

The purpose of this assignment is to familiarize you with the different parts of a eukaryotic cell. **This assignment is worth 50 points and is due no later than 8:10 A.M. on 18 February 2010.** Your answers must be typed and submitted in your folder or you will receive a grade of zero on this assignment. Late papers will be penalized 20% per day or portion of a day late (Turning in your paper at 8:11 A.M. on 18 February 2010 is considered a portion of a day). You must also submit an electronic version of your assignment using your **Shepherd University** e-mail account. Use the following format to name your file: initials of first and middle names, first two initials of your last name, OCA 1. For example if I were submitting a paper I would name his file CJNOOCA1. This electronic copy will allow me to submit the papers to Turnitin for plagiarism checking.

I will be happy to help you by answering any questions that you may have regarding portions of the assignment. In addition I will be happy to read any papers in advance and make comments about the paper prior to 1 February 2010. If you would like me to review and comment on your paper please send your draft to me electronically at cnolan@shepherd.edu. I will attempt to return your paper with comments within four (4) *working days*. I would prefer that you use 1.5 line spacing, 11 or 12 point font and margins between 0.5 and 1 inch.

In this assignment you will take your reader on a journey through a cell. The cell must be a specific cell rather than a generic cell. For example, the cell may be a nerve cell in a squid, a skin cell on a human nose, a cell in a mushroom cap or a leaf cell in a daisy. By no means should you limit yourself to just these specific examples. Once you decide upon a cell type, then you must creatively shrink yourself and legitimately enter this cell. This means that you must consider how materials normally enter and leave this cell and enter accordingly. You will describe at least ten structures/organelles as vividly as you can, trying to incorporate two or more senses. Don't just describe what it looks like, but what it sounds, smells and feels like wherever possible. Use your imagination. Connect this description to the job that this structure/organelle does in this cell. Remember that structure often informs function in biological systems. Use analogies where possible to help your reader to relate this new environment to what they might already know. Point out what you want your reader to see—don't leave them guessing what you intend the analogy or comparison to show. In your journey, show how the described parts relate to one another in the working of this cell—these make great transitions from one part to another. Remember that even though this is a specialized cell, it must contain certain organelles to maintain life. The relative numbers of certain organelles often vary, but most organelles described in Chapter 4 (pages 56 – 78) will be present in most cells. When your journey is complete, you must exit the cell in a biologically feasible manner. Set your essay as a story. Write a short introduction and a short conclusion. This essay is as long as it needs to be, but try to be concise.

Do not copy verbatim from your textbook or any other source. Any information you use from a source other than your textbook must be cited. You may do this by simply putting the author(s) last name(s) and the date in parentheses behind the relevant material: for example, (Gray and Coates, 2005). At the conclusion of your essay, the relevant bibliographic information should be included. Some sample citations are:

Book:

Nybakken, J.W., Bertness, M.D. 2005. *Marine Biology: An Ecological Approach*, sixth ed. Pearson Education, Inc., CA, pp. 25-31.

Article from a book:

Thompson, S.N. 1997. Physiology and biochemistry of snail-larval trematode relationships. In: *Advances in Trematode Biology* (Fried, B., Graczyk, T.K., eds.). CRC Press, NY, pp. 149-195.

Format for Journal References:

Twombly, S., Burns, C.W. 1996. Effects of food quality on individual growth and development in the freshwater copepod *Boeckella triarticulata*. *J. Plankton Res.* 18: 75-82.

Woodin, S.A., Lindsay, S.M., Wetthey, D.S. 1995. Process-specific recruitment cues in marine sedimentary systems. *Biol. Bull.* 189: 49-58.

The assignment will be graded using the following rubric:

Introduction/Conclusion with biologically relevant entrance and exit (15 points)

Points Earned =

Content (30 points)

For each of 10 structures/organelles: description and function (2 points each; 20 points total)

Points Earned =

Connections/relationships between organelles (5 points)

Points Earned =

Use of analogies/relationships to common experiences (5 points)

Points Earned =

Mechanics—Organization, Sentence Structure, Spelling, Punctuation (5 points)

Points Earned =