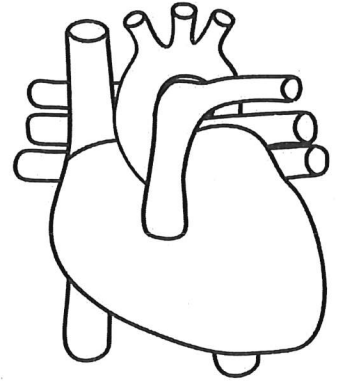


Name: \_\_\_\_\_

# Your Heart

by Cynthia Sherwood

Have you ever watched as your mom or dad pumps gas into your car? You may not realize it, but the most vital part of your body—your heart—is simply a fancy pump. It is designed to move your blood around your body. The heart is located a little to the left of the center of your chest and is about the size of your fist.



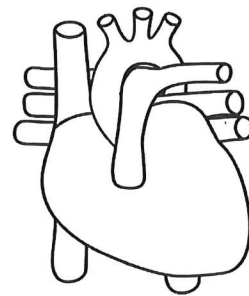
Your heart works very hard. When you run around a lot, you can feel your heart beating fast because it is pushing blood filled with oxygen and nutrients to the cells in your body. Your heart is a muscle too! It is divided into two parts. The right side receives blood from your body and pumps it into your lungs. The left side receives blood from the lungs and returns it to the rest of the body.

Your heart muscle beats between 80 and 120 times every minute. With each beat, blood is both entering and leaving your heart. The vessels that carry blood away from your heart are called arteries. The vessels that carry blood back to your heart are called veins.

Heart disease is common among older Americans because the heart can become clogged over time. The heart will not pump as well if someone smokes or eats a lot of unhealthy fats and sugary foods. To take good care of your heart, you should eat plenty of whole grains, fruits, vegetables, and lean proteins. You should also exercise often to get your heart pumping hard. Just like other muscles in your body, your heart needs exercise to keep strong.

If you wonder why it is so important to have a strong heart, just think about this—your heart will beat about three *billion* times in your lifetime!

Name: \_\_\_\_\_



# Your Heart

by Cynthia Sherwood

1. Where is your heart located?

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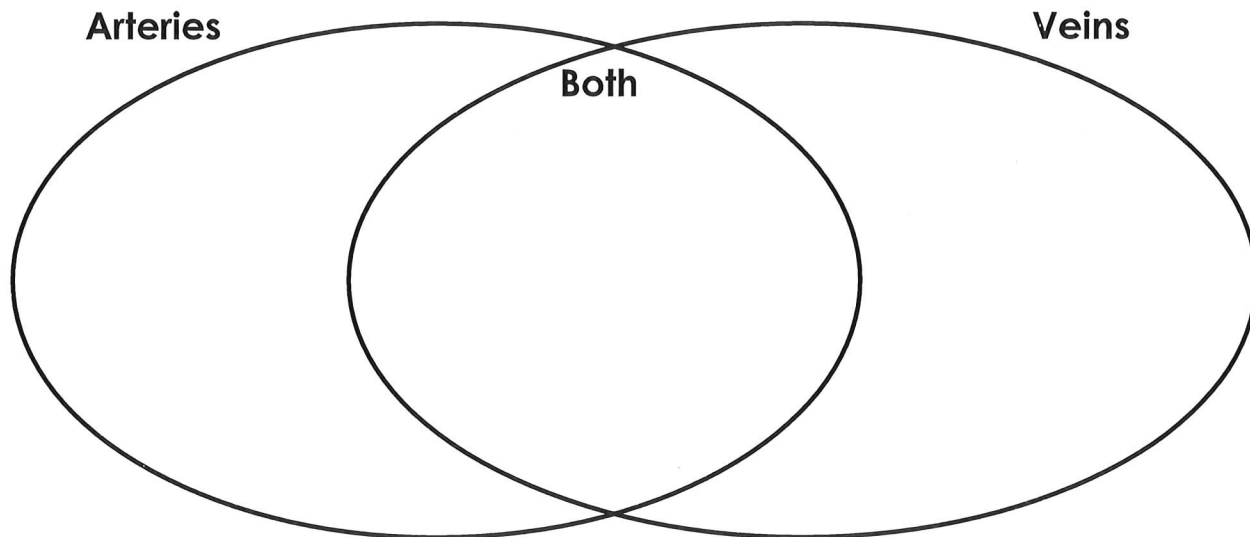
2. What does your heart do for your body?

