



The Learning Center at WPSD

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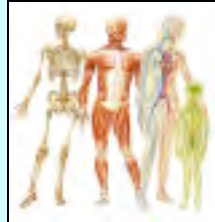
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Your Amazing Body

Have you ever thought about the amazing things your body can do? Such as, when your brain is working, we don't notice anything special or different. In this newsletter you will learn about the different body systems and their functions. There are ten body systems that work together to help your body function. Only six of the body systems will be explored in this newsletter: the Skeletal System, the Muscular System, the Circulatory System, the Nervous System, the Respiratory System, and the Digestive System.

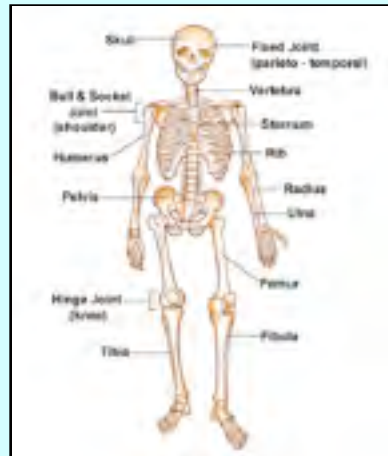


The Skeletal System

Did you know an adult has 206 bones in their body? You are actually born with more, but as your body grows the bones fuse together. Our skeletal system is made up of bones, cartilage, tendons, and ligaments. The purpose of the skeletal system is to provide support for the body, to protect our organs, and for movement.

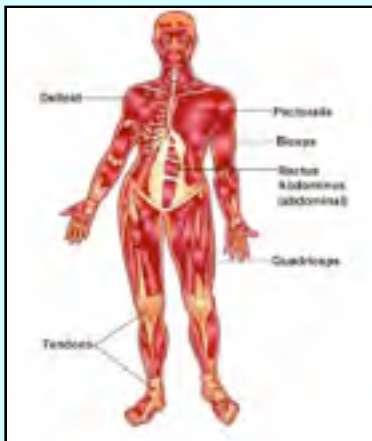
There are four parts of the bone: periosteum, compact bone, cancellous, and bone marrow. The periosteum is the outer layer of the bone and the compact bone is hard, smooth part of the bone. The cancellous bone is strong and spongy and protects the bone marrow. The bone marrow makes blood cells and looks like a thick jelly. Your bones are alive and growing.

It is important to take care of your bones. Always wear a helmet when bike riding or doing other sports to protect your brain. Drink milk and other dairy products to strengthen your skeleton. Dairy products have calcium which helps keep your bones strong! Always be sure to exercise.



The Muscular System

Muscles make up the muscular system. You have over 600 muscles in your body! Almost half your body weight is muscle. The muscular system provides movement. Muscles work with your skeletal system for movement. When you move, a signal is sent from your brain through your nerves and spinal cord to your muscles. This forces them to contract. When you move your leg, the brain sends a message to your leg and you move it. Muscles contract and relax to move body parts.



There are three types of muscles. Smooth muscle is layered in sheets covering one another.

You don't control this muscle type. The skeletal muscle works together with your bones to help you move. You control these muscles. Cardiac muscle is the muscle that makes up your heart. You cannot control this muscle.

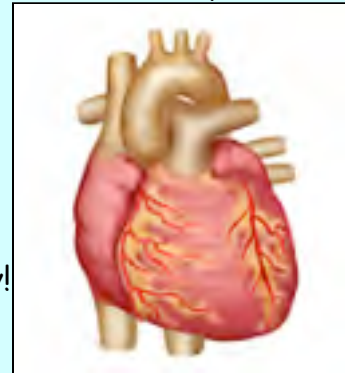
The Circulatory System

The circulatory system is made up of the heart, blood vessels, and the blood. The circulatory system provides nutrients and oxygen throughout our body. It also helps excrete waste and carbon dioxide in the body. The circulatory system has two different systems; pulmonary system and systemic circulation. The pulmonary system is a loop from the heart to the lungs and back. The systemic circulation is the loop from heart to all the parts of the body and back.

There are three types of blood vessels. The arteries are any blood vessels that carry blood away from the heart to all the body parts. The veins are blood vessels through which blood flows to the heart from all the parts of the body. The capillaries are blood vessels that join the end of an artery to the beginning of a vein.

Your heart is only the size of your closed fist. An adult male's heart weighs about 10 ounces and a female's heart weighs about 8 ounces. Your heart beats 60-100 beats per minute. An adult heart pumps about 2,000 gallons of blood each day throughout the body. Your heart beats about 100,000 times in one day!

Your heart is very important! Strive for a healthy and happy heart. Eat a well-balanced meal. This includes fruits and vegetables, grains, and meat. Fruits and vegetables should fill half your plate! Choose water instead pop or juice. Exercise your heart at least 30 minutes each day.



