

Plant tissue

Business



A vascular plant (A mature plant (any plant other than mosses and liverworts), contains several types of differentiated cells.

These are of differentiated cells These are grouped together in tissues.

Some are grouped together in tissues Some tissues contain only one type of cell. Some consist of several.

cell Some consist of several ? Meristematic ? Protective ?

Parenchyma ? Sclerenchyma ? Collenchyma ? Xylem ? Phloem

Meristematic ? The main function of meristematic tissue is mitosis. The cells are small, thin walled, with no central vacuole and no specialized features.

Meristematic tissue is located in the apical meristems at the growing points of roots and stems. the secondary meristems (lateral buds) at the buds) at the nodes of stems (where

branching occurs), and in some plants, meristematic tissue, called the cambium that is found within mature stems and roots. The cells produced in the meristems

soon become differentiated into one or another of several types

Protective ? Protective tissue covers the surface of leaves and the living cells of roots and stems.

Its cells are flattened with their top and bottom surfaces parallel.

Protective tissues are usually present in the outermost layer of the plant body such as leaves, stem and roots. Parenchyma

The cells of parenchyma are large, thin walled, and usually have a large central vacuole. They are often partially separated from each other

and are usually stuffed with chloroplasts.

In areas not exposed to light, chloroplasts predominate and food storage is the main function. The cells of the white potato are parenchyma cells.

It forms, for example, the cortex and pith of stems, the cortex of roots, the mesophyll of leaves, the pulp of fruits, the endosperm of seeds. Collenchyma

These cells provide mechanical support for the plant. They are most often found in areas that are growing rapidly and need to be strengthened. The petiole (stalk) of leaves is usually reinforced with collenchyma. Sclerenchyma The walls of these cells are very thick and built up in a uniform layer around the entire margin of the cell. Often the cell dies after its cell wall is fully formed.

Sclerenchyma cells are usually found associated with other cell types and give them mechanical support. Sclerenchyma is found in stems and also in leaf veins. Sclerenchyma also makes up the hard outer covering of seeds and nuts.

Xylem Xylem cells transport water and minerals absorbed by the roots from the soil. They transport them to leaves where glucose is prepared during photosynthesis.

prepared during photosynthesis ? The hard xylem is usually on the inner side of the plant tissue. Phloem Phl ?

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In vascular plants, phloem is the living tissue that carries organic nutrients (k i t i t (known as photosynthate) in particular glucose photosynthate), in particular, glucose, a sugar, to all parts of the plant where g p f p needed. In trees, the phloem is the innermost layer of the bark.