

Tour of the Human Body Webquest

In this webquest, you will be shrunken down in order to explore the systems of your body. Visit the following link to begin:

http://vilenski.org/science/humanbody/hb_intro.html

If you are lost during any point of this webquest, click "LOST" or "SITE MAP"

The Skin

The skin's job is to:

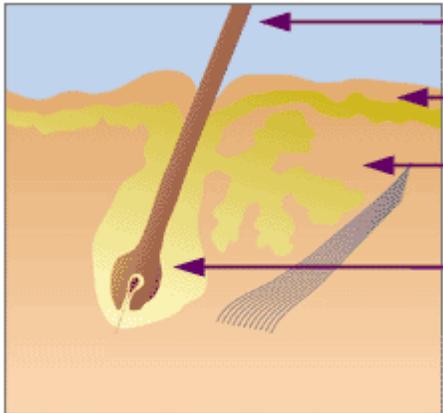
1. _____
2. _____
3. _____
4. _____
5. _____

The outer layer is called the _____

The inner layer is the _____. It contains

_____.

Label the dermis, epidermis, hair shaft, and hair follicle



Why does your skin wrinkle when it is placed in water for awhile?

Muscles

- Muscle contracts to move _____
- Muscles look either striated or smooth:
 - _____ muscle has stripes or striations in it.
 - _____ muscle does not.
- Also, muscles are labeled as either voluntary or involuntary.
 - _____ are muscles that you can move whenever you want to.
 - _____ contract and relax automatically inside your body. We can not control our involuntary muscles.

When you make a muscle, what kind are you making?

Three Types of Muscles

Tour of the Human Body Webquest

Type of Muscle	Smooth Muscle	Cardiac Muscle	Skeletal Muscle
Appearance			
Involuntary/Voluntary			
Function			

Complete the following:

Take the Muscular System *Self Quiz* (Left-hand side of the page). Write your answers below.

- | | |
|----------|----------|
| 1. _____ | 4. _____ |
| 2. _____ | 5. _____ |
| 3. _____ | 6. _____ |

Internal Organs

Click on [Go in a layer to the internal organs.](#)

Click on the picture of the stomach and small intestine.

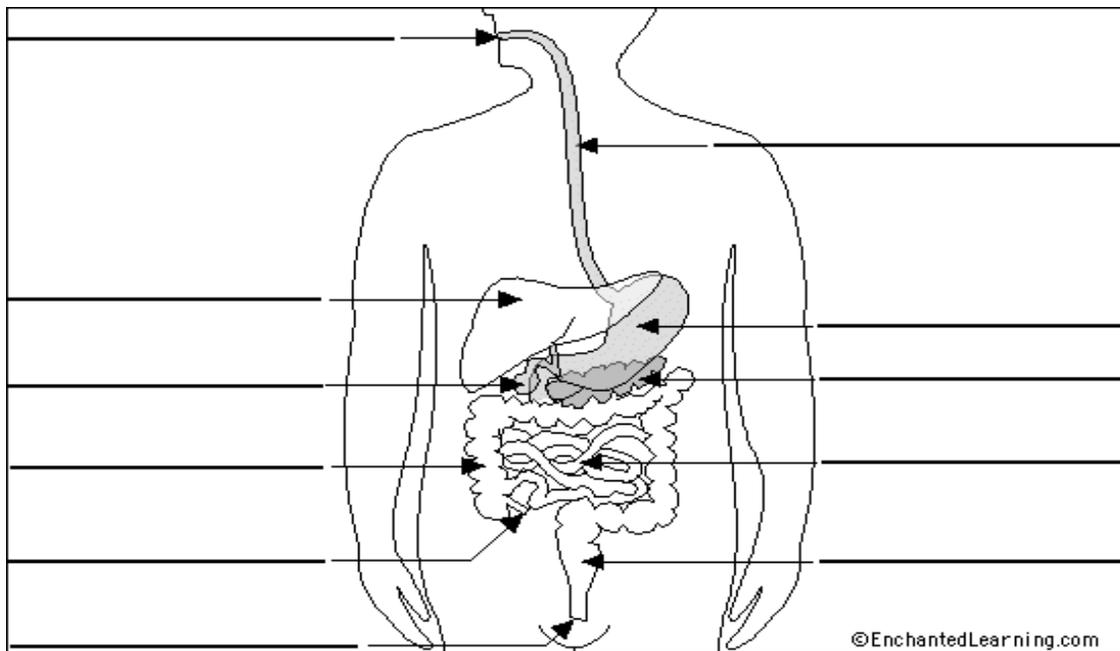
What most likely happens when your diaphragm goes into spasms? _____

