

What are Sense Organs and Senses?

Name: _____

Date: _____

Sense organs & Senses

- What is your favorite sense? Why?
- What would happen to your other senses if your ears were damaged and no longer worked correctly?
- How many senses can you think of in your body? Try to come up with as many as possible and then prioritize your list.

- You are aware of what is going on around you and inside your body because of _____.
- A _____ is a specialized cell that receives information from its surrounding and provides it to the brain.
- Receptors let you _____ huge trees, hear delightful melodies, taste delicious flavor, _____ flows scents, or feel soft textures.
- These receptors also keep you _____ from harm, because they make it possible for you to see, hear, taste, smell, or feel things that might be dangerous.
- Sense organs include...
 - _____
 - Ears
 - Mouth
 - _____
 - Nose
 - _____
- Service _____ are trained to assist people, who have disabilities, such as sensory disorders, and help them lead fuller lives.

Sense Organs and Senses: Eyes & Sight

- Humans are able to look at object with _____ eyes.
- They can see an object's _____, width, depth, and color.
- Your eyes can tell you if an object is _____, or how far away it is from you.

- The _____ is a colored ring surrounding the pupil that absorbs light and stops reflection so you see clearly.
- This layer has blood vessels that bring _____ to the eye.
- The _____ is the center of the iris that contracts and expands to regulate the amount of light entering the eye.
- The _____ is the clear tissue covering the front part of the eye that is responsible for letting light pass into your eye.
- The _____, which sits behind the pupil, is curved and focuses images in the eye.
- The _____ **nerve** carries impulses to the brain, which interprets them as images.
- The _____ is found in the inner layer of tissue at the back of the eye.
- The retina has rod- and cone-shaped _____ receptors.
- The rods allow you to see _____ and _____ and shades of gray.
- The cones allow you to distinguish _____.
- There are no light receptors in the area where the optic nerve leaves the eye on its way to the _____.
- Since there are no receptors, there is no _____ there.
- This area is the _____ spot.
- When people who have perfect vision look at an object, the light rays enter the eye and focus on the _____.
- Many people do _____ have perfect vision.
- They have _____ see far or near.
- If a person is _____, the shape of the eye directs light rays toward a point behind the retina.
- So, the person sees a blurry image of objects that are _____.
- If a person is _____, the shape of the eye directs light rays toward a point that is in front of the retina.
- So the person sees a blurry image of objects that are _____ away.
- A person can see at night using a night _____ scope.
- The night vision scope helps people see objects at night by recording the infrared, or _____, radiation the object gives off.
- Some scientist use the night vision scope to study night _____, such as bats and owls.

Sense Organs and Senses: Ears and Hearing

- Your ears are the sense organs that are responsible for your _____.
- They are also important in helping you maintain your _____.

- When the inner ear membrane begins to move, the _____ in the cochlea also moves.
- This stimulates the _____ of the receptor cells.
- These cells send signals to the _____, which interprets them as sounds.
- The semicircular canals are also in the _____ ear.
- These organs have fluid and help you maintain your balance by responding to _____ movement.
- People can damage their hearing by continually listening to sounds that are too _____.
- Music volumes, especially when listening through earphones, should be _____ so hearing loss does not occur.
- Hearing loss can also be caused by _____ or injury to the cochlea.
- Follow the path that sound waves travel to produce sound:
 1. The _____ ear is the part you see and where sound travels down to the ear canal.
 2. The _____ stretches across the ear canal and vibrates when sound waves hit it. The eardrum separates the outer and middle ear.
 3. The _____ ear contains three tiny bones called the hammer, the anvil, and the stirrup. These tiny bones amplify, or increase, the effects of sound waves.
 4. The _____ of the ear drum moves the bones of the inner ear.
 5. The _____ is the bony, coiled tube that is filled with fluid and lined with hair cells.
- Sound waves are created when objects vibrate. Humans can hear sounds of between 20 and 20,000 vibrations a _____.

