

Mitosis Models

Biology

For this assignment, you will work with a partner to create physical models of chromosomes. You will then use those models to demonstrate the process of mitosis. The final outcome of your work will be a Google Slides document showing the four phases of mitosis – each slide should show a picture of your chromosomes in the correct position for each phase, along with supplementary information that explains exactly what is happening in the cell at the time.

Here are the criteria for your models:

1. You will need to create 4 unique chromosomes out of paper, manila folders, or some other physical materials. Your chromosomes should all be replicated (two sister chromatids attached at the centromere of a chromosome) since mitosis begins after DNA has already been copied during the S phase of the cell cycle.
2. Your chromosomes need to be easily separated and re-attached (since they will be used not only for this assignment but for a future assignment as well!).
3. In the future, you will need to be able to distinguish between the sister chromatids of the same chromosome. Make sure your chromosomes allow you to do this!
4. Your presentation should have the following five slides:
 - a. A title slide with your name and your partner's name
 - b. A slide showing your chromosomes during prophase along with a written explanation of what else is happening during this stage of mitosis
 - c. A slide showing your chromosomes during metaphase along with a written explanation of what else is happening during this stage
 - d. A slide showing your chromosomes during anaphase along with a written explanation of what else is happening during this stage
 - e. A slide showing your chromosomes during telophase along with a written explanation of what else is happening during this stage
5. To make your slides, you may use your cell phone or an iPad camera to take pictures of your chromosomes; upload these pictures to your CSD Google Drive and insert them into your presentation.

Evaluate your work using the checklist below (this is how your presentation will be graded). When you are done, turn your presentation in through Showbie.

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