

**Cell  
Assignment  
Choice  
Boards**

**Easy Differentiation  
in the High School  
Science Classroom**

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# Cell Choice Boards- Teacher Guide

Choice boards are a great resource to allow students to take charge of their learning and learn more about the topics that they are interested in. With these cell choice boards, students still learn about various facets of cells and organelles, but the ability to choose what they learn about helps them remain more engaged.

There are a few different ways to use these choice boards:

1. For the boards labeled "Tic-Tac-Toe", instruct students to select 3 or 4 choices in a straight line across, diagonally, or down. Struggling learners or those that need more structure can work on one project a day from the 3x3 boards, more advanced or independent learners can choose their topics and work at a self-guided pace on the 4x4 boards.
2. For the boards labeled "Choice Board", allow students to pick any 3 or 4 topics that interest them and work the same as the tic-tac-toe boards. The inclusion of the stars on the 4x4 board ensures that students don't pick the "easy" choices and instead incorporate a few more advanced or creative ideas.
3. For the boards labeled "Menu Board", students should follow the directions to choose 1 "appetizer", 2 "entrees" and a "dessert". This should be used for more advanced or independent learners.

You can also use a combination of these boards for easy differentiation. Higher level students can receive 4x4 choice boards, while lower level students can receive 3x3 tic-tac-toe boards. Your most advanced students can work on the menu board. Students will still be working on the same types of projects, but the results are more targeted to their individual learning levels. Each board has been designed so that the choices across, down, and diagonally are equal- for the 3x3 board, students will do 2 basic or review-type activities and one more advanced/creative activity, while on the 4x4 board any combination will lead to 2 basic and 2 advanced prompts.

I hope you enjoy incorporating these choice boards into your classroom!

## Cell Tic-Tac-Toe

Choose 3 projects to complete. Your choices should be in a straight line across, down, or diagonally, just like a real tic-tac-toe game. Please HIGHLIGHT the projects you picked and attach this sheet, with your name at the bottom, to your projects.

|   |  |  |
|---|--|--|
| <p>Draw and label both a plant and an animal cell with all of the appropriate organelles.</p>   | <p>Pick an organelle and write a short story called "A Day in the Life of a _____." Include at least 3 organelles in your story.</p> | <p>Create a 10-question multiple choice quiz. Include an answer key.</p>                 |
| <p>Make a list of body parts that serve the same function as each of the organelles. Your list should be in the form of a chart. The first column will list the organelle, the second will have the corresponding body part, and the third will show how they are alike or different.</p> | <p>Create a set of flashcards for at least 15 different vocabulary words relating to cells and their organelles.</p>                 | <p>Create a song, rap, or poem about the processes of mitosis and meiosis.</p>           |
| <p>Make a flip book about organelles. Include a drawing and description of one organelle on each page.</p>  | <p>Create a crossword puzzle about cells with at least 10 different words and hints for each word. Include an answer key.</p>        | <p>Create a Venn diagram comparing and contrasting prokaryotic and eukaryotic cells.</p> |

Name: \_\_\_\_\_ Block: \_\_\_\_\_

## Cell Tic-Tac-Toe

Choose 4 projects to complete. Your choices should be in a straight line across, down, or diagonally, just like a real tic-tac-toe game!

