

BAL BHARATI PUBLIC SCHOOL, NTPC SIPAT

Syllabus Plan for the Session 2023-24

CLASS XI

Subject- ENGLISH CORE(Code-301)

LEARNING OBJECTIVES

Through the study of English, the students will:

1. Gain an introductory knowledge of some of the issues explored in influential works of the English-language tradition, and of some of the stylistic strategies writers have used to explore those issues.
2. Read and interpret complex texts actively: recognize key passages; raise questions; appreciate complexity and ambiguity; comprehend the literal and figurative uses of language.
3. Practice writing as a process of motivated inquiry, engaging other writers' ideas through the use of quotations, paraphrase, allusions and summary.
4. Increase confidence in speaking publicly; articulate clear questions and ideas in class discussion; listen thoughtfully and respectfully to others' ideas; and prepare, organize, and deliver engaging oral presentations.
5. Attend to a wider range of voices within and across cultures.
6. Enjoy the experience of reading challenging literature: appreciate literature's ability to elicit feeling, cultivate the imagination, and call us to account as humans.

TEXT BOOKS

Main Textbook: HORNBILL

Supplementary Reader: SNAPSHOTS

SUGGESTED READINGS

Oxford Advanced Learner's Dictionary, Oxford Thesaurus, Longman Advanced Grammar

MONTH	WORKING DAYS	COURSE CONTENT
APRIL	20	READING- Unseen Passage WRITING & GRAMMAR- Classified Advertisement, Rearranging Words LITERATURE: HORNBILL: The Portrait of a Lady, A Photograph SNAPSHOTS: The Summer of the Beautiful Horse
JUNE	12	READING: Unseen passage WRITING & GRAMMAR: Poster, Gap Filling LITERATURE: HORNBILL: We're Not Afraid to Die.... , The laburnum top SNAPSHOTS: The Address
JULY	23	READING: Unseen passage (Note Making) WRITING & GRAMMAR: Classified Advertisement, Debate, Transformation of Sentences LITERATURE: HORNBILL: Discovering Tut, <i>The Voice of the Rain</i> SNAPSHOTS: <i>Mother's Day</i>
AUGUST	23	READING: Unseen passage WRITING & GRAMMAR: Poster Drafting, Rearranging words LITERATURE: HORNBILL: Adventure, <i>Childhood</i>

SEPTEMBER	21	REVISION
OCTOBER	18	READING: <i>Unseen Passage</i> WRITING & GRAMMAR: <i>Speech, Gap Filling</i> LITERATURE: <i>HORNBILL: Silk Road, Father to Son</i>
NOVEMBER	18	READING: Unseen passage (Note Making) WRITING & GRAMMAR: Debate, Transformation of sentences SNAPSHOTS: Birth
DECEMBER	18	READING: Unseen passage (Note Making) WRITING & GRAMMAR: Classified Advertisement SNAPSHOTS: The Tale of Melon City
JANUARY	23	REVISION FOR ANNUAL EXAM
FEBRUARY	23	REVISION FOR ANNUAL EXAM
SYLLABUS FOR EXAMS	Unit 1	Unseen Passage, Advertisement, The Portrait of a Lady, A Photograph, The Summer of the Beautiful Horse, The laburnum top, Rearranging of Sentence
	Half Yearly-Theory	All topics covered till August
	Half yearly-Practical/Project	Assessment of Speaking and Listening skill
	Unit II	Unseen Passage, Adventure, Childhood, Silk Road, Gap filling, Speech
	Unit III	Unseen Passage, Mother's Day, Father to Son, Birth, Debate, Rearranging of words
	Annual Examination-Theory	Complete Syllabus
	Annual Practical/Project	ASL and Group Project Portfolio on Socially relevant issues.

SUGGESTIONS TO PARENTS:

1. Encourage your child to read magazines and books in English
2. Engage your child in some writing tasks regularly (eg. writing emails/ letters/ creative writing)
3. Keep regular contact with the teacher to monitor your child's progress

SUBJECT : Mathematics(041)

LEARNING OBJECTIVES :

1. To enable the students to reinforce mathematical skills and reasoning through clear arguments.
2. To strengthen the concepts developed at the secondary stage to provide firm