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3. How is the left side of your heart different from the right side?

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4. Complete the Venn diagram to compare and contrast the functions of arteries and veins.



5. What are some things you can do to keep your heart healthy?

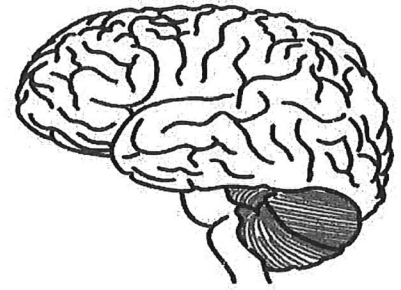
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Name: \_\_\_\_\_

# Your Brain

by Cynthia Sherwood



You may not realize that you have a boss, just like adults do at work. But when it comes to your body, your brain is your boss! It is in charge of just about everything you do. When you remember what you ate for breakfast, you use your brain. When you jump up and down, you use your brain. When you draw a picture, you use your brain. Even when you are dreaming, you use your brain.

The brain looks like a wrinkled, wet sponge. In adults, it weighs only about three pounds, but it is made up of billions of nerve cells. These cells send and receive electrical signals that direct all of your body's activities. Sometimes, like when you are learning at school, you know you are using your brain. Many times, though, your brain controls your body without you even thinking about it. The "brain stem" takes care of things your body does automatically, like breathing air, pumping blood, and digesting food.

The biggest part of your brain is called your "cerebrum" (suh-ree-brum). This is the thinking part of your brain. It controls your memory, the movements you choose to make, your ability to figure things out, and your imagination. The cerebrum is made up of two halves. It may sound mixed up, but the left side controls the right side of your body and the right side controls your left side.

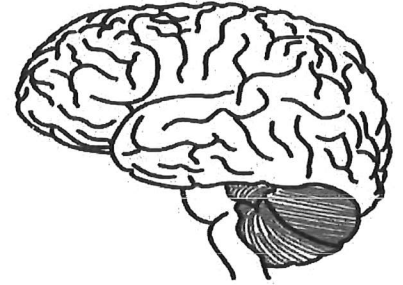
Even your feelings come from your brain. Scientists think emotions are controlled by a part of your brain called the "amygdala" (uh-mig-duh-luh). It is shaped like an almond and is only an inch long. So next time you get in a bad mood, you can blame it on your brain.

You should be glad you have a human brain. It is very complex, which means we can think in different, more complicated ways than other animals. In fact, every day your brain produces about 70-thousand thoughts. No wonder your head hurts when you have too much homework!

Name: \_\_\_\_\_

# Your Brain

by Cynthia Sherwood



1. According to the information in the article, what does your brain look like and how much does it weigh?

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2. Which part of your brain controls your memory?

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3. Which part of your brain automatically controls parts of your body without you having to think about them?

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4. Which part of your brain controls feelings, like happiness, sadness, frustration, and anger?

---

5. Why does the author say that your cerebrum seems "mixed up"?

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6. Your brain is made of nerve cells. What do nerve cells do?

---

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7. Which statement from the article is an opinion?

- a. Even your feelings come from your brain.
- b. Sometimes, your brain controls your body without you even thinking about it.
- c. You should be glad you have a human brain.
- d. Every day your brain produces 70-thousand thoughts.



Name: \_\_\_\_\_

# Your Digestive System

by Cynthia Sherwood

This may seem like a trick question, but are you bigger than a tennis court? The answer is no, of course not! But think about this fact—your intestines have a surface area about the size of a tennis court all coiled up inside your body. They fit inside of you because your large and small intestines are like a giant Slinky that scrunches up.

These organs have a giant role to play too. They are part of your digestive system. That means they break down the food you eat. Digestion begins in the mouth when you chew and swallow. From there, your food travels through the esophagus (ee-saw-fuh-gus), which connects the bottom of your throat to your stomach. Your stomach mixes up food with liquids and then dumps it all into the small intestine.

