

Designer Cell Challenge

The shape of a cell reveals its function. Designing a cell will allow you to begin to think about the relationship between a cell's structure, its function and how it interacts with cells around it.

Specialized cells vary widely with respect to:

- shape, size, number of organelles, types of organelles



Challenge:

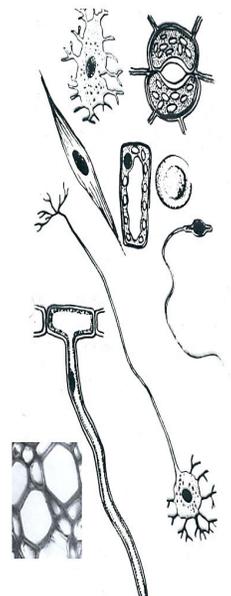
1. Design a cell with a **NEW** function.
2. Determine the shape, size, and organelles needed for your cell to perform this **NEW** function
3. Create a drawing of your cell

Diagram & Design Requirements:

- Title of where the cell is found (*ie Animal Cell, Fish cell, flower cell...*) and its unique function.
- Cell should include organelles covered in class **and researched** structures/organelles.
 - You should include and combine parts from other specialized cells.

Written Requirements: **TO BE COMPLETED INDIVIDUALLY**

1. What is the unique **function** of your cell and why is this function desirable for an organism? ②
*List of Features → (more, longer, larger.... **NOT WHY PRESENT**)*
2. What special features does your cell contain? ②
*List of Features → (more, longer, larger.... **NOT WHY PRESENT**)*
3. How is the structure of your cell related to its function? ④
ie. **How** do these special features make it suited for its function?
Why does it have more or less of certain organelles?



Name: _____

Partner: _____

Diagram & Design	
Organelles are clearly indicated including correct size, shape, and location.	/5
Researched parts for specific function are clearly indicated, including where normally found.	/4
Function of unique/researched organelles	/2
Professionalism (neat, carefully constructed, planning evident...)	/5
References (website link acceptable)	/2
Written Answers – Completed Independently	
Describe the function of your cell and why function is desirable.	/2
List of special structure(s)	/2
How do these special features make it suited for its function?	/4
Total	/26

Designer Cell Challenge

Name: _____

Partner: _____



Where is cell found? _____

What is its NEW Function? _____

Organelles Covered In Class:

- | | | |
|---------|---------|---------|
| ○ _____ | ○ _____ | ○ _____ |
| ○ _____ | ○ _____ | ○ _____ |
| ○ _____ | ○ _____ | ○ _____ |

Added/Researched Organelles:

- | | |
|------------------|--|
| ○ _____ | Type of cell that normally has this organelle: _____ |
| Function: _____ | |
| Reference: _____ | |
| ○ _____ | Type of cell that normally has this organelle: _____ |
| Function: _____ | |
| Reference: _____ | |