LESSON NOTE FOR WEEK 4  
TOPIC: **THE HUMAN RESPIRATORY SYSTEM**  
MAIN OBJECTIVES: At the end of this lesson, student should be able to;   
(a) define respiration   
(b) list the organs of respiration.   
(c) list five (5) respiratory diseases.

STEP I   
**INTRODUCTION**

Respiration is the processing of breaking down of digested food by oxygen gotten from air taken in the cells of animals to release energy and produce carbon dioxide.

**PARTS OF RESPIRATORY SYSTEM**

1**.** Nose**:** The nose has two openings known as nostrils through which air enters into the lungs.

2. Trachea: This is a ringed tube connecting the pharynx and the bronchus. It is also called wind pipe.

3. Bronchi: These are the two branches of the trachea, i.e the left and the right trachea. Each trachea leads air from trachea into the lungs.

4. Bronchioles: These are small vessels which are many in number through which air passes into the alveoli

5. Alveoli: These are air sacs which make up the lungs and are surrounded by blood capillaries. Gas exchange takes place in the blood capillaries of the alveoli.

**FUNCTIONS OF THE RESPIRATORY SYSTEM.**

1. Breathing: This is taking in of air which is rich in oxygen into the lungs (inspiration) and the releasing of air rich in carbon (IV) oxide from the lungs (expiration). Breathing involves the following processes:

(i) External respiration: This is the exchange of oxygen and carbon (IV) oxide between the air and blood in the lungs.

**(ii).** Internal respiration: This is the exchange of oxygen and carbon (IV) oxide between the blood and tissue fluid.

(iii) Cellular respiration: This is respiration that occurs in the cells of the body to produce energy.

2. Breakdown of digested food: when this happens energy is released as well as carbon dioxide

**THE MECHANISM OF BREATHING.**

During respiration, air which is rich in oxygen from the surrounding environment enters the body through the nose. From the nose the air gets into bronchioles through the pharynx and the bronchus (Bronchi). From the bronchioles, the air enters the alveoli where it diffuses into the blood. Then the oxygen oxides the digested food substances to produce energy and carbon (IV) oxide.

**Respiratory Diseases**

1. Asthma: A disease of bronchi and bronchioles and is characterized by wheezing, shortness of breath and sometimes cough.

2. Pneumonia: Affects the lungs in which the bronchi and alveoli are filled with thick fluid making gas exchange difficult.

3. Pulmonary fibrosis:

4. Pulmonary tuberculosis:

5. Emphysema:

6. Bronchitis: Inflammation of the bronchi

**Assignment:**

1. How many bones make up to skeletal system?

2. List four types of joint

3. State five reasons why humans need to move

4. Where are the immovable joints located?

5. What is a skeleton?