



UNIT

The 5 Senses
Elementary 5-8

TIMEFRAME

15 - 20 minutes

MATERIALS

Non clear bag

Clean Socks

Small items for
in the bag
-dolls with hair
-marbles/bouncy
balls
-combs/plastic
utensils
-ect.

The Sense of Touch

Synopsis

In this activity students will learn about how our brains collect information through the nerve endings in our skin.

Learning Outcomes

Students will understand that there are nerve endings in or skin that enable us to feel, they will be able to identify the four types of touch.

Background for Teachers

The largest organ on the human body is our skin, which is composed of three layers of tissue. Within the three layers and throughout our entire body we have a network of **nerve endings** and touch receptors called the **somatosensory** system. Different types of nerves allow us to interpret four types of touch sensation; contact, pain, cold, and heat. These nerve endings send information up our spinal cord and to our brains, finally being interpreted in the brain's somatosensory cortex in the front part of the parietal lobe. Each body part is specifically represented by a part of the somatosensory cortex, from the toe at the top to the mouth at the bottom. The amount cortex that represents a body part does not relate to the size of the body part, but rather the density of receptors in the body part. Certain places in our bodies have more nerve endings, more space representing them on the cortex and are therefore more sensitive, such as our fingertips and faces. A pictorial representation of the somatosensory cortex is called a sensory humunculus (see picture A).

TEACHING TIPS

Remind students not to remove the object from the bag until everyone has gone.

ARIZONA LEARNING STANDARDS

3.L2U1.6

5.L4U3.12

Activity Instructions

Sensory Bag

- Put several small items in a bag that can not be seen through. Objects should include various different textures and shapes (ie: doll with hair, bouncy ball and marble, sea shells, ect.)
- Have children place a tube sock on their hand and try to guess items that they feel in the bag. Recall common guesses and any that stood out.
- Have the children repeat the activity without the socks on, noting guesses that have changed.
- Show children what was inside the bag.

Two point touch

- Bend a paperclip into a letter U shape, with the two points even about 2 cm apart from each other.
- Have one person (the subject) put their hand on a table (palm down) and look away, and then the other person lightly touch the two tips on the back of the subject's hand. Make sure the points touch at the same time.
- Ask the subject if they felt 1 point or two. If they answered two, spread the tips apart a centimeter and try again.
- Measure different parts of the body such as fingers, palms, forearms, calves, ect. to determine which part of the body is most sensitive!

Extensions & Discussion

Ask the children what they felt without the socks that they did not feel with them on.

Were guesses closer or more accurate without the socks on?

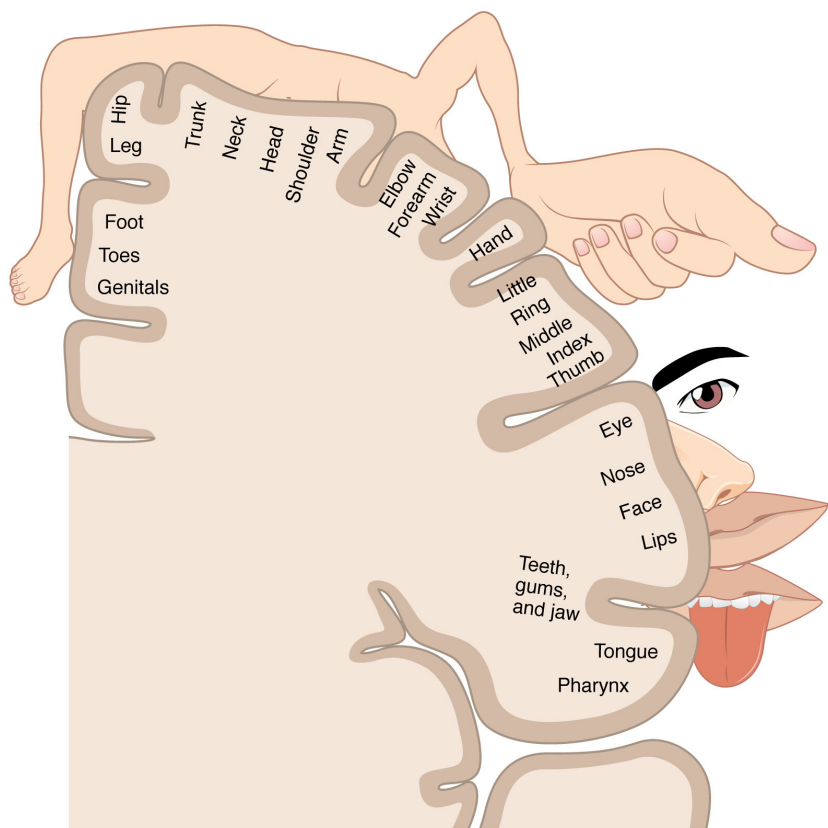
Why do you think this is?

Key Terms & Concepts

Nerve Endings: afferent nerve fiber sending its signal to a sensory neuron. Afferent means it is bringing information to the brain.

Somatosensory: Relating to a sensation that can occur anywhere in the body

Picture A: Sensory Humonculous



Resources

Neuroscience for Kids

<http://faculty.washington.edu/chudler/chtouch.html>

Education.com

<https://www.education.com/lesson-plan/feel-the-sensation-touch/>

Brain Facts.org

<https://www.brainfacts.org/Thinking-Sensing-and-Behaving/Touch/2013/A-Mind-About-Touch>