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A NOTE FROM MEI AND GERDY

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Always Nerdy, Mei and Gerdy

HUMAN BODY:

INB ACTIVITY PACK

getting nerdy with mel and gerdy

Interactive Notebook Activities for Enrichment

General Directions:
Included in this Human Body INB Bundle there are 31 Interactive Notebook activities for your classroom. Many of these activities are aligned with our Human Body PowerPoint and Handout Bundle and lessons sold in our store! These activities can be used for review, enrichment, at stations, or as reinforcement to use with our Human Body PowerPoint and Handouts Bundle.

The Table of Contents are as follows:

General Directions cont'd:

We have included multiple Interactive Notebook Activities per page in order to conserve paper. Please make copies and cut along the long line that runs the length and/or width of the paper before providing a copy to your students. Each sheet fits perfectly inside of a standard composition notebook but will also do well in whatever kind of notebook your students use.

Illustrations have been included when necessary in blackline and full color depending on your wants and needs. If necessary, project color pictures onto your white board or print a copy or two in color and place at front of room or at tables for groups of students to see so they may color their diagrams appropriately.

Directions are often provided on individual student sheets. When space is not available, they are on the teacher notes/answer key. Students are to always cut along dark lines and fold along dashed lines.

Teacher notes/answer keys are provided for every INB activity in this packet. They contain notes and guidance for helping students fill out the INB sheets and teachers provide the appropriate information. Of course you are welcome to use your own notes to assist students in the completion of these activities. Pictures of each assignment are included to ensure understanding.

We have also provided two ways to complete some of these activities. It is up to the teacher which way you would like to complete them.

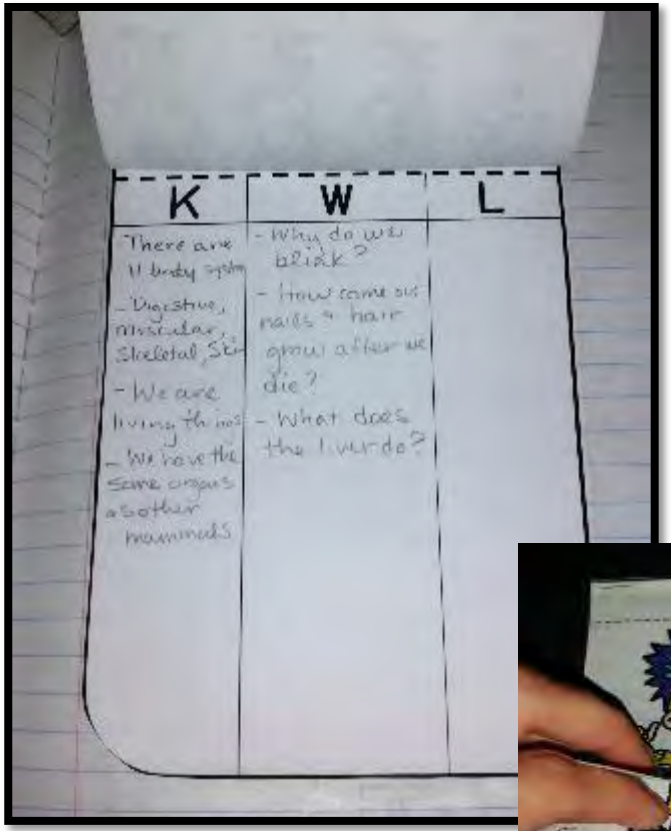
1. Students can glue activities into their INB and write answer directly in their INB under the interactive flaps.
2. We have included templates that get glued into the INB to helps students write in the amount of space provided. They then glue their interactive flap piece overtop.

Each body system has its own Title Page available in color and blackline for students to color. Begin each system with this page to act as a marker and colorful reminder of what is included in each section of the human body unit. Behind it you have the option of gluing in a KWL chart so students can show understanding, ask questions, and then review what they have learned in the end.

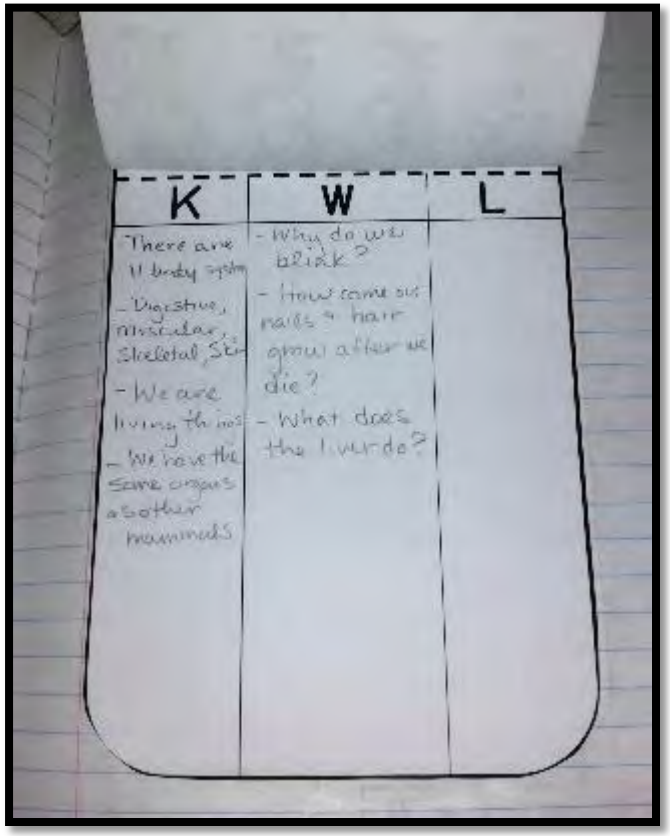
4 HUMAN BODY SYSTEMS

INTRO/REVIEW

INB ACTIVITIES



Human Body System Title Page



Directions: This page is to be used at the beginning of the Human Body unit as a title page. Have students color the different body system dudes if they receive a blackline copy. Cut out the KWL chart and glue it into their notebook. Then, cut out the Human Body Title Page and glue it to the KWL chart along the top tab. Under the title page, in their notebook, students can complete the KWL chart for what they:

Know about the Human Body

Want to know about the Human Body

And at the end of the unit, what they **L**earned about the Human Body.

Human Body Systems

Apply glue behind this tab and place in notebook










Human Body Systems

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Human Body Systems

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Human Body Systems

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Glue Human Body System Title Page Here

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Glue Human Body System Title Page Here

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Human Body System Functions Teacher Notes/Answer Key

You will find several templates that follow to allow your students to show their knowledge of the systems of the human body. These would work well as an intro to the human body, a formative assessment as they complete each body system in class, or as a summative assessment/review at the end of the unit.

- Page 11 has eight body templates that you can make multiple copies of for your class. Have students work in groups or alone to complete 12 cards for the 11 organ systems (male and female reproductive systems can be done separately making it a total of 12 systems) and draw in the organs of each organ system. On the back of the template they can write the function of each individual system. Lastly they can glue or staple the cards together using the top tab to create a small booklet for the INB.
- Page 12-18 has all body systems present (in blackline and color) and students can identify which system is represented by each picture and underneath each flap, describe the function of each system.
- Page 19 has a large body template that you can make multiple copies of. Students can work alone or in groups to research one body system describing its function and then drawing in the organs and describing their functions on the back of the template. Groups/students can submit their completed system template to the teacher to make a large book of the systems of the human body.

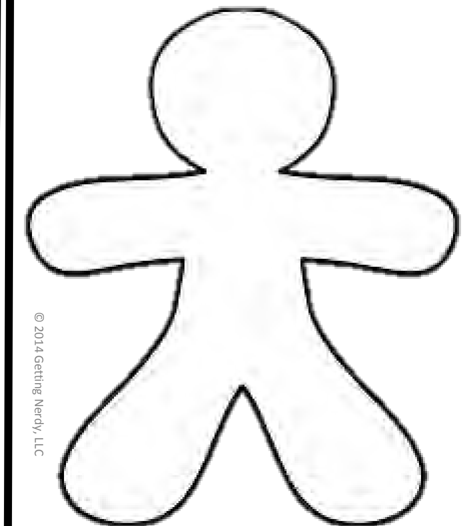
Human Body System Functions Teacher Notes/Answer Key

BODY SYSTEM	ORGANS	FUNCTIONS
INTEGUMENTARY	Skin	protection of body from injury and bacteria, maintenance of tissue moisture, holds receptors for stimuli response, body heat regulation
MUSCULAR	Muscle, tendons	Movement of organs
SKELETAL	Bones, ligaments, cartilage	Protection, site for bone attachment for movement, stores calcium and phosphorus, makes blood cells in marrow, provides shape and support of body.
DIGESTIVE	Mouth, teeth, tongue, esophagus, stomach, small intestine, pancreas, liver, gallbladder, large intestine, rectum, anus	Breaks down food into usable nutrients for body to absorb and convert into energy.
CIRCULATORY/ CARDIOVASCULAR	Blood, arteries, veins, capillaries, heart	Transports nutrients, waste, and disease fighting cells throughout the body
LYMPHATIC/ IMMUNE	Lymph nodes (thymus, tonsils, spleen, etc), lymph, lymphatic vessels	Filters and returns lymph to the bloodstream; provides an immune response to foreign invaders.
RESPIRATORY	Trachea, larynx, bronchi, bronchiole tubes, lungs, alveoli, diaphragm	intake of oxygen and removal of carbon dioxide from body
URINARY	Kidneys, nephrons, ureters, bladder, urethra	Controls water and salt balance in blood
REPRODUCTIVE	Ovaries, fallopian tubes, uterus, testes, penis	Aid in sexual reproduction by producing sperm and egg
ENDOCRINE	pituitary gland, adrenal gland, thyroid gland, ovaries, testes	production of hormones and body regulation
NERVOUS	spinal cord, brain, nerves, skin, eyes, ears, tongue, nose	Controls the body's activities and reacts to environmental stimuli.

System

System

System



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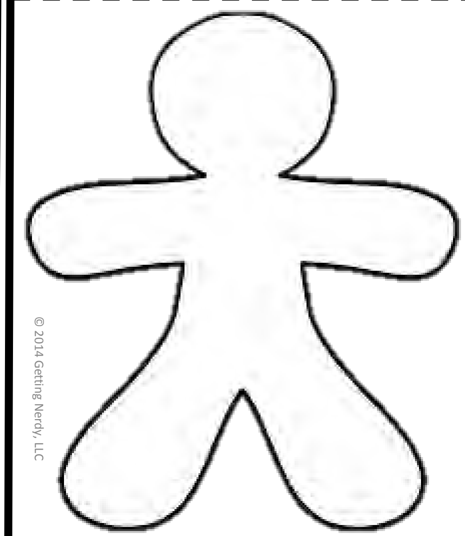

System

Human Body System Functions Teacher Notes/Answer Key

Reproductive

System

Nervous

System

Integumentary

System

Skeletal

System

Endocrine

System

Circulatory

System

Respiratory

System

Lymphatic

System

Urinary

System

Muscular

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Digestive

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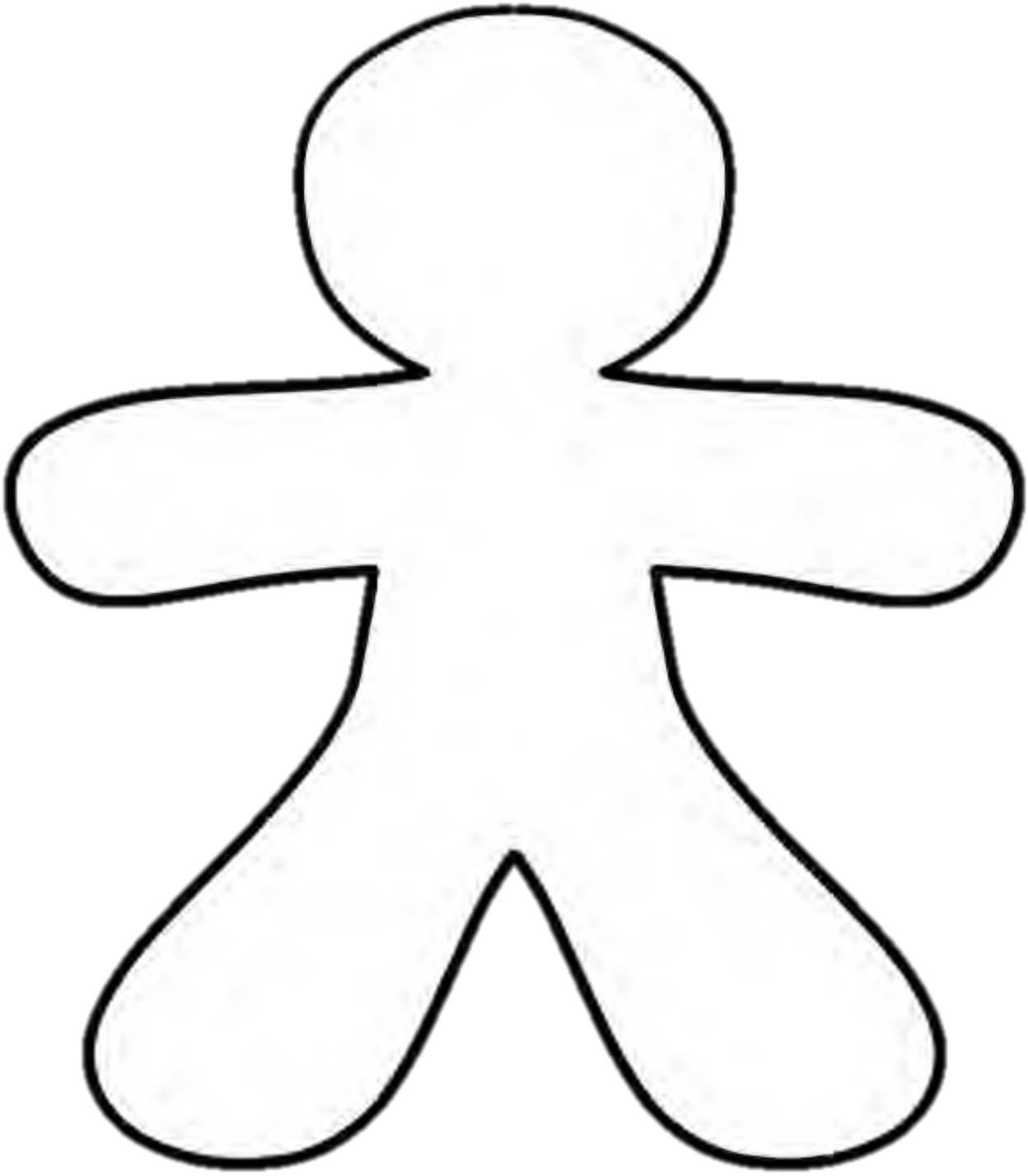
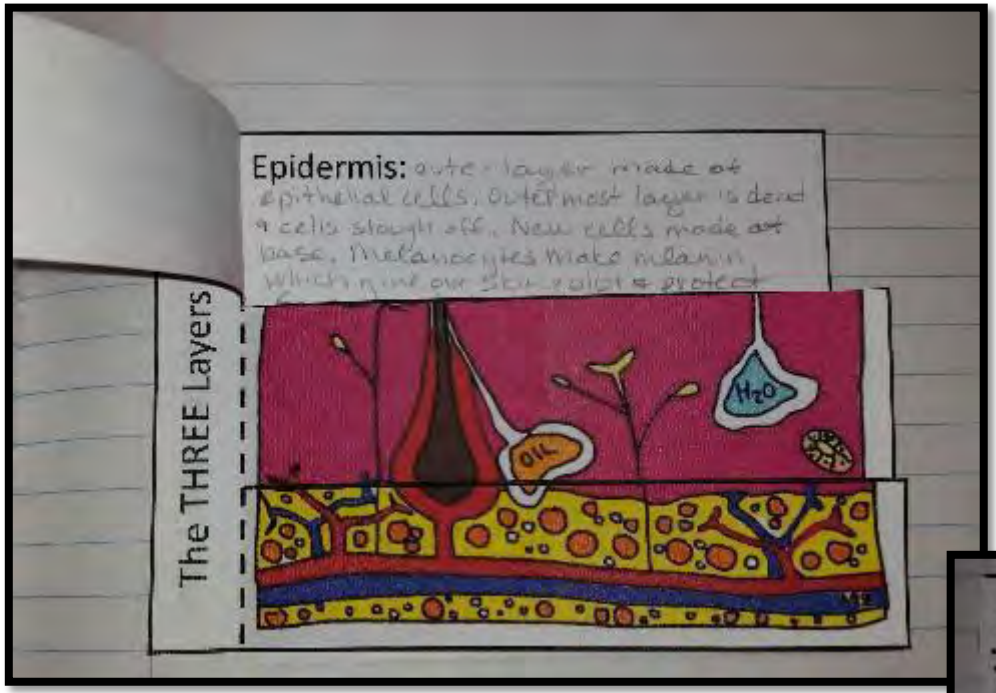
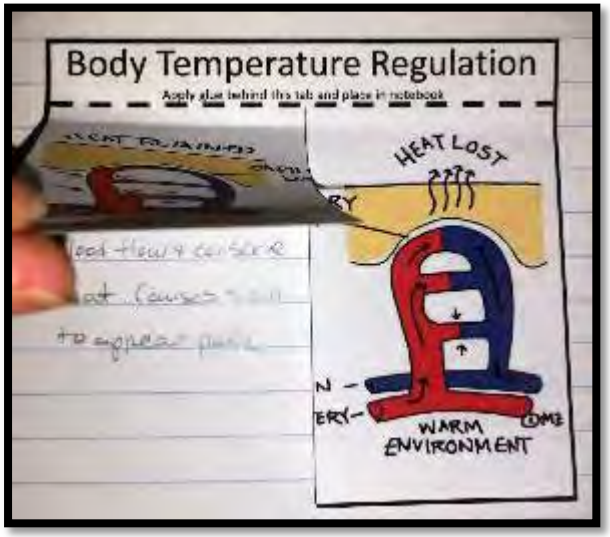
Body System:

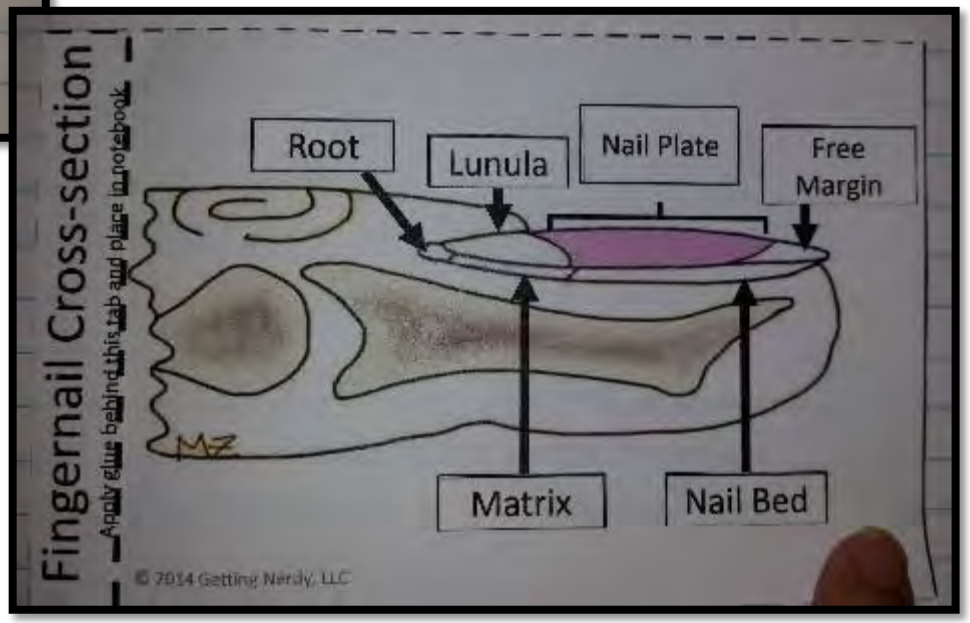


Function:

3 INTEGUMENTARY SYSTEM IN ACTIVITIES







I'm Learning About the Integumentary System!

I'm Learning About the Integumentary System!

I'm Learning About the Integumentary System!

I'm Learning About the Integumentary System!

Glue Human Body System Page Here

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Glue Human Body System Page Here

K	W	L

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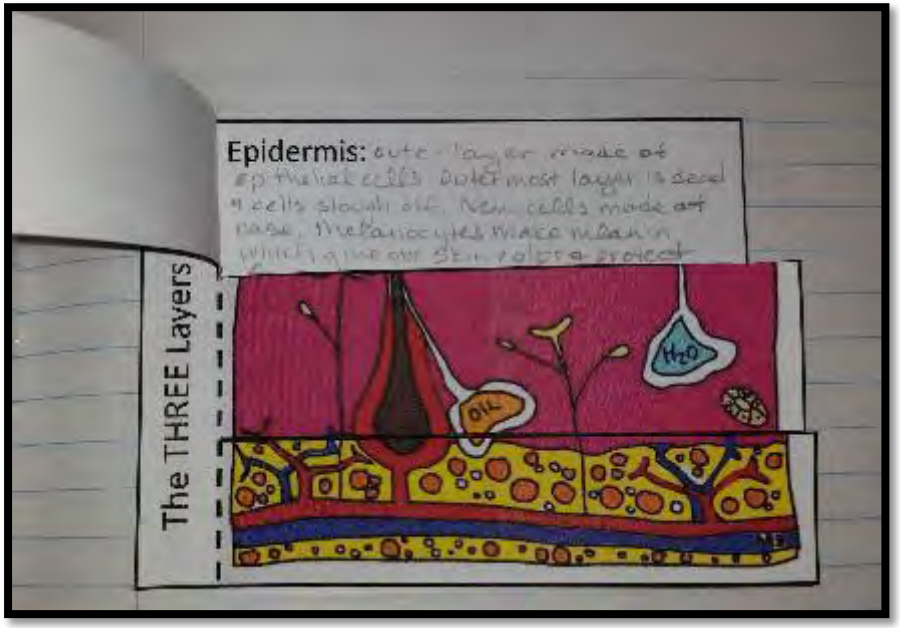
Layers of Skin Teacher Notes/Answer Key

Glue Layers of Skin Tab Here

Epidermis: outer layer composed of epithelial cells. Outermost cells are dead and rub off. New cells are constantly made at the base/bottom of the epidermis. Melanocytes: cells produce melanin - pigment that protects your skin and gives it color

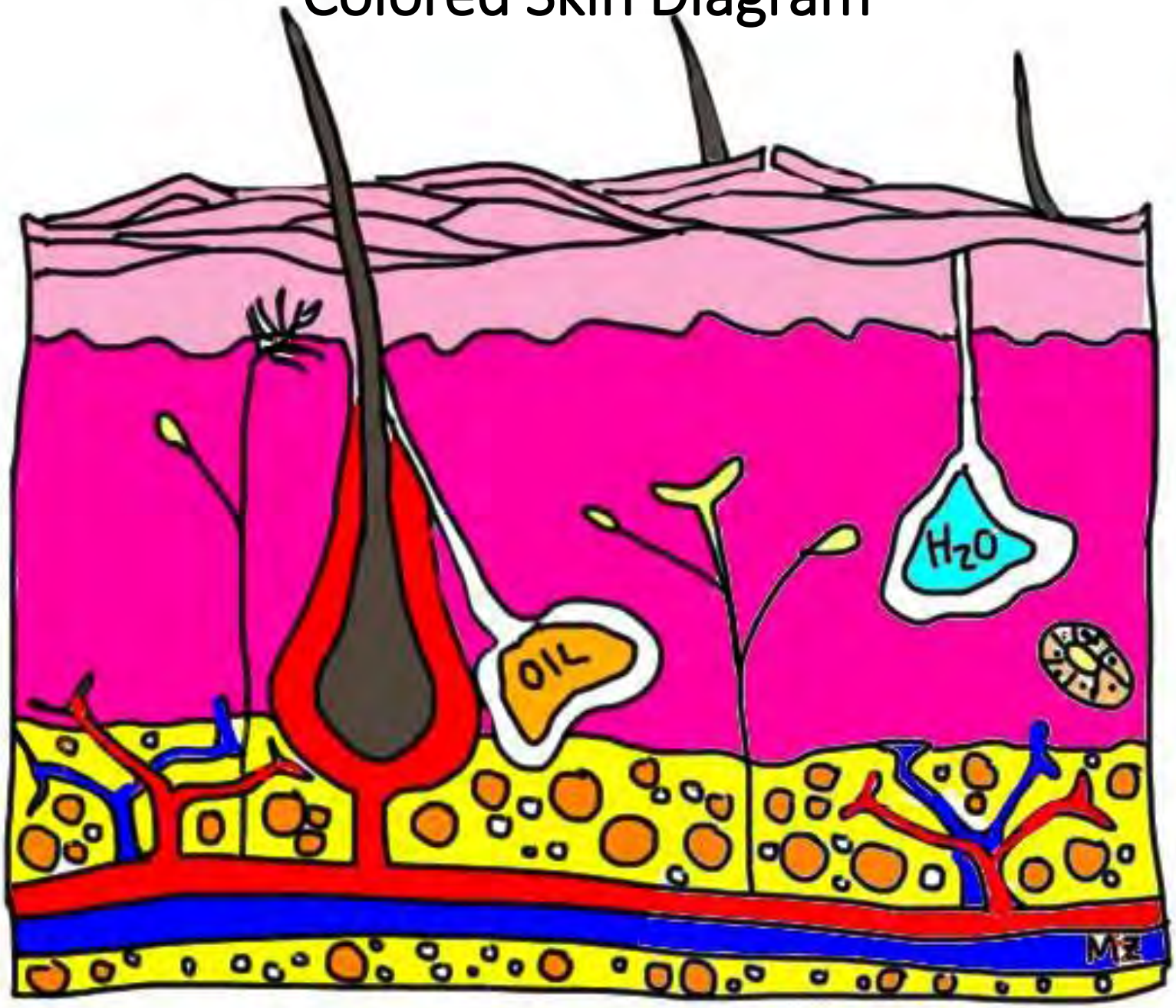
Dermis: the middle layer composed of connective tissue. Contains blood vessels, nerve fibers, muscles, oil, sweat glands, and other structures.

Fatty Layer: Also called the hypodermis = below the dermis - insulates the body and stores excess energy for times of need.



Directions: Have students color the parts of the skin. Next, they cut along the bold face lines. Glue the blank answer sheet for the three layers of the skin into your notebook. Glue the picture page over the answer sheet along the left hand tab. Fill out the information regarding the three layers of skin according to notes or the answers provided above.

Colored Skin Diagram



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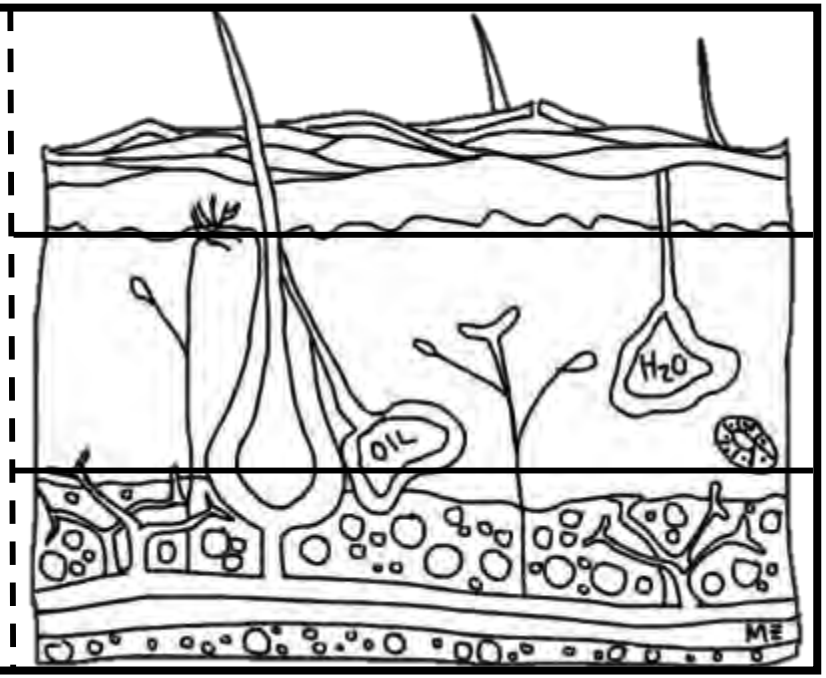
Epidermis:

Dermis:

Fatty Layer:

The THREE Layers of Skin



Glue Layers of Skin Tab Here

Epidermis:

Dermis:

Fatty Layer:

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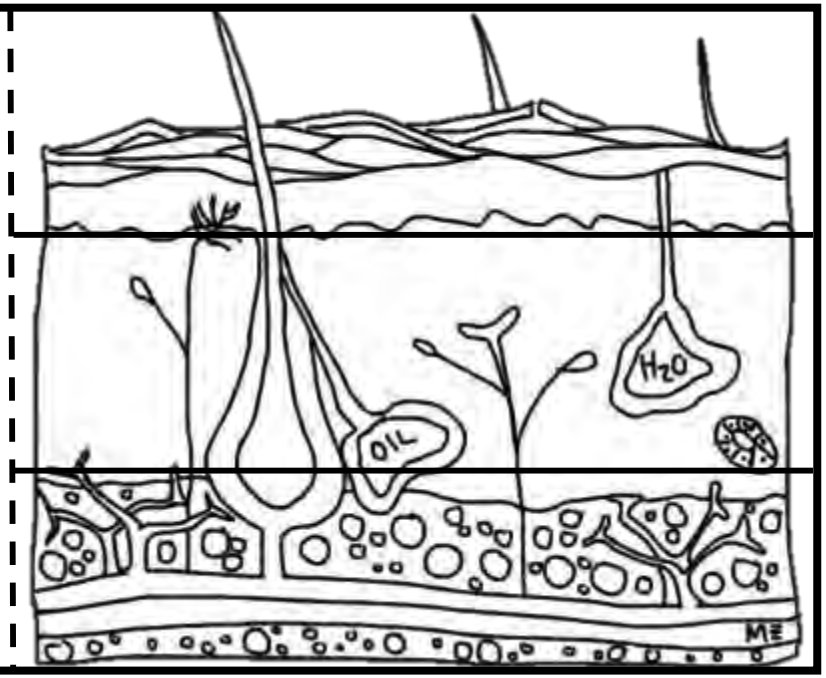
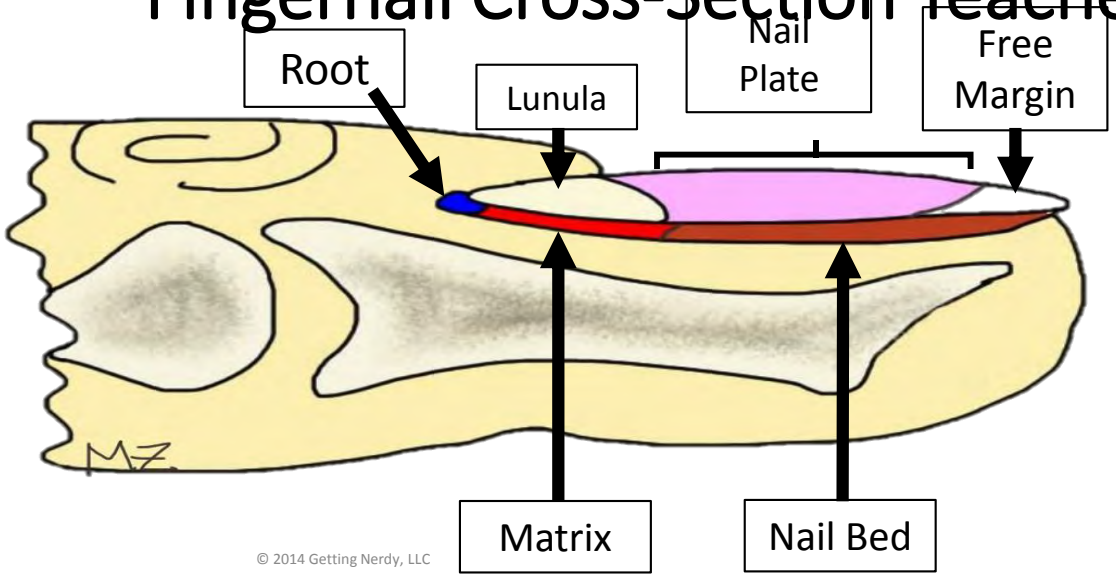
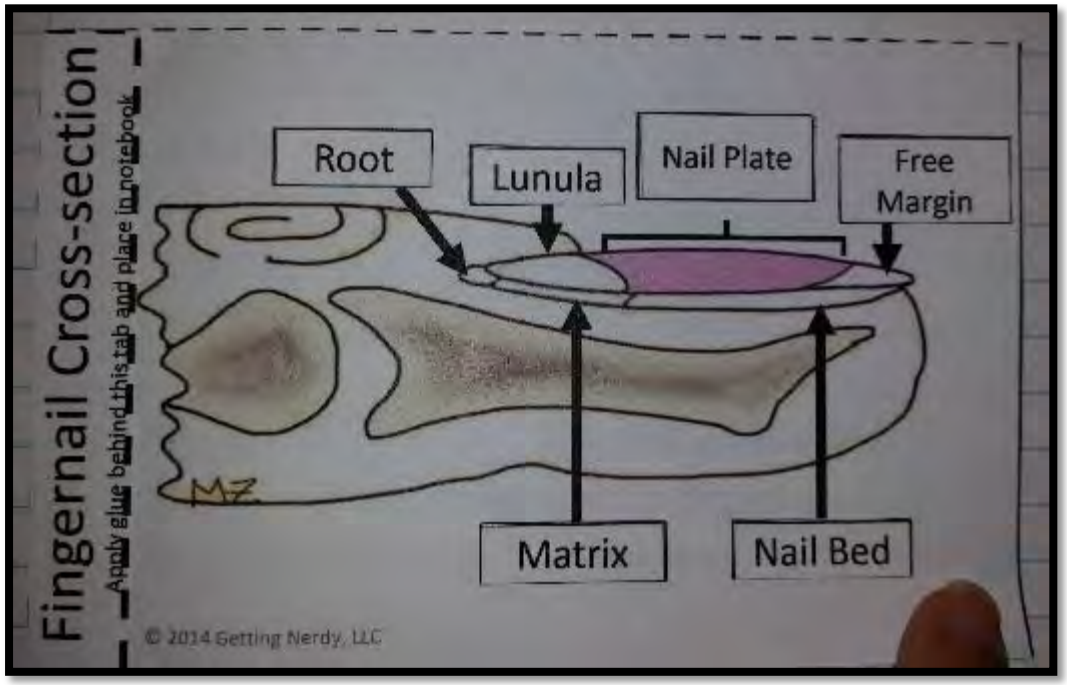
The THREE Layers of Skin



Fingernail Cross-Section Teacher Notes/Answer Key





Directions: Have students write the name and function of each nail part underneath the glued in fingernail cut-out. Use your own notes or the information provided below:

Root- the base of the nail that grows from the matrix

Lunula- the visible part of the matrix – shaped like a little moon.

