

## REVIEW

### Unit 2 – Cells and Systems

#### 1.0 Characteristics of Living Things

- ❖ They are made of cells, require energy, grow and develop, respond to their surroundings, reproduce and have adaptations to survive
- ❖ All organisms have structures which perform specific life functions
- ❖ Animals have **organs** and different organs that work together to perform a common function are organized into **organ systems**

#### 2.0 Cells play a vital role

- ❖ A **Microscope** is a scientific tool used to see very small structures
- ❖ The **cell** is the basic unit of life - all organisms have at least one cell
- ❖ Structures in cells are called **organelles** which carry out specific life functions
- ❖ Organisms can be single celled or multi-celled
- ❖ Substances move in and out of cells by **diffusion** and **osmosis**
- ❖ All cells have a **selectively permeable membrane**
- ❖ **Cells** form **tissue** (four types – **connective, epithelial, nervous and muscular**), tissue forms **organs** and organs work together to make **organ systems**

#### 3.0 Healthy Human Body Systems

- ❖ **Digestive System, Circulatory System, Respiratory System, Excretory System, Nervous System**
- ❖ Interactions between systems as a result of internal and external stimuli

#### 4.0 Scientific investigation and Medical Applications

- ❖ Research to improve understanding of what causes diseases (smallpox)
- ❖ Health is affected by a number of factors which can lead to poor health of cells, organs and organ systems