

# THE CELL

## Study Chart

## Cell Organelle Site

| Animal / Plant | Job / Function   | Organelle    | Plant / Animal                                   |
|----------------|--|--------------|--|
| Both           | Thin and strong shape of membrane serves as a protective barrier.  | Cell Wall    | Plants, Bacteria, Fungi, Prokaryotes; NOT ANIMAL |
| Both           | Plants: wall is made of cellulose. Bacteria cell walls are made of peptidoglycan.  | Cell Wall    | Plants, Bacteria, Fungi, Prokaryotes; NOT ANIMAL |
| Plants         | Use light to form glucose molecules from CO <sub>2</sub> and H <sub>2</sub> O. Glucose is an energy STORAGE molecule.  | Chloroplast  | Plants; NOT ANIMAL                               |
| All Eukaryotes | Protective container for the cell's DNA. DNA never leaves the nucleus, but messages (mRNA) can be sent to other parts of the cell.                                   | Nucleus      | All Eukaryotes                                   |
| All Cells      | Builds proteins by putting together long chains of Amino Acids according to the mRNA message (a copy of a piece of DNA). They're everywhere, thousands in each cell. | Ribosomes    | All Cells  |
| All Eukaryotes | Powerhouse of the cell. Converts glucose into ATP, an energy molecule every reaction the cell does.  | Mitochondria | All Eukaryotes                                   |