**Cell Model Assignment**

**Your Goal:** To make a model cell to demonstrate an understanding of the basic structure and function of plant and animal cells. It must include a legend that explains the model and basic function of each part of the cell.

**Steps:**

1. Choose either to make a model of a plant or animal cell. Decide on the items you will use to create the model. All models must be made out of materials that will not spoil.
2. Your model must be labelled. You must label each organelle and put the names in the legend.
3. **Each model must include the following organelles: cell membrane, cytoplasm, mitochondria, vacuoles, nucleus, nucleolus, nuclear membrane, chromosomes, (cell wall), (chloroplasts), golgi apparatus, rough and smooth endoplasmic reticulum, lysosomes, ribosomes**
4. Your assignment must include a legend that contains the following:

* Parts of the cell
* Diagrams of the organelles within your model
* Detailed description of each organelle and its function

Example:

|  |  |  |
| --- | --- | --- |
| **Cell structure** | **Diagram** | **Description & Function** |
| Nucleus |  | Directs all the cells activities including reproduction |

**Success Criteria:**

□ Is the cell type identified? Tell if it is a plant or animal cell.

□ Is the model a 3D representation of a plant or animal cell?

□ Are all the organelles included?

□ Are the organelles correctly labelled? Each organelle must be labelled with its name.

□ Have you included a legend with each organelles name, diagram, and function?

□ Are the relationships between the parts shown correctly?

Example: Plant cell - are the chloroplasts around the vacuole?

□ Are the materials acceptable? The materials cannot be food products.

Cell Model Rubric

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| --- | --- | --- | --- | --- |
| **Category** | **LEVEL 4** | **LEVEL 3** | **LEVEL 2** | **LEVEL 1** |
| **Knowledge and Understanding** | Includes all elements of the cell and each is carefully and accurately represented | Includes all elements of the cell with accurate representations | Is missing some required elements, or has not accurately represented each element | Has included very few or unidentifiable elements of the cell |
| **Application/ Communication** | Model is highly effective at showcasing elements in a creative, neat, concise, realistic  All cell parts and materials used to represent are listed and functions are thoroughly explained on legend | Model is considerably effective at displaying elements in a creative, neat and realistic manner  All cell parts and materials used to represent are listed and functions are explained on legend | Model is somewhat effective at displaying elements in a creative neat and realistic manner  Not all cell parts are labelled and/or materials used to represent not included and organelle functions partially explained on legend | Model is not neatly constructed; materials shown make it difficult to see elements in a realistic manner  Limited effectiveness in terms of labelling and/or explaining organelle functions on legend |

**Science:\_\_\_\_\_\_\_\_**