

# CHAPTER 21

**B**efore we get started this week, let's use our imagination, okay?

Imagine going to the park on a warm summer day...

As you run through the playground you **hear** other kids playing. You can **feel** the warmth of the sun on you. Later in the day, you may **see** your parents setting up a picnic for you. As you sit down at the picnic table, you **smell** and **taste** your lunch!

Makes you want to go outside and play right now, doesn't it?

In this made-up picnic at the park, you experienced five of your **external senses**



Hearing  
Touch  
Vision  
Smell  
and Taste

Our **senses** are messages that are sent to our brain when we use our hearing, touching, vision, smell and taste. The word "**external**" means "outside of", so all of these **external senses** give us information about what is going on outside of our body!

Each of these five senses have a **sense organ** that is used to collect the information that is outside of our body.

## External sense

## Sense organ

Hearing

Ears

Touch

Skin

Vision

Eyes

Smell

Nose

Taste

tongue

Each of these sense organs sends a message to your **brain**. Your brain is another organ that controls what your body does!



In this chapter, we are going to look at two of these senses. I'll give you a guess on the first one. What do you think of when you hear...

# Eewwww! What stinks ?

That's right! You better hold your nose, because we must be talking about your sense of...

## Smell!

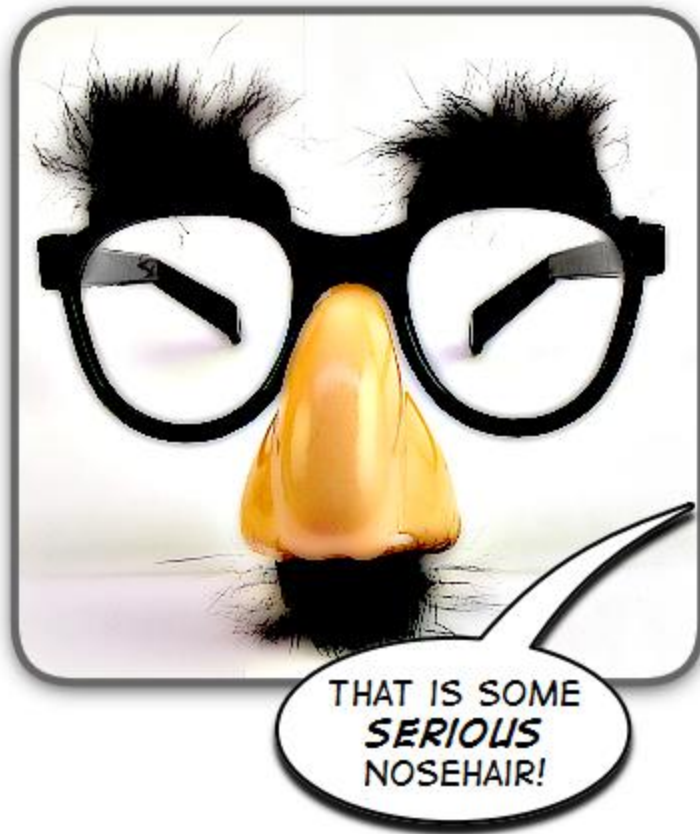
Your nose is the sense organ for smelling. Think of your nose as a tunnel that does a lot of things with the air you breathe. If you have ever looked into your nose, you may have found a whole bunch of hair up there! This hair is very important because every time you breathe (which is about 20 times a minute), your nose hair helps clean the air!

## How does it do that?

Your nose hair catches big pieces of junk you breathe in that is not air. This includes dust, bacteria, fungus, smoke and a lot of other things floating around in the air!

The hairs act like a screen in your nose. They are always trying to stop things from coming into your body.

You can find more than just hair inside your nose. It also



has a large amount of **mucus** ("mew-cus") inside it too. Mucus is a slimy, sticky goo that your body uses to trap some of the junk that enters your nose!

Your nose hair does not catch all of the junk that is floating around in the air. Your mucus catches the smaller pieces that your nose

hair misses!!! When the mucus has trapped a lot of stuff in a slimy, gooey ball, you have just made a booger!! And, as we all know, boogers must get out of your nose! Who wants to have all of that junk just lying around in you all day long? Yuck!