Nail Plate- the strong and flexible nail made of keratin

Free Margin- the edge of the nail that we cut

Matrix- Part of the nail bed that produces the cells that become part of the nail plate.

Nail Bed- the skin beneath the nail plate.

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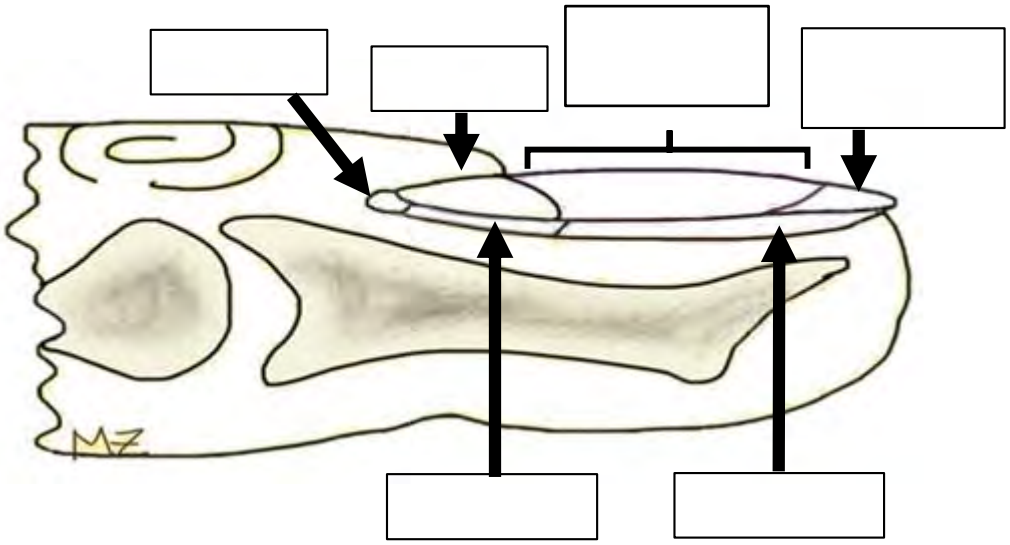
Fingernail Cross-section

Apply glue behind this tab and place in notebook

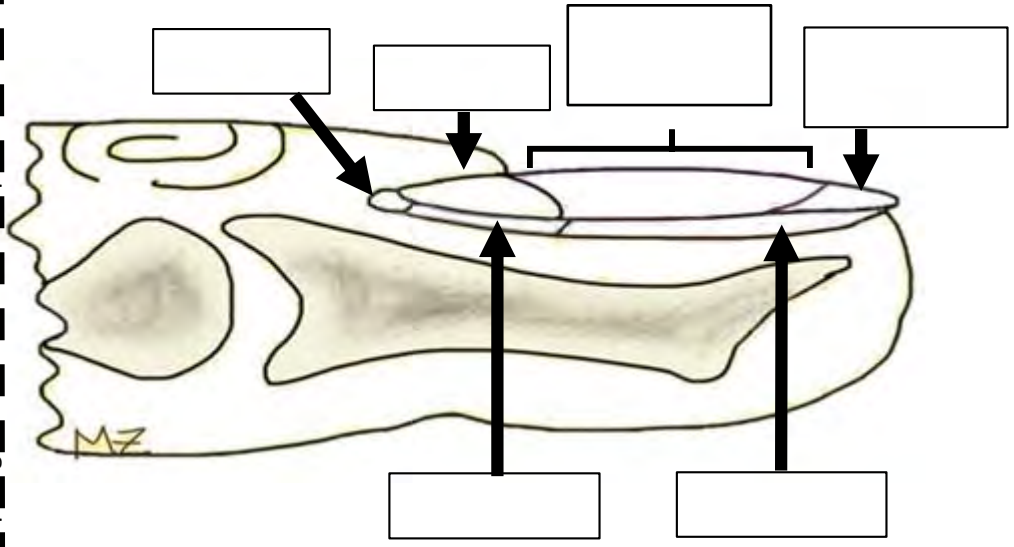


Directions: Color the fingernail diagram, cut it out, and glue it into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the fingernail diagram. In your notebook, underneath the diagram, describe the function of each of these nail parts.

Root	Lunula
Nail Plate	Free Margin
Nail Bed	Matrix

Fingernail Cross-section

Apply glue behind this tab and place in notebook



Directions: Color the fingernail diagram, cut it out, and glue it into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the fingernail diagram. In your notebook, underneath the diagram, describe the function of each of these nail parts.

Root	Lunula
Nail Plate	Free Margin
Nail Bed	Matrix

Glue Fingernail Cross Section Here

Root:

Lunula:

Nail Plate:

Free Margin:

Matrix:

Nail Bed:

Directions: Cut out and glue this cut out into your notebook. Glue the fingernail cross section page over the tab marked "glue fingernail cross-section here". Then, complete your activity.

Glue Fingernail Cross Section Here

Root:

Lunula:

Nail Plate:

Free Margin:

Matrix:

Nail Bed:

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Directions: Cut out and glue this cut out into your notebook. Glue the fingernail cross section page over the tab marked "glue fingernail cross-section here". Then, complete your activity.

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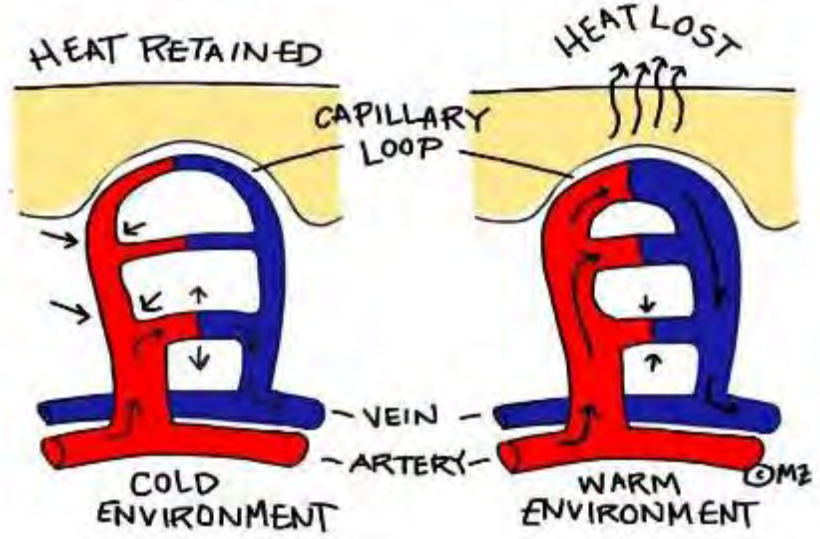
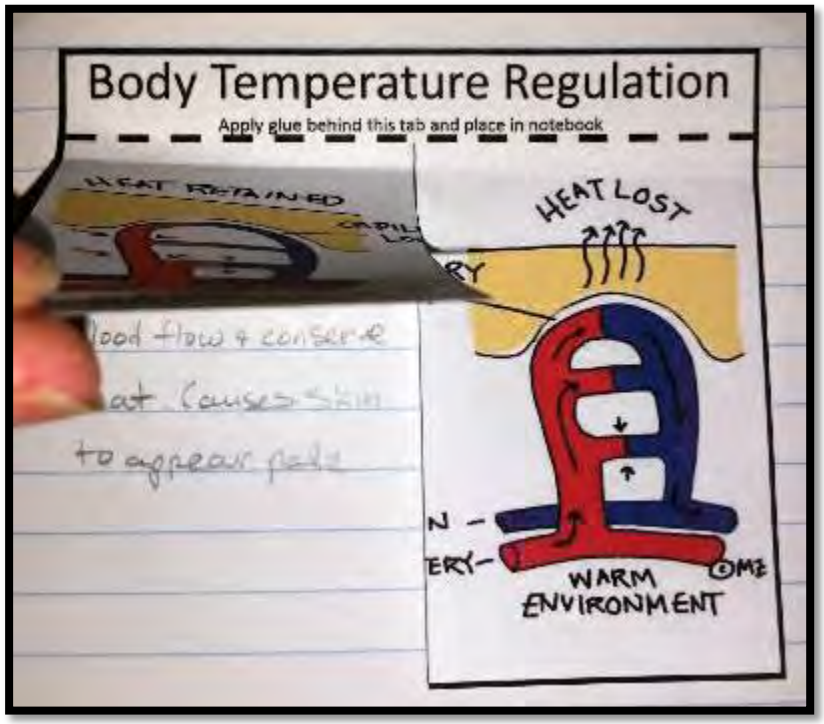
Body Temperature Regulation Teacher Notes/Answer Key





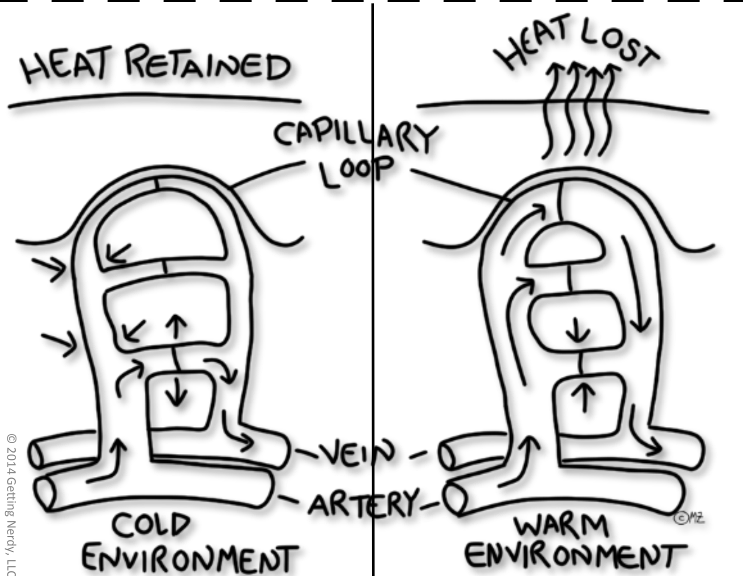
Directions: Cut out and glue the diagram into your notebook along the back of the tab. Students may color as well according to the picture to the left. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flap for heat retained and heat lost, students write notes about how the body stays warm and cools off.

Heat Retained- In cold conditions, the blood vessels on the surface of your skin constrict to prevent blood flow to them which conserves the heat traveling through blood. This also causes our skin to appear pale.

Heat Lost- In warm conditions, the blood vessels dilate and allow blood flow to the skin's surface and heat is lost. This also causes our skin to appear red or flushed.

Body Temperature Regulation

Apply glue behind this tab and place in notebook



Body Temperature Regulation
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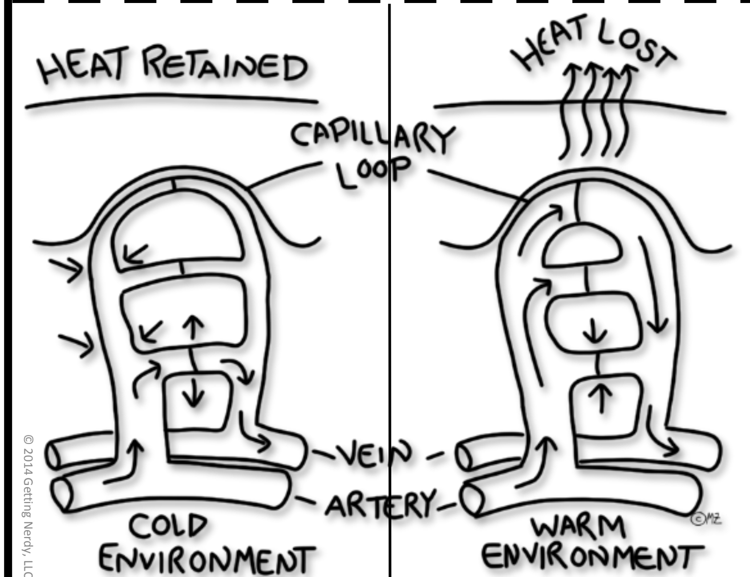

Body Temperature Regulation
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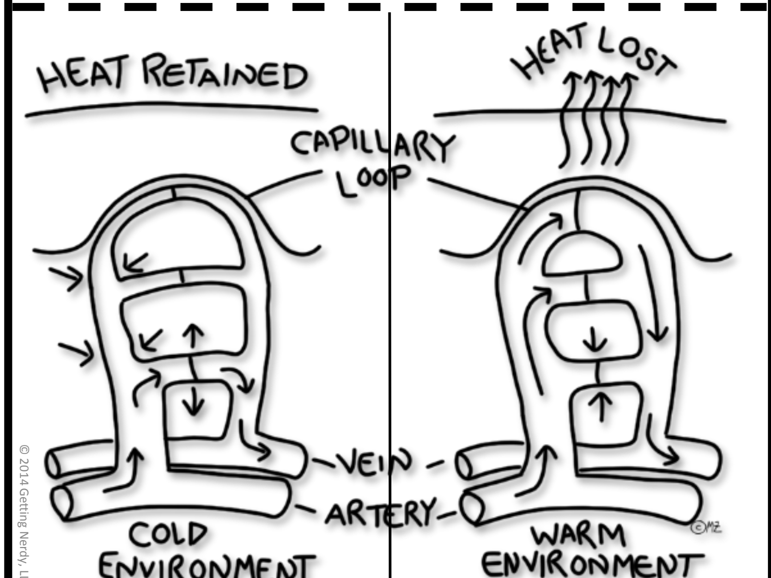

Body Temperature Regulation
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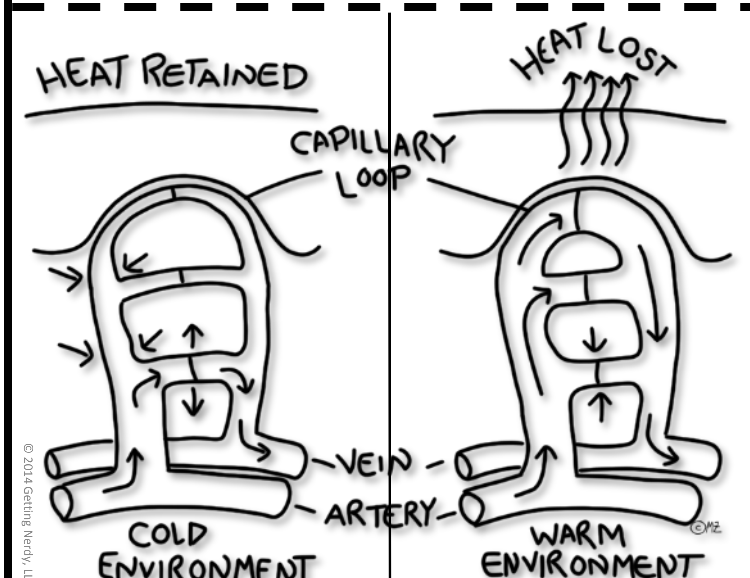

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Glue Body Temperature Regulation Tab Here

Heat Retained:	Heat Lost:

Glue Body Temperature Regulation Tab Here

Heat Retained:	Heat Lost:

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Glue Body Temperature Regulation Tab Here

Heat Retained:	Heat Lost:

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Glue Body Temperature Regulation Tab Here

Heat Retained:	Heat Lost:

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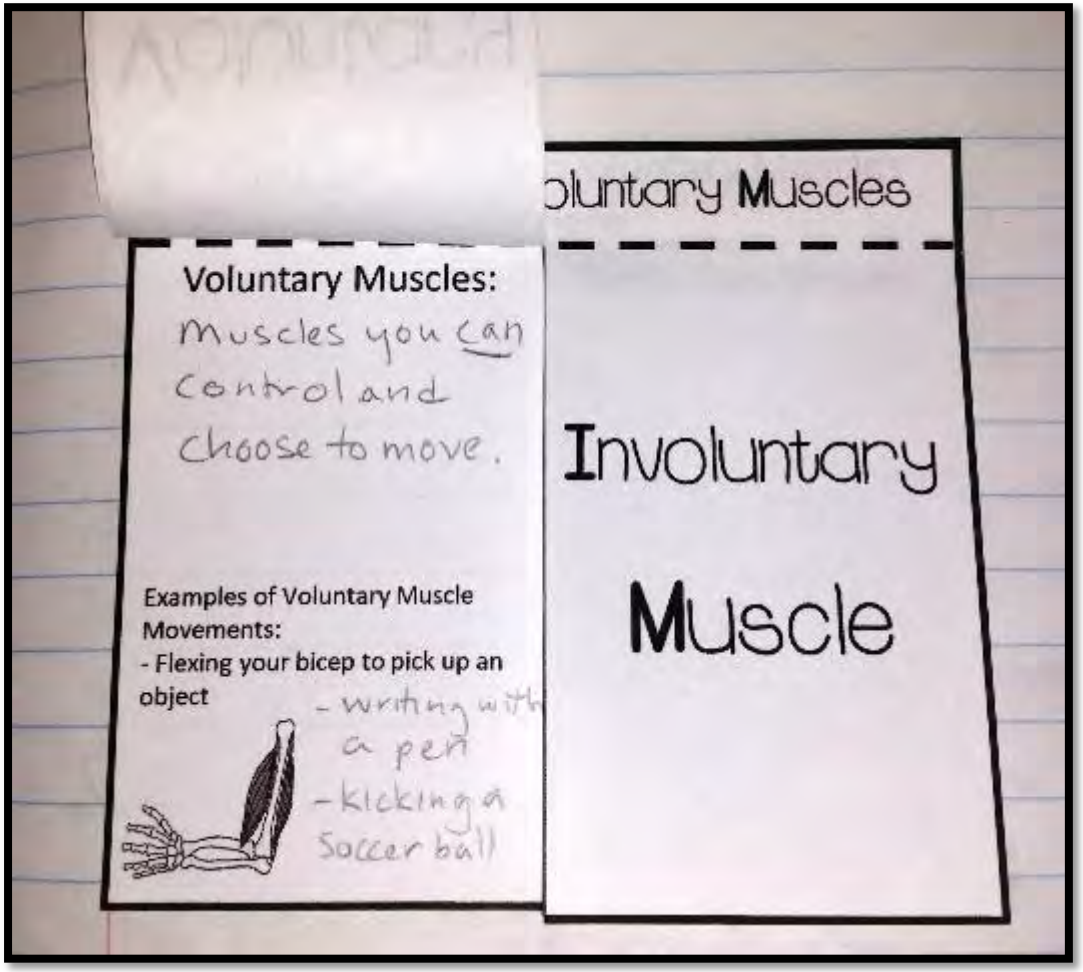
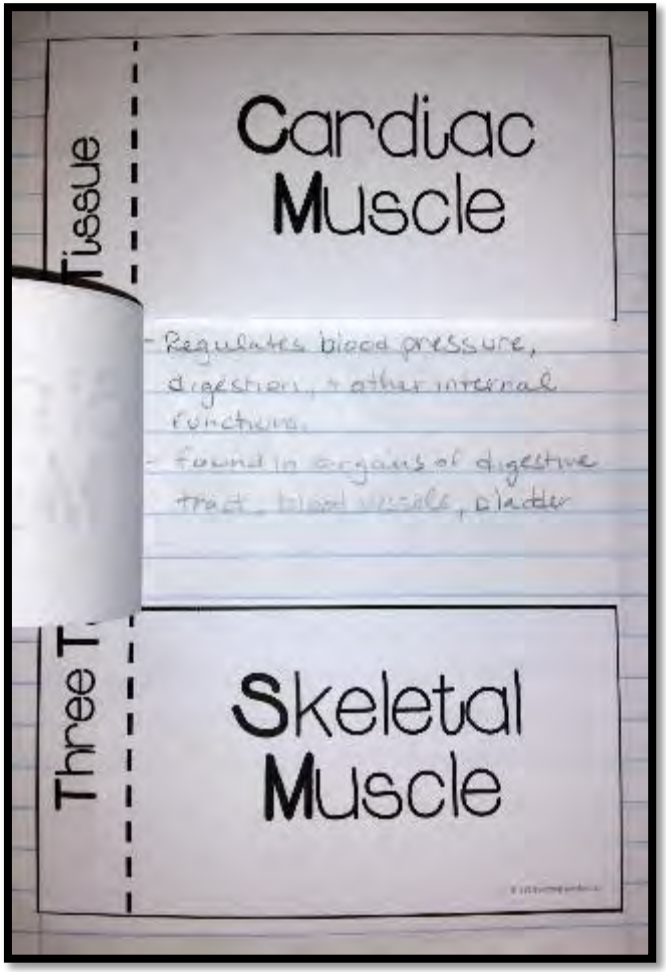
2 MUSCULAR SYSTEM IN ACTIVITIES





I'm Learning About the Muscular System!

I'm Learning About the Muscular System!

I'm Learning About the Muscular System!

I'm Learning About the Muscular System!

Glue Human Body System Page Here

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Glue Human Body System Page Here

K	W	L

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Voluntary vs. Involuntary Muscles Teacher Notes/Answer Key

Voluntary Vs. Involuntary Muscles

Voluntary Muscles:

- Muscle contractions of the body that you are capable of controlling.
- Includes skeletal muscle

Examples of Voluntary Muscle Movements:

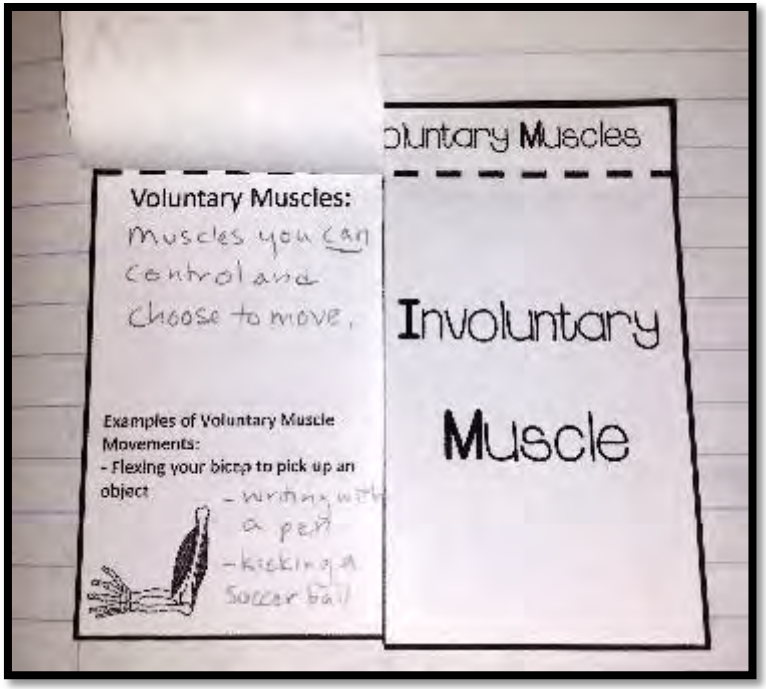
- Flexing your bicep to pick up an object
- Picking up a pencil with your fingers to write notes for class.
- Moving your tongue to talk
- Using your leg muscles to kick a soccer ball

Involuntary Muscles:

- Muscle contractions of the body that you cannot control.
- Includes smooth muscle and cardiac muscle

Examples of Involuntary Muscle Movements: - Heart beating

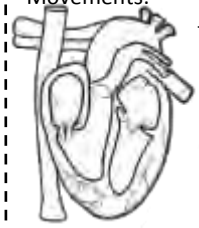
- Diaphragm for inhaling and exhaling
- Eyelid muscles for blinking
- Blood vessels pumping blood
- Digestive tract moving food



Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between voluntary and involuntary muscles and provide examples of each.

Glue Voluntary vs. Involuntary Muscles Tab Here

Voluntary Muscles:	Involuntary Muscles:
Examples of Voluntary Muscle Movements: - Flexing your bicep to pick up an object	Examples of Involuntary Muscle Movements: - Heart beating



Voluntary vs. Involuntary Muscles

Apply glue behind this tab and place in notebook

Voluntary Muscle	Involuntary Muscle

Glue Voluntary vs. Involuntary Muscles Tab Here

Voluntary Muscles:	Involuntary Muscles:
Examples of Voluntary Muscle Movements: - Flexing your bicep to pick up an object	Examples of Involuntary Muscle Movements: - Heart beating

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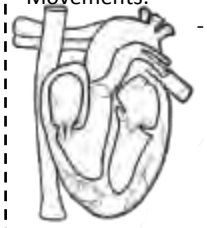

Voluntary vs. Involuntary Muscles

Apply glue behind this tab and place in notebook

Voluntary Muscle	Involuntary Muscle

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Three Types of Muscle Tissue Teacher Notes/Answer Key

Three Types of Muscle Tissue

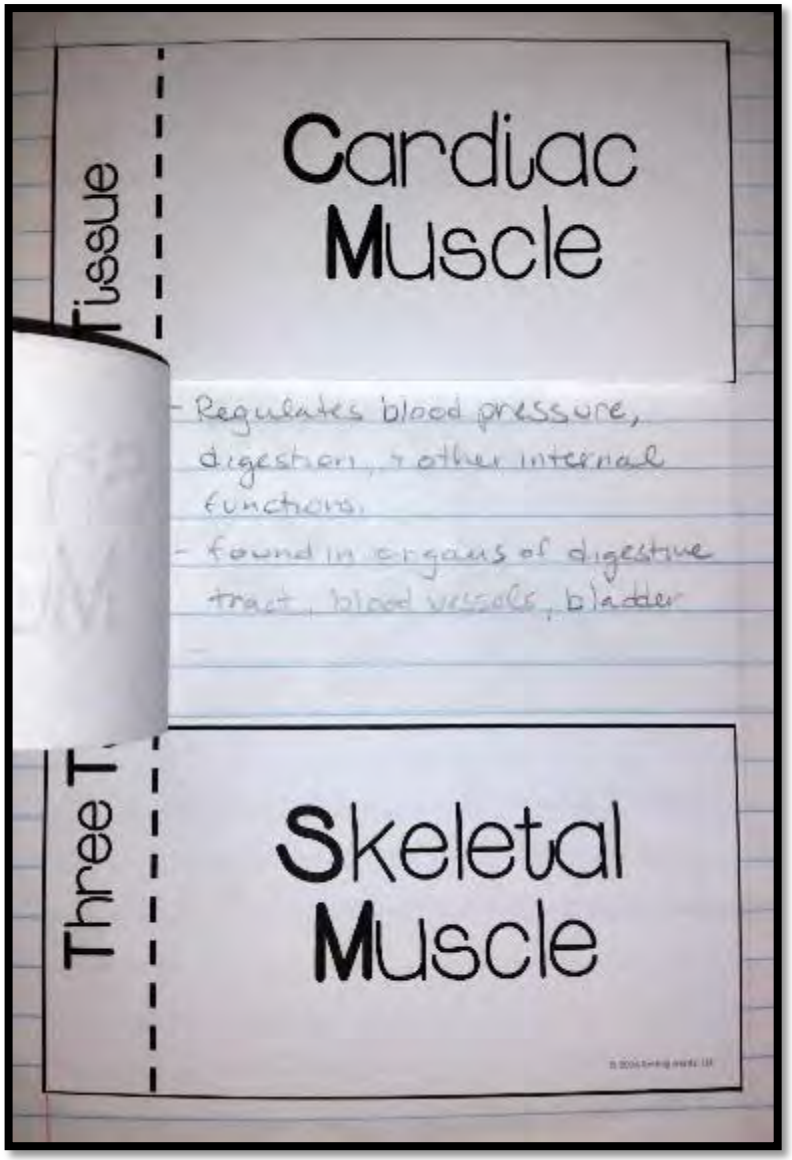
Apply glue behind this tab and place in notebook

Skeletal Muscle:
- Move bones
- Voluntary
- Tendons connect muscle to bone
- Contract quickly and tire more easily
- Look striped or striated
- Ex: Bicep, quadriceps, pectoral

Smooth Muscle:
- responsible for regulating blood pressure, digestion, and other internal functions
- Involuntary
- Ex: Muscles in the stomach, bladder, blood vessels

Cardiac Muscle:
- Found only in the heart
- Involuntary
- Can beat independently of input from the brain
- Never tires
- Striated (striped)

Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the three vertical lines to split the picture in thirds. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe three types of muscle tissues and provide examples of each.



Three Types of Muscle Tissue

Apply glue behind this tab and place in notebook

Skeletal Muscle

Smooth Muscle

Cardiac Muscle

Three Types of Muscle Tissue

Apply glue behind this tab and place in notebook

Skeletal Muscle

Smooth Muscle

Cardiac Muscle

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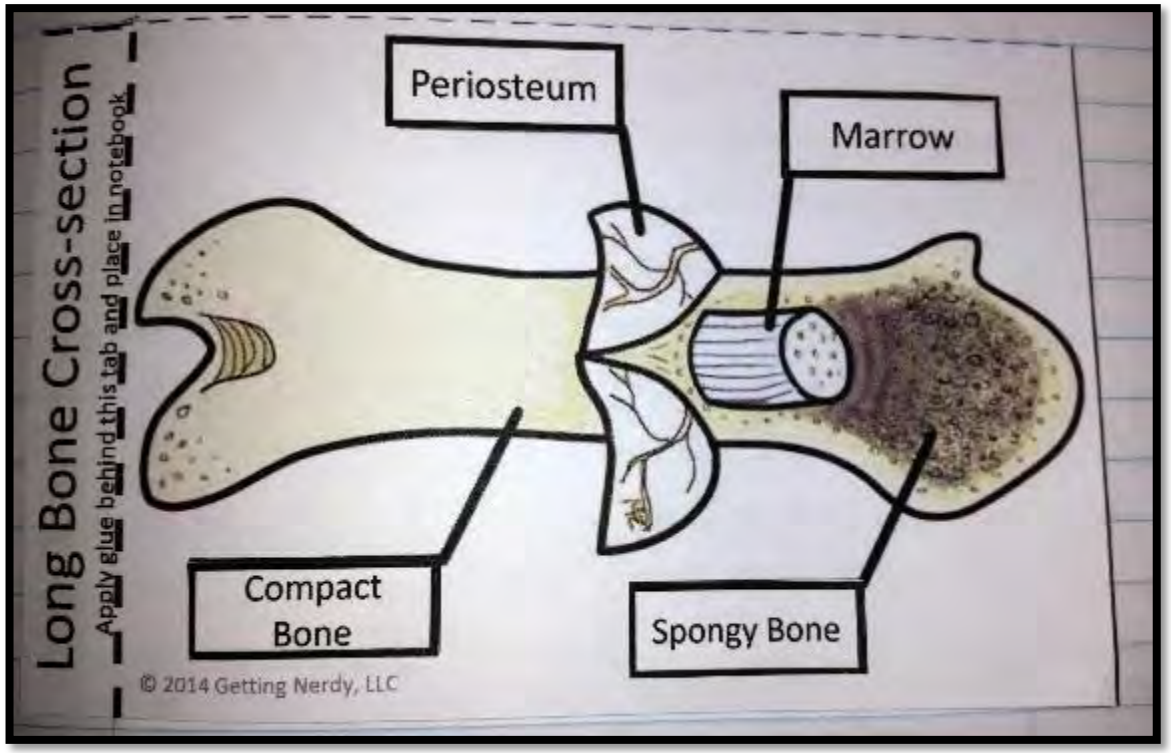
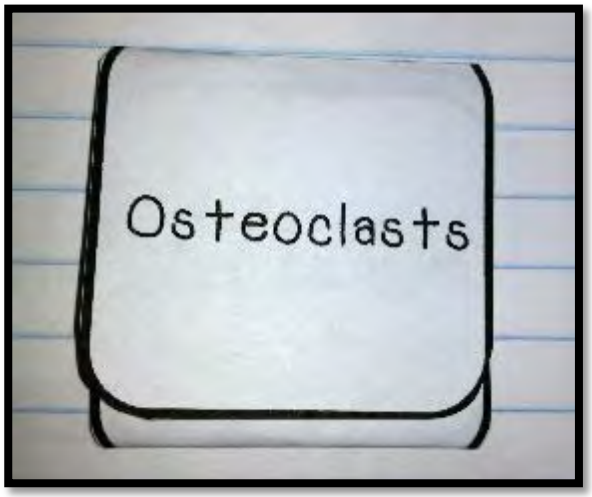
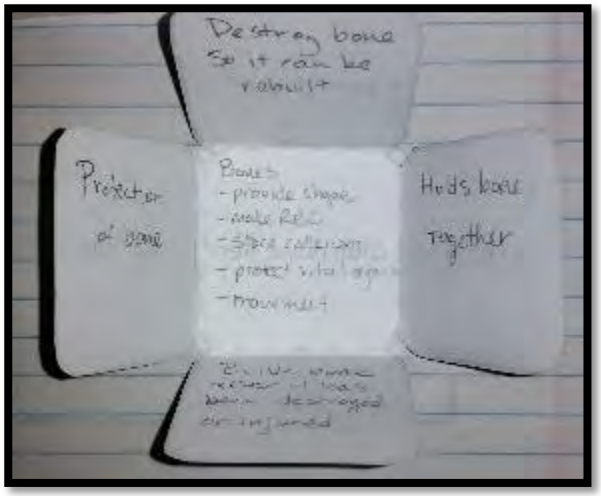
2 SKELETAL SYSTEM INB ACTIVITIES







I'm Learning About the Skeletal System!

I'm Learning About the Skeletal System!

I'm Learning About the Skeletal System!

I'm Learning About the Skeletal System!

