

CELL PROJECT

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.

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	cell wall	cytoplasm
chromatin/chromosomes	cytoskeleton	cilia
mitochondrion	ribosome	chromoplast
smooth endoplasmic reticulum	centriole	lysosome
rough endoplasmic reticulum	perioxisome	leucoplast
chloroplast	nucleus	nucleolus
flagellum	Golgi apparatus	vacuole

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.

OTHER OPTIONS ARE ON THE BACK SIDE OF THIS PAPER

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

Make a three dimensional 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, 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.)

OPTION THREE: Design and Create a T-Shirt With a Picture of the Cell.

Design and create a T-shirt with a picture of a cell on it. Identify the type of cell (plant or animal). **Include the appropriate organelles (at least 13) as listed in Option 1 and label each directly on the shirt with the functions listed either on the front or back of the shirt.** Use fabric paints, puff paints, scraps of fabric, beads, ribbon, or anything else you would like. You may not find a picture of the cell on the internet and use iron-on paper to attach it to a t-shirt; it must be designed by you! Be creative! (See your class notes, the internet, or the textbook for information on organelles.)

GRADING POLICY:

- 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 - 15 points
- Creativity and appeal - 15 points

Rubric for Cell Project

Category	A	B	C	D	F	Inc.
Followed directions for the chosen project	10	8	7	6	5	0
Correct organelles are depicted for chosen cell	30	25	23	20	15	0
Correct description of functions of organelles	30	25	23	20	15	0
Organization and neatness	15	13	11	9	8	0
Creativity and appeal	15	13	11	9	8	0
Total points earned:						