How do the three objective lenses on the microscope you used differ and what are the advantages and disadvantages of each?

They differ in magnification

|  |  |  |
| --- | --- | --- |
| Magnification | Advantage | Disadvantage |
| 4x | Easiest for finding things | Least detail |
| 10x | Best overview | Not much more detail |
| 40x | Most detailed | Hard for finding things |

How variable were the lengths of paramecium caudatum cells relative to the lengths and widths of the cells you observed in vallisneria leaves?

Similar length, but the vallisneria cell has a shorter width

What size range did the single eukaryotic cells you examined span?

Paramecium: .1mm - .5mm

Vallisneria (length): .2mm - .8mm

Vallisneria (width): .1mm

What subcellular features did you recognize and identify in the organisms you examined?

Nucleus, cell wall (vallisneria)

Did you find any prokaryotes in the pod or aquarium water you used?

No

How would prokaryotes and eukaryotes differ when viewed with a microscope?

Prokaryotes would be smaller in size

What organisms were you able to identify in the pond or aquarium water you examined and how did they differ?

Chlamydomonas, Pandorina, Eudorina

Chlamydomonas was smaller than Pandorina which was smaller than eudorina

Table and 4 sketches

A close up of text on a whiteboard

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| Cells examined | Paramecium caudatum cells (length) (mm) | Vallisneria cells (length) (mm) | Vallisneria cells (width) (mm) |
| 1 | .3 | .2 | .1 |
| 2 | .3 | .5 | .1 |
| 3 | .4 | .6 | .1 |
| 4 | .5 | .3 | .1 |
| 5 | .3 | .2 | .1 |
| 6 | .2 | .3 | .1 |
| 7 | .1 | .6 | .1 |
| 8 | .3 | .2 | .1 |
| 9 | .3 | .8 | .1 |
| 10 | .4 | .2 | .1 |
| Average | .31 | .39 | .1 |