RECOMMENDED BOOKS : MATHEMATICS- NCERT, Together with mathematics, R.D. SHARMA

MONTH	NO. OF WORKING DAYS	COURSE CONTENT
April	20	Chapter 1: Sets Chapter 2: Relations and Functions
June	12	Chapter 3: Trigonometric Functions
July	23	Trigonometric Function Continiue..... UT- 1 Chapter 7: Permutations and Combinations: Chapter 8 : Binomial Theorem
August	23	Chapter 5: Complex numbers and Quadratic Equations Chapter 6: Linear Inequalities. Chapter 4. Sequence and Series.
September	21	Revision For Half Yearly & Half Yearly Examination
October	18	9. Straight lines
November	18	UT-2 10. Conic Section
December	18	11. Limits and Derivatives UT- 3
January	23	12. Statistics and Probability. Revision For Annual Examination
February	23	Annual Examination 2024
SYLLABUS	I Unit Test	Chapter 1: Sets Chapter 2: Relations and Functions
	Half Yearly Examination -Theory	Chapter no. 1 to 8
	Half yearly – Practical/Project	5 Activities given in the NCERT Lab Manual. (From Chapter no. 1 to 8)
	II Unit Test	Chapter 9.: Straight Lines
	III Unit Test	Chapter 10: Conic Section Chapter 11. Limits and Derivatives
	Annual Examination-Theory	Entire Syllabus (Chapter no. 1 to 12)
	Annual Examination-Practical/Project	10 Activities given in the NCERT Lab Manual. (From Chapter no. 1 to 12)

Subject : Physics

LEARNING OUTCOME:

- 1.To develop reasoning abilities in a systematic manner,
2. To develop scientific thirst and attitude.
- 3.To enable students to be more creative and develop skills for solving scientific problem's.
- 4.To sharpen observations and inculcate the spirit of exploration.
- 5.To develop the ability to apply knowledge of science in day-to-day life,

RECOMMENDED BOOKS –

1. NCERT
2. S.L ARORA
3. PRADEEP

MONTH	WORKING DAYS	COURSE CONTENT
April	20	Chapter 1.Physical World Chapter–2: Units and Measurements
June	12	Chapter–3: Motion in a Straight Line
JULY	23	Chapter–4: Motion in a Plane Chapter–5: Laws of Motion
AUGUST	23	Chapter–6: Work, Energy and Power Chapter–7: System of Particles and Rotational Motion
SEPTEMBER	21	Chapter–8: Gravitation
OCTOBER	18	Chapter–9: Mechanical Properties of Solids Chapter–10: Mechanical Properties of Fluids
NOVEMBER	18	Chapter–11: Thermal Properties of Matter, Chapter–12: Thermodynamics Chapter–13: Kinetic Theory
DECEMBER	18	Chapter–14: Oscillations Chapter–15: Waves
JANUARY	23	Revision
FEBRUARY	23	Annual Exam
SYLLABUS FOR EXAMS	UT-1	Chapter-1 Chapter–2: Chapter–3
	Half Yearly Exam	Chapter-1 Chapter–2: Chapter–3 Chapter-4 Chapter–5 Chapter–6 Chapter-7 Chapter–8
	UT-2	Chapter-4 Chapter–5 Chapter–6

	Annual Exam	Whole syllabus
	Experiments	<p>1. To measure diameter of a small spherical/cylindrical body and to measure internal diameter and depth of a given beaker/ calorimeter using Vernier Calipers and hence find its volume.</p> <p>2. To measure diameter of a given wire and thickness of a given sheet using screw gauge.</p> <p>3. To determine volume of an irregular lamina using screw gauge.</p> <p>4. To determine radius of curvature of a given spherical surface by a speedometer.</p> <p>5. To find the weight of a given body using parallelogram law of vectors.</p> <p>6. Using a simple pendulum, plot its L-T² graph and use it to find the effective length of second's pendulum.</p> <p>7. To study variation of time period of a simple pendulum of a given length by taking bobs of same size but different masses and interpret the result.</p> <p>Activitie (Any two)</p> <p>1. To determine mass of a given body using a metre scale by principle of moments.</p> <p>2. To measure the force of limiting friction for rolling of a roller on a horizontal plane.</p> <p>3. To study the conservation of energy of a ball rolling down on an inclined plane (using a double inclined plane).</p> <p>. To study dissipation of energy of a simple pendulum by plotting a graph between square of</p>

Subject-Chemistry

LEARNING OBJECTIVES

1. To enhance scientific approach and attitude in students.
2. To grasp the concepts and ideas related to science.

RECOMMENDED BOOKS -1.Ncert Chemistry Vol.1 and 2

2.Refresher Chemistry Pradeep.

3.Sample paper Arihant or together with

4.Practical Manual Comprehensive.

