

LIFE AND LIVING

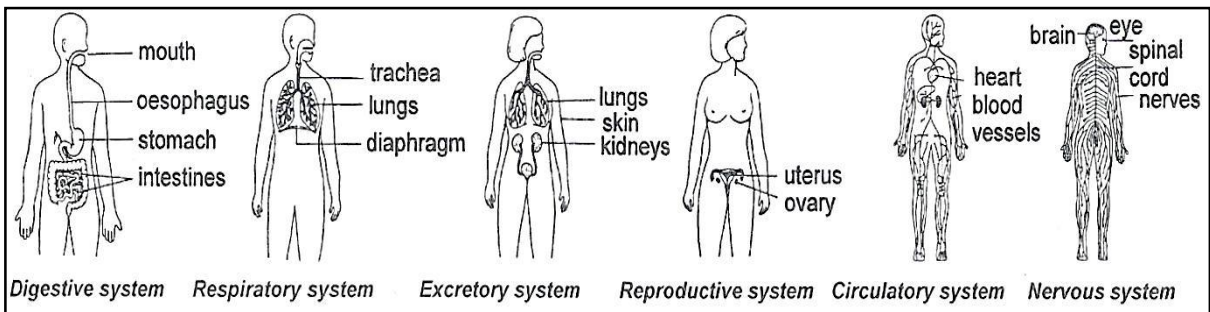
BODY SYSTEMS

PARTS AND SYSTEMS

- The human body consists of numerous small parts that work together.
- The work of each part is called its **function**.
- The smallest part of the human body is called the **cell**.
- Cells with similar function work together in groups called **tissues**.
- Groups of tissues form parts of the body called **organs**.
- Organs work together to form **systems**.

ORGAN SYSTEMS OF THE HUMAN BODY

- Some important organ systems of the human body are represented in the following diagrams.



- The **digestive system**: the mouth, oesophagus and intestines are digestive system.
- The **respiratory system**: the windpipe or trachea, the lungs and the diaphragm are respiratory organs.
- The **reproductive system**: the penis and testicles (in males) and the vagina and uterus (in females) are reproductive organs.
- The **nervous system**: the brain, spinal cord and sensory organs are organs of the nervous system.
- The **locomotory system**: the bones and muscles are organs of the movement.
- The **circulatory system**: the heart, blood vessels and circulatory organs.
- **Musculoskeletal system**: muscles produce body movement. The skeleton protects the body, provides support and enables movement.

LIFE PROCESSES

- Each **organ system** is responsible for a function called a **life process**.
- It is the process such as **nutrition, respiration, excretion, reproduction, growth (endocrine system), irritability and movement** that **sustain life**.
- **Nutrition** is the process used to obtain nutrients for growth and for energy to sustain other life process. **The digestive system** has the nutrition function.
- **Respiration** is the process used to produce energy for the body. Energy is produced in the cells from nutrients and oxygen. The nutrients are obtained from the digestive system and the oxygen from the respiratory system. When the cells use nutrients to produce energy and for **growth**, waste products are produced that cannot be used. The body get rid of waste products through a process called **excretion**.

- **Reproduction** is the process by which babies are produced. For a baby to be produced, a sperm cell from the male testicles must unite with an egg cell from the female ovaries. They make a new cell, called a zygote, which grows in the uterus to form a baby.
- **The nervous system** controls other systems. There are sensory organs in all parts of the body that are connected to the spinal cord and the brain by the nerves. The spinal cord and the brain can control the life processes in this way. Sensory organs such as the eyes and ears send information to the brain regarding activities outside the body.
- **Movement** is the process that is essential for life. In the human body the bones and joints form the skeleton that gives shape to the body and makes movement possible. Muscles provide the force that moves the bones and other parts of the body.