
BIOLOGY

Week 1: Topic 1a: Cell Structure and Cell Division (Pages 23-32)

- Cell Structure
- Microscopy
- Cell Differentiation and Specialisation

Week 2 (Pages 33-39)

- Chromosomes
- Mitosis
- Binary Fission

Week 3 (Pages 40-45)

- Culturing Microorganisms
- Stem Cells

Week 4: Topic 1b: (Pages 51-59)

- Diffusion
- Osmosis
- Active Transport

Week 5 (Pages 60-66)

- Exchange Surfaces
- Exchanging Substances

Week 6: Topic 2a: Tissues, Organs and Organ Systems (Pages 72-78)

- Cell Organisation
- The Lungs

Week 7 (Pages 79-88)

- Circulatory System
 1. The Heart
 2. The Blood Vessels
 3. The Blood

Week 8 (Pages 89-96)

- Plant Cell Organisation
- Transpiration and Translocation
- Transpiration and Stomata

Week 9: Topic 2b: Health and Disease (Pages 101-10)

- Introduction to Health and Disease
- Cardiovascular Disease
- Risk Factors for Non-Communicable Diseases
- Cancer

Week 10: Topic 2c: Enzymes and Digestion (Pages 115-25)

- Enzymes
- Investigating Enzymatic Reactions
- Food Tests

Week 11: Topic 3: Infection and Response (Pages 130-7)

- Communicable Disease

- Viral Disease
- Fungal and Protist Diseases
- Bacterial Diseases and Preventing Diseases
- Fighting Disease

Week 12 (Pages 138-45)

- Fighting Disease: Vaccination
- Fighting Disease: Drugs
- Developing Drugs

Week 13: Topic 4: Bioenergetics (Pages 146-53)

- Monoclonal Antibodies
- Monoclonal Antibody Uses
- Plant Diseases and Defences

Week 14 (Pages 158-66)

- The Basics of Photosynthesis
- How Plants Use Glucose
- The Rate of Photosynthesis

Week 15 (Pages 167-74)

- Investigating Photosynthesis Rate
- The Inverse Square Law
- Artificially Controlling Plant Growth
- Aerobic Respiration

Week 16 (Pages 175-80)

- Anaerobic Respiration
- Exercise
- Metabolism

Week 17: Topic 5a: The Nervous System (Pages 184-90)

- Homeostasis
- The Nervous System
- Synapses and Reflexes

Week 18 (Pages 191-97)

- Investigating Reaction Time
- The Brain
- The Eye

Week 19 (Pages 198-01)

- Correcting Vision Defects
- Controlling Body Temperature

Week 20: Topic 5b: The Endocrine System (Pages 207-14)

- Hormones
- Controlling Blood Glucose

Week 21 (Pages 215-21)

- Controlling Water Content
- Kidney Failure

Week 22: Topic 5c: Animal and Plant Hormones (Pages 225-33)

- Puberty and the Menstrual Cycle
- Contraceptives
- Increasing Fertility

Week 23 (Pages 234-40)

- Thyroxine and Adrenaline
- Plant Hormones
- Uses of Plant Hormones

Week 24: Topic 6a: DNA and Reproduction (Pages 244-50)

- DNA
- The Structure of DNA
- Protein Synthesis
- Mutations

Week 25 (Pages 251-56)

- Reproduction
- Meiosis
- More on Reproduction

Week 26: Topic 6b: Genetics (Pages 261-70)

- X and Y chromosomes
- Alleles and Genetic Diagrams

Week 27 (Pages 271-77)

- Individual Disorders
- The Work of Mendel

Week 28: Topic 6c: Evolution and Classification (Pages 282-91)

- Variation
- Evolution and Extinction
- Ideas About Evolution

Week 29 (Pages 292-00)

- Selective Breeding
- Genetic Engineering
- Cloning

Week 30 (Pages 301-10)

- Fossils
- Speciation
- Antibiotic-Resistant Bacteria
- Classification

Week 31: Topic 7a: Organisms and Their Environment (Pages 315-22)

- Competition
- Abiotic and Biotic Factors
- Adaptations

Week 32 (Pages 323-29)

- Food Chains
- Using Quadrats and Transects
- Environmental Change

Week 33 (Pages 330-35)

- The Cycling of Materials
- Decay

Week 34: Topic 7b: Human Impacts on the Environment (Pages 340-9)

- Biodiversity and Waste
- Global Warming
- Deforestation and Land Use
- Maintaining Ecosystems and Biodiversity

Week 35: Topic 7c: Biomass, Food and Biotechnology (Pages 53-65)

- Trophic Levels
- Pyramids of Biomass
- Food Security and Farming
- Biotechnology

Week 36-39

- Revision, Practice Papers