**LESSON NOTE**

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| CIRCULATORY SYSTEM    Circulatory system consists of all the tissues and organs that are involved in the transportation of materials through the blood round the body of farm animals. Farm animals possess closed circulatory system. This means that oxygenated and deoxygenated blood does not mix. They also display a pattern of double circulation (this mean that for one complete circulation to occur, the blood must pass through the heart twice; first to the lungs for oxygenation and then on return to the other parts of the body) or single circulation as in the case of fish. Circulatory system has three (3) main divisions. These are:   1. The Blood: the mammalian blood is made up of plasma (the liquid part of the blood that contains water, blood proteins dissolved mineral salt etc.), the blood cells (red and white blood cells also known as Erthrocytes and Leucocytes), and blood plaletes (thrombocytes) 2. The Blood vessels: with 3 major blood vessel; artery, vein and capillaries 3. The Heart: organ responsible for pumping blood around the body and located in the thoracic cavity of the body with 4 chambers; the upper auricle (left and right) the lower ventricles (right and left)   RESPIRATORY SYSTEM    Respiratory system includes all the organs and tissues associated with the exchange of gases between the animal and its environment, leading to the release of energy. The purpose of respiration is to supply oxygen to the cell which burns down food to release energy.  C6H12O6 + 6O2 à 6CO2 + 6H2O + ENERGY  (Glucose) (Oxygen) (Carbon dioxide) (Water) (ATP)  Two types of respiration exist  Aerobic respiration: This is the type of respiration that takes place in the presence of oxygen  Anaerobic respiration – This is the type of respiration that takes place in the absence of oxygen. Anaerobic respiration is also known as fermentation.  Farm animals use organ such as the lungs in land animals and gills in aquatic animals for respiration.  NERVOUS SYSTEM    The nervous system includes all the organs and tissues which enable farm animals to respond to changes in their environment. The change in the environment is called stimulus and the reaction of the living things to the stimulus is response. The nervous system is made up of two parts;  Central Nervous System: This includes the brain and the spinal cord. Both are made up of thousands of nerves and neurons. The functions of C.N.S. are correlation of impulses from various sense organs and storage of impulses as information.  Peripheral Nervous System: This consists of cranial and spinal nerves. The P.N.S. mediates between animals and its external environment.  HOME WORK   1. Draw the respiratory system of a fish. 2. List 3 functions of the blood and the heart. |