|   |   |   |   |
|---|---|---|---|
| <p>Draw and label both a plant and an animal cell with all of the appropriate organelles.</p>   | <p>Make a paper lift-the-flap style model of a plant or animal cell including all of the organelles for that cell. Label each organelle name under its flap and include the functions of each organelle on the back of the model.</p>   | <p>Make a list of body parts that serve the same function as each of the organelles. Your list should be in the form of a chart. The first column will list the organelle, the second will have the corresponding body part, and the third will show how they are alike or different.</p> | <p>Make a children's book about the organelles of plant and animal cells, with a different organelle on each page. For each organelle, include the name of the organelle, its function, the type of cell it is found in, and a picture.</p>   |
| <p>Create a 10-question multiple choice quiz. Include an answer key.</p>  | <p>Create an organelle amusement park map brochure (3-4 panels) for a park which has attractions, shows, dining and shopping. For example, you might want visitors to ride the Ribosomes Rampage so they can watch proteins synthesize before their eyes. Include each organelle and its function in a ride, show, restaurant or shopping area.</p> | <p>Pick an organelle and write a short story called "A Day in the Life of a _____." Include at least 3 organelles in your story.</p>  | <p>Make a three-flap foldable that shows the two different types of cells. The first two flaps should feature prokaryotic and eukaryotic cells, with the name and a picture on the front of the flap and a description on the inside of the flap. The third flap should compare plant and animal cells, with a title on the front of the flap and a comparison on the inside.</p> |
| <p>Create a fictional city where each part of the city represents an organelle in the cell. You may choose either a plant cell or an animal cell for your city. Label all the city parts, the organelles represented and WHY you chose it to represent that part of the city. For example, the city garbage department would be the lysosomes because it takes care of the trash.</p> | <p>Create a song, rap, or poem illustrating the job of at least one organelle in the cell.</p>  | <p>Create a "Cell Catalog" for a plant cell. Each organelle should have a drawn and colored picture, a description (sales pitch) describing what it does or why it is important, and a price. The catalog should have a cover and a table of contents.</p>                                | <p>Create a set of flashcards for at least 15 different vocabulary words relating to cells and their organelles.</p>  |
| <p>Make a 3-dimensional model of a cell. You may choose to make your model out of anything you want, EXCEPT FOOD, but it must contain all cell organelles. Include a legend or key for your model.</p>  | <p>Create a Venn diagram comparing and contrasting prokaryotic and eukaryotic cells.</p>  | <p>Make a fictional Facebook account for your favorite organelle. Include their friends, pictures, and recent status updates.</p>   | <p>Create a crossword puzzle with at least 10 different words and hints for each word. Include an answer key.</p>   |

# Cell Choice Board

Choose any three projects to complete.

|   |  |  |
|---|--|--|
| <p>Draw and label both a plant and an animal cell with all of the appropriate organelles.</p>   | <p>Pick an organelle and write a short story called "A Day in the Life of a _____." Include at least 3 organelles in your story.</p> | <p>Create a 10-question multiple choice quiz. Include an answer key.</p>                 |
| <p>Make a list of body parts that serve the same function as each of the organelles. Your list should be in the form of a chart. The first column will list the organelle, the second will have the corresponding body part, and the third will show how they are alike or different.</p> | <p>Create a set of flashcards for at least 15 different vocabulary words relating to cells and their organelles.</p>                 | <p>Create a song, rap, or poem illustrating the job of one organelle in the cell.</p>    |
| <p>Make a flip book about organelles. Include a drawing and description of one organelle on each page.</p>  | <p>Create a crossword puzzle with at least 10 different words and hints for each word. Include an answer key.</p>                    | <p>Create a Venn diagram comparing and contrasting prokaryotic and eukaryotic cells.</p> |

# Cell Choice Board

**Choose 4 projects to complete. At least 2 projects must be starred (\*).**

|  |  |   |  |
|--|--|---|--|
| <p>Draw and label both a plant and an animal cell with all of the appropriate organelles.</p>  | <p>*Make a paper lift-the-flap style model of a plant or animal cell including all of the organelles for that cell. Label each organelle name under its flap and include the functions of each organelle on the back of the model.</p>   | <p>Make a list of body parts that serve the same function as each of the organelles. Your list should be in the form of a chart. The first column will list the organelle, the second will have the corresponding body part, and the third will show how they are alike or different.</p> | <p>*Make a children's book about the organelles of plant and animal cells, with a different organelle on each page. For each organelle, include the name of the organelle, its function, the type of cell it is found in, and a picture.</p>   |
| <p>Create a 10-question multiple choice quiz. Include an answer key.</p>   | <p>*Create an organelle amusement park map brochure (3-4 panels) for a park which has attractions, shows, dining and shopping. For example, you might want visitors to ride the Ribosomes Rampage so they can watch proteins synthesize before their eyes. Include each organelle and its function in a ride, show, restaurant or shopping area.</p> | <p>Pick an organelle and write a short story called "A Day in the Life of a _____." Include at least 3 organelles in your story.</p>  | <p>*Make a three-flap foldable that shows the two different types of cells. The first two flaps should feature prokaryotic and eukaryotic cells, with the name and a picture on the front of the flap and a description on the inside of the flap. The third flap should compare plant and animal cells, with a title on the front of the flap and a comparison on the inside.</p> |
| <p>*Create a fictional city where each part of the city represents an organelle in the cell. You may choose either a plant cell or an animal cell for your city. Label all the city parts, the organelles represented and WHY you chose it to represent that part of the city. For example, the city garbage department would be the lysosomes because it takes care of the trash.</p> | <p>Create a song, rap, or poem illustrating the job of at least one organelle in the cell.</p>   | <p>*Create a "Cell Catalog" for a plant cell. Each organelle should have a drawn and colored picture, a description (sales pitch) describing what it does or why it is important, and a price. The catalog should have a cover and a table of contents.</p>                               | <p>Create a set of flashcards for at least 15 different vocabulary words relating to cells and their organelles.</p>   |
| <p>*Make a 3-dimensional model of a cell. You may choose to make your model out of anything you want, EXCEPT FOOD, but it must contain all cell organelles. Include a legend or key for your model.</p>  | <p>Create a Venn diagram comparing and contrasting prokaryotic and eukaryotic cells.</p>   | <p>*Make a fictional Facebook account for your favorite organelle. Include their friends, pictures, and recent status updates.</p>  | <p>Create a crossword puzzle with at least 10 different words and hints for each word. Include an answer key.</p>  |

