Cells always start with the cell membrane. Cell membrane controls what goes membranes. Separates all multi-cell and single-cell things from the environment. It is important so you are an entity and can stay in homeostasis. Everything tries to maintain homeostasis by metabolic reaction. Water is a transport medium. Gas is also a transport medium, but not fluid enough to move things like magnesium, and sodium. You need heavy materials and magnesium won't move through air. You need to move things in and out. The water is strong way of carrying things because it's usually neutral.

Two types of cells- Prokaryotes and Eukaryotes.

Prokaryotes-Bacteria and Archae Prokaryotic cells are smaller than your cells. Unicellar organisms that are so small that they can go into Eukaryotes. Archae means ancient. Three types Heat-loving, Salt loving and Methane making. Archae has a cell wall. The cell wall is a protector so if it has food it lives, if not it was going to die anyways but at least it has a chance. Like the coating on an m&m. prokaryotes do not need a nucleus because they are small. When the nucleotides come in for food the DNA is right there and can read it right there. In a Eukaryote, it would take too long and the nucleic acids would be all over and the nucleus is about the size of a prokaryotic cell.

Plants have a cell wall but their cell wall is not for protection it is for rigidity. The cell wall to grow against gravity cell wall made of cellulose. When the plant dies, the material goes out leaving the cell wall, this is wood.

Cytoplasm- has a cytoskeleton that gives the cell the Cytoplasm, they are transparent. In both preview page