

MINISTRY OF EDUCATION
SECONDARY ENGAGEMENT PROGRAMME
GRADE 8
INTEGRATED SCIENCE

Week 12

Lesson 1

Topic: Sense Organ

Sub-topic: The Skin

Objectives: With the use of diagrams, students will:

- label at least four (4) parts of the skin.
- outline the functions of the skin correctly.
- identify the main receptors in the skin correctly.

Content

The Skin

The skin is a sense organ that responds to the stimulus of touch. It is also sensitive to heat, cold, and pressure. The skin has five kinds of receptors that respond to stimuli of touch, pressure, pain, heat, or cold.

Functions of the Skin

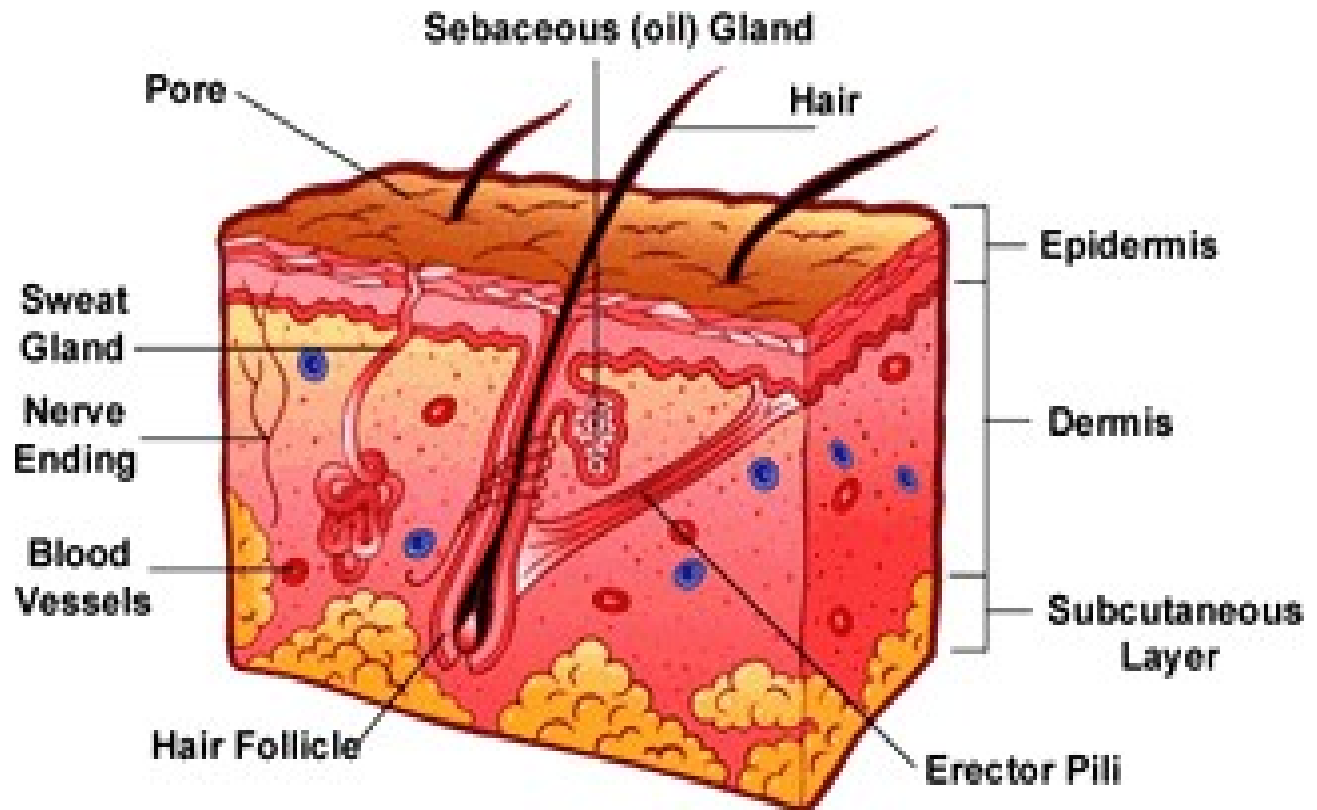
The skin is the largest sense organ because it covers the entire body. It plays an important role in protecting us from certain dangers. The sensation of pain is a protective device because it signals a threat of injury to the body.

