Skin (Worksheet)

Name: ______________________________
Section: _____________________________
Student ID#:__________________________

Work in groups on these problems. You should try to answer the questions without referring to your textbook. If you get stuck, try asking another group for help.

1. The outermost layer of the skin is: the dermis / the epidermis / fat layer

2. Which is the thickest layer: the dermis / the epidermis?

3. Add the following labels to the diagram of the skin shown below:
   - Epidermis, dermis, fat cells, hair shaft, hair follicle, hair erector muscle, sweat gland, pore of sweat gland, sebaceous gland, blood capillaries
4. Which of the following happens to epidermal cells as they move up to the surface of the skin?
   - Keratin is deposited in them
   - they become flattened and scale-like
   - they die
   - they become thicker
   - they become more active
   - they are shed from the surface
   - fat is deposited in them
   - they grow hairs

5. Keratin deposited in the epidermal cells:
   - makes it stronger
   - gives it color
   - makes it waterproof
   - makes it flexible
   - kills the cells

6. Which of the following is NOT a keratin skin structure:
   - foot pads
   - hair
   - nails
   - feathers
   - antlers
   - reptilian scales
   - horns

7. The function of melanin in the skin is to:
   - cause cancer
   - give the skin a nice color
   - protect underlying layers from the harmful rays of the sun
   - make the skin tough

8. The hair erector muscle:
   - gives humans goose bumps
   - squeezes out sweat
   - makes animals hair stand on end
   - reduces blood flow in the skin
   - makes animals shiver

9. Sebaceous glands secrete:
   - sweat
   - milk
   - oils
   - scent

10. Sweat glands are:
    - exocrine glands
    - endocrine glands

11. Sense organs for touch, pressure, pain and temperature are found in the:
    - epidermis
    - subcutaneous fat layers
    - dermis

12. All vertebrates are homoiothermic (warm blooded) animals. True or false?

13. Temperature regulation is under the control of the:
    - medulla oblongata
    - pituitary gland
    - hypothalamus
    - sympathetic nervous system
14. Which of the following are NOT important in temperature regulation of the body:
   smooth muscle around capillaries / adipose tissue / sweat glands / sebaceous glands / hair / shivering / panting.

15. Which vitamin is produced in the skin in sunlight?
   Vitamin A / Vitamin B12 / Vitamin C / Vitamin D / Vitamin E / Vitamin K.

16. Large animals find it easier to keep warm than small ones because:
   they lose less heat through their lungs / they are more active / the ratio of the outside body surface to the inner
   volume is smaller?

17. Which of the following is NOT a function of the skin:
   holding in the organs / temperature regulation / protection/ water proofing / sensing stimuli / excretion of waste
   products?

18. Frogs and other amphibians use their skin for:
   maintaining their temperature / gas exchange / preventing water loss / attracting a mate.

19. Match the skin structure with its function.

<table>
<thead>
<tr>
<th>Structure</th>
<th>Function</th>
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<tbody>
<tr>
<td>A. Epidermis</td>
<td>a. Insulation</td>
</tr>
<tr>
<td>B. Hair erector muscle</td>
<td>b. Water proofing</td>
</tr>
<tr>
<td>C. Fat cells</td>
<td>c. Protection from sun's rays</td>
</tr>
<tr>
<td>D. Sebaceous gland</td>
<td>d. Heat retention</td>
</tr>
<tr>
<td>E. Dermis</td>
<td>e. Heat loss</td>
</tr>
<tr>
<td>F. Melanin</td>
<td>f. Protection from infection</td>
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<tr>
<td>G. Hair</td>
<td>g. Makes hairs stand on end</td>
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<tr>
<td>H. Sweat gland</td>
<td>h. Secretes oily substance to coat hairs</td>
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<tr>
<td>I. Blood capillaries in the dermis</td>
<td>i. Makes skin tough</td>
</tr>
<tr>
<td>J. Keratin</td>
<td>k. Constrict or dilate to control heat loss</td>
</tr>
</tbody>
</table>

Skin Worksheet Answers