

SAFETY

- Safety glasses are available while you are working with stains.
- Do not get methylene blue or iodine stain on your hands. If you do, wash your hands and tell your teacher.

Name: _____

OBSERVING ANIMAL & PLANT CELLS

ANIMAL CELL: PREPARATION AND DRAWING

1. Add a small drop of METHYLENE BLUE stain in the middle of a clean, dry microscope slide.
2. Use the blunt end of a toothpick or wooden splint to gently scrape the inside of your cheek to obtain some cheek cells. The cells will not be visible yet.
3. Swirl the toothpick (splint) in the stain to release some cells and then add a cover slip. Discard the toothpick (splint) in the garbage. You have created a “wet mount” using stain.
4. Examine the cells on low power and work up to high power. The cells will look something like “fried eggs” and may be overlapping each other. Experiment with the iris diaphragm below the stage, turning to increase/decrease the light.
5. Identify the nucleus, cytoplasm, and cell membrane.
6. Draw ONE cheek cell on blank white paper while on high power. Follow proper biological drawing format. On your diagram label the nucleus, cytoplasm and cell membrane.
7. Using your dFOVhp, calculate the ACTUAL SIZE of the cell (the width). Show all your work.
8. When you are finished, carefully remove the cover slip and wash and dry it along with the slide.

PLANT CELL: PREPARATION AND DRAWING

1. Add a small drop of IODINE stain in the middle of a clean, dry microscope slide.
2. Using forceps, peel a small, thin piece of onion as demonstrated by your teacher and place it in the stain.
3. Add a cover slip and with a piece of paper towel folded over on itself to give some thickness, press gently to squish the onion a little. You have created a “wet mount” using stain.
4. Examine the cells on low power and work up to high power. The cells will look something like “interlocking bricks” and may be overlapping each other.
5. Move the slide around as you examine and search for the edge of the onion piece. There you may find a thin enough section to view individual cells. Also experiment with the iris diaphragm below the stage, turning to increase/decrease the light.
6. Identify the nucleus, cytoplasm, cell membrane (or cell wall) and vacuole.
7. Draw ONE onion cell on blank white paper while on high power. Follow proper biological drawing format. On your diagram label the nucleus, cytoplasm, cell membrane (or cell wall) and vacuole.
8. Using your dFOVhp, calculate the ACTUAL SIZE of the cell (the width). Show all your work.
9. When you are finished, carefully remove the cover slip and wash and dry it along with the slide.

QUESTIONS

Refer to your text pg. 35 and answer “Analyze and Evaluate” (a-f) and “Apply and Extend” (g-i).

SUBMIT TO TEACHER

- Cheek cell drawing with labels and calculation
- Onion cell drawing with labels and calculation
- Answers to questions