Glue Human Body System Page Here

K	W	L

Glue Human Body System Page Here

K	W	L

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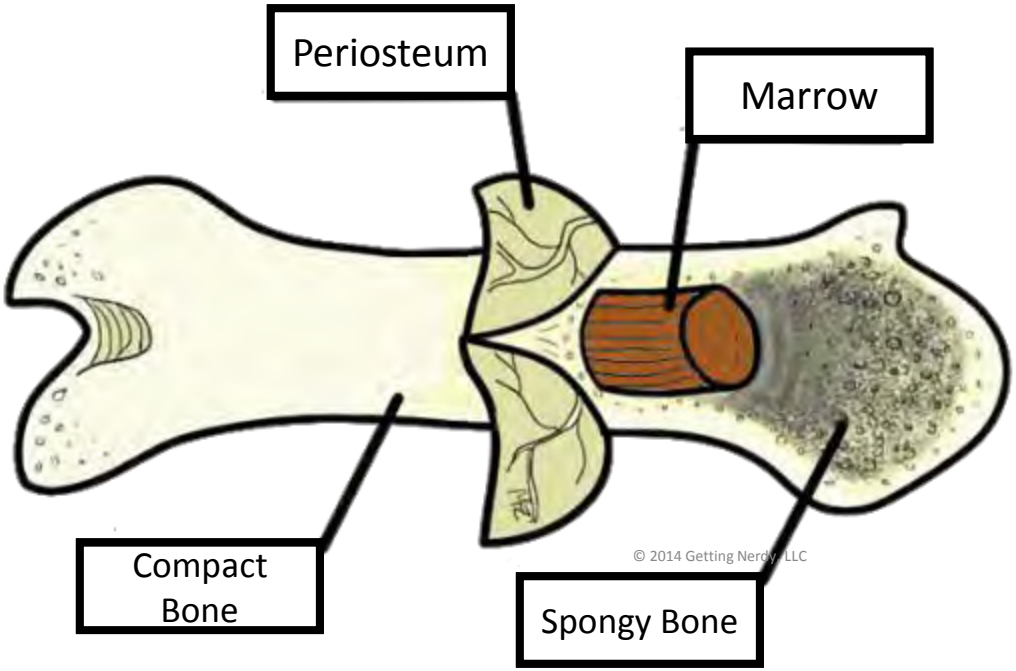
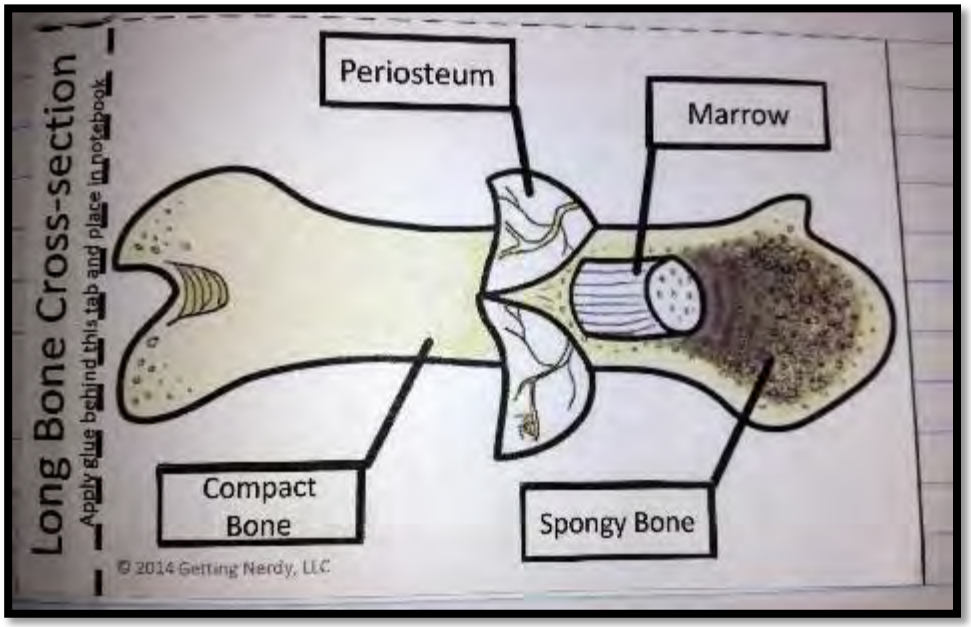
Long Bone Cross-Section Teacher Notes/Answer Key





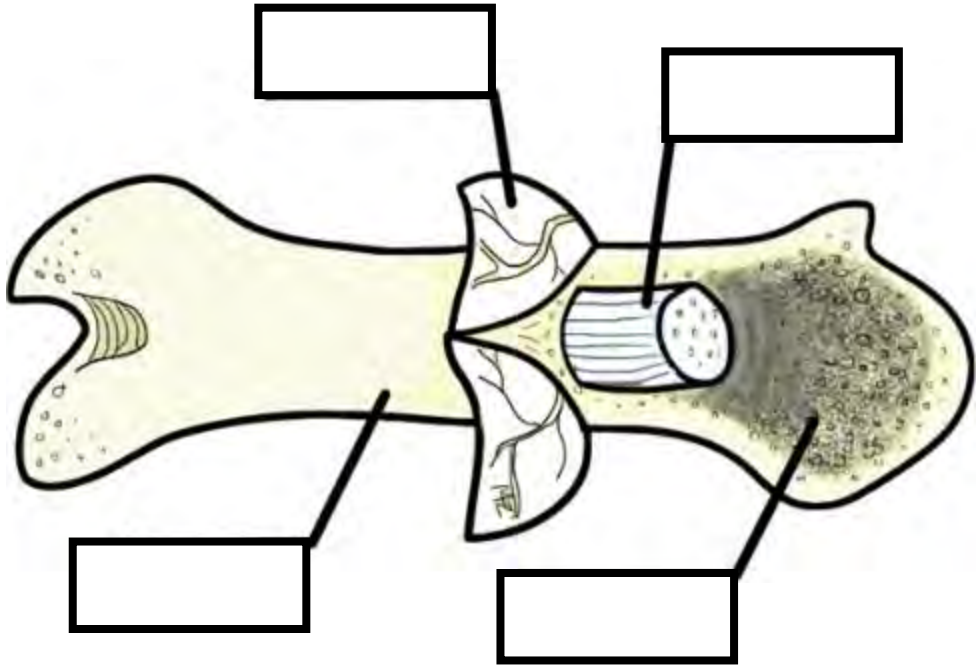
Directions Have students write the name and function of each part of the long bone underneath the glued in long bone cut-out. Use your own notes or the information provided below:

Long Bone: bones of the body that are longer than they are wide and have a long shaft (the diaphysis) and two articular (joint) surfaces, called epiphyses.

1. **Periosteum**: thin membrane that covers and protects; contains blood vessels and nerves
2. **Compact bone**: hard bone that provides structure to bones
3. **Spongy bone**: porous bone (aka cancellous bone); contains blood vessels and marrow
4. **Marrow**: soft, jelly-like center of bones. Two types:
   - **Yellow**: contains fat cells
   - **Red**: manufactures platelets, and red & white blood cells

Long Bone Cross-section

Apply glue behind this tab and place in notebook

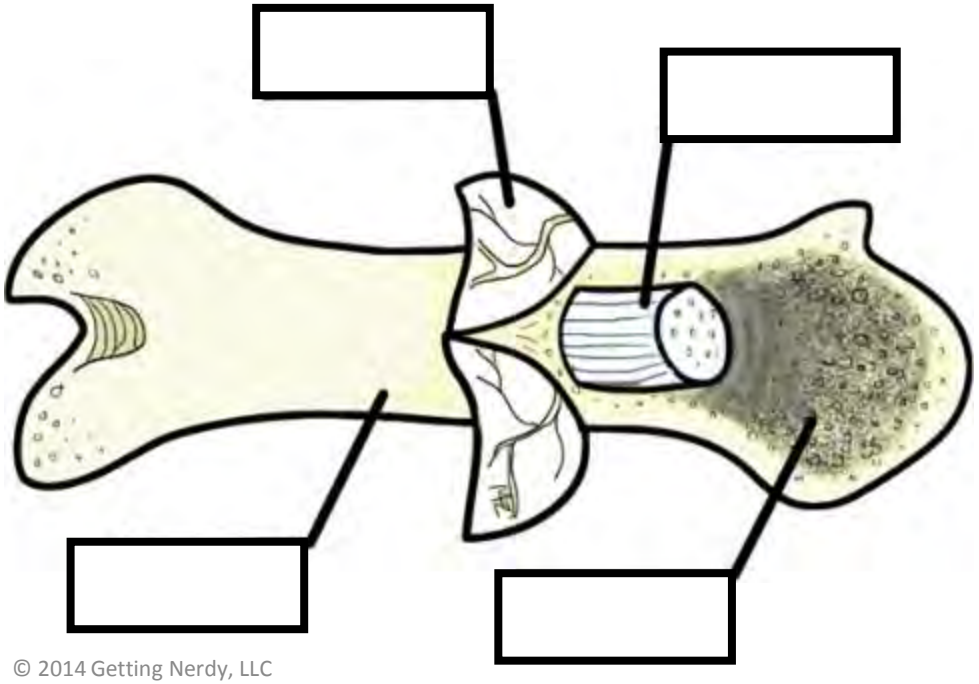


Directions: Color, cut out, and glue the long bone diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the long bone diagram. In your notebook, underneath the diagram, describe the function of each of these bone parts.

Periosteum	Spongy Bone
Marrow	Compact Bone

Long Bone Cross-section

Apply glue behind this tab and place in notebook



Directions: Color, cut out, and glue the long bone diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the long bone diagram. In your notebook, underneath the diagram, describe the function of each of these bone parts.

Periosteum	Spongy Bone
Marrow	Compact Bone

Glue Long Bone Cross Section Here

Long Bone:

Periosteum:

Compact Bone:

Spongy Bone:

Marrow:

Red:

Yellow:

Directions: Cut out and glue this cut out into your notebook. Glue the long bone cross section page over the tab marked "glue long bone cross-section here". Then, complete your activity.

Glue Long Bone Cross Section Here

Long Bone:

Periosteum:

Compact Bone:

Spongy Bone:

Marrow:

Red:

Yellow:

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Directions: Cut out and glue this cut out into your notebook. Glue the long bone cross section page over the tab marked "glue long bone cross-section here". Then, complete your activity.

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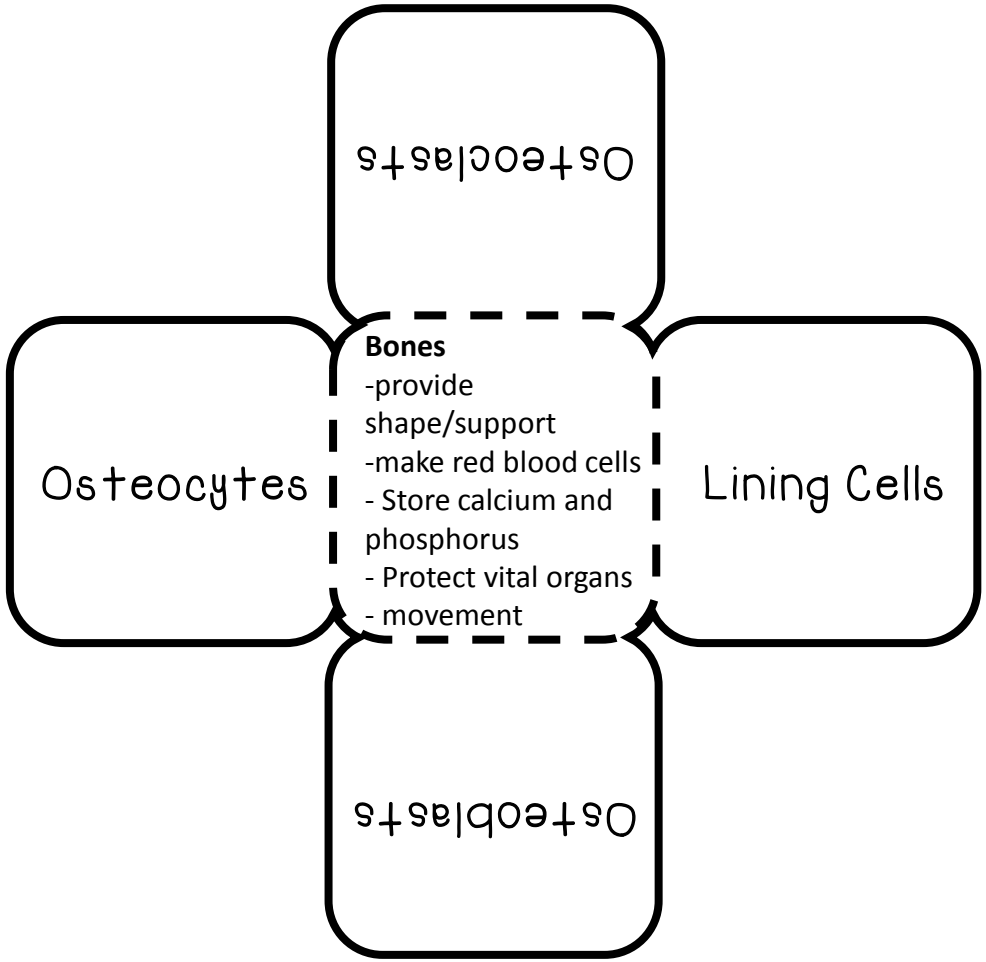
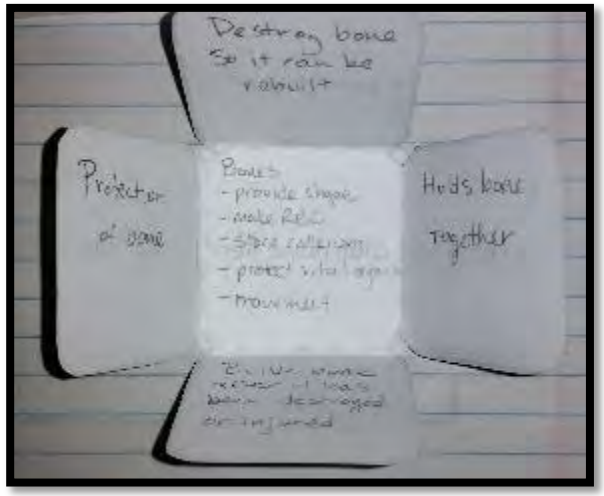
Cells of the Skeletal System Teacher Notes/Answer Key





Directions: Underneath each door/flap students write notes about each of the four types of cells that make up bone tissue:

Osteoclasts: destroy bone so it can be rebuilt

Osteoblasts: builds bone after is has been destroyed or injured.

Osteocytes: holds bone cells together

Lining cells: protection of bone

Osteoclasts

Osteocytes | Glue down here | Lining Cells

Osteoblasts

Directions: Cut out the diagram and glue the "glue down here" side of the square into your notebook while leaving the flaps free. In the center square describe the function of the skeletal system/bones. Crease along the dotted lines and fold in the sides followed by the bottom and top.

Directions: Cut out the diagram and glue the "glue down here" side of the square into your notebook while leaving the flaps free. In the center square describe the function of the skeletal system/bones. Crease along the dotted lines and fold in the sides followed by the bottom and top

Osteoclasts

Osteocytes | Glue down here | Lining Cells

Osteoblasts

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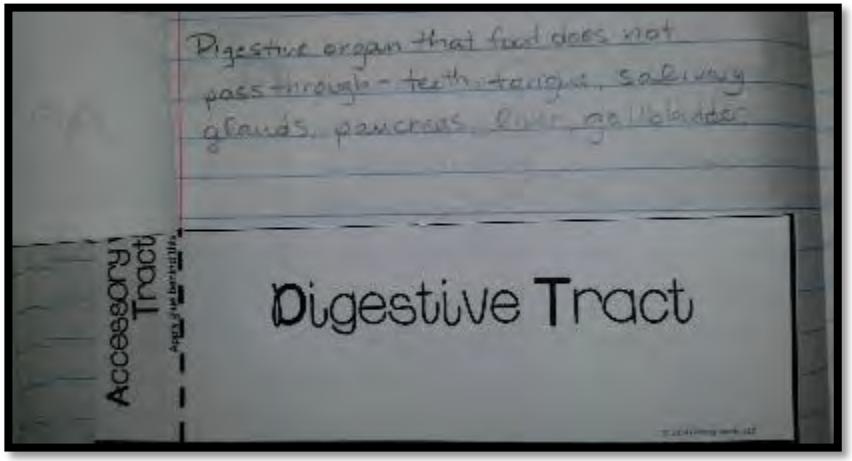
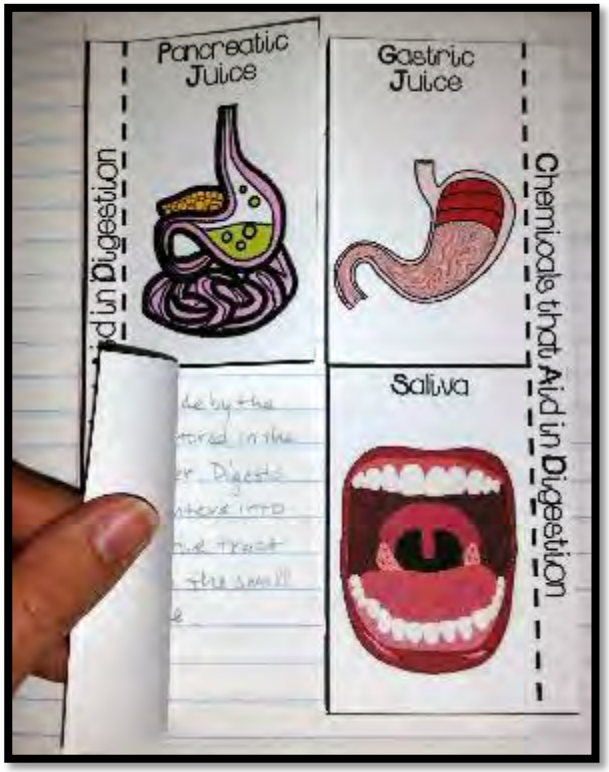
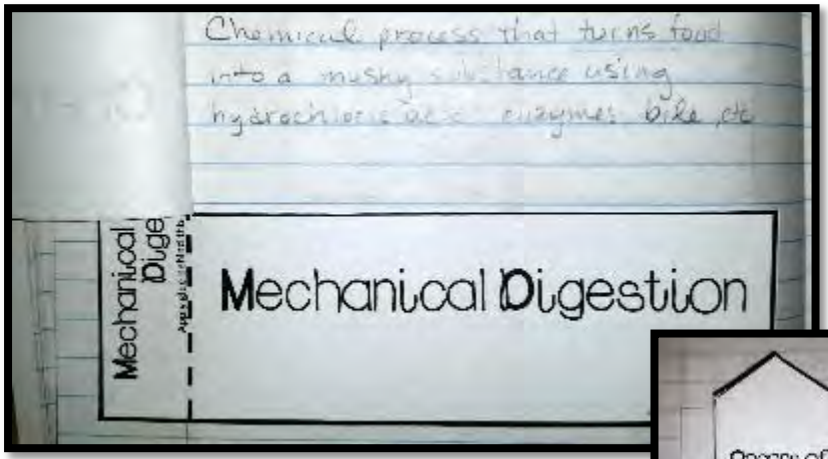
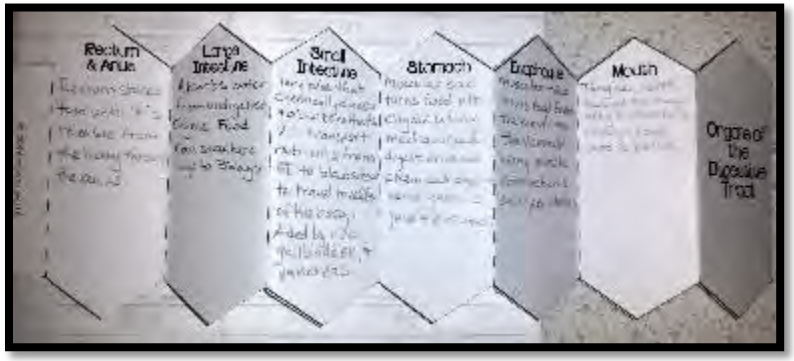
4 DIGESTIVE SYSTEM INB ACTIVITIES





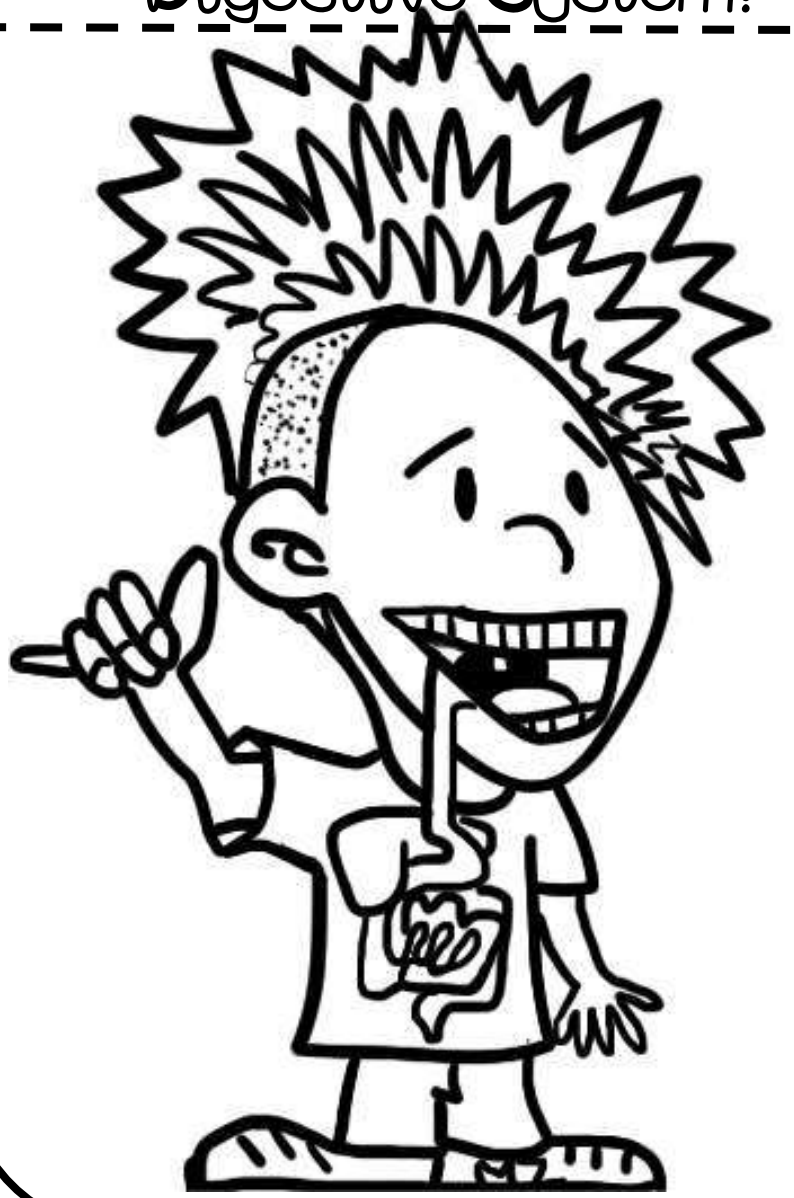




I'm Learning About the Digestive System!

I'm Learning About the Digestive System!

I'm Learning About the Digestive System!



I'm Learning About the Digestive System!

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Glue Human Body System Page Here

K	W	L

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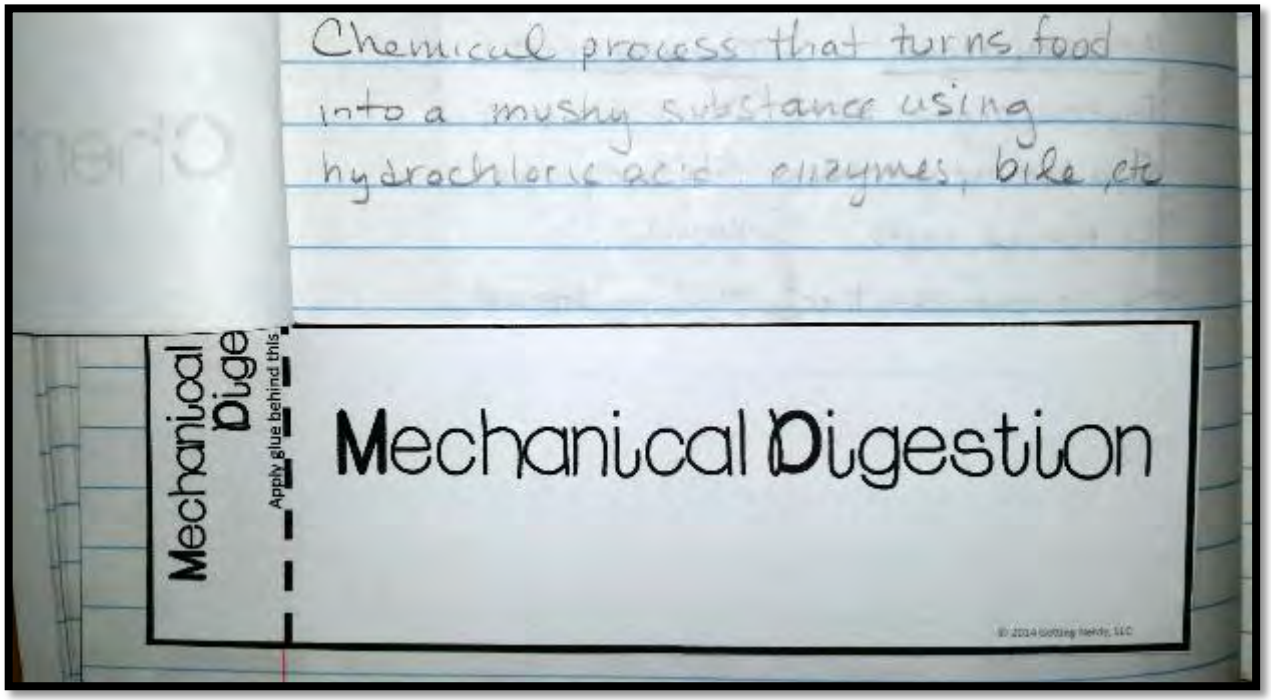
Mechanical vs. Chemical Digestion Teacher Notes/Answer Key

Mechanical vs. Chemical Digestion	
Mechanical Digestion: PHYSICAL process in which food is chewed, mixed and churned. Peristalsis are the wave-like muscle contractions that move food throughout the digestive system and aid in mechanical digestion.	**Chemical Digestion**: CHEMICAL process in which food is turned into a mushy substance. Uses hydrochloric acid, bile, saliva, & enzymes (proteins that speed up chemical reactions) like pepsin.

Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between chemical and mechanical digestion.



Mechanical vs. Chemical Digestion

Apply glue behind this tab and place in notebook

Chemical Digestion

Mechanical Digestion

Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between chemical and mechanical digestion.

Mechanical vs. Chemical Digestion

Apply glue behind this tab and place in notebook

Chemical Digestion

Mechanical Digestion

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Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between chemical and mechanical digestion.

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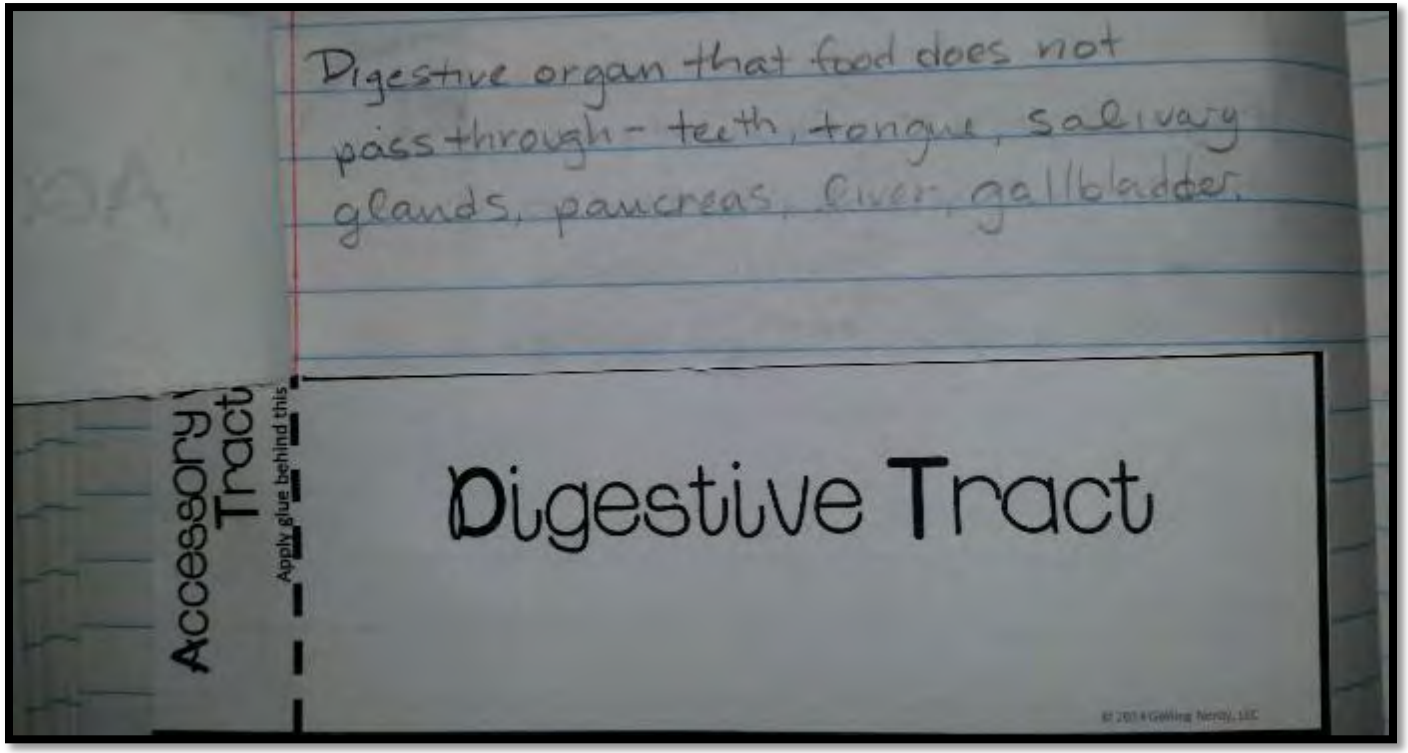
Accessory Organs vs. Digestive Tract Organs Teacher Notes/Answer Key

Accessory vs. Digestive Tract Organ

Accessory Organs	Digestive Tract Organs
Organs of the Digestive system in which food DOES NOT pass through. Includes tongue, teeth, salivary glands, liver, gallbladder, & pancreas	Organs of the Digestive system in which food DOES pass through. Includes mouth, esophagus, stomach, small & large intestine, rectum & anus

Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between accessory organs and digestive tract organs and provide examples of each.



Accessory vs. Digestive Tract Organ

Apply glue behind this tab and place in notebook

Accessory Organ

Digestive Tract

Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between accessory organs and digestive tract organs and provide examples of each.

Accessory vs. Digestive Tract Organ

Apply glue behind this tab and place in notebook

Accessory Organ

Digestive Tract

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Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the center line to split the picture in half. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the difference between accessory organs and digestive tract organs and provide examples of each.

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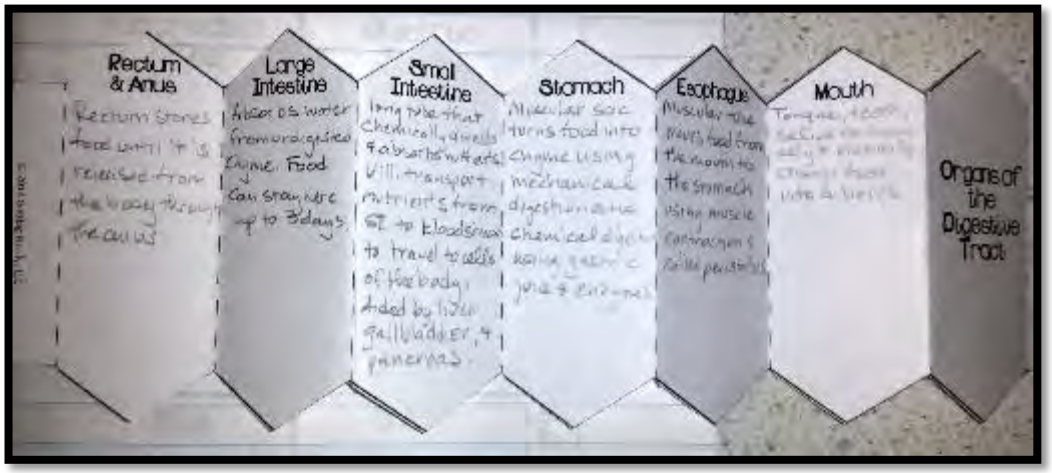
Organs of the Digestive Tract Teacher Notes/Answer Key



Directions: Students can write down the function of each organ of the digestive tract. Whether it uses mechanical digestion, chemical digestion, or both. And/or which accessory organs may aid in helping with digestion. Cut out along the dark line, make an accordion fold along each dashed line and glue the small tab into the INB.

Mouth: tongue, teeth, & saliva from the salivary glands (all accessory organs) change food into soft mass called a bolus. Both mechanical and chemical digestion take place here.

Esophagus: muscular tube moves food to stomach using peristalsis (muscle contractions) – mechanical digestion.

Stomach: muscular sac that turns food into a thin, watery liquid called chyme. Mechanical digestion by peristalsis. Chemical digestion by digestive juices/enzymes.

Small Intestine: long tube (small diameter) that functions in chemical digestion and nutrient absorption. Lined with villi: finger-like projections. Each villus is composed of cells that have microvilli. Cells transport nutrients to the bloodstream through capillary beds to be distributed to the body cells. Pancreas, Liver, and Gallbladder all help the small intestine with chemical digestion.

Large Intestine: absorbs water from undigested chyme. Chyme can be in L.I. as long as three days.

Rectum & Anus: rectum stores solid waste (feces) until is it released from the body through the anus.

Rectum & Anus

Large Intestine

Small Intestine

Stomach

Esophagus

Mouth

Organs of the Digestive Tract

Rectum & Anus

Large Intestine

Small Intestine

Stomach

Esophagus

Mouth

Organs of the Digestive Tract

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Chemicals that Aid in Digestion Teacher Notes/Answer Key

Chemicals that Aid in Digestion

Pancreatic Juice

Pancreatic Juice: Made by the pancreas and helps to break down proteins, carbohydrates, and fats. Enters into the digestive tract through the small intestine.

