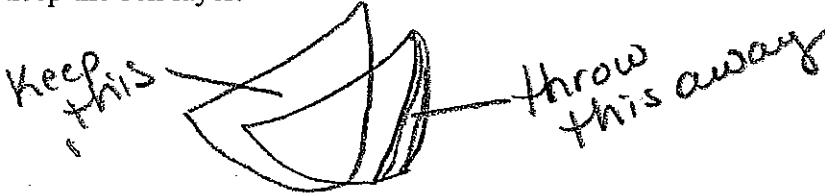


World of Cells Lab

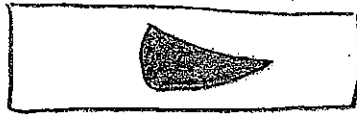
Read each step. Understand what it is asking. Do what it is asking. Check it off after you are done.

Part 1: Onion Cells

1. Place a drop of iodine in the center of a slide.
2. Peel away the inner surface layer of an onion slice. Throw away the onion slice and keep the cell layer.



3. Place the layer of cells in the iodine so there are no folds, wrinkles, or bubbles.



4. Drop more iodine over the layer of cells. Cover the cell layer with a cover slip. Blot off excess iodine with tissue paper.
5. Set the diaphragm on the largest opening. Examine the cell layer under low power. Then switch up to medium or high power.
6. What is the shape of the cells?

7. Are the cells similar or different in size or shape?

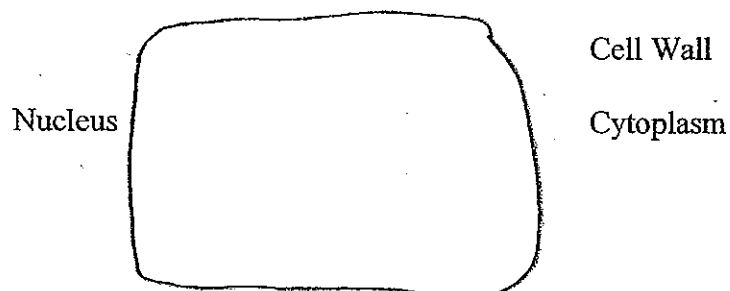
8. What distinct object is visible in all of the cells? Describe it.

9. Do the cells have depth – that is, are the cells three-dimensional; do the cells have thickness?

10. How can you tell?

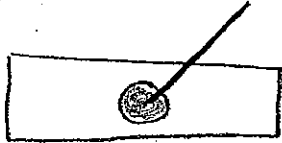
11. In Space A below, draw a small group of cells as they appear under high power. Label the parts listed.

Space A. Onion cells under high power.



Part 2: Cheek Cells

- _____ 1. Place a drop of iodine in the center of a slide.
- _____ 2. Gently scrape the inside of your cheek with the flat end of a toothpick as demonstrated by the teacher.
- _____ 3. Spread the scrapings in the drop of iodine. Stir the cells well to spread them around.



- _____ 4. Place a cover slip over the iodine and cells. Blot off excess iodine with tissue paper.
- _____ 5. Focus on low power first. Then switch up to high power.
- _____ 6. Are the cells large or small compared to the onion cells?

_____ 7. Describe the shape of cheek cells.

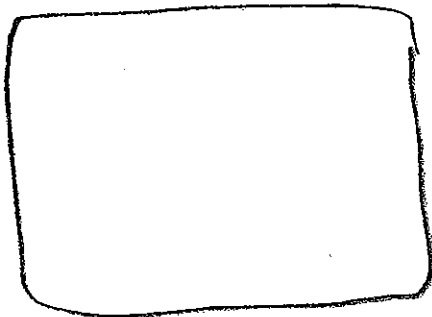
_____ 8. Are the cells similar or different in size and shape?

_____ 9. What object is plainly visible in almost all of the cells? Describe it.

_____ 10. Why did you add stain to the cheek and onion cells?

_____ 11. In Space B below, draw several cheek cells as you see them under high power. Label the parts.

Space C. Cheek cells under high power.



Cell Membrane

Cytoplasm

Nucleus