Cells, Tissues, Organs and Systems
Lab #2- Using the Microscope

NAME: _____ Date Due: _____

Purpose: Can a microscope be used to determine the size of objects?
Hypothesis: (copy from the text) _____

_____

_____

_____

Procedure: Follow the procedure from the text and answer the analysis questions as you proceed.
Analysis Questions:

Step #1

1. What is the diameter of the field of view under low power? Include the units of measure.

_____

Step #2

2. Why should the coarse adjustment knob NOT be used with the medium and high-power lenses?

_____

_____

_____

3. What is the diameter of the field of view under medium power?

_____

Step #3

4. Calculate the ratio of the magnification of the high power lens to the low power lens. (SHOW YOUR CALCULATIONS)

5. Use the ratio to calculate the field of view under high power magnification. (SHOW YOUR CALCULATIONS)

Step #5

6. Estimate the number of copies of the letter "f" that can fit across the field of view.

_____

Step #6

7. What happens to the diameter of the field of view as you move from low to high magnification?

8. Explain why the size of objects viewed under high power is usually measured in micrometers (µm) rather than millimetres (mm). (1000 µm= 1 mm)

9. Devise a way to estimate the size of the letter "F". DESCRIBE the method.

10. Construct an equation that you can use.

11. Which magnification would be best for scanning several objects? WHY?

Conclusion: (Answer the purpose and then record the formula to use to determine the size of objects under a high power lens.)

❑ Incomplete or not handed in by due date ❑ No hypothesis ❑ Poor knowledge exhibited in analysis questions ❑ No or incorrect conclusion ❑ Poor conduct during lab ❑ Redo and parent signature required – upon completion you will receive 50% X_____	❑ Complete by due date with accuracy ❑ Hypothesis **not** in "IF/THEN" form ❑ Good knowledge exhibited in analysis questions ❑ Correct conclusion ❑ Adequate conduct during lab Questions to improve #'s _____	❑ Completed by due date with detail ❑ Hypothesis in proper form ❑ Excellent knowledge exhibited in analysis questions ❑ Supported conclusion ❑ Model scientist/student /15