Gastric Juice

Formed by the cells of the stomach, it is made mostly of hydrochloric acid and helps to break down proteins.

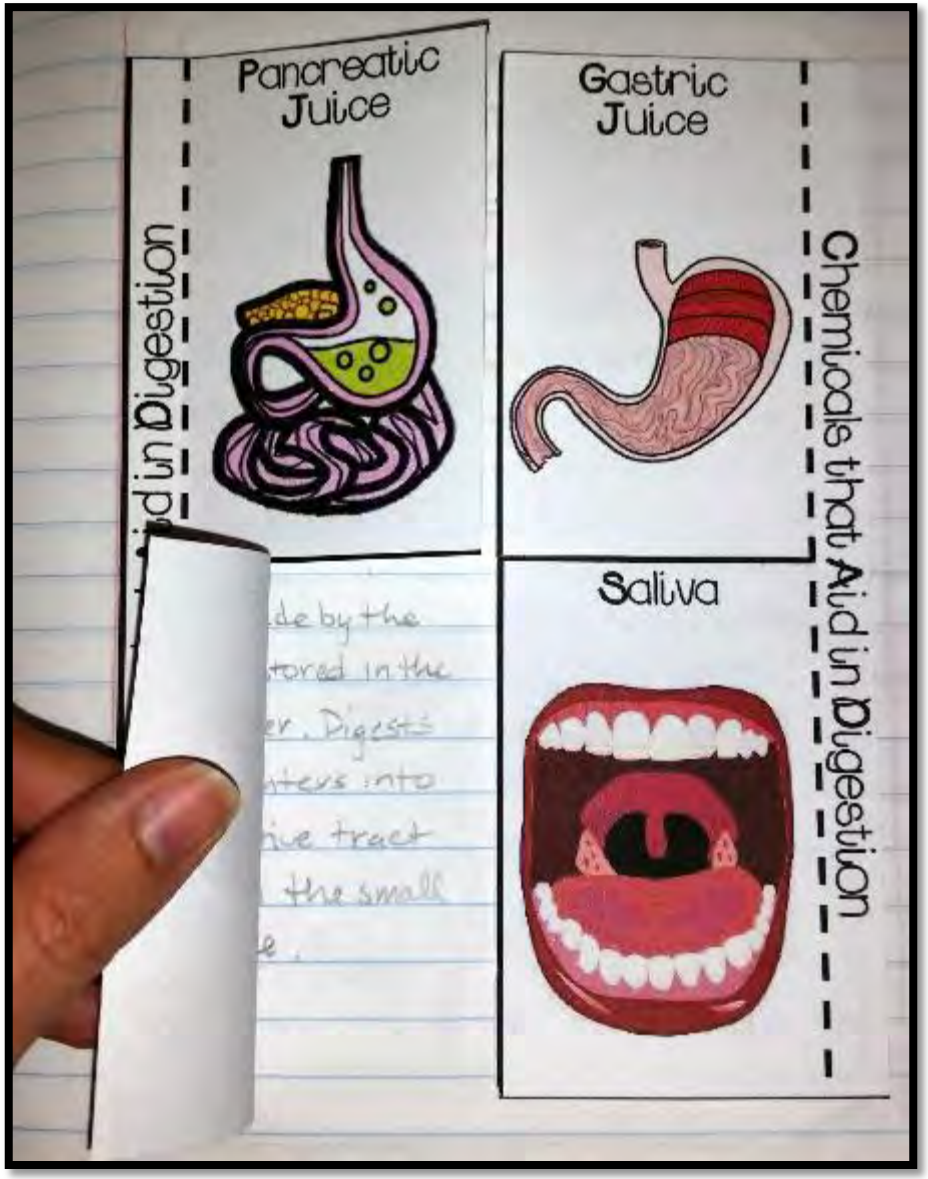
Bile

Made by the liver and stored in the gallbladder. Enters into the digestive tract through the small intestine. Helps to aid in digestion of fats.

Saliva

Made by the salivary glands and aids the mouth in chemically breaking down starches/complex carbohydrates into simple sugars.

Chemicals that Aid in Digestion



Directions: Cut out the diagram along the dark lines and glue the INB activity into your notebook along the folded tabs to create a four door table. Or glue down the blank answer page and then glue the tab of the booklet over top. Underneath each door/flap describe what you know about the types of chemicals involved in the digestive process.

Chemicals that Aid in Digestion

Pancreatic Juice

Gastric Juice

Chemicals that Aid in Digestion

Bile

Saliva

Chemicals that Aid in Digestion

Pancreatic Juice

Gastric Juice

Chemicals that Aid in Digestion

Bile

Saliva

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Chemicals that Aid in Digestion

Pancreatic Juice

Gastric Juice

Chemicals that Aid in Digestion

Bile

Saliva

Chemicals that Aid in Digestion

Pancreatic Juice

Gastric Juice

Chemicals that Aid in Digestion

Bile

Saliva

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Glue Chemicals that Aid in Digestion Tab Here

Pancreatic Juice

Gastric Juice

Bile

Saliva

Glue Chemicals that Aid in Digestion Tab Here

Glue Chemicals that Aid in Digestion Tab Here

Pancreatic Juice

Gastric Juice

Bile

Saliva

Glue Chemicals that Aid in Digestion Tab Here

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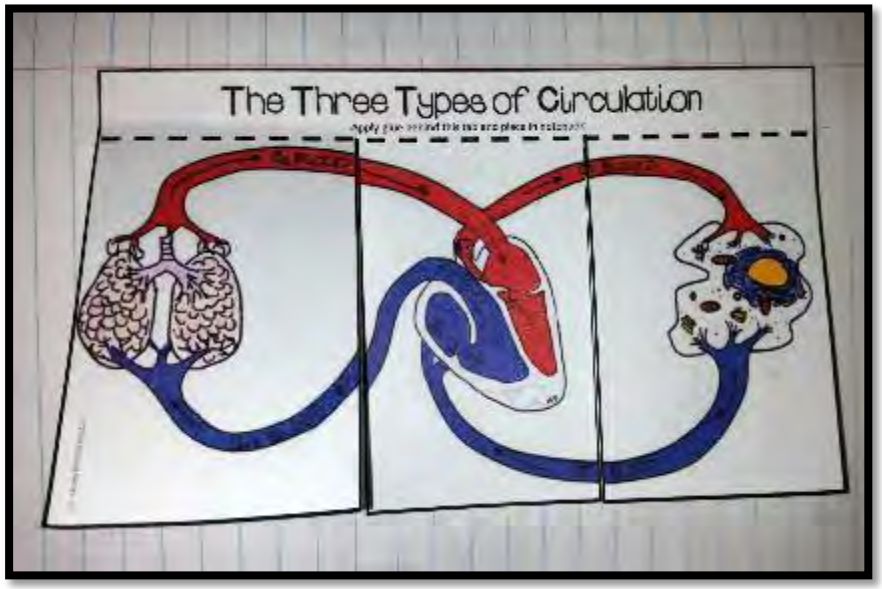
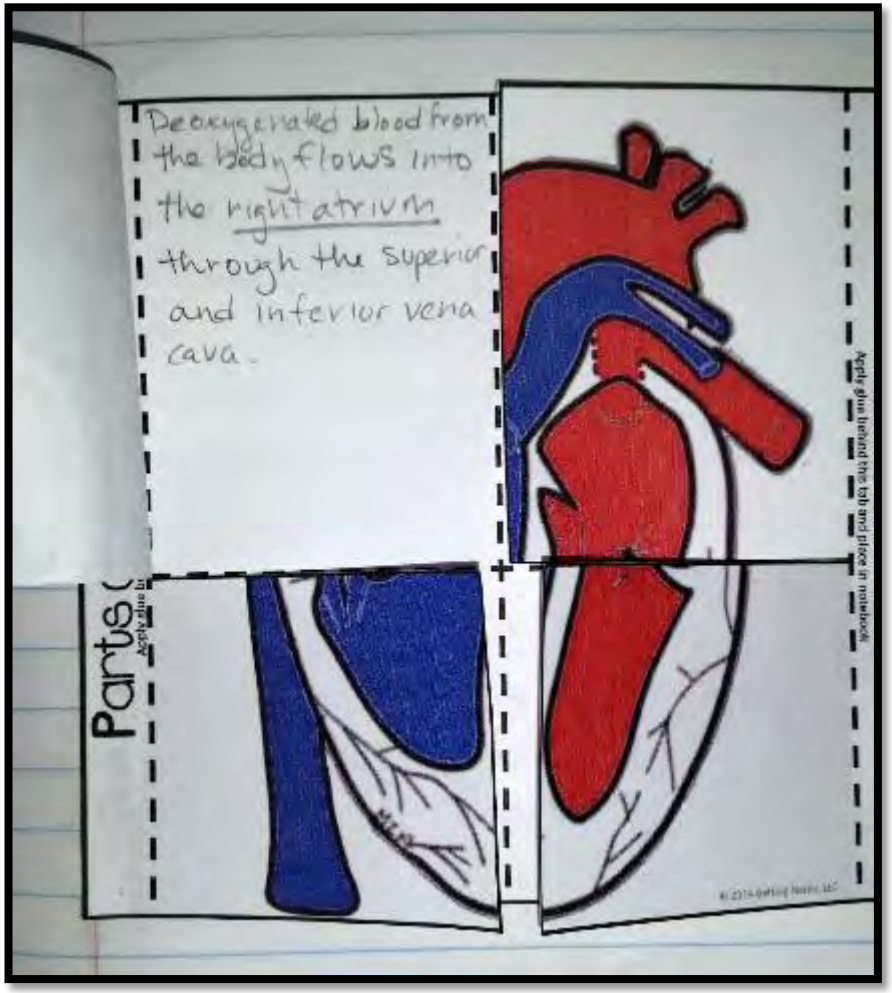
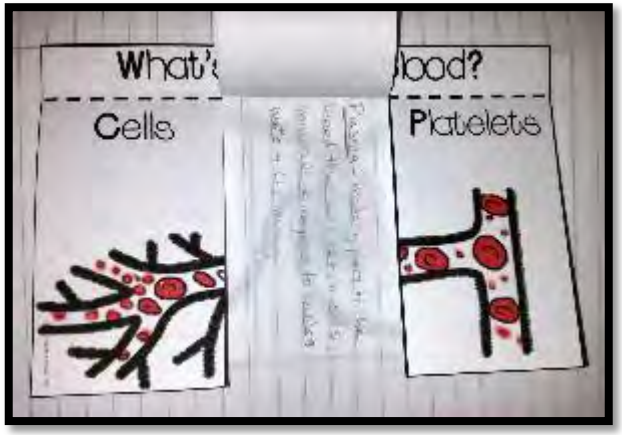
3 CIRCULATORY SYSTEM INB ACTIVITIES







I'm Learning About the Circulatory System!

I'm Learning About the Circulatory System!

I'm Learning About the Circulatory System!

I'm Learning About the Circulatory System!

Glue Human Body System Page Here

K	W	L

Glue Human Body System Page Here

K	W	L

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What's In Your Blood Teacher Notes/Answer Key

What's In Your Blood?

Apply glue behind this tab and place in notebook

Cells

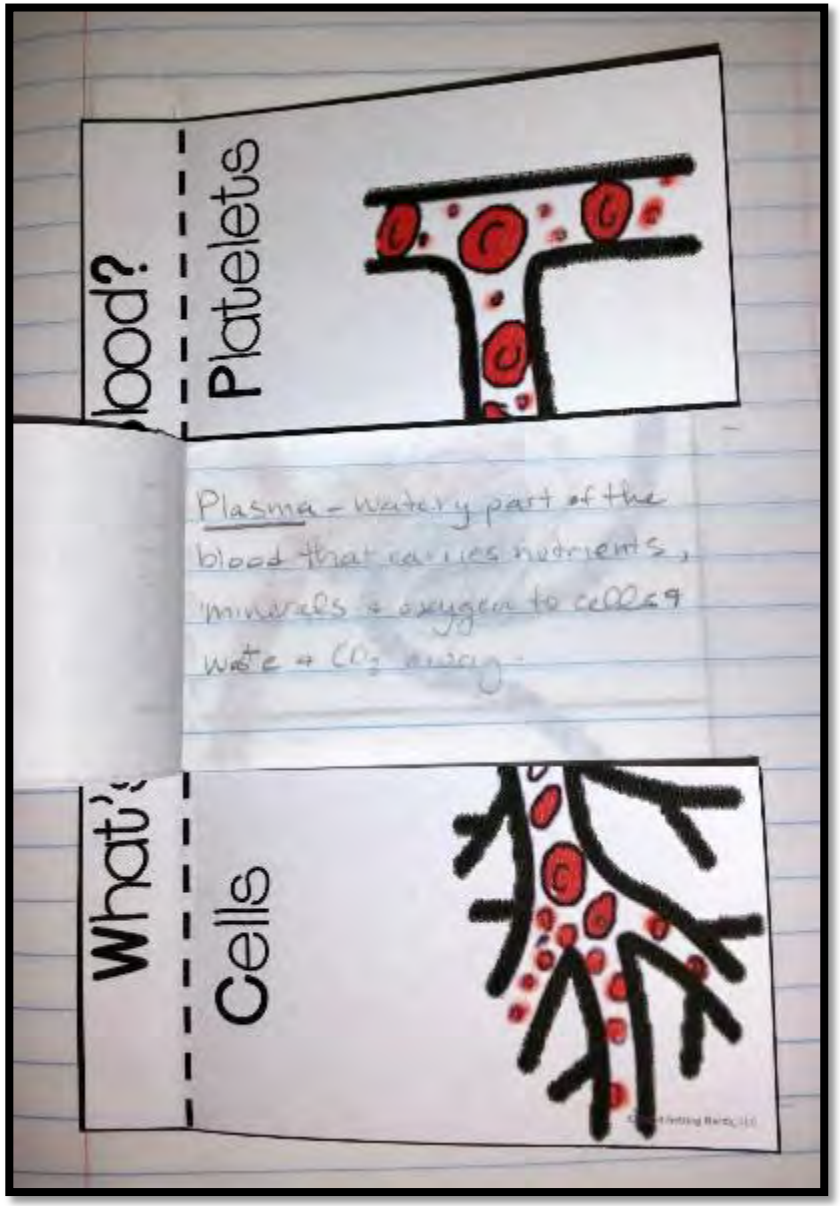
WBC- White blood cells that help to protect the body from foreign invaders.
RBC- Red Blood Cells are made in the bone marrow, carry oxygen to body cells using an iron-containing protein called hemoglobin

Plasma

"watery" part of blood that carries nutrients, minerals, oxygen to cells and carries waste and carbon dioxide away

Platelets

cell fragments that help in the process of clotting blood after getting a cut.



Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the three vertical lines to split the picture in thirds. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe what makes up each part of our blood.

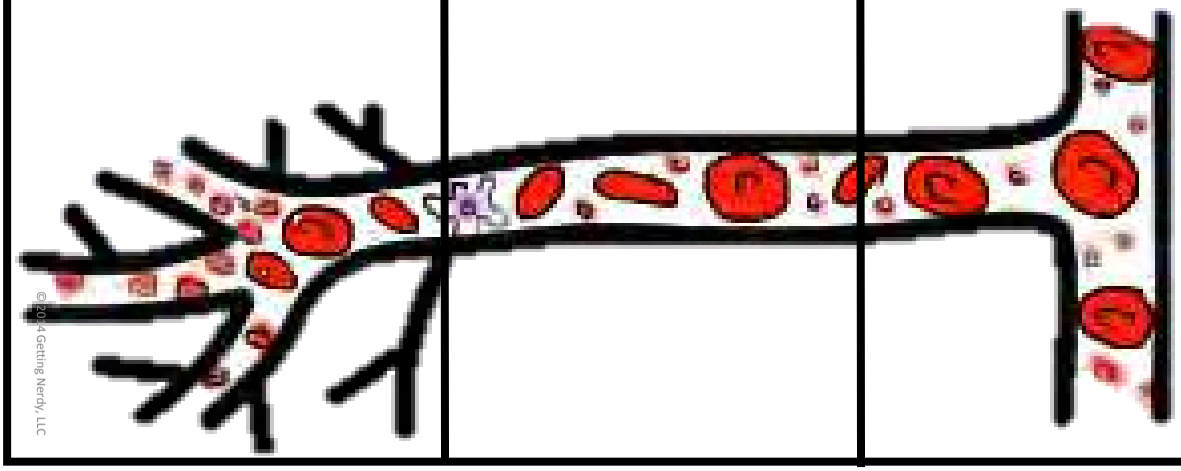
What's In Your Blood?

Apply glue behind this tab and place in notebook

Platelets

Plasma

Cells



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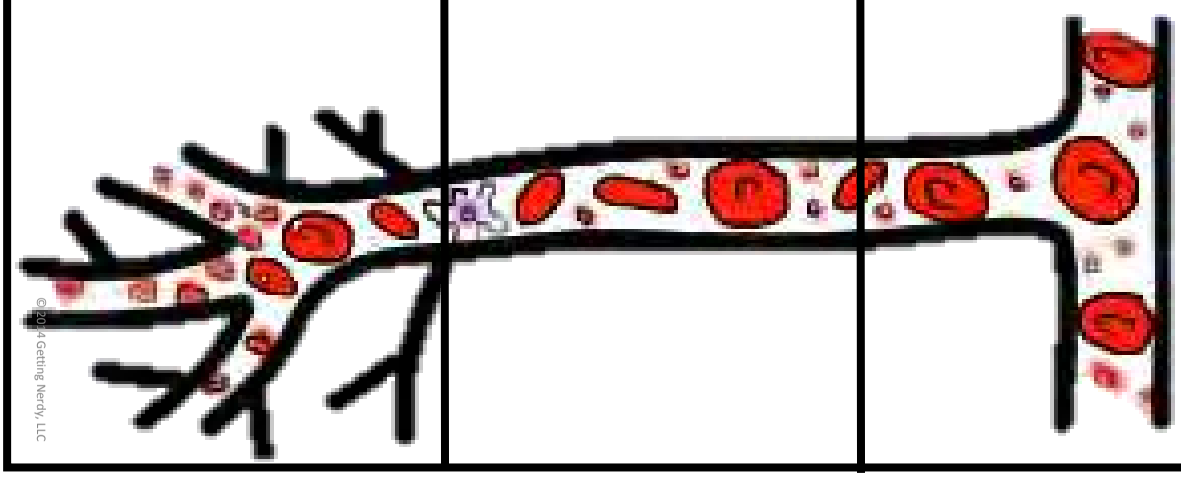
What's In Your Blood?

Apply glue behind this tab and place in notebook

Platelets

Plasma

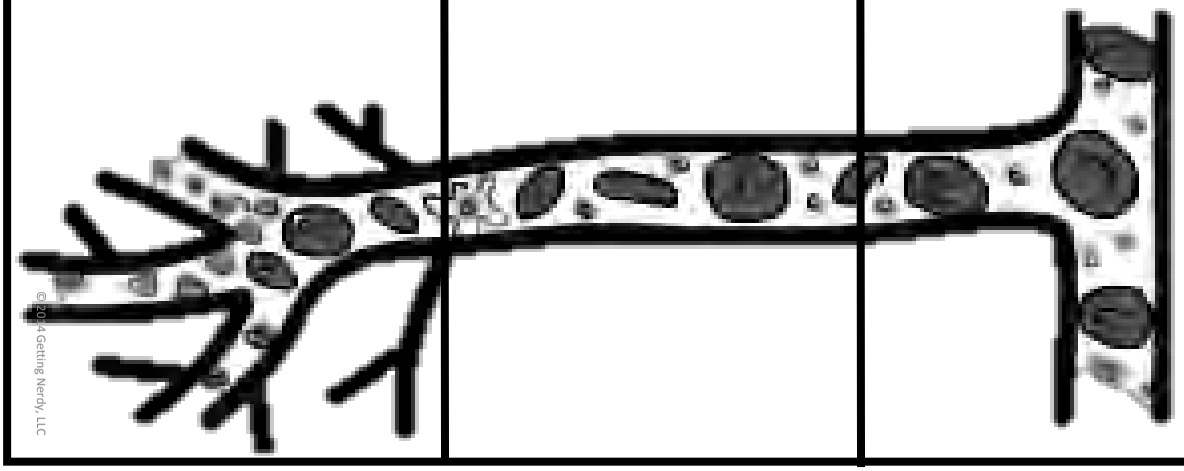
Cells



What's In Your Blood?

Apply glue behind this tab and place in notebook

Platelets | Plasma | Cells



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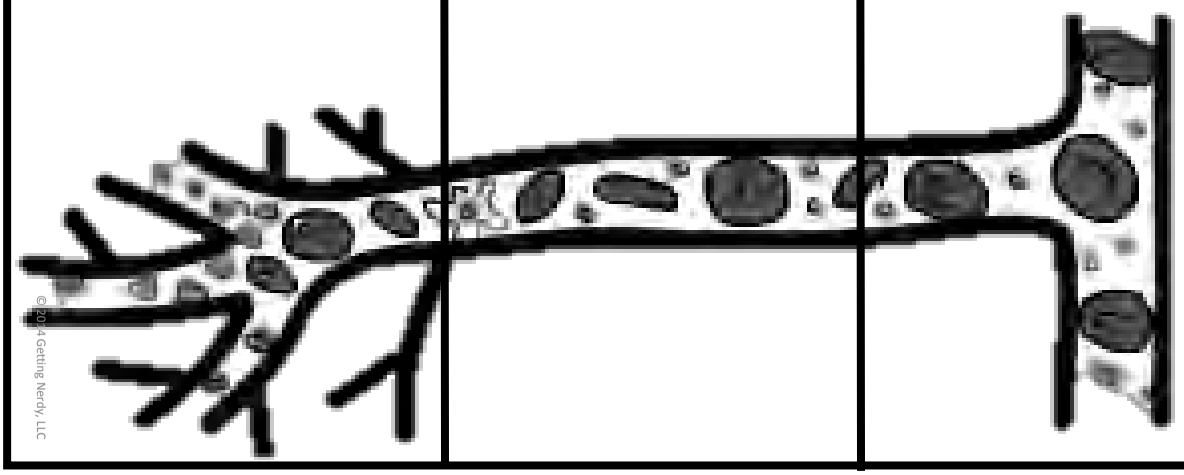
What's In Your Blood?

Apply glue behind this tab and place in notebook

Platelets | Plasma | Cells



The Three Types of Circulation Teacher Notes/Answer Key

Three Types of Circulation

Apply glue behind this tab and place in notebook

Systemic

arteries bring oxygenated blood to body cells and veins return deoxygenated blood back to heart

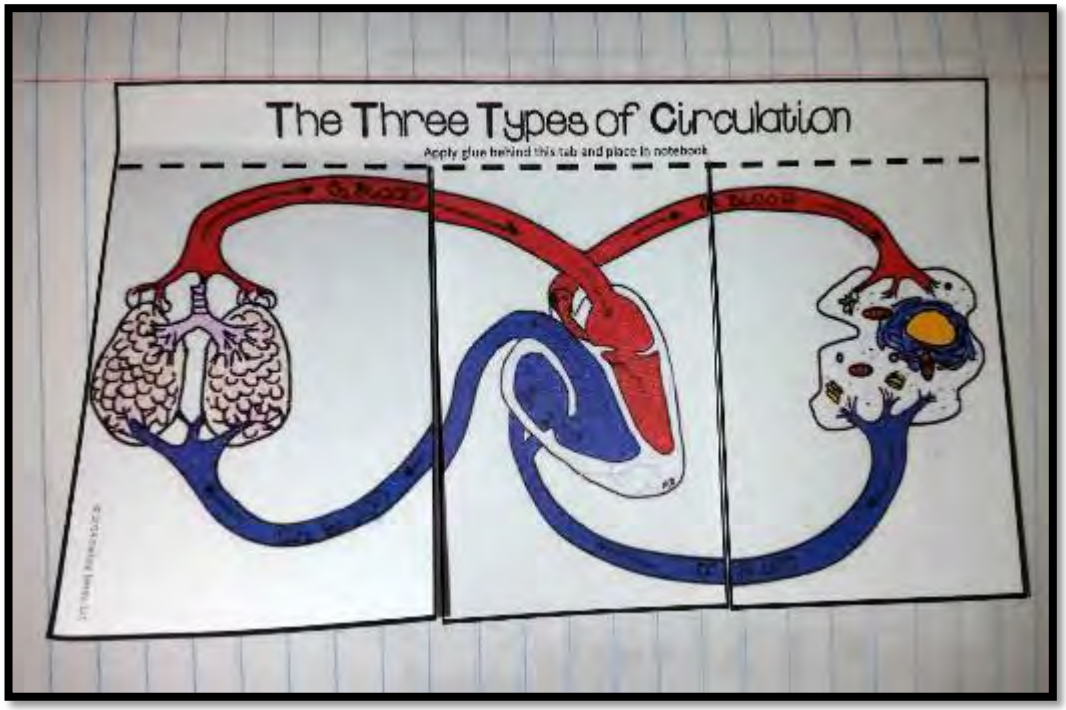
Coronary

arteries and veins supply the heart with blood

Pulmonary

pulmonary artery carries deoxygenated blood to the lungs to release CO_2 and pulmonary vein carries oxygenated blood back to the heart

Directions: Color, cut out and glue the diagram into your notebook along the back of the tab. Cut along the three vertical lines to split the picture in thirds. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe each of the three types of circulation.



The Three Types of Circulation

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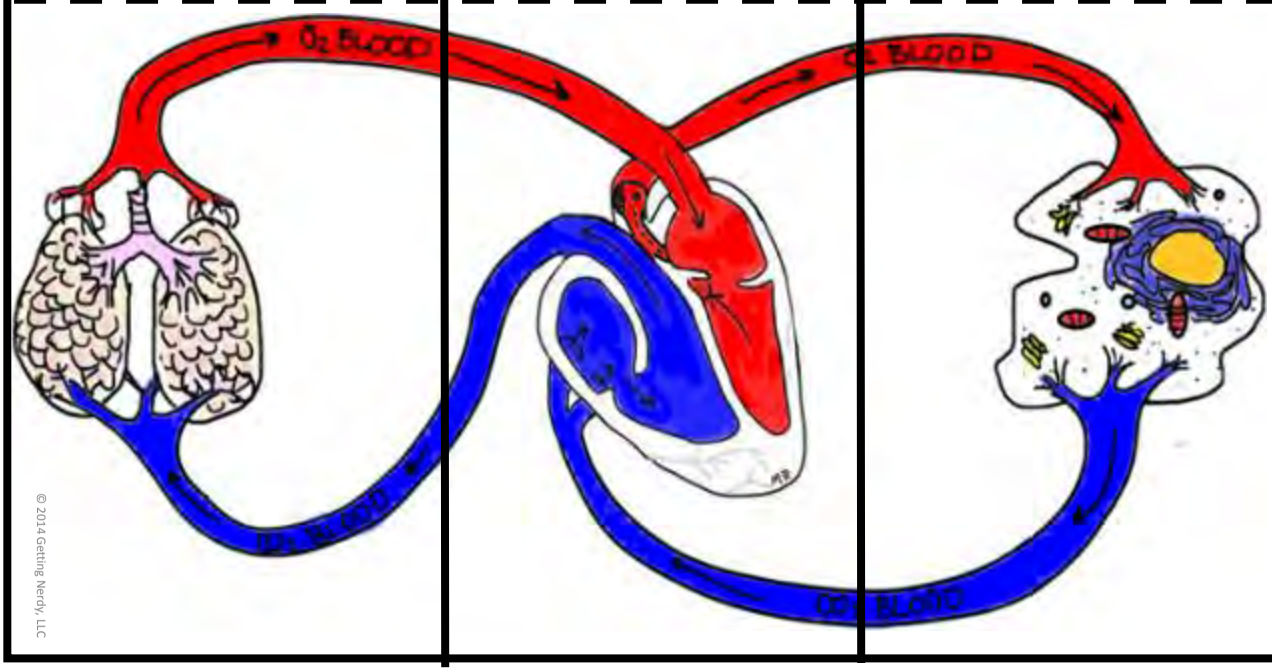

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The Three Types of Circulation

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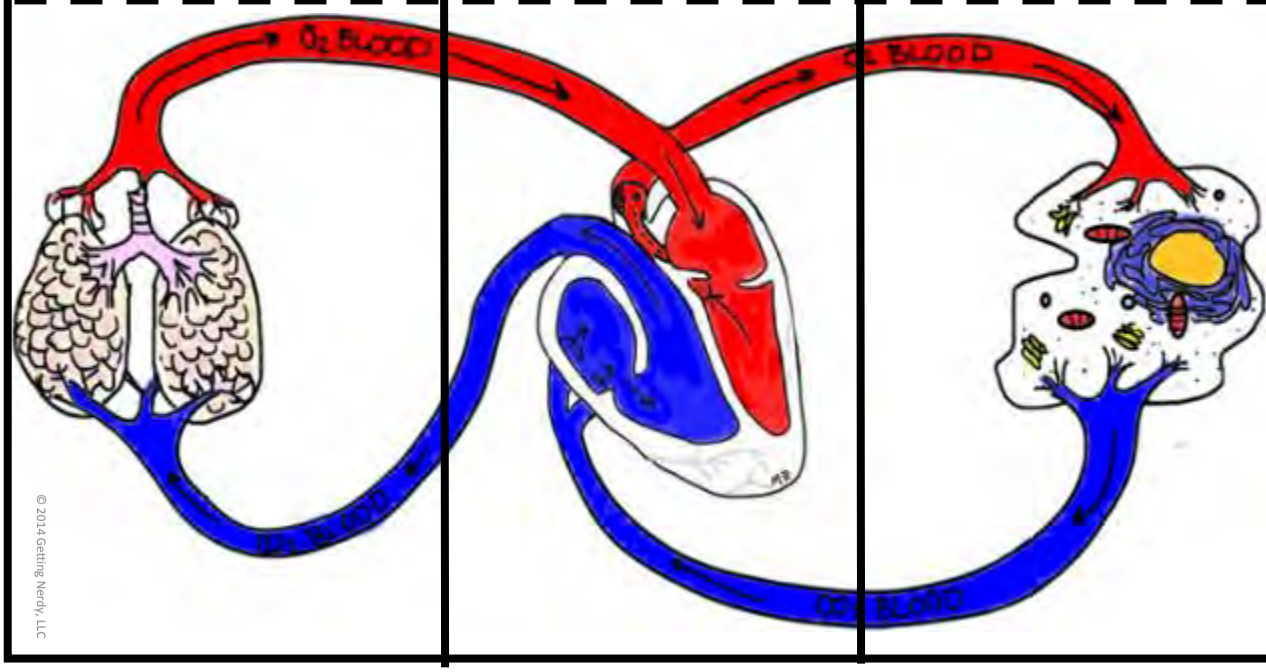

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The Three Types of Circulation

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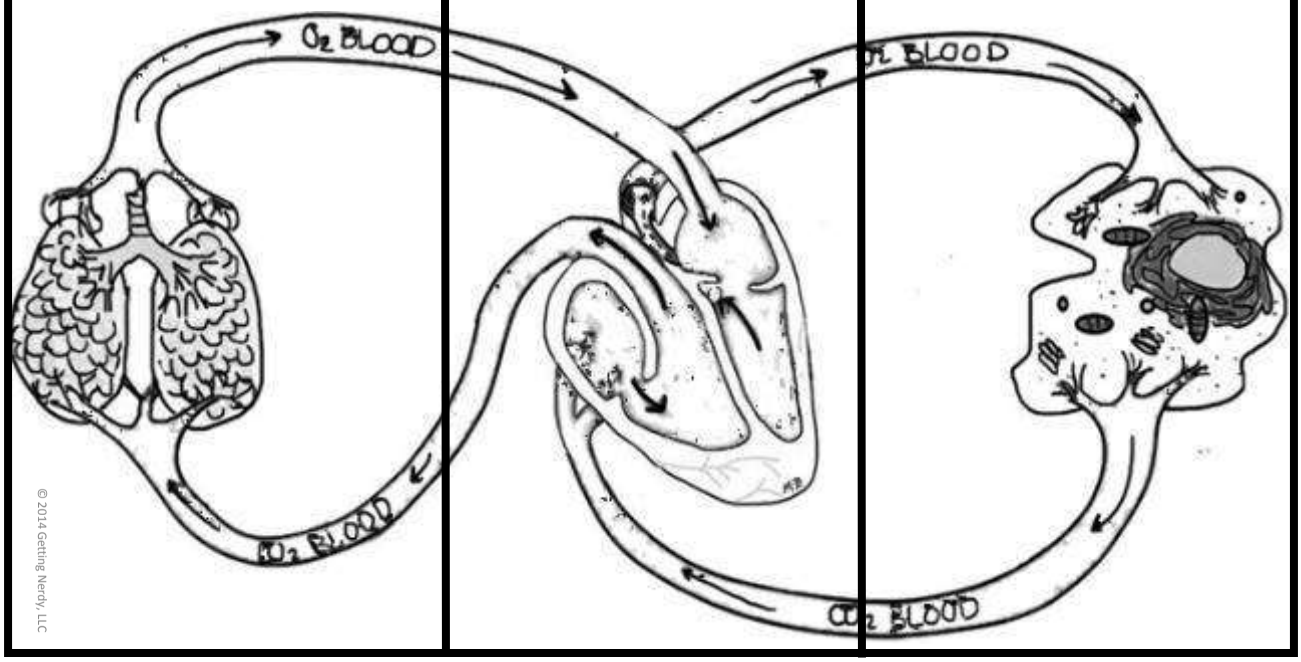

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The Three Types of Circulation

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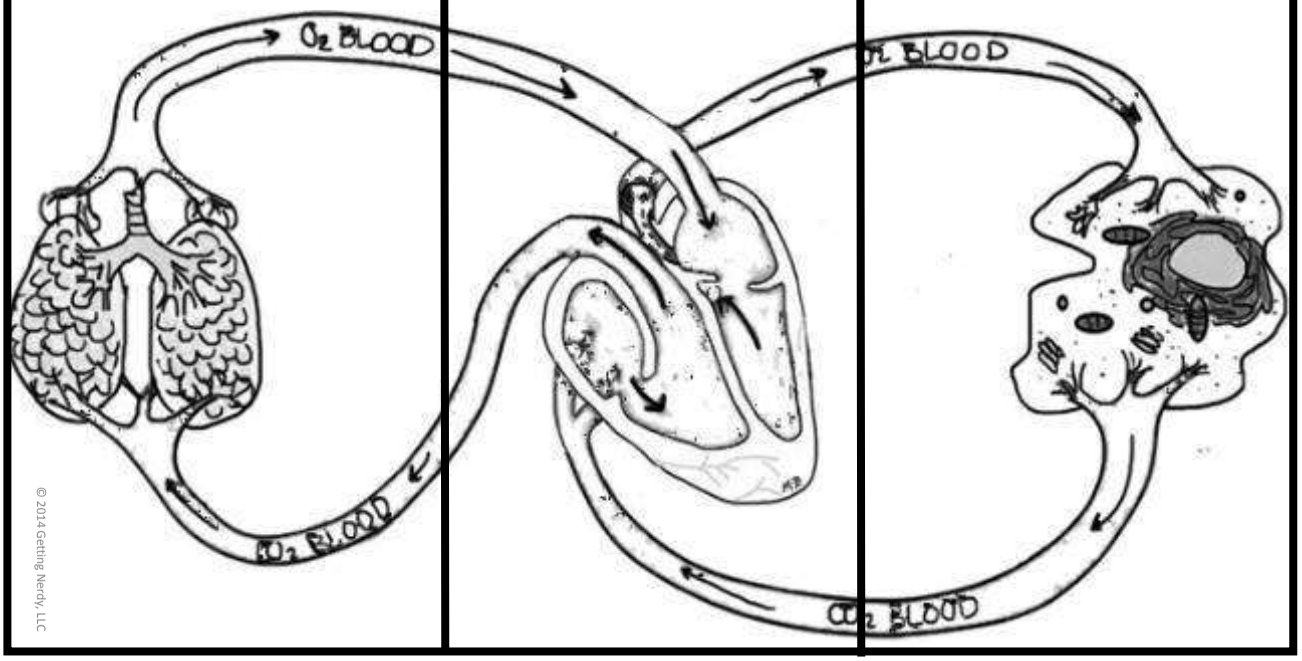

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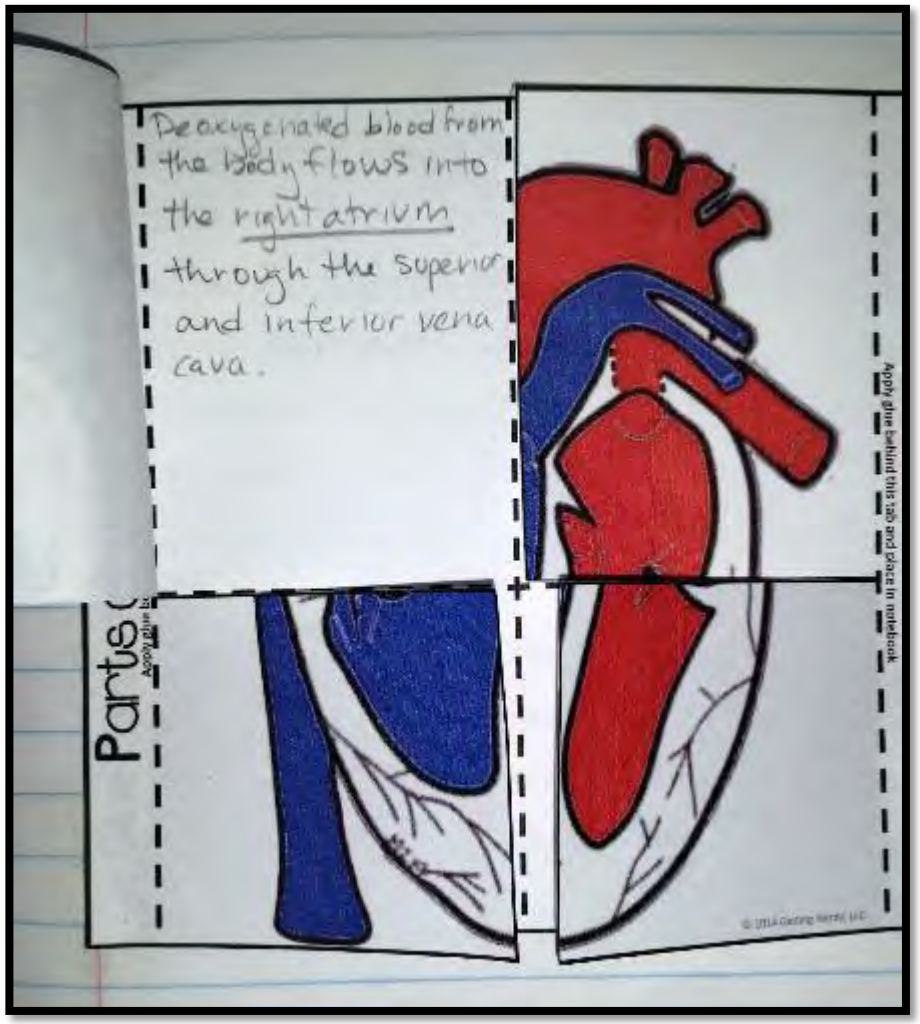
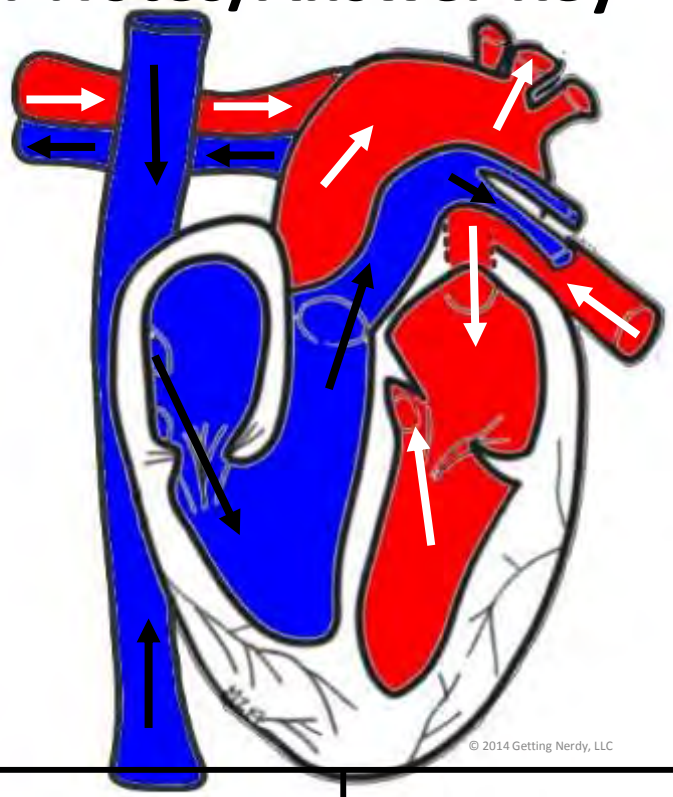
The Parts of the Heart Teacher Notes/Answer Key





Parts of the Heart			Parts of the Heart
	Deoxygenated blood from the body flows into the **Right Atrium** through the superior and inferior vena cava.	Oxygenated blood from the lungs flows into the **Left Atrium** through the pulmonic veins.	
	The deoxygenated blood moves through the tricuspid valve into the **Right Ventricle** which then forces the blood out of the heart to the lungs through the pulmonic arteries.	The oxygenated blood moves through the mitral valve into the **Left Ventricle** which then forces the blood out of the heart to the body through the aorta.	

Parts of the Heart

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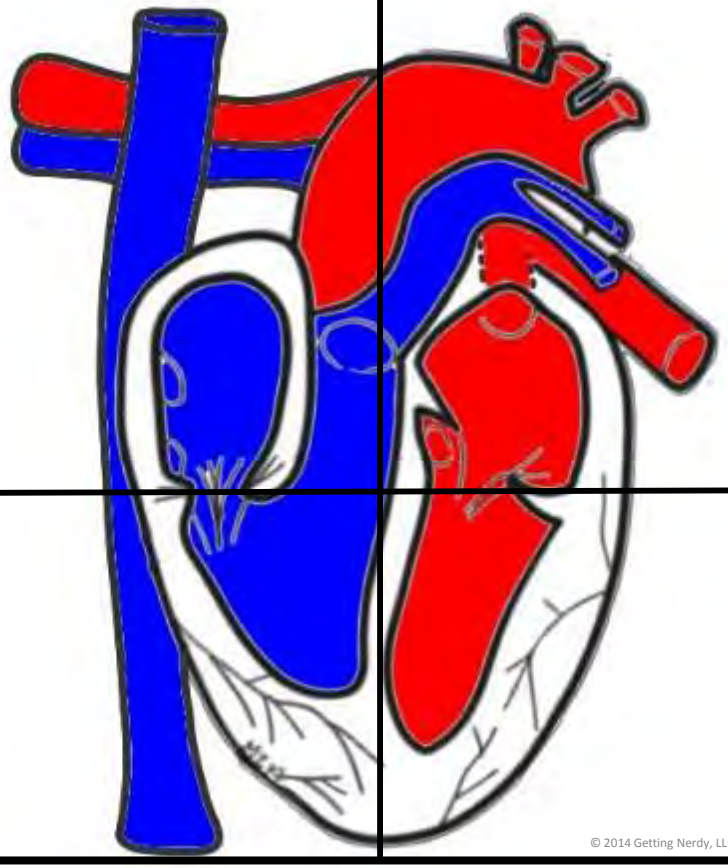

Parts of the Heart

Apply glue behind this tab and place in notebook

Directions: Draw arrows to show the direction of blood flow through the heart. Cut out the diagram along the dark lines and glue the INB activity into your notebook along the folded tabs to create a four door table. Underneath each door/flap describe the different parts of the heart.

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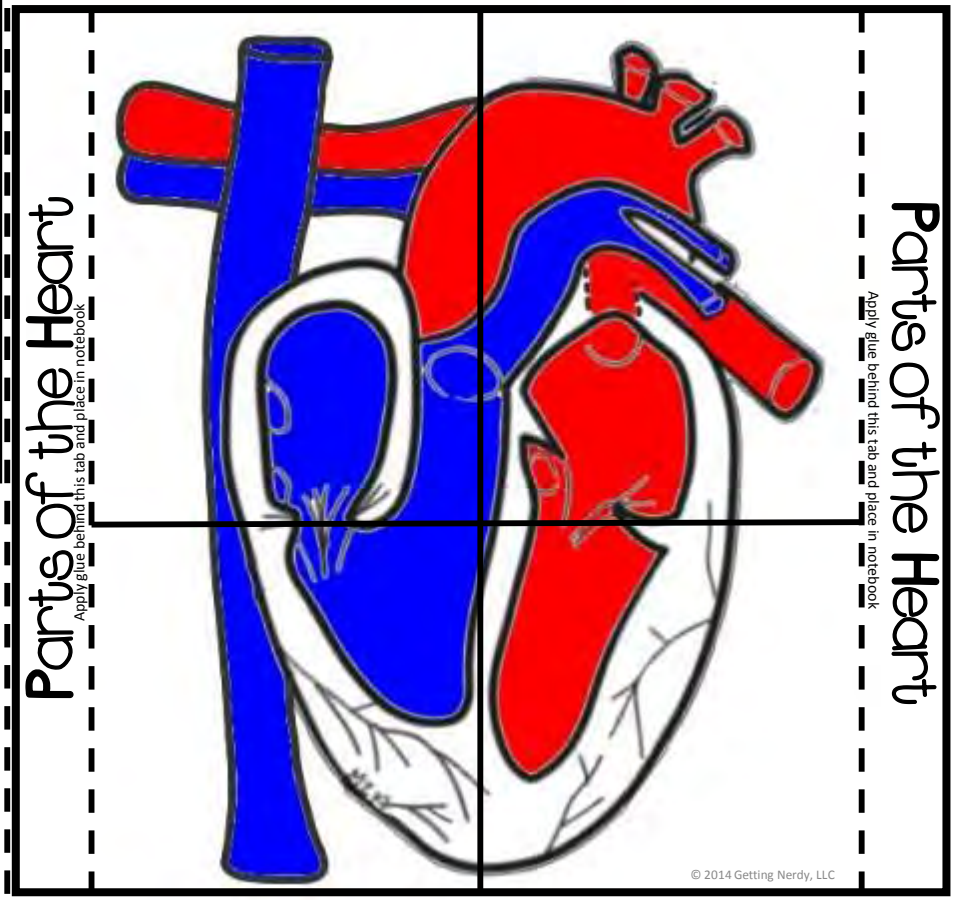

Parts of the Heart

Apply glue behind this tab and place in notebook

Parts of the Heart

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Parts of the Heart

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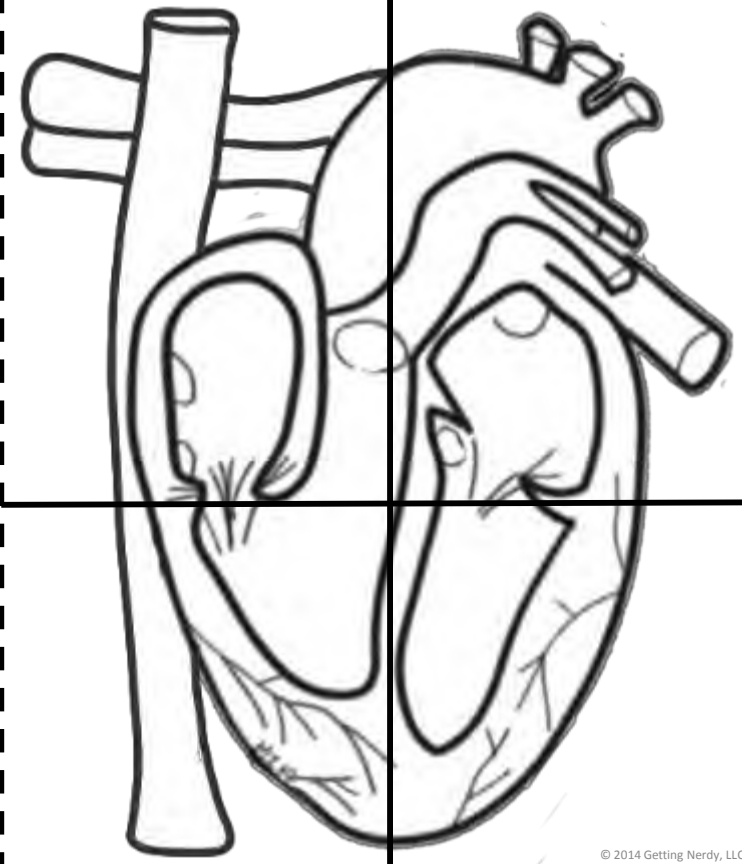

Parts of the Heart

Apply glue behind this tab and place in notebook

Color the heart to show the flow of oxygenated and deoxygenated blood. Draw arrows to show the direction of blood flow through the heart. Cut out the diagram along the dark lines and glue the INB activity into your notebook along the folded tabs to create a four door table. Underneath each door/flap describe the different parts of the heart.

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Parts of the Heart

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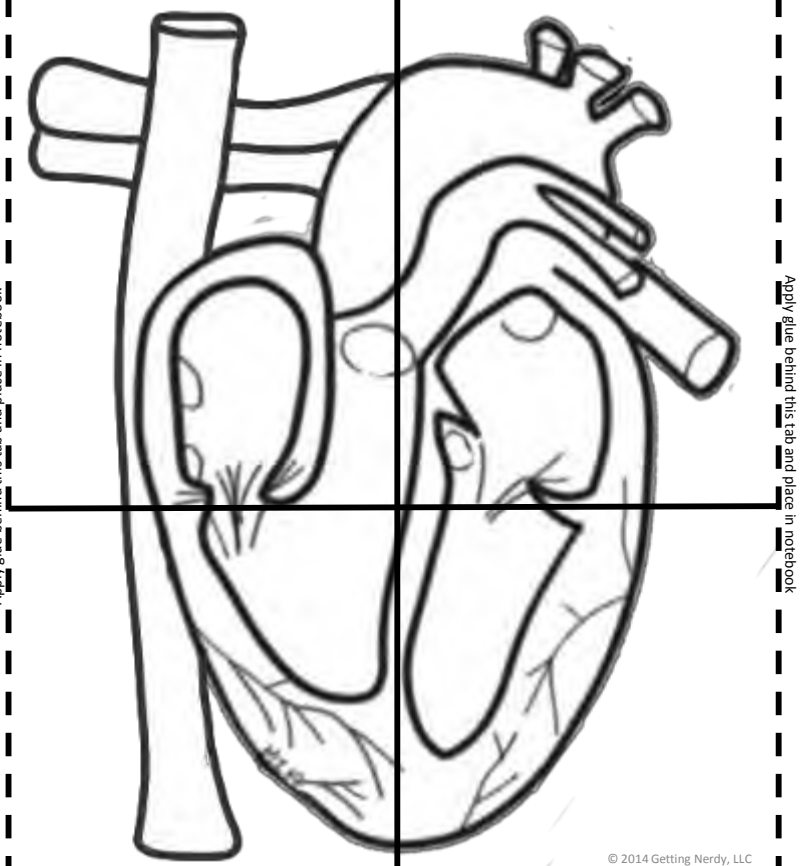

Parts of the Heart

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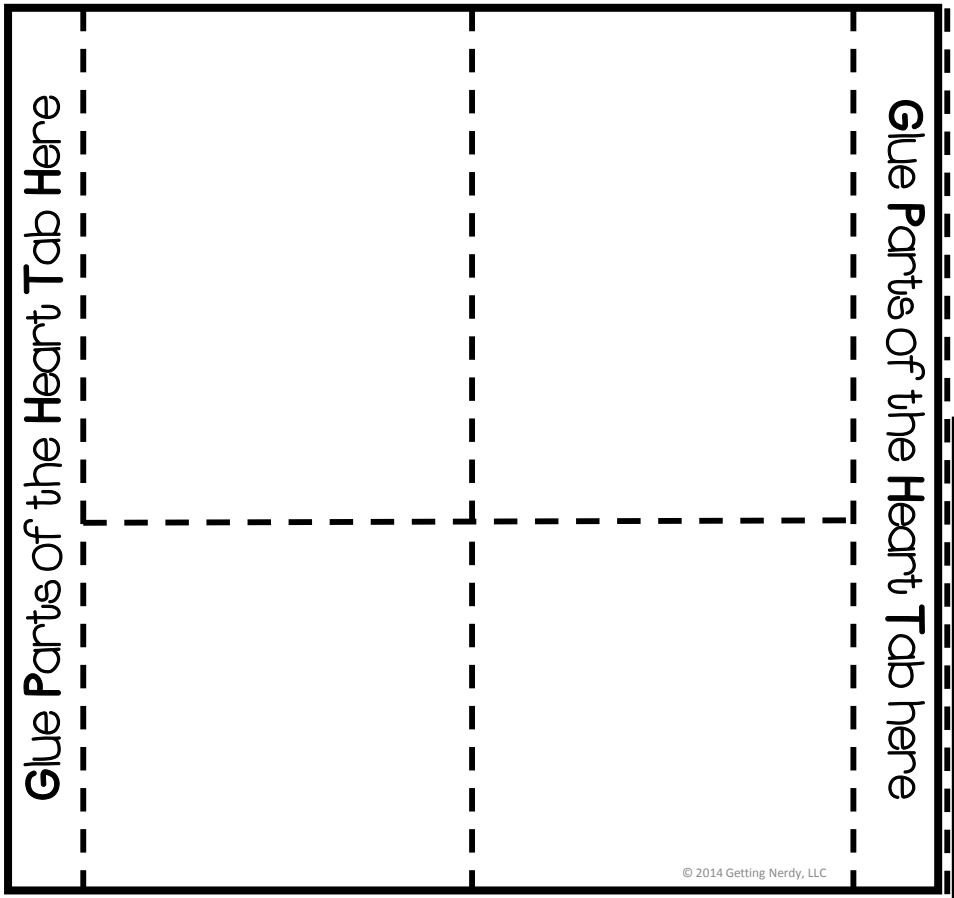

Glue this page down on your notebook. Then, glue the Parts of the Heart page/tabs over the "Glue parts of the heart tab here" to make a four door book.

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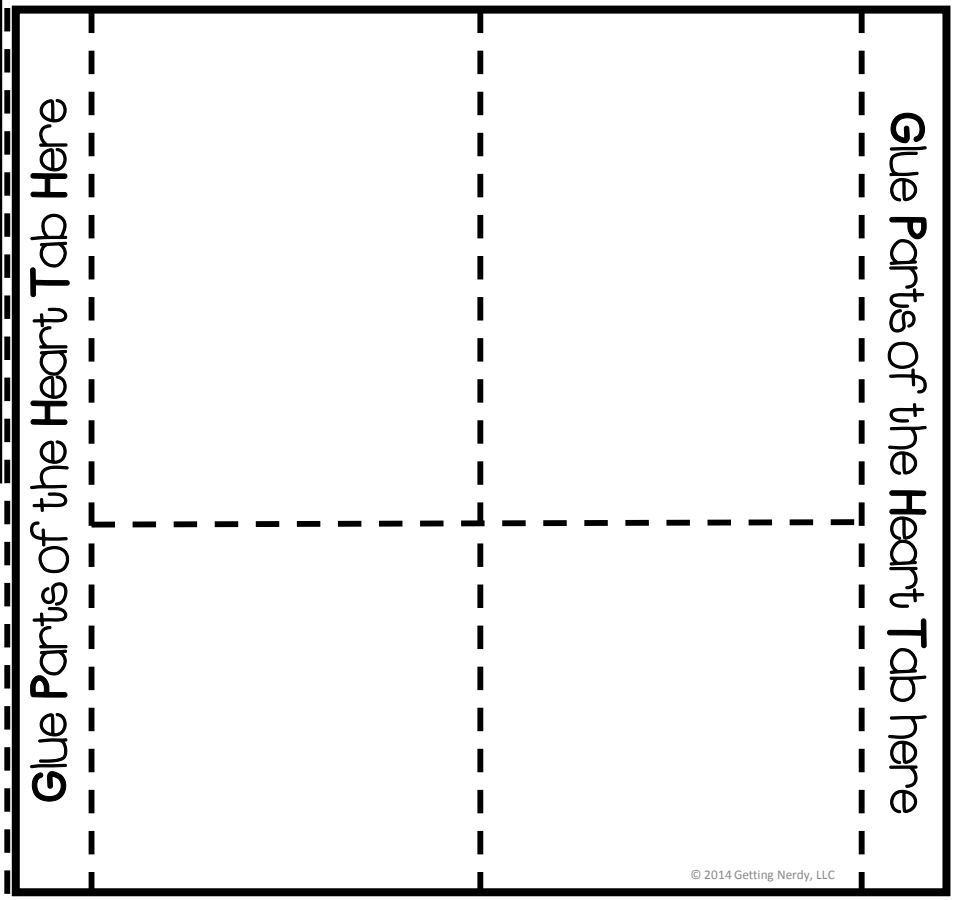
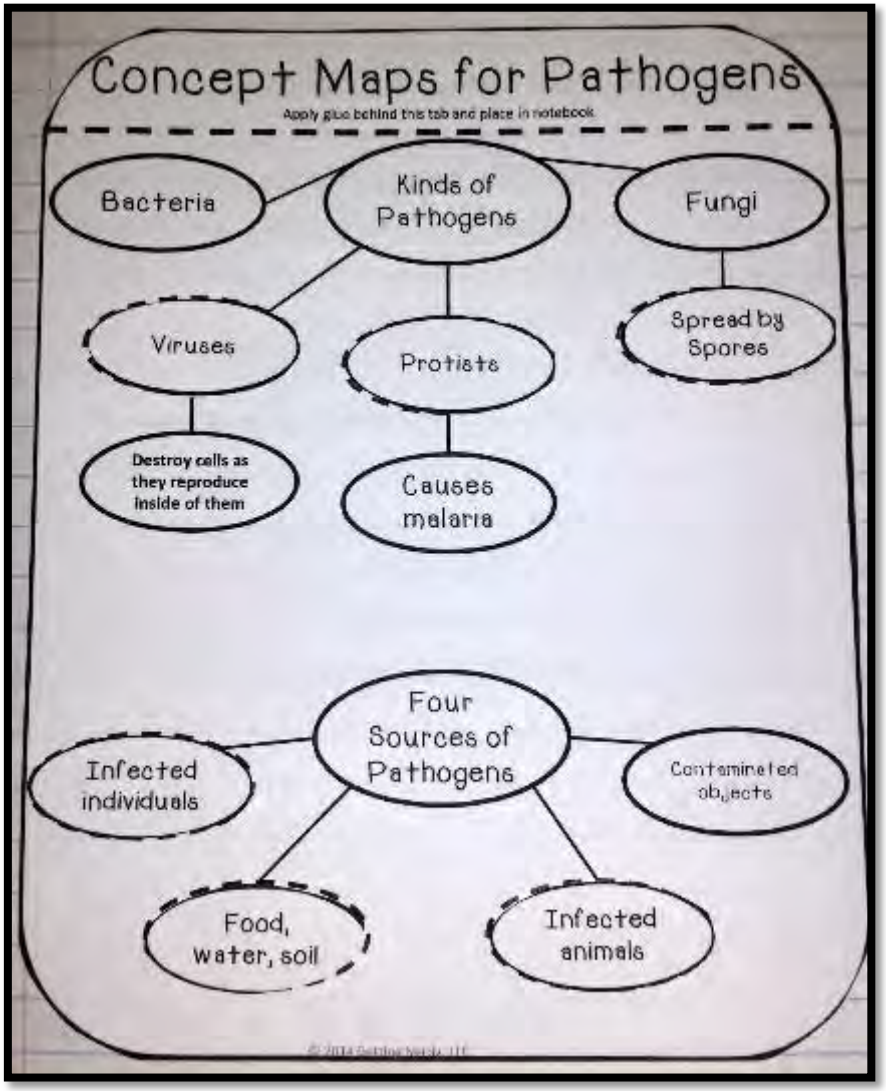
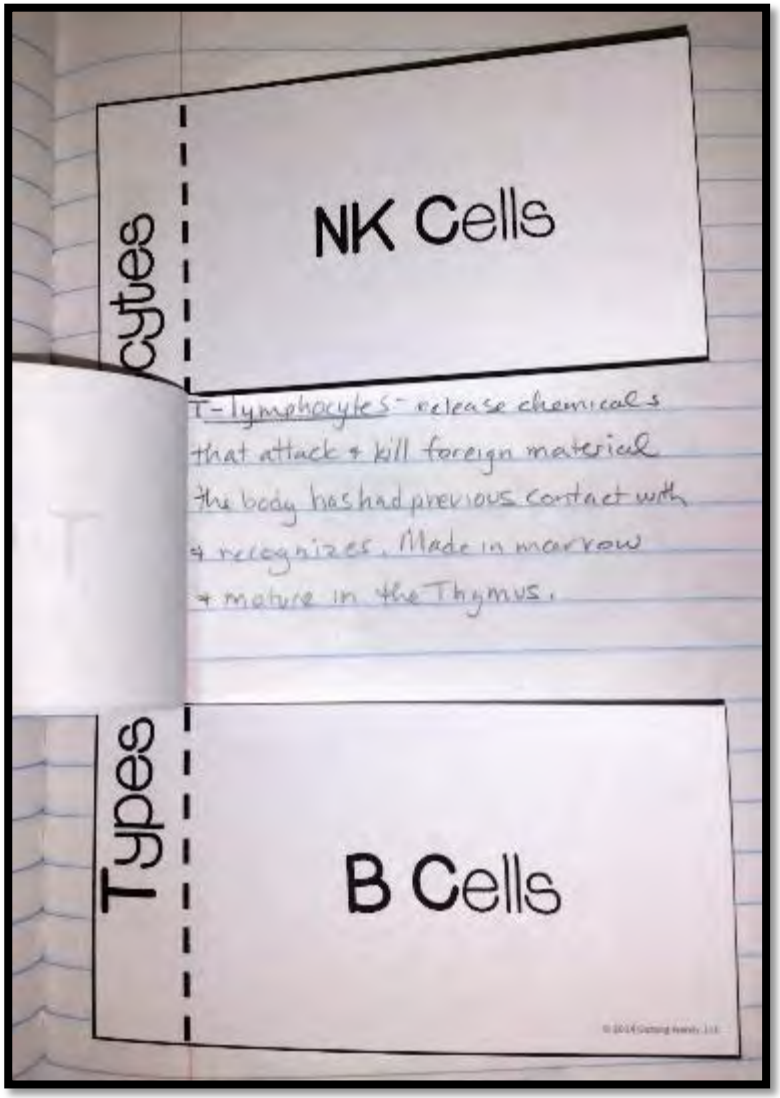
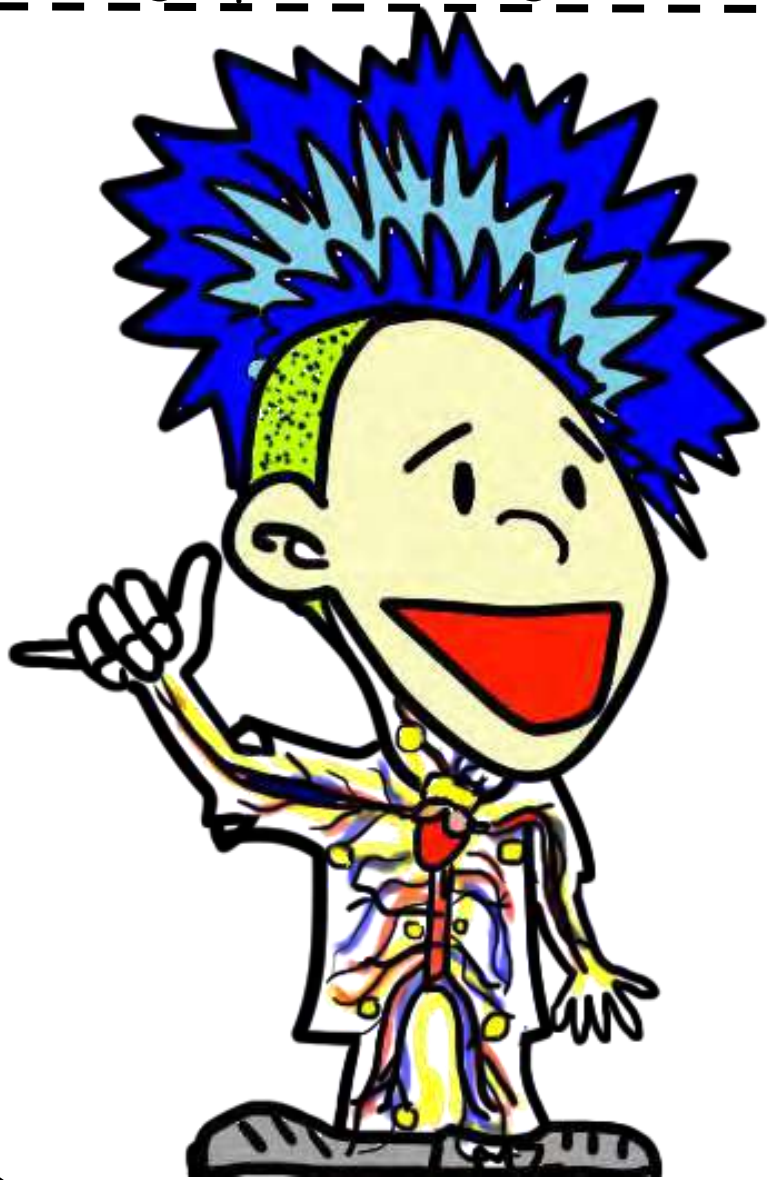


LYMPHATIC SYSTEM IN ACTIVITIES





I'm Learning About the Lymphatic System!



