



Year 8 Biology
Curriculum



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Introduction

In Year 8 biology, students will build on prior knowledge and skills and delve deeper into the diversity of life, exploring different ecosystems and the organisms that inhabit them. They will learn about the human body and how it works, from cells to organs. They will examine important biological processes like reproduction, growth, and development.

Learning Objectives:

1. Cells and Tissues:

Cell Organelles:

- Detailed structure of animal and plant cells.
- Functions of organelles (nucleus, mitochondria, ribosomes, endoplasmic reticulum, Golgi apparatus, chloroplasts, vacuole).

2. Nutrition

Nutrients:

- Types of nutrients (carbohydrates, proteins, fats, vitamins, minerals, water).
- Functions of each nutrient.
- Balanced diet and its importance.

Digestion:

- The digestive system and its organs.
- The process of digestion (mechanical and chemical breakdown).
- Absorption of nutrients.

Malnutrition:

- Causes and effects of malnutrition (undernutrition, over nutrition).



3. Reproduction

Animal Reproduction:

- Sexual and asexual reproduction in animals.
- Fertilisation and development of embryos.
- Pregnancy and gestation.
- Menstrual cycle.

4. Transport

Transport in Plants:

- Transport of water and minerals through the xylem.
- Transport of glucose through the phloem.
- Transpiration.

Transport in Animals:

- The circulatory system (heart, blood vessels, blood).
- Functions of blood (transport of oxygen, carbon dioxide, nutrients, waste products).
- The respiratory system (lungs, breathing).

5. Homeostasis:

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- Definition of homeostasis.
- Regulation of body temperature (heat gain and loss mechanisms).
- Regulation of blood sugar levels (insulin and glucagon).
- Excretion (kidneys, urine formation).

Evaluation and Review

The curriculum will be reviewed annually to ensure its effectiveness. Feedback from students, teachers, and parents will be considered in the review process.

Updated August 2024

Next review: August 2025