Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3-D Cell Model

Objective: Make a 3-D model of a cell.

Guidelines:

1. You may choose to make a plant or animal cell.
2. Your cell must be 3- dimensional with front, back and sides.
3. The model may be edible or non-edible
4. All parts of your cell must be labeled clearly. Suggestion: use toothpicks and pieces of paper to make little flags.
5. Your organelles should clearly represent the actual organelle.
6. Need to include all the organelles listed in the table below for the type of cell that you have chosen

|  |  |
| --- | --- |
| **Eukaryotic Plant Cell** | **Eukaryotic Animal Cell** |
| 1. Cell Wall  2. Cell Membrane  3. Cytoplasm  4. Nucleus  5. Nucleolus  6. Smooth ER  7. Rough ER  8. Ribosomes  9. Golgi Apparatus  10. Vacuole(s)  11. Mitochondria  12. Chloroplast | 1. Cell Membrane  2. Cytoplasm  3. Nucleus  4. Nucleolus  5. Smooth ER  6. Rough ER  7. Ribosomes  8. Golgi Apparatus  9. Vacuole(s)  10. Mitochondria  11. Lysosomes |

1. Functions of each organelle should be provided. Suggestion: use the back side of your label “flags” to write down the job of that organelle.
2. Be unique and creative! Use a variety of appropriate materials.

**This project is to be completed individually or in pairs**

**TOTAL 22 Marks – Marking criteria on the back**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CATEGORY** | **Beginning**  **1** | **Developing**  **2** | **Accomplished**  **3** | **Exemplary**  **4** | **Factor** | **Total Mark** |
| **Appearance** | The models are haphazard in appearance or do not resemble an animal or a plant cell. | The models are nice in appearance but vaguely resemble an animal or a plant cell. | The models are nice in appearance and resemble an animal or plant cell. | The models are attractive in appearance and clearly resemble an animal or plant cell. | \_\_\_\_\_ x 0.5 |  |
| **Labelled Organelles** | <5 organelles are  labeled OR there are  **errors** with organelles  identified. | 5-7 organelles are  correctly located  and labeled on the  model. | 8-10 organelles are  correctly located  and labeled on the  model. | 11+ organelles are  correctly located  and labeled on the  model. | \_\_\_\_\_ x 2 |  |
| **Spelling** | Several spelling errors in the legend or title of the project. | No more than 3 spelling errors in the legend or title of the project. | No more than 1 spelling error in the legend or title of the project. | No spelling errors in the legend or title of the project. | \_\_\_\_\_ x 1 |  |
| **Functions of**  **Organelles (on**  **back of label)** | Functions are not  clearly explained or  **contain errors**. | Functions of some  organelles are  summarized with  minor errors. | Functions of all  organelles are  correctly  summarized. | Functions of all  organelles are  correctly described  in **detail**. | \_\_\_\_\_ x 2 |  |
|  |  |  |  |  |  |  |