
5. organize the content into plan of action and practice the micro and macro teaching skill.
6. cope up with adoption of methods of teaching physical sciences and use the learning experiences.

Course Content

Unit-1: Introduction to Science and Physical Sciences

- 1.1 Science and Physical Sciences – Meaning, Nature, Scope and Importance
- 1.2 Structure of Science – Syntactic Structure (Process of Science – Domain of Inquiry), Substantive Structure - Product of Science-Facts, Concepts, Theories, Laws and Principles – characteristics in the context of Physical sciences (citing examples)
- 1.3 Values of Learning Physical Sciences
- 1.4 Correlation of Physical Sciences with Mathematics, Biological Sciences, Social Studies, Languages, Fine Arts, Environment, Health, Development, Peace and Equity
- 1.5 Analysis of selected concepts of Physics and Chemistry from 6-10 classes

Unit-2: Development of Science - Physical Sciences

- 2.1 Milestones in the Development of Sciences – Physics and Chemistry
- 2.2 Contributions of Western and Indian Scientists
- 2.3 Landmarks, Status and Development Indian Science and Technology
- 2.4 Physical Science and Human Life
- 2.5 Rationale in Inspiring Students to study Physical Science

Unit-3: Aims, Objectives and competencies of Teaching Physical Sciences

- 3.1 Aims and Objectives of Teaching Physical Sciences
- 3.2 Taxonomy of Educational Objectives – Bloom, Krathwohl, Simpson, et al – Revised Bloom’s Taxonomy and Higher Order Thinking Skills
- 3.3 Instructional Objectives of Teaching Physical Sciences
- 3.4 Behavioural or Specific Objectives of Teaching Physical Sciences
- 3.5 Competencies for Teaching of Physical Sciences

Unit-4: Approaches, Methods and Techniques of Teaching Physical Sciences

- 4.1 Concept of Teaching with special reference to Physical Science – Approaches and Methods – Student Participation in Learning
- 4.2 Teacher-centred Methods - Lecture, Lecture-cum-Demonstration, Historical
- 4.3 Student-centred Methods - Heuristic, Project, Scientific and Laboratory
(Illustration of each method by taking examples from specific contents of Physics and Chemistry)

- 4.4 Modern Teaching Techniques - Brainstorming, Team Teaching and Models of Teaching – Concept Attainment Model and Enquiry Training Model
- 4.5 Microteaching - Concept and Meaning, Skills of Microteaching, Practice of Microteaching Skills

Unit-5: Planning for Teaching Physical Sciences

- 5.1 Importance of Planning for Teaching
- 5.2 Year Plan
- 5.3 Unit Plan
- 5.4 Period Plan (Lesson Plan) – Herbertian Steps vs. Constructivist Approach
- 5.5 Teaching Strategies and Academic Standards, CCE model period plan for classroom teaching

Activities

1. Identify the most abstract concepts (difficult topics) from any class physical science textbook suggest ways and means to make it easy to understand and concrete.
2. Identify Concrete and Abstract Concepts in Physics and Chemistry of any class and suggest the appropriate Teaching methods and approaches to teach them and report
3. Prepare an assignment on any physical sciences and its application and implications with other branches of knowledge
4. Prepare biographical sketch of a scientist and his/her contributions to Physics/ Chemistry
5. List out different content aspects of a unit in Physics/ Chemistry and write down the objectives and specifications under Cognitive Domain associated with them

Text Books

- Bhouthika Rasayana Shashtra Bodhana Paddhatulu (Methods of Teaching Physical Science) – Telugu Academy
- Vaidya, Narendra (1989). *The Impact of Science Teaching*. New Delhi: Oxford and IBH Publishing Co. Pvt. Ltd.
- Sharma, R.C. (1987). *Modern Science Teaching*. New Delhi: Dhanpat Rai and Sons.
- Vanaja, M. (2004). *Methods of Teaching Physical Sciences*. Hyderabad: Neelkamal Publications Pvt. Ltd.
- Das, R.C. (1990). *Science Teaching in Schools*. New Delhi: Sterling Publications Pvt. Ltd.

Reference Books

- Siddiqui and Siddiqui (1998). *Teaching of Science Today and Tomorrow*. New Delhi: Doaba House.
- Kumar, Amit (1999). *Teaching of Physical Sciences*. New Delhi: Anmol Publications Pvt. Ltd.
- Soni, Anju (2000). *Teaching of Science*. Ludhiana: Tandon Publications.
- Nagaraju, M.T.V. (2008). *Hand Book for Teaching Physical Sciences - Methods and Techniques*. New Delhi: Kanishka Publishers and Distributors.
- Mohan, Radha (2004) – Innovative Science Teaching for Physical Science Teachers, New Delhi, PHI
- UNESCO - Teaching of School Physics – Penguin Books
- UNESCO – Teaching of School Chemistry – Penguin Books

Course-V
PEDAGOGY OF ENGLISH

Objectives

After completion of the course, the student-teacher will be able to

1. understand the place of English Language Teaching in India
2. understand the different roles of language
3. understanding the importance of home language, school language and the role of mother tongue in education.
4. understand different skills of English language
5. identify different Methods, Approaches and Techniques needed for teaching different skills of ELT in the Indian context
6. improve their ability in planning a lesson in Prose, Poetry and Supplementary Reader
7. develop integrated skills in ELT
8. prepare different activities and tasks for learners

Course Content

Unit-1: Introduction to ELT

- 1.1 Meaning, nature and scope of ELT
- 1.2 Status of English Language in the global and Indian contexts
- 1.3 Aims and Objectives of Teaching English in India
- 1.4 Language and Education Policy in India
- 1.5 Teaching English in Bilingual/Multi-lingual contexts

Unit-2: Methods and Approaches in ELT

- 2.1 Method, Approach and Technique
- 2.2 Grammar Translation Method, Direct Method, Bilingual Method and Dr. West's Method
- 2.3 Oral, Situational and Structural Approaches
- 2.4 Communicative Language Teaching
- 2.5 Micro skills in ELT

Unit-3: Listening and Speaking Skills

- 3.1 Types and Sub-skills of Listening
- 3.2 Techniques of and materials for teaching Listening
- 3.3 Sub-skills of Speaking
- 3.4 Techniques of and materials for teaching Speaking
- 3.5 Activities to develop Listening and Speaking skills.

Unit-4: Reading and Writing Skills

- 4.1 Types and Sub-skills of Reading; Methods of Teaching Reading
- 4.2 Reading and Reflecting on text
- 4.3 Mechanics of Writing
- 4.4 Sub-skills and techniques of Writing
- 4.5 Activities to develop Reading and Writing skills.

Unit-5: Developing integrated skills and use of ICT in English Language Teaching

- 5.1 Teaching of Prose
- 5.2 Teaching of Poetry
- 5.3 Use of Multi-media in ELT
- 5.4 Online resources for ELT
- 5.5 ELT and Social Networking

Activities

1. Prepare a report on Language policies given in the reports of Kothari Commission, NPE 1986 and POA 1992.
2. Prepare a detailed report on how, when and why you are going to use various methods, approaches and techniques in teaching the English language skills.
3. Enumerate ten activities (5 for listening and 5 for speaking) from the text books of classes VI to X. Suggest your own activities using supplementary materials.
4. Critically analyse the writing activities given in the text books of classes VI to X and report.
5. Analyze the tasks given at the end of any one unit in the textbook and check their relevance to cognitive, affective

Text Books

- Graham Butt (2008): *Lesson Planning*. New York: Continuum International Publishing Group.
- Grillet, F. (1983): *Developing Reading Comprehension*. Cambridge, CUP.
- Krishnaswamy, N. and Sriraman, T. (1994): *Teaching English in India*.Chennai: T.R. Publishers
- M. L. Tickoo (2003): *Teaching and Learning English*. Hyderabad: Orient Longman.
- Makey, Sandra L. (1985): *Teaching Grammar*. Oxford: Pergamon Press

Reference Books

- Doff, A. (1981): *Teach English*. London: Cambridge University Press (CUP)
- Parrott, M. (1993): *Developing Reading Comprehension*, Oxford: Pergamon Press.
- Richards, J.C. and T. Rogers (1998): *Approaches and Methods to Language Teaching*. London: CUP
- Allen, Virginia French (1983): *Techniques in Teaching Vocabulary*. New York: Oxford University Press (OUP)
- Cruttenden Allan (VII Ed.) (2008): *Pronunciation of English*. Hodder Education, UK
- Frank, C. and Rinvolucri Mario (1983): *Grammar in Action*. Oxford: Pergamon Press
- Mario (1984): *Grammar Games*. Cambridge: Cambridge University Press (CUP)
- Roach Peter (III Ed.) (2007): *English Phonetics and Phonology*. Cambridge: CUP

**Course-V
PEDAGOGY OF TELUGU**

భాషా విద్య (తెలుగు)

ఉచ్చాలు:

రెండేళ్ళ శిక్షణ పూర్తి చేసుకున్న ఛాత్రోపాధ్యాయులు:

- 1) సమాజంలో భాష పాత్రను అర్థం చేసుకుంటారు, ప్రాధాన్యతను గుర్తిస్తారు.
- 2) భాషకు, సాహిత్యానికి మధ్య గల సంబంధాన్ని గుర్తిస్తారు.
- 3) వివిధ భాషా రూపాలను ప్రశంసిస్తారు, సాంతం చేసుకుంటారు.
- 4) భాషల మధ్య అనువాదం యొక్క ప్రదాన్యతను గుర్తించి తమ విద్యార్థులను అనువాదం చేయమని ప్రోత్సహిస్తారు.
- 5) సాహిత్య, శాస్త్ర, భాషా గ్రంథాలను సంప్రదిస్తారు, ప్రశంసిస్తారు, విశ్లేషిస్తారు.
- 6) సందర్భానుగుణ భాషాపయోగాన్ని అలవర్పుకుంటారు, తమ విద్యార్థులకు అలవరుస్తారు.
- 7) పిల్లల భాష - ఇంటి భాష, జన వ్యవహార భాషలను ప్రశంసిస్తారు.
- 8) భాషా బోధన - అభ్యాసన పై భారతీయ - ప్రాశ్చాత్య దృక్పదాలను తులనాత్మకంగా అనుగుణంగా పరిశీలిస్తారు.

I. భాష, సమాజం భావనలు

భాష మరియు సమాజం - సమాజంలోని వివిధ వర్గాల భాష - భాష మరియు లింగ వివక్ష - భాష మరియు అస్త్రిత్వం - భాష మరియు సాధికారత, సామాజిక విధులు.

భాష వివిధ భావనలు

గృహ భాష (ఇంటి భాష) వైయక్తిక, కుటుంబ భాషలు - పరిసరాల్లోని-భాషలు - పారశాలల్లో భాష-పారశాలేతర వ్యవహారాల్లో భాష - పిల్లల భాష - తెలుగు వాచకాల్లో భాష - భాషేతర వాచకాల్లో భాష-బక పాల్యంశంగా భాష మాధ్యమ భాష (ప్రాధాన్యత, పరిమితులు)-భాష మరియు మాధ్యమ భాషల మధ్యగల సంబంధాలు.

భాషావిద్య- రాజ్యంగ అధికరణాలు - నింబధనలు, సిఫార్సులు

భారత రాజ్యంగం అధికరణాలు 343 - 351, 350 (A)

ముదలియార్ కమీషన్ (1952), కొరారి విద్యాసంఘం (1964-66)

జాతీయ విద్యావిధానం (1986) కార్యచరణ పథకం (1992)

జాతీయ విద్యా ప్రణాళిక చట్టం (2005) సిఫార్సులు

జతర కమిటీలు - కమీషన్ సిఫార్సులు - అధికార భాష - త్రిభాష సూత్రం.

