Cells are the smallest units of life,
Tissues are specialized groups of cells and cell products

Modules 1.4 & 1.5

Cells are the smallest units of life

• Measured in micrometers (µm)
  – 1/1,000,000th of 1 meter
  – 1/1000th of 1 mm
• Over 200 different types of cells in the human body
• Respond to environment and work together
Cell Theory

• Building blocks of life
• Divide to produce new cells
• Smallest structures that perform all 8 universal characteristics of life

Cell anatomy relates to physiology
Tissues are specialized groups of cells

- Perform a specific function
- Histology
- 4 primary tissue types
  - Epithelial
  - Connective
  - Muscle
  - Neural

Epithelial tissue

- Forms a barrier
- Covers exposed surfaces
- Lines internal passageways
- Skin, lining mouth/digestive tract
Connective tissue

- Most diverse
- Fills internal spaces, general packing material
- Provides structural support
- Stores energy
- Fat, blood, bone

Muscle tissue

- Contracts to allow movement
- 3 types – skeletal, smooth, cardiac
Neural tissue

- Conducts electrical impulses in order to carry information
- Neurons, neuroglia