Breaking Down

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Cell membrane

The cell membrane is a barrier that surrounds the cell. It controls what exits and enters the cell. Every cell has a cell membrane, whether it's a plant, animal, or bacteria cell.

The Vacuoles:

The general function for these vacuoles are at some point all of theses vacuoles, no matter where they are present, they will eventually store wastes/ materials and then will eventually pump out all this waste.

Central Vacuole:

The central vacuole is present in many plant cells.
This vacuole is not present in animal or bacteria cells.
In plant cells, the central vacuole is single and large and is filled with water.
Having all this pressure in the cell, will cause the cell to increase stiffness. This increase in Stiffness allows plants to support heavy structures like flowers and leaves.
Martin & Gina

Contractile Vacuole :

Present in animal cells, not in plant or bacteria cells.
This is a special vacuole because it contracts a measured amount of water and pumps out any extra water that might have accumulated in the cell.

Food Vacuole :

This vacuole is present in both animal and plant cells, not in bacteria cells.
This vacuole stores all the waste, food, and water taken in and all of that is digested through (digestive enzymes), then is removed from the cell.

Peroxisome

The Peroxisome is a break down organelle, found in only animal cells. It absorbs nutrients, which are nourishment essentials and digest fatty acids, which are just broken down pieces of fats.

The Peroxisome works with the endoplasmic reticulum (ER) and the mitochondrial to maintain homeostasis.

Lysosomes

They breakdown carbon compounds that are also known as lipids. They also break down carbonhydrates and proteins into small molecules that can be used by the rest of the cell.

They are found in very few specialized types of plant cells.

They are also found in animal cells.

They are not found in bacteria, but the lysosomes actually digest viruses and bacteria.

Acronym: Studying Tips and Tricks

(Cell Membrane) **CM**- Circus Monkeys
(Vescuoles) **V**- Vacuum
(Lysosomes) **L**- Linen
(Peroxisome) **P**- Properly

" Circus monkeys" need to " vacuum" to take in, store, and pump out waste, food, and excess water that has accumulated in their cell. They do this "linen" so that the wastes, or carbonhydrates taken in are broken down more carefully and made into small particles. The " circus monkeys" need to do this " properly" so that no one sees them absorbing/ taking apart acids/ alcohol(wastes) that they have in their cell. All these functions need each other in order for everything to *Break Down*.

Quiz:

1- Which vacuole digests the waste, food, and or water that is taken in?

2- What is the flexible barrier that surrounds the cell?

3- Lysosomes break down_____and proteins into small molecules.