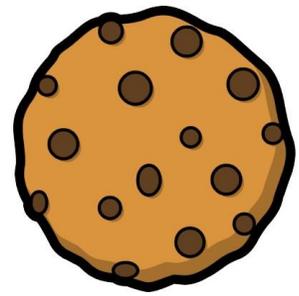




Edible Cell

A Digital Project



This activity provides students with an opportunity to review and reinforce their understanding of the parts of a cell. Working in small groups, students will make a cookie (or other cake-like item) with toppings that represent the various parts of a cell. The grade for this project will be based on four factors. Each factor is 25% of grade.

- Cell design - does it have all the necessary parts
- Creativity and innovation in the design of their cell - “looks” as well as **how each part is related to each other part (placement of organelles within the cell).**
- Each student’s understanding of the cell parts: which toppings are what part and what is their function.
- Clarity and legibility of final digital image.

You and your group will decide which product you want to make. You must also supply the materials for this project as it is up to you which toppings to use and how much. Remember, creativity is part of your grade!

You must pick one of the following cells to construct.

Animal Cell	Plant Cell	Bacterial Cell
The following MUST be included:	The following MUST be included:	The following MUST be included:
Cell membrane Cytoplasm Nucleus (nucleolus, nuclear pores, nuclear envelope) Ribosomes (free and attached) Smooth ER Rough ER Mitochondria Golgi Apparatus Lysosome Centrioles Vesicles	Cell wall Cell membrane Cytoplasm Nucleus (nucleolus, nuclear pores, nuclear envelope) Chloroplast Ribosomes (free and attached) Rough ER Smooth ER Golgi Apparatus Mitochondria Vacuole	Capsule Cell Wall Cell Membrane Cytoplasm Nucleoid Region DNA (in the nucleoid region) Plasmid (circular) Ribosomes Flagella Cilia Pili

Once you have your completed FINAL edible cell, you are to take a digital photo of your product.

Now you can eat it 😊

You are then to take that digital photo and annotate it using some digital program like Word or PPT. Annotate means to **label and give a brief description**. You will label each of the parts above and put a BRIEF description of its function in the cell. Remember, clarity and legibility of this photo is part of your grade. If it is not clear, you will lose points.

Rubric

	0	1	2	3	4	5	TOTAL
<p><u>Cell Design</u> Does it have all the necessary parts / organelles labeled?</p>	Missing	<p>< 12 parts are present and/or parts not labeled properly.</p> <p><i>Bacteria:</i> <i>< 9 parts are present and/or properly labelled</i></p>	<p>12-14 parts are present but not all labeled properly.</p> <p><i>Bacteria:</i> <i>9-10 parts are present but not all properly labeled</i></p>	<p>12-14 parts are presents and labeled properly.</p> <p><i>Bacteria:</i> <i>9-10 parts are present and properly labeled</i></p>	<p>15 parts are present but not all labeled properly.</p> <p><i>Bacteria:</i> <i>11 parts are present but not all properly labeled.</i></p>	<p>All 15 parts are present and properly labeled.</p> <p><i>Bacteria:</i> <i>All 11 parts are present and properly labeled.</i></p>	
<p><u>Creativity</u> How does the cell look? Are all the parts / organelles correctly positioned in relation to one another?</p>	Missing	<p>Bare minimum done to complete project. Little time spent on creativity. Organelles may or may not be put in correct place.</p>	<p>Some creativity but student could have put more time and effort into it. Organelles are all not in their correct positions in relation to one another.</p>	<p>Some creativity but student could have put more time and effort into it. Organelles are in their respective places.</p>	<p>Can tell student put time and effort into the creativity of the project. Organelles are all not in their correct positions in relation to one another.</p>	<p>One of a Kind! Student put time and thought into project and all organelles are in their correct places.</p>	
<p><u>Understanding</u> Does the student understand the function of each structure?</p>	Missing	<p>1-4 parts have correct descriptions. Or Cell is annotated but incorrectly.</p> <p><i>< 9 parts are present and/or properly labelled</i></p>	<p>5-7 parts have correct descriptions.</p> <p><i>Bacteria:</i> <i>9-10 parts are present but not all properly labeled</i></p>	<p>8-12 parts have correct descriptions.</p> <p><i>Bacteria:</i> <i>9-10 parts are present and properly labeled</i></p>	<p>All 15 parts have descriptions but 1-2 of them are incorrect/unclear. Or 13-14 parts w/correct descriptions</p> <p><i>Bacteria:</i> <i>11 parts are present but not all properly labeled.</i></p>	<p>All 15 parts have the correct description of function.</p> <p><i>Bacteria:</i> <i>All 11 parts are present and properly labeled.</i></p>	
<p><u>Clarity/ Legibility</u> Is the final product clear and easy to find information?</p>	Missing	N/A	<p>Project is not very clear nor legible. Very hard to find information.</p>	<p>Project could be clearer - hard to find some information.</p>	<p>Project is clear but legibility and organization could be better.</p>	<p>Project is clear, organized, and legible. Very easy to grade.</p>	

YOU WILL LOSE UP TO 5 POINTS FOR NOT FULLY FOLLOWING THE DIRECTIONS

_____ out of 20

Grade: _____