II తెలుగు భాష-ఆంధ్రప్రదేశ్ రాష్ట్రంలో తెలుగు భాష

- 1) స్వాతంత్ర్యానికి పూర్వపు తెలుగు భాష - స్వాతంత్ర్యానంతర కాలంలో తెలుగు భాష శాసన భాష-గ్రాంధిక భాష - వ్యవహారిక భాష - ఆధునిక ప్రామాణిక భాష

2) తరగతిలో భాషాపయోగం - సహవిద్యార్థులతో ఉపాధ్యాయులు తల్లిదండ్రులు ఇతర పెద్దలు అధికారులతో భాషా వ్యవహారం, మెలకువలు

3) జాతీయ స్థాయిలో, అంతర్జాతీయస్థాయిలో తెలుగు భాషాస్థితి, తెలుగు భాషకు ప్రాచీన హోదా కల్పన - ప్రయోజనాలు

4) ప్రథమ, ద్వితీయ, తృతీయ భాషలుగా తెలుగు - మాతృబాషగా తెలుగు

III భాషాభ్యసనం - భాషా బోధన

- 1) భాషా సంపాదన - పిల్లల భాషా సంపాదన

తాత్క్రిక, మనోవైజ్ఞానిక, సామాజిక దృక్పూఢాలు

- 2) భాష - ఆలోచన - జ్ఞాన నిర్మాణం - అభివ్యక్తి-సృజన

- 3) బాషాభ్యసనం - అనుమానపపత్తి, నిగమాపపత్తి ఉపగమాలు

జ్ఞాన నిర్మాణవాద ఉపగమాలు

భాషా బోధన - అభ్యసనాలు భారతీయ దృక్పూడం.

భాషా బోధన - అభ్యసనాలు పాశ్చాత్యలు దృక్పూడాలు.

పాణిని, పతంజలి, కాత్యాయనుడు, జౌన్దూయి-బ్రూసర్

పియాజీ, వైగాటస్క్యూ, చోమ్స్క్యూ ప్రభృతుల ఆలోచనలు.

- 4) భాషాభ్యసన - బోధన పద్ధతులు- విమర్శనాత్మక విశేషణము-ప్రాచీనుల, ఆధునికుల అభిప్రాయాలు.

➤ పద్ధతి - వ్యాహారం: అంటే - ఎందుకు - వ్యాహాల ప్రయోజనాలు - పరిమితులు

➤ వ్యక్తరణానువాదపద్ధతి, ప్రత్యక్షపద్ధతి - పరనపద్ధతి - సందర్భపద్ధతి

వాక్యపద్ధతి, పద పద్ధతి, సంభాషణా పద్ధతి-ప్రశ్నాతర పద్ధతి

వివరణ పద్ధతి - విశేషణ పద్ధతి - వ్యాఖ్యన పద్ధతి - విమర్శనా పద్ధతి

నాటకీకరణ పద్ధతి - కథన పద్ధతి - పూర్వపద్ధతి - ఖండ పద్ధతి - ప్రతి పదార్థ పద్ధతి,

తాత్పర్యపద్ధతి - ప్రశంసా పద్ధతి.

➤ పరస్పరచర్యాపద్ధతి, అన్వేషణ పద్ధతి, ప్రాజెక్టుపద్ధతి

➤ సంయుక్త అభ్యసనం, సహకార అభ్యసనం, వనరుల ఆధారిత అభ్యసనం

➤ స్వీయనిర్దేశితఅభ్యసనం, పరిశీలనాత్మక అభ్యసనం

➤ మేధమధన పద్ధతి - ఆష్టవాక్యపద్ధతి

IV భాష - స్వరూపం - స్వభావం

1) ఒక నియమ బద్ద వ్యవస్థగా భాష-బాషా ప్రవర్తన - భాషాస్నూహ-బాషా వైఖరి-బాషా విషయ వైవిధ్యత.

2) భాషా మాండలికాలు, కళింగాంధ్ర మాండలికం, ఉభయగోదావరి జిల్లాల మాండలికం, కృష్ణమాండలికం, నెల్లారు మాండలికం, రాయలసీమ మాండలికం (స్థానిక మాండలికాలు) పద, వాక్య రూపాల్లో సాధ్యత్వ భేదాలు

3) భాషేతర పుస్తకాల్లో తెలుగుభాష - పరిభాషా కల్పన

4) భాషావ్యవస్థ : భాషేత్తుత్తి విధం - నిర్వచనాలు - లక్షణాలు- స్వభావం - ధ్వనివ్యవస్థ - వాగిందియ వ్యవస్థ (ఉచ్చారణ)-ధ్వని విజ్ఞానం - వర్ణవిజ్ఞానం - పద విజ్ఞానం, వాక్య విజ్ఞానం, అర్థ విజ్ఞానం - అర్థవిపరిణామం.

5) భాష - వ్యాకరణం : పొర్యాపుస్తకాలలోని వ్యాకరణాలు-సంఘలు - సమాసాలు - చంధనుస్తు - అలంకారాలు - రూపం-పర్యాయ పదాలు - ప్రకృతి - వికృతులు, నానార్థాలు-ప్యాత్యశ్యాలు- జాతీయాలు (నుఢికారాలు), సామెతలు, మహితోక్తులు (Quotations)-సంప్రదాయ వ్యాకరణం - విశ్వవ్యాకరణం

6) భాషోపాధ్యాయుని సన్మద్ధత: విశిష్ట లక్షణాలు సాధారణ లక్షణాలు- మార్య సన్మద్ధత బోధనానంతర సమీక్ష - భాషోపాధ్యాయుల తరగతి గది ప్రవర్తన-తరగతిలో భాషోపయోగం - పరిమితులు-ప్యాత్యశ్యానుత (Resourcefulness) -సూక్ష్మబోధన వైపుణ్యాల సంపాదన, ఆచరణ.

7) భాషాభ్యసనం- భాషాబోధన: ప్రథమ ద్వితీయభాషలుగా తెలుగు బోధన గమ్యాలు- ఆశయాలు -ఉద్దేశాలు- లక్ష్యాలు - కనిష్ఠ అభ్యసన ప్రమాణాలు సామర్థ్యాలు (కమీషన్లు NCF- SCF ల ఆధారంగా)

జ్ఞానం- విషయజ్ఞానం - భాషాజ్ఞానం - సాహిత్య జ్ఞానం-అవగాహన - శ్రవణమూలక అవగాహనం - పరశనమూలక అవగాహనం-అభివ్యక్తి-వాగ్రాప అభివ్యక్తి - లిఖితరూప అభివ్యక్తి, స్వీయ అభివ్యక్తి,-సృజనాత్మక అభివ్యక్తి

భాషాభిరుచి - ఆసక్తి: పరనాసక్తి, అన్వేషణాసక్తి, రచనాసక్తి

రసానుభూతి: సృజనాత్మకత

నముచితమనోవైఖరులు: భాషాంతరీకరణం.

ప్రకల్పనా కృత్యాలు, నిర్వాపణ-పరిశోధన, పరిశీలనా సామర్థ్యాలు.

V. భాషాకోశలాల సంపాదన:

1. కౌశలం - సామర్థ్యం - నైపుణ్యం శక్తియుక్తులు భావనలు

2. శ్రవణం

శ్రవణం అంటే-శ్రవణం ప్రయోజనాలు-వక్షులోతృసంబంధాలు-అవధానం-గ్రహణం - సూక్ష్మ పరిశీలన-వివేచన - అవగాహన- శ్రవణం- ఆరోధాలు - నివారణోపాయాలు-మౌలిక భాష సంకేతాలు ధ్వనులను వినుట- శ్రవణ ఆభ్యాసాలు క్రమీకర్ణత అభ్యాసాలు

3. భాషణం:

భాషణం అంటే - భాషణం ప్రయోజనాలు - ఉత్త్రమ భాషణం లక్ష్మణాలు-భాషణంలో వక్షులోతు సంబంధాలు - భాషణంలో అవధానం (ఎకాగ్రత), గ్రహణం, సూక్ష్మ పరిశీలన, వివేచన - అవగాహన-భాషణం - ఆవరోధాలు-నివారణోపయాలు.

భాషణం - మౌన భాష, సంకేత భాషణం - బాషణాశైలులు - భాషణ అలవాట్లు భాషణం-వక్షుల్యం-వాదప్రతివాదాలు - ఉపన్యాసం - చర్చ- మేధమధనం-భాషణాభ్యాసాలు -భాషణ బోధన-సంభాషణ, కథాకథనం-సందర్భచిత భాషణం - నాటకీకరణం. భాషణ దోషాలు ఉచ్ఛారణ దోషాలు - పదాల ఎంపిక దోషాలు - వాక్యనిర్మాణ దోషాలు భావదోషాలు - వ్యాకరణ దోషాలు

4. పరనం:

పరనం అంటే-పరనం ప్రయోజనాలు - లిపి పరనం - చిత్రపరనం - పటాల పరనం పరనం లక్ష్మణాలు - పరన అలవాట్లు - వాచక పరనం - పత్రికా పరనం - గ్రంథ పరనం - సాహిత్య పరనం.

పరనం పద్ధతులు: క్షుణ్ణపరనం - విస్తార పరనం
పరనం-భేదాలు: మౌన పరనం మరియు ప్రకాశ పరనం-పరనం-అవధానం - గ్రహణం - పరిశీలన - పరనావగాహన- పరనం - అవరోధాలు-పరన సన్నద్ధత - పరన పరిణితి - పద్యపరనం.
పరనాభ్యాసం - బోధన పద్ధతులు - పద పద్ధతి - వాక్యపద్ధతి.

5. లేఖనం:

భాషాలిపి - తెలుగు లిపి పరిణామ క్రమం - తెలుగు లిపి లక్ష్మణాలు,

లేఖనం - దృష్టలేఖనం - ఉక్తలేఖనం - దస్తారీ

లేఖనాభ్యాసం - సంప్రదాయపద్ధతి - ఆధునిక పద్ధతులు - లేఖనం లక్ష్మణాలు - లేఖనం-అవరోధాలు.

లేఖనరూపాలు: వినతి పత్రం - అభ్యర్థన పత్రం - ప్రకటన కర పత్రం - పోస్టరు-పత్రికలకు లేఖ - తల్లిదండ్రులకు, స్నేహితులకు లేఖ - వ్యాపార లేఖ - ఆహ్వాన పత్ర రచన, స్వాగత పత్ర రచన, నివేదికా రచన, అభినందనరచన - వ్యాపార రచన, కృతజ్ఞత/ వందన సమర్పణ రచన ప్రశంసా రచన - ప్రజ్ఞత్వకరచన - దినచర్య రచణ, స్వీయ వివరాల రచన.

లేఖనం -అనువాదం : మూల విధేయానువాదం - వాక్యవిధేయానువాదం- భావానువాదం - అనువాదంలో పరిభాష.

తెలుగు - హిందీ - ఆంగ్లభాషల మద్య అనువాదం.

లేఖనం- శైలి, ప్రాచీన శైలి, మాండలిక శైలి, ప్రామాణిక శైలి -

6. భాషాకౌశలాల మధ్యగల అంతర సంబంధాలు.

