

COMPARING CELLS LAB: PROKARYOTES vs. EUKARYOTES

(Adapted from: http://schoolhouse1.fenn.org/duane/science9th/lab_comparing_cells_1_prokaryotes_&_eukaryotes.htm)

INTRODUCTION

In this lab, students use microscopes to compare and contrast prokaryotic cells (bacteria) and eukaryotic cells.

PROCEDURE PART A: PROKARYOTIC CELLS (BACTERIA)

1. Acquire a prepared slide from the box labeled "Bacteria".
2. Label the species of Bacteria in your lab notebook.
3. Focus the slide under the low power objective and move the slide to find good examples of these cells. Diagram the cells in your lab notebook.
4. Focus under medium power and diagram.
5. Focus under high power and diagram. Label the cell membrane, (cell wall), and cytoplasm.

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PROCEDURE PART B: EUKARYOTIC CELLS

1. Acquire a prepared slide from the box labeled "Eukaryotic Cells"
2. Label what specimen of eukaryotic cell you have.
3. Focus the slide under the low power objective and move the slide to find good examples of these cells. Draw and diagram the cells. Label the cell membrane, cytoplasm, nucleus, and any other organelles that are visible.
4. Focus under medium power and diagram.
5. Focus under high power and diagram.

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Questions: Prokaryotic and Eukaryotic Cells

1. Explain the function of the nucleus in eukaryotic cells and tell how prokaryotic cells carry out this function.
2. What structures do both prokaryotic and eukaryotic cells have?
3. What structures (organelles) do eukaryotic cells have that prokaryotic cells do not?
4. Compare the size and shape of both eukaryotic cells and prokaryotic cells.
5. Summary: In your own words, explained what you have learned over the course of this week about microscopes and cells. *This must be 3-5 sentences.*