Cell Organelle Model - Group Project

You will work in groups of four students. The project is worth 100 points; however, individuals who bicker and/or do not do their fair share of the work load will lose points.

You will have two class days to complete the project; you may need to also work on it at home. Everything should be completed and brought to school at least one day before your presentation in case someone in your group is absent.

**Day 1 - Planning Day**

1. **Highlight your cell part**
   - a. Mitochondria (red)
   - b. Nucleus (dark blue)
   - c. Ribosomes (yellow)
   - d. Endoplasmic reticulum (light green)
   - e. Golgi complex (orange)
   - f. Lysosomes (purple)
   - g. Vacuole (light blue)
   - h. Chloroplast (green)

2. **Read over jobs and decide who will be the primary person responsible for each job.**
   Remember that although everyone has a primary job, everyone needs to help each other person to make sure the project is successful. You receive a group grade.

3. **Then list your organelle group members below and on the group grading sheet.**

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wordsmith</td>
<td>in charge writing structure and function card and name card</td>
</tr>
<tr>
<td>Poet</td>
<td>in charge of the poem</td>
</tr>
<tr>
<td>Model Maker</td>
<td>in charge of making model</td>
</tr>
<tr>
<td>Analogy Maker</td>
<td>in charge of bringing prop</td>
</tr>
</tbody>
</table>

4. **With your group, discuss the function of your organelle and plan how you will make your 3-D model.**
   - a. Find out the cell diameter to plan the correct size of your model. ________________
   - b. Decide what materials you need for your model and who will bring what from home. You will need these materials in class tomorrow. Ms. Ware has construction paper in class that you may use.

5. **Discuss what a good prop would represent an analogous function of your organelle.**
   - a. Talk it over and decide who will bring the prop from home.
   - b. Bring it to class tomorrow. Make sure you have labeled it with your name and period.

6. **As a group, begin writing the poem.**
   - a. Review the function of the organelle. Write what you want to include in the lines, and write it down to remember. Take your time and play around with words. Come up with your lines, even if they don't rhyme yet.
   - b. Start rhyming. Once you have a specific idea of what you want your first line(s) to be, find some simple words that rhyme. Switch around some of the words in that line, and add in those simple rhyming words at the end. This might take a little time, as it is the hardest part. Ms. Ware has several rhyming dictionaries or you can go to [www.rhymer.com](http://www.rhymer.com) for ideas.
   - c. Poem criteria: poem should have rhythm and rhyme, be at least 8 lines long, be scientifically accurate, and talk about the function of the organelle.
Day 2 - Working Day

1. **Wordsmith makes Structure & Function Card (see example in class)**
   a. Use 5 X 8 inch index card (provided in class)
   b. LIGHTLY print in pencil and then once you get Ms. Ware’s approval, go over your printing in black sharpie.
      o Center and print the name of the organelle on the top red line in marker.
      o Skip a line and using 2 lines for consistent word height, print a detailed function of the organelle.
      o Make sure your letters are even and not slanted. Have no names of group on the card.
   c. Use a ruler to measure, cut a piece of construction paper 6 x 9 inches.
   d. Glue the index card neatly to the color construction paper assigned. Make sure you have the same size border on all sides.

2. **Wordsmith makes Name Card (see example in class)**
   a. Use 3 X 5 inch index card (provided in class) and follow the printing procedure above.
   b. Print, the names of the group members in list format.
   c. Cut your piece of construction paper 4 x 6 inches and glue your card.

3. **Poet completes writing poem with help from others as needed**
   a. Check to ensure that the poem is at least eight lines, scientifically accurate, and describes the organelle’s function.
   b. Review what your group and you did yesterday focusing on the poem’s rhythm and then on the poem’s rhymes.
   c. When you are satisfied with your poem, have each of your group members check it for description of organelle’s function, scientific accuracy, rhythm, rhyme, spelling, and grammar. Get Ms. Ware’s approval.
   d. Type your poem in **Times New Roman font, size 48**.
      i. Align the poem on the left-hand side of the page.
      ii. Do not include names on the poem.
      iii. Go back to the poem’s title and skip a line between the title and the poem
      iv. Use the space bar key to move the poem’s title and center it over the poem
   e. Save it to your jump drive and ask Ms Ware to print your poem. You need two copies.
   f. Use a pencil and a ruler to lightly draw a box around your poem leaving one inch around the words.
   g. Cut out your poem.
   h. Measure the cut out poem adding an inch to each side. Using this measurement, cut your group’s construction paper.
   i. Using a glue stick, glue your poem to your paper leaving a **half inch border**.

4. **Model maker completes making model 3-D model out of a material that can attach with a thumb tack or push pin to a giant cell the bulletin board.**
   a. Remember: The organelle needs to be structurally and proportionally correct to the size of the cell and should look similar to the organelle. Use your **Drawing a Scale Model of a Cell** handout to help you.
   b. Food and living material, which is PERISIBLE, may NOT be used.
   c. If your prop falls off of the wall, your group loses points – so do not make something too heavy or difficult to thumbtack to the bulletin board!

5. **The Analogy Maker should decide upon the prop and the analogy.** Then he or she should help other group members today.

Day 3 - Finishing Day  Everyone helps everyone finish their jobs.

Practice Presentation  - Your group’s presentation should be from 2 – 3 minutes long
- Wordsmith starts by telling the name of your organelle and its function.
- Model maker explains what the organelle looks like and shows the model of it.
- Analogy maker shows the prop and explains how is similar in function to the organelle.
- Poet reads the organelle poem to the class. (Memorize or use your second copy to read it.
Cell Model Grading

Period: __________

Names:
_________________________________
_________________________________
_________________________________
_________________________________

Organelle: ______________________________________

Points

___________ Structure & Function Card and Names Card (20 Points)

________________________________________________

___________ Model (20 Points)

________________________________________________

___________ Poem (20 Points)

________________________________________________

___________ Prop (20 Points)

________________________________________________

___________ Presentation (20 Points)

________________________________________________

Any points deducted for not contributing to project or bickering? Write notes below.