BLOOM PUBLIC SCHOOL
C-8 Vasant Kunj New Delhi
SYLLABUS FOR THE SESSION 2023-24

Class: XII
Subject: Biology

MONTH	CHAPTERS (NCERT TEXT BOOK)	CONTENT
April	Ch. 1: - Sexual Reproduction in Flowering Plants	Flower structure; development of male and female gametophytes; pollination - types, agencies and examples; out breeding devices; pollen-pistil interaction; double fertilization; post fertilization events - development of endosperm and embryo, development of seed and formation of fruit; special modes- apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.
	Human Reproduction	Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle;fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).
May	Ch.2: Human Reproduction	Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis - spermatogenesis and oogenesis; menstrual cycle;fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).
	Ch. 4: Reproductive health.	Need for reproductive health and prevention of Sexually Transmitted Diseases (STDs); birth control - need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies - IVF, ZIFT, GIFT (elementary idea for general awareness

July	Ch. 5: - Principles of inheritance and variation	Heredity and variation: Mendelian inheritance; deviations from Mendelism – incomplete dominance, co-dominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination - in humans, birds and honey bee; linkage and crossing over; sex linked inheritance - haemophilia, colour blindness; Mendelian disorders in humans - thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.
	Ch. 6: -Molecular Basis of Inheritance	Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central Dogma; transcription, genetic code, translation; gene 8 expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting
	Chapter-7: Evolution	Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, embryology and molecular evidences);Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution - variation (mutation and recombination) and natural selection with examples,types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; adaptive radiation; human evolution.
	Ch 8:- Human health & Diseases	Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse

August	Ch 8:- Human health & Diseases (Cont')	Pathogens; parasites causing human diseases (malaria, dengue, chikungunya, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse
	Ch.10: - Microbes in human welfare	Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.
	Ch. 11: - Biotechnology: Principles & Processes	Genetic Engineering (Recombinant DNA Technology).
	Ch.12: -Biotechnology& its Application	Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents
September	Ch.12: -Biotechnology& its Application	Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, biopiracy and patents.
	Ch. 13: - Organisms and Population	Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.

October	Chapter-14: Ecosystem Chapter 15: Biodiversity & conservation.	Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy Biodiversity-Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.
November	Preboard Exam/ Revision	-
December	Preboard Exam/ Revision	-
January	Board Practical	-
February	Board Practical/ CBSE Board Exam	-
March	CBSE Board Exam	-

ASSESSMENT SYLLABUS	
PERIODIC ASSESSMENT -1	Chapter 2: Sexual Reproduction in floweringPlants. Chapter 3: Human Reproduction
PERIODIC ASSESSMENT -2	Chapter 4: Reproductive health. Chapter 5: Principles of inheritance and variation Chapter 6: Molecular Basis of Inheritance
MID TERM EXAM	Chapter 2: Sexual Reproduction in floweringPlants. Chapter 3: Human Reproduction Chapter 4: Reproductive health. Chapter 5: Principles of inheritance and variation Chapter 6: Molecular Basis of Inheritance Chapter-7: Evolution
PRE BOARD 1 EXAM	Chapter 2: Sexual Reproduction in floweringPlants. Chapter 3: Human Reproduction Chapter 4: Reproductive health. Chapter 5: Principles of inheritance and variation Chapter 6: Molecular Basis of Inheritance Chapter-7: Evolution Chapter 8: Human health & Diseases Chapter 10: Microbes in human welfare Chapter 11: Biotechnology: Principles & Processes
PRE BOARD II EXAM	Chapter 2: Sexual Reproduction in floweringPlants. Chapter 3: Human Reproduction Chapter 4: Reproductive health. Chapter 5: Principles of inheritance and variation Chapter 6: Molecular Basis of Inheritance Chapter-7: Evolution Chapter 8: Human health & Diseases Chapter 10: Microbes in human welfare Chapter 11: Biotechnology: Principles & Processes Chapter 12: Biotechnology & its Application Chapter 13 Organisms and Population Chapter-14: Ecosystem Chapter 15: Biodiversity & conservation.