Organ systems in plants

Plants do not have muscles, because the primary function of muscles is movement. The main reason that animals need to move is to find food. Plants do not need to move, because they obtain their food by photosynthesis by using substances in the air (carbon dioxide) and in the soil (water). Plants can get these materials while remaining in one place, with their leaves in the air and their roots in the soil.

Because of the difference in how plants and animals survive, plants have fewer types of tissues and organ systems than animals have. Movement in not the only difference between plants and animals. Unlike animals, plants do not need sensory organs (such as eyes and ears) to locate their food. They do not need a digestive system to break down large pieces of food into small particles for their cells to use. Also, plants do not need a nervous system to send rapid signals throughout the body and to co-ordinate movement.

Plants have only 2 main organ systems. These systems are the root system and the shoot system. The root system in a plant is located below ground. The function of the root system is to obtain water and minerals from the soil, and to anchor the plant to the ground. The function of the shoot system is to make food for the plant. At certain times, flowering plants produce a third system, for reproduction. The main organs of the reproductive system are flowers.

Plants, like humans, have tissues. Tissues in plants are responsible for many things, including the transportation of nutrients. Tissues are also responsible for connecting the organ systems of plants. Inside the plant, two types of tissues, called vascular tissues, connect the root system and the shoot system. Phloem tissue transports sugars made in the leaves to the rest of the plant. Xylem tissue conducts water and minerals absorbed by the root cells to every cell in the plant.

All cells need water and food, together with oxygen to carry out their functions. Xylem and phloem tissue usually occur together, along the length of the plant stems and roots. Both types of tissue are surrounded and supported by other tissue that gives the plant strength and has large vacuoles for storing water and food.