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| --- | --- |
| **Cell or Organelle** | **True size in (um)** |
| Average Plant Cell length | 30 um |
| Nucleus  | 7.5 um |
| Nucleolus  | 2.5 um |
| Plasma Membrane |  0.009 um thick |
| Mitochondrion  | 1 um wide x 8 um long |
| Chloroplast | 2 um wide x 5 um long |
| Ribosome  | 0.025 um |
| Rough Endoplasmic Reticulum  | 0.5 um thick (vary in length. Look at diagrams for sensible size) |
| Golgi Complex | 1 um thick (vary in length. Look at diagrams for sensible size). Vesicles – diameter 1um |
| Vacuole | 50-80% of volume of cell |
| Lysosomes |  0.2-2 um circular (vary) |
| Cell Wall  | 1-2 um thick |

**The Giant 2D Cell lab**

**Method**

You and your group (total of 2-3 people) are responsible to create a diagram of an organelle to scale. Use this sheet to help you create your model.

You will also be responsible for a 1 min presentation about your organelle.  Your speeches will be presented while standing in a giant cell.

**Creating the Organelles**

The Giant Plant Cell is shaped like a giant rectangle. You have been provided with a chart of actual cell organelle sizes.

You must calculate the size of your giant organelle so that it is proportionately correct for the huge cell.  Remember um stands for micrometers.

You also need to research the function of the organelle for your short presentation.