Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_

Cell Specialization Lab Activity

Part 1:

Each group will be given a cell function.

-Using what you know about cell organelles and differentiation, design a cell that would be best suited to fulfill that function.

-You may use your laptops to research but make sure you cite your sources and make your diagram as original as possible.

-On a separate sheet of paper, explain why you designed the cell the way you did. Don’t reveal your cell type to the other groups!

Part 2:

While each group is designing their cell, one group at a time will go to the microscope stations. There are two microscope stations and 4 slides prepared with anonymous specialized tissues. Your group must use the microscopes properly to answer the following questions for each slide. When your group finishes, please reset the microscopes to their storage positions before the next group goes.

1. Are the cells Eukaryotic or Prokaryotic?
2. Are the cells plant or animal cells?
3. Describe the cells including: size, shape, tissue, and any distinctive characteristics.
4. As a group decide what you think the specialized function of the cell is and explain your reasoning.

Regroup:

Discuss group answers as a class. Reveal cell types.

Part 3:

Exchange cell diagrams from part 1 with other groups who will attempt to guess the cell’s purpose and explain their reasoning to the class.