



Cells: Our Building Blocks

A web quest introduction to eukaryotic cells and their role in our human body.



Web quest Introduction

During this activity you will:

1. Define eukaryotic cells and identify components of eukaryotic cells.
2. Explain how an actual eukaryotic cell functions in our human bodies.
3. Research and explain a cellular disease.



Introduction continued

You may use internet resources, journals, peer reviewed documents, books, or any other reliable source in your QUEST for knowledge.



Task

- Share information in a threaded discussion that will be posted following this activity.
- Prepare a one page informative document about a cell type found in the human body that includes a graphic image or model of the cell.
- Research a cellular disease with a partner and prepare a PowerPoint presentation that consists of 12-15 slides.



Questions

- The following slides contain three different categories of information. Use all available resources to answer each question.

(It will be helpful if you keep notes for yourself with references.)



Eukaryotic Cells

- Definition: What characteristics define eukaryotic cells and differentiate them from prokaryotic cells?
- Organelles: What are the primary organelles of a eukaryotic cell and what are their typical functions? (Identify at least 7)



Cells in Our Body

- Identify at least 5 different types of cells found in the human body. (Many actual images can be found on the internet.)
- Choose one cell type and explore its function, size, location, and content. How is its structure related to its unique function?



Cellular Diseases

Many diseases originate at the cellular level. For example, sickle cell anemia and malaria are diseases of red blood cells.

- With your partner decided on a cellular disease. What are the cause(s) of the disease and its effect on the body? What internet information and resources are available for those who have this disease?



Helpful Internet Resources

General information:

- <http://library.thinkquest.org/3564/> (A great starting place)
- <http://ampere.scale.uiuc.edu/~m-lexa/cell/cell.html>
- <http://www.accessexcellence.org/index.html>
- http://www.biology.arizona.edu/cell_bio/cell_bio.html
- <http://www.bioanim.com/CellTissueHumanBody3/index.html>
- <http://esg-www.mit.edu:8001/esgbio/cb/cbdir.html>
- <http://www.kumc.edu/instruction/medicine/anatomy/histoweb/>
- <http://personal.tmlp.com/Jimr57/>
- <http://www.letsfindout.com/>
- <http://www.cbc.umn.edu/~mwd/cell.html>
- <http://www.cellsalive.com/> (AWESOME GRAPHICS)



Resources continued

- <http://whyfiles.news.wisc.edu/cgi-bin/htsearch>
- <http://www.ucmp.berkeley.edu/glossary/glossary.html>

Disease Information

- <http://www.gohamptonroads.com/community/groups/SickleCellAssociationInc/>
- <http://www.letsfindout.com/>
- http://www.ils.nwu.edu/~e_for_e/nodes/NODE-291-pg.html
- <http://www.curtis1.com/>
- <http://whyfiles.news.wisc.edu/cgi-bin/htsearch>

Don't let your search for information end with these resources!!



Evaluation

You will be graded on

- Accuracy of information
- Depth of knowledge about the topics you choose
- Organization of summary and PowerPoint presentation



Conclusion

- After completion of this exercise you should
- *be able to identify and define eukaryotic cells
 - *be aware that cells come in a variety of shapes and sizes according to their function
 - *be aware that many of our human diseases begin at the cellular level
 - *gain insight into the wealth of valuable and accurate knowledge available on the www



Have fun and explore,
explore, explore!!!

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