Your nose does not only make boogers all day long. It has another very important job to do... smell! Scientists believe that every human can sense about 4,000 to 10,000 different smells! Each one of these different smells act like a key in the back of your nose... that's right, a key!

Now, every key can open a lock, right? Each of these smells can unlock a different way for your body to react. Remember... your nose sends a message to your brain every time you smell something! It's your brain that tells your body how to react!

For example, if you took a big breath of your garbage, you may react by pinching your nose and running away!

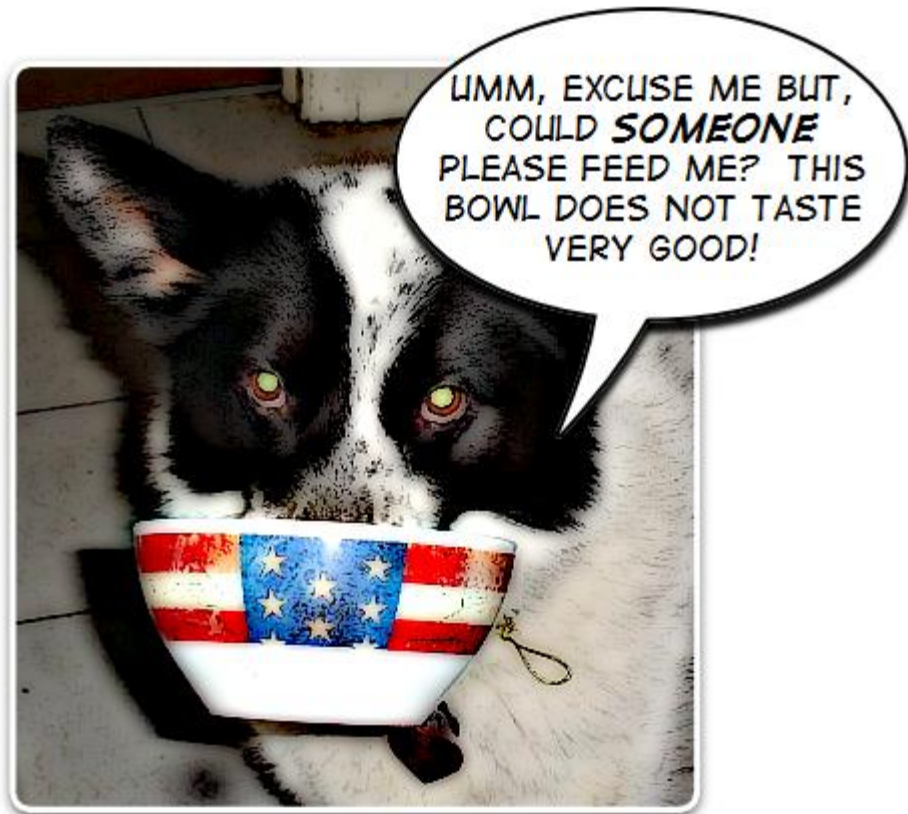
You wouldn't react the same way if you smelled a fresh rose, would you? Of course not! So what is better... the smell of fresh cookies baking in an oven, or the taste of one in your mouth?



## Tasting...of course!

The sense organ for your sense of taste is the tongue! This organ is covered with areas that can unlock different responses from your brain!

Remember the "lock and key" method that your nose uses to smell things? Well, your tongue does the same thing. The "locks" are all over your tongue and are called **taste buds**. These taste buds are used to sense four different flavors:



**Sour** (Think of a lemon or pickle...they are sour!!!)

**Salty** (I'm sure many of you have placed too much salt on your food before, right?)

**Bitter** (Coffee beans are very bitter tasting!)

**Sweet** (I think you know what this one is like!!!)

You have to thank your **saliva** ("suh-live-uh") for many of the wonderful (and not so wonderful) tastes that you can sense. Your saliva is the liquid that your mouth creates. When you put a cooking in your mouth you start to chew, right?

Your teeth grind your food and mix it with your saliva. This mixture is easily spread all over your tongue. Each of these pieces of food has thousands of different "keys" to unlock your taste buds on your tongue!