The small intestine is a very long narrow tube. Its spongy walls soak up nutrients from your food. Then those nutrients flow into your bloodstream to be carried off to other parts of your body. Some nutrients get stored until you need them and others are used right away for all the different things your body needs to work well.

Your body cannot use every single bit of the food you eat. There will always be some that needs to be changed into waste by the large intestine. From the small intestine, leftover food gets pushed into the large intestine where it is dried up and turned into feces, or poop.

If you want to keep your digestive system healthy, you should be careful about what you eat. Healthy whole grains, fruits, and vegetables all pass through your digestive system quickly and easily. They also contain fiber, which is a nutrient that helps in digestion. Your body has a harder time digesting fatty foods, so be careful how much fat is in your diet.

Name: \_\_\_\_\_

# Your Digestive System

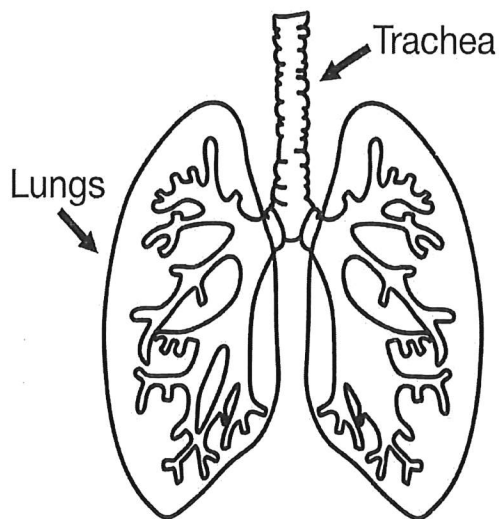
by Cynthia Sherwood

1. What is the purpose of your body's digestive system?
  - a. to help your blood move through the body
  - b. to help you breathe
  - c. to help your body make food
  - d. to help your body break down food
  
2. After you swallow your food, what does it travel through to get to your stomach?  
\_\_\_\_\_
  
3. Which organ takes nutrients from your food and puts it in your bloodstream?
  - a. stomach
  - b. esophagus
  - c. small intestine
  - d. large intestine
  
4. Place these events in the correct order. Number each sentence 1 - 5.  
\_\_\_\_ Food ends up in the small intestine.  
\_\_\_\_ Food is chewed up.  
\_\_\_\_ Food is in the large intestine.  
\_\_\_\_ Food travels through the esophagus.  
\_\_\_\_ Food waste leaves the body.
  
5. What is fiber?  
\_\_\_\_\_

Name: \_\_\_\_\_

# Your Lungs

by Cynthia Sherwood



You do something about twenty times a minute without even thinking about it—you breathe! In fact, every day you take about twenty-thousand breaths.

The organs of your body that allow you to breathe are called your lungs. You have two of them that work together, located in your chest inside the rib cage.

The main purpose of your lungs is to breathe in good air and breathe out bad air. The good air contains oxygen, which your body needs. The bad air is a gas called carbon dioxide, which your body cannot use.

When you breathe in through your nose or mouth, air travels down the back of your throat. It passes through your voice box and into your trachea, or windpipe. Your trachea is divided into two air passage tubes. One leads to your left lung. The other leads to your right lung. Inside your lungs, oxygen is removed from the air you breathe and pumped into blood cells. Your lungs also get rid of harmful carbon dioxide from these cells. This process takes place inside hundreds of millions of tiny air sacs.

Each adult lung is about the size of a football. When they are healthy, your lungs feel a little like a sponge and are pinkish-gray. When lungs are damaged by smoking, they can appear gray or have black spots on them.

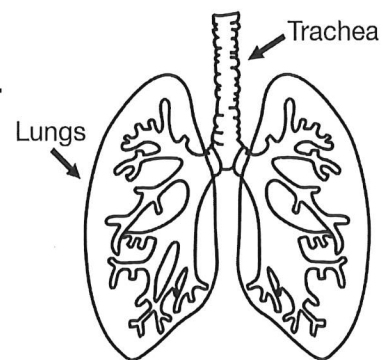
One disease that is very common in children involves the lungs. Asthma narrows the breathing tubes, making it harder to breathe. As many as nine million kids in the United States have asthma.

You probably already know that your lungs are important when you swim. But you may not know this—your lungs are the only part of your body that can float on water!

