

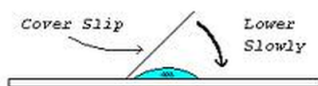
Notes: / and X as you read

___ ****Drawings MUST BE CHECKED while object is in focus.**

___ ****Always carry a microscope upright and with 2 hands, 1 on the arm and 1 under the base.**

___ ****Read to each other as you each learn to focus.**

- ___ 1. Obtain a clean slide and coverslip. Or, wash them.
- ___ 2. Obtain a section of onion. Remove only the INNER membrane (skin) and place only the membrane (skin) on your slide. Put the main part of the onion in the wastebasket.
- ___ 3. Add a drop of dye such as Iodine to the onion membrane to make the parts easier to see.
- ___ 4. With your slide on a table, hold the coverslip at an angle, resting one edge by the onion. See ↓ drawing below. Then lower the coverslip to on top of the onion membrane.



___ 5. Now tap lightly on the coverslip to help move out air bubbles.

___ 6. Turn on the microscope light or move the mirror so you can see light through the opening in the stage. You can adjust the diaphragm to get more or less light.

___ 7. Place your slide on the microscope stage so the onion membrane is in the light. Move both stage clips on to the slide to hold it. Leave them on while you work. **Always** USE a SLIDE, COVER SLIP and STAGE CLIPS when you use a compound microscope.

___ 8. Set your microscope on the lowest power lens (usually 100X). **Read the number on the lens.**

___ 9. "START CLOSE": Watch from the side and use the large coarse adjustment wheel to move the objective lens close to the stage, but not touching it.

___ 10. "FOCUS AWAY": **Look in the eyepiece** as you slowly move the LARGE coarse adjustment wheel so the lens moves away from the slide. STOP when you can see some cells. The cells should look like yellow blocks in a wall. The yellow is from the iodine. Focus.

___ ****If you can't see the onion cells.....GO BACK! Redo step 9 & 10 for sure. If that doesn't help, ASK. Or, GO BACK.**

___ 11. IF you have cells in focus, choose **one cell** that has no black (dry) areas and move the slide so that cell is in the center of your view. (Keep stage clips on!) Have Checked, if not sure _____

___ 12. Increase the magnification (power) by turning the next larger objective lens in place.

___ 13. Refocus. Use the fine adjustment (small wheel) now, but only on high power.

___ 14. Locate the nucleus, cytoplasm, cell membrane and cell wall. Use a reference image. Locate 1 or 2 nucleoli (singular = nucleolus). You may be able to see the endoplasmic reticulum.

___ 15. Have your one cell checked in focus, BEFORE YOU DRAW. **Have checked for points** _____

___ 16. Use **plain paper & pencil**. Draw, as large as your hand, a **SOLID-LINE OUTLINE** drawing of ONE cell. Draw the parts you found in #14. **Have checked for points, while in focus.** _____

___ 17. Label the above cell parts with a **straight edge, straight out to the right**. **Points** _____

___ 18. Clean and return your slide and coverslip. Ask. Turn off the light.

