NOTES: Prokaryotic vs. Eukaryotic Cells

COMPARE/CONTRAST CELL STRUCTURE

Look at the image above. Answer the questions below:

1.) How are prokaryotic and eukaryotic cells SIMILAR? (What structures do both cells have?)

2.) How are prokaryotic and eukaryotic cells DIFFERENT? Organize your observations into the following categories:

   RELATIVE SIZES (is one much bigger/smaller than the other?)

   LOCATION OF DNA (in a nucleus or not?)

   RELATIVE COMPLEXITY (is one more simple/complex than the other?)
COMPARE THE CELL SIZES

WEBSITE: http://www.cellsalive.com/howbig.htm

1.) Click on “Start the Animation”

2.) Zoom in by hitting the “play” button to the right of “Magnification”. Zoom out by hitting the button to the left of “Magnification”. Use the menu to the right of the picture to know what you are looking at.

3.) The purple lymphocyte, red blood cells, and pink yeast are EUKARYOTIC CELLS.

   A. **QUESTION:** To actually see one of these cells, how much did you have to magnify the picture?

   B. **QUESTION:** These are all eukaryotic cells. Do any of these cells have a nucleus? If so, which one(s)?

4.) The green E.coli and yellow Staphylococcus are PROKARYOTIC CELLS.

   A. **QUESTION:** Look at the examples given – E.coli, Staph. Both of these cells have made the news in past years because they have made people very sick. What type of organisms are prokaryotes?

   B. **QUESTION:** To actually see one of these cells, how much did you have to magnify the picture?

   C. **QUESTION:** E.coli and Staph are prokaryotic. Do either of these cells have a nucleus?

   D. **QUESTION:** Are prokaryotic cells (bacteria cells) smaller, larger, or about the same size as eukaryotic cells?