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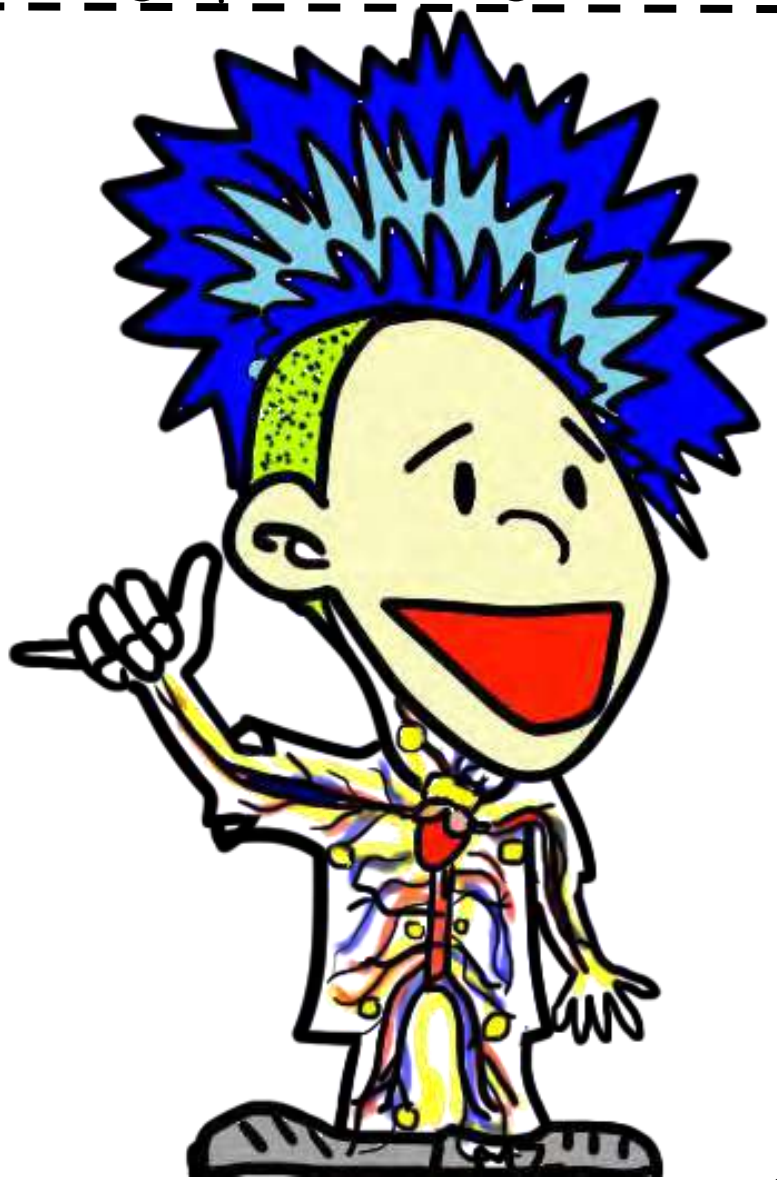

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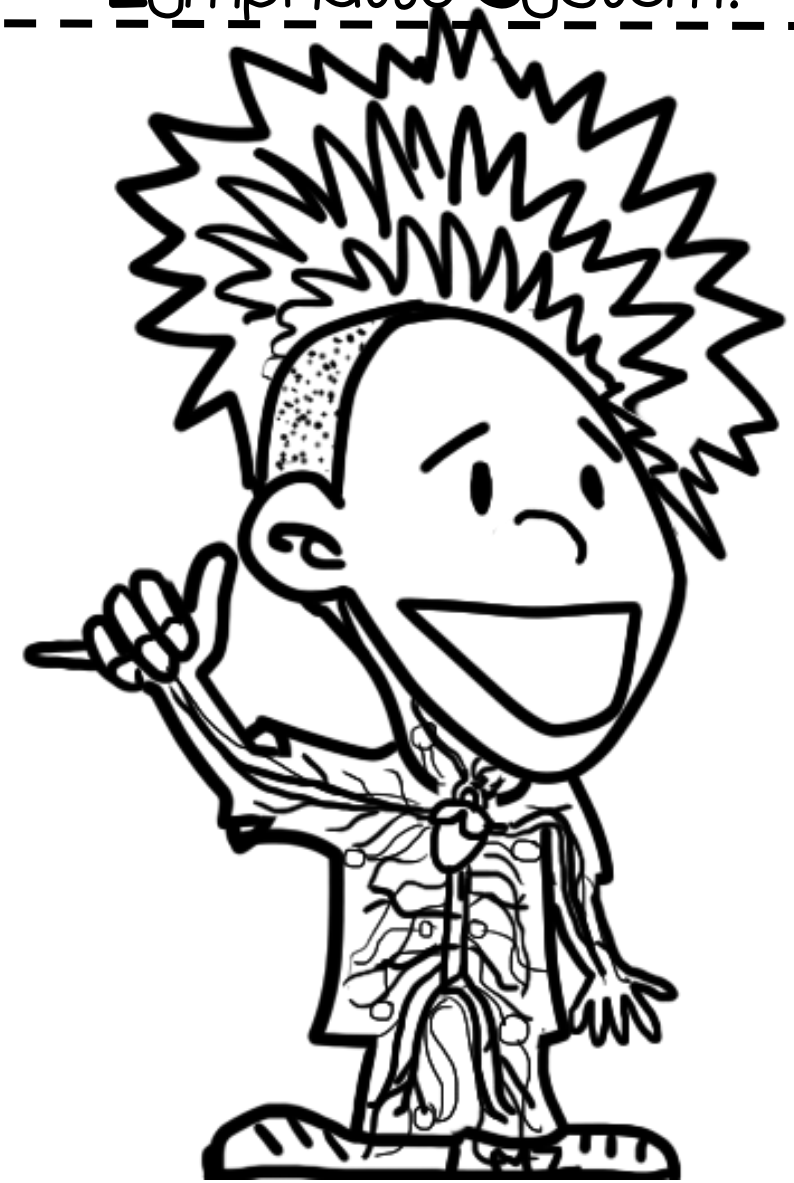

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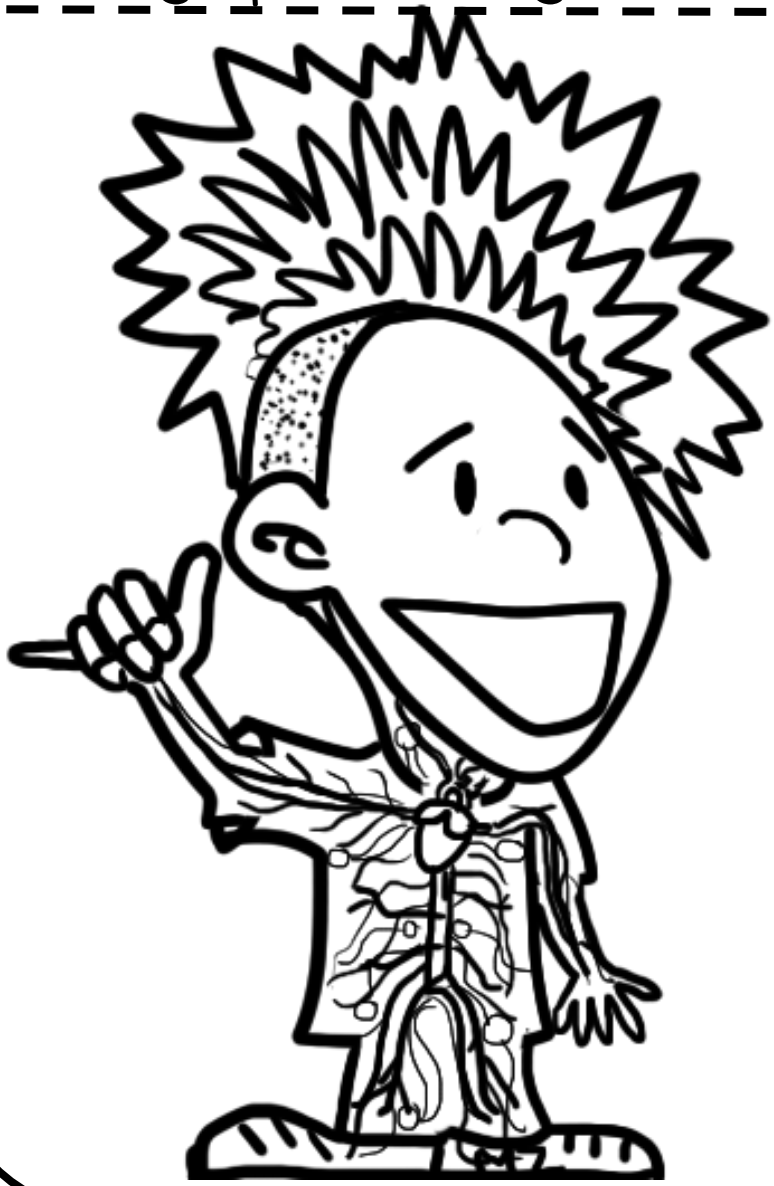

Glue Human Body System Page Here

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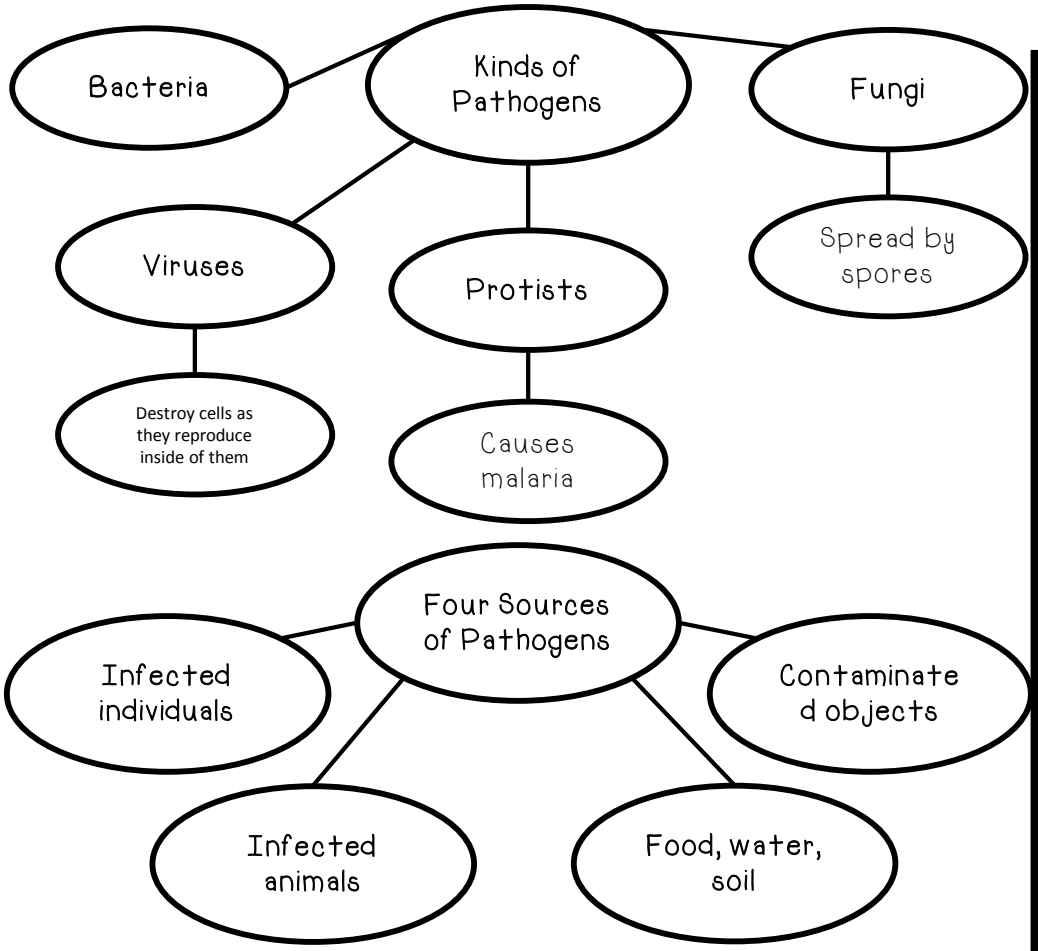
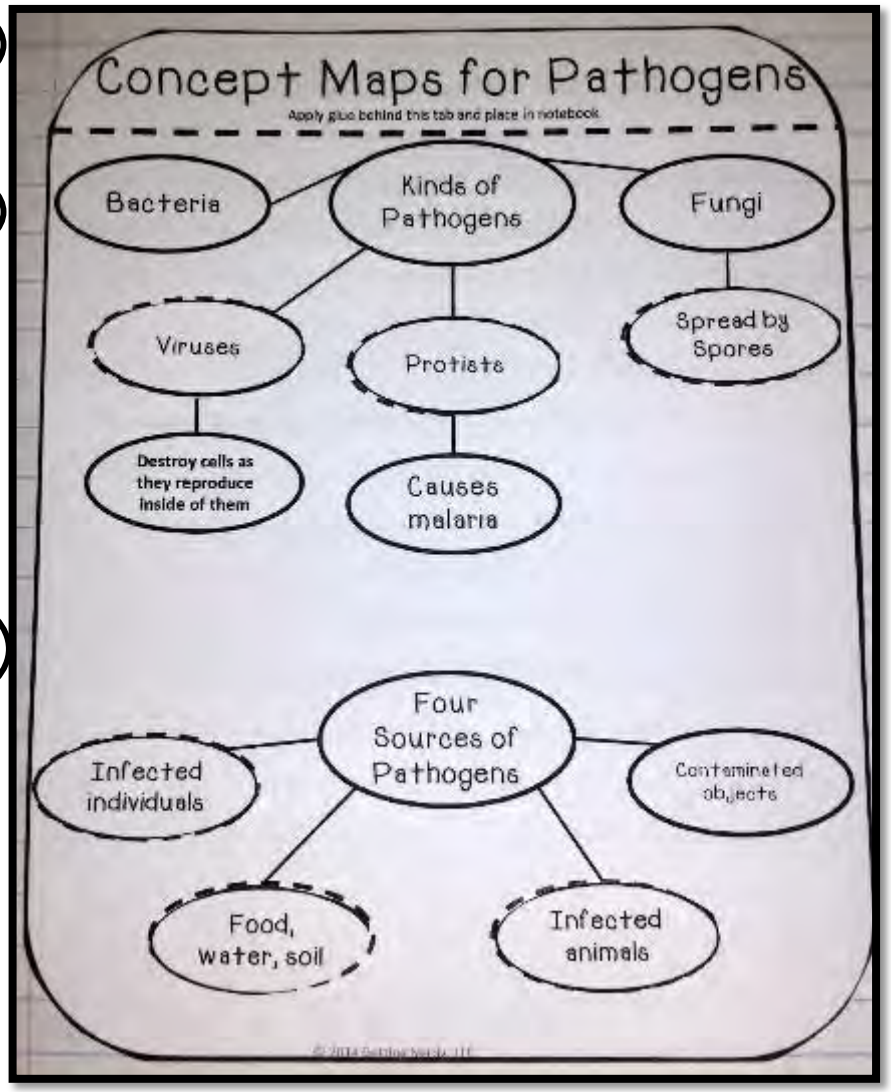
Pathogen Concept Map Teacher Notes/Answer Key





The Lymphatic or Immune System identifies, remembers, attacks and destroys disease-causing invaders or infected cells. White blood cells (or lymphocytes) of all kinds travel throughout the body via the circulatory system and lymphatic vessels.

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Concept Maps for Pathogens

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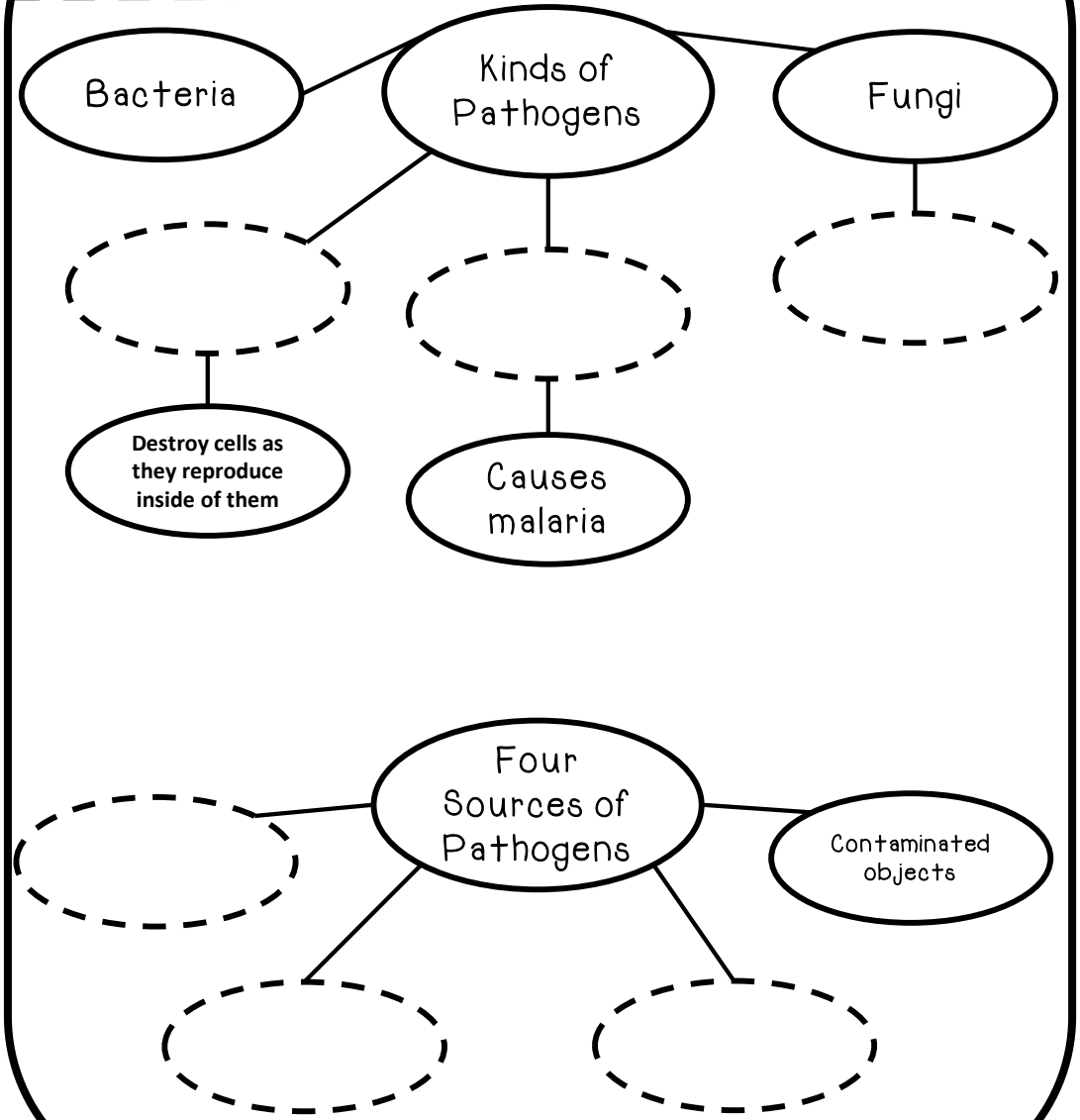


Cut out the blank concept map and glue into your notebook along the top tab. Cut out the individual circles and complete the concept map to show the different kinds of pathogens (disease causing organisms) and sources of pathogens by gluing them into the appropriate places.

Underneath the concept map, in your notebook, describe the ways our lymphatic system defends us against diseases and disease causing organisms.

Infected individuals

Spread by Spores

Viruses

Protists

Infected animals

Food, water, soil

Types of Lymphocytes Teacher Notes/Answer Key

Types of Lymphocytes

Apply glue behind this tab and place in notebook

B Cells

B Lymphocytes are responsible for making antibodies to foreign material (antigens). The antibodies then attack and kill whatever antigen they are made to react with. Made and mature in marrow.

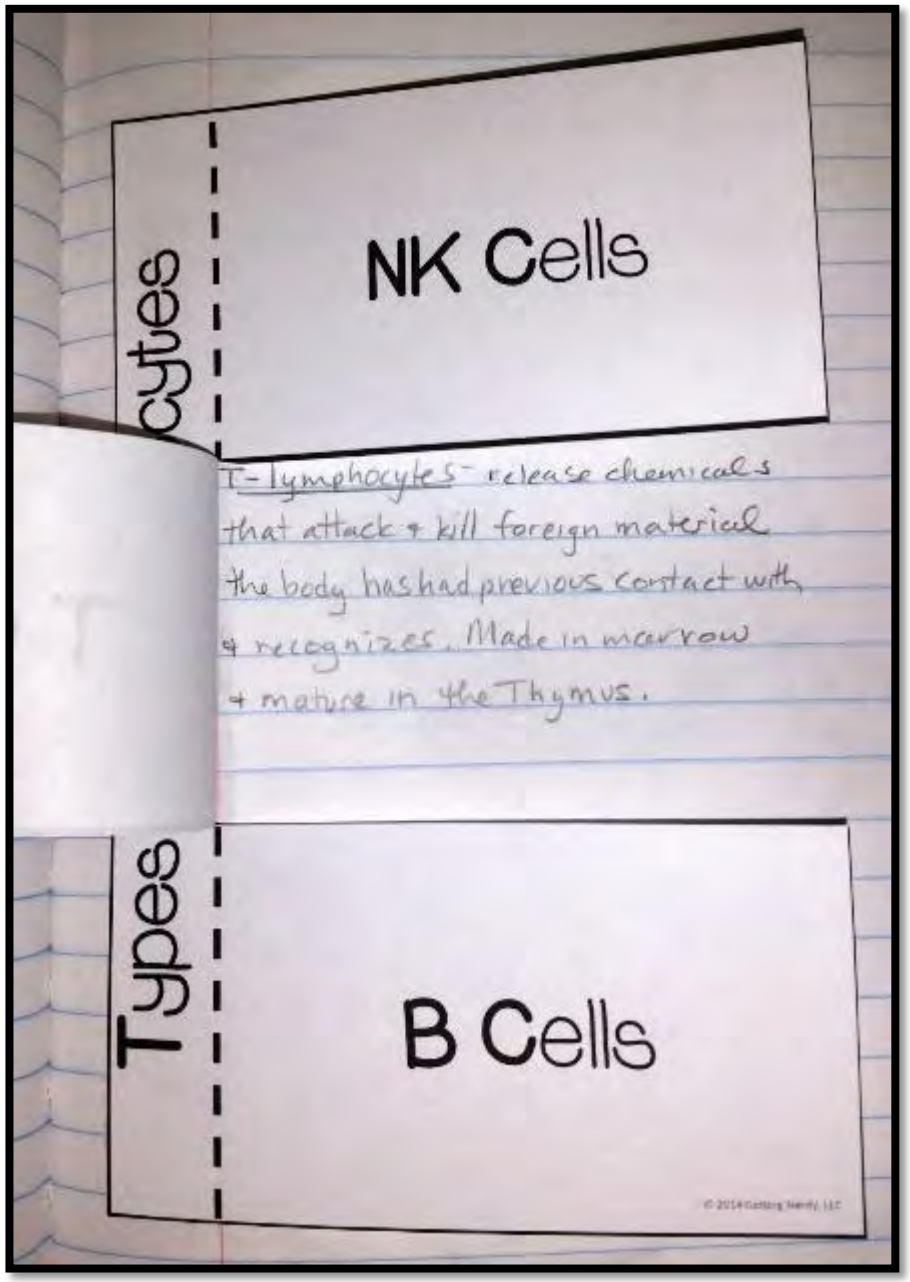
T Cells

T Lymphocytes Release chemicals that attack and kill foreign material that the body has had previous contact with and recognizes. Made in bone marrow but mature in the Thymus gland.

NK Cells

Natural Killer Cells release chemicals that kill a foreign invader without previous recognition of that cell.

Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the three vertical lines to split the picture in thirds. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe what each type of lymphocyte (white blood cell) does for the immune system.



Types of Lymphocytes

Apply glue behind this tab and place in notebook

NK Cells

T Cells

B Cells

Types of Lymphocytes

Apply glue behind this tab and place in notebook

NK Cells

T Cells

B Cells

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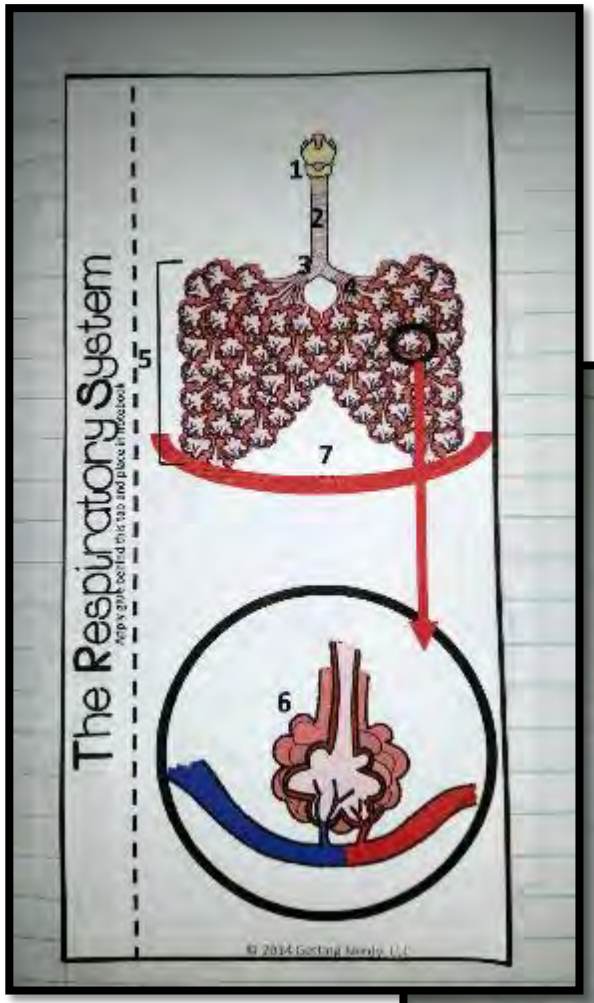
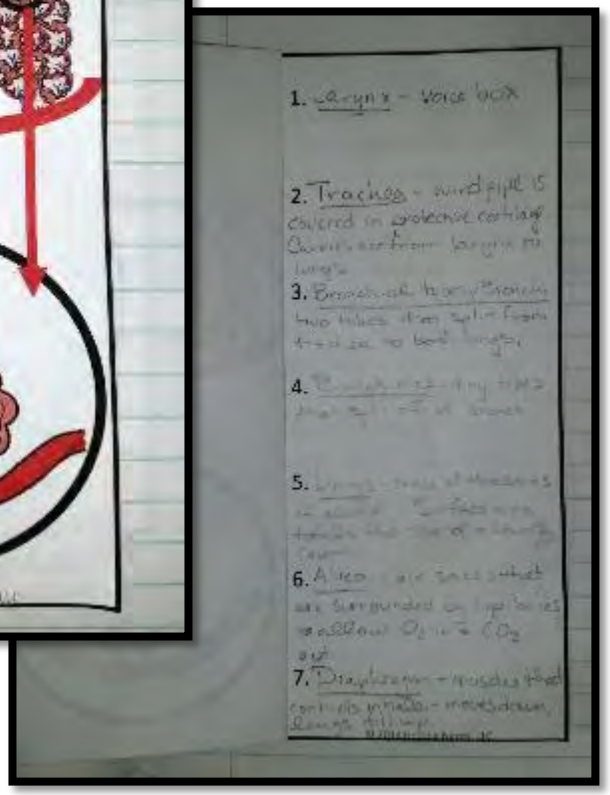
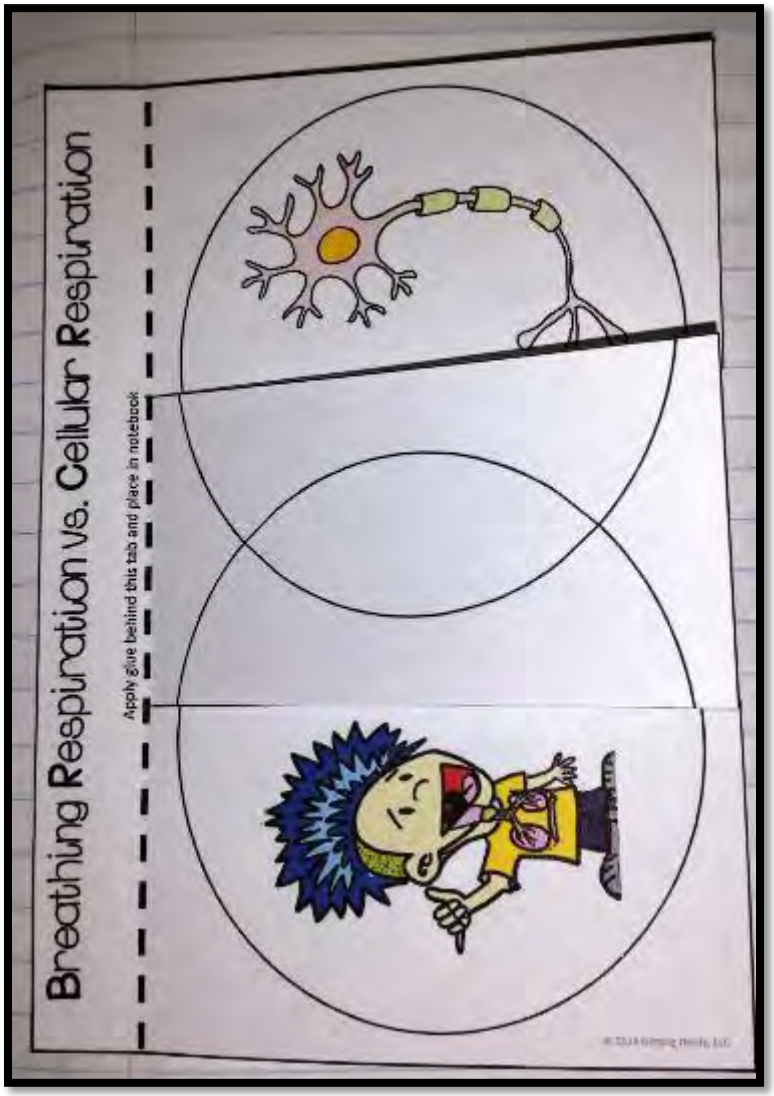
2 RESPIRATORY SYSTEM INB ACTIVITIES







I'm Learning About the Respiratory System!

I'm Learning About the Respiratory System!

I'm Learning About the Respiratory System!

I'm Learning About the Respiratory System!

Glue Human Body System Page Here

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The Respiratory System Teacher Notes/Answer Key

Air is warmed as it enters through the nose and mouth. It then moves to the pharynx or throat which transports air down the trachea and food and water down the esophagus.

1. Larynx (Voice Box): vocal cords are stretched across larynx opening.

2. Trachea (Wind Pipe): carries air from larynx to lungs. Covered in cartilage for protection

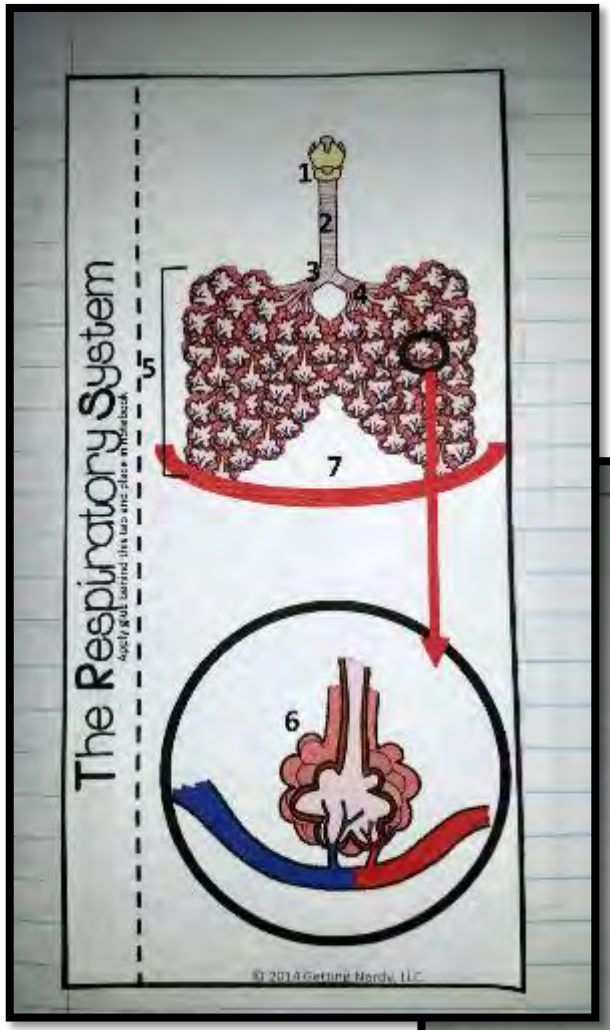
3. Bronchi/Bronchial tubes: two tubes split off from trachea - one tube goes to each lung.

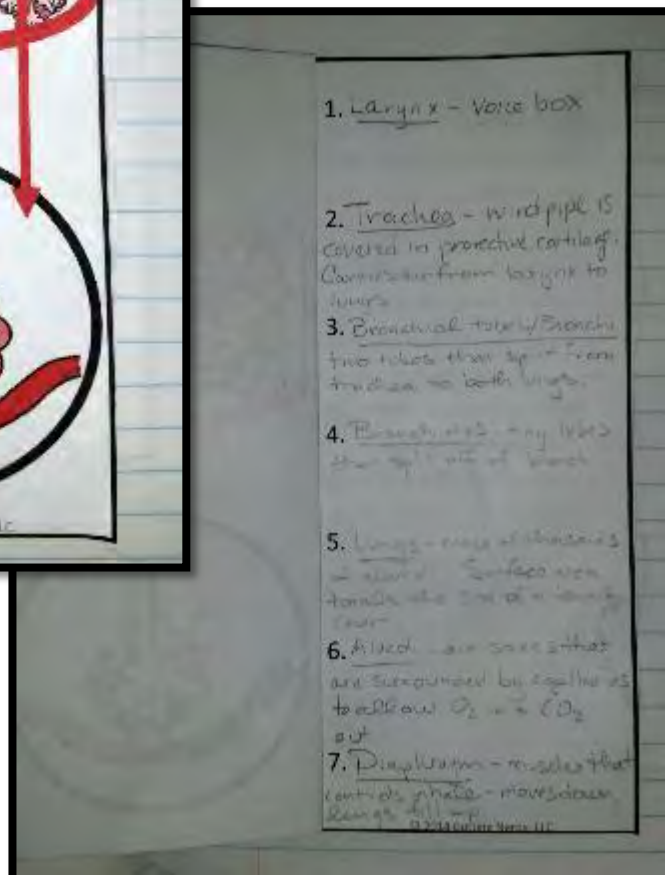
4. Bronchioles- Each bronchial tube splits into tiny tubes called bronchioles**.**

5. Lungs:
Each lung has thousands of alveoli, making the breathable surface area of the lung the size of a tennis court.

6. Alveoli: Alveoli are known as the "air sacks" of the lungs. They are tiny sacks that are surrounded by capillaries. This allows oxygen to enter the bloodstream and carbon dioxide to exit.

