

Chapter 32: Integumentary, Skeletal and Muscular Systems

	<u>Integumentary</u>	<u>Skeletal</u>	<u>Muscular</u>
<u>List of Vocab</u>	epidermis keratin melanin dermis hair follicle sebaceous gland.	axial skeleton appendicular skeleton compact bone osteocyte spongy bone red/yellow bone marrow osteoblast osteoclast ligament	smooth muscle involuntary muscle cardiac muscle skeletal muscle voluntary muscle tendon myofibril myosin actin
<u>Structure</u>	<p><u>The Epidermis</u></p> <ul style="list-style-type: none"> - outermost layer of skin - epithelial cells - contain <u>keratin</u> (waterproof protein) - inner layer contains cells w/ <u>melanin</u> (pigment - w/ light) <p><u>The Dermis</u></p> <ul style="list-style-type: none"> - second layer - 15-40x thicker than epidermis - connective tissue - Nerve cells, muscle, sweat & oil glands, <u>hair follicles</u> <p><u>Hair & Nails</u></p> <ul style="list-style-type: none"> - hair follicles - Sebaceous gland 	<p><u>206 bones</u></p> <p><u>Axial Skeleton:</u> skull, vertebral column, the ribs, and the sternum.</p> <p><u>Appendicular skeleton:</u> shoulders, arms, hands, hips, legs, and feet.</p> <p><u>Compact and Spongy bone:</u></p> <p><u>Compact:</u> dense & strong strength & protection.</p> <p><u>Osteocytes:</u> living bone cells.</p> <p><u>Spongy bone:</u> less dense, many cavities contain bone marrow.</p> <p><u>Joints:</u> where two or more bones meet.</p> <p><u>Ligaments:</u> attach bone to bone</p>	<p><u>3 Types:</u> Smooth, Cardiac, Skeletal</p> <p><u>Smooth</u> - involuntary muscle cannot be controlled consciously - stomach, intestines</p> <p><u>Cardiac</u> - involuntary muscle</p> <ul style="list-style-type: none"> - only present in the heart - network - striped/striated - connected by gap junctions <p><u>Skeletal:</u> attached to bone by <u>tendons</u></p> <ul style="list-style-type: none"> - when tightened (contracted) cause movement ↳ <u>Voluntary</u>
<u>Function</u>	<p>① <u>Temperature Regulation</u></p> <ul style="list-style-type: none"> - Sweating - evaporation cools body - Goose bumps - ↳ Make bigger ↳ traps air (warms) <p>② <u>Vitamin production</u></p> <p>Vitamin D is produced by absorbing w/ light.</p> <p>③ <u>Protection and Senses</u></p> <ul style="list-style-type: none"> - Prevents invaders - Prevent excess water loss - Melanin protects DNA in skin cells <p>- Information abt. environment (pain, temp, pressure etc.)</p>	<p>① <u>Support:</u> muscles, structure</p> <p>② <u>Protection:</u> skull-brain, vertebrae-spine, rib cage-heart, lungs</p> <p>③ <u>Formation of blood cells:</u> Red bone marrow produces red blood cells, white blood cells, and platelets.</p> <p>④ <u>Reservoir:</u> stores Ca, P</p> <p>⑤ <u>Movement:</u> muscles attach</p> <p>Diaphragm allows normal breathing</p>	<p>① <u>Movement</u> - connected to skeletal system</p> <p>② <u>Digestion</u> - move substances through digestive tract.</p> <p>③ <u>Circulation</u> - cardiac muscles "pump" blood through body.</p>