Name: \_\_\_\_\_

# Your Lungs

by Cynthia Sherwood



1. Where are your lungs located?

\_\_\_\_\_

2. Complete the graphic organizer.

Type of air that your lungs remove from your blood cells	Type of air that your lungs put into your blood cells

3. What is your trachea?

\_\_\_\_\_

4. What do lungs look like when they've been damaged from smoking?

\_\_\_\_\_

5. Why does asthma make it hard for people to breathe?

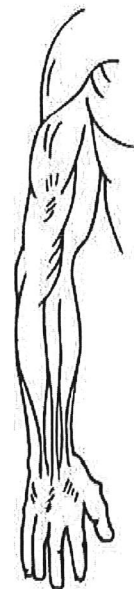
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Name: \_\_\_\_\_

# Your Muscles

by Cynthia Sherwood

When you think of muscles, you might picture a bodybuilder with big, bulging arm and chest muscles. But your muscles do not have to look like that to work well. Every time you write your name, you use the twenty different muscles in your hand. Every time your heart beats, you use your cardiac muscle. When you chew your food, you use your tongue muscles. You're even using muscles when you blink your eyes. In fact, every time you move, you are using some of the amazing muscles in your body.



A muscle is made of tiny fibers. Fiber is a type of tissue that feels a little like a rubber band. Thousands of these fibers are packed together to make a single muscle. We all have the same number of muscles—around 700 or so. Men and women with extra-big muscles simply have thicker bundles of fibers.

There are three different types of muscles. *Smooth muscles* are ones you cannot control. They work behind-the-scenes to keep your body running. Smooth muscles include the ones that help you digest your food. The *cardiac muscle* makes the heart pump blood in and out. *Skeletal muscle* is the kind you can control. These are the muscles you use to raise your hand, swim laps, or ride your scooter. Usually, a skeletal muscle is attached to the end of a bone. Muscles and bones work together to give your body power, strength, and movement. In fact, every year, your leg muscles help you take about five-million steps!

Even your face uses muscles. But if you want to save your energy, try smiling instead of frowning. It takes seventeen muscles in your face to smile, but forty-three muscles to frown!

Name: \_\_\_\_\_

# Your Muscles

by Cynthia Sherwood



1. Which statement is true?

- a. Muscles in your brain help you think.
- b. All of your muscles are attached to bones.
- c. Muscles help you digest food.
- d. All of these statements are true.

2. What are muscle fibers?

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3. How are smooth muscles different from skeletal muscles?

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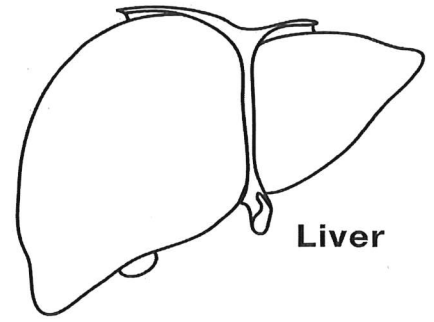
4. Draw straight lines to match each fact on the left with the correct number on the right.

- |    |                                     |           |
|----|-------------------------------------|-----------|
| a. | Number of muscles it takes to frown | 17        |
| b. | Number of muscles it takes to smile | 20        |
| c. | Number of muscles in your body      | 5 million |
| d. | Number of steps you take in a year  | 700       |
| e. | Number of muscles you use to write  | 43        |

Name: \_\_\_\_\_

# Your Liver

by Cynthia Sherwood



A crab that loses a leg can grow another one back. A worm that loses its head or tail can grow either back from any of its segments. And believe it or not, you can do something similar!

The liver is the largest organ inside your body. If part of it is removed, it can grow back. But the liver is amazing in many other ways too because it does so many important jobs. The liver is like a giant chemical factory with three major functions. It makes something called "bile" to help your stomach break down the food you eat. It cleans your blood by removing dangerous chemicals from your body. And it makes and stores fuel for you to use when you need extra energy.

Your liver is located under your ribs on your right side. It is smooth, reddish-brown, and made up of two different parts called "lobes." Your liver weighs about three pounds.

