Mitosis Lab Supplement

**Mitosis Simulation**

Assemble two long chromosomes (one red and one yellow) and two short chromosomes.

Duplicate each of the chromosomes.

Complete the following mitosis diagrams to demonstrate the process of mitosis.

- Prophase
- Metaphase
- Anaphase
- Telophase
Mitosis Illustrations

Mitosis in Onion Root Tip

Mitosis in Whitefish Blastula

Cytokinesis in Plant Cells

Cytokinesis in Animal Cells
Relative Time Spent in Cell Cycle Phases

You can estimate the relative length of time each phase of the cell cycle takes by recording the frequency with which you find each phase in meristem regions where cell division is occurring. There are more than 60 cells in the micrograph of onion mitosis shown below. Record how many cells of each cell cycle phase you see in Table 1. Now go back and observe your slide of root tip mitosis. Using high power, count how many cells you find of each phase of mitosis in your field of view. Repeat this for two or three different fields of view.

![Micrograph of onion mitosis](image)

<table>
<thead>
<tr>
<th>Cell Cycle Phase</th>
<th>Micrograph</th>
<th>View 1</th>
<th>View 2</th>
<th>View 3</th>
<th>Total</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interphase</td>
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<td>Prophase</td>
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<td>Metaphase</td>
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<td>Telophase</td>
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</tbody>
</table>

Grand Total: