

### ITEM ONE.

A scientist was doing research on the various systems used by living organisms for gaseous exchange. He noticed that small bodied organisms such as Amoeba, bacteria are very thin, and flattened ones like the earthworms do not have specialized systems for gaseous exchange. However, larger and more bulky organisms, such as mammals, have specialized organs/systems for gaseous exchange such as lungs.

### TASK.

As a S.4 student with knowledge in gaseous exchange, explain to the scientist the reasons behind the observations he made.

### ITEM TWO

A boy, feeling sick, went to a nearby health facility (hospital). The doctor asked him to present a sample of urine to be taken to the hospital laboratory for urinalysis. On carrying out several tests, the urine sample **tested positive** for both **glucose** and **proteins**. The doctor recommended some treatment procedures to the boy to remedy the illness he was facing.

### TASK.

Identify to the boy the problem he is facing; help him understand how the substances above ended up in his urine. Also help him understand the treatment procedures recommended to him by the doctor.

### ITEM THREE.

MR NOBODY a resident in one of the small towns in Uganda observed very many women making local brew (alcohol) in his neighborhoods and became curious about the processes involved in the process of making the alcohol. He waited for you his child in S.4 to come home for holidays with hope that you would help him understand.

### TASK.

Help your father, MR NOBODY to understand the different processes involved in the formation of the local alcohols. Also let him know the other ways the above mentioned processes can be used in his society and the products that can be obtained.