

Grade 10 Human and Social Biology Syllabus

2017 - 2018

Term 1

Section A: Living Organisms and the Environment

Characteristics of Living Organisms

- Structure of unspecialized plant and animal cells
- Basic structure of microbes to include virus, bacteria and fungi
- Function of cell organelles
- Example of specialized cells
- Movements of substances across the cells including osmosis, diffusion and active transport

Photosynthesis

- Light and dark reaction
- Site of photosynthesis, equation

Food Chain/ Webs

- Terrestrial and aquatic habitats
- Dependence of living organisms on plants for food
- Cycles nitrogen, carbon, oxygen and water

Nutrition

- Major nutrients, their sources and function
- Deficiency diseases

Structure and Function of Teeth

- Causes of tooth decay/care of teeth
- Role of teeth in digestion

Digestion

- Parts of digestive system and function to include ingestion, digestion, absorption, assimilation and egestion
- Properties of enzymes
- Effects of temperature and pH on enzyme controlled reactions

Term 2

Transport System in Humans

- Relationship between surface area and volume
- Major blood vessels and functions
- Blood cells and function
- Function of platelets and blood plasma
- Flow of blood through the heart and heart diseases
- Blood groups and blood transfusions

Respiratory System

- Structure and function of respiratory tract
- Breathing mechanism
- Factors affecting breathing rate, vital capacity
- Aerobic and anaerobic respiration

Term 3

Skeletal System

- The skeleton
- Bones and cartilage
- Muscles
- Joints
- Posture and locomotion

Excretion and Homeostasis

- Definition of excretion and function of organs involved (skin and kidneys)
- Definition of homeostasis
- Regulation of blood sugar, water, temperature and carbon dioxide
- Feedback mechanisms