బోధనా సంబంధ కృత్యాలు:

1. 6, 7 తరగతుల సామాన్య, సాంఘిక శాస్త్ర పుస్తకాల్లోని.
 - 1) భాషారూపం - భావస్పష్టతలు
 - 2) అభ్యాసకుని అవగాహనకు అనువైన భాషారూపం
 - 3) భాష - పరిభాష కారిన్యస్థాయిలు
 - 4) భాషాభ్యసనానికి తోడ్యాటుకు పరిశీలించుట, నివేదిక రాయుట.
2. పరిసరాల్లోని ఐదు పారశాలల సందర్భం
 తెలుగు బోధన తీరు తెస్తులు
 తెలుగు బోధనకు పారశాలల్లో లభ్యమగు వనరులపై నివేదిక తయారు చేయుట.
3. ఏదైనా ఒక పాత్యాంశమునకు
 జ్ఞాన నిర్మాణవాదం అనుసరణకు తగిన కృత్యాలు రూపొందించుట.
4. 6 నుండి 10 తరగతులు పాత్యాంశాలనుండి ఏదైనా ఒక తరగతి వాచకంలోని వ్యాకరణాంశాలని పట్టికగా కూర్చుట.
5. పిల్లల సంభాషణల్లోని మాండలిక భాషా రూపాల గుర్తింపు పట్టికను తయారు చేయుట

వరామర్ప గ్రంథాలు

1. Kadambari Sharma & Tripat Tuteja- Teaching of Language and Linguistics
Common wealth Publishers.
2. U.K. Singh & K.N. Sudharsan - Lanugage Education,
D.P.H. Publications
3. Instructional approaches - Dr. Santosh Areekkuzhigil.
Neelkamal publications
4. Santosh Sharma (Ed) - Constructivist Apporaches to Teaching and
Learning (NCERT 2006)
5. NCERT - Teaching Reading- A Challange - NCERT
6. తెలుగు బోధన పద్ధతులు - దా॥ దహగాం సాంబమూర్తి
నీలకమల్ ప్రచురణలు
7. దా॥ శివరత్నం రెడ్డి & దా॥ టి. సాంబమూర్తి (సంపాదకీయలు) - తెలుగు బోధన పద్ధతులు (బి.ఎడ్.)
తెలుగు అకాడమీ)
8. దా॥ ఆర్. వెంకటేశ్వరరావు & దా॥ టి. సాంబమూర్తి - తెలుగు బోధన పద్ధతులు (డి.ఎడ్) తెలుగు
అకాడమీ)
9. Cameron, L.(2001)-Teaching Lanugages to Young Learners - Cambridge University Press
10. NCERT - National curriculum frame work (2005)
11. SCERT - AP - AP State Curriculum Frame work (2011)
12. NCERT - Position Paper on Teaching Indian Languages (2006)
13. SCERT - AP - భాషాబోధన అధారపత్రం (2011)
14. Butler, A and Turbill, J. (1984) - Towards Reading - Writing in Class Room.
New York : Cormel University
15. Tompkins, Gail E (1994) Teaching writing - Macwillon
16. దా॥ పోరంకి దక్కిఖామూర్తి - భాష ఆధునిక దృక్పథం- నీలకమల్ ప్రచురణలు
17. దా॥ భద్రిరాజు కృష్ణమూర్తి - భాష, సమాజం, సంస్కృతి - నీలకమల్ ప్రచురణలు
18. దా॥ పి.యస్. సుబ్రహ్మణ్యం, ఆధునిక భాషా శాస్త్ర సిద్ధాంతాలు- తెలగు విశ్వవిద్యాలయం.
19. Noam Chomsky - Syntactic Structures
20. Atkinson - Teach yourself Linguistics
21. చేకూరి రామారావు- తెలుగు వాక్యం-తెలుగు విశ్వవిద్యాలయం
22. దా॥ డి. చంద్రశేఖర్ రెడ్డి - మన భాష - మీడియా ప్రచురణలు.

Course-VI
SOCIOLOGICAL FOUNDATIONS OF EDUCATION

Objectives

After completion of the course, the student-teacher will be able to

1. understand the sociological basis of Education
2. understand the impact of culture and socialization on Education
3. sensitize the student teacher about the impact of Education on the quality of life
4. understand the preamble of the constitution in the light of Education
5. organize various programmes to achieve national integration and international understanding

Course Content

Unit-1: Sociology and Education

- 1.1 Meaning, nature and scope of sociology
- 1.2 Relationship between sociology and Education
- 1.3 Agencies of socialization (Family, peer group, school, Media, Religion)
- 1.4 Role of Teacher in Socialisation process
- 1.5 Impact of Socialisation on Education

Unit-II: Culture and Education

- 2.1 Meaning and definitions of culture
- 2.2 Characteristics of culture
- 2.3 Dimensions of culture, cultural lag, cultural pluralism
- 2.4 Impact of culture on Education
- 2.5 Role of Education in preservation, transmission and promotion of culture

Unit-III: Social Change and Education

- 3.1 Meaning and factors responsible for Social change
- 3.2 Concept and attributes of Modernization
- 3.3 Social stratification, Social Mobility and Education
- 3.4 Education as a facilitator for social change
- 3.5 Social Networking its implications on social cohesion and education

Unit-IV: Democracy and Education

- 4.1 Concept and Principles of Democracy
- 4.2 Equality and equity in Education
- 4.3 Preamble of the Constitution in relation to Education
- 4.4 Role of Education in strengthening democracy and democratic citizenship
Teacher as a democrat

Unit-V: Education and National Integration

- 5.1 Concept, Need for National Integration
- 5.2 Education as an instrument for national integration
- 5.3 Programmes to promote National Integration and International understanding,
- 5.4 Peace education in schools
- 5.5 Social Crisis and its Management

Activities

1. Study the cultural practices prevailing in the local community and submit a report
2. Study the diversities existing in the community and describe the root causes for such diversities.
3. Study the social stratification in a village/ward and prepare a report on it.
4. Education and social mobility – Conduct a survey in a village/ward and prepare a report

Text Books

The Teacher and Education in Emerging Indian Society, NCERT, New Delhi - 1983

Srinivas M N - Social Change in Modern India, Allied Publishers, New Delhi - 1966

Premnath – The Bases of Education – A Philosophical and Sociological Approach – S Chand & Co. Ltd., New Delhi - 1979

Aggrawal, J C – Sociological Foundations of Education – New Delhi

Ramesh Ghanta (Ed.) – Vidya Adharalu (In Telugu) – Telugu Academy, Hyderabad

Reference Books:

Sandeep.P. & C.Madhumati (2008) Philosophical and Sociological Foundations of Education. Secunderabad: Vera Educational Services Public Ltd.

Havighurst, R (1995) – Society and Education – Boston: Allyn and Bacon

Thakur A S & Berwal, S (2007), Education in Emerging Indian Society, New Delhi: National Publishing House

Jaffar, S M (1972) – Education in Muslim India – Delhi: Idrah-I-Ababiyat

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Sharma, Yogendra K (2001) – History and Problems of Education, Volume-I, New Delhi, University Press

Richard Cheever Wallace & Wendy Drew Wallece (1985) – Sociology – Boston: Allyn and Bacon

Taneja, Y R (1990) – Educational Thought and Practice – Sterling, New Delhi

Coombs, Phil P H (1970) – The World Education Crisis: A Systems Analysis – A H Wheeler & Co.

Vaizey John (1967) – Education in the Modern World: World University Library – London

Course-VII LEARNING AND TEACHING

Objectives

After completion of the course, the student-teacher will be able to

1. To be aware of the process of learning and information processing
2. To gain an understanding of different theoretical perspectives on learning
3. To reflect on their own implicit understanding of the nature and kinds of learning
4. To explore the possibilities of designing learning environment and experiences at school
5. To appreciate the critical role of learner differences and social contexts in making meanings and drawing implications for schools and teachers

Course Content

Unit-1: Process of Learning

- 1.1 Concept of learning, types of learning and factors influencing learning
- 1.2 Learning process: Attention, sensation, perception, and concept formation
- 1.3 Memory & forgetting: concept, types of memory, applicability to learning and strategies for better management of memory.
- 1.4 Transfer of learning: concept, theories and types(Horizontal and Vertical)
- 1.5 Role of motivation in learning; methods of improving motivation

Unit-2: Behaviorist Perspectives of Learning

- 2.1 Trial and error - Thorndike, Laws of learning, concept and principles and classroom implications
- 2.2 Classical Conditioning - Pavlov, concept and principles and classroom implications
- 2.3 Operant Conditioning – Skinner, concept and principles and classroom implications
- 2.4 Compare these perspectives in terms of their merits and applicability to classroom learning

Unit-3: Cognitive and Humanist Perspectives of Learning

- 3.1 Cognitive perspectives of learning (insight learning – Kohler, Discovery learning - Bruner, Developmental theory of learning - Piaget, Social Learning - Bandura, Social constructivism – Vygotsky)
- 3.2 Humanist perspectives of learning (Learner centered approach – Rogers)

Unit-4: Teaching Process

- 4.1 Concept of teaching, teaching as a profession and teacher as a professional, teaching as an art and science
- 4.2 Distinction between Instruction, training and teaching
- 4.3 Phases of teaching: planning, execution and reflection
- 4.4 Role of teacher in teaching learning process: teacher as a model, facilitator, negotiator, co-learner, reflective practitioner and classroom researcher
- 4.5 Functions of a teacher in classroom, school and community

Unit-5: Learning Environment and Learning Engagement

- 5.1 Meaning of learning environment and learning engagement

- 5.2 Creating positive and productive environment for learning - creation of emotionally safe learning environment to increase learning
- 5.3 Development of emotional intelligence
- 5.4 Role of culture in the educative process, creating culturally responsive learning environment, create cultural congruity between home and school
- 5.5 Assisted performance, supervised discussion and reciprocal teaching as strategies to enhance motivation and learning

Activities

1. Prepare a list of study habits prevailing among students of a particular class through interaction of students
2. A report on learning situations, learners attention, motivational status among the students of a particular class through observation
3. Conduct a group discussion on strategies of memorization – Repeated reading, writing, peer group discussion, explaining to others, etc. and prepare a report
4. Understanding the nature of interaction between teachers and students by Flander's Interaction model and prepare a report

Text Books

- Dandapani (2002). *Advanced Educational Psychology*, Second Edition. New Delhi: Anmol Publication Pvt. Ltd.
- Mangal, S.K.(2002). Advanced Educational Psychology, Printice- Hall. of India , Pvt.Ltd., New Delhi.

Reference Books

- Begbie, H.L. and Hunt M. P: Psychological Foundations of Education
- Erickson, Eric, H. (1972). *Play and Development*. New York: W. W. Norton
- Gardner, H. (1980). *Frames of mind: The theory of multiple intelligence*. London: Paladin Books
- Gauvian, M. and M. Cole (eds). Readings on the development of children. New York: W. H. Freeman
- Gauvian, M. and M. Cole (eds). Readings on the development of children. New York: W. H. Freeman
- Hilgard, E.R. and Bower, G.H. *Theories of Learning*. Prentice Hall India, New Delhi
- Hurlock, E.B. (1999). *Developmental Psychology*. New Delhi: Tata McGraw-Hill Publishing Company Ltd, New Delhi
- Piaget, J. (1926). *Psychology of Intelligence*. New York: Basic Books
- Sharma, K.N. (1990). *Systems, Theories and Modern Trends in Psychology*. Agra: HPB.
- Sprinthall, Norman A. and Richard C. Sprinthall (1990). *Educational Psychology - A Developmental Approach*, Fifth Edition. New York: McGraw-Hill International Edition, Psychology Services.
- Vygotsky, L. S. (1978). *Mind in Society: The development of higher psychological processes*. Cambridge, Massachusetts: Harvard University Press
- Yakaiah, P. & Bhatia, K.K. (2005). *Introduction to Educational Psychology*. Ludhiana: Kalyani Publishers.

Course-VIII
CLASSROOM MANAGEMENT LEADERSHIP AND ACTION RESEARCH

Objectives

After completion of the course, the student-teacher will be able to

1. understand the importance of classroom organization
2. understand the importance of classroom Management
3. develop ability to face the problems in managing the classroom.
4. understand the role of leadership of a teacher
5. undertake different action research projects to improve professional practices

Course Content

Unit-1: Classroom Organization

- 1.1 Classroom organization – Meaning and purpose
- 1.2 Classroom Seating Arrangement for different purposes
- 1.3 Technology integration – OHP/ LCD, Smart board, Chalk board, White board, Display boards, multimedia, E-Classroom.
- 1.4 Characteristics of Classroom Environment - Learner friendly and inclusive
- 1.5 Management and maintenance of physical and material resources to optimize access to learning; Sharing of resources – School Complex

Unit-2: Classroom Management

- 2.1 Classroom management – concept, need and approaches .
- 2.2 Managing with different types of students – Leader, Follower, passive
- 2.3 Classroom behavior management – problems, mistakes, disciplinary practices, corporal punishments, classroom rules, routines and regulations.
- 2.4 Violation of rights of children – legal consequences.
- 2.5 Strategies to manage behavior problems- preventive, supportive and corrective.
- 2.6 Time management in a classroom – Allocated time, instructional time, engaged time and Academic learning time.

Unit-3: Role of Teacher in School Functions

- 3.1 Teacher as a facilitator of learning
- 3.2 Perspective planning and coordination with authorities for support.
- 3.3 Accountability and self assessment of teachers and feedback mechanisms.
- 3.4 Conducive school environment – team work, transparency, self esteem among head teacher, teachers, students.

Unit-4: Teacher as a Leader

- 4.1 Concept, Nature and Characteristics of a Leader
- 4.2 Types of Leadership
- 4.3 Strategies to develop leadership qualities
- 4.4 Role of a teacher as a leader in managing classroom dynamics

Unit-5: Action Research in Education

- 5.1 Action Research – Meaning, Need and Scope
- 5.2 Steps in Action Research
- 5.3 Action Research Cycle
- 5.4 Action Research Problem Areas – Student, Classroom, School, Teacher, Administration, etc.

Activities

1. Prepare a detailed record describing the role of the teacher in organizing the classroom at least by observing a teacher for five periods.
2. Identify a problem for action research and prepare a proposal for action research
3. Collection of articles from newspapers relating to classroom management problems
4. Collection of cases of indiscipline and corporal punishment from newspapers
5. Observe a minimum of five school teachers and describe their leadership characteristics

Text Books

- Parag Diwn (2006), Management Principles and Practices, Excell Books, New Delhi
- Vandana Punia (2005) Managerial Skills in Educational Administration - Deep and Deep Publications Pvt. Ltd. Delhi
- John W Best and James V Kahn (2008) Research in Education, Pearson/PHI, New Delhi

Reference Books

- Ranjith Kumar (2007) Research Methodology, Pearson/PHI, New Delhi
- Mishra R C (2007) History of Educational Adminitration, APH Publishing Corporation, New Delhi
- Meenakshi Sundaram, A (2012), Educational Innovations and Management , Kavyamala Publishers, Chinnalapathi, Tamilnadu
- Padmanabhaiah S and Vijayalakshmi B (Eds.) (2014), Pathasala Nirvahana Vidyamsalu, Telugu Academy, Hyderabad
- Krishnamacharyulu V (2010) School Management and Systems of Education, Neelkamal Publications Pvt. Ltd. Hyderabad

Course-IX ART EDUCATION

Objectives

After completion of the course, the student-teacher will be able to

1. integrate Art with Education and become better communicator.
2. develop creative thinking through different Art forms.
3. realize that liberal arts help in making better professionals.
4. understand Art as a medium of expression.
5. understand the role of Art as a medium of Education.
6. deepen students ability for perception and reflection.
7. use Art as an alternative languages to experience and communicate concepts in teaching-learning.

Course Content

Unit-1: Art and Aesthetics

- 1.1 Aesthetics – as a branch of Philosophy.
- 1.2 Aesthetics – its meaning, dimensions and constituents.
- 1.3 Art as a form of Aesthetics.
- 1.4 Indian Art and Rasa principle.
- 1.5 Importance of Arts in Education

Unit-2: Art and Education

- 2.1 Art as a medium of education.
- 2.2 Art as a unifying principle in education.
- 2.3 Art and Society.
- 2.4 Art and Human development.
- 2.5 Art for self-expression, keen observation, and sense of appreciation.

Unit-3: Place of Visual Art and Performing Arts in Teaching

- 3.1 Different forms of visual and performing Arts.
- 3.2 Teaching as an Art.
- 3.3 Drama as a form of Teaching.
- 3.4 Identification of local Art forms and their integration to teaching – learning.
- 3.5 Evaluation strategies; assessing the different forms of Art.

Unit-4: Contributions made by Contemporary thinkers on Art and Education

- 4.1 Rabindranath Tagore
- 4.2 A.K. Coomara Swamy
- 4.3 Herbert Read
- 4.4 Elliot Eisener

Unit-5: Art and Craft in Education

- 5.1 Art in Craft
- 5.2 Craft in Art
- 5.3 Traditional Craft and their relevance to Education
- 5.4 Local Craft and their place in SUPW
- 5.5 Indian Festivals and its Artistic significance

Activities

1. Select a concept from the school curriculum which includes a social message and identify an appropriate art form to spread the message in public and prepare a report
2. Identify a local art form and integrate it in teaching an appropriate lesson from school curriculum – Prepare a lesson plan
3. Select an appropriate lesson from the school curriculum and rewrite it in the form of a drama

Text Books

- John Dewey, Art as Experience, New York, 1934, Minton
 Herbert Reed, Education through Art – Faber and Faber, New York, 1968
 Esner Elliot W, Educating Artistic Vision – New York, Macmillan, 1972

Reference Books

- John, B., Yogin, C., & Chawla, R.(2007). Playing for real: Using drama in the classroom. Macmillan
 Jefferson B, Teaching Art to Children – Continental View Point – Boston, Allyn Bacon, 1969
 Rabindranath Tagore, Lectures and Addresses – Macmillan, New Delhi, 1962
 A.K. Coomara Swamy, Christian and Oriental Philosophy of Art, Munshiram Manoharlal, Delhi, 1974

Course-X

PEDAGOGY OF MATHEMATICS

Objectives

After completion of the course, the student-teacher will be able to

1. Appreciate Mathematics as a tool to engage the mind of the student
2. Appreciate mathematics to strengthen the students resource
3. See mathematics as something to talk about to communicate through to discuss among themselves to work together on.
4. Construct appropriate assessment tools for evaluating mathematics learning.
5. Stimulate curiosity, creativity and inventiveness of mathematics
6. Develop Competencies to develop gifted and slow learners.
7. Develop language of mathematics; engage with research on children's learning in specific areas.

Course Content

Unit-1: Mathematics Curriculum:

- 1.1 Meaning and objectives of curriculum
- 1.2 Principles for designing and Organizing Curriculum
- 1.3 Approaches for Organizing Curriculum
- 1.4 Meaning of syllabus and difference between syllabus and curriculum
- 1.5 Recommendations and critical appraisal of NCFSE- 2005, APSCF – 2011 and other commissions on Mathematics curriculum.
- 1.6 Discussion of important concepts, principles and processes from the topics of the branches as specified below.
 - i. Arithmetic : Development of number system, Ratio and Proportion, Percentages and other topics based on them.
 - ii. Algebra: Sets and Operations on them, Systems of Linear Equations and their graphical solutions, Quadratic Equations, theory of Indices and Logarithms, Remainder and factor theorems.
 - iii. Probability and Statistics: Basic concepts of Probability, Representation of data, Measures of Central Tendencies.
 - vi. Geometry: Theoretical, Practical and Co-ordinate Geometry, Distance formula, section formula.
Menstruation ; Areas and Volumes
 - v. Trigonometry: Trigonometrical Ratios, Identities. Composite Angles, Multiple and Sub multiple angles, Heights and Distances.

Unit-2: Language and Aesthetic sense of Mathematics

- 2.1 Aesthetic Sense in Mathematics; three aesthetic experience variables identified by Brikhoof and their relation.
- 2.2 Co-existence of Precision and beauty in Mathematics- order pattern, structure and symmetry
- 2.3 Recreational Mathematics – Mathematical games, puzzles, and riddles.
- 2.4 Language of Mathematics

Unit-III: Assessment and Evaluation

- 3.1 Testing of Mathematical abilities of children
- 3.2 Meaning of Assessment, measurement and evaluation in mathematics

- 3.3 Achievement test in mathematic- Arithmetic, Algebra, and Geometry.
- 3.4 Speed test in Mathematics - Arithmetic, Algebra, and Geometry.
- 3.5 Preparation of test items – Precautions to be taken while preparing test items in different branches of mathematics
- 3.6 Concept of CCE and measurement of different behavioral changes like interest attitude, and aptitude in learning mathematics.

Unit-IV: Mathematics for all

- 4.1 Speed and accuracy in Mathematics
- 4.2 Understanding Learners – Gifted slow, backwardness and dyscalculia
- 4.3 Activities enriching Mathematics learning- Mathematical Clubs, fairs and its activities, Olympiad, Recreational activities
- 4.4 Mathematic Laboratory and its effective use
- 4.5 Teaching learners with special needs - Co-operative learning, Peer learning, Reciprocal learning – Breur, using technology to meet diverse needs of learners.

Unit-V: Professional Development in Mathematics Teacher

- 5.1 In-service programmes for Mathematics Teacher
- 5.2 Mathematics Teachers Associations – Role, and Uses
- 5.3 Journals and other resource material in Mathematics Education
- 5.4 Professional Growth – Participation in conferences/Seminars/ Workshops and E-Learning

Activities

1. During Internship, conduct of Essay writing/ quiz competitions in mathematics and report
2. One case study of gifted child and slow learner with interventions suggested.
3. Preparation of Mathematical Puzzles, Games, riddles and other recreational activities.
4. Preparing two types of assessment tests – Formative, Summative type of tests.
5. Preparing Diagnostic test in Algebra, Arithmetic and Geometry from VIII to X class mathematic syllabus.

Text Books and Reference Books

As given in Course IV- Pedagogy of Mathematics

Course-X

PEDAGOGY OF SOCIAL SCIENCES

Objectives

This course will enable the student teachers to

1. understand the teaching and learning of geography, economics, history, political science and identify the difference among them
2. understand the importance of social science curriculum and its organization
3. understand various teaching aids for social sciences
4. understand the assessment process through CCE
5. sensitize and equip teachers to handle social issues and concerns in a responsible manner
6. inculcate qualities and competencies required for a good social sciences teacher

Course Content

Unit-1: Teaching and Learning of Geography and Economics

- 1.1 Fundamental concepts of Geomorphology - Latitudes, longitudes, earth movements, climatology, temperature, pressure, wind, humidity; Hydrology and Oceanography – Hydrological Cycle, Ocean and Ocean deposits
- 1.2 Indian Geography-Political divisions, Rivers and Landforms
- 1.3 Meaning, Nature and Scope of Economics; Key concepts in Economics
- 1.4 Classification of Economic Systems
- 1.5 Teaching strategies of geography and economics

Unit-2: Unit-VII: Teaching Learning of History and Political Science

- 2.1 Periodisation of World History, Indian History – Ancient, Medieval, Modern and Contemporary society with special reference to Secondary School Social Studies Textbooks
- 2.2 Capitalism, Democracy and Citizenship – American and French Revolutions
- 2.3 Nature and Scope of Political Science; Key concepts and current trends
- 2.4 Indian Constitution – Fundamental Rights and Duties; Organs of Government-Legislature, Executive and Judiciary
- 2.5 Teaching Strategies of Teaching History and Political Science

Unit-3: Social Science Curriculum

- 3.1 Curriculum – Meaning, Nature and Scope
- 3.2 Principles of Social Sciences Curriculum Construction
- 3.3 Approaches of organizing social studies curriculum – concentric, spiral, chronological, topical and correlation
- 3.4 Qualities and Characteristics of Good Social Science Textbook
- 3.5 Analysis of Social Science Textbook of State Board and CBSE

