**Extension (Part 1): The Microscope**

**(Types of Microscopes)**

**Biology 11 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Directions:** Answer the questions below using the article called “Various Types of Microscopes in Biology” linked [HERE](https://sciencing.com/various-types-microscopes-biology-5949595.html), or find it on the classroom website.

1. A microscope allows people to view speciens in detail that are too small for the naked eye to see by magnification and resolution. Explain what magnification and resolution are.
2. List 4 types of microscopes that biologists may use:
3. Explain what the dissecting microscope is also called and explain what it is used for. What is the magnification of this microscope?
4. Explain what a compound microscope is and what they do. What is the average and greatest magnification that can be seen?
5. What does a Transmission Electron Microscope (TEM) do? What is the magnification of them? How do they work?

**Extension (Part 2) : The Microscope**

**(Microscope Calculations)**

**Directions:** Using a slide provided by Mrs. Cote as well as the extension station information sheet complete the questions below. You will need to follow the procedure and use the example given on the information sheet to help you.

**Questions:**

1. How many millimeters across is your field of view? \_\_\_\_\_\_\_ mm
2. How many micrometers (µm) would that be? \_\_\_\_\_\_ µm
3. Calculate the FOV for both the medium and high-power objectives in micrometers.

 Medium Power FOV = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ High Power FOV = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Create a biological drawing in the field of view below of the slide you are looking at. Make sure to title the drawing; however labels will not be required.

5. How many specimens could fit across the diameter (centre)? \_\_\_\_

6. Calculate the actual size of the specimen you viewed in micrometers/cell. Show your work!