



Unleashing Innovation Through STEM Education

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Lesson: Cells and Cell System

Name:

Teacher:

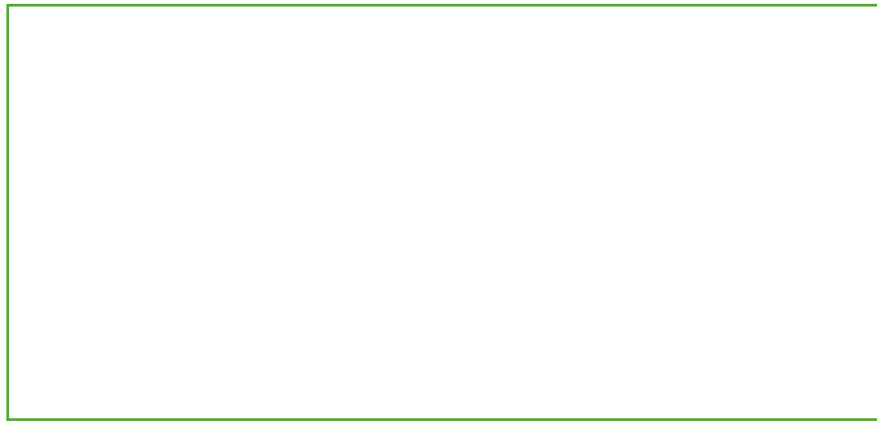
Date:

### Animal Cell Detective

Objective: Investigate animal cell organelles and understand their functions.

#### 1. Observation & Drawing

- Look at the animal cell diagram or prepared microscope slide.
- Draw the cell in the box below.
- Label at least 6 organelles.
- Write a keyword or short phrase for each organelle's function.



#### 2. Organelles Match-Up

Draw a line to match the organelle to its function:

Organelle	Function
Nucleus	Control center of the cell
Mitochondria	Produces energy for the cell
Ribosomes	Makes proteins
Golgi Apparatus	Packages and ships materials
Lysosomes	Breaks down waste and worn-out cell parts
Cytoplasm	Jelly-like substance that holds organelles in place



### 3. Detective Challenge

Imagine you are a scientist exploring an unknown animal cell. Answer the questions below:

1. Which organelle would you visit first to understand what the cell “does”? Why?

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2. Which organelle is like the cell’s power plant? Why is it important?

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3. If one organelle stopped working, how would it affect the cell? Pick one organelle and explain.

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### 4. Compare & Contrast

- Differences between animal and plant cells:

1. 

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2. 

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3. 

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- Similarities between animal and plant cells:

1. 

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2. 

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### 5. Reflection

- Which organelle did you find most interesting today? Why?

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## Animal Cell Detective – Answer Key

### 3. Detective Challenge

1. Which organelle would you visit first to understand what the cell “does”?

- Suggested answer: Nucleus – controls cell activities and contains DNA.
- Note: Answers may vary.

2. Which organelle is like the cell’s power plant? Why is it important?

- Suggested answer: Mitochondria – produces energy for the cell.
- Note: Answers may vary.

3. If one organelle stopped working, how would it affect the cell? Pick one organelle and explain.

- Suggested answer: Lysosomes – if they stopped working, waste would accumulate, and the cell could become unhealthy.
- Note: Answers may vary.

### 4. Compare & Contrast

Differences between animal and plant cells:

1. Animal cells do not have a cell wall.
  2. Animal cells do not have chloroplasts.
  3. Animal cells usually have smaller vacuoles.
- Note: Answers may vary.

Similarities between animal and plant cells:

1. Both have a nucleus.
  2. Both have mitochondria.
  3. Both have a cell membrane.
- Note: Answers may vary.

### 5. Reflection

- Suggested answer: The mitochondria (or another organelle) is most interesting because it provides energy for the cell (or other reasoning).
- Note: Answers may vary.