Unit-4: Teaching Learning Material in Social Sciences

- 4.1 Need and significance of Teaching Learning Material in Teaching Social Sciences
- 4.2 Globe and Maps – Types of Maps – Map Language, Map Reading and Map Making
- 4.3 Charts and Graphs – Types of Charts – Chronology, Tabular, Diagramatic and Pictorial; Types of Graphs – Bar, Pie, Line and Pictorial
- 4.4 Models – Working, Still and Diorama

4.5 Objects, Specimens and Scrap book

Unit-5: Evaluation in Learning Social Sciences

- 5.1 Meaning, Nature and Characteristics of Evaluation
- 5.2 Forms of Evaluation
- 5.3 Quantitative and Qualitative Tools of Evaluation in Social Sciences
- 5.4 CCE Model of assessment in social sciences
- 5.5 Analysis and Interpretation of test scores

Activities

1. Observe a day's proceedings in house of assembly or parliament and report
2. Collect News paper clippings on any social issue and write a report on the issue with your comments
3. Organise any one of the social awareness programme on Swatch Bharath/ Water and Plant/ Aids Awareness/ Vanamahotsavam, etc in a village/ward and report.
4. Observe the functioning of any local body office and report
5. Critically analyse the characteristics of Social Science text book of any class and prepare a detailed report

Text Books and References

As given in Course IV- Pedagogy of Social Sciences

Course-X

PEDAGOGY OF BIOLOGICAL SCIENCES

Objectives

After completion of the course, the student-teacher will be able to

1. Understand the curriculum development issues in biological science
2. Identify the role and use of laboratory, ICT, and TLM in the teaching of biological science teaching effectively
3. Develop the skill of writing lesson plan period plan
4. Develop micro teaching skills
5. Develop the skill of constructing test papers

Course Content

Unit-1: Biological Science Curriculum and Textbooks

- 1.1 Meaning and Definitions of curriculum
- 1.2 Principles of Curriculum Construction
- 1.3 Organizational Approaches of Curriculum: Logical, Psychological,
- 1.4 Topical concentric and spiral
- 1.5 Steps involved in the development of science curriculum
- 1.6 Basic Criteria of Validity of a Science Curriculum context, - Cognitive, Process, Historical, Environmental Science and Ethical Validity
- 1.7 Curriculum at upper Primary, Secondary and Higher secondary stages.
- 1.8 National Curriculum Framework, 2005 – Position paper on Science
- 1.9 Andhra Pradesh State Curriculum Framework 2011- Science
- 1.10 Qualities of good biological science text books
- 1.11 Analysis of Secondary School Biological Science text book

Unit-2: Biological Science Laboratory

- 2.1 Importance of practical work in Biological Science
- 2.2 Planning of science laboratories, Lecture cum laboratory, all-purpose laboratory, mobile science laboratory
- 2.3 Procurement, care and maintenance of laboratory equipment
- 2.4 First Aid

Unit-3: Teaching Learning Materials

- 3.1 Edgar Dale's Cone of experience
- 3.2 Audio, visual Instructional aids
- 3.3 Activity aids (Aquarium, Vivarium, Terrarium, Herbarium), Electronic Teaching Aids
- 3.4 Improvisation of Teaching aids

Unit-4: Resources for Teaching Biological Science

- 4.1 Science Kit
- 4.2 Science library
- 4.3 Science club
- 4.4 Science exhibition and science fair
- 4.5 Science Museum
- 4.6 Community Resource

Unit-5: Evaluation in Biological Science

- 5.1 Concept of test, measurement and evaluation
- 5.2 Evaluation- meaning, types, Process, and tools
- 5.3 Qualities of a Good test and types of tests
- 5.4 Preparation of Continuous Comprehensive Evaluation (CCE) Record
- 5.5 Analysis and interpretation of test scores.
- 5.6 Assessment of performance of the student, electronic assessment
- 5.7 Preparation of portfolio

Activities

- 1. Make a survey on the problems of environmental pollution in your locality and record the observations and submit a report
- 2. Select any topic of your choice and prepare a lesson plan on the lines suggested in constructivistic approach.
- 3. Prepare laboratory instructional cards for any two experiments of your choice.
- 4. Prepare a herbarium based on a certain theme.
- 5. Analyze recent public examination X class Biological Science question paper and compare with the pre-final question paper and record your observations.

Text Books and References

As given in Course IV- Pedagogy of Biological Sciences

Course-XI
PEDAGOGY OF PHYSICAL SCIENCES

Objectives

After completion of the course, the student-teacher will be able to

1. understand the importance of physical science curriculum and its organisation
2. develop the skill, procurement and maintenance of the science laboratory.
3. equip the resources for effective teaching of physical sciences.
4. utilize the applications of science and technology on society.
5. construct the achievement test on CCE model and analyse the results

Course Content

Unit-1: Science Curriculum and Textbooks

- 1.1 Curriculum - Concept and Meaning, Principles of Curriculum Construction
- 1.2 Different Approaches of Curriculum Organisation: Concentric, Topical, Psychological & Logical – Learner Centred curriculum
- 1.3 Curriculum organisation in terms of NCF-2005, RTE-2009, NCFTE-2009, APSCF-2011
- 1.4 Characteristics of a Good Physical Sciences Text Book
- 1.5 Learning Resources for Physical Science – Exploring alternative resources

Unit-2: Instructional Material for Physical Sciences Teaching

- 2.1 Importance of Practical Work in Physics and Chemistry
- 2.2 Planning and Organisation of Science Laboratories, Procurement and Care of Laboratory Equipment, Registers, Safety and First-Aid – Conduct of Laboratory experiments
- 2.3 Development of Improvised Apparatus for concrete and abstract concepts
- 2.4 ICT and multimedia resources for teaching Physical Sciences - Simulated computer based laboratory activities
- 2.5 Self Learning Material (SLM) – Characteristics and Functions - Preparation of Self Learning Material on one lesson – Analysis of its Effectiveness by Classroom Discussion and Preparation of SLM by each student for their classroom use

Unit-3: Lifelong Physical Sciences Learning

- 3.1 Science Clubs, Science Exhibition, Science Museums, Science Fairs and Olympiads
- 3.2 Role of Government and Non-Governmental Organizations in the Propagation of Science
- 3.3 Utilizing Knowledge Resources – Identification of online and offline resources – context and challenges in Utilization
- 3.4 Science Communication in India – DST-NCSTC Network – National Children Science Congress, National Teachers Science Congress, Initiative for Research and Innovation in Science
- 3.5 Development of Scientific Temper and encouraging and inspiring students to choose science as career and to become scientists

Unit-4: Professional Development of Physical Sciences Teachers

- 4.1 Professional development of Physical Sciences Teachers
- 4.2 Participation in Seminars, Conferences, Workshops and In-service Training Programmes
- 4.3 Membership in Professional Organisations; Teachers as a community of learners
- 4.4 Role of reflective practices in professional development of physical science teachers
- 4.5 Teacher as a researcher: Action Research in Physical science - Learning to understand how children learn science

Unit-5: Evaluation in Physical Science

- 5.1 Evaluation of Learning Outcomes in Physical Sciences
- 5.2 Qualities of a good test - Written and Practical
- 5.3 Planning, Preparation and Conduct of Achievement Test in CCE model
- 5.4 Evaluation of Responses, Scoring and Tabulation
- 5.5 Analysis and Interpretation of Test Scores

Activities

1. Prepare different steps involved for demonstration of an experiment one each in Physics and Chemistry
2. Prepare two improvised apparatus / teaching gadgets with locally available material resources for Physics and Chemistry and submit
3. Visit a Science Centre or Science-Museum (District/ State/ National) and prepare a report
4. Participate in a District / State Level Science Fair and prepare a report on the exhibits and activities presented
5. Celebrate National Science Day/ Earth Day/ Water Day / any important day related to science in the school during the internship and submit a report

Text Books and References

As given in Course V- Pedagogy of Physical Sciences

**Course-XI
PEDAGOGY OF ENGLISH**

Objectives

After completion of the course, the student-teacher will be able to

1. get acquaintance with skills of communication for classroom teaching
2. develop creativity among learners
3. use multilingualism as a strategy in the classroom situation
4. understand the basics of English grammar
5. develop the skills of presentation of vocabulary
6. get acquaintance with different sounds in English and use correct pronunciation in the classroom teaching
7. understand constructivist approach to language teaching and learning
8. assess and Evaluate the student skills of language learning

Course Content

Unit-1: Language across Curriculum

- 1.1 Need for Communication
- 1.2 Communication for classroom teaching
- 1.3 Classroom interaction patterns
- 1.4 Interpersonal skills
- 1.5 Individual/Pair/Group activities

Unit-2: Teaching of Grammar

- 2.1 Need and importance of teaching Grammar
- 2.2 Types of Grammar and Techniques of Teaching Grammar
- 2.3 Using Authentic materials to teach Grammar
- 2.4 Grammar Games and the related activities
- 2.5 Remedial teaching in Grammar

Unit-3: Teaching Vocabulary, Study and Reference skills

- 3.1 Selecting and Grading vocabulary items
- 3.2 Techniques of teaching vocabulary
- 3.3 Vocabulary games
- 3.4 Techniques of teaching Study Skills: Note-making/Note-taking/Mind mapping/Brain-storming
- 3.5 Techniques of teaching Reference Skills: Dictionary, Thesaurus, Encyclopedia and Bibliographies

Unit-4: Introduction to Phonetics

- 4.1 Vowels and Diphthongs
- 4.2 Consonants
- 4.3 Stress
- 4.4 Intonation
- 4.5 Techniques of using Language Laboratory

Unit-5: Language Assessment and Evaluation

- 5.1 Concept of Evaluation and Characteristics of a good test in English
- 5.2 Progress and assessment of development of language skills; CCE; techniques of evaluation – oral and written; self evaluation; peer evaluation; group evaluation.
- 5.3 Typology of questions: activities and tasks reflecting - problem solving, creative and critical thinking and enhancing imagination.
- 5.4 Preparing tests for different skills of language – Listening, speaking, reading, writing, study skills and reference skills
- 5.5 Preparation of Scholastic Achievement Test (SAT) giving weightages to objectives and learning experiences.

Activities

1. Take a few passages from different lessons of any class of your choice and critically examine the following and comment:
 - a. To what extent the language clearly convey the meaning of the topic being discussed?
 - b. Is the language learner-friendly?
 - c. Is the language too technical in nature?
2. Select 10 examples of grammar activities listed in English Readers of classes VI to X and analyse.
3. Take a topic of your choice and select 10 vocabulary items to teach in the relevant context. Give reasons for your selection.
4. Prepare 3 activities for practicing pronunciation and spelling of 15 words from a lesson in any text book of classes VI to X.
5. Develop a question paper for classes VI to X to asses all the aspects of language learning.

Text Books and References

As given in Course V- Pedagogy of English

**Course-XI
PEDAGOGY OF TELUGU**

భాషావిద్య (తెలుగు)

లక్ష్యాలు:

రెండేళ్ళ శిక్షణ పూర్తి చేసుకున్న భాతోపాధ్యాయులు:

- 1) పద్యం, గద్యం, వ్యాకరణం, వ్యాసం, కథ నాటిక మున్నగు ప్రక్రియల బోధనను సమర్థంగా నిర్వహించారు.
- 2) పార్యాబోధనకు అనువైన వ్యూహాలు, భోదన సామాగ్రిని ఎంపిక చేసుకుంటారు.
- 3) విద్య ప్రణాళిక, విషయ ప్రణాళిక, పార్యాపుస్తకాల మద్యగల సంబంధాలను అవగతం చేసుకుంటారు.
- 4) భాషా మూల్యాంకనం భావనలను అర్థం చేసుకొని, తమ విద్యార్థుల ఉప లభ్యాని వివిధ మూల్యాంకన విధానాల్లో అంచనావేస్తారు.
- 5) భాషాభ్యాసం/బోధనల్లో భాషా ప్రయోగశాల, కంపూటర్ ప్రధాన్యతను గుర్తిస్తారు. తమ బోధనలో వినియోగిస్తారు.
- 6) తెలుగు భాషాసాహిత్యాలు, ప్రజల సంస్కృతి వారసత్వాల ఎడ స్టుపుసు పెంపాందించుకొని తమ విద్యార్థులలో సంస్కృతీస్టుపుసు పెంపాందిస్తారు.

