**Study Guide for Unit 4: Integumentary System**

* What are at least 3 functions of the skin?
* What are the two distinct layers of the skin?
* What is the tissue underneath the skin called?
* What lies between the epidermis and the dermis?
* What are the layers of the epidermis? Which layer produces new cells? Which layer is made up of keratinized cells and is the outermost layer?
* Be able to identify the layers of the skin, including the specific layers of the epidermis
* What are melanocytes? What do they produce? Where are they found? What is the importance of melanin?
* Dermis
  + Function
  + How do fingerprints form?
    - Dermal papillae
  + What is it comprised of?
  + 2 sensory receptors
    - Pacinian corpuscles- what do they sense?
    - Meissner’s corpuscles- what do they sense?
  + Accessory organs
    - Hair follicles (identify on diagram)
      * What do they produce?
        + What is hair made of?
        + What determines hair color?
      * Arrector pili muscle (identify on diagram)
        + What do they cause when they constrict?
      * Sebaceous gland empties out onto hair shaft
        + What does this do?
    - Nails
      * Function?
      * Nail bed and nail plate Lunula- what is this the site of?
      * What is a nail made of?
    - Skin glands
      * Sebaceous
        + Holocrine

Cells fill with fat and then burst

Sebum

* + - * + What is the function of sebum for hair?
        + How does it relate to acne?
      * Sweat/sudoriferous
        + Widespread
        + Most numerous are the eccrine glands
        + Sweat carried to surface of skin to an opening known as a pore
        + What is sweat made of?
        + Sweat production helps to cool the body down
        + Apocrine sweat glands are associated with a strong odor when their products are digested by bacteria
        + What is one example of a modified sweat gland?
* Subcutaneous layer/hypodermis
  + Not really a layer of skin but what lies beneath
  + What types of tissues comprise this layer?
  + Identify hypodermis on picture/diagram
* Temperature issues
  + Hyperthermia and Hypothermia
  + What is the problem with a humid day?
  + How does sweating work to cool us down?
* Skin color
  + What can determine skin color?
  + How has it evolved?
* Healing of wounds and burns
  + Inflammation- what happens and why?
  + Cuts
    - Scab formation- blood clots, fibroblasts, and growth factors, phagocytes (what role do they all play?)
  + Burns
    - Know the three degrees and how they are different from one another
    - Rule of 9’s- be able to figure out problems
* Aging
  + Why does our hair turn gray/white when we age? Why does our skin sag and wrinkle when we get older?
* Skin diseases
  + Recognize the symptoms and treatment of
    - Baldness
    - Psoriasis
    - Eczema and acne
    - Vitiligo
    - Athlete’s foot
    - Albinism
* Skin cancer
  + Cutaneous carcinoma or cutaneous melanoma
  + Risk factors