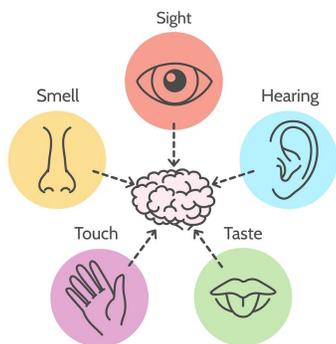Name _____

Touch, One of Our Five Senses

by Cindy Grigg

Answer the following questions **BEFORE** you read this book. It is okay if you do not know as much as you thought. Do the best you can!

1. What do you already know about your sense of touch? List as many facts as you can.

_____

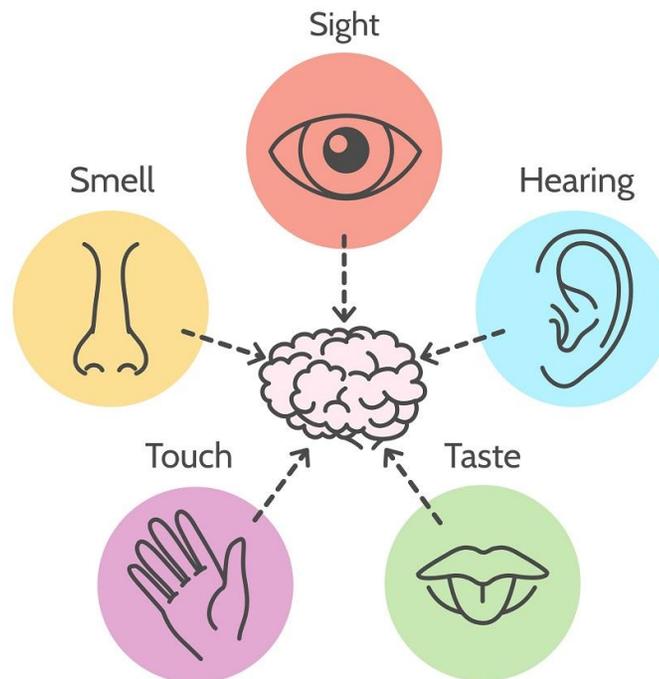_____

_____

_____

2. What is the main organ of the sense of touch?

_____

3. What body system is mostly responsible for our sense of touch?

_____

Five Senses and the Brain

Sight

Smell

Hearing

Touch

Taste

We use our five senses to learn about the world around us. We see with our eyes. We hear with our ears. We taste with our tongues. We smell with our noses. All of these sense organs are located in our heads. But our sense of touch is different. Our skin is the sense organ for touch. We have skin all over our bodies. Every part of our skin has touch receptors. Messages travel from a touch receptor to the brain in less than one second.

Some receptors help us feel different textures. Our faces can feel the difference between touching a baby's soft, smooth skin and the rough bark of a tree trunk. Our feet can feel if our bathwater is hot or cold. Our fingers can feel if something is made of metal, wood, glass, or fur. Our backs can feel if a towel is wet or dry. Our arms can feel a thorn poking them. Our arms and chests can feel pressure when someone hugs us. Unlike our other senses, our sense of touch is not confined to one part of our bodies.

Some receptors sense temperature. They help us feel the difference between heat and cold. The most important receptors are the pain receptors. There are many of these receptors found all over our bodies. Pain is an alarm that tells us something is wrong. Pain tells us to get away from what hurts. Pain receptors do not stop sending messages to the brain. If we have rocks in our shoes, our feet keep hurting until we take the rocks out. If we burn our fingers, our pain receptors keep on telling us it hurts even after the cause of the burn is stopped.

There are more touch receptors in our tongues, lips, and fingertips than in the other parts of our bodies. Pressure receptors tell our brains if something is pressing on us too hard. Pressure receptors also tell our hands to use just enough pressure to pick up an egg but not enough pressure to break the shell. Some receptors send messages for just a short time. When we first get in it, a swimming pool's water feels cold. Then our skins' receptors stop sending messages. The water no longer feels cold.

Our nerves send and receive messages to and from all parts of our bodies. Nerve cells are called neurons. Nerves are bundles of neurons that carry signals from the sense organs to the brain. They also carry signals from the brain to the muscles. Signals move along fibers of the neuron that branch out, like branches on a tree. Signals travel from one neuron to another neuron. They move up the spinal cord to the brain. The spinal cord is a thick cord of nerves that runs through the bones of the backbone, or spine. The spinal cord carries messages from the brain to the rest of the body. The nervous system controls all the muscles in the body.

Our sense of touch tells us about the world around us. Messages travel from receptors through the nerves to the brain. While the brain is getting messages from the skin, it is also getting messages from the eyes, ears, nose, and maybe from the tongue, too, which zoom along the nerves to the brain in a tiny fraction of a second. The brain sorts out all these messages. It lets us know if we need to jerk our hands away from something that's causing pain or to gently stroke a dog's soft fur. Our sense of touch is amazing!

Answer the following questions **AFTER** you have completed this book.

1. Our _____ system is mostly responsible for our sense of touch.

2. Which is a sensation that the sense of touch can detect? Circle all correct answers.

   age   pain   color

   pressure   noise   smell

   temperature texture

3. The _____ is the sense organ for touch.

4. _____ receptors send messages for just a short time.

5. **Write a paragraph that explains how your sense of touch helps you.**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

6. **Which of your five senses do you think is the most important? State your opinion and give reasons to support it. Try to persuade others to agree with you.**

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____