I. భాష - సాహిత్యం - సాందర్భ శిల్పము

భాష - ఆలోచనలు-సృజనాత్మకత

భాష వివిధ సాహిత్య ప్రక్రియలు - లక్ష్యాలు (1వ తరగతి నుండి 10వ తరగతి తెలుగు ప్రథమ ద్వీతీయ భాషా వాచకాల్లో పరిచయమైన ప్రక్రియలు)

పద్యప్రక్రియలు - ఇతిహాస కవిత - పురాణ కవిత - కావ్యకవిత - ఆధునిక పద్యం

వచన ప్రక్రియలు - గద్యం - లేఖ - వ్యాసం - సంపాదకీయం - జీవిత చరిత్ర, ఆత్మకథ - దినచర్య - యాత్రాకథనం - కథానిక

నాటక ప్రక్రియలు - సంభాషణ - నాటిక

బాల సాహిత్యం - బావ కవిత్వం - అభ్యుదయ కవిత్వం - విష్వవ కవిత్వం - స్త్రీవాద

సాహిత్యం - దళిత వాద సాహిత్యం - మైనారిటీ వాద సాహిత్యం, జాతీయోద్యమ కవిత్వం - అందోద్యమ కవిత్వం - శాప్ర సాహిత్యం.

ఇతర ప్రధాన ప్రక్రియలు - నవల, నవలిక ఇత్యాదులు

తెలుగు సాహిత్య చరిత్రలో ప్రముఖ రచయితలు - కవులు - కవయిత్రులు

II. భాషాసాహిత్యాలు - బోధనాప్రక్రియలు:

గద్య బోధన - వాచకబోధన - ఉపవాచక బోధన - పద్యబోధన-సంభాషణ/నాటక బోధన-వ్యాకరణ బోధన-వ్యాప రచన బోధన- కథా బోధన.

(యూనిట్ - III లో పాందుపరచిన పద్ధతులు అన్వయం చేసుకోవాలి)

* భాషా సాహిత్యాల బోధనలో ప్రాధాన్యతలు - భాష - పరిసరాలు విద్యార్థుల అనుభవాలు ఆసక్తులతో సమన్వయం.

* ప్రశంసా శక్తిని, సృజనాత్మకతలను పైంపాందించుటకు ప్రక్రియల బోధన

III. భాషాభ్యసనం, బోధన ప్రణాళికలు, బోధన సామాగ్రి నిర్మాణం.

* విద్యా ప్రణాళికలు:

విద్యా ప్రణాళికల్లో తెలుగు భాషా స్థానం (మాతృభాషగా మాధ్యమ భాషగా) డిజిటల్ మాధ్యమాలు:

* పార్యపుస్తకం- నిర్మాణం - లక్ష్మణాలు.

* తగరతి బోధన ప్రణాళికలు - వార్డ్‌క పథకం - సమగ్ర పార్యపథకం - దైనిక పార్యపథకం. ఆవశ్యకత- మౌళిక భావనలు - తయారీలో మెలకుపలు.

* భాషా సహ పార్య కార్యక్రమాలు - భాషా క్రీడలు - రచనా క్రీడలు - భాషణ క్రీడలు - భాషా సాహిత్య యాత్రలు - సాహిత్య సభలు.

* గ్రంథాలయాలు : పరామర్శ గ్రంథాలు - నిఘంటువులు - విజ్ఞాన సర్వస్వాలు-మూల గ్రంథాలు- వినియోగం.

* భాషా బోధనాభ్యసన ఉపకరణాలు: భాషా ప్రయోగ శాల - కంప్యూటర్లు, దృశ్యశక్తి, శ్రవ్య దృశ్య - ద్విమితీయ, త్రిమితీయ ఉపకరణాలు.

* మాధ్యమాలు: అచ్చమాధ్యమాలు-దృశ్యమాధ్యమాలు (ప్రింట్ అండ్ విజువల్ మీడియా)

IV. భాషాభ్యసనం - బోధన - అధునిక ఫోరములు.

* కార్యక్రమయుత బోధన - బృంద బోధన, నియోజనాల బోధన (వ్యక్తి పద్ధతి) కంప్యూటర్ సహాయక బోధన/ అభ్యసనం-లోపనివారణ - బోధన కృత్యాధార బోధన, స్వయం అధ్యయనం పర్యావేక్షనాత్మక అధ్యయనం - మౌలిక భావనలు - పరిమితులు.

భాషా సాహిత్య కృపిలో వివిధ సంస్థలు :

తెలుగు అకాడమీ - ఆంధ్రసాహిత్య పరిషత్ (కాకినాడ), వేటపాలెం గ్రంథాలయం -సి.సి. బ్రోను అకాడమీ, కడప-తెలుగు విశ్వవిద్యాలయం, తిరుపతి ప్రాచ్యలిఖిత పుస్తక భాండాగారము ఆంధ్రప్రదేశ్ సాహిత్య అకాడమీ, లలిత కళా అకాడమీ, నాటక అకాడమీలు, తదితర సంస్థలు

V. భాషాభ్యసనం - బోధన - మూల్యంకనం:

మూల్యంకనం - పరీక్ష - నికష - పరిగణన, భావనలు- సామర్థ్యధారిత మూల్యంకనం - నిరంతర సమగ్ర మూల్యంకనం- రూపణ మూల్యంకనం - సంకనల మూల్యంకనం - లోప నిర్ధారణ మూల్యంకనం - ప్రాగ్నసెటిక్ మూల్యంకనం-మూల్యంకనానికి ప్రశ్నపత్రాలు - ప్రశ్నల తయారీ- వివిధ ప్రశ్నారూపాలు, ప్రశ్నల లక్షణాలు - మెలకువలు- పారాంత నికషలు - అంతర్గత మూల్యంకనం - బాహిర మూల్యంకనం, విద్యార్థులు/అభ్యసకుల స్వీయ మూల్యంకనం- మూల్యంకనం - భాషా కౌశల నికషలు - శ్రవణ నికష - పరన నికష - భాషణ నికష - లేఖన నికష - అభిరుచి నికష-ఆసక్తి నికష - సృజనాత్మక నికష, ప్రశంసానికష, భాషా స్పృహ నికష - నిర్మాణం - విశేషణ - మెలకువలు - మాదిరి సమాధాన పత్రాలు- ప్రశ్నపత్రాల సమాధానాలను సరిచూచుట - ఫలితాల నివేదన - గ్రేడింగ్ - ఫలితాల వ్యాఖ్యానం

బోధన సంబంధ కృత్యాలు:

1. ఏవేని మూడు స్థానిక వార్తాపత్రికల్లోని - సంపాదకీయ వ్యాసాలు, వార్తా వ్యాఖ్యలను సమీక్షించి, ముఖ్యభావనలను, భాషా లక్షణాలను క్రోడీకరించి, వ్యాసరూపంలో నివేదిక తయారు చేయుట.
2. నచ్చిన ఒక కవి/రచయితల ఒక కవిత/కథను ప్రశంసిస్తూ రాయుట.
3. కార్యక్రమయుత బోధనపై ఒక పారం సిద్ధం చేయించుట.
4. బాలల పత్రికలు - భాషాభ్యసనానికి వాటి తోడ్పాటుపై పిల్లల అభిప్రాయ సేకరణ.
5. స్థానిక భాషా విశేషాలు - జాతీయాలు - సామేతలు - పొడుపు కథలు - సేకరణ.

పరామర్శ గ్రంథాలు:

కోర్సుV నందు పొందుపరచబడినవి.

Course-XII

LEARNING ASSESSMENT

Objectives

After completion of the course, the student-teacher will be able to

1. Understand the nature of assessment and evaluation and their role in teaching-learning process.
2. Understand the perspectives of different schools of learning on learning assessment
3. Realize the need for school based and authentic assessment
4. Examine the contextual roles of different forms of assessment in schools
5. Understand the different dimensions of learning and the related assessment procedures, tools and techniques
6. Develop assessment tasks and tools to assess learners' performance
7. Analyse, manage, and interpret assessment data
8. Analyse the reporting procedures of learners' performance in schools
9. Develop indicators to assess learners' performance on different types of tasks
10. Examine the issues and concerns of assessment and evaluation practices in schools
11. Understand the policy perspectives on examinations and evaluation and their implementation practices
12. Traces the technology bases assessment practices and other trends at the international level

Course Content

Unit-1: Perspectives on Assessment and Evaluation

- 1.1 Meaning of Assessment, Measurement, Tests, Examination, Appraisal, and Evaluation and their interrelationships
- 1.2 Purpose(s) and principles of Assessment, characteristics of quality assessment
- 1.3 Current thinking about learning based on Behaviorist, Cognitivist and Constructivist learning theories and their implications for classroom assessment-changing the culture of classroom assessment
- 1.4 Classification of assessment: based on *purpose* (prognostic, formative, diagnostic and summative), *scope* (teacher made, standardized), *attribute measured* (achievement, aptitude, attitude, etc.), *nature of information gathered* (qualitative, quantitative), *mode of response* (oral and written; selection and supply), *nature of interpretation* (self-referenced, norm-referenced, criterion-referenced) and *context* (internal, external)
- 1.5 Policy perspectives on examinations and evaluation: Recommendations in National Policies of Education and curriculum frameworks- continuous and comprehensive assessment

Unit-2: Formative and Summative Assessment

- 2.1 Formative Assessment (FA) meaning, purpose, essential elements (formative assessment in practice), major barriers to wider use of FA, role of students and teachers in formative assessments,

- 2.2 Observation, questioning, reflection on learning as strategies for using assessment in the process of learning;
- 2.3 Use of Projects, Assignments, Work sheets, Practical work, Performance-based activities and Reports as assessment devices; Self, Peer and Teacher assessments- use of rubrics,
- 2.4 Summative assessment: meaning, purpose, summative assessment in practice, use of teacher-made and standardized test
- 2.5 Aligning formative and summative assessments

Unit-3: Tools of Assessment

- 3.1 Assessment of cognitive learning: understanding and application; thinking skills –convergent, divergent, critical, problem solving, and decision making;
- 3.2 Selected-Response Assessment: Multiple Choice, Binary Choice, and Matching and Constructed Response Assessment: Completion, Short-Answer, and essay Items as tools-nature, advantages and limitations, guidelines for their construction and scoring
- 3.3 Assessment of affective learning: attitude and values, interest, self-concept; tools and procedures for their assessment; observation, interview, rating scales, check-lists, inventories as tools/techniques, their uses and preparation
- 3.4 Assessment of Performance/ project-based assessment- meaning, characteristics, scope; using rubrics to grade a performance-based assessment
- 3.5 Portfolios: meaning, types, purposes, guidelines for portfolio entries and assessing portfolios

Unit-4: Planning, Construction, Administration and Reporting of assessment

- 4.1 Planning: Deciding on what, why and how to assess- difference between instructional, learning and assessment objectives, stating of assessment objectives , deciding on the nature and form of assessment - oral tests and written tests; open book examination; weightage to content, objectives, allocation of time; Preparation of a blue print
- 4.2 Construction/selection of items: writing test items/questions, reviewing and refining the items, assembling the test items; writing test directions and guidelines for administration (if any), Scoring procedure – manual and electronic; Development of Rubrics
- 4.3 Administration, item analysis and determining item and test characteristics; Item response analysis, ascertaining student needs, identifying student interests and feeding forward for improving learning
- 4.4 Analysis and Interpretation of Students' Performance
Processing test data: graphical representations; calculation of measures of central tendency and variability, and derived scores- percentiles, percentile rank, percentage score, grade point averages, z-scores; and Frame of reference for interpretation of assessment data: norm-referenced, criterion-referenced and self-referenced ie., relative and absolute interpretation;