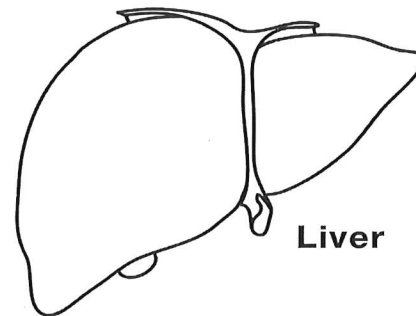
All together, your liver does more than 500 things that are vital to your health. Besides its main jobs, the liver helps make antibodies that kill germs and makes cells that builds your muscles. It even makes a protein that stops cuts from bleeding for a long time and it keeps pollution from hurting you. The liver is so important that none of us can live for long with one that is badly diseased. You can take care of your liver by eating healthy foods, drinking water, and exercising. Drinking too much alcohol and smoking cigarettes can cause damage to the liver.

There is a rather strange side effect for some people with liver problems. Their skin and eyes can turn a shade of yellow. Even newborn babies sometimes have this problem. Doctors can help, so people who are looking "yellow" should see one right away. After all, this is one part of your body you need to keep healthy.

Name: \_\_\_\_\_

# Your Liver

by Cynthia Sherwood



1. Where is your liver located?

\_\_\_\_\_

2. Complete the graphic organizer.

Three Major Functions of Your Liver		
1. _____ _____ _____ _____	2. _____ _____ _____ _____	3. _____ _____ _____ _____

3. What can you do to take care of your liver?

\_\_\_\_\_

4. Circle the things that your liver does.  
Cross out the things that your liver does not do.

**a.** cleans your blood

**b.** moves blood around your body

**c.** makes a chemical called bile

**d.** stores extra energy for your body

**e.** puts oxygen in your blood

**f.** makes antibodies that kill germs

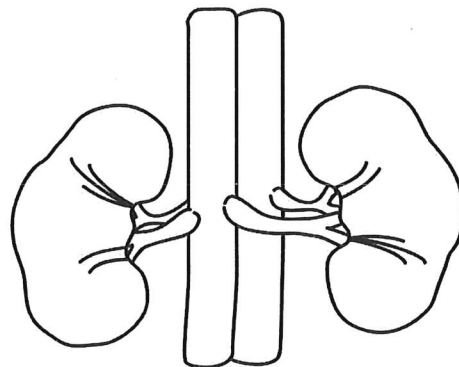


Name: \_\_\_\_\_

# Your Kidneys

by Cynthia Sherwood

Many kids have moms or dads who clean up after them. But did you know that you have body parts that clean up after you too? Your two kidneys are very important organs in your body. Without them, you could not survive. They clean your blood and get rid of waste that your body produces.



To find your kidneys, slide your hands up from your hips until you feel your ribs. Then put your thumbs on your back. You cannot feel them, but that is where your kidneys are located. Each is about the size of your fist and has a funny shape. Kidney beans were named after them because they have the same shape.

The main job of the kidneys is to filter your blood for anything your body does not need. The kidneys make this waste into urine, which is then sent to your bladder. The bladder is like a storage pouch that can expand. When your bladder starts getting full, you feel the urge to go to the bathroom.

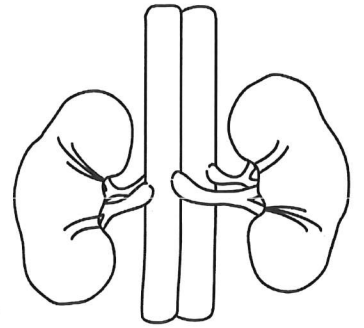
Sometimes, the kidneys do not work like they should. People usually can survive on only one kidney, so long as it is healthy. If only one kidney becomes very sick, a doctor can remove it. Other people need a special machine to clean the blood. This is called dialysis (di-a-li-siss.) Sometimes, people need a kidney transplant. That is when another person donates a kidney to be put in the sick person's body.

Keeping your kidneys healthy is easy for most kids. Just pay attention to when you feel thirsty and drink up!