MONTH	WORKING DAYS	COURSE CONTENT
April	20	Unit3-Classification of elements and Periodicity
June	12	Unit-1 Basic Concepts of Chemistry
JULY	23	Unit2-Structure of atom

		Unit-4 Chemical Bonding
AUGUST	23	Unit-5 Thermodynamics Unit6-Equilibrium
SEPTEMBER	21	Unit-7 Redox reaction
OCTOBER	18	Unit 8-Organic Chemistry basic concepts
NOVEMBER	18	Unit9-Hydrocarbons
DECEMBER	18	Revision
JANUARY	23	Revision
FEBRUARY	23	Exam
SYLLABUS FOR EXAMS	I UT	Unit 3 and 1
	Half Yearly theory	Unit 1,2 ,3 and 4
	Half Yearly Practical/Project	Prescribed by CBSE
	II UT	Unit 5 and 6
	III UT	Unit 7,8 and 9
	Annual Exam	All units from 1 to 9

Subject-Biology

LEARNING OBJECTIVES

- 1.To enhance scientific approach and attitude in students mind.
- 2.To grasp the concepts and ideas related to science.

RECOMMENDED BOOKS -

- 1.NCERT Biology
- 2.Veer Bala Rastogi.
- 3.NCERT Exemplar Biology
- 4.Practical Manual Comprehensive.

MONTH	WORKING DAYS	COURSE CONTENT
APRIL	20	Unit-I Diversity of Living Organisms Chapter-1: The Living World Biodiversity; Need for classification; three domains of life; taxonomy and systematics; concept of species and taxonomical hierarchy; binomial nomenclature Chapter-2: Biological Classification Five kingdom classification; Salient features and classification

		<p>of Monera, Protista and Fungi into major groups; Lichens, Viruses and Viroids.</p> <p>Chapter-3: Plant Kingdom Classification of plants into major groups; Salient and distinguishing features and a few examples of Algae, Bryophyta, Pteridophyta, Gymnospermae (Topics excluded – Angiosperms, Plant Life Cycle and Alternation of Generations)</p> <p>Chapter-4: Animal Kingdom Salient features and classification of animals, non-chordates up to phyla level and chordates up to class level (salient features and at a few examples of each category).</p>
JUNE	12	<p>Unit-II Structural Organization in Plants and Animals Chapter-5: Morphology of Flowering Plants Morphology of different parts of flowering plants: root, stem, leaf, inflorescence, flower, fruit and seed. Description of family Solanaceae</p>
JULY	23	<p>Unit-II Structural Organization in Plants and Animals Chapter-6: Anatomy of Flowering Plants Anatomy and functions of tissue systems in dicots and monocots.</p> <p>Chapter-7: Structural Organisation in Animals Morphology, Anatomy and functions of different systems (digestive, circulatory, respiratory, nervous and reproductive) of frog.</p> <p>Exam PT-I</p>
AUGUST	23	<p>Unit-III Cell: Structure and Function Chapter-8: Cell-The Unit of Life Cell theory and cell as the basic unit of life, structure of prokaryotic and eukaryotic cells; Plant cell and animal cell; cell envelope; cell membrane, cell wall; cell organelles - structure and function; endomembrane system, endoplasmic reticulum, golgi bodies, lysosomes, vacuoles, mitochondria, ribosomes, plastids, microbodies; cytoskeleton, cilia, flagella, centrioles (ultrastructure and function); nucleus. 3</p> <p>Chapter-9: Biomolecules Chemical constituents of living cells: biomolecules, structure and function of proteins, carbohydrates, lipids, and nucleic acids; Enzyme - types, properties, enzyme action. (Topics excluded: Nature of Bond Linking Monomers in a Polymer, Dynamic State of Body Constituents – Concept of Metabolism, Metabolic Basis of Living, The Living State)</p> <p>Chapter-10: Cell Cycle and Cell Division Cell cycle, mitosis, meiosis and their significance</p>
SEPTEMBER	21	Exam PT-II
OCTOBER	18	Unit-IV Plant Physiology Chapter-13: Photosynthesis in