- 4.6 Reporting Student Performance – content and formats; Progress reports, Cumulative records, Profiles, and Open house; Using feedback for reporting to different stakeholders – students, parents, and administrators
- 4.7 Use of Feedback for teachers' self-improvement and curriculum revision

Unit-5: Issues, Concerns and Trends in Assessment and Evaluation

- 5.1** Existing Practices: Class/Unit tests, half- yearly and annual examinations, Board examinations and Entrance tests, State and National achievement surveys; Management of assessment and examinations; Use of question bank
- 5.2** Issues and Problems: Marking Vs Grading, Non-detention policy, Objectivity Vs Subjectivity; Impact of entrance test and public examination on teaching and learning – the menace of coaching.
- 5.3** Trends in assessment and evaluation: Online examination, Computer-based examination and other technology based examinations
Standards- based assessment – international practices

Activities

1. Plan and construct an achievement test in one of the methodology subjects
2. Survey the assessment practices followed in different schools – Zilla Parishad/ Government, Private and a Residential and prepare a report
3. Prepare a report by undertaking question paper analysis of two school subjects (Public Examinations of Previous Years)
4. Administer an intelligence test on students of any class and interpret the results
5. Conduct a survey to find out occupational choices of 9th Class students and prepare a report

Text Books

- Bransford, J., Brown, A.L., & Cocking, R.R. (Eds.) (2000). How people learn: Brain, mind, experience, and school. Washington, DC: National Academy Press.
- Burke, K. (2005). How to assess authentic learning (4th Ed.). Thousand Oaks, CA: Corwin.
- Burke, K., Fogarty, R., & Belgrad, S (2002). The portfolio connection: Student work linked to standards (2nd Ed.) Thousand Oaks, CA: Corwin.
- Carr, J.F., & Harris, D.E. (2001). Succeeding with standards: Linking curriculum, assessment, and action planning. Alexandria, VA: Association for Supervision and Curriculum Development.
- Danielson, C. (2002). Enhancing student achievement: A framework for school improvement. Alexandria, VA: Association for Supervision and Curriculum Development.
- Gentile, J.R. & Lalley, J.P. (2003). Standards and mastery learning: Aligning teaching and assessment so all children can learn. Thousand Oaks, CA: Corwin.

Reference Books

- Guskey, T.R., & Bailey, J.M. (2001). Developing grading and reporting systems for student learning. Thousand Oaks, CA. Corwin.
- McMillan, J. (2013). Classroom Assessment: Principles and Practice for Effective Standards-Based Instruction, 6th ed. Boston, MA: Pearson
- Natrajan V.and Kulshreshtha SP(1983). Assessing non-Scholastic Aspects-Learners Behaviour, New Dlehi: Association of Indian Universities.
- NCERT(1985). Curriculum and Evaluation, New Delhi: NCERT
- Newman, F.M. (1996). Authentic achievement: Restructuring schools for intellectual quality. San Francisco, CA: Jossey-Bass.
- Nitko, A.J. (2001). Educational assessment of students (3rd ed.). Upper Saddle River, NJ: Prentice Hall.
- Norris N. (1990) Understanding Educational Evaluation, Kogan Page Ltd.
- Parker Boudett, K., et. al. (2013). Data Wise: A Step-by-Step Guide to Using Assessment Results to Improve Teaching and Learning, Revised and Expanded Edition. Cambridge, MA: Harvard Education Press.

Course-XIII UNDERSTANDING THE SELF

Objectives

After completion of the course, the student-teacher will be able to

1. understand that any Self is a human resource to exercise all the resources: cognitive, affective and psychomotor resources.
2. make them realize that the Self does not have independent existence but related to Nature, other selves and the ‘Unknown’ causing it and this great design of the Universe.
3. make the student-teacher perform one’s function to the possible extent as any part of the Nature is silently doing so; thereby developing self-actualization and self-esteem.
4. realize that one is responsible as a person and as a teacher for the integrated development of oneself and one’s pupils: Physical, cognitive, social, emotional, aesthetic, moral, and spiritual developments.
5. realize the commonness and uniqueness prevalent in Nature and human nature and feel equality as the reality and contribute to the furtherance of evolution at mental level.

Purpose of the Course

It aims at student-teachers’ understanding of themselves as person and teacher through conscious ongoing reflection. This course is intended *to transact through a workshop mode* by more than one teacher educator / resource person. The resource persons can be identified from those who have philosophical outlook, psychological orientation and social consciousness. It enables to develop sensibilities, dispositions, values and skills that facilitate personal growth in relation to different identities and professional identity as a teacher. The core life skills are to be developed with relevant exercises. It may use yoga, meditation, case studies, biographies, and stories of children like Prahlada, Dhruva, Markandeya, etc. and the holistically developed people. Its expected outcome is to promote self-actualization and also healthy, happy and peaceful coexistence wherever they are as a being, a citizen and as a global citizen.

Course Content

Unit-1: Self as a human resource:

- 1.1 Cognitive resources of the self: Self-critical awareness about one’s abilities and opportunities to develop independent thinking-critical thinking and creative thinking, decision making and problem solving and develop them as skills.
- 1.2 Affective resources: Feelings of love, joy, appreciation; emotions like fear, anger, jealousy, affection, happiness to be understood both as assets and threats or limiting factors.

1.3 Sensitize the ability to identify the structural and functional commonality of the human body except the organs of reproduction and allied features of the human kind.

1.4 Empathic understanding of geographical, climatic and genetic conditions causing physical differences.

Unit-2: Self in relation to social identities:

2.1 Self-critical awareness of the causes for one's positive and negative relations with the people based on caste, class, language, religion, nation, region etc.,

2.2 Self-critical understanding of the basic realities of the man-made divisions over the time-scale.

2.3 Critical understanding of the Nature's necessity of gender difference for the onset and continuity of human race.

2.4 Critical understanding of the basic realities of cultural differences across the time-scale and across the globe.

Unit-3: Self (person) as a part of the Nature:

3.1 Nature, harmony in existence and co-existence

3.2 Dependence of Self on the Nature for the very life; dependence of self on other selves for comfortable living.

3.3 Responsibility of self towards conservation, protection and enrichment of plant and animal life.

3.4 Responsibility of self towards other human beings in the family, society, and people across the globe.

Unit-4: Self in relation to profession:

4.1 Self-critical awareness of teaching competency: adequacy of subject matter knowledge, professional skills, and effective communication to the students.

4.2 Self-critical awareness of one's attitudes towards students, teaching, teaching material, interest in students and subject and one's aptitude in the inculcation of interest in students and in tapping their abilities to realize the values identified in the lesson.

4.3 Self-critical awareness of suitability of one's role being performed contextually to enrich learners' capabilities and guiding them for self-actualization while interacting.

4.4 Self-critical awareness of involvement in team work with colleagues, head of the institution parents of learners and management for the development of the learners.

Unit-5: Self- development through self-learning (Self-knowledge):

5.1 Development of self and social identities in the learners to enrich human resources and self-esteem; Realistic understanding of any self as depending on the source of the whole existence for spiritual awakening free of any religious identity.

5.2 Objective view of beliefs, prejudices and stereotypes to liberate from irrational tendencies.

5.3 Understanding human roots in animal and possibility of heights in the divinity through the philosophers like Swamy Vivekananda, Sri Aurobindo and J. Krishnamurti to awaken oneself to Truth, beauty and goodness both inside and outside.

5.4 Yogic practices for physical, mental and spiritual health and to lay the seeds or foundations for Self-realization.

Activities

During the transaction of this course, through workshop mode, student teachers will be asked to come out with the following documents. Student teachers are required to submit only five documents, one from each unit. These documents will be assessed by a minimum of two faculty members to award 25 marks for activities.

1. Self-critical awareness about one's abilities and assets in different contexts of life and limitations in terms of knowledge, attitudes, skills and values which may be revised or developed.
2. Activities that develop cognitive skills-independent thinking to promote critical thinking and creative thinking; decision making and problem solving with all their components.
3. Visits to the slums and natural calamities and stories of different children to tap empathy which is inherent.
4. Group discussion on the current issues to develop psycho-social skills like interpersonal relationship skills and effective communication skills.
5. Introducing yoga exercises to be done with ease and meditation which starts with self-knowledge with let come and let go spirit to experience spells of silence for healthy body and mind and to awaken the hidden faculties.
6. Exercises to have inner observation for self knowing while in stress or in emotions and to develop skills of self management.
7. Use of brain storming, value clarification and group discussion techniques to arrive at the realities free of habitual modes of thoughts, attitudes and action tendencies.
8. Encouraging Nature observation, inner observation, nature walks, and reading biographies of great people who contributed their might out of self-abnegation but not with self-centeredness and sharing personal experiences.

Reference Books

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Course-XIV
CONTEMPORARY INDIA AND EDUCATION

Objectives

After completion of the course, the student-teacher will be able to

1. Understand and Contextualize ideals of the Constitution of India;
2. Appreciate humanistic agenda of the Constitution on India;
3. Value and recognize the role of education in realizing the ideals of the Constitution;
4. Develop critical awareness about the issues of education that are coming in the way of realization of the values of the Constitution;
5. Understanding and develop positive attitudes towards various forms of exclusion;
6. Appreciate the need for education for Peace;
7. Reflects on the issues of secondary school stage education/

Course Content

Unit-1 Normative Vision of Indian Education: Indian Constitution

- 1.1 Constitution of India Basic Features
 - i. Fundamental Rights
 - ii. Directive principles of state policy
 - iii. Federal Structure
- 1.2 Preamble of the Constitution : The ideals
 - i. Sovereign Nation
 - ii. Democratic and Secular polity
 - iii. Liberty equality and fraternity
 - iv. Justice : Social, Economic and political

Unit- 2 Education as Fundamental Right

- 2.1 Human Rights; Meaning Nature , and Classification;
- 2.2 Right of Children : International convention and Indian Constitution; Education as Fundamental Right of Children-2009
- 2.3 Issues in Implementing RTE-2009: A critical understanding
 - i. Issues that affect and negate the children's right to education (Child Labor: Street children, abandoned and orphans)
 - ii. Differently abled children: Attitude towards the girl child and her participation in schooling, punishment, abuse and violence in Schools).

Unit-3 Contemporary Indian Schooling: Concerns and Issues

- 3.1 Equality of Educational Opportunity : Meaning and nature : Forms of inequality : Religion, Regional, Caste, Gender and other marginalized groups.
- 3.2 Inequality in Schooling: Public – Private schools , Rural – urban schools, Mass-elite schools , single teacher schools and many other forms of in-equal school systems. Critical understanding of Paradox of Equal opportunity and in-equal schooling: positive discrimination ; concept and issues and policy interventions.

3.3 Schooling: Quality concerns and issues

- i. Universal access
- ii. Universal Enrollment
- iii. Universal retention
- iv. Universal success

Unit-4 Understanding Exclusion in schooling

- 4.1 Exclusion: Meaning and Nature
- 4.2 Forms of Exclusion: a) physical / Psychological Exclusion
- 4.3 Different types of differently abled children: Nature of problems and their impact on learning
- 4.4 Measure to address the issue of learning of differently abled children and professional preparedness of Institutions;
- 4.5 Socio-cultural and economic exclusion: Understanding different forms of socio-culture and economic exclusion in schooling – Caste, Class, Gender, Minority, and other Marginalized sections of the society.

