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| Science 9 Unit Overview – Mitosis vs Meiosis |
| Unit Name: | Reproduction – Mitosis vs Meiosis |
| Duration:  | 2 Weeks |
| IRP Standards: | - Explain the process of cell division |
| Assessment Strategies | - Mitosis vs Meiosis Poster Project- Part of the Reproduction Unit and associated quiz |
| Materials  | B.C. Science Probe 9 Chapter 2.1, 2.2 and 2.3 |
| LESSON | **OBJECTIVE** | **ACTIVITIES** |
| The Cell Cycle | Ss will explain all the parts of the cell cycle | Give worksheet on the cell cycle to students for them to work on (without use of previous notes or text book)Direct teach the cell cycleAllow students to complete or correct their worksheet and do activities in the book |
| Meiosis | Ss will explain all parts of meiosis | Answer questions relating to the cell cycle Give worksheet on meiosis to students for them to work on (without use of previous notes or text book)Direct teach meiosisAllow students to complete or correct their worksheet and do activities in the book |
| Assignment | See Appendix A | Introduce to the assignment to studentsShow examples of work from students done in years pastGive students up to three periods to work on the assignment in teams of no more than two |

# Appendix A - The Assignment as Posted on the Wikipage

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| Mitosis vs MeiosisMitosis vs MeiosisNow that you have a basic understanding of what mitosis and meiosis is, it’s time to see if you can explain the similarities and differences between the two processes. In this assignment you (by yourself) are to create a cartoon that depicts the differences and similarities of meiosis and mitosis. Each person will be given a sheet of A3 paper to complete the assignment. I will give you two full classes to do the posterTeaching (including visualization, neatness, analogy, what is to be learned from the cartoon): /3Included Information: /1ð Similarities and differences between mitotic an meiotic cell divisionð Number of cells produced ð Number of chromosomes in daughter cellsð Explains the biological difference between the twoMitosis and Meiosis and stages explained: /1 (half mark each)I also give a full .5 mark bonus to the best looking poster and .25 bonus for the second nicest looking. Thus, it is possible to get 5.5/5.The assignment is due October 19th. Good luck!Questions to answer at the end of this projectHow did you ensure that all members have done equal workDoes everyone in your group understand DNA and protein synthesis? How do you know?What went well in your group? What didn't?What would you do differently for the next time?Would you work with these partners again on a different project? Why or why not?Links to help you get started[http://learn.genetics.utah.edu](http://learn.genetics.utah.edu/) - A great overall website to see what DNA looks like and how to make proteins<http://videos.howstuffworks.com/hsw/12588-the-science-of-life-rna-and-protein-synthesis-video.htm> - Contains a video on how proteins are made<http://www.cellsalive.com/> - May help with questions on what DNA looks like and parts of the cell

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|  | Unsatisfactory 1 mark  | Satisfactory 2 marks  | Good 3 marks  | Excellent 4 marks  |
| Required Information and all instructions followed | Only one or two requirements | 3 or 4 requirements | 5 or 6 requirements | All requirements |
| Appropriate detail and depth of knowledge | some details of the topic provided | either too much or too little detail | depth of content is appropriate for the audience | appropriate depth makes the presentation memorable |
| Organization of presentation | ideas presented in no particular order | most ideas‘flow’from one to another | ideas are presented logically | presentation leads the audience to a thorough understanding |
| Visual impact | few images provided and explanations are sketchy | poster has images, colour and some explanation | images and explanations are related and easy to see | explanations well supported by images ‐ poster captures attention of audience |
| Creativity in poster and presentation | little imagination throughout the presentation | examples used explain the topic poorly | examples or extensions relate well to the topic | examples and extensions are exceptionally relevant |

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