

Both animals and plants are made up of cells. Their cells have many features in common, but there are a few significant differences. Let's look inside a leaf to take a closer look at a plant cell. First, we encounter a protective cell wall outside the plasma membrane. The cell wall is made from strong cellulose fibrils. Once inside the plant cell, we see the large central vacuole, which regulates the composition of the cytoplasm, creates the internal pressure that is characteristic of plant cells, and stores various compounds produced by the cell. Plants make their own food by photosynthesis in chloroplasts. Light passes through the two membranes of the chloroplast and strikes these green disks, where light energy is converted to chemical energy. The sugar molecules produced by photosynthesis can be made into other molecules or broken down for energy. When sugars produced by photosynthesis are broken down, their energy is used to make ATP in mitochondria. ATP powers the work of the plant cell. Most organelles, like mitochondria, are found in both plant cells and animal cells. So, the next time you pass by a plant, remember that we have more in common than meets the eye.