		<p>Higher Plants Photosynthesis as a means of autotrophic nutrition; site of photosynthesis, pigments involved in photosynthesis (elementary idea); photochemical and biosynthetic phases of photosynthesis; cyclic and non-cyclic photophosphorylation; chemiosmotic hypothesis; photorespiration; C3 and C4 pathways; factors affecting photosynthesis.</p> <p>Chapter-14: Respiration in Plants Exchange of gases; cellular respiration - glycolysis, fermentation (anaerobic), TCA cycle and electron transport system (aerobic); energy relations - number of ATP molecules generated; amphibolic pathways; respiratory quotient.</p> <p>Chapter-15: Plant - Growth and Development Seed germination; phases of plant growth and plant growth rate; conditions of growth; differentiation, dedifferentiation and redifferentiation; sequence of developmental processes in a plant cell; plant growth regulators - auxin, gibberellin, cytokinin, ethylene, ABA.</p>
NOVEMBER	18	<p>Unit-V Human Physiology Chapter-17: Breathing and Exchange of Gases Respiratory organs in animals (recall only); Respiratory system in humans; mechanism of breathing and its regulation in humans - exchange of gases, transport of gases and regulation of respiration, respiratory volume; disorders related to respiration - asthma, emphysema, occupational respiratory disorders.</p> <p>Chapter-18: Body Fluids and Circulation Composition of blood, blood groups, coagulation of blood; composition of lymph and its function; human circulatory system - Structure of human heart and blood vessels; cardiac cycle, cardiac output, ECG; double circulation; regulation of cardiac activity; disorders of circulatory system - hypertension, coronary artery disease, angina pectoris, heart failure. 4</p> <p>Chapter-19: Excretory Products and their Elimination Modes of excretion - ammonotelism, ureotelism, uricotelism; human excretory system – structure and function; urine formation, osmoregulation; regulation of kidney function - renin - angiotensin, atrial natriuretic factor, ADH and diabetes insipidus; role of other organs in excretion; disorders - uremia, renal failure, renal calculi, nephritis; dialysis and artificial kidney, kidney transplant.</p>
DECEMBER	18	<p>Unit-V Human Physiology Chapter-20: Locomotion and Movement Types of movement - ciliary, flagellar, muscular; skeletal muscle, contractile proteins and muscle contraction; skeletal system and its functions; joints; disorders of muscular and skeletal systems - myasthenia gravis, tetany, muscular dystrophy, arthritis, osteoporosis, gout.</p>

		<p>Chapter-21: Neural Control and Coordination Neuron and nerves; Nervous system in humans - central nervous system; peripheral nervous system and visceral nervous system; generation and conduction of nerve impulse</p> <p>Chapter-22: Chemical Coordination and Integration Endocrine glands and hormones; human endocrine system - hypothalamus, pituitary, pineal, thyroid, parathyroid, adrenal, pancreas, gonads; mechanism of hormone action (elementary idea); role of hormones as messengers and regulators, hypo - and hyperactivity and related disorders; dwarfism, acromegaly, cretinism, goiter, exophthalmic goitre, diabetes, Addison's disease.</p> <p>Note: Diseases related to all the human physiological systems to be taught in brief.</p>
JANUARY	23	Exam PT-III
FEBRUARY	23	<p>Revision and practical</p> <p>A: List of Experiments</p> <ol style="list-style-type: none"> 1. Study and describe locally available common flowering plants, from family Solanaceae (Poaceae, Asteraceae or Brassicaceae can be substituted in case of particular geographical location) including dissection and display of floral whorls, anther and ovary to show number of chambers (floral formulae and floral diagrams), type of root (tap and adventitious); type of stem (herbaceous and woody); leaf (arrangement, shape, venation, simple and compound). 2. Preparation and study of T.S. of dicot and monocot roots and stems (primary). 3. Study of osmosis by potato osmometer. 4. Study of plasmolysis in epidermal peels (e.g. Rhoec/lily leaves or flashy scale leaves of onion bulb). 5. Study of distribution of stomata on the upper and lower surfaces of leaves. 6. Comparative study of the rates of transpiration in the upper and lower surfaces of leaves. 7. Test for the presence of sugar, starch, proteins and fats in suitable plant and animal materials. 8. Separation of plant pigments through paper chromatography. 9. Study of the rate of respiration in flower buds/leaf tissue and germinating seeds. 10. Test for presence of urea in urine. 11. Test for presence of sugar in urine. 12. Test for presence of albumin in urine. 13. Test for presence of bile salts in urine. <p>B. Study and Observe the following (spotting):</p> <ol style="list-style-type: none"> 1. Parts of a compound microscope.

