

Human System Cell Comparison

Objective:

To investigate how actual cells differ from the generic animal cell, based on the function they need to perform within their larger body system.

Procedure:

Students will select a system in the body and research one cell with in that system.

- Cell purpose, what role does that cell perform and how does that fit into the larger system.
- Cell structure, including organelles
 - Nucleus, Cytoplasm, Cell Membranes, Vesicles, Lysosomes, Cytoskeleton, Ribosomes, Endoplasmic Reticulum, Golgi Apparatus, and Mitochondria

Students will create a visual model of the cell to compare to a uniquely created generic cell model.

Student will highlight the differences in structure, and describe how those differences account for the cell in the role within its system.

Human System Cells Rubric (40)		Awesome 5	Good 4	Good Enough 3	Not Good Enough 2	Cells are Bad 1
Processing and Evaluating	Generic Eukaryote Model	There is a clear, accurate, and unique model of a Generic Animal Cell. It includes all 10 structures listed above, with additional structural details relevant to the body cell.	There is an accurate and unique model of a Generic Cell. It includes all 10 structures listed above	There is a unique model of a Generic Cell. It includes most structures listed above	There is a model of a Generic Cell. It includes most of the cell structures listed above	There is an attempt to model a Generic Cell.
	Body Cell Model	There is a clear, accurate, and unique model of a Specific Body System Cell. It includes all key structures and Identifies unique and missing structures.	There is an accurate, and unique model of a Specific Body Cell. It includes all key structures	There is a unique model of a Specific Body Cell. It includes most key structures	There is a model of a Specific Body Cell.	There is an attempt to model a specific system
	Model Clarity	Models are in color well designed with labels and are clear and unique. Model shows creativity beyond simple communication	Models are in color well designed with labels and are clear and unique	Models are clear include labels and unique	Model is unique	There is a model
	Works Cited	There are at least 4 sources in APA or MLA format. Including Endnotes or footnotes	There are at least 4 sources in consistent formatting. Including Endnotes or footnotes	There are at least 4 sources.	There is more than 2 sources.	There is a source.
Processing and Evaluating						17/20
U	Cell	Differences in the	Differences in the	Differences in	Differences in	Some

s i n g K n o w l e d g e	Differences	Generic and Body Cell are clearly and concisely included. Includes all structures that are missing or changed in the Body Cell and structures that do not appear in the generic cell.	Generic and Body Cell are clearly included. Includes most structures that are missing or changed in the Body Cell	the Generic and Body Cell included. Includes structures that are missing or changed in the Body Cell.	the Generic and Body Cell included.	differences in the Generic and Body Cell included.
	Body System	The system of the body the chosen cells is from is clearly and directly stated	The system of the body the chosen cells is from is directly stated	The system of the body that the cells is from is included	The system of the body that the cells is from is implied	The cell is from a system
	Body Cell Function	There is a clear concise and accurate description of the function of the specific cell within the system of the body.	There is a clear and accurate description of the function of the specific cell within the system of the body.	There is an accurate description of the function of the specific cell within the body. Or an accurate description of function of the system	There is a description of the function of the system	There is an attempt to describe the function of the system
	Structures in function	There is a clear and concise argument for how the specific structures and changes might affect the function of the Body Cell in its system	There is a clear argument for how the specific structures and changes might affect the function of the system	There is an argument for how the specific structures might affect the function of the system	Student connects the function to the structures	Student does not connect structures to the function of the cell
	Using Knowledge					