Things to Know:

- Food passes through the _____, _____, _____, _____ intestine, _____ intestine, _____, and out the anus.
- The digestive system breaks down food two ways:
 - _____ *digestion*- the chewing (in the [mouth](#)) and churning (in the stomach)
 - _____ *digestion*- with the help of **enzymes**, into substances that cells can absorb and use. This occurs in the mouth, stomach and small intestines.
- What is the term for the water liquid that food becomes when it is partially broken down in the stomach? _____
- The _____ releases digestive enzymes into the small intestines.
- The _____ absorb excess water from chyme so it can be used by the body.

Label the following parts of the digestive system.

Tour of the Human Body Webquest



Take the *Digestive System Self Quiz* (Click on the fortune teller on the left-hand side of the page). Write your answers below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Click on *Get a better view of the kidneys*

Just like how you have a trash collector who takes garbage from your home, the kidneys help remove waste from your body.

- They are located behind the _____.
- They filter _____ that has collected wastes from your body's cells.

Click on *Get a better view of the liver*.

The liver is located at the beginning of the _____.

What is bile? _____

What is the function of the gall bladder? _____

Click ***Go in a layer to the trachea, lungs, and heart***

What does "skeleton" mean in Greek?

Tour of the Human Body Webquest

The lungs are part of the _____ system.

The heart is part of the _____ system.

Respiratory System

The _____ is a small flap of tissue above the trachea that prevents food from entering the trachea and lungs.

- At the lower end of the trachea are two short branches called _____, that carry air into the _____.
- Within the lungs, the bronchi branch into smaller and smaller tubes called _____.
- At the end of each bronchiole are clusters of tiny, thin-walled sacs called _____.
- The exchange of oxygen and carbon dioxide takes place between the alveoli and the surrounding capillaries.
- The _____ is a [muscle](#) beneath the lungs that helps move air in and out of the body.

Take the *Respiratory System Self Quiz* (Click on the wizard on the left-hand side of the page). Write your answers below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Circulatory System

Click on the heart to enter the circulatory system.

Blood Vessels:

- **Arteries** are tubes that carry blood _____
- **Veins** are tubes that return blood _____
- **Capillaries** connect arteries and veins. They are tiny tubes that exchange _____, _____ and _____ between blood and body cells.
- **Pulmonary circulation** is the movement of blood between the _____ and _____
- _____ **circulation** is the movement of blood from within the heart chambers to the heart tissues themselves
- **Systemic circulation** is the movement of blood between the heart and the _____.

Click on *Get a better view of the Heart*.

The average heart beats _____ times per minute.

Tour of the Human Body Webquest

- Your heart is an organ made of _____.
- Your heart has four cavities called _____.
- The two upper chambers are called the right and left _____.
- The two lower chambers are the right and left _____.
- Blood flows into the heart through the atrium and then out through the _____.

Take the *Self Quiz* (Click on the man on the left-hand side of the page). Write your answers below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Click on [Learn about blood and the immune system](#)

Complete the following and use the information to play the **GAME**.

Immune System:

Your immune system is like an army that protects you from disease.

- Your _____ is the first wall of protection against foreign invaders that cause disease.
- The second line of defense are fluids like mucus found in your _____ and tears from your _____.

If the invaders do pass through these defenses there is an army battalion of white blood cells and their weapons that fight the germs:

- **Helper Tcells** - _____

- **Bcells** - _____

- **Killer Tcells** - _____

- **Phagocytes** - _____

Skeletal System

Tour of the Human Body Webquest

Use the Site Map feature on the top of the page to find this section.

Bones are living structures with 5 functions:

1. _____
2. _____
3. _____
4. _____
5. _____

A point where two or more bones connect is called a _____. There are two different types of joints in the body:

- **Movable joints** (like _____)
- **Immovable joints** (like the bones of the _____) which allow little or no movement

Take the Skeletal System Self Quiz (Click on the man lying on a bed of nails on the left-hand side of the page). Write your answers below.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____

Nervous System

Things to know about the nervous system:

- The central nervous system contains of the _____ and _____
- A _____ (nerve cell) is the basic unit of structure and function of the nervous system
- A response that is made automatically is a _____

The Spinal Column

- Your spinal cord is made of bundles of _____ that carry impulses from all parts of the body to the _____ and from the brain to all _____.
- The spinal cord is about as big around as a(n) _____ and _____ cm long.