Do you  
remember this  
sentence?



Well, here it is again!

Your sense of smell and taste are connected to each other. In fact, they work together every day! Have you ever noticed that you have a hard time tasting your food when you have a cold? That is because **smelling** is a part of your sense of taste!

When you have a cold, your nose shuts down its "locks," and keeps you from being able to smell! This happens every time your nose is clogged up when you have a cold. Without your sense of smell, you cannot taste your food!

To test this out... pinch your nose and place a piece of hard candy in your mouth. It is very hard to tell what flavor it is! Now let go of your nose and ... **Blam!**

# Instant flavor!

Cool, huh?

In the next chapter, we are going to explore our last three external senses...

Fill in the "code" to answer the following question:

What are sense organs and what do they do?

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
26	8	24	7	20	3	12	19	6	16	4	22	25	23	15	13	18	21	5	14	2	11	1	10	9	17

— — — — —  
5 20 23 5 20 15 21 12 26 23 5 5 20 23 7 25 20 5 5 26 12 20 5

— — — — —  
14 15 9 15 2 21 8 21 26 6 23 1 19 6 24 19 26 21 20

— — — — —  
2 5 20 7 14 15 12 6 11 20 2 5 15 2 21

— — — — —  
20 10 14 20 21 23 26 22 5 20 23 5 20 5

Match the words in the first column to the best available answer in the second column.

- |                     |   |
|---------------------|---|
| ___ External senses | 1) an organ that controls what your body does                                   |
| ___ Sense organs    | 2) a slimy and sticky goo   |
| ___ Brain           | 3) organs such as eyes  |
| ___ Mucus           | 4) a liquid created in your mouth   |
| ___ Taste buds      | 5) feelings that give us information about what is going on outside of our body |
| ___ Saliva          | 6) parts of the tongue that are used for the sense of taste                     |

Look into the mirror and draw a picture of your own face! Label all of the sense organs you can find!

# CHAPTER 22

In the last chapter, you looked at two of your five external senses: smell and taste. You also read that all of your senses have sense organs that help to “unlock” messages sent to your brain.



In this chapter, you are going to look at your three external senses that are left: vision, hearing, and touch. Let's start with your...

## Vision

Your sense organ for vision is your eyes! You may not know this, but your eyes have a lot of parts to them!

Once you open your eyes in the morning, you should be able to see everything in your room. This is because light is bouncing off of everything you can see and into your eyeballs!

To be more correct, all of this light enters the black “dot” in your eye known as the **pupil** (“pew-pill”). The pupil is an opening in your eyeball that changes size with the amount of light that is shining in your eyes.

The more light that enters your eyes, the smaller your pupils will be! Try to look at your eyes in the mirror and remember how big your pupils are. Now close your eyes and wait for a couple of minutes. When you open your eyes, you will notice how the size of your pupils will look **huge** at first, and then they will start to shrink back to a smaller size! As your eyes were closed, your pupils began to get larger because there was not much light entering your eyes!

Your **iris** is the colorful portion of your eye! The job of the iris is to change the size of the pupil.

Once the light enters your pupil, it bounces into your **retina** ("rhet-in-ah"). The retina can be found behind your pupil. This part of your eye has a very important job! The retina acts just like a camera! It takes a picture of what you are looking at and sends it to your brain. If your brain sees a picture of a candy bar, you may start reaching for it... but if your brain sees a picture of an elephant running towards you, you better start running!

## look familiar?



MANY DIFFERENT ANIMALS, LIKE THESE CATS, HAVE EYES WHOSE PUPILS MOVE TOO

SMALL PUPILS/MUCH LIGHT



LARGE PUPILS/LITTLE LIGHT



## Other parts of your eyes are used to protect themselves...

**Eyebrows** (those bushy strips of hair above your eyes) help to keep sweat from dripping into your eyes! **Eyelashes** act just like the hairs in your nose...they try to "sweep away" any bad stuff in the air that may get into your eyes! **Eyelids** also sweep away dirt and other junk that gets on your eyeballs as well just like windshield wipers on your car! Every time you blink, you are cleaning your eyes with your eyelids! Don't forget about your **tears**! Tears work with the eyelids to wash away bad stuff from your eyes!