7. Diaphragm: When this muscle moves down, the lungs fill up with air.





The Respiratory System

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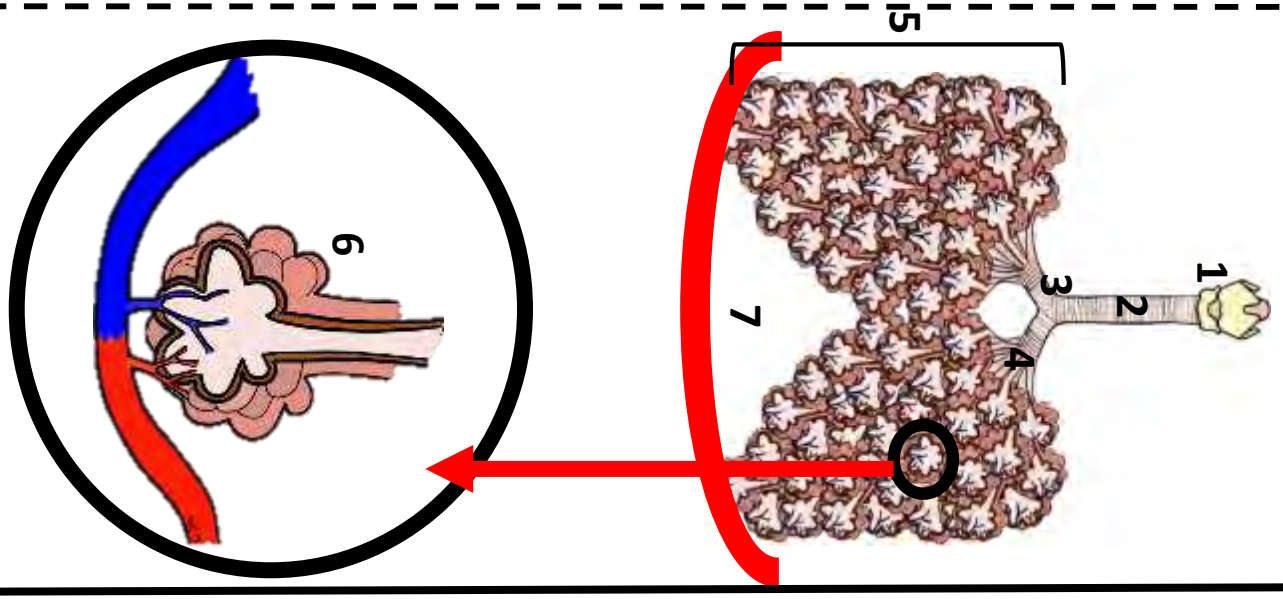
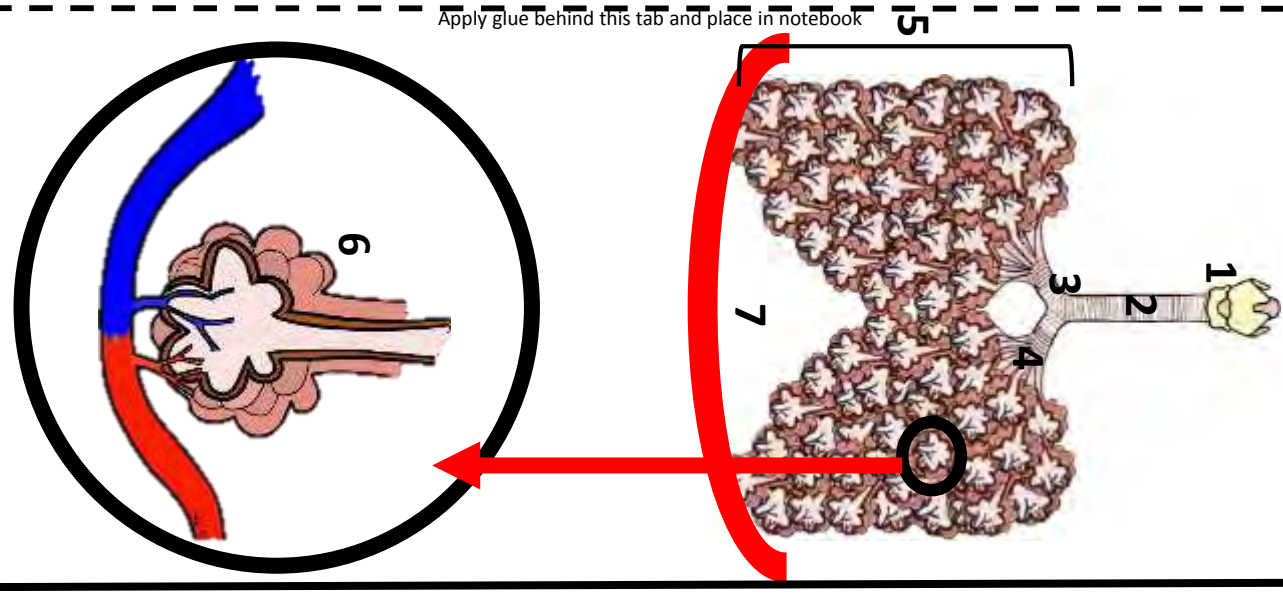


Directions: Cut out the INB activity and glue it in to your notebook using the tab. Underneath the flap, label the numbered organs using the following terms: lung, alveoli, bronchi/bronchial tube, trachea, diaphragm, larynx (voice box), bronchiole tubes. Lastly, describe each organ's function.

The Respiratory System

Apply glue behind this tab and place in notebook



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The Respiratory System

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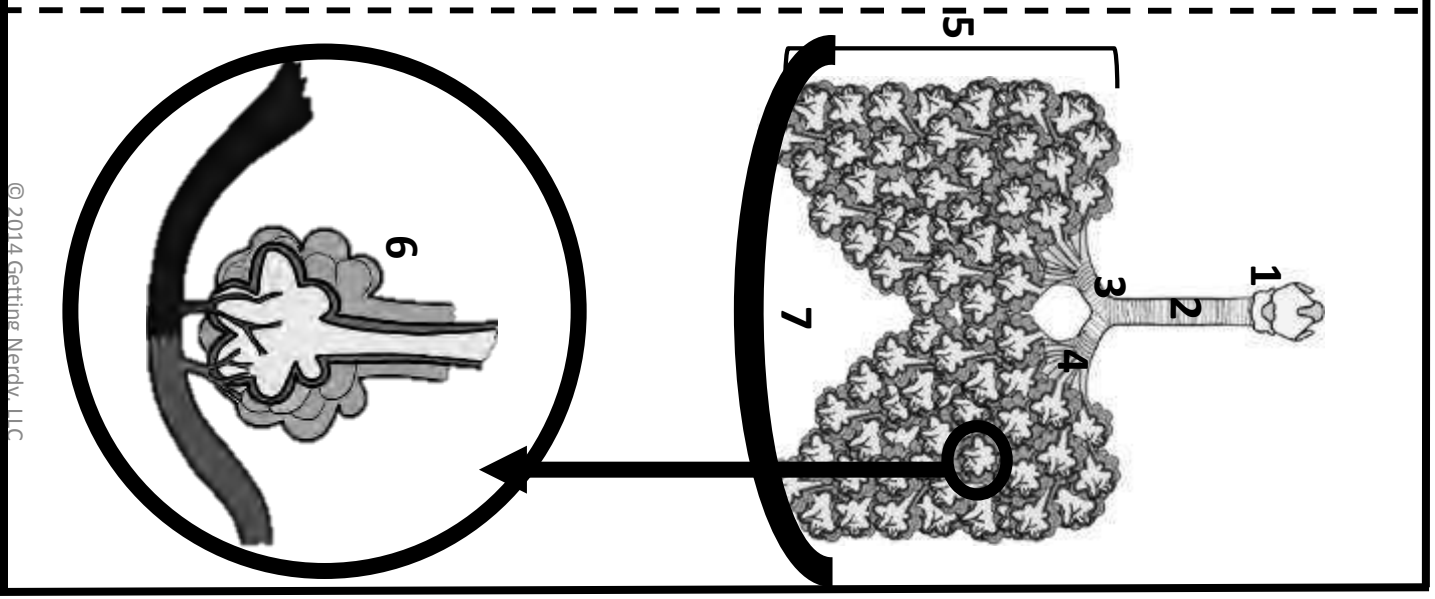

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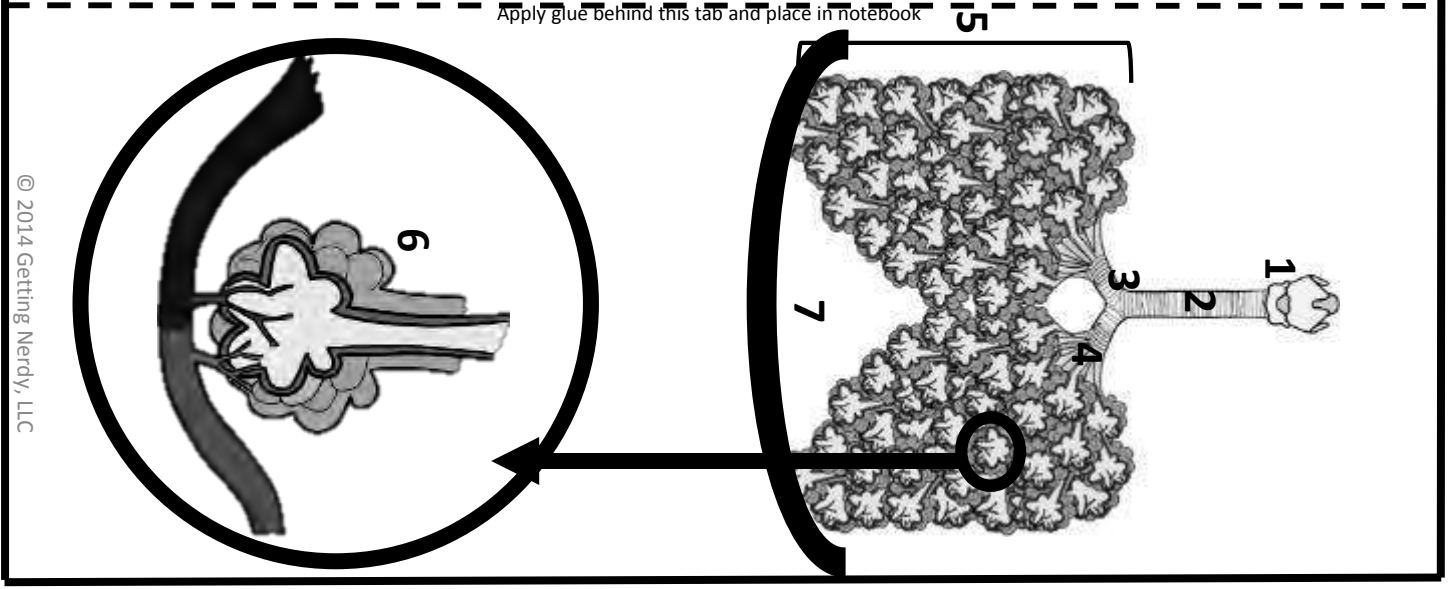

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Glue the Respiratory System Tab Here

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

Directions: Cut out the INB sheet and glue it in to your notebook. Glue the Respiratory System picture sheet over top of the tab labeled “glue respiratory system here”.

Glue the Respiratory System Tab Here

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Directions: Cut out the INB sheet and glue it in to your notebook. Glue the Respiratory System picture sheet over top of the tab labeled “glue respiratory system here”.

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Breathing Respiration vs. Cellular Respiration Teacher Notes/Answer Key

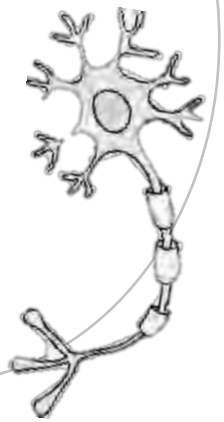
Breathing Respiration vs. Cellular Respiration

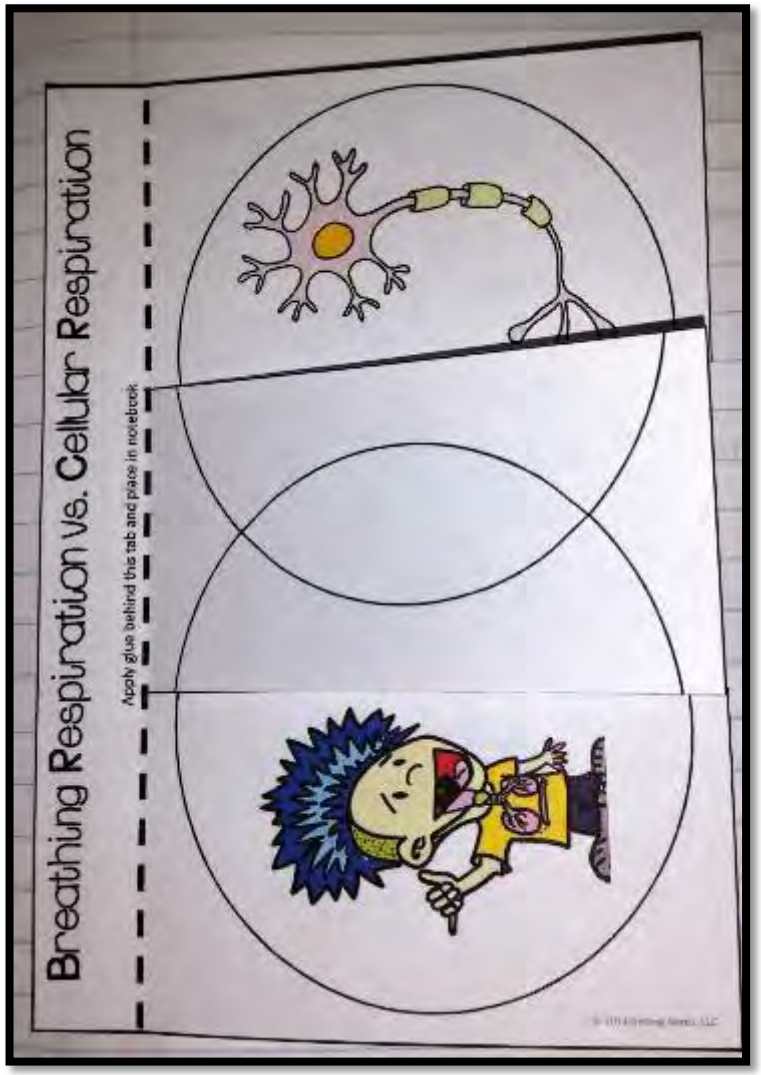
Apply glue behind this tab and place in notebook

Breathing Respiration: Involves inhaling and exhaling air using the lungs. During inhale the diaphragm muscle moves down so the lungs expand. During exhale air moves out auto

Both: Breathing and cellular respiration require and use oxygen and remove carbon dioxide & water.

Cellular Respiration: Is a chemical reaction that occurs within every mitochondria in every cell of the body. It uses oxygen to release ATP energy from the food we eat.





Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the three vertical lines to split the picture in thirds. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the similarities and differences between breathing respiration and cellular respiration.

Breathing Respiration vs. Cellular Respiration

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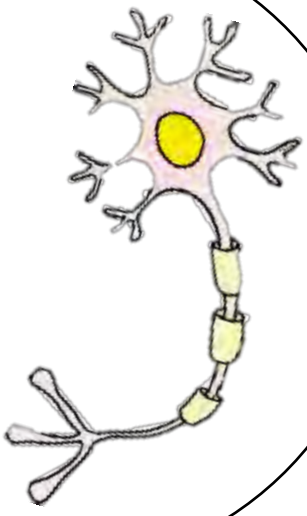

Breathing Respiration vs. Cellular Respiration

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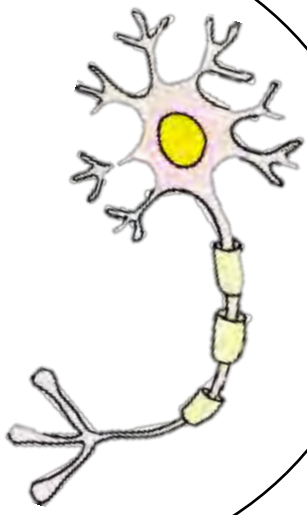

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Breathing Respiration vs. Cellular Respiration

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Breathing Respiration vs. Cellular Respiration

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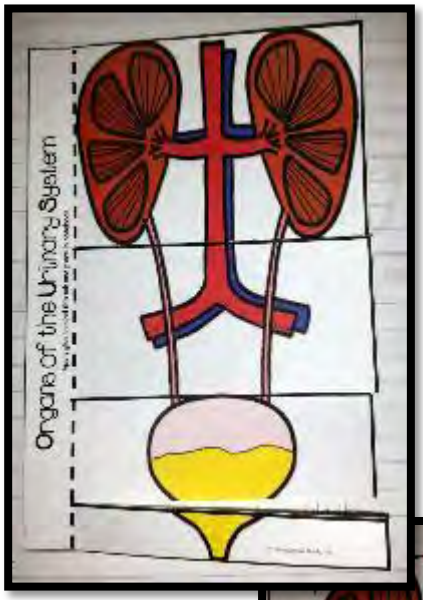
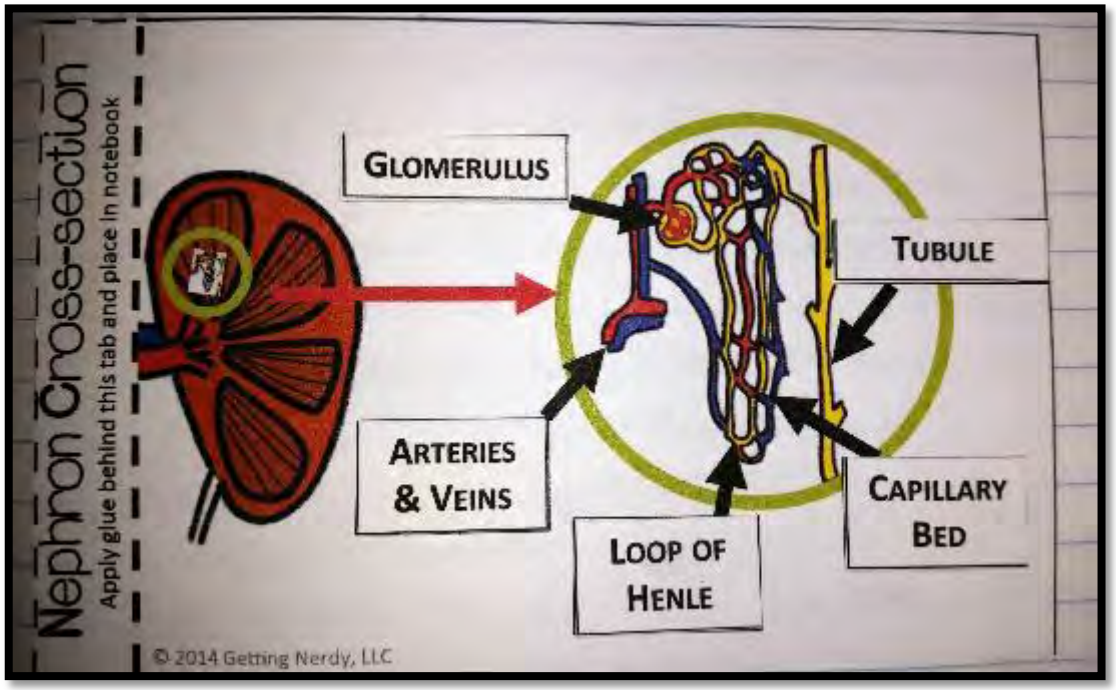
2 URINARY SYSTEM INB ACTIVITIES





I'm Learning About the Urinary System!

I'm Learning About the Urinary System!

I'm Learning About the Urinary System!

I'm Learning About the Urinary System!

Glue Human Body System Page Here

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Glue Human Body System Page Here

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The Organs of the Urinary System Teacher Notes/Answer Key

Organs of the Urinary System

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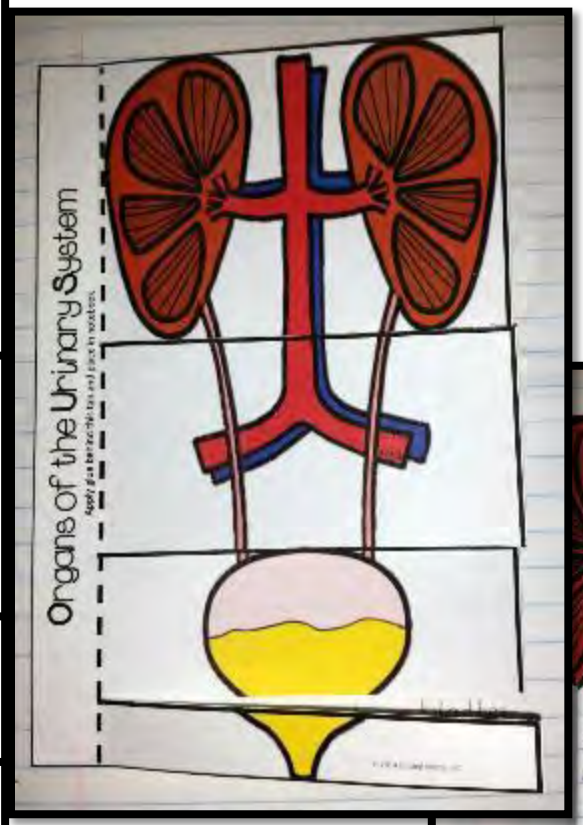
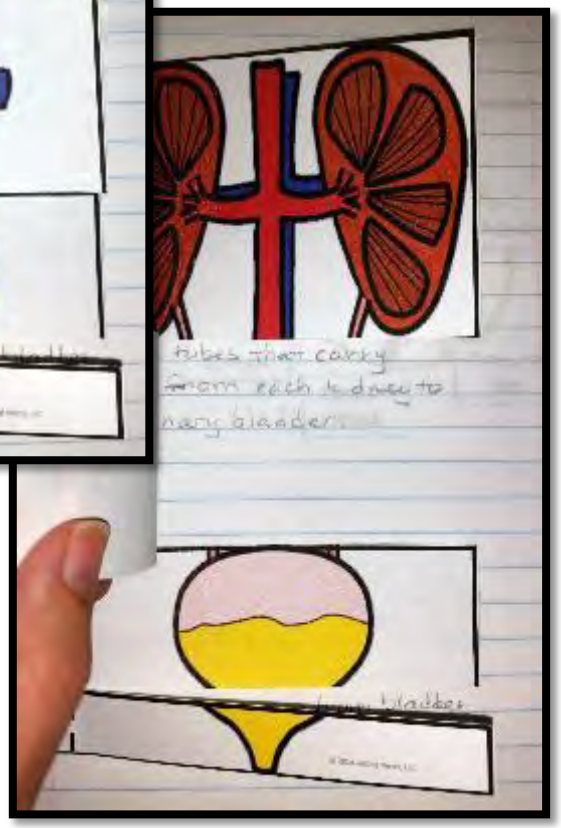
Kidneys: filter blood of waste using tiny structures called nephrons. Unfiltered blood from artery enters kidney and passes through nephrons, removing waste. Nephrons collect waste and release to ureters. Filtered blood returns to bloodstream in veins

Ureters: tubes that carry urine from each kidney to the urinary bladder

Bladder: muscular sac that stores urine until it is released from the body

Urethra: carries urine from the bladder to the outside of the body. Males have common exit for both urine and sperm. Females have a single exit for urine





Directions: Students color the organs of the urinary system, cut out the diagram, and then, glue the INB activity into their notebook along the folded tab. Cut along each dark line to create a four tabbed activity. Underneath each door/flap they write notes about the name and function of the organs of the urinary system.

Organs of the Urinary System

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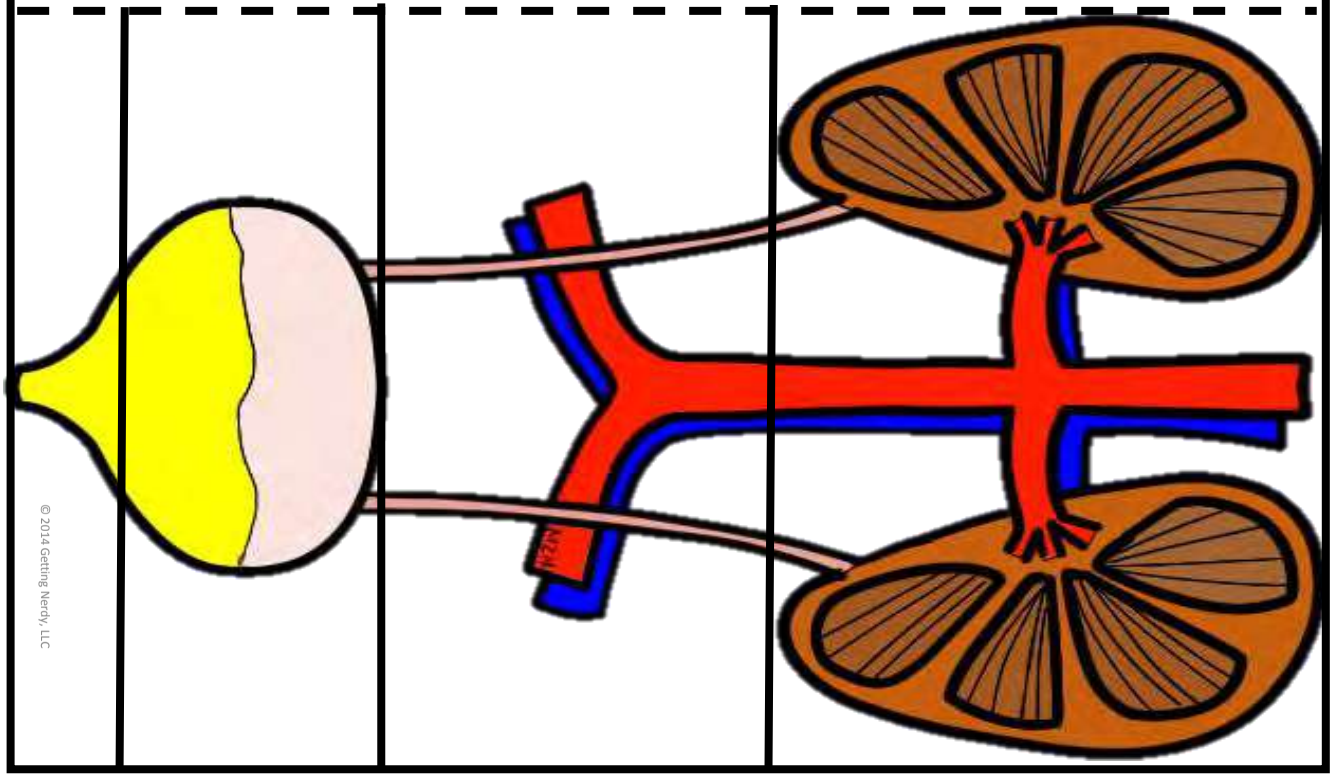

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Organs of the Urinary System

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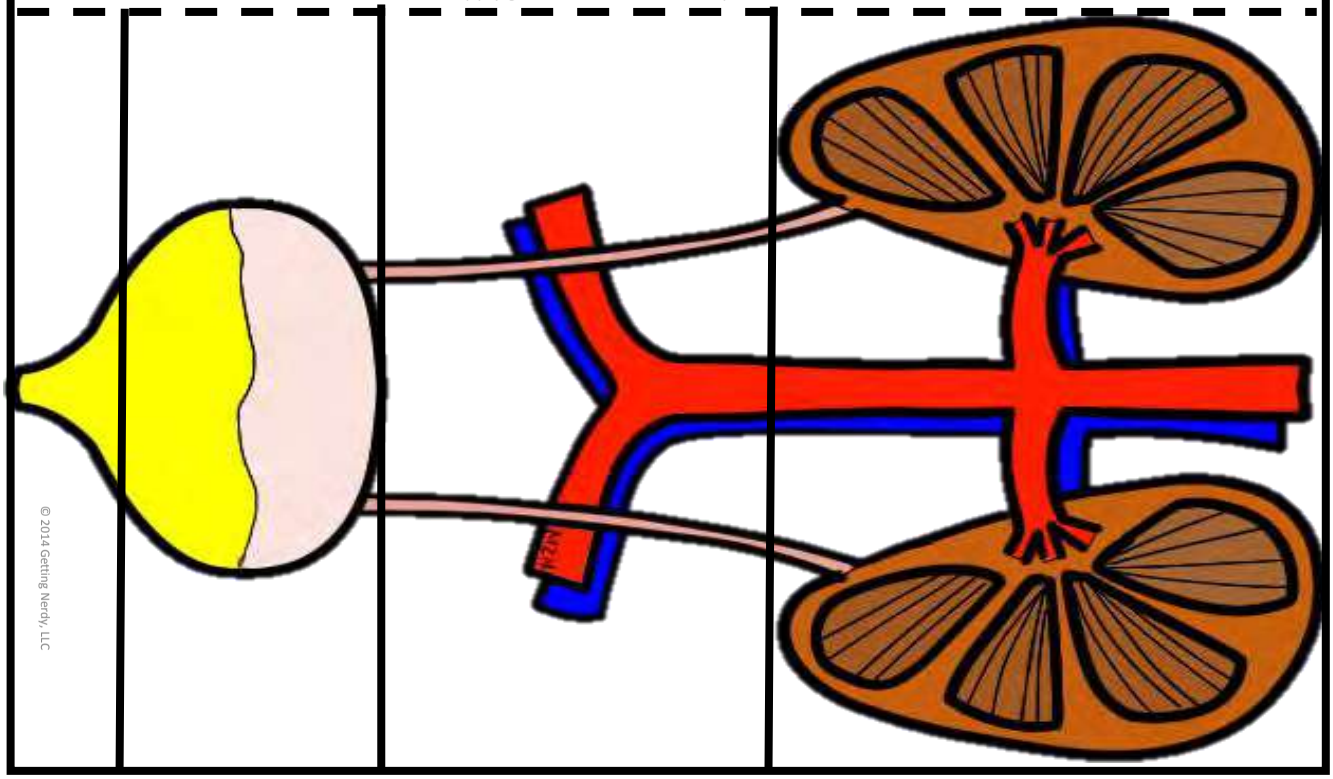

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Organs of the Urinary System

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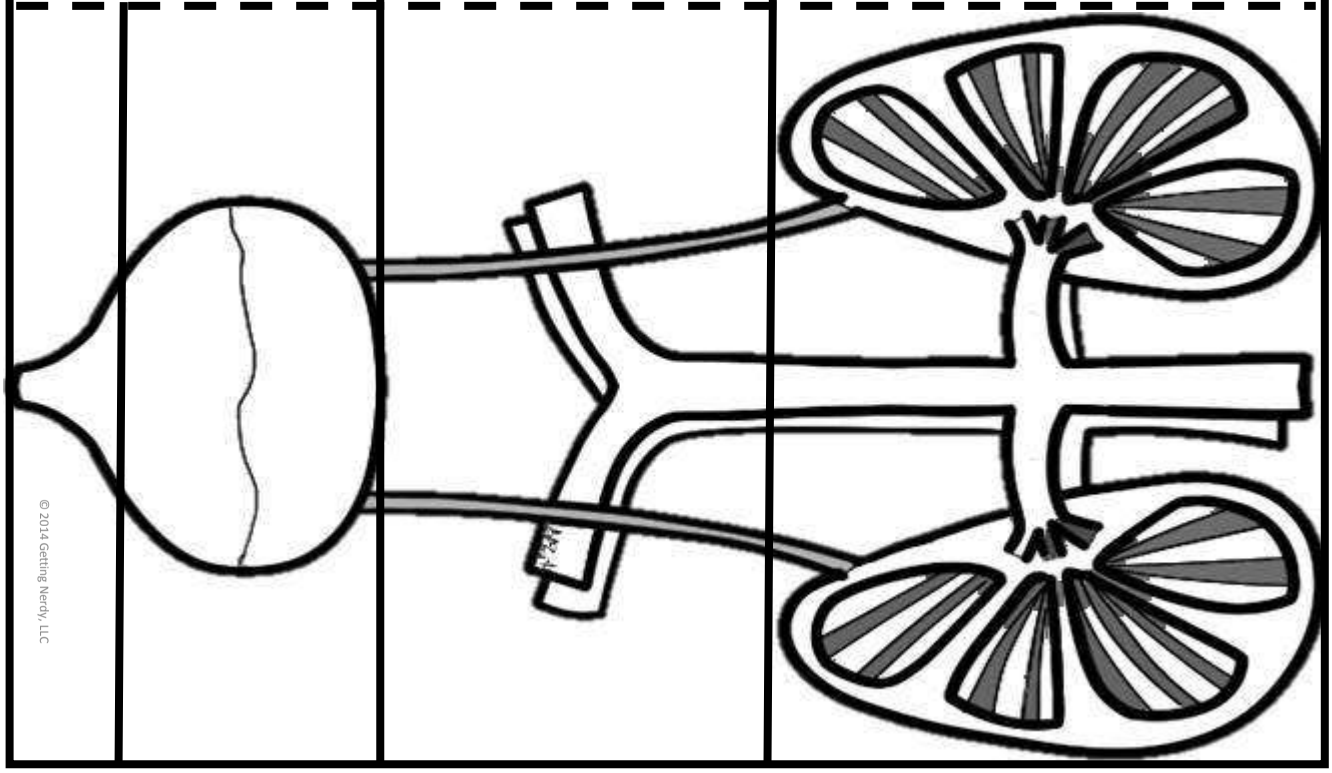

Organs of the Urinary System

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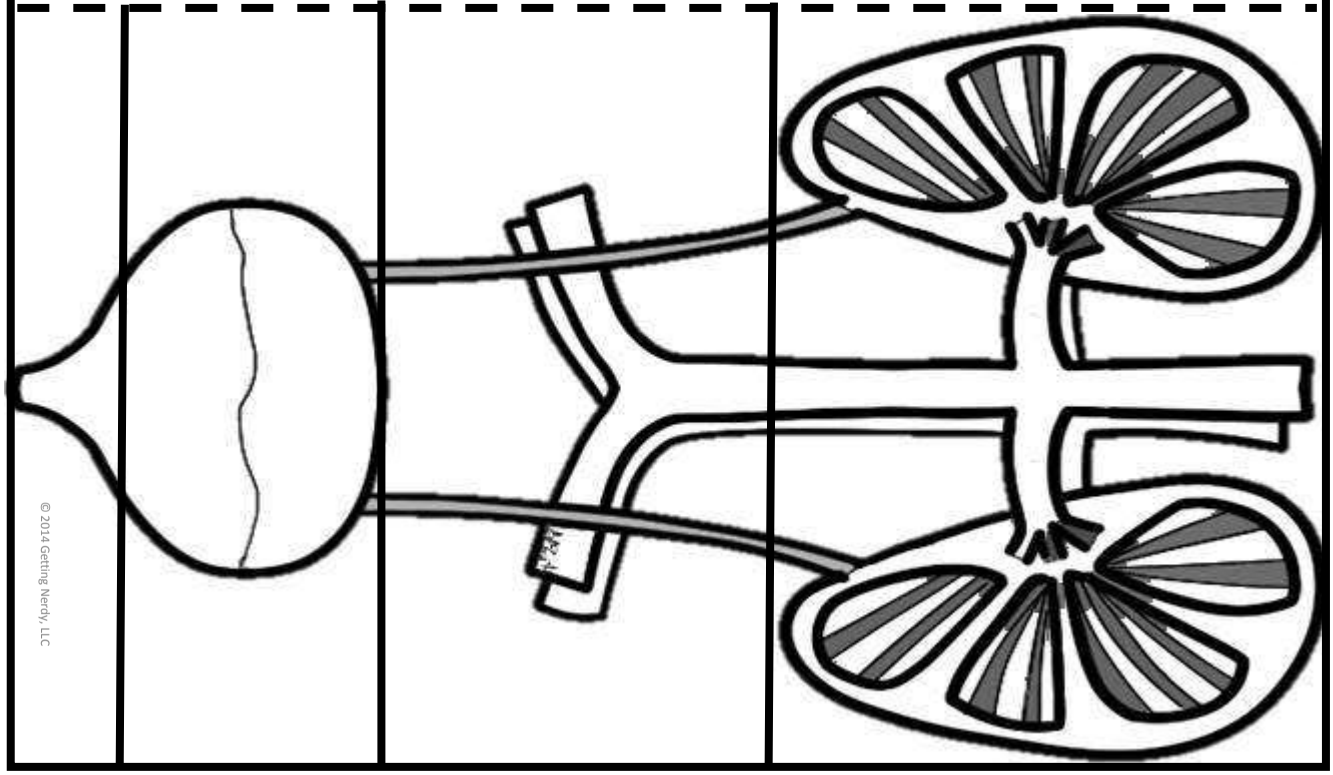

