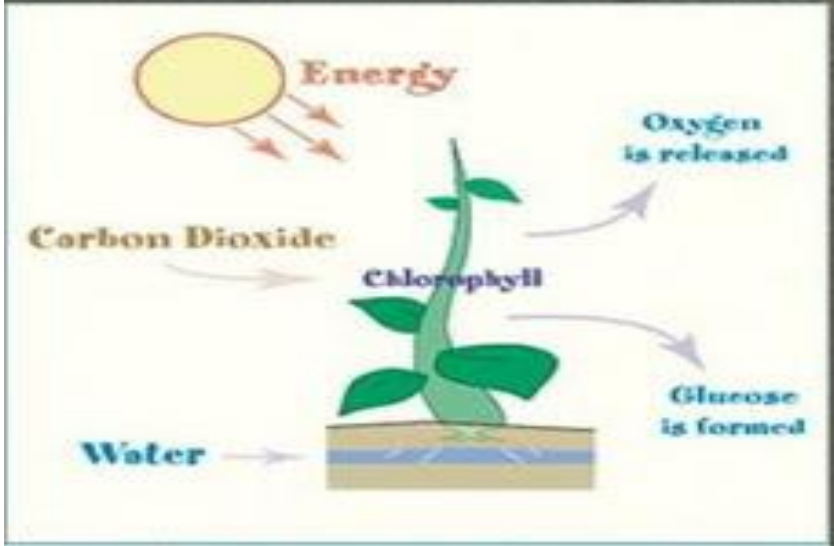
Transportation In Plants And Animals

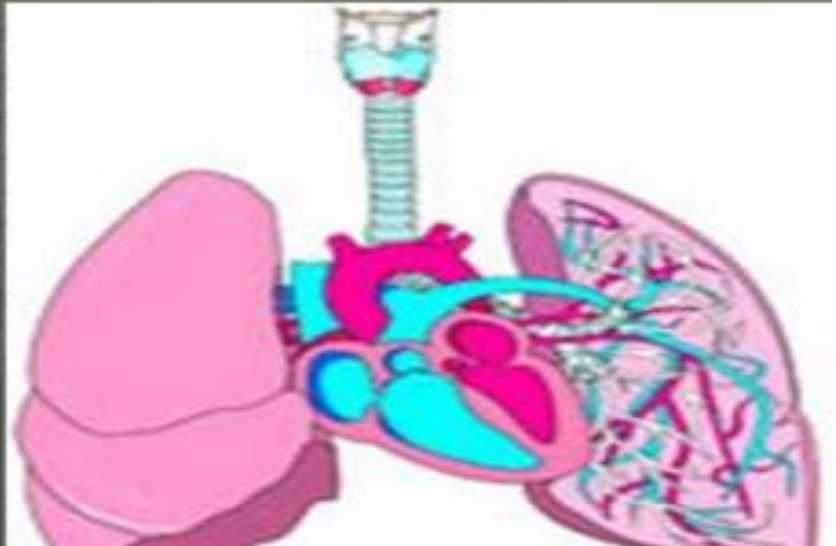
Class :7

Chapter : 8

05.10.20 to 15.10.20



Photosynthesis



Transportation

The process of movement of substances, from on location to another, in an organism, is known as transportation.

Transportation in plants

In plants food, water and minerals, carbon dioxide and oxygen that get transported are summarized in the table given below.

Food	**Prepared by**	**leaves**	**Sent to**	**Other parts of the plant**
Water and Minerals	**From**	**roots**	**Sent to**	**Other parts of the plant**
Carbon dioxide	**From**	**atmosphere**	**Absorbed by**	**Leaves for photosynthesis**
Oxygen	**from**	**atmosphere**	**Absorbed by**	**All parts of the plant for respiration**