## Cell Choice Menu

Directions: Pick 1 “appetizer”, 2 “entrees” and 1 “dessert” from the menu below. Highlight or circle your choices for each category.

### Appetizer

1. Draw and label both a plant and an animal cell with all of the appropriate organelles.
2. Create a set of flashcards for at least 15 different vocabulary words relating to cells and their organelles.

### Entrée

1. Pick an organelle and write a short story called “A Day in the Life of a \_\_\_\_\_.” Include at least 3 additional organelles in your story.
2. Make a list of body parts that serve the same function as each of the organelles. Your list should be in the form of a chart. The first column will list the organelle, the second will have the corresponding body part, and the third will show how they are alike or different
3. Make a three-flap foldable that shows the two different types of cells. The first two flaps should feature prokaryotic and eukaryotic cells, with the name and a picture on the front of the flap and a description on the inside of the flap. The third flap should compare plant and animal cells, with a title on the front of the flap and a comparison on the inside.
4. Create a “Cell Catalog” for a plant cell. Each organelle should have a drawn and colored picture, a description (sales pitch) describing what it does or why it is important, and a price. The catalog should have a cover and a table of contents.
5. Make a fictional Facebook account for your favorite organelle. Include their friends, pictures, and recent status updates.

### Dessert

1. Make a children’s book about the organelles of plant and animal cells, with a different organelle on each page. For each organelle, include the name of the organelle, its function, the type of cell it is found in, and a picture.
2. Make a 3-dimensional model of a cell. You may choose to make your model out of anything you want, EXCEPT FOOD, but it must contain all cell organelles. Include a legend or key for your model.



## Cell Project Rubric

Name: \_\_\_\_\_

| Category              | Excellent<br>(5 points)                               | Average<br>(3 points)                             | Poor<br>(1 point)                                | Your points |
|-----------------------|---|---|--|-------------|
| Assignment completion | All assignments completed on time                     | 2 projects completed OR are late                  | 1 project completed and/or submitted late        |             |
| Information Accuracy  | All information in project is accurate & relevant     | Some information is accurate or vague             | Most information is inaccurate or irrelevant     |             |
| Presentation          | All projects are neat and legible, including pictures | Writings or drawings are messy or poorly designed | Projects are poorly constructed and messy        |             |
| Participation         | Time in class was well used and productive            | Some time in class was wasted or not used well    | Class time was wasted; no work occurred in class |             |

Total points: \_\_\_\_\_/20

## Cell Project Rubric

Name: \_\_\_\_\_

| Category              | Excellent<br>(5 points)                               | Average<br>(3 points)                             | Poor<br>(1 point)                                | Your points |
|-----------------------|---|---|--|-------------|
| Assignment completion | All assignments completed on time                     | 2 projects completed OR are late                  | 1 project completed and/or submitted late        |             |
| Information Accuracy  | All information in project is accurate & relevant     | Some information is accurate or vague             | Most information is inaccurate or irrelevant     |             |
| Presentation          | All projects are neat and legible, including pictures | Writings or drawings are messy or poorly designed | Projects are poorly constructed and messy        |             |
| Participation         | Time in class was well used and productive            | Some time in class was wasted or not used well    | Class time was wasted; no work occurred in class |             |

Total points: \_\_\_\_\_/20

# Acknowledgements



Thank you for purchasing "Cell Choice Boards" from I Heart Teaching Science! Follow me at my Teachers Pay Teachers store for more lessons, activities, and a 50% off discount of the first 24 hours after new materials are posted.

Font: Kimberly Geswein Fonts  
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**I heart Teaching Science**  
and I want to help you  it too!