The receptors that respond to heat and cold tell us when temperature changes are affecting us. If we feel uncomfortably hot or cold, we can do something to remedy the situation. This helps us to maintain constant body temperature.

➤ The skin of human body has various functions. Some of this are given below:-

1. **Protection** :- One of the main function of the skin protection from invasion by microbes, chemicals, physical agent.
2. **Sensory function** :- Free nerve ending on the skin are sensitive to pain , touch , heat & cold , resulting either voluntary or reflex activities.
3. **Excretion** :- Skin excretes sodium chloride in sweat, urea when kidney function is impaired, and aromatic substances (like Garlic and other spices).
4. **Regulation of body temperature** :- Regulation of body temperature at about 36.9°C with variation of 0.5°C and 0.75°C is one of the important function of skin.

Structure of the Skin



The main receptors of the skin

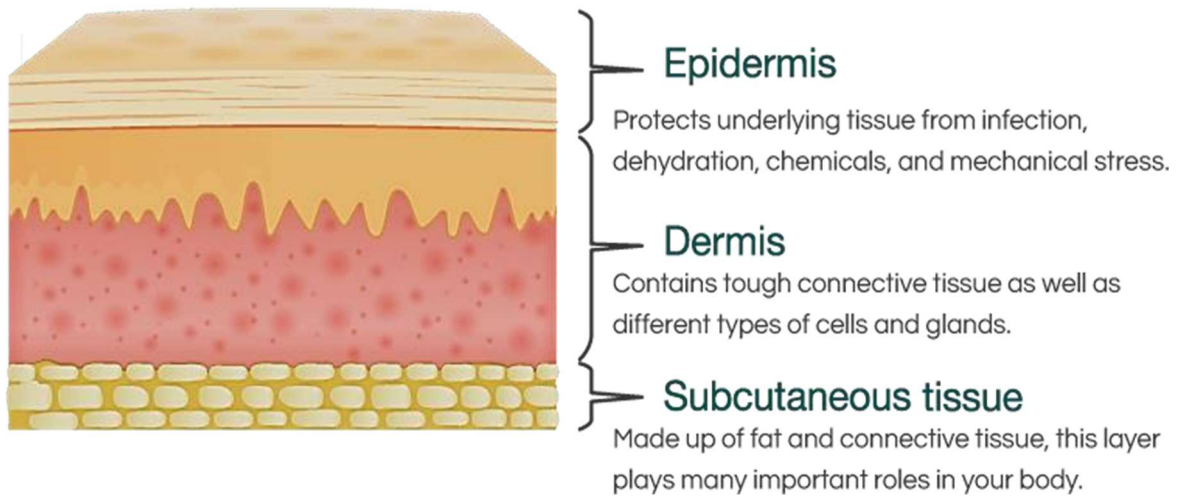
There are two (2) main sections in the skin: -

1. The outer section or epidermis is made up of layers of cells.
2. The inner section or dermis also has layers of cells and contains most of the sense receptors.

The dermis also contains sweat glands and sebaceous or oil glands, blood vessels, and hair follicles. The sweat glands have sweat ducts that lead to the surface of the epidermis. Sweat pores open out on the outer surface. All of these structures help the skin to perform its many functions.

The main layers of the skin

Layers Of The Skin



Home Work

1. Describe two functions of the skin.
2. Discuss how the skin works when the place is very hot.

Reference

Blackman, S., Bernard, M., Dalgety, F., & Sadoo, d.s (2000) Science in Daily Life Bk.2.

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https://www.google.com/search?q=the+function+of+skin+in+temperature+regulation&tbm=isch&ved=2ahUKEwikx47q8-7rAhVBO98KHZ_VDjoQ2-cCegQIABAA&oq=the+function+of+skin+in+temperature+regulation&gs_lcp=CgNpbWcQAzoECAAQHjoECAAQGFCW2A5Y6ZgPYKSiD2gAcAB4AIABxQKIAZgkkgEIMC4yNC4xLjGYAQCgAQGqAQQnd3Mtd2l6LWltZ8ABAQ&scient=img&ei=66liX-SIFsH2_Aafq7vQAw&bih=789&biw=1600&hl=en#imgrc=2JWWd5W3QObVM&imgdii=5u9UnT3av_4xVM