Transportation in plants:-

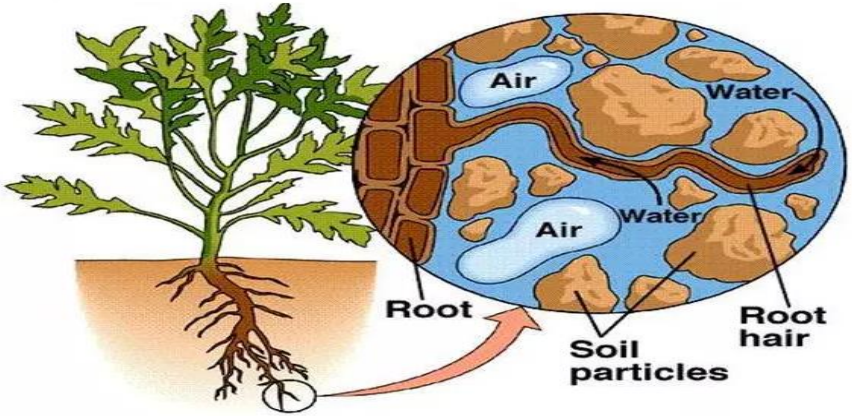
In plants transport of food, water and minerals takes place through special tissues called vascular tissues.

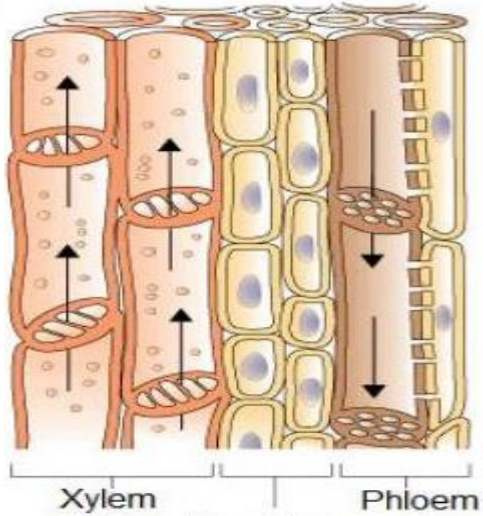
Tissue:- is a group of cells which performs a specialised function.

Vascular tissues is of two types called xylem and phloem.

The roots have root hairs which absorb water and minerals from the soil. The xylem tissuetransports the water to all parts of the plant.

Food is prepared in the leaves. The phloem tissuetransports the food to all parts of the plant.

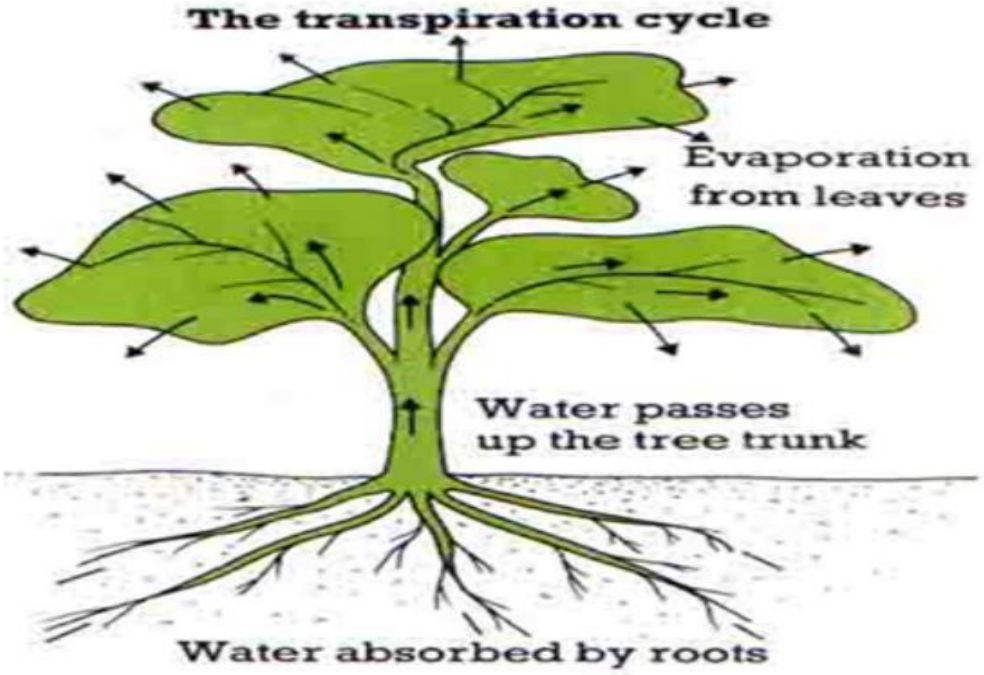




Transpiration:-

Transpiration:- is the process by which plants give out water through the stomata in the leaves.

