



CAMBRIAN PUBLIC SCHOOL KANKE ROAD RANCHI

Class – XI (Session 2026-27)

LEARNING PLAN OUTCOMES

Subject: Biology (044)

S. No.	Month	Chapter/Unit Name	Learning Outcomes
1	April	Bridge Course 1. Introduction to Biology 2. Cell Structure and Functions 3. Plant and Animal Cells 4. Biomolecules (Carbohydrates, Proteins, Fats) 5. Plant Tissues and Functions 6. Human Digestive and Respiratory Systems 7. Basics of Genetics and Heredity 8. Reproduction in Plants and Humans 9. Scientific Method and Laboratory Safety 10. Diagram Drawing and Practical Skills	After completion of the bridge course, students will be able to: 1. Explain the basic structure and functions of cells and cell organelles. 2. Differentiate between prokaryotic and eukaryotic cells. 3. Identify major biomolecules and describe their functions. 4. Understand basic plant physiological processes. 5. Describe the structure and functions of major human body systems. 6. Apply concepts of heredity and genetics in daily life examples.
2	May	Biology Practical & Laboratory Skills 1. Introduction to Biology Laboratory 2. Identification of Laboratory Equipments 3. Use and Care of Microscope 4. Laboratory Safety Rules 5. Handling of Glassware and Chemicals 6. Scientific Observation Skills 7. Preparation of Temporary Slides 8. Diagram Drawing Techniques 9. Biological Diagram Making and Labeling 10. Recording Observations in Practical Notebook 11. Measurement and Use of Laboratory Instruments 12. Identification of Plant and Animal Specimens 13. Basic Experimentation Skills 14. Collection and Preservation of Specimens	After completion of the bridge course, students will be able to: 1. Identify common laboratory equipments and their uses. 2. Demonstrate proper handling of laboratory instruments. 3. Use a microscope correctly for observation of specimens. 4. Follow laboratory safety rules and precautions. 5. Prepare and observe temporary slides properly. 6. Draw neat and labeled biological diagrams. 7. Record observations systematically in practical notebooks. 8. Perform simple biological experiments independently. 9. Identify basic plant and animal specimens. 10. Develop scientific observation and analytical skills. 11. Maintain cleanliness and discipline in the laboratory. 12. Apply scientific methods during practical activities.

		15. Cleanliness and Maintenance of Laboratory 16. Introduction to Scientific Method 17. Data Recording and Interpretation 18. Practical Demonstration Activities 19. Team Work in Laboratory Activities 20. Development of Scientific Attitude	13. Interpret experimental data and observations correctly. 14. Work cooperatively during laboratory activities. 15. Build confidence for Class XI Biology practical work.
3	June	Chapter: 01: The Living World Chapter: 02: Biological Classification Chapter: 03 : Plant Kingdom	Chapter 01: The Living World - Students will understand the characteristics of living organisms. - Students will explain the need for classification of organisms. - Students will use basic biological terminology correctly. - Students will understand binomial nomenclature and taxonomy. - Students will develop awareness about biodiversity and scientific study of life. Chapter 02: Biological Classification - Students will classify organisms into different kingdoms. - Students will identify major characteristics of Monera, Protista, and Fungi. - Students will compare different groups of living organisms. - Students will understand the basis of modern classification systems. - Students will develop skills in observing diversity among organisms. Chapter 03: Plant Kingdom - Students will identify major groups of plants and their characteristics. - Students will differentiate between algae, bryophytes, pteridophytes, gymnosperms, and angiosperms. - Students will understand the life cycle patterns in plants. - Students will explain the economic and ecological importance of plants. - Students will develop diagram drawing and classification skills related to plants.
4	July	Chapter: 04: Animal Kingdom Chapter: 05: Morphology of Flowering Plants Chapter: 06: Anatomy of Flowering Plants	Chapter 04: Animal Kingdom - Students will classify animals based on their characteristics and body organization. - Students will identify important features of different animal phyla.

			- Students will compare vertebrates and invertebrates. - Students will understand the basis of animal classification. - Students will develop observation and identification skills related to animals. Chapter 05: Morphology of Flowering Plants - Students will identify different parts of flowering plants and their functions. - Students will describe the morphology of root, stem, leaf, flower, fruit, and seed. - Students will understand modifications of plant parts. - Students will draw and label diagrams of flowering plants accurately. - Students will develop skills in observation and description of plant structures. Chapter 06: Anatomy of Flowering Plants - Students will understand the internal structure of plant tissues. - Students will differentiate between monocot and dicot tissues. - Students will identify various tissue systems in plants. - Students will explain the functions of xylem, phloem, and meristematic tissues. - Students will develop microscopic observation and diagram drawing skills.
5	August	Chapter :07: Structural Organisation in Animals Chapter: 08: Cell: The Unit of Life Chapter: 09: Biomolecules Chapter: 10: Cell cycle and Cell division	Chapter 07: Structural Organisation in Animals - Students will understand the levels of structural organization in animals. - Students will identify different animal tissues and their functions. - Students will explain the morphology and anatomy of cockroach and frog. - Students will compare various organ systems in animals. - Students will develop observation and diagram drawing skills. Chapter 08: Cell: The Unit of Life - Students will explain the structure and functions of cells. - Students will differentiate between prokaryotic and eukaryotic cells. - Students will identify major cell organelles and their roles.

