

Cell Project

7th Grade

The cell is vitally important to all living things. Please complete **ONE** of the following projects to reinforce our study of cell structure and function. Be prepared to describe your work to the class on the day the project is due.

Project DUE: _____

OPTION ONE: Cell Analogies Collage

Webster defines analogy: "A comparison between two things which are similar in some respects, but otherwise are different; an explaining of something by comparing it point by point with something else."

For this project, you will need: poster paper; text with illustration of cell structures to refer to; scissors; paste; drawing pencils or pens; magazines and/or newspaper ad sections.

Step 1: Draw a **plant or animal cell** in pencil in the center of the poster board. Include the following structures (if you are drawing a plant cell, only include structures that are found in plant cells; if you are drawing an animal cell, only include structures that are found in animal cells):

Cell Membrane Nucleus Lysosome Cytosol
Ribosome Endoplasmic Reticulum Mitochondrion
Golgi Apparatus Cell Wall Cytoplasm Chloroplast
Vacuole Golgi Body Rough Endoplasmic Reticulum Cilia
Flagellum Centriole Nucleolus

Step 2: Correctly identify your cell as a plant cell or an animal cell.

Step 3: Find out the function (or main job) each structure has in the cell. (Read your book, use the internet, or use class notes.)

Step 4: Find a magazine or newspaper picture of an everyday object that has a similar function (or use) as each cell structure (you may also draw the everyday object if you can't find a picture). Write an analogy to show the similarity between the cell part and the everyday object. Be sure to explain the reasoning behind your analogies. (For example: "The Golgi apparatus is like a post office because it modifies, sorts and packages protein for delivery like a post office packages and sorts mail for delivery.")

Step 5: Paste the pictures of everyday objects at the edges of the poster board. Label the pictures with your neatly written analogies and make a pointer to the correct structure in your cell drawing.

Step 6: Be certain that there are at least 13 analogies.

OPTION TWO: 3-D Model of a Plant or Animal Cell

Make a 3d model of a plant or animal cell. Identify the type of cell (plant or animal). Include all the appropriate organelles listed in Option 1 that are appropriate for your type of cell. Use whatever materials you like (Styrofoam, wood, clay, cake, candy etc.) Be creative!!! The cell must be **at least** 20 centimeters wide and long. **Again, it must contain the appropriate organelles (at least 13) and the organelles should be identified with their functions listed; either directly on the model or typed on a separate piece of paper.** (See your class notes, the internet, or the textbook for information on organelles.)

GRADING POLICY:

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| • Followed specific instructions for the chosen project | 10 Points |
| • Depicted appropriate organelles for the cell chosen. | 30 Points |
| • Correctly described the function of each structure | 30 Points |
| • Organization and neatness | 10 Points |
| • Creativity and appeal | 10 Points |
| • PRESENTATION to class | 10 Points |