

Practical Biology - Sequence

Introduction to Biology (Chapter 1)

- What is Life Science?
- Traits of Life

Chemicals of Life (Chapter 12) (Notes – Minimal Book)

- Periodic Table
- Atoms – Elements – Molecules – Compounds
- Biological (Symbiotic Relationships)
 - **(Standard 12.4.4 Part A)**
- Biogeochemical Cycles
 - **(Standard 12.5.2)**

Cells Structure & Function (Chapter 2)

- Tools of Biology. (Microscopes)
- Cell Theory
- Cell Structure
- Organelles
- Cell Function
- Diffusion & Osmosis
 - **(Standard 12.4.1)**
- Photosynthesis
- Cell Respiration
 - **(Standard 12.4.4 Part B)**
- Mitosis (Typical Cell Division)

DNA Structure & Genetics (Chapter 3)

- Meiosis (Sex Cell Division – Significant to Genetics)
- DNA Structure & History
- Protein Synthesis
- Mendel's Genetics
- Genetics Problems
- Genetics Disorders
- Genetic Engineering
 - **(Standard 12.4.2)**

Evolution (Chapter 4)

- Adaptations
- Darwin's Natural Selection
- Speciation (Divergent & Convergent Evolution)
- Evidence of Evolution
- Analogous, Homologous & Vestigial Structures
- Human Evolution
 - **(Standard 12.4.3)**

Nervous System & Senses (Chapter 18)

- Goal of Nerves
- Neurons
- Central Nervous System
- Nervous System & Endocrine System Disorders
- Senses
- Endocrine System
 - **(Standard 12.4.6)**

Skeletal & Muscular System (Chapter 13)

- Goal of Skeletal System
- Bone Structure & Function
- Goal of Muscles
- Muscle Structure & Function
- Skeletal & Muscular Disorders

Nutrition & Digestion (Chapter 14)

- Goal of Digestion
- Nutrients, Vitamins & Minerals
- Calories
- Digestion of Nutrients
- Absorption of Nutrients
 - **(Standard 12.4.5)**

Circulation & Blood (Chapter 15)

- Goal of Circulation
- Heart Pathway
- Blood Vessels
- Circulation Disorders
- Blood Parts & Function
- Blood Types

Respiration & Excretion (Chapter 16)

- Goal of Respiration
- Pathway of Respiration
- Mechanics of Breathing
- Respiratory Disorders
- Excretion – Kidneys, Skin & Breathing

Immunity (Chapter 17)

- Mini Unit

Reproduction (Chapter 19)

- Mini Unit

Classification of Living Things (Chapter 5)

- Benefits of Classification (Not Perfect)
- Classification Table
- Aristotle & Linnaeus
- Taxonomy
- Scientific Names
- Traits of Viruses
- Viral Diseases

Bacteria, Protist & Fungus (Chapter 6)

- Traits of Bacteria
- Bacterial Diseases
- Traits of Protist
- Protozoa (Animal-like Protist)
- Algae (Plant-like Protist)
- Fungus-like Protist
- Traits of Fungus

Plants (Chapter 7)

- Traits of Plants
- Simple Plants – Nonvascular Plants (Mosses & Liverworts)
- Vascular Plants
- Ferns – Spore Producing
- Gymnosperm – Naked Seed
- Angiosperm – Flowering Plants

Plants Structure (Chapter 8)

- Roots, Stems, Leaves, Flowers, Fruit & Seeds

Invertebrates (Chapter 9)

- Traits of Animals (Invertebrate vs. Vertebrate)
- Porifera
- Cnidaria
- Worms
- Echinoderms
- Arthropods
- Insects

Vertebrates (Chapter 10)

- Classification of Fish
- Amphibia
- Reptilia
- Aves
- Mammalia