Cell Assignment

Biol-1, revised Spring 2016

Like most other assignments in this course, this assignment will be graded as follows:

Check-minus:	Approaches expectations.
Check:	Meets expectations. Full credit.
Check-plus:	Exceeds expectations. (A check-plus can compensate for a check-minus.)

Expectations for assignments

- Respond meaningfully to every part of the assignment.
- Respect your own ideas enough to present them professionally and clearly. Consider grammar, spelling, appropriate terminology, and appearance. Complete sentences are not always necessary.
- May be typed or clearly handwritten. Double-sided printing is encouraged.
- If you generate multiple pages, simply staple them together rather than using a cover.

Materials needed

- Access to course website
- One to two hours of your time

Objectives

- Become familiar with major parts of cells and their functions.
- Exercise your creativity.

Assignment prompts

Discover and learn about basic parts of cells. Be sure to find out about these structures: cell wall, cell membrane, nucleus, ribosomes, smooth and rough endoplasmic reticulum, Golgi apparatus, lysosomes, vacuoles, flagella, cilia, mitochondria, and chloroplasts.

Now you have two options:

Option 1:

- Pick a specific environment that is interesting to you. Possible examples include: the bottom of the ocean, under a leaf in a rainforest, a cave, on the wing of a butterfly… There are so many options!

- Design a cell that is uniquely suited to the environment you've chosen. Use all the structures listed above, but modify them to serve particular needs. Consider their size, position, number, or any other quality.

- Draw a labeled diagram showing and explaining your ideas.

Option 2:

- Consider the parts of the cell listed above. Come up with an analogy to explain the functions of each part. One popular example describes the cell as though it is a factory, with the nucleus acting as a central office, ribosomes as production workers, and the Golgi as a packaging and labeling center.

- What is a different way to describe the functions of the cell? Any analogy can work, as long as you are able to justify your choices for each structure.

- Draw or describe your analogy, with explanations to justify your choices.