Gaseous Exchange in Plants:

Plants Have No organs or systems for exchange of Gases with the environment every cell of the plant body exchange gases with the environment by its own.

the leaves and the young stems have stomata in their epidermis. The gaseous exchange occurs through these stomata. The inner cells of leaves (mesophyll)and stems also have air spaces among them,which help in the exchange of gases. In young stems and leaves,some gaseous exchnage also occurs through the cuticle which is present over their epidermis

Gaseous Exchange in a Leaf

leaf cells faces two situations. During the day time when the mesophyll cells of leaves are carrying out photosynthesis and respiration side by side, the oxygen produced in photosynthesis is utilized in cellular respiration. Similarly the carbon dioxide produced during cellular respiration is utilized in photosynthesis. however, during night when there is no photosynthesis occurring, the leaf cells get oxygen from the environment and release carbon dioxide through stomata

In woody steam and mature roots, the entire surface is covered by bark which is impervious to gases or water .however, there are certain pores in the layer of bark. These are called the lenticels.the lenticels allow air to pass through them.the lenticels are slightly more raised than the general surface of stems

Gases diffuse in and out of the general surface of the young roots.the gases are found in the soil surrounding the roots.

The aquatic plants get the oxygen dissolved in water and release carbon dioxide in the water.

Practical work:

investigate the effect of light on the net gaseous exchange from Leaf

stomata are the Microscopic pores in the epidermis of leaves. They are the passageways for gases and water vapours.opening and closing of stomata controls the gaseous exchange.