		<p>2. Specimens/slides/models and identification with reasons - Bacteria, <i>Oscillatoria</i>, <i>Spirogyra</i>, <i>Rhizopus</i>, mushroom, yeast, liverwort, moss, fern, pine, one monocotyledonous plant, one dicotyledonous plant and one lichen.</p> <p>3. Virtual specimens/slides/models and identifying features of - <i>Amoeba</i>, <i>Hydra</i>, liverfluke, <i>Ascaris</i>, leech, earthworm, prawn, silkworm, honey bee, snail, starfish, shark, rohu, frog, lizard, pigeon and rabbit.</p> <p>4. Mitosis in onion root tip cells and animals cells (grasshopper)</p> <p>5. Different types of inflorescence (cymose and racemose).</p> <p>6. Human skeleton and different types of joints with the help of virtual images/models only.</p>
SYLLABUS FOR EXAMS	UT-I	Chapter 1 to 7
	Half Yearly Theory and Project	Chapter 5,6,7,8.9 & 10.
	UT-III	Chapter 13 to 17
	Annual Exam	Chapter 1 to 22.

SUBJECT- Computer Science

LEARNING OBJECTIVES-

Students should be able to:

- Develop basic computational thinking
- Explain and use data types
- Appreciate the notion of algorithms
- Develop a basic understanding of computer systems- architecture, operating system, and cloud computing
- Explain cyber ethics, cyber safety, and cybercrime
- Understand the value of technology in societies along with consideration of gender and disability issues.

RECOMMENDED BOOKS -

Computer Science with Python TextBook for Class XI

Author:- Sumita Arora

MONTH	NO. OF WORKING DAYS	COURSE CONTENT
April	20	Ch 6- Getting Started with Python

June	12	Ch 7- Python Fundamentals
July	23	Ch 8- Data Handling
August	23	Ch 1- Computer System Overview Ch 5- introduction to Problem Solving
September	21	Revision of syllabus for Half yearly exam
October	18	Ch 9- Flow of Control Ch 10- String Manipulation Ch 11- List Manipulation
November	18	Ch 12- Tuple Ch 13- Dictionaries Ch 3- Boolean Logic
December	18	Ch-15 Cyber Safety Ch-16 Online Access and Computer Security Ch-17 Society Law and Ethics
January	23	Ch 2- Data Representation Ch 3- Boolean Logic
February	23	Revision of entire syllabus
SYLLABUS	I Unit Test	Ch 6- Getting Started with Python Ch 7- Python Fundamentals
	Half Yearly Examination - Theory	Ch 1- Computer System Overview Ch 5- introduction to Problem Solving Ch 6- Getting Started with Python Ch 7- Python Fundamentals Ch 8- Data Handling
	Half yearly – Practical/Project	Python program (60% logic + 20% documentation + 20% code quality) Report file: Minimum 10 Python programs- Viva voce
	II Unit Test	Ch 9- Flow of Control Ch 10- String Manipulation
	III Unit Test	Ch 11- List Manipulation Ch 12- Tuple Ch 13- Dictionaries
	Annual Examination- Theory	Entire Syllabus

	Annual Examination- Practical/Project	Python program (60% logic + 20% documentation + 20% code quality) Report file: Minimum 20 Python programs- Viva voce
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Sub. – Physical Education

LEARNING OBJECTIVES-1. Understanding some basic physical education concepts and development of physical fitness.

2. Realising of learner's role in Nation building and sensitivity to the health issues that the nation is facing today.

3. Applied physical education is to develop a comprehensive outlook of an individual with strong civic position, moral qualities and sports in daily life to present his or her own health.

RECOMMENDED BOOKS –Health and Physical Education (Vishvas Publications)

MONTH	NO. OF WORKING DAYS	COURSE CONTENT
April	20	UNIT-1 Changing trends and career in physical education
June	12	UNIT-2 Olympism value education
July	23	UNIT-3 Yoga UNIT-4 Physical education and sports for CWSN
August	23	UNIT-5 Physical fitness wellness and lifestyle UNIT-6 Test measurement and evaluation
September	21	Revision for Half Yearly examination
October	18	UNIT-7 Fundamentals of Anatomy, Physiology in Sports UNIT-8 Fundamentals of Kinesiology and Biomechanics in Sports.
November	18	UNIT-9 Psychology and sports
December	18	UNIT-10 Training and Doping in Sports
January	23	
February	23	

SYLLABUS	I Unit Test	UNIT-1,2
	Half yearly - Theory	UNIT-1,2,3,4,5
	Half yearly -Practical/Project	SAI KHELO INDIA
	II Unit Test	UNIT-6,7
	III Unit Test	UNIT-8,9
	Annual Exam	WHOLE COURSE
	Annual -Practical/Project	SAI KHELO INDIA