Life Science—*Cell Models Project*

DUE DATE:

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***Turn this paper in with your project!***

In order to visualize the 3-Dimensional structure of the smallest unit of life, Biology students build their own models of a single cell. Each student makes either a plant or animal cell and uses whatever materials they choose to depict their cell. The requirements of the assignment concern the accuracy of the cell’s structure, the correct labeling of the cell parts, and a corresponding key that includes the functions of each cell part.

**Requirements**:

1. MODEL: a model of an animal or plant cell will be made, labeled with the following organelles (where appropriate):

\_\_Cell membrane \_\_Cytoplasm \_\_Chloroplast \_\_Nucleus

\_\_Mitochondria \_\_Vacuole \_\_Cell Wall

2. LABELING: The cell type (plant or animal) should be labeled. All cell organelles and parts of the cell membrane should also be labeled. Identification of organelles should be done using flags made of toothpicks stuck in the appropriate organelle. The name of the structure can be written on the flag or a number can be used which corresponds to a key of the structures.

3. FUNCTION KEY: You must include a key for your model. The organelles should be listed and identified by the flags on your model. You should also include a brief explanation of the function of each organelle in your key.

**Suggestions for Getting Started:**

1. Decide if you want to make an animal or plant cell for your model. Think of materials that would best represent the different organelles.
2. Make a key of the organelles and their functions before you make the model.
3. Materials used to represent organelles may include anything. I suggest you *use what you have at home*. Do not make this into an expensive project!
   1. Ex: Wood, buttons, yarn, thread, food (noodles, vegetables, etc.), candy, plastic, paper, Styrofoam, etc.
4. Use your time wisely and plan ahead of time. We will be sharing these in class!

The scoring guide is on the back, so you have an idea of how the scoring will occur.

\*\*For additional information and visual examples of this projects (click on requirements to view the details of the lesson), visit this website:

<http://coldwater.k12.mi.us/nicholsk/courses/chs/Bio/cell/01-02/cellmod.htm>

 

**Scoring Guide:**

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| **GRADING** | **TOTAL POINTS POSSIBLE** | **POINTS**  **EARNED** |
| Correctly Labeling Organelles  (5 points each) | 35 |  |
| Function Key of Organelles (5 points each) | 35 |  |
| Correct Model of the Cell Membrane | 10 |  |
| Correctly Indicating Plant or Animal Cell | 5 |  |
| **TOTAL POINTS:** | **80** |  |

 