			- Students will understand the importance of cell as the basic unit of life. - Students will develop microscopic observation and labeling skills.
6	September	Chapter: 09: Biomolecules Chapter: 10: Cell Cycle and Cell Division	Chapter 09: Biomolecules - Students will identify major biomolecules present in living organisms. - Students will explain the structure and functions of carbohydrates, proteins, lipids, and nucleic acids. - Students will understand the role of enzymes in biological reactions. - Students will differentiate between primary and secondary metabolites. - Students will develop analytical skills related to biomolecules. Chapter 10: Cell Cycle and Cell Division - Students will describe different phases of the cell cycle. - Students will explain mitosis and meiosis with diagrams. - Students will compare mitotic and meiotic cell division. - Students will understand the significance of cell division in growth and reproduction. - Students will develop diagrammatic and sequencing skills.
8	November	Chapter: 11: Photosynthesis in Higher Plants Chapter: 12: Respiration in Plants Chapter: 13: Plant Growth and Development	Chapter 11: Photosynthesis in Higher Plants - Students will explain the process of photosynthesis in plants. - Students will identify factors affecting photosynthesis. - Students will differentiate between light and dark reactions. - Students will understand the importance of chlorophyll and chloroplasts. - Students will develop experimental and analytical skills related to photosynthesis. Chapter 12: Respiration in Plants - Students will understand the process of respiration in plants. - Students will differentiate between aerobic and anaerobic respiration. - Students will explain glycolysis, Krebs cycle, and electron transport system. - Students will understand the role of ATP in energy production.

			5. Students will develop conceptual understanding of plant metabolism. Chapter 13: Plant Growth and Development 1. Students will explain phases of plant growth and development. 2. Students will identify factors affecting plant growth. 3. Students will understand the role of plant hormones. 4. Students will differentiate between growth movements in plants. 5. Students will develop observation and interpretation skills.
9	December	Chapter: 14: Breathing and Exchange of gases Chapter: 15: Body fluids and Circulation Chapter: 16: Excretory Products and Their Elimination	Chapter 14: Breathing and Exchange of Gases 1. Students will understand the mechanism of breathing in humans. 2. Students will explain gaseous exchange in lungs and tissues. 3. Students will identify respiratory organs and their functions. 4. Students will understand the transport of oxygen and carbon dioxide. 5. Students will develop diagram drawing and analytical skills. Chapter 15: Body Fluids and Circulation 1. Students will explain the composition and functions of blood and lymph. 2. Students will understand the structure and working of the human heart. 3. Students will describe double circulation in humans. 4. Students will identify different blood groups and their importance. 5. Students will develop understanding of circulatory disorders and health. Chapter 16: Excretory Products and Their Elimination 1. Students will identify excretory products formed in the body. 2. Students will explain the structure and functioning of the human excretory system. 3. Students will understand the process of urine formation. 4. Students will differentiate between different modes of excretion in animals. 5. Students will develop diagrammatic and analytical skills.

10	January	Chapter: 17: Locomotion and Movement Chapter: 18: Neural Control and Coordination Chapter: 19: Chemical Coordination and Integration	Chapter 17: Locomotion and Movement 1. Students will explain different types of movements in organisms. 2. Students will identify the structure and functions of muscles and bones. 3. Students will understand the mechanism of muscle contraction. 4. Students will describe disorders related to muscular and skeletal systems. 5. Students will develop understanding of human body movements. Chapter 18: Neural Control and Coordination 1. Students will understand the structure and functions of neurons. 2. Students will explain the organization of the nervous system. 3. Students will describe the mechanism of nerve impulse transmission. 4. Students will understand reflex actions and sensory perception. 5. Students will develop diagrammatic and analytical skills related to the nervous system. Chapter 19: Chemical Coordination and Integration 1. Students will explain the role of hormones in the human body. 2. Students will identify endocrine glands and their functions. 3. Students will understand hormonal regulation and coordination. 4. Students will describe common hormonal disorders. 5. Students will develop understanding of chemical control mechanisms in humans.
11	February	Revision	• Revise and strengthen conceptual understanding of all chapters. • Develop problem-solving and critical thinking skills. • Improve analytical and application-based learning through case-study questions. • Enhance examination readiness through assignments and tests.
12	March	Revision and Assessments Annual Examination	• Strengthen accuracy, logical thinking, and application-based learning
