Cell Model Project

Due Date: The completed model with function key (below) is due in class on **Wednesday, March 12**.

Requirements:

1. **Model**: Make a model of an animal **or** plant cell including all organelles (applicable to that type of cell) listed below.

2. **Identification/Labeling**: The cell type (plant or animal) must be labeled. All cell organelles must also be labeled. Identification of organelles may be done by numbering or using flags made of toothpicks stuck in the appropriate organelle. The name of the organelle may be written on the flag or a number may be used which corresponds to the key. This is just a suggestion. Other simple and clear identification methods may be used,

3. **Function Key**: You MUST complete a typed key (below) for your model. If you need to make it bigger, please do so. The organelles must be listed and identified by the numbers or flags on your model. Include a brief explanation of the function of each organelle and an explanation of how your material in the model is a good representation of the organelle. (*ex. Plastic bag represents cell membrane because the membrane is like a bag*.)

4. **Getting started:** Choose an animal or plant cell for your model. Think of and gather materials that would best represent the different organelles. Complete the key of the organelles and their functions before you make the model. If an organelle is not present in your cell, put NA next to it on the list.

Do your best to use what you have at home. Do not make this into an expensive project! Ex: wood, buttons, yarn, thread, food (noodles, vegetables etc), candy, plastic, paper, Styrofoam, cardboard, boxes, bags, pipe cleaners, etc.

Extra credit (1-5 points) will be earned for using recycled or biodegradable materials rather than purchasing or using "new" materials.

See the rubric below. Please see me if you want to create an illustration rather than a model.

Submit only pages 2 and 3 by the due date with your model. You may submit them electronically or by hard copy.

Name _____ Period _____ Date _____

Function Key for Cell Model

Type of Cell:			
Organelle	Identifier/ Label	Function	Represented in Model by _____, because _____.
Cell Membrane			
Cell Wall			
Cytoplasm			
Nucleus			
Nucleolus			
Nuclear Envelope			
Mitochondria			
Golgi Body			
Rough Endoplasmic Reticulum			
Smooth Endoplasmic Reticulum			
Ribosome			
Lysosome			
Large Central Vacuole			
Small Vacuoles			
Vesicles			
Chloroplast			
Centriole			

Rubric

CATEGORY	**6**	**5**	**4**	**3-1**
Construction - Materials	Creative and unique materials were selected and creatively modified in ways that made them even better.	Creative and unique materials were selected and there was an attempt at creative modification to make them even better.	Appropriate materials were selected and organelles' structure and function were somewhat represented.	Inappropriate materials were selected and contributed to a product that did not represent structure and function of organelles.
Organelles size and shape	Each organelle is a characteristic size and shape that represents the organelle's structure and function.	1-2 organelles are designed inappropriately or may have disproportionate shapes. Or 1-2 organelles may be missing from model.	3-6 organelles are designed inappropriately or may have disproportionate shapes. Or 3-6 organelles may be missing from model.	Construction appears careless or haphazard. Many details need refinement for a strong or attractive product. More than 7 organells missing from model.
Spelling	No spelling errors exist.	1-2 spelling errors exist in organelle names and functions.	3-6 errors in spelling exist in organelle names and functions.	7 or more spelling errors exist on cell model project.
Organelle function	Function of all organelles is accurate and appropriate for cell type.	Function of 1-2 organelles is inaccurate.	Function of 3-6 organelles is inaccurate.	Function of 7 or more organelles is inaccurate.
Labels	All organelles are correctly labeled with correct function. Labels are typed or neatly hand printed.	1-2 labels missing either name of organelle or function. 1-2 labels may be misplaced. Labels are neatly handwritten or typed.	3-6 labels missing either name of organelle or function. 4-7 labels may be misplaced. Labels are not neatly handwritten or typed.	7 or more labels missing either name of organelle or function. 8 or more labels may be misplaced. Handwriting on labels is indecipherable.