

Animal and Plant Cells • Relationships/  
Parts of a Whole/Comparison



## Project Essential Questions

- What are the functions of the various animal and plant cell organelles?
- How can music be used to create connections between the two types of cells?

### PROJECT DESCRIPTION

This project integrates music and visual arts into students' study of both plant and animal cells. In this project students will compare and contrast the organelles in both an animal cell and plant cell. Students will create a rap that shows their understanding of how the individual organelles function in both types of cell.

### LEARNING TARGETS

"I Can..."

- Identify the various organelles in an animal cell and plant cell
- Compare and contrast animal and plant cells
- Explain the function of the various organelles
- Label the various organelles in cells
- Create a musical rap that demonstrates my understanding of the science concept

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Units provide differentiated ideas and activities aligned to a sampling of standards.

The units do not necessarily imply mastery of standards, but are intended to inspire and equip educators.

Produced through the U.S. Department of Education: Arts in Education—Model Development and Dissemination Grants Program  
Cherokee County (GA) School District and ArtsNow, Inc.

**DURATION: 3-4 days**

Project Description	Learning Targets
<p>This project integrates music and visual arts into students’ study of both plant and animal cells. In this project students will compare and contrast the organelles in both an animal cell and plant cell. Students will create a rap that shows their understanding of how the individual organelles function in both types of cell.</p>	<p>“I Can...”</p> <ul style="list-style-type: none"> <li>● Identify the various organelles in an animal cell and plant cell</li> <li>● Compare and contrast animal and plant cells</li> <li>● Explain the function of the various organelles</li> <li>● Label the various organelles in cells</li> <li>● Create a musical rap that demonstrates my understanding of the science concept</li> </ul>

**ESSENTIAL QUESTIONS**

<ul style="list-style-type: none"> <li>● What are the functions of the various animal and plant cell organelles?</li> <li>● How can music be used to create connections between the two types of cells?</li> </ul>
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**STANDARDS**

Curriculum Standards	Arts Standards
<p><b>S5P1.</b> Students will verify that an object is the sum of its parts</p> <p><b>S5L3.</b> Students will diagram and label parts of various cells (plant, animal, single-celled, multi-celled)</p>	<p><b>M5GM.1.</b> Singing, alone and with others, a varied repertoire of music</p> <p><b>M5GM.4.</b> Improvising melodies, variations, and accompaniments</p> <p><b>M5GM.5.</b> Composing and arranging music within specified guidelines</p> <p><b>M5GM.8.</b> Understanding relationships between music, the other arts, and disciplines outside the arts</p>

**KEY VOCABULARY**

Content Vocabulary	Arts Vocabulary
<ul style="list-style-type: none"> <li>● Animal cell</li> <li>● Cell membrane</li> <li>● Chloroplasts</li> <li>● Cytoplasm</li> <li>● Nucleus</li> <li>● Plant cell</li> <li>● Structure</li> </ul>	<ul style="list-style-type: none"> <li>● Articulation</li> <li>● Beat</li> <li>● Crescendo</li> <li>● Decrescendo</li> <li>● Form</li> <li>● Legato</li> <li>● Melody</li> </ul>



**Part 2:**

- The teacher will ask the students to compare and contrast the two cells based on what we learned from our raps. (*Why does the plant cell have organelles that the animal cell does not include?*)
- Together as a class, begin a 5-line rap together that compares and contrasts the 2 types of cells.
- Students get back in groups and independently finish the last 5 lines of the compare/contrast rap.
- Groups share their different endings.

**Part 3:**

- Students work collaboratively in groups to create Word Art for all of the organelles in the cell they were exploring.
- The students must use the properties of each organelle and the function to best illustrate the vocabulary word. (Example: Cytoplasm might be “oozing” and use thick shaped letters and have pieces inside—representative of it’s function and physical properties).

**REFLECTION**

**Reflective Strategies**

- **Written Reflection Questions** (see Downloads)

**Reflection Questions:**

1. How would I rate myself on the understanding of the differences between plant and animal cells and their organelles?
2. How does music and writing a song help me understand the concept of the differences between plant and animal cells?

**DIFFERENTIATION**

**Below Grade Level:**

- These groups of students can work with the entire class to create the 10-line rap song, and focus more on their performance and mastery of the content. Consider splitting the class into 2 groups and having a Rap Battle.

**Above Grade Level:**

- These groups of students can create the entire rap by themselves, instead of working with the entire class.

**EL Students:**

- Instead of working in homogeneous groups to create the last 5 lines of the rap, the teacher would pair an EL student with a higher fluency/language student to work together in a one-on-one collaborative pair.



**APPENDIX**

- **Written Reflection Sheet Project 4**
- **Cell Rap Rubric**

**CREDITS**

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