Now, on to your next sense...

## Hearing

Have you ever placed your hand on a speaker while music is playing? If you have, you should have felt vibrations in your hand!



Those vibrations cause the air around the speaker to vibrate as well. We call these vibrations in the air, **sound waves!** As these sound waves move through the air, they can end up entering your ears. Your sense organs for your sense of hearing are your ears!

As sound travels through your ear, it reaches your eardrum. Your eardrum is very thin covering inside your ear. Your eardrum vibrates when sound waves bounce off of it!

The vibrations from your eardrum cause the little bones inside your ear to vibrate as well. One of these bones, called the **cochlea** ("coke-lee-ah"), is filled with liquid. As your cochlea vibrates, so does the liquid inside!! Now, here comes the cool part...

The inside of your cochlea is covered with tiny little hairs that vibrate as well! Each of these hairs sends its own message to the brain. And, each of these messages tells the brain what kind of sound you are listening to!

When your brain gets the message, it tells your body whether or not to dance, jump or run for cover!

**One more sense to go.....**

# Touch

Unlike your other senses, your ability to touch uses sense organs that cover your entire body! Your skin is your sense organ for your sense of touch.

All of your sense organs have areas that send messages to your brain...

- The hairs in your cochlea
- Your taste buds
- Your ability to detect smells
- The retina in your eyes

**Your skin is no different than any of these sense organs!**  
**Your skin can sense a lot of different feelings!**

The most common feelings are:

**Heat**  
**Cold**  
**Pressure**  
**and Pain**



The areas of your skin that sense these feelings are called **nerve endings**. Nerve endings are found all over your body. However, they are not spread out evenly in your skin! Some areas of your skin have more nerve endings than other areas.

For example, your fingers can feel heat, cold, pressure and pain very well because you have many nerve endings in them! This is important because you use your hands every day!

## Nerve endings are not found everywhere in your body!

Some areas of your body that you can see and feel do not have any nerve endings in them at all. Your hair and fingernails are good examples of this.

You don't scream in pain every time someone cuts your hair do you?



# I hope not!

Our hair and fingernails help to protect our bodies. Our hair can keep us warm and act as a filter to keep bad things from getting into our bodies (remember to thank you nose hair!). Fingernails protect the ends of our fingers from getting hurt. The tips of our fingers are filled with nerve endings that we use everyday!

Our five senses are very, very, very important for us to survive. However, they are not the only senses that can be used by animals or plants. That's right! Plants can sense things too!

**In the next chapter, you will explore several different senses that organisms use to survive...**

# Circle the hidden words from below

E C S S Q I R J N G S S S Z W  
N B O X E E K S N D X W R K U  
D D D C T H T Z I I D O N Y O  
I E O I H J S L Y K N R U Z L  
N G N N K L E A J U U B C H L  
G A B K K Y E I L X O E Q R S  
S I J K E Y J A J E S Y X G K  
K J R H L I P U P E Y E S A B  
X M X I X B P N E R V E J O M  
S I G U S H E A R D R U M N Z  
Z R R U L E W F E C W D A S W  
T F A W L U S O V N G H E B A  
K Z T E U X G U K A F V I V Z  
W X R Y T P Y Y B Y A N W Q N  
E B Y K G V X R F W B G Z M T

**COCHLEA**  
**EYEBROWS**  
**IRIS**  
**RETINA**  
**WAVES**

**EARDRUM**  
**EYELASHES**  
**NERVE**  
**SOUND**

**ENDINGS**  
**EYELIDS**  
**PUPIL**  
**TEARS**

Match the words in the first column to the best available answer in the second column.

