

NAME: _____

**3-D Cell Model Project
(100 points)**

Project Due: FRIDAY DECEMBER 7TH

- Objective: By making a 3-D model and researching the cell, the student will become aware of the various organelles and structures, which make up a plant or animal cell.

Guidelines:

Part 1: 3-D Model (80)

- You may choose to make either a plant or animal cell.
- Your cell **must be 3-dimensional**. This means it needs to have a front, back, and sides. It cannot be a piece of paper with things glued on it. **Your plant cell must be rectangular/your animal cell must be circular.**
- All parts of your cell **must be labeled** clearly in order to receive credit. LABEL one side of pinned "flags" with the name of cell structure and the FUNCTION of each structure written on the back of the flag.
- Make sure that your cell has a FLAT NOT round bottom so it will sit on a table or shelf.
- Your representations of the **organelles must be similar to the ones seen in your diagrams**: for example, your nucleus cannot be square. Use diagrams for plant and animals cells that we have gone over in class.
- **Be unique and creative**, yarn, clay, Styrofoam, and anything else appropriate that you can think of, in any combination. **ABSOLUTELY NO KITS OR MODELS ALREADY MADE.**
- **NO FOOD ITEMS MAY BE USED IN THE CONSTRUCTION OF YOUR CELL MODEL!**
- **BE CAREFUL WITH USING CLAY OR PLAY DOUGH AS THE CELL WILL BE TOO HEAVY OR NOT STAY TOGETHER!**

Part 2: Writing Assignment-Resume (20)

- In many ways, a cell is like a factory or manufacturing plant. The employees of a factory work to create specific products and maintain the factory's viability, just as the organelles of a cell work to meet its varied needs. In the workplace, the responsibilities and roles of each employee are specified in a formal document, called a job description.
- Select 10 cell structures from your 3-D model. Image that the cell structures are looking for a job within a company. Create a short resume for each cell structure. You must identify the cell structure, the job title within the company it would interview for and write description of the job/skills it can do. Be creative but make sure your information is accurate. Must be neat.

***YOU MUST COMPLETE BOTH PARTS ORDER TO RECEIVE A GRADE. YOU CANNOT JUST DO ONE PART. I WILL ONLY EXPECT THE PROJECT WHEN BOTH PARTS ARE COMPLETED.**

***SINCE THIS IS AN EXTRA CREDIT ASSIGNMENT, THEY WILL NOT BE ACCEPTED AFTER THE DUE DATE WHICH IS DECEMBER 7TH. NO EXCEPTIONS**

You will use the attached rubric to make you earn all the points. You will turn your copy of the rubric when you turn in your 3-D model and writing assignment.

Name: _____

Period: _____

Date Turned in: _____

3-D Cell Model Project Rubric

Cell Structure for Plant	Label 2 pt	Function 2 pt	Total 64 pt
Cell Wall			
Cell Membrane			
Cytoplasm			
Nucleus			
Nucleolus			
Nuclear Envelope			
Smooth ER			
Rough ER			
Ribosomes (Floating and attached to ER)			
Golgi apparatus			
Central Vacuoles			
Mitochondria			
Chloroplasts			
Cytoskeleton			
Vesicles			
Chlorophyll			
Organelle Present Label Total			
General Project Guidelines			Total 16 pt
Plant cell is not square (8 pts)			
Appearance (8 pts)			
General Project Guidelines Total			
Writing Assignment-Resume			Total 20 pt
10 Cell Structure/Job title (1 point each)			
Description (1 point each)			
Writing Assignment Total			
Overall Project Total			

Name: _____

Period: _____

Date Turned in: _____

3-D Cell Model Project Rubric

Cell Structure for Animal	Label 2 points each	Function 2 points each	Total 64 point
Cell Membrane			
Lysosomes			
Cytoplasm			
Nucleus			
Nucleolus			
Nuclear Envelope			
Smooth ER			
Rough ER			
Ribosomes (Floating and attached to ER)			
Golgi apparatus			
Vacuoles			
Mitochondria			
Centrioles			
Cytoskeleton			
Vesicles			
Cilia or Flagella			
Organelle Present Label Total			
General Project Guidelines			Total 16 pt
Animal cell is not round (8 pts)			
Appearance (8 pts)			
General Project Guidelines Total			
Writing Assignment-Resume			Total 20 pt
10 Cell Structure/Job title (1 point each)			
Description (1 points each)			
Writing Assignment Total			
Overall Project Total			