Unit- 5 Secondary Education: Concerns and Issues

- 5.1 Secondary School stage: its linkages with primary and higher secondary stages of education;
- 5.2 Aims of Secondary School Stages of Education
- 5.3 Universalisation of Secondary School stages of Education: Its Status
 - i. Quantitative expansion , Qualitative consolidation and Equity perspective – A sociological understanding;
 - ii. Issues in Secondary school stages of Education :Privatization, Vocationalization
 - iii. Reforms in Secondary School Stages Education: Curricular , Pedagogical and Examinations;
- 5.4 Rashtriya Madhyamika Shiksha Abhiyan (RMSA): Goals and policy intervention for Quality Secondary School Stages of Education

Activities

1. A Critical Study with the help of Survey and Observation of alternative schools - Night schools, Mobile schools, Child labor Schools and prepare a report
2. Conduct a Survey of schools of different quality in different milieu and make a presentation
3. A critical review of school textbooks based on socio-cultural and economic exclusion
4. Conduct a survey on street children / orphan children and make a presentation
5. Conduct a survey (a minimum of 10 schools) and critically analyze the RMSA intervention for enhancing the quality of secondary education and prepare a report

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**Course-XV
GENDER, SCHOOL AND SOCIETY**

Objectives

After completion of the course, the student-teacher will be able to

1. understand the gender related issues
2. develop sociological perspectives about the impact of culture. Tradition, Socialization, division of labour on gender aspects
3. create an awareness about the impact of gender on Education
4. understand the dynamics of gender perspectives and sensitization
5. create the knowledge regarding equality and its relationship to women education
6. know hindrances in achieving cent % literacy, continuing education, course preferences etc
7. provide the knowledge about legal provisions related to Women's Rights and Education
8. know the Trends in girls Education and Women empowerment
9. know Benefits of Women / Girls Education
10. estimate the level of change in the Status.

Course Content

Unit-1: Basics of Gender

- 1.1 Concept, Meaning, Scope of gender,
- 1.2 The difference between sex and Gender - Gender discrimination
- 1.3 The characteristics of patriarchal system and its impact on Women's status
- 1.4 The need and importance of Women's Education – its benefits

Unit-2: Factors affecting gender Discrimination

- 2.1 Factors influencing gender differences and practices- inequality in ratio, female infanticide, feticide, crime, violence.
- 2.2 Religious, Physical, Sociological, Economic, Political, Legal, employment, Psychological etc .
- 2.3 Sociolisation process and its impact on decision making Women / Girls Education
- 2.4 Rural / Urban /Tribal Societies in relation to girls Education
- 2.5 Women and Girls status at present in our Society

Unit-3: Historical Perspectives and changing status of Women

- 3.1 Epic . Vedic age – Kaikeyi, Sathyabhama, Gargi, Maitreyi, Lopamudra etc.
- 3.2 Medieval age – Rami Lakshmi Bai, Chennamma, Rudramadevi.
- 3.3 British Age – Victoria, Elizebeth, Noorjahan
- 3.4 Present Age – Indira Gandhi, Sushma Swaraj, Bandaranayake, Kiranbedi, Kalpana Chawala, Prathibapatil, Meerakumar.

Unit-4: Legal issues of Gender

- 4.1 Women's Rights
- 4.2 Legal Provisions
- 4.3 Equality of Sexes
- 4.4 Education and division of Labour – Home, School, Society, work place

Unit-5: Gender and Education

- 5.1 Educational provisions specially meant for girls Education
- 5.2 Emerging trends in the field of girls Education – Reservations
- 5.3 Gender as an influencing factor in course choices
- 5.4 Women empowerment through girls education – its need – National Development

Activities

1. Community survey – Literacy rate among boys and girls – Access, Continuity, dropout, entry, pass percentage, child marriages, child labour, etc. and prepare a report
2. Visit a Co-Education high school and Girls High School and prepare a report on the facilities to girl students and women teachers.
3. Basing on 2011 census reports find out the sex ratio and educational status of different age groups in your mandal and report
4. Study of Self Help and Self Employment groups and Economic empowerment of women in these groups – A Report (Select a five groups)
5. Text Book Analysis and gender equity – A report.

Reference Books

- Purba Das,, Sociological Foundations of Education Authors Press. Lakshmi Nagar, Delhi, Rs.600
- Adelson Rachel K Daring – DO for Digital Daughters, Association for Women in computing – Live wire Communications (1996)
- Currid Cheryl” Bridging the gender gap” information work, (1996)
- Klein, Reva “ Girls friendly”, Times Educational supplement (1991)
- Koch, Melissa” Opening up Technology to both genders” Education Digest Vil.601 n3, (1994)
- Lehmann – Haupt, Rachel “ Girls Schools seeks to overcome Tech gender gap” wired News (1997)
- United Nations children’s fund” Focus on Girls Education Needed to Break Apartheid of Gender, Unicef Press release (1995)

Course-XVI INCLUSIVE EDUCATION

Objectives

After completion of the course, the student-teacher will be able to

1. Acquire knowledge about the concept of inclusive education for different types of special needs children.
2. Able to identify the different types of special needs children and their characteristics.
3. Develop understanding in identification and assessment of children with special needs.
4. Critically evaluate the policy perspectives emerged at national and international levels for empowering children with special needs.
5. To develop the required skills for teaching children with special needs in regular schools.
6. To develop adequate competencies in building barrier free environments within and outside the schools to facilitate learning in children with special needs.

Course Content

Unit-1: Concept of Inclusive Education

- 1.1 Inclusive Education – concept, meaning, definition and importance.
- 1.2 Concept of Impairment, Disability and Handicap
- 1.3 Concept of Special Education, Integrated Education, Mainstreaming and Inclusive Education
- 1.4 Need for Inclusive Education in India for children with special needs.

Unit-2: Types and Characteristics of Children with Special Needs

- 2.1 Concept, types and characteristics of different types of children with special learning needs:
- 2.2 Children with Physical challenges– Visual, Hearing, Loco-motor and Neurological.
- 2.3 Children with Intellectual challenges – Gifted, Mentally Challenged, Autism (ASD) and Learning Difficulties (LD).
- 2.4 Children with Emotional and Behavioral deviations with special reference to ADHD and Juvenile Delinquency.
- 2.5 Children with Socio- cultural deviations (SC, ST, Minorities) and Linguistic Minorities.

Unit-3: Identification, Assessment and Educational Provisions

- 3.1 Identification, assessment and education of Children with physical challenges – Visual, Hearing, Loco-motor and Neurological.
- 3.2 Identification, assessment and education of Children with Intellectual challenges – Gifted, Mentally Challenged, Autism, Learning Difficulties (LD).

- 3.3 Identification, assessment and education of Children with Emotional and Behavioral deviations with special reference to ADHD and Juvenile Delinquency.
- 3.4 Identification, assessment and education of Children with Socio- cultural deviations and Linguistic minorities.
- 3.5 Challenges and prospects in Identification and assessment of children in inclusive education.

Unit-4: Policy Perspectives for Children with Special Needs

- 4.1 International Legislations –Salmanca Declaration, UNESCAP, UNCRPD
- 4.2 National Legislations – NPE-1986, PoA-1992, RCI Act-1992, PWD Act-1995 with latest amendments , National Trust Act-1999, RTE Act-2009
- 4.3 Government schemes and provisions – SSA, RMSA with special reference to the provisions and activities aimed at meeting the needs of children with special learning needs.

Unit-5: Educating Children in Inclusive Classrooms

- 5.1 Need for creation of physical, psychological, sociological barriers free environment within and outside the classroom
- 5.2 Assistive devices and technologies required for education of children with special needs in inclusive classroom
- 5.3 Need for parent and community involvement to promote positive behaviours and social competence in children with special learning needs
- 5.4 Need for multi-disciplinary approach to address the educational needs of children with special learning needs
- 5.5 Challenges and prospects in providing education in inclusive classrooms.

Activities

1. Prepare case studies of two differently abled children (with different disabilities)
2. Observation of five class room teaching periods in each of special schools and inclusive schools and prepare a report highlighting the teaching strategies implemented by the teachers
3. Form a small group of 5-6 student teachers and conduct an awareness camp in any village/ward on causes, prevention and referral services available for differently abled children and prepare a report
4. Visit any one NGO offering vocational training for special children and prepare a report
5. Critically analyse the needs, strengths and issues of differently abled children – mentally, visually and hearing challenged

Reference Books

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Course-XVII ENVIRONMENTAL EDUCATION

Objectives

After completion of the course, the student-teacher will be able to

1. recognizes the concept and importance and participate in various activities of swatch bharath
2. recognizes the need and importance of environmental education.
3. identify the factor responsible for environmental degradation and environmental pollution
4. develop strategies to curb out environmental degradation in their house and locality.
5. recognizes the role of government and non government agencies in reducing the environmental issues faced by mankind.
6. appreciate the strategies taken up for sustainable development.
7. recognize the role of the teacher in a school in promoting the environmental awareness among the children.
8. develop strategies to sensitize the students regarding the environmental problems faced in the country.

Course Content

Unit-1: Swatch Bharath- an Environmental Awakening

- 1.1 Meaning, concept, definition of Swatch Bharath
- 1.2 Evolution of the concept of Swatch Bharath, objectives, its campaign and execution.
- 1.3 Integration of Swatch Bharath campaign with educational institutions
- 1.4 Strategies to implement the Swatch Bharath campaign in schools and other educational institutions.

Unit-2: Objectives, Scope and Nature of Environmental Education

- 2.1 Meaning, importance, definition, characteristics and objectives of environmental education
- 2.2 Importance, objectives, scope and guiding principles of environmental education.
- 2.3 Factors of degradation of environment – adverse socio –economic impacts of degradation of environment.
- 2.4 Types of pollution: Land, Air, Water, Noise, and Radiation
- 2.5 Green house effect - Ozone layer depletion.
- 2.6 Importance of need and scope of environmental conservation and regeneration.
- 2.7 Impact of industry/mining/transport on environment

Unit-3: Environmental Management and Protection

- 3.1 Need for environmental management – functions and characteristics of environmental management
- 3.2 Dimensions of environmental management. Factors responsible for flora and fauna extinction
- 3.3 Measures to conserve flora and fauna.- causes for forest fire- measures of prevention

- 3.4 Major environmental problems in India – Environmental protection and policies in India
- 3.5 Need and objectives of conservation – Environmental conservation measures taken in India, waste management, alternative sources of energy, organic farming, rain water harvesting, community participation in nature resource management, water and forests.
- 3.6 Constitutional amendments made and Environmental laws,

Unit-4: Environmental Movements and Developments

- 4.1 Environmental movements in India: Silent Valley movement, Chipko movement, Narmada Bachao, Andolan, National Test Range at Balipal, Orissa.
- 4.2 Conditions for achieving the goals of sustainable development
- 4.3 Strategies for sustainable development in India.
- 4.4 The Stockholm conference 1972 – Brundtland commission 1983 – Nairobi conference 1982 – The Rio Summit 1992
- 4.5 The Rio Declaration at the earth charter – Major achievements of the Rio Summit – Main features of the Rio Declaration
- 4.6 Kyoto conference and part on Global Warming 1997.

Unit-5: Environmental Education in the School Curriculum and Means to Sensitize the Students

- 5.1 Environmental education at Primary, Secondary and Higher Education level
- 5.2 Major constraints for its implementation at these levels.
- 5.3 Teacher's role – national resource center for environmental education.
- 5.4 Characteristics of good teaching method.
- 5.5 Seminar, Workshop, Problem-solving, Field trips and Surveys, Projects, Exhibition and other methods.
- 5.6 Relative efficiency of teaching methods, Role of IT and media in environment and human health.

Activities

1. Make a survey of your area and document all the environmental problems found along with photographs
2. Conduct a survey of five high schools and describe the steps to be taken to enhance the environment and make the institutions Swatch.
3. Organize a Rally in a school where you attend Internship on Swatch Bharath and Importance of Environment (The World Environment Day is 5th June) and report
4. Conduct elocution and essay writing competitions for students on environmental issues and report

Text Books

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