- |                 |  |
|-----------------|--|
| _____ Pupil     | 1) bushy strips of hair above your eyes that help to keep sweat from dripping into your eyes               |
| _____ Iris      | 2) part of your ear that vibrates when sound waves hit it  |
| _____ Retina    | 3) protective skin that can surround the eye and sweep away dirt and other junk that gets on your eyeballs |
| _____ Eyebrows  | 4) the colorful portion of your eye that changes the size of the pupil                                     |
| _____ Eyelashes | 5) takes a picture of anything you see and sends it to your brain  |
| _____ Eyelids   | 6) areas in your skin that sense the feelings of heat/cold/pressure/pain and taste                         |

- \_\_\_\_\_ Tears
- 7) looks like a seashell and is filled with fluid; when sound waves vibrate the eardrum tiny hairs inside the cochlea vibrate too; each hair sends a different message to the brain
- \_\_\_\_\_ Sound waves
- 8) the black "dot" in your eye where light enters your body
- \_\_\_\_\_ Eardrum
- 9) fluid that is made by your eyes to keep them wet and clean
- \_\_\_\_\_ Cochlea
- 10) vibrations that cause any kind of noise
- \_\_\_\_\_ Nerve endings
- 11) protective hairs that "sweep away" any bad stuff in the air that may get into your eyes

**Which one is right? Circle the correct answer.**

**1. To protect your eyes, your body uses \_\_\_\_\_.**

- a. eyebrows and eyelashes
- b. eyebrows, eyelashes and eyelids
- c. eyebrows, eyelashes, eyelids and tears

**2. Which happens first?**

- a. light enters your retina
- b. light enters your iris
- c. light enters your pupil

**3. What part of the ear sends messages to the brain?**

- a. cochlea
- b. tiny hairs inside the cochlea
- c. eardrum

**4. Which sense has the largest sense organ?**

- a. hearing
- b. vision
- c. touch

**5. Nerve endings can be found in which group of body parts?**

- a. fingernails, hair and the tongue
- b. tongue, skin and hair
- c. tongue, fingers and ears

**6. Which of the following paths of sound is in the correct order?**

- a. soundwaves cause the eardrum to vibrate, then the cochlea and finally the hairs inside the cochlea
- b. soundwaves cause the cochlea to vibrate, then the tiny hairs inside the cochlea and finally the eardrum
- c. soundwaves cause the eardrum to vibrate, then the hairs inside the cochlea and finally the cochlea

# CHAPTER 23

In the past two chapters, you have explored your five external senses:

## Hearing, Touch, Vision, Smell and Taste

In this chapter, we are going to look at some other senses that occur in plants, humans and other animals!

Humans tend to think that we only have five senses...but this is not true! If this was true, how would you classify your feelings of hunger or thirst? Are these feelings we get from our sense organs of hearing, touch, vision, smell or taste? Not really...



Our senses of hunger and thirst are examples of **internal senses**. Internal senses are the types of feelings we receive inside our body! We have already looked at one of these feelings in the last chapter. Can you guess what it was?

It was the feeling of pain! You can't find "pain" anywhere in the world, right? Pain is a feeling you have in your own body. That makes pain an **internal sense**, just like hunger, thirst and balance.

Your sense of balance is controlled by a part of your ear. Let's take a closer look at how your ears keep you balanced...

Inside your ear (on top of your cochlea) you have three little curved tubes called **canals**. These canals are full of liquid and contain tiny little hairs in them, just like your cochlea! Every time you move your head, the liquid moves as well. The moving liquid makes the little hairs move too. So whenever these hairs move, a new message is sent to your brain.

JUNIOR GIVES HIS EAR CANALS A WORKOUT...



Waaaaahh!!!!

Imagine holding onto a pitcher of water that is half-full of water... if you tilt the pitcher to one side just a bit, what is going to happen to the water inside? It's going to move, right?

Well, when you lose your balance, this happens in your body! Your canals send a message to the brain for your body to move backwards or forwards... wherever you need to go to stand straight up!

Spend a few seconds running in a circle and you will start swirling this liquid around! All of that liquid movement in your canal confuses your brain into thinking you are falling, when you are not! This is what causes you to feel dizzy! Cool, huh?

## Okay, now let's get into some other neat stuff...

It is true that an animal's senses tell them how to respond to their environment. But some animals can use senses that are very different to humans. For example, let's look at...