The evaporation of water from the leaves produces a suction pull which can pull water to great heights in tall trees.

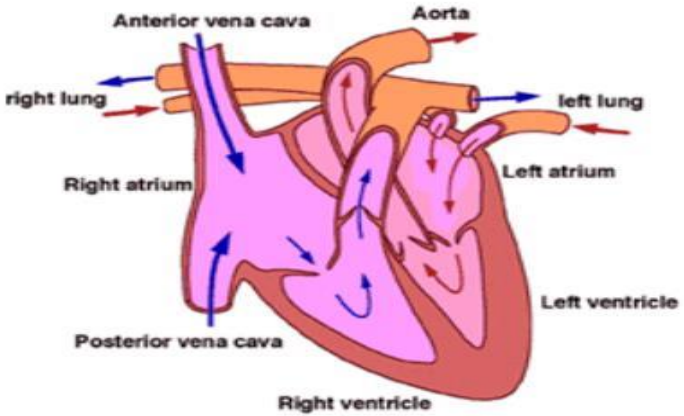


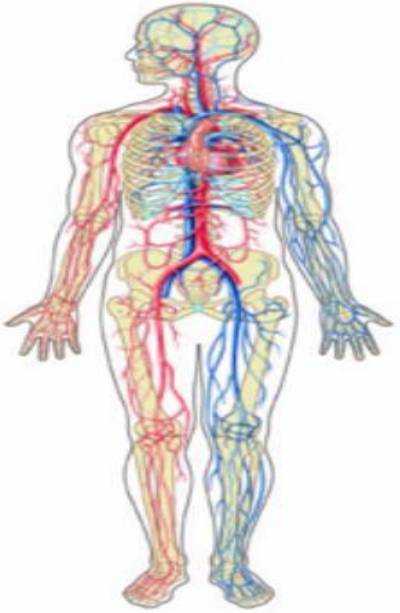
Transportation in Animals

1) Circulatory system:-

In human beings digested food, water and oxygen are transported to all parts of the body. Waste products are also transported form all parts of the body to be removed from the body.

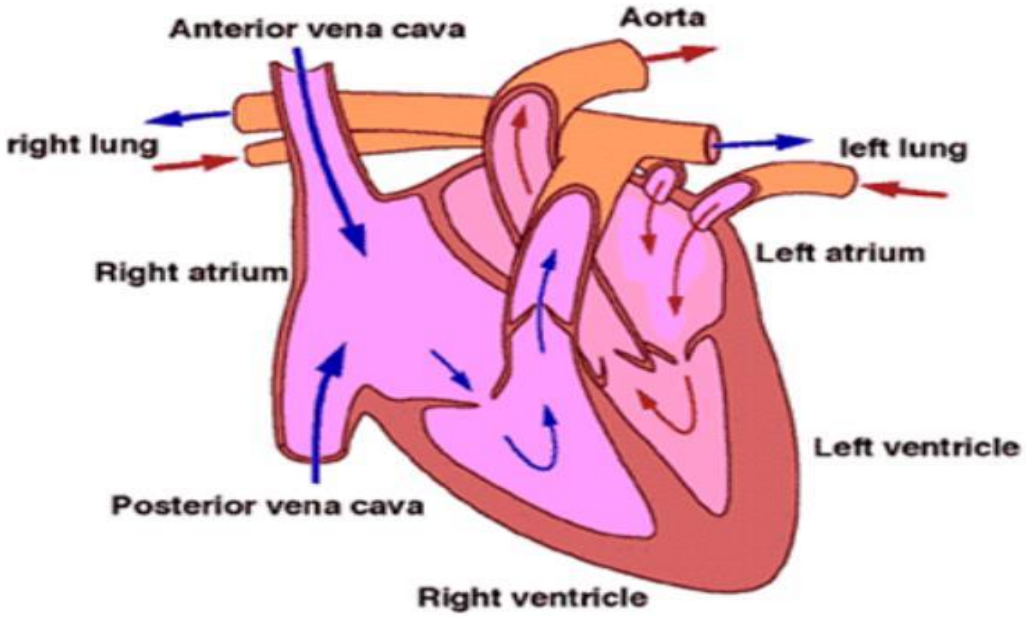
The transport of substances in the body is done by the circulatory system.It consists of heart, blood vessels and blood.