Name: \_\_\_\_\_

# Your Kidneys

by Cynthia Sherwood



1. Where are your kidneys located?

\_\_\_\_\_

2. How big is a kidney?

\_\_\_\_\_

3. How do your kidneys help your blood?

\_\_\_\_\_

4. Which is the best synonym for the word filter?

a. clean

b. create

c. blood

d. fill

5. What is your bladder?

\_\_\_\_\_

6. What three things can doctors do for a person whose kidneys do not work properly?

a. \_\_\_\_\_

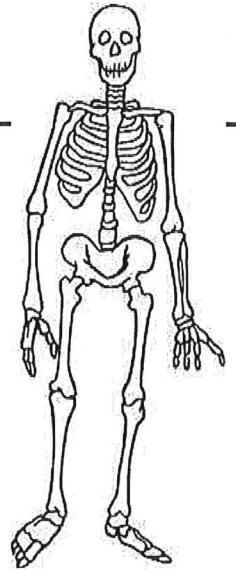
b. \_\_\_\_\_

c. \_\_\_\_\_

Name: \_\_\_\_\_

# Your Bones

by Cynthia Sherwood



Without your bones, you would be as floppy as a jellyfish. Our bones allow us to stand up straight. They support us and help us move, but they also protect our body organs.

Our skeleton is made up of all of our bones working together. If you have ever seen a real skeleton in a science class or museum, you might think that bones are dry and dead feeling. But that is not the case. Bones are made of living, growing cells. Inside most bones is soft marrow, which is where many of our blood cells are made. As a baby, you were born with nearly 300 bones. But adults only have about 206 bones because some of the smaller ones join together to form big ones.

Certain bones are especially important. The skull inside your head acts like a helmet for your soft, squishy brain. Your skull helps protect you from injuries to your head. Your spine, or backbone, lets you stand up tall. Your spine also protects the spinal column with all of its nerves inside. Your ribs make a cage to protect your vital organs like the heart, lungs, and liver.

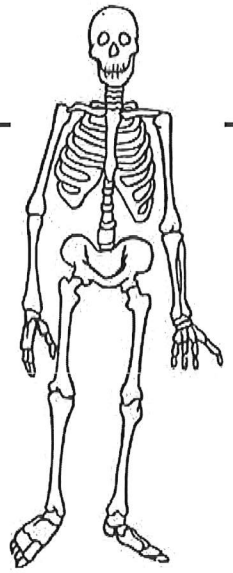
Even though bones are very light, they are also very strong. That is why it usually takes a very bad fall or other serious accident to break a bone. If that does happen, you might wear a cast until new bone cells heal the break in a month or two.

To protect your bones, wear a helmet whenever you ride your bike or skateboard. Knee pads, wrist guards, and other safety gear for sports are a good idea too. Strong bones need the mineral calcium, so drink lots of milk and eat dairy products. Bones also need active exercise, so go out and run, jump, and dance for healthy, strong bones.

Name: \_\_\_\_\_

# Your Bones

by Cynthia Sherwood



1. Tell whether each statement is true or false.

- a. \_\_\_\_\_ Your bones are hollow.
- b. \_\_\_\_\_ Blood cells are made inside your bones.
- c. \_\_\_\_\_ Adults have more bones than babies do.

2. Why are dairy products good for your bones?

\_\_\_\_\_

3. Complete the graphic organizer.

Bone(s)	Purpose
ribs	
	helps you to stand up tall and protects the nerves in your spinal column
skull	

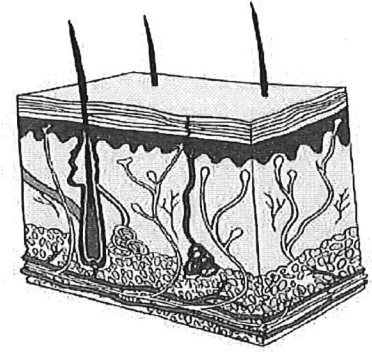
4. How many more bones do babies have than adults?  
Use your math skills. Show your work.

\_\_\_\_\_

Name: \_\_\_\_\_

# Your Skin

Written by Sandie Lee



## Your Largest Organ

What is the largest organ in your body? Your heart? It is the largest muscle in your body, but you do have larger organs. Your brain? The brain inside your skull is pretty big, but it's not the biggest. How about the liver? It is the heaviest organ. How about your skin? Yes, your skin is an organ, just like your heart, brain, and liver. Since your skin covers your entire body, it is, in fact, your body's largest organ.