### Echolocation

("ek-o-low-kay-shun")

Echolocation is a way some animals (like bats, whales, dolphins and seals) can talk to each other, find food, and move through their environment (without bumping into everything!) All of these animals use their sense of echolocation because their sense of vision is not as good!

## It works like this...

An animal gives off a sound using their mouth or nose. Once the sound hits something (like a tree, an insect, the cave wall...) it bounces back into the animal's ears. This is called an **echo**. These animals can use these echoes to tell them where objects and animals are! Echolocation can tell an animal the size, shape and movement of even the smallest of creatures!



"BLIND AS A BAT. BLIND AS A BAT." THAT'S ALL I EVER HEAR!

WHY DON'T WE EVER HEAR SOMETHING LIKE, "BLIND AS A *DOLPHIN?*"

*IT'S JUST NOT FAIR!*

If you think using sound to find your way around the world is strange, check out this sense...

## Infrared vision

("in-fra-red")

Most of us are pretty good at using our sense of vision to see what is going on. Many other animals use this same type of sense too!

However, some animals (like rattlesnakes) hunt their food at night. It can be pretty hard to see at night, can't it?

Well... rattlesnakes can actually see the heat coming off of the body of another animal! This ability is known as infrared vision! This kind of vision is not like the vision that you and I use to see. When a rattlesnake uses its infrared vision at night, it sees a colorful outline of its prey.

This ability would come in handy at night, wouldn't it? Even though it is very dark outside, the rattlesnake can see exactly where its prey is hiding!

## Light that we cannot see?

It sounds weird but it is very true! Here comes another strange sense...

## Electric sense

Some animals use a strong electric charge to see, move and to kill other animals! This electric charge is much like the shock you get from static electricity, only much stronger! One animal that uses this sense is the **electric eel**.

HOW DO ELECTRIC EELS TASTE?



Think of the electric eel like a powerful battery that can be recharged! When it is in danger from another organism, the electric eel can shock the organism and then escape! If it is

hunting for its food, it can use the same shock to stop its food from swimming away! After relaxing for a short while, the eel can recharge itself without any wires!

Even plants have senses that are different from other organisms...

## Phototropism

("foe-toe-tro-pizm")

Phototropism is the ability of a plant to sense the direction of sunlight and to grow towards it! If you can place a potted plant (carefully!) on its side, the plant will start to grow towards the light once again! The stem of the plant begins to bend towards the light so that the leaves can make food. In fact, if you put that plant into a box with a large hole on its side the plant will start to grow sideways towards the hole! Not bad for a plant!



The world is a large place. It has a lot of organisms which have all kinds of senses that are different from you and me!

Fill in the blanks with the correct letters. The words in the list on the right provide a clue to the answer.

- 1) \_ \_ terna \_ sens \_ s  
types of feelings we receive inside our body like hunger and thirst
- 2) cana \_ s  
three curved tubes in your ear that are filled with fluid
- 3) ec \_ o \_ o \_ at \_ on  
a way for some animals to keep from bumping into everything by giving off sounds and listening for echoes
- 4) \_ c \_ o  
the bouncing back of a sound wave to the person who made the sound
- 5) infr \_ \_ \_ d  
a way for animals to see the heat coming off of the body of another animal
- 6) \_ l \_ ctri \_ sen \_ \_  
a way for some animals to use a strong electric charge to see and move in order to survive
- 7) ph \_ t \_ tropi \_ m  
the ability of a plant to sense the direction of sunlight and to grow towards it

Match the words in the first column to the best available answer in the second column.

- |                       |  |
|-----------------------|--|
| _____ Internal senses | 1) a way for some animals (like bats and dolphins) to keep from bumping into everything by giving off sounds and listening for echos |
| _____ Canals          | 2) the ability of a plant to sense the direction of sunlight and to grow towards it  |
| _____ Echolocation    | 3) the bouncing back of a sound wave to the person who made the sound  |
| _____ Echo            | 4) a way for animals (like rattlesnakes) to see the heat coming off of the body of another animal                                    |
| _____ Infrared        | 5) three curved tubes in your ear that are filled with fluid; acts like the cochlea but works to keep you balanced                   |
| _____ Electric sense  | 6) a way for some animals to use a strong electric charge to see and move  |
| _____ Phototropism    | 7) types of feelings we receive inside our body like hunger and thirst   |



# CHAPTER 24

**I**n the past three chapters, you have looked at how you and other organisms can use their senses. Your sense organs are the places where each of these senses begins. But you have also learned that each of these senses must send a message to the brain! Let's take a look at these "messages" and how your brain can read them...