Heart:-

The heart is an organ which pumps blood to all parts of the body. The heart is about the size of our fist. The heart has four chambers. The two upper chambers are called atria and the two lower chambers are called ventricles.The heart has a partition in the middle which prevents mixing up of oxygen rich blood and carbon dioxide rich blood.



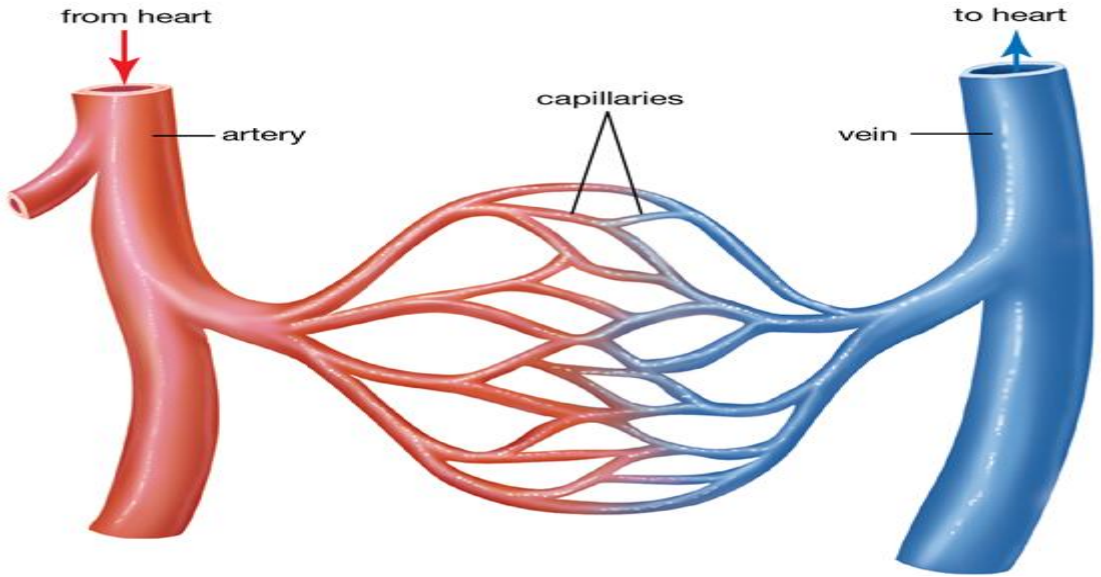
Blood vessels:-

There are three types of blood vessels. They are arteries, veins and capillaries.

Arteries :- carry oxygen rich blood from the heart to all parts of the body. They have thick walls.

Veins :-carry carbon dioxide rich blood from all parts of the body to the heart. They have thin walls.

Capillaries :-are very thin blood vessels which join arteries and veins.



