CHAPTER 2 – THE ESSENTIALS OF MOVEMENT

**balance**: the even distribution of weight (p. 16)

**coordination**: the organization of different elements (p. 16)

**dynamics**: aspects of moving systems (p. 14)

**kinematics**: the analysis of movement in terms of mechanical elements (p. 14)

**kinesiology**: the study of movement (p. 14)

**kinetic chain**: a movement pattern’s predictable sequence (p. 17)

**kinetics**: the study of forces that act on the body to generate or alter motion (p. 15)

**mobility**: the ability to move (p. 15)

**proportion**: corresponding in size to something else (p. 18)

**stability**: the ability to be firmly fixed or supported (pp. 14–16)

**statics**: aspects of nonmoving (or virtually nonmoving) systems (p. 14)

**symmetrical**: comprised of exactly similar parts facing each other (p. 18)

CHAPTER 3 – CONNECTIVE TISSUE, PART 1

**cell**: the basic structural, functional, and biological unit of all known living organisms (p. 23)

**collagen fiber**: a group of naturally occurring proteins found in animals, especially in the flesh and connective tissues of vertebrates (pp. 23–27)

**colloidal**: a property whereby a material is composed of solid particles suspended in fluid (p. 28)

**creep**: a gradual change in shape that occurs when tissues are subjected to a slow, continuous force from either compression, tension, or twisting (p. 26)

**elastic**: the capacity to recoil or rebound to an original length (or shape) after being stretched (or deformed) (p. 26)

**elasticity**: a muscle’s ability to return to its original length and shape after it is shortened or lengthened (p. 26)

**elastin fiber**: a protein in connective tissue that is elastic and allows many tissues in the body to resume their shape after stretching or contracting (p. 24)

**extracellular matrix**: the part of animal tissue that usually provides structural support to the animal cells in addition to performing various other important functions (pp. 22–24)
**fascial tissue**: the body’s sheets, cables, conduits, and paddings, composed of loose or dense connective tissue (p. 31)

**fibroblast**: a type of cell that synthesizes the extracellular matrix and collagen (p. 23)

**ground substance**: an amorphous gel-like substance surrounding cells; formed by the nonfibrous components of the extracellular matrix (p. 22-24)

**macrophage**: a large cell found in stationary form in the tissues or as a mobile white blood cell (p. 23)

**myofascial unit**: the combined muscular and fascial elements that comprise a muscle belly and its tendons (p. 27)

**osteoblast**: a cell responsible for bone formation (p. 23)

**piezoelectric effect**: the production of electricity or electric polarity by applying a mechanical stress to certain crystals (p. 28)

**plasticity**: the capacity to be altered and retain that new configuration (p. 26)

**reticular fiber**: a type of fiber in connective tissue composed of collagen secreted by reticular cells (pp. 23–24)

**stretch**: the ability to lengthen without being damaged or injured (p. 26)

**tensile strength**: the ability to be pulled in two different directions without damage (p. 27)

**thixotropic**: a quality that responds to changes in temperature (or other disturbances, such as pressure) by transforming from a gel to a liquid and vice versa (p. 27)

**CHAPTER 4 – CONNECTIVE TISSUE, PART 2**

**aponeurosis**: a broad, flat tendon that attaches to the end of a muscle (pp. 43–44)

**appendicular skeleton**: the portion of the skeleton composed of the arms and legs, pectoral girdle (scapulae and clavicles), and pelvic girdle (hips) (p. 36)

**axial skeleton**: the skeleton’s center including the cranium, vertebral column, ribs, sternum, and hyoid bone (p. 36)

**compact bone**: one of the two types of osseous tissue that form bones (p. 38)

**elastic cartilage**: a type of cartilage present in the outer ear, eustachian tube, and epiglottis (p. 40)

**fascial tissue**: the body’s sheets, cables, conduits, and paddings, composed of loose or dense connective tissue (p. 41)

**fibrocartilage**: a mixture of white fibrous tissue and cartilaginous tissue in various proportions (p. 40)

**hyaline cartilage**: also known as articular cartilage, it is a type of cartilage found on many joint surfaces (p. 40)

**interosseous membrane**: a broad and thin plane of fibrous tissue that separates two bones (p. 43)

**joint capsule**: the envelope surrounding a synovial joint (p. 43)

**lever**: a simple machine that can amplify an applied force (effort) by converting it into torque (p. 37)

**ligament**: a band of connective tissue that connects bones together (p. 44)

**myofascial unit**: the combined muscular and fascial elements that comprise a muscle belly and its tendons (p. 43)