Project:

Mitosis vs. Meiosis Poster

NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



This TEAM Project (groups of 3 OR 2 OR by yourself0) is an assessment worth 200 points. **Learning requires practice** and the purpose of this assignment is for you to practice your understanding of two very important cell processes, Mitosis and Meiosis. I want you to be able to DESCRIBE and MODEL the similarities and differences between Mitosis and Meiosis. Projects are a reflection of your best work, take your time, and please put an extreme amount of effort toward the project. This means include color, write in pen or type the information, use a ruler when necessary, etc… You should be proud of the work you compete in this course!

**The Assignment:**

1. You will use 1 poster board for **Mitosis** and one for **Meiosis.**
2. Label the first **Mitosis** and the second **Meiosis** (make titles LARGE).

|  |  |
| --- | --- |
| Mitosis | Meiosis |

1. Begin the Mitosis and Meiosis Diagrams by drawing your **cell circles** that will represent the individual cells. Be consistent. Use something that is round and trace it or you could cut out circles of a different light color. Be consistent! All cells should be about the same size!
	* Mitosis = 7 cells (one will be one cell with the cell membrane pinching inward)
	* Meiosis = 19 cells(three will be one cell with the cell membrane pinching inward)
2. Label the cell circles with the appropriate cell phases from the Vocabulary chart below. Phase name should be neatly written or typed underneath each cell.
3. Model Mitosis and Meiosis using **pipe cleaners (or similar material) as the chromosomes.** Your poster will include the genome of an imaginary organism with only **4 chromosomes.**
4. Label all vocabulary from the table below for each section (Mitosis and Meiosis). ***PLEASE highlight all the vocabulary on your poster so I can find them easily.***
5. Write a **Description** about EACH diagram to explain the processes of mitosis and meiosis. Be specific, conduct some extra research for full credit!

**Vocabulary:**

|  |  |
| --- | --- |
| **Mitosis**  | **Meiosis**  |
| **Cell Phases** | **Vocabulary** | **Cell Phases** | **Vocabulary** |
| InterphaseProphaseMetaphaseAnaphaseTelophaseCytokinesis | Somatic Cells CentriolesSpindle fibersNucleus Sister ChromatidsCentromereChromosomesDiploid (2n)Daughter cells Chromatin | InterphaseProphase I Metaphase IAnaphase ITelophase ICytokinesis I Prophase II Metaphase IIAnaphase IITelophase IICytokinesis II | Crossing Over TetradGametesDaughter cells Homologous ChromosomesHaploid (n) |