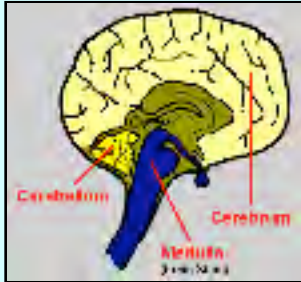
The Respiratory System

The respiratory system is a continuous circle throughout your body to help you breathe. Oxygenated air is breathed in through your nose or mouth and then goes down your trachea to your lungs and diaphragm. This air then circulates to



the rest of your body giving oxygen to your cells and picking up carbon dioxide. Air containing carbon dioxide is returned to the lungs and is breathed out. Carbon dioxide is a gas that is produced by the body as a waste. The average adult's lungs contain about 600 million of the spongy, air-filled sacs that are surrounded by capillaries. Two facts about the respiratory system is that the right lung of your body is slightly larger than your left and the average person at rest breathes 12 to 15 times a minute.

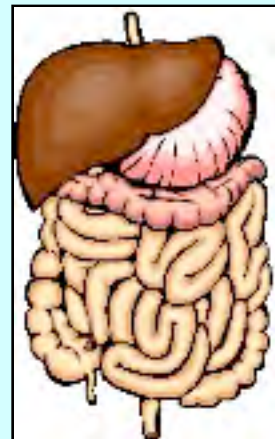
The Nervous System



The brain and spinal cord along with nerves found in your body make up the nervous system. This system gathers information and stores, interprets, analyzes, and responds to the information given. This response may be involuntary without you controlling it such as breathing, heartbeat, and digestion or it may be voluntary with you doing what you think with the information gathered.

The Digestive System

The human body contains a number of systems, each of which has a specific job. The digestive system breaks down food so that the rest of the body can use this food as nourishment and energy. Digestion begins in the mouth, continues down the esophagus into the stomach. The first step of the process takes place in the mouth where the teeth break the food into smaller pieces. After swallowing, the food goes into a tube called the esophagus and down to the stomach. In the stomach, the food is mixed with juices and squeezed and churned until it becomes a thick liquid. The thick liquid goes into the small intestine, which is a hollow tube about 20 feet long. Digestive juices from the liver and pancreas aid in digestion in the stomach. The digested food then goes into the small intestine and to the rest of the body. The wastes from the body go into the large intestine and then into the rectum or colon.



Resources:

kidshealth.org/kid/htbw

www.myschoolhouse.com

www.pbs.org/wgbh/nova/heart/heartfacts.html

www.squidoo.com/humanbody

www.worldbookonline.com

Amazing Books! @ your library



My Body series

written by Kathy Furgang

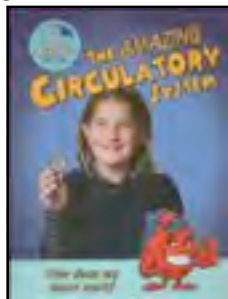
- My Brain
- My Ears
- My Heart
- My Lungs
- My Nose

Slim GoodBody's Body Buddies

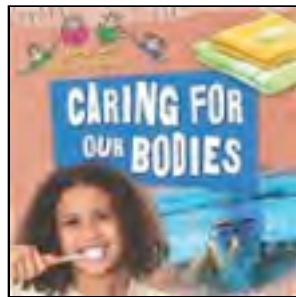
A.R. Book Level - 5

written by John Burstein

- The Amazing Circulatory System
- The Astounding Nervous System
- The Dynamic Digestive System
- The Exciting Endocrine System
- The Mighty Muscular and Skeletal Systems
- The Remarkable Respiratory System



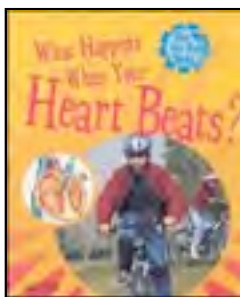
Fifth graders reading their AR book or taking a quiz.



Now We Know About series

A.R. Book Level - 3

- Being Safe...Jinny Johnson
- Caring for Our Bodies...Deborah Chancellor
- Good Manners...Deborah Chancellor
- Healthy Eating...Deborah Chancellor
- My Body...Mike Goldsmith
- Recycling...Mike Goldsmith
- Saving Water and Energy...Philip Steele
- The Weather...Mike Goldsmith



How Your Body Works series

A.R. Book Level - 5

written by Jacqui Bailey

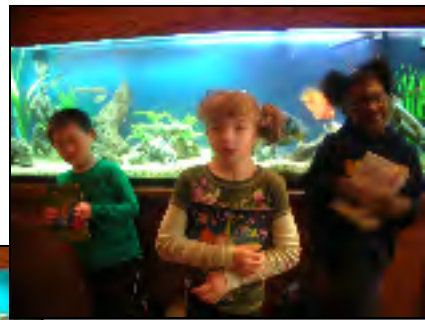
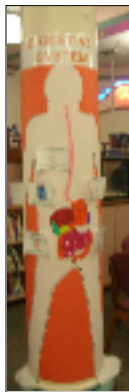
- What Happens When You Move?
- What Happens When Your Heart Beats?



Snapshots @ your library



Students in Library Classes with their human body system projects.



Students with their RIF books.