

Student

Mrs. Richardson

Biology

3-26-16

Lab: Observing Human Cells

Background:

Cells in the human body number in the trillions and come in all shapes and sizes. These tiny structures are the basic unit of living organisms. Vertebrate organs are made of four types of tissues: epithelial, connective, muscle, and nerve. *Epithelial tissue* is made up of closely-packed cells in one or more layers. *Connective tissue* provides strength, support, and protection to the soft parts of the body. *Nerve tissue* transmits signals throughout the body. *Muscle tissue* has the special ability to contract, allowing for movement.

Hypothesis:

I think I will be able to observe the four different types of cells in this lab.

Purpose:

To observe connective, epithelial, nervous, and muscular cells.

Materials:

Microscope, pencil, paper, colored pencils, prepared cell slides

Procedure:

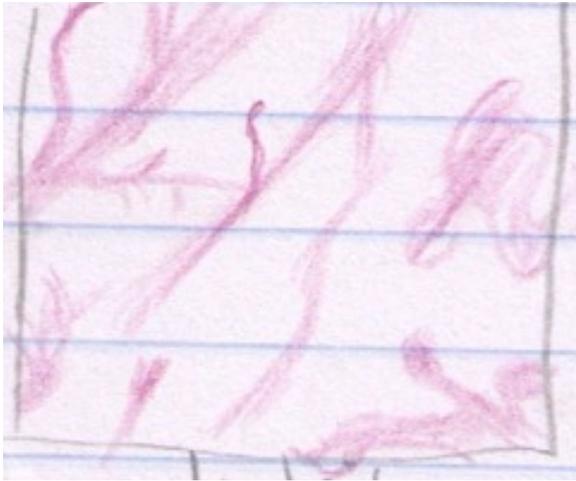
1. Gather all your materials and have them ready prior to starting the lab.
2. Turn on your microscope and insert one of the cell slides at 4x magnification.
3. If you would like, change the magnification to 10x or 40x, and notice the differences.

4. Repeat this process with all of the cell slides, making sure to record your observations with pencils and paper.

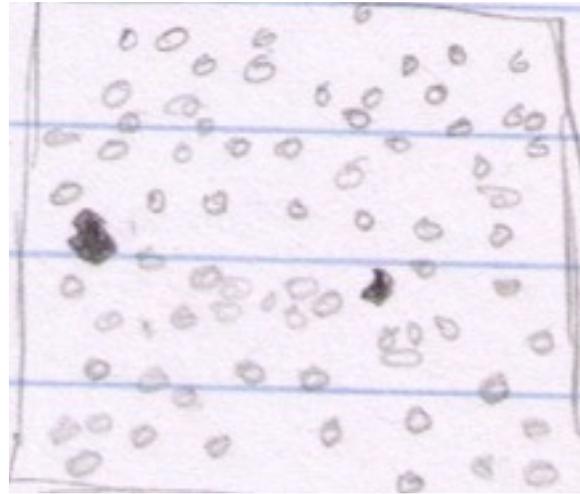
5. Be sure that you have drawings, notes, and accurate descriptions of each cell type.

Results/Data:

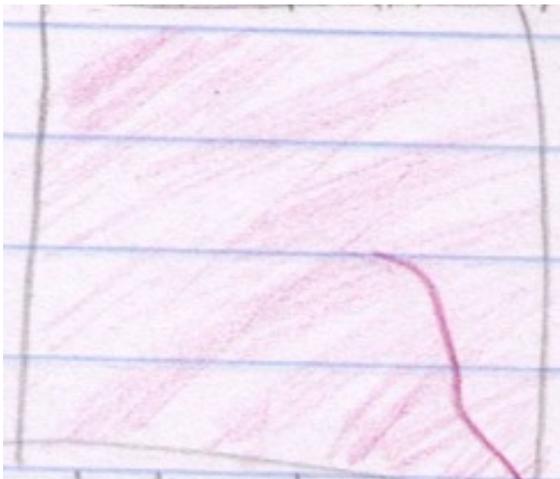
Nervous tissue



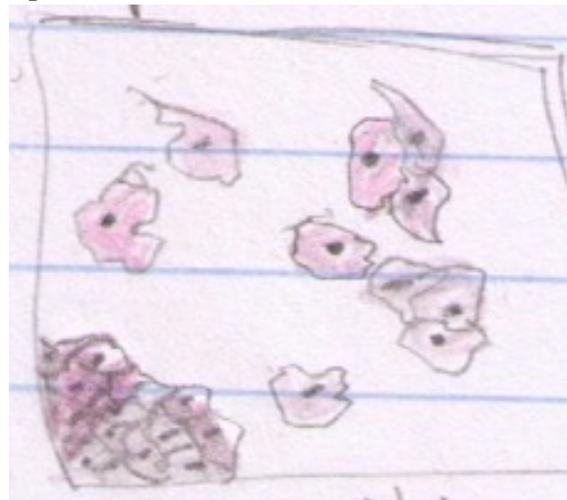
Connective tissue



Muscle tissue



Epithelial tissue



Conclusion:

This lab taught me a lot about the structure and formation of different cells in the body. I observed blood cells, which are connective tissues, epithelial cells, which come from the human mouth, nervous cells, which are part of the nervous system, and muscle cells, which are muscular tissues. Nervous tissues can be found all throughout the body. Connective tissue can be found in bones or blood. Muscle tissue can be found your heart or biceps (or any other muscle). Epithelial tissue can be found as the lining of organs in your body. I observed all of the cells under 4x magnification. During the nervous tissue observation, I saw the thin dendrites in clusters spread around. The axon was thicker, but was formed by several thin strands. The axon branched into smaller bits known as the dendrites. The connective tissue from the human blood sample, resembled the blood platelets shape. I saw several non-filled dots scattered throughout. The muscle tissue looked similar to cheetah stripes, and looked strong and fibrous. There were many fibers together in a bundle shape. I have already observed epithelial cells, but the epithelial cells looked like thin, irregular shapes that formed closely together. Sometimes they would layer on top of each other. For these cells, all the nuclei were visible. I learned a lot in this lab, and it was fun to observe the different structures of each type of cell.