

## **FORM TWO WORK**

### **6.0.0 TRANSPORT IN PLANTS AND ANIMALS**

#### **6.1.0 Specific Objectives**

By the end of the topic, the learner should be able to:

- a) Define transport and explain the necessity of transport in plants and animals
- b) Relate the structure of the root, root hair, xylem and phloem to their functions
- c) Relate the internal structure of the leaf to transpiration
- d) Explain possible forces involved in the movement of water and mineral salts through the plant
- e) Explain the significance of and factors affecting transpiration
- f) Demonstrate simple experiments on transpiration
- g) Distinguish between closed and open circulatory systems
- h) Relate the structure of the heart and the blood vessels to their functions
- i) Trace the path taken by blood from the heart to all parts of the body, and back to the heart
- j) Name the common diseases of the circulatory system in humans and suggest methods of control / prevention
- k) Relate the structure of the components of blood to their functions
- i) Explain how oxygen and carbon dioxide are transported in the blood
- m) Describe the mechanism of blood clotting and its importance
- n) Describe the human blood groups and their importance in blood transfusion
- o) Explain immunity and describe immune responses.

## **7.0.0 GASEOUS EXCHANGE**

### **7.1.0 Specific Objectives**

By the end of the topic, the learner should be able to:

- a) Explain the need for gaseous exchange in living organisms
- b) Explain the mechanism of gaseous exchange in plants
- c) Compare the internal structures of aquatic and terrestrial roots, stems and leaves
- d) Examine various types of respiratory structures in animals and relate them to their functions
- e) State the characteristics of respiratory surfaces
- f) Describe the mechanisms of gaseous exchange in protozoa, insects, fish, frog and mammal
- g) Describe the factors which control the rate of breathing in humans
- h) State the causes, symptoms and prevention of respiratory diseases.

## **8.0.0 RESPIRATION**

### **8.1.0 Specific Objectives**

By the end of the topic, the learner should be able to:

- a) Explain the significance of respiration in living organisms
- b) Distinguish between aerobic and anaerobic respiration
- c) Describe the economic importance of anaerobic respiration in industry and at home
- d) Describe experiments to show that respiration takes place in plants and animals.

## **9.0.0 EXCRETION AND HOMEOSTASIS**

### **9.1.0 Specific Objectives**

By the end of the topic, the learner should be able to:

- a) Distinguish between excretion and egestion
- b) Explain the necessity for excretion in plants and animals
- c) State the uses of excretory products of plants
- d) Describe the methods of excretion in a named unicellular organism
- e) Relate the structures of the human skin, lungs, liver and kidney to their functions name common kidney diseases
- g) Explain the concept of internal environment and homeostasis
- h) Compare responses to changes in temperature by behavioural and physiological methods in animals
- i) Relate heat loss to body size in
- j) Describe methods by which mammals gain and lose heat
- k) Explain how the functions of the following relate to homeostasis - skin, hypothalamus, liver and kidney
- l) discuss the role of antidiuretic hormone, insulin and glucagon
- m) Describe simple symptoms of Diabetes mellitus and Diabetes insipidus.