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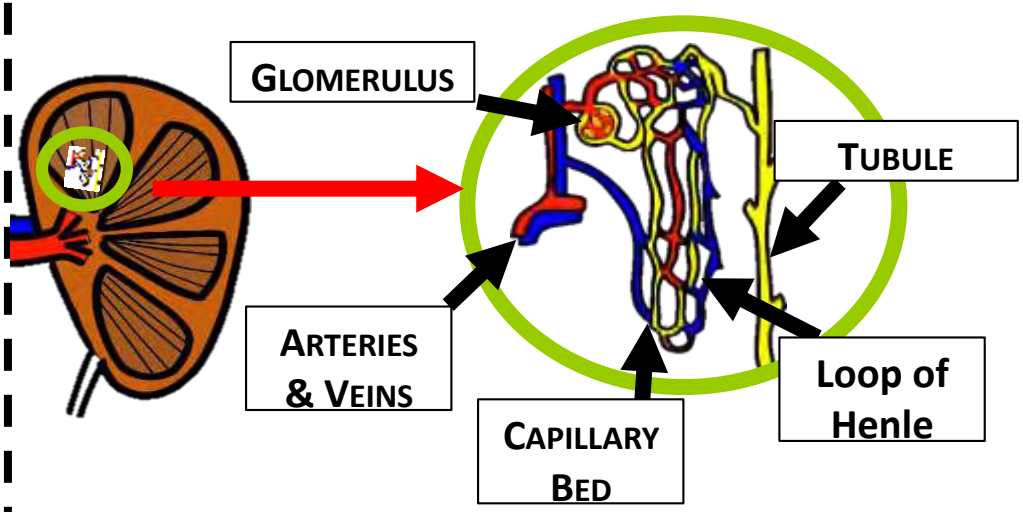
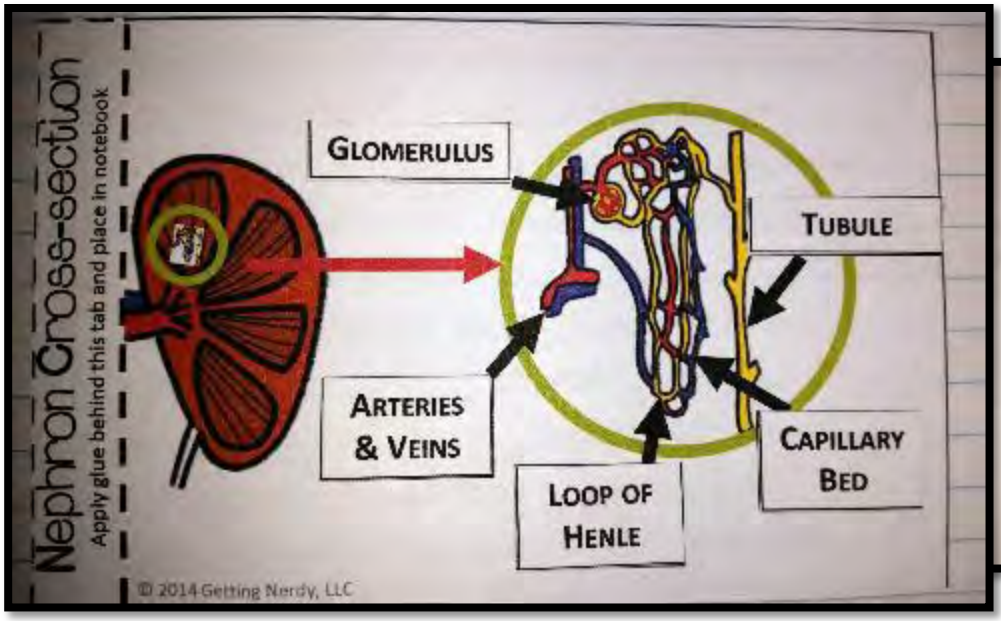
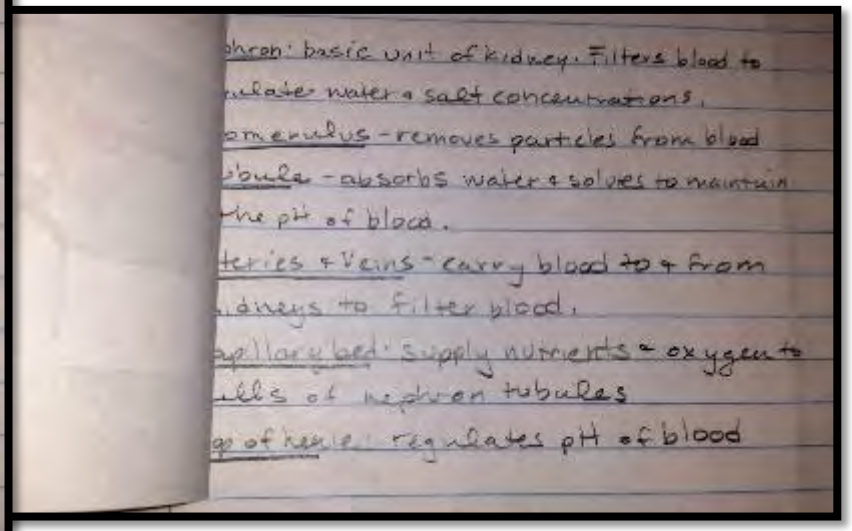
Nephron Cross-Section Teacher Notes/Answer Key

Nephron Cross-section



Nephron: Basic unit of structure and function in the kidney. It is responsible for regulating the concentration of water and salts in the body by filtering the blood and removing any waste as urine.
Glomerulus: Responsible for removing small particles and solutes from the blood.
Tubule: Absorbs water and solutes to maintain pH of blood.
Arteries and Veins: Carry blood to and from kidney for filtration.
Capillary bed: Supply nutrients and oxygen to the cells of the nephron tubules.
Loop of Henle: Responsible for creating a concentration gradient within the kidney which helps regulate pH within the blood.





Nephron Cross-section

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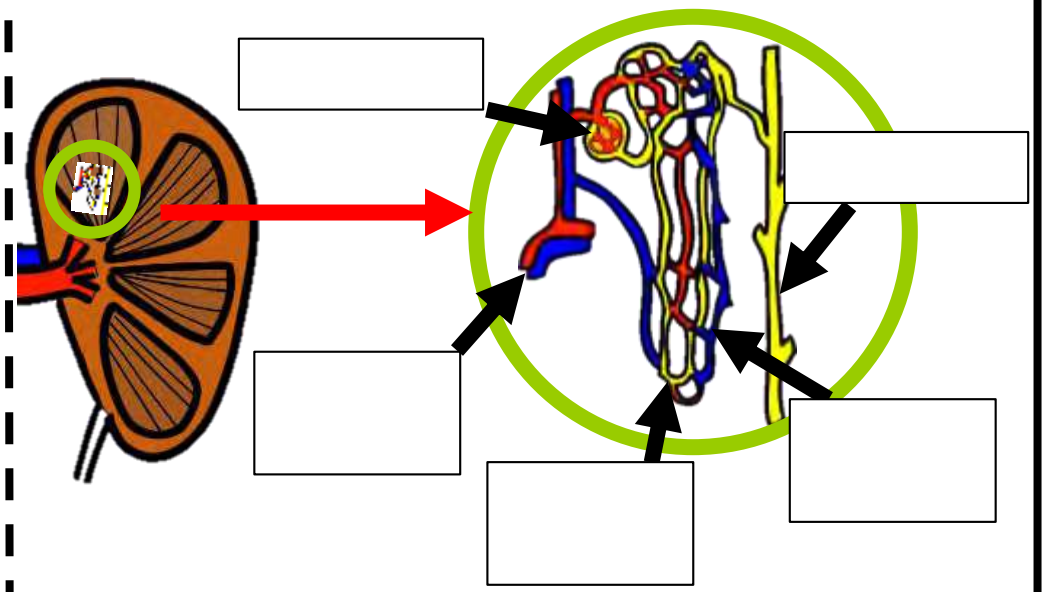
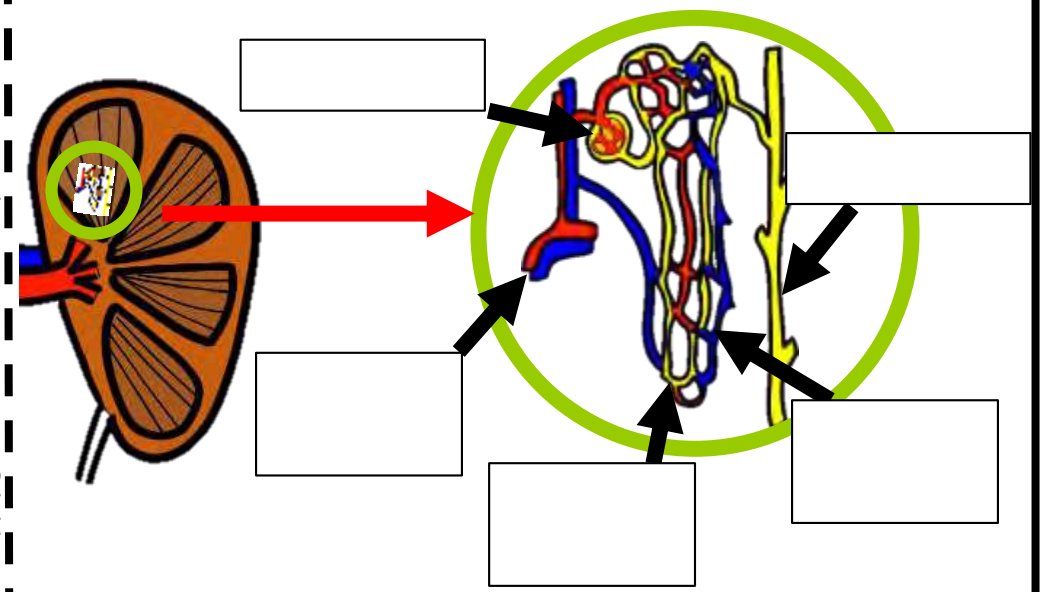


Directions: Cut out and glue the nephron diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the diagram. In your notebook, underneath the diagram, describe the function of each of these nephron parts.

- TUBULE
- GLOMERULUS
- CAPILLARY BED
- ARTERIES & VEINS
- LOOP OF HENLE

Nephron Cross-section

Apply glue behind this tab and place in notebook

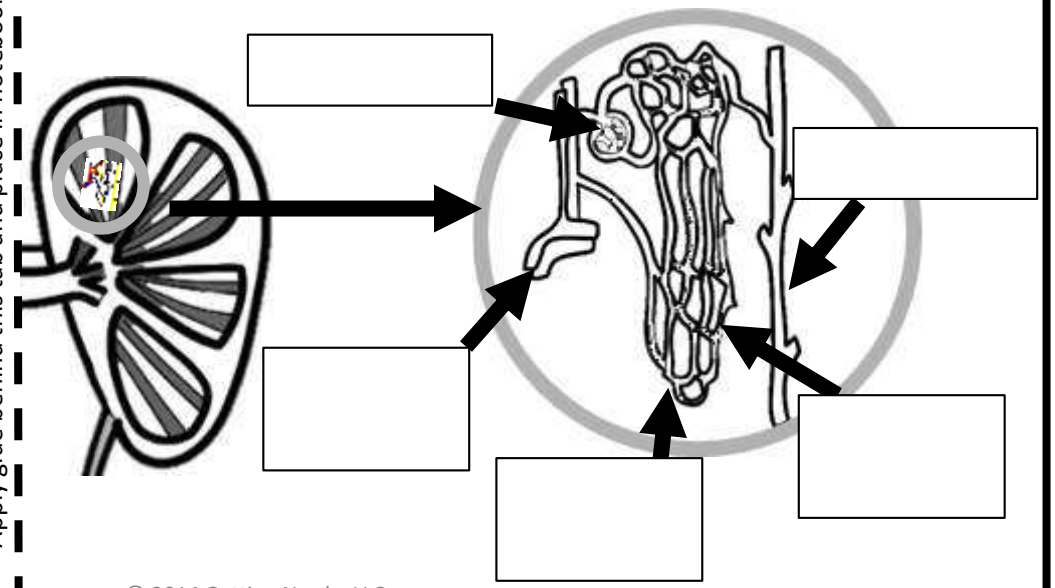


Directions: Cut out and glue the nephron diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the diagram. In your notebook, underneath the diagram, describe the function of each of these nephron parts.

- TUBULE
- GLOMERULUS
- CAPILLARY BED
- ARTERIES & VEINS
- LOOP OF HENLE

Nephron Cross-section

Apply glue behind this tab and place in notebook



Directions: Color, cut out, and glue the nephron diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the diagram. In your notebook, underneath the diagram, describe the function of each of these nephron parts.

- TUBULE
- GLOMERULUS
- CAPILLARY BED
- ARTERIES & VEINS
- LOOP OF HENLE

Nephron Cross-section

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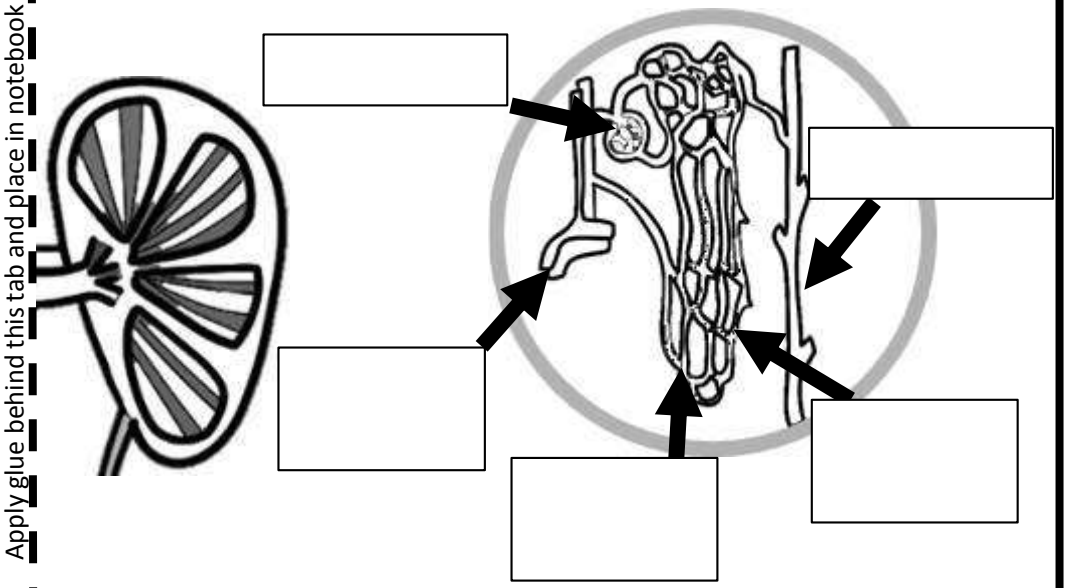

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- TUBULE
- GLOMERULUS
- CAPILLARY BED
- ARTERIES & VEINS
- LOOP OF HENLE

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Glue Nephron Cross-Section Here

Nephron:

Glomerulus:

Tubule:

Arteries and Veins:

Capillary Bed:

Loop of Henle:

Directions: Cut out and glue this cut out into your notebook. Glue the nephron cross section page over the tab marked "glue nephron cross-section here". Then, complete your activity.

Glue Nephron Cross-Section Here

Nephron:

Glomerulus:

Tubule:

Arteries and Veins:

Capillary Bed:

Loop of Henle:

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Directions: Cut out and glue this cut out into your notebook. Glue the nephron cross section page over the tab marked "glue nephron cross-section here". Then, complete your activity.

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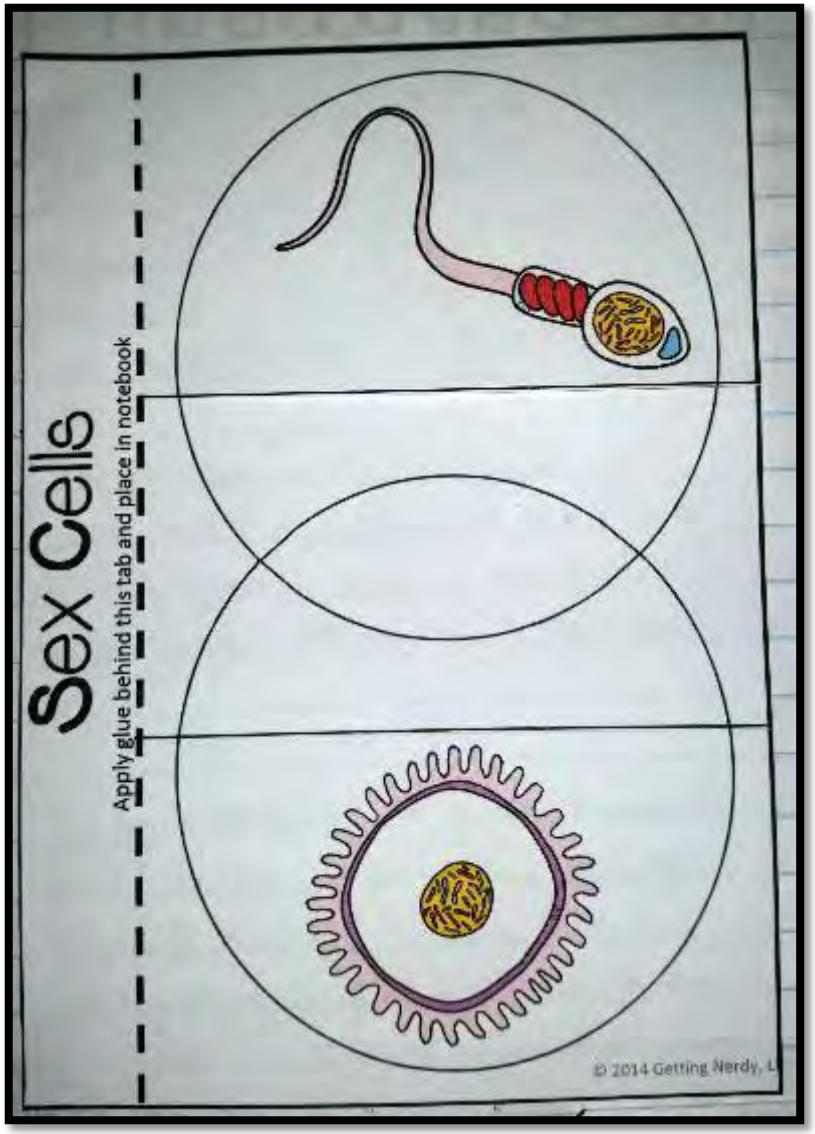
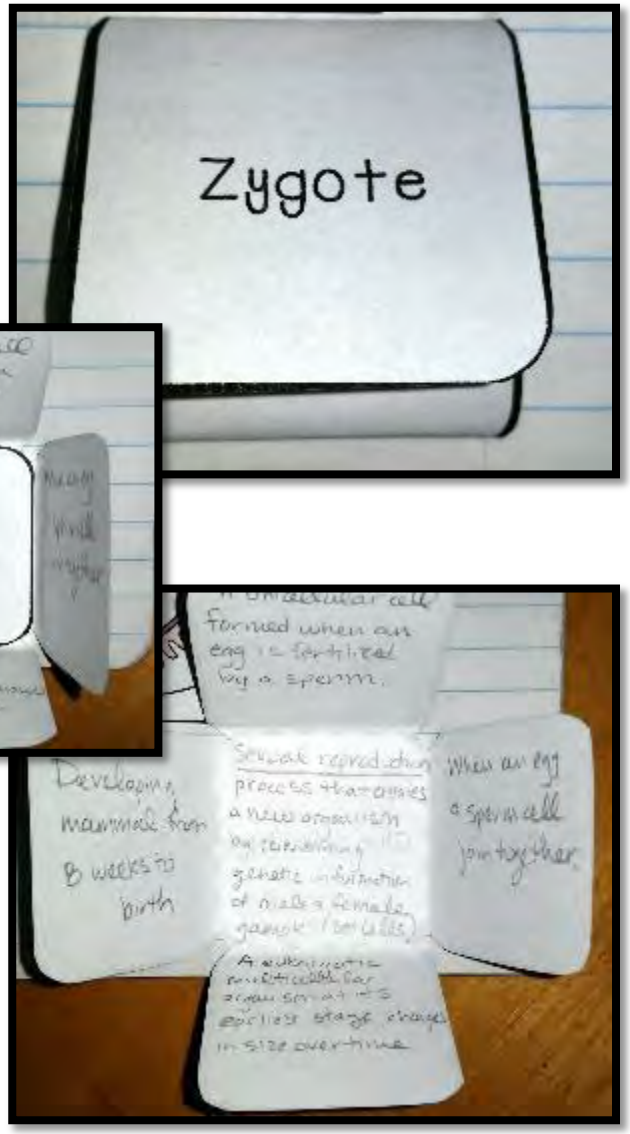
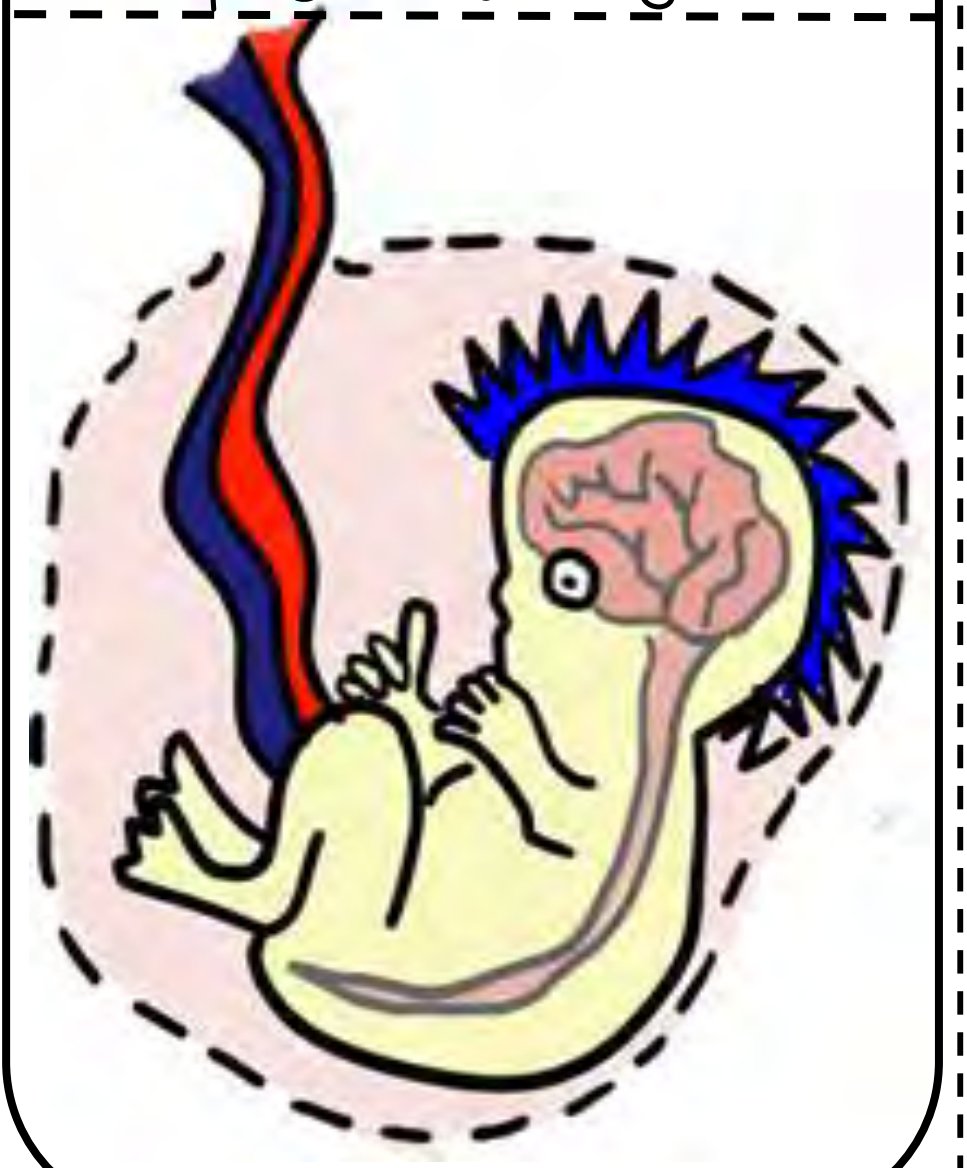
2 REPRODUCTIVE SYSTEM INB ACTIVITIES

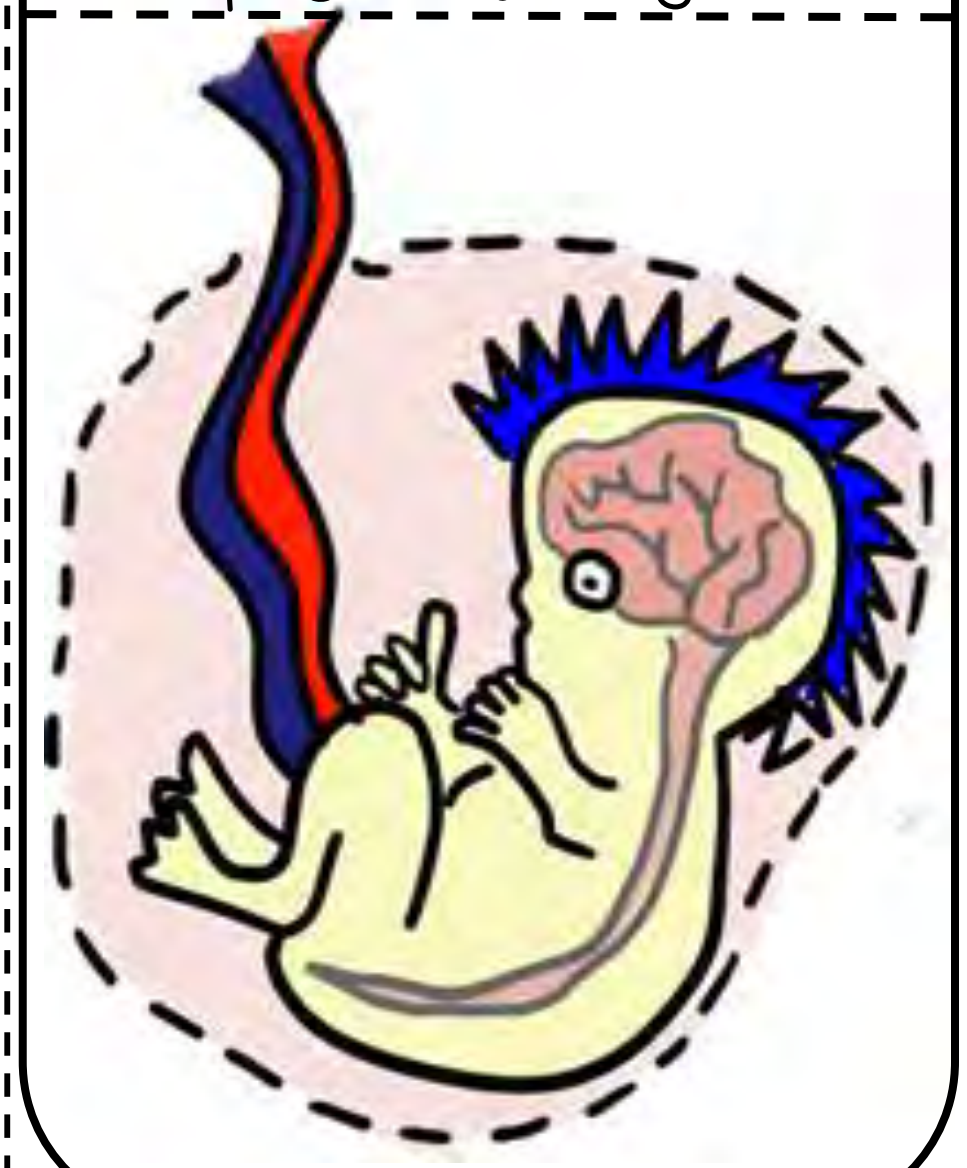




I'm Learning About the Reproductive System!



I'm Learning About the Reproductive System!



I'm Learning About the Reproductive System!

I'm Learning About the Reproductive System!

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Glue Human Body System Page Here

K	W	L

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Egg and Sperm Teacher Notes/Answer Key

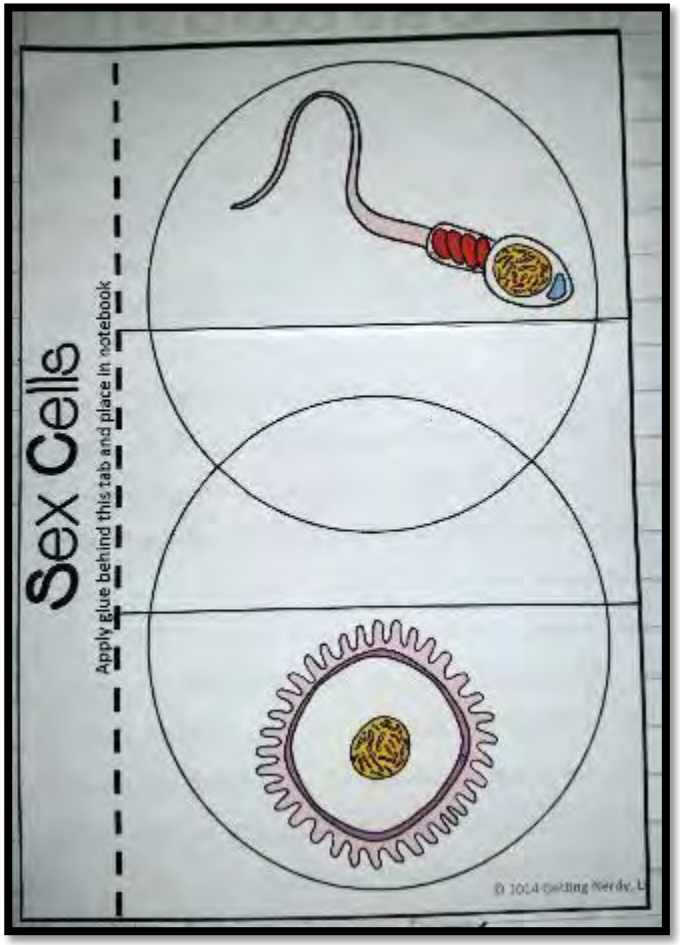
Sex Cells

Apply glue behind this tab and place in notebook

Egg (ovum or oocyte):
- Created by the female's ovaries before birth, are released at puberty and stop at the time of menopause.
- One of the largest cells in humans.
-Filled mostly with fluid/cytoplasm.
- Round in shape
- Live 12-24 hours.
- Single egg produced during each menstrual cycle.
- Contain X chromosome

Both:
-Sexual Reproduction involves the production of egg and sperm (gametes)
- Each cell contains ½ of the genetic information from each parent (23 chromosomes each).
- Egg and sperm join together in fertilization.
- A fertilized egg is called a zygote.
- XX = female & XY = male

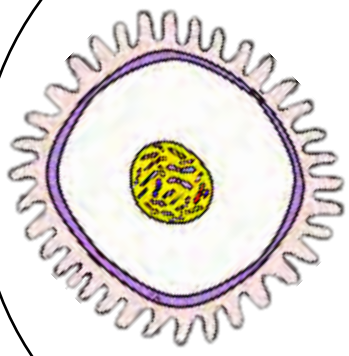
Sperm:
- Created by the male's testes from puberty until death.
- Smallest cell in humans
- Has a tail for swimming.
- Filled with a small amount of cytoplasm.
- Have a small nucleus and many mitochondria to provide energy.
- Nearly straight in shape.
- Live 3-5 days
- Hundreds of millions of sperm are produced each day
- Contain X or Y Chromosome
- Sperm determines the gender of offspring.



Directions: Cut out and glue the diagram into your notebook along the back of the tab. Cut along the three vertical lines to split the picture in thirds. Fold the tabs back along the dashed line and apply glue to the back of the tab. Underneath the flaps, describe the similarities and differences between egg and sperm.

Sex Cells

Apply glue behind this tab and place in notebook



Sex Cells

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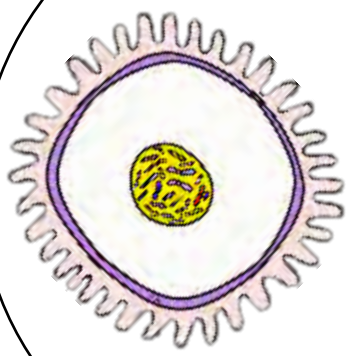

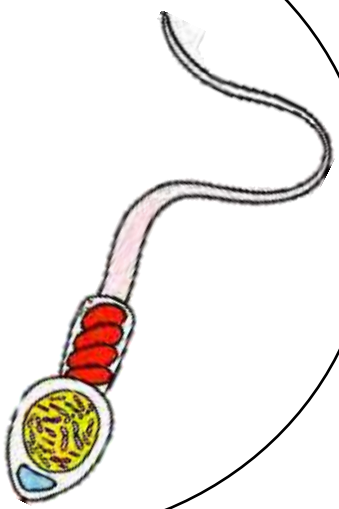

Sex Cells

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