Even though skin comes in many different colors, all skin has a very important job to do. It acts as a covering for our entire body, which protects our organs and keeps out infections. Can you imagine what your body would look like without skin?

It also regulates our body temperature and helps us perceive pain, pressure, and touch.

## Layers of the Skin

The human skin is made up of three layers:

- **Epidermis** - [ep-i-dur-mis] the part of the skin on the outside of your body; it's the part you can see
- **Dermis** - [dur-mis] where blood vessels and nerves are at work
- **Hypodermis** - [hahy-puh-dur-mis] mostly made of fat; where your hair grows from

## How Thick Is My Skin?

If you've ever had a cut on your skin, you know that it's not very thick at all. On average, your skin is only about 1.5 millimeters thick. It is thickest on the soles of our feet and thinnest on our eyelids.

## Is it Alive?

Here's something fun to try. Look down at your hands. What do you see? Anything unusual? Even though you can't see it, your skin is hard at work making new cells. It takes from two weeks to a month to make a new cell. When these cells are ready they will work their way to your epidermis, pushing the old, dead ones to the surface. So when you look at your skin, you're actually seeing dead cells. In fact, our skin loses about 30,000 to 40,000 dead cells every minute!

## Skin-Tastic Facts!

- Frogs don't drink water; they absorb it through their skin.
- Polar bear's skin is black to absorb heat from the sun.
- Besides humans, pigs are the only other animal that can get sunburned skin.
- Ostrich skin makes the strongest leather.
- Some humans and animals have no 'melanin' (an enzyme that produces color) in their skin. This makes them completely white.

Name: \_\_\_\_\_

# Your Skin

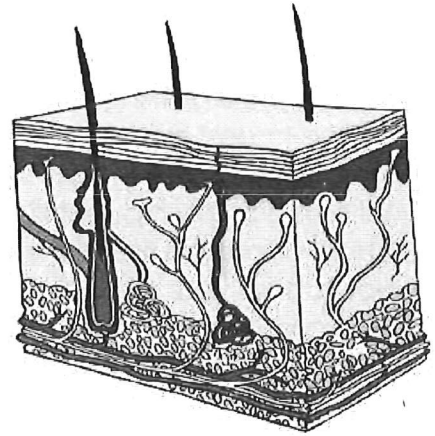
Written by Sandie Lee

1. What is your body's heaviest organ?

- a. brain
- b. heart
- c. liver
- d. skin

2. Your skin is about as thick as....

- a. a notebook
- b. a dime
- c. pancake
- d. a plate



3. Explain how our skin helps to keep our bodies healthy.

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4. When you look at someone, which layer of their skin can you see? \_\_\_\_\_

5. Which layer of skin does hair grow from? \_\_\_\_\_

6. Which layer of skin contains blood vessels and nerves? \_\_\_\_\_

7. What is the enzyme in skin that gives it color? \_\_\_\_\_

8. How does a polar bear's skin help it survive in the Arctic? \_\_\_\_\_

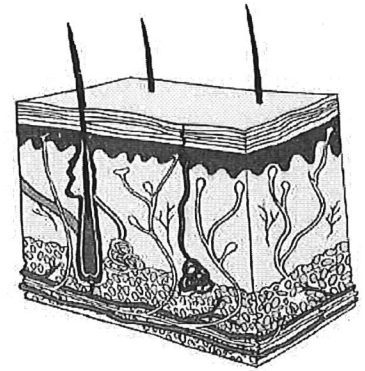
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Name: \_\_\_\_\_

# Your Skin

## Vocabulary



Match each vocabulary word with its definition.

1. \_\_\_\_\_ brain
  2. \_\_\_\_\_ organ
  3. \_\_\_\_\_ muscle
  4. \_\_\_\_\_ liver
  5. \_\_\_\_\_ absorb
  6. \_\_\_\_\_ regulates
  7. \_\_\_\_\_ soles
  8. \_\_\_\_\_ ostrich
- a. controls
  - b. large bird that cannot fly
  - c. soaks in
  - d. bottoms of your feet
  - e. organ that stores nutrients for your body and cleans your blood
  - f. part of your body that is used for movement
  - g. organ that controls your entire body
  - h. group of body tissue that performs a task (examples: heart, lungs, stomach)

