This first assignment worth 20 points is using the microscope simulator. It will require you to follow the tour and you should use the recommended checklist. You will answer the following questions and then upload this document to the Moodle microscope assignment upload link.

Define or describe in your own words (do not cut and copy from the internet!) the following terms or phrases:

Parfocal-

Parcentral-

Course adjustment-

Fine adjustment-

Microns (micrometer)-

Microscope iris diaphragm-

Field of view-

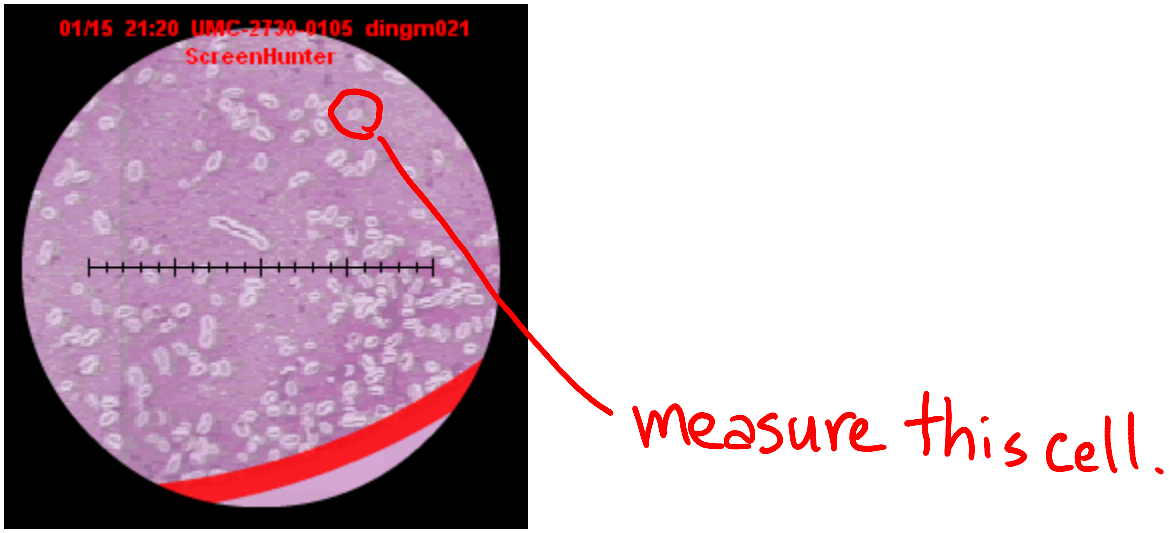
Ocular micrometer-

1. Provide me with a very detailed description (with the little recommendations of good microscope technique that the tour will describe) of taking the microscope from turning the light on through having the letter “e” focused on High power (40X objective).

PLEASE note the little red circle on these slides. Unfortunately, real slides do not have these circles that SHOULD be used as your guide as to whether the specimen is focused or not. You will be able to determine if you have the right amount of light and the specimen is focused if you have a very strong in focus little red circle (as the picture below demonstrates).

2. Use the “try this menu” to use the following calibrations: 1 micrometer unit (the little hash marks on the field of view ruler) equals 10 micrometers using the 10X objective; 1 micrometer unit equals 2.5 micrometers using the 40X objective; 1 micrometer unit equals 1.0 micrometer using the 100X objective. Measure how wide the letter “e” is under the 10X objective magnification. Document the size by using this link for a screen capture program (free!) and insert the picture below of a the letter in perfect focus using the 10X objective:

3. Get the bacterial cell capsule focused under “oil” immersion (100X objective) using the following as an example:



Magnification (what objective)_____ size in micrometers _____

4. Compare/contrast the onion root tip cells (there are different looking dark nuclei cells!). Please provide a size range in micrometer from the largest cells to the smallest cells both at the 40X and 100X objectives. Document the size by using this link for a screen capture program (free!) and insert the picture below of a the letter in perfect focus using the 10X objective:

5. Describe what cheek cells look like. Provide again a range of size in micrometer with the cheek cells both at the 10X and 40X objectives. Document the size by using this link for a screen capture program (free!) and insert the picture below of a the letter in perfect focus using the 10X objective: