

Lab 04 – 2/24/14

## Learning Objectives

By the end of this lab you should understand:

- The complete cell replication cycle
- The major functions of the four tissue types of the body
- How the appearance of a tissue is connected with its functions

Key facts:

- Connective tissue connects and supports, typically with many fibers
- Epithelial tissue forms a boundary and is usually composed of layers of large cells
- Muscle and nervous tissue are electrically active and have distinctive cell structures
- Mitosis is the splitting of the nucleus, which is the final event of cell replication (save for cytokinesis, the splitting of the cytoplasm)

Key skills:

- Identify a tissue by sight
- Identify the function or location of a tissue
- Identify steps of mitosis by sight, function or name

Lab Procedure:

- Individual material: Complete cell replication cycle (Refer to Exercise #5)
  - Hint: Do NOT start with prophase
- Group material: Tissue identification (Refer to Exercise #5)

Sample lab exam questions:

- True/False: Blood is an epithelial tissue
- Identify the tissue/tissue type visible under the microscope
- Where may this tissue be found in your body?
- Which of these slides is composed of stratified squamous epithelia?
- Identify this stage of mitosis
- What stage of mitosis involves the splitting of sister chromatids into separate chromosomes?