Scripture Spotlight

- *What does Psalm 34:15 say about the Lord's eyes and ears?*

Sense Organs & Senses: Tongue & Taste

- Your mouth has about _____ taste buds.
- Every taste bud has _____ that produce one or a combination of four main taste sensations:
 - _____
 - Sour
 - _____
 - Salty
- Taste relies on the _____ reactions that take place in saliva.
- When the taste buds are stimulated, nerve impulses are sent to the _____.
- Sticking out of each receptor cell is a _____ that identifies the food chemicals in saliva.
- The binding of these chemicals with the taste receptors generates impulses in nearby _____ fibers.
- Most likely, _____ taste cells can interpret sweet, sour, salty, and bitter taste sensations.
- The taste buds are mainly found around the tiny bumps on your tongue called _____.
- Your sense of taste may keep you safe from eating _____ foods.
- If you put something _____ in your mouth you would find the taste disgusting.
- Your sense of taste can also help you keep your body in _____.
- When you eat foods with sugar and salt, your body's need for minerals and carbohydrates is _____.
- When you eat sour foods such as oranges and lemons, your body's need for some necessary _____ is met.
- You need to be _____, that you eat the right amount of salt, sugar, and carbohydrates.

Sense Organs and Senses: Nose & Smell

- For you to enjoy the taste of most food you need _____ than your tongue and your sense of taste.
- You also need your _____ and your sense of smell.
- Think about what happens when you have a _____ and your nose is stuffed up.
- You lose your sense of _____ for a little while.
- While your tongue still can identify the _____ tastes, what you eat will not taste the same.

- _____ receptors found in the nasal passages sense chemicals from the food as you chew.
- The stimulated olfactory receptors produce nerve impulses that travel to the _____.
- The _____ interprets information from your nose and your tongue, which makes it possible for you to taste.

Sense Organs and Senses: Skin and Touch

- Your sense of _____ comes from receptors in your skin.
- In addition to sensing touch, these receptors sense _____, pain, heat, and _____.
- Receptors for touch, pressure, and temperature are _____ spread evenly over the body.
- Touch is most _____ in the fingertips, palms, and lips.
- Suppose you have a piece of hair on the inside of your mouth.
- Why are you able to feel it so easily?
- _____ receptors are found in almost every part of your body.
- Each receptor helps _____ you from injury by sending warnings of danger to your brain.

Protecting Your Sense Organs

- Safety tips for protecting your eyes:
 - Use proper _____ when reading, writing, or using the computer.
 - Wear eye _____ when doing something that could cause harm to your eyes.
 - Wear _____ that block ultraviolet radiation from the Sun.
 - _____ look directly at the Sun.
 - Point spray products _____ from your face before spraying.
 - Get your eyes _____ by an eye-care professional.
- Safety tips for protecting your ears:
 - Clean the _____ of your ears with soap and water and whip the inside with a soft tissue.
 - _____ cleaning your ears by putting anything into them.
 - Lower the _____ on your listening device.
 - Get your hearing tested.
- Safety tips for protecting your mouth and tongue:
 - Wear mouth guards in _____ where injuries to the mouth may occur.

- Wear a _____ to reduce injuries during a car accident
- Never walk or run with objects in your _____.
- Safety tips for protecting your nose:
 - Don't _____.
 - Blow your nose _____.
 - Do not put _____ in your nose.
- Safety tips for protecting your skin:
 - Apply _____ with an SPF of at least 15 to you skin and reapply every two hours.
 - Cover up with _____ to protect exposure skin when in the sunshine.
 - Wear a _____ when in the Sun.
 - Avoid _____ bed and sunlamps.
 - Check your skin _____ for any changes in the size, texture, or color of a mole or sore.
- The human body experiences _____ senses – sight, smell, touch, taste, and sound.
- Each sense allows you to interpret _____ from the outside environment so you know that is happening in your surroundings.