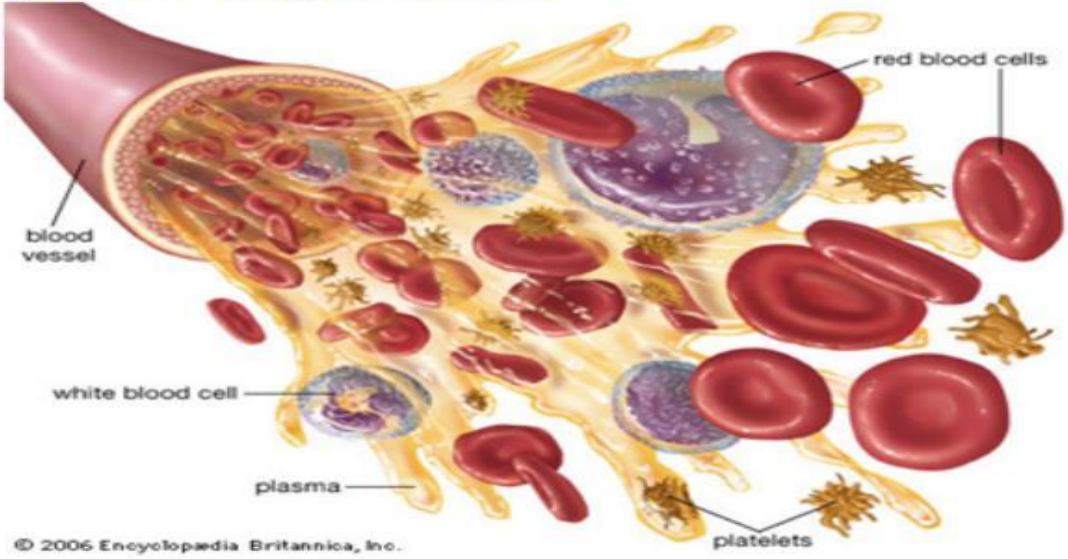
Blood:-

Blood transports substances in the body. It has a fluid part called plasma and cells like red blood cells (RBC), white blood cells (WBC) and platelets.

Red blood cells :-contain a pigment called haemoglobin which transports oxygen.

White blood cells :-fights against germs and protects us from diseases.

Platelets :-help in clotting of blood.



Functions of the blood

- Blood helps to distribute the digested food to all parts of the body.
- Circulation of blood (resulting in distribution in the body) also helps to maintain the body temperature.
- Blood cells, especially the WBCs, help fight infections.
- Clotting of blood is needed to prevent any excessive bleeding. Blood platelets help in clotting of blood.
- Blood transports oxygen, from the lungs to the tissue.
- Blood also transports carbon dioxide, from the tissues to the lungs.

Heart beat:-

The walls of the heart is made up of muscles. These muscles contract and relax rhythmically producing heart beat.We can feel the heart beat if we place the hand on the left side of the chest. The human heart beats about 70 - 80 times per minute.

Pulse/Pulse rate:- Blood flows through arteries at a high pressure causing throbbing movements called pulse.The number of pulse beats per minute is called pulse rate.The normal pulse rate is between 72 and 80 beats per minute.

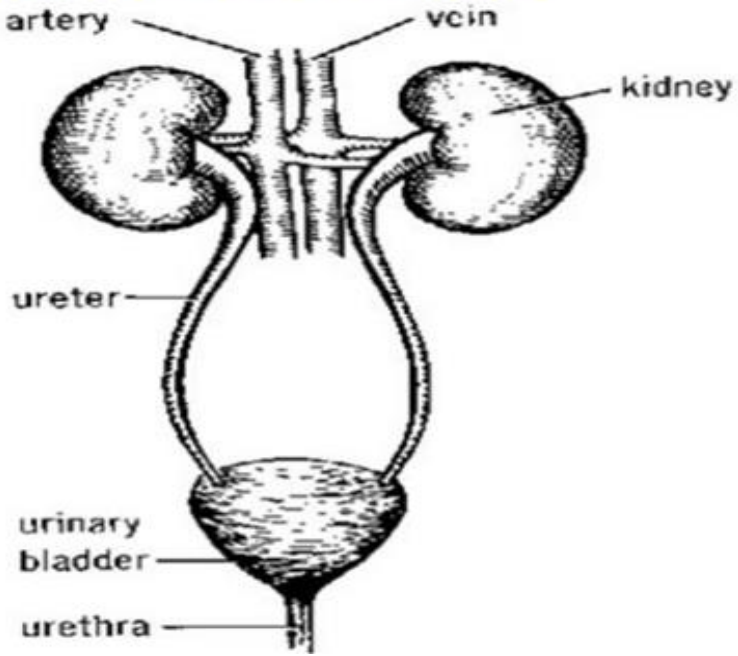
2) Excretion in animals:-

Excretion:- is the process by which waste products are removed from the body.

The Kidneys

Excretion is done by the excretory system.The human excretory system consists of kidneys, ureters, urinary bladder and urethra.

The blood brings the waste products to the kidneys. The kidneys filter the waste and removes the waste as urine. The urine passes through the ureters into the urinary bladder. From the urinary bladder the urine passes out through the urethra.



The Lungs

Carbon dioxide produced by cells during respiration is removed through the lungs by exhalation.

The Skin

The skin offers a large surface area, for losing body heat. Skin is supplied with a large number of blood capillaries and sweat glands. When there is a rise in temperature , sweat glands get activated and produce sweat. Sweating leads to cooling of the skin due to the evaporation of sweat. Small amounts of urea, salts and other metabolic waste are also eliminated through sweating.

THANKS