Think of your brain like a computer. You send it information and it sends information back. A computer can also do different things like tell a printer to print off a page or to use a telephone to call someone.

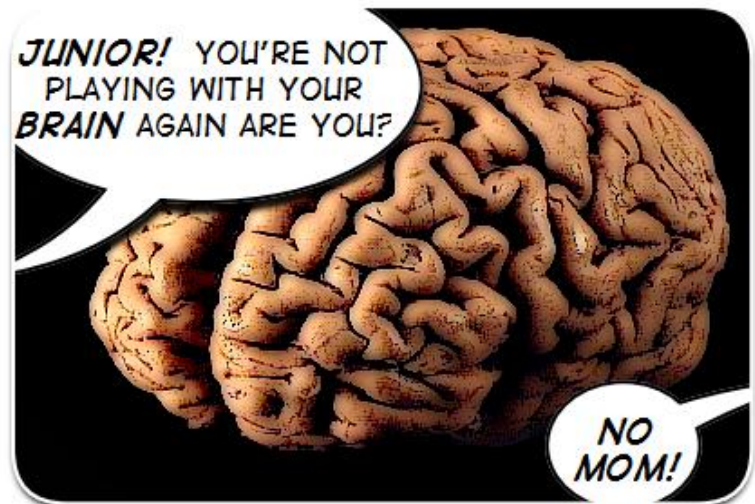
**Your brain tells your body how to do things too...**

Like taking a copy out of the printer and picking up the phone when it rings!

Your brain is divided into three parts:

**Cerebrum, Cerebellum** and the **Brainstem**

("suh-ree-brum") ("sarah-bell-um")



Your **cerebrum** is the largest part of your brain and it is split in half. Each half is called a **hemisphere** ("hem-is-fear"). Every cerebrum has a **right hemisphere** and a **left hemisphere** that are connected to each other. However, each of these hemispheres tells your body how to do different things. For example...

INSIDE YOUR  
CEREBELLUM...



RIGHT FOOT,  
LEFT FOOT,  
RIGHT FOOT,  
LEFT FOOT...

Your right hemisphere is in charge of your creative abilities: art, music, movement and dance are all controlled by your right hemisphere.

Your left hemisphere is in charge of your problem-solving abilities. Math, language and your ability to solve puzzles is done by your left hemisphere.

Both your left and right hemispheres are made up of four parts, called **lobes**:

**Frontal Lobe** this lobe controls your ability to speak, movement, emotions and problems solving

**Parietal Lobe** this lobe controls your feelings of pain, pressure, temperature, and touch

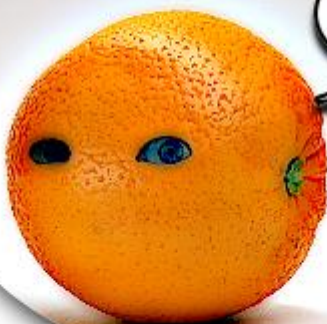
**Occipital Lobe** this lobe controls your sense of vision

**Temporal Lobe** this lobe controls your senses of hearing and smelling and the ability to understand speech

The second part of your brain, the **cerebellum** is much smaller than your cerebrum. Your cerebellum is what you use in order to run, skip, hit a baseball or jump rope. The cerebellum helps you to keep your balance. It also controls all of your **reflexes**.

YOU WILL NEVER FIND AN OCCIPITAL LOBE IN A PLANT.

OH YEAH?





*IN A BIZARRE NEWS STORY, GRAVITY HAS BEEN BANNED FOR THE REST OF THE DAY. NO STRANGE REFLEXES ARE TO BE EXPECTED TODAY.*

Reflexes are actions your body goes through without thinking about them. Blinking your eyes and raising your arm when something is thrown at you are reflexes!

