The Anatomy of Skin

Name: ____________________________

Date: _______ Period: ______

Go to the following site and complete the module on the anatomy of skin.


The Body’s Protective Covering

1. How much does our skin weigh?
   8 pounds

2. _____ Our skin is a complex system of which of the following?
   a. Cell layers   b. nerves   c. glands   d. all of these

   Click “Skin Anatomy”

Under Your Skin

3. What are the three layers of the skin?
   - **Epidermis**: Protective outer layer
   - **Dermis**: Thick elastic inner layer
   - **Subcutaneous layer**: base layer of fatty tissue

4. Define the following terms:
   a. **Epidermis**: made up of several overlapping layers of skin. The outer layer contain dried, flattened cells rich in keratin, a protein found in hair and fingernails that helps retain moisture inside the skin and keeps the skin surface water proof. The lower epidermis is where new skin cells are produced. Epidermal cells are constantly being sloughed off replaced from below.
   b. **Dermis**: The dermis is a strong, thick, flexible layer beneath the epidermis. This layer houses a network of tiny blood vessels that help in regulating body temperature and nerve fibers as well as receptors that detect pressure, temperature, and pain. The dermis layer is also home to hair follicles and sweat glands.
   c. **Subcutaneous layer**: underneath the dermis is the subcutaneous layer, a seam of fat used as a fuel reserve as well as for insulating and cushioning.
   d. **Hair follicle**: The skin is dotted with millions of tiny cavities called follicles. These pits originate in the dermis and are responsible for growing our bodies coat or hair. They also channel to the surface a skin-softening oil called sebum.
   e. **Capillaries**: Capillaries are thin blood vessels that extend throughout the dermis layer and help to regulate body temperature.
   f. **Stratum corneum**: the stratum corneum means “horny layer.” It is the covering of flattened, dead skin cells that make up the topmost layer of the epidermis.
   g. **Nerve endings**: nerve endings relay messages between the skin and the brain. Nerves in the dermis come in two different forms: touch receptors that detect light touch and pressure receptors that detect pressure and vibrations.
h. Arrector pili: Arrector pili are tiny muscles attached to the base of hair follicles. They pull the hair upright and produce goosebumps when the body gets cold.

i. Sebaceous gland: Sebaceous glands are attached to each hair follicle. They produce an oil called sebum, which moves to the and keeps the skin and hair soft and flexible.

j. Sweat Gland: Every square inch of skin contains about 650 sweat glands. These tiny ducts emit droplets or perspiration that cool the body as they evaporate. Sweat glands are also used by the body to remove certain waste materials from the blood.

5. Label the image below

![Image of skin layers]

- Epidermis
- Dermis
- Fatty Tissue (Subcutaneous layer)
- Nerve
- Follicle
- Oil Gland
- Sweat Gland