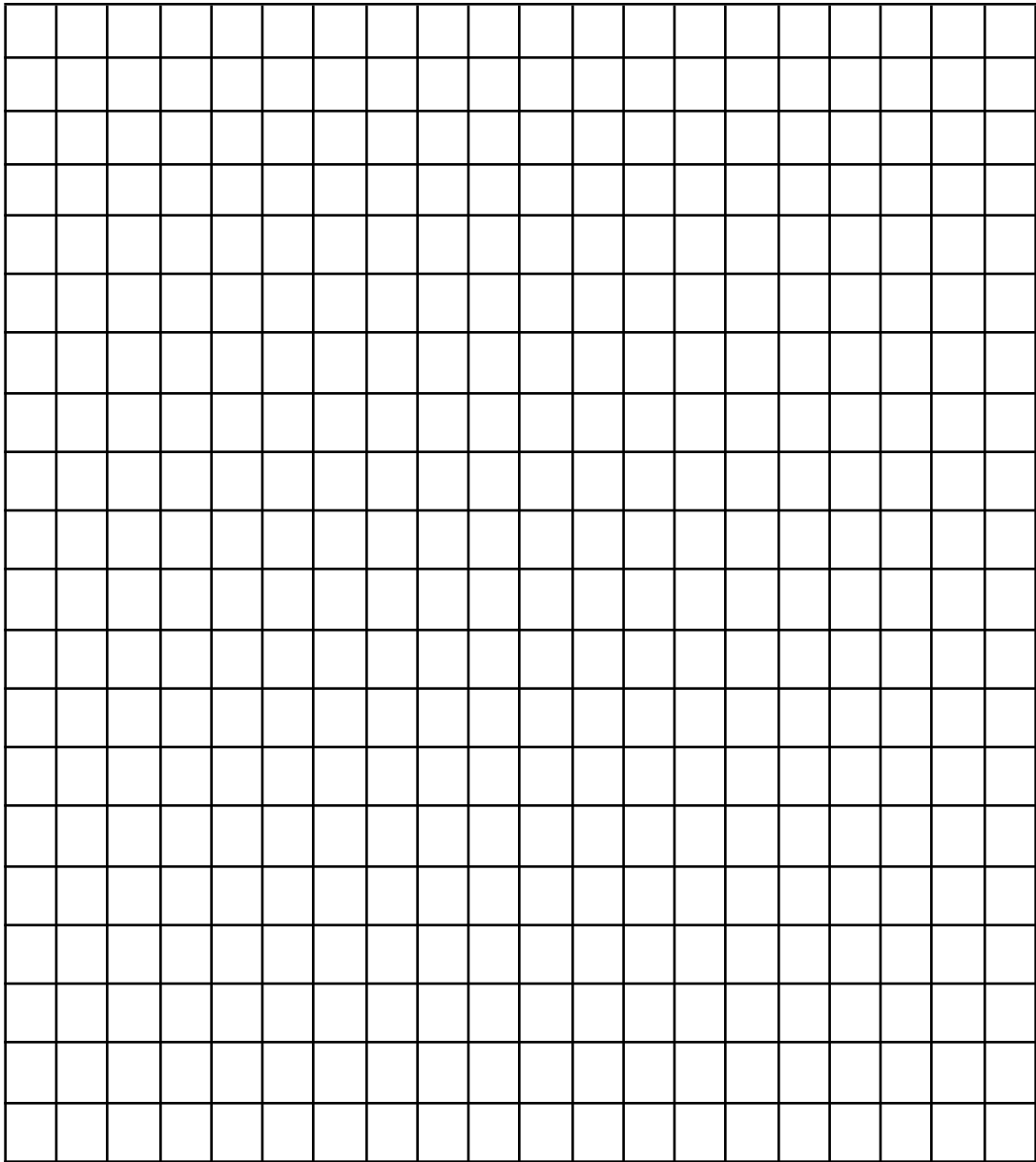


Unit 1: Graph Activity: Cells and Organelles

A researcher samples two different kinds of cells in humans- a muscle cell and a skin cell. The researcher counts the number of mitochondria, nucleus, Golgi apparatus, lysosomes, ribosomes in each cell type. Make a “double” bar graph (so you need two different colors or two different shading styles) to compare the amounts of organelles in each kind of cell. (10 pts)

Type of cell	Amount of each kind of organelle				
	Mitochondria	Nucleus	Golgi Apparatus	Lysosomes	Ribosomes
Muscle Cell	17	1	5	8	22
Skin cell	5	1	3	7	15



Using sentences and

complete in your own words, explain which kind of cell—muscle or skin cell—makes more protein than the other? Support your claim with evidence and reasoning. _____

Graph Rubric (10 pts; each bullet is 1 point)

- Correct graph type is used
- Graph has a title that is DESCRIPTIVE
- Axes are correctly oriented
- Axes have titles
- Axes have units, when appropriate
- Scales on both axes are **consistent** (includes having the “squiggle” when cutting numbers, counts by consistent number of boxes)
- Scales on both axes are appropriate/graph is spread out/uses space
- Key is present (when appropriate); dots connected (when appropriate)
- Data is plotted correctly (includes- does not connect to zero if not given data for zero)
- Other: Point taken off for _____

LATE WORK ADDITION: If this paper is not turned in on time, complete the following questions in addition to the work above. No credit will be given if the answers below are not fully completed.

1. Using complete sentences and in your own words, describe what the functions of the mitochondria, nucleus, golgi apparatus, lysosomes, and ribosomes (10 pts)
2. Using complete sentences and in your own words, describe a possible reason that the number of cell structures in the muscle cell differs from the number of structures in a skin cell. Describe why there would be differences and what effect those differences would have on an organism. (10 pts)