

Name: _____ Date: _____ Section: _____

Cell Specialization Project

In class we looked at many different types of cells (red blood cells, amoebas, plant cells, and muscle cells) and saw how the structures of these cells allowed the cell to perform a specific function. In the human body there are many different types of cells. These different cell types have to work together so that you can perform simple life processes such as moving, thinking, and eating. In order for that to happen, each cell must be uniquely suited to perform a particular function in an organism, this is called **cell specialization**. For example, some cells are specialized to move, some cells are specialized to react to their environment and some cells make certain products that your body needs.

Each student will choose a different cell type. You will research this cell and find out what is its primary function and what specialized structures or features (like shape or size) does this cell have to help perform this function. You will make either **a poster or a model** displaying this information.

The poster or model must include:

- **A title – what the cell is**
- **A description of the primary function of the cell**
- **A detailed drawing of the cell**
- **At least three labeled unique features or structures of the cell**
- **Descriptions next to each structure or feature that explain how they allow the cell to perform its primary function**
- **Citations for at least two sources**

Cell Types

- Nerve cells (neurons)
- Red blood cells
- White blood cells
- Bacteria cells
- Paramecium
- Amoeba
- Euglena
- Plant cell

Challenge

- Muscle cells
- Skin (Epithelial) cells - Epidermis
- Rod cell – a type of eye cell
- Platelets

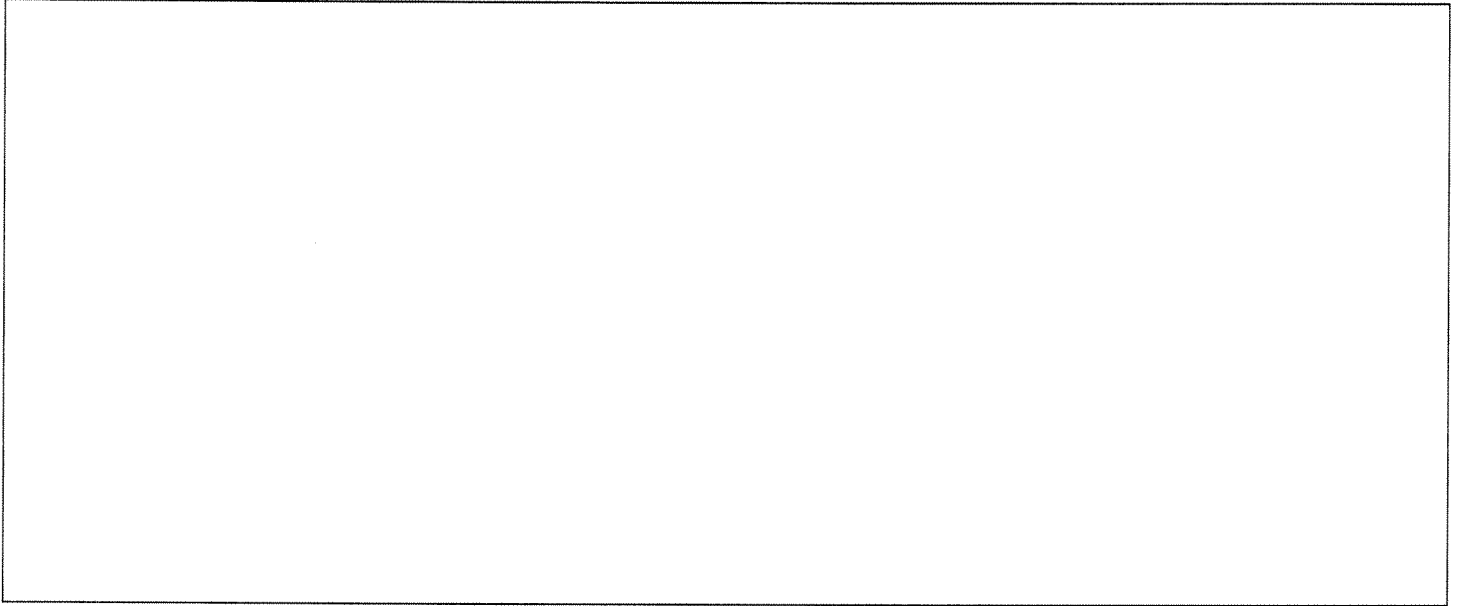
My cell type is : _____

The project is due: _____

Cell type: _____

Primary function of the cell: _____

Sketch of the cell – include all important and identifiable unique cell structures or features



Cell Structures or Features (that are unique to this cell type)	Function (explain how these structures or features help the cell perform its primary function)

Project : Cell Specialization

Teacher Name: **Mrs. King**

Student Name: _____

CATEGORY	4	3	2	1
Description of Cell's Primary Function	Detailed description explaining the cell's primary function.	Description explaining the cell's primary function lacks at least one important detail.	Brief description explaining the cell's primary function, lacks many important details.	Unclear or no description explaining the cell's primary function.
Labeling Cell Structures	The poster or model labels all identifiable cell structures.	The poster or model labels the important cell structures.	The poster or labels some of the important cell structures.	Several important cell structures are not labeled.
Cell Type Drawing/Model	Drawing or model is very clear, colored, a good size and detailed.	Drawing or model is clear, colored, an adequate size, and some details are missing.	Drawing or model is unclear, adequate size, lacks color, and some necessary details are missing.	Drawing or model is poorly done, not colored, too small, and many important details are missing.
Descriptions of Cell Structure #1	The function of the cell's structure is defined, described in detail, and connected back to the cell's primary function.	The function of the cell's structure is defined but is not described in detail or connected back to the cell's primary function.	The function of the cell's structure is defined but is not described in detail and not connected back to the cell's primary function.	The function of the cell's structure is only defined or missing.
Descriptions of Cell Structure #2	The function of the cell's structure is defined, described in detail, and connected back to the cell's primary function.	The function of the cell's structure is defined but is not described in detail or connected back to the cell's primary function.	The function of the cell's structure is defined but is not described in detail and not connected back to the cell's primary function.	The function of the cell's structure is only defined or missing.
Descriptions of Cell Structure #3	The function of the cell's structure is defined, described in detail, and connected back to the cell's primary function.	The function of the cell's structure is defined but is not described in detail or connected back to the cell's primary function.	The function of the cell's structure is defined but is not described in detail and not connected back to the cell's primary function.	The function of the cell's structure is only defined or missing.
Attractiveness	The poster or model is exceptionally attractive in terms of design, layout, and neatness.	The poster or model is attractive in terms of design, layout and neatness.	The poster or model is acceptably attractive though it may be a bit messy.	The poster or model is distractingly messy or very poorly designed. It is not attractive.

Spelling and Grammar	There are no errors in spelling, punctuation or grammar.	There are 1-3 errors in spelling, punctuation or grammar.	There are 4-5 errors in spelling, punctuation or grammar.	There are more than 5 errors in spelling, punctuation or grammar.
Use of Class Time	Used time well during each class period. Focused on getting the project done. Never distracted others.	Used time well during each class period. Usually focused on getting the project done and never distracted others.	Used some of the time well during each class period. There was some focus on getting the project done but occasionally distracted others.	Did not use class time to focus on the project OR often distracted others.
Cited Sources	Source information collected for all information. All documented in desired format. At least two sources were used.	Source information collected for all information. Most documented in desired format. At least two sources were used.	Source information collected, but not documented in desired format. At least one source was used.	Very little or no source information was collected.

Comments:

Self-Score: _____

Total Score: _____