



# BLOOM PUBLIC SCHOOL

C-8 Vasant Kunj, New Delhi

Syllabus for the Session 2026-27

**Class: XII**

**Subject: BIOLOGY**

<b>SYLLABUS</b>			
<b>MONTH</b>	<b>CHAPTER ( NCERT Text book)</b>	<b>CONTENT (Topics)</b>	<b>Practical/Activities</b>
<b>April</b>	Chapter 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.	1.Prepare a temporary mount to observe pollen germination 2. Flowers adapted to pollination by different agencies (wind, insects, birds). 3. Pollen germination on stigma through a permanent slide or scanning electron micrograph. 4. Controlled pollination - emasculation, tagging and bagging.
	Chapter 2: Human Reproduction	Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis -spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development up to blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).	
<b>May</b>	Chapter 3: 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).	5.Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice). 6.Meiosis in onion bud cell or grasshopper testis through permanent slides.
	Chapter 4: 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,	7.T.S. of blastula through permanent slides (Mammalian).

		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.	8. Mendelian inheritance using seeds of different colour/sizes of any plant.  9. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.
<b>July</b>	Chapter 5: 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 expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting. 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 expression and regulation - lac operon; Genome, Human and rice genome projects; DNA fingerprinting.	10. Prepare a temporary mount of onion root tip to study mitosis.
	Chapter-6: 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.	11. Flash cards models showing examples of homologous and analogous organs.
<b>August</b>	Chapter 7: 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.	12. Common disease causing organisms like Ascaris, Entamoeba, Plasmodium, any fungus causing ringworm through permanent slides, models or virtual images or specimens. Comment on symptoms of diseases that they cause.
	Chapter-8: 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.	
	Chapter 9:		

	Biotechnology: Principles & Processes	Genetic Engineering (Recombinant DNA Technology).	
<b>September</b>		Revision	
<b>October</b>	Chapter 10: 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.	13. Isolate DNA from available plant material such as spinach, green pea seeds, papaya, etc.
	Chapter 11: Organisms and Population	Population interactions - mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.	14. Models specimen showing symbiotic association in root nodules of leguminous plants, Cuscuta on host, lichens
<b>November</b>	Chapter 12: Ecosystem	Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy.	15. Study the plant population density by quadrat method.
	Chapter 13: Biodiversity & conservation.	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.	16. Study the plant population frequency by quadrat method.
<b>December</b>	PreBoard-1 Exam		
<b>January</b>	PreBoard-2 Exam & Board Practical Examination		
<b>February</b>	CBSE Board Exam As per the Board date sheet		
<b>March</b>	CBSE Board Exam As per the Board date sheet		
<b>ASSESSMENT SYLLABUS</b>			
<b>PERIODIC ASSESSMENT -1</b>		Chapter 1: Sexual Reproduction in Flowering Plants. Chapter 2: Human Reproduction.	
<b>PERIODIC ASSESSMENT -2</b>		Chapter 3: Reproductive Health. Chapter-4: Principles of Inheritance and Variation Chapter-5: Molecular Basis of Inheritance	

<b>MID TERM EXAM</b>	Chapter 1: Sexual Reproduction in Flowering Plants. Chapter 2: Human Reproduction Chapter 3: Reproductive Health. Chapter 4: Principles of Inheritance and Variation Chapter 5: Molecular Basis of Inheritance Chapter-6: Evolution Chapter 7: Human Health & Diseases Chapter 8: Microbes in Human Welfare	
<b>FINAL EXAMINATION</b>	Chapter 1: Sexual Reproduction in Flowering Plants. Chapter 2: Human Reproduction Chapter 3: Reproductive health. Chapter 4: Principles of Inheritance and Variation Chapter 5: Molecular Basis of Inheritance Chapter-6: Evolution Chapter 7: Human Health & Diseases Chapter 8: Microbes in Human Welfare Chapter 9: Biotechnology: Principles & Processes Chapter 10: Biotechnology & its Application Chapter 11: Organisms and Population Chapter 12: Ecosystem Chapter 13: Biodiversity & conservation.	