FACTS/TIPS

TOPIC: OUR SENSE ORGANS

- Organs perform special jobs in the body.
- Sense organs are body organs that the brain uses to help us feel, taste, see, hear and smell.
- There are five sense organs in the human body.
- These are the skin (for touching or feeling) the eyes (for seeing), the nose (for smelling), the ears (for hearing), and the tongue (for tasting).

The Skin

- The skin (organ of touch) is a continuous layer of tissue covering the entire body.
- The skin is the largest organ of the body.
- It has three functions.

(1) To protect the tissues underneath from injury, ultra-violet rays from the sun and bacterial infection.
It has numerous **sensory receptors** which are sensitive to temperature, touch, pain, pressure, hair movement and awareness of the environment.

The skin **regulates body temperature** by getting rid of excess water through the pores.

**Parts of the skin**

**The skin has three layers:**

1. The **epidermis**, the outermost layer of skin, provides a waterproof barrier and creates our skin tone. This layer contains living and dead cells.

2. The **dermis**, beneath the epidermis, contains tough connective tissue (blood capillaries and nerve endings), hair follicles, and sweat glands. This layer has only living cells.

3. The deeper **subcutaneous tissue (hypodermis)** is made of fat and connective tissue. This layer helps to maintain body heat.

**Diagram of the skin**
How you feel?

1. In the skin, there are sensory receptors that make up the somatosensory system.
2. Within this system (somatosensory) there are four main types of receptors; mechanoreceptors, thermo receptors, pain receptors and proprioceptors.
3. Whenever we touch or feel an object, the receptors in the skin are activated, and they send information to the brain.
4. The brain then translates the information into what we feel.

Did you know?
Melanin gives the skin colour!

Did you know?
The skin’s natural oil is called sebum!

The Tongue
- The tongue is a muscular organ in the mouth.
- It is connected to the bottom of your mouth by a thin membrane called the lingual wall.
- The tongue is the sense organ which the brain uses to help us taste.
- It is also vital for chewing, swallowing and speaking.
- The tongue is covered with moist, pink tissue called the mucosa.
- Tiny bumps called papillae give the tongue its rough texture.
Thousands of taste buds cover the surfaces of the papillae. Taste buds are collections of nerve-like cells that connect to nerves running into the brain. The taste buds are filled with gustatory cells which do the tasting and allow us to experience bitter, sour, salt and sweet. When we eat the sensory receptors carry information from these cells to the brain. The brain then translates the information sent into what we taste.

There are four different types of tastes: bitter, sour, sweet and salty.

Diagram of the organ of taste
ON YOUR OWN

1. In your own words say what sense organs are.

_________________________________________________________
___________________________________________________

2. Complete the table below by filling in either the organ or sense.

<table>
<thead>
<tr>
<th>Organs</th>
<th>Senses</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Ears</td>
<td></td>
</tr>
<tr>
<td>b)</td>
<td>Smell</td>
</tr>
<tr>
<td>c) Skin</td>
<td></td>
</tr>
<tr>
<td>d)</td>
<td>Sight</td>
</tr>
<tr>
<td>e)</td>
<td>Taste</td>
</tr>
</tbody>
</table>

3. Use the words in the Word bank to label the diagram below.
4. Two functions of the skin are
   (i) ____________________________________________
   (ii) __________________________________________

5. The skin’s natural oil is called?
   ____________________________________________
6. Identify the part of the skin that helps to keep us warm.

7. Name the organ of taste.

8. What connects the tongue to the mouth?

9. List three functions of the tongue.
   (i) ______________________________________
   (ii) ______________________________________
   (iii) ______________________________________

10. What are taste buds?

11. Explain how taste buds work.

12. Name the four different kinds of taste.

HOME WORK

1. Draw a diagram of your tongue showing the papillae.

2. List eight foods you like to eat then draw the tongue and label it to show where each food will be tasted on the tongue.
3. Write one sentence to explain how your skin helps to regulate your body temperature. Give an example.

____________________________________________________________________________________

4. State why the skin is referred to as the largest sense organ.

____________________________________________________________________________________

5. Name the part of the skin from which hair arises.

____________________________________________________________________________________

6. Explain how the skin protects your body from bacteria or germs.

____________________________________________________________________________________