

## BIOLOGICAL FRAMEWORKS FOR ENGINEERS

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### Session #19 [Integrating Cells into Tissues]

#### General Objectives:

- ✓ Describe the features of tissues - structural organization, cell localization, extracellular matrix, and protein synthesis.

#### Central Framework:

- ✓ Cells join together physically, electrically, and chemically to work together in a common specialized function as a tissue.

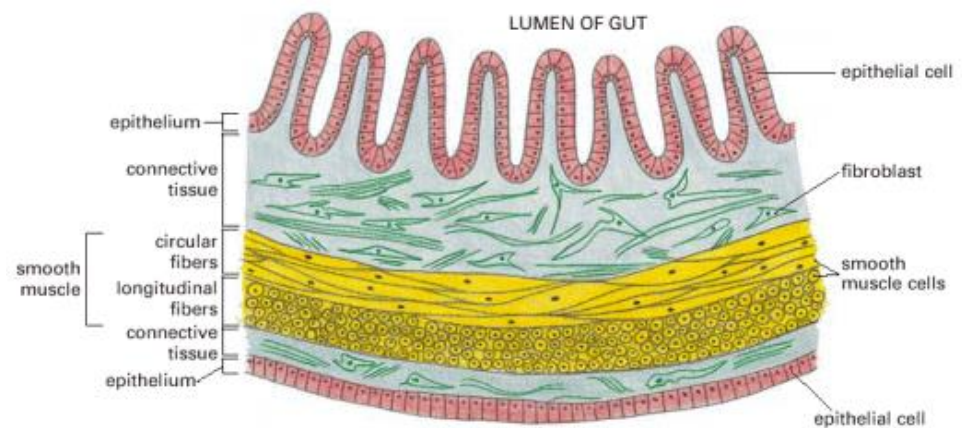
#### Interactive Activity:

- ✓ Worksheet in class on protein synthesis.

#### Session Outline:

##### A. Tissues Defined

##### B. Examples of tissues & their jobs.

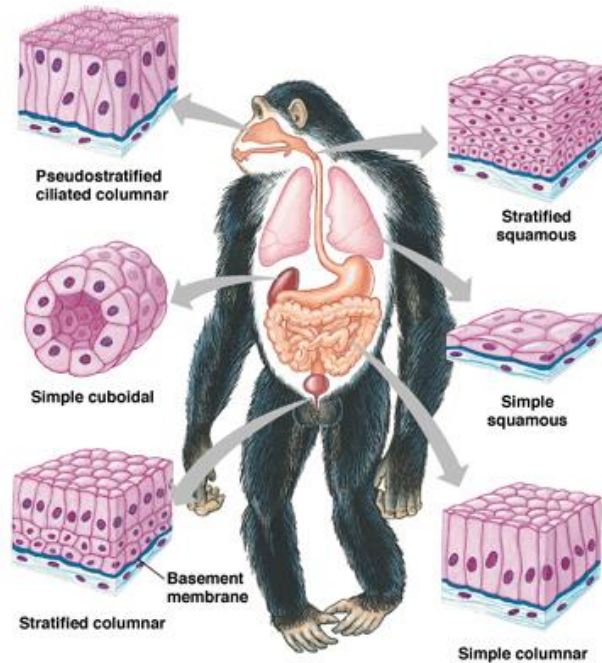


##### C. Our bodies have many different tissues that perform different tasks.

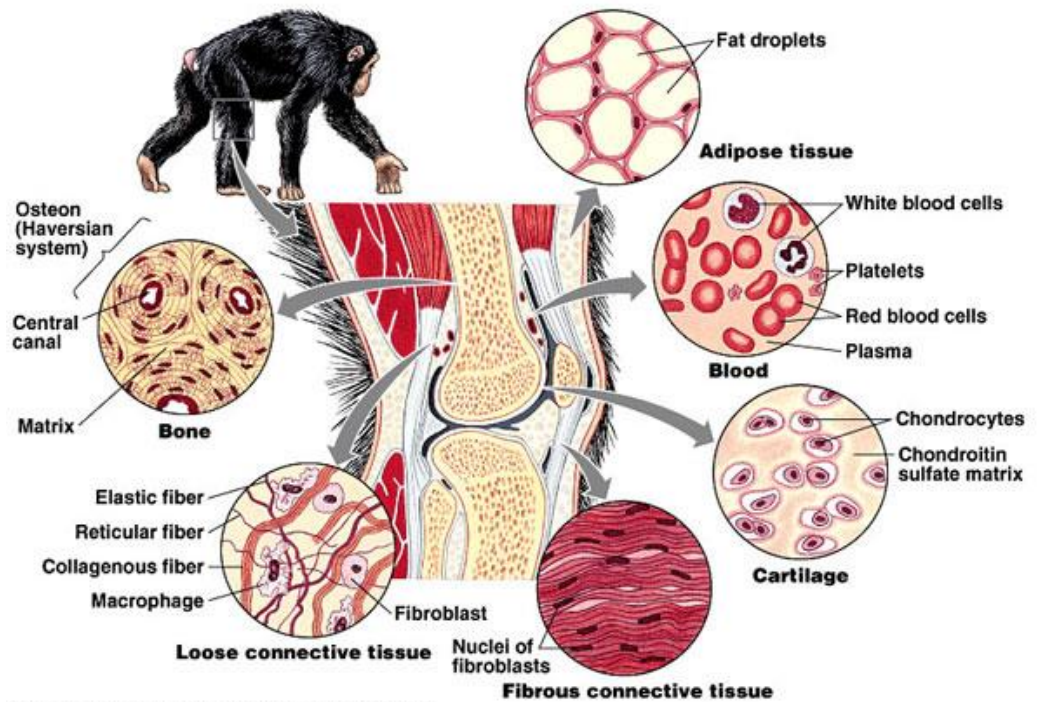
##### D. Every cell in your body starts with the same DNA, but some cells obviously have specialized functions.

##### E. All cells contain the ability to make all proteins, but they divide up the tasks and each cell only expresses specific proteins necessary for its specific functions.

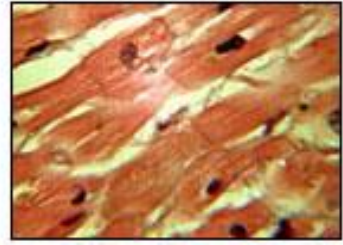
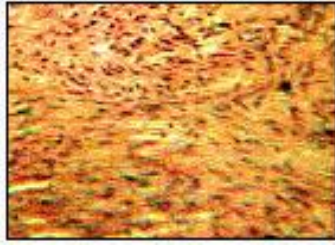
A. Epithelial Tissue



B. Connective Tissue



C. Muscle Tissue



D. Nerve Tissue

