

IMMACULATE CONCEPTION HIGH SCHOOL

GRADE 8 GENERAL SCIENCE SYLLABUS

2017 - 2018

**TERM 1**

1. SPECIALISED PLANT AND ANIMAL CELLS

Structure of specialised cells

Function of specialised cells

2. PHOTOSYNTHESIS

- Adaptations of a leaf to carry out photosynthesis
- Importance of photosynthesis to trap energy from the sun to make food
- To investigate the factors responsible for photosynthesis
- Energy released from food in cellular respiration
- Interdependence of plants and animals
- Flow of energy through plants and animals; food chains and food webs; transfer of energy between trophic levels
- Impact of human activities on food chains and food webs
- Carbon, Nitrogen and Water cycles in the environment

3. HUMAN NUTRITION

- Structure and care of the teeth
- Processes in human nutrition-ingestion, digestion, absorption, assimilation and egestion
- Food digestion and absorption

**TERM 2**

4. FOOD TESTS

- Protein, starch, fat and reducing sugar in foods

5. PARTICULATE NATURE OF MATTER

- Generalized definition of an atom
- Differences among elements, compounds and mixtures
- Common household compounds
- Subatomic particles of the atom
- The periodic table and the first twenty elements
- Atomic number and mass number, Kinetic theory.

## 6. MOVEMENT OF PARTICLES

Osmosis and diffusion

## 7. WATER AND THE EARTH'S ATMOSPHERE

- Properties of water and its uses
- Water as a habitat
- Sources of water and water conservation
- Chemical tests for water and water purification
- Importance of water to plants and animals
- Water pollution
- Composition of air, uses of gases in the air
- Chemical tests for carbon dioxide and oxygen

### TERM 3

## 8. FORCES AND MOTION

- Distinguish between scalar and vector quantities
- Balanced and unbalanced forces
- Friction as a force which opposes motion
- Floating of objects in air and water
- Streamlined shapes and motion in air and water

## 9. SPACE SCIENCE

Construction of technological devices for space exploration

Connection between the concepts of universe, galaxy and stars

Planetary systems of some stars

Physical characteristics of the Solar System

Eclipses of the sun and the moon

The role of gravity in determining the motion of planets

Use of the light year to solve simple problems