**You don't think about blinking every few seconds, do you? Of course not... it is your cerebellum that controls these reflexes!**

The third part of your brain, the **brainstem**, can be found between your spine and the cerebrum. The brainstem controls your breathing, swallowing and digestion of food. The brainstem also controls how fast your heart beats and how it pumps blood through your body!

Your brain cannot work alone! It must have a way to get the messages from your sensory organs. It also must have a way to send a message to your body to run, jump, and pick up the phone or any other action you have to do!

Your brain gets help from other parts of your body. One of them is your spinal cord. Your spinal cord is attached to your brain stem and is found **inside** that long stack of bones known as your backbone. Your backbone is also called your **spine**.

Whenever you take a bite of chocolate cake, your taste buds send messages to your spinal cord through the use of nerves. **Nerves** are small fibers (like a string) that act like telephone lines in your body. Nerves send messages from your sense organs to your spinal cord. The spinal cord then sends the message to your brain.

Your brain reads the message and decides what the body should do. It then sends a new message to your spinal cord. The spinal cord then sends the message through nerves to your body. Once your body gets the message, it begins to move. In the case of the chocolate cake, your brain is telling your mouth **to keep chewing!**

So far, you have been looking at the organs that help you sense the world around you. In the next unit, you will be looking at many of the other organs that keep your body alive!

The table below contains words and phrases that have been chopped in half. Find the pieces that fit together and write them in the answer area below.

brai	al lobe	nstem	ves
Ner	al lobe	cere	lo
ellum	occipit	misphere	exes
pariet	spina	l lobe	left he
tempor	Cereb	brum	refl
l cord	ine	fronta	right he
al lobe	bes	sp	misphere

### Answers:

- |          |           |
|----------|-----------|
| 1. _____ | 9. _____  |
| 2. _____ | 10. _____ |
| 3. _____ | 11. _____ |
| 4. _____ | 12. _____ |
| 5. _____ | 13. _____ |
| 6. _____ | 14. _____ |
| 7. _____ |           |
| 8. _____ |           |

## Match the words in the first column to the best available answer in the second column.

- |                        |   |
|------------------------|---|
| _____ Cerebrum         | 1) one half of your brain that takes care of your problem-solving abilities                     |
| _____ Right hemisphere | 2) parts of the hemispheres of your brain   |
| _____ Left hemisphere  | 3) long stack of bones that protect your spinal cord  |
| _____ Lobes            | 4) this lobe controls your senses of hearing and smelling and your ability to understand speech |
| _____ Frontal lobe     | 5) smaller than the cerebrum; helps you to keep your balance and controls all of your reflexes  |
| _____ Parietal lobe    | 6) this lobe controls your sense of vision  |
| _____ Occipital lobe   | 7) this lobe controls your feelings of pain/pressure/temperature and touch                      |

- \_\_\_\_\_ Temporal lobe 8) this lobe controls your ability to speak, move and problem solve.
- \_\_\_\_\_ Cerebellum 9) actions your body goes through without thinking about them
- \_\_\_\_\_ Reflexes 10) found between your spine and the cerebrum; this part of your brain helps you to breath/swallow/digest food and also controls how fast your heart beats and how it pumps blood through your body
- \_\_\_\_\_ Brainstem 11) found inside your spine; helps your brain by sending messages throughout your body
- \_\_\_\_\_ Spinal cord 12) one half of your brain that takes care of your creative abilities
- \_\_\_\_\_ Spine 13) small fibers in your body that send messages from your sense organs to your spinal cord
- \_\_\_\_\_ Nerves 14) the largest part of your brain that contains four lobes

# Unit Six review

Fill in the blanks in the story below with the following words:

vision  
ears  
smell  
hearing

nerves  
spinal cord  
taste  
touch

I use my \_\_\_\_\_ to help me stay balanced. These sense organs send messages to my brain with the help of \_\_\_\_\_. Before these messages reach my brain they have to travel through my \_\_\_\_\_.

These sense organs are also used for my sense of \_\_\_\_\_. I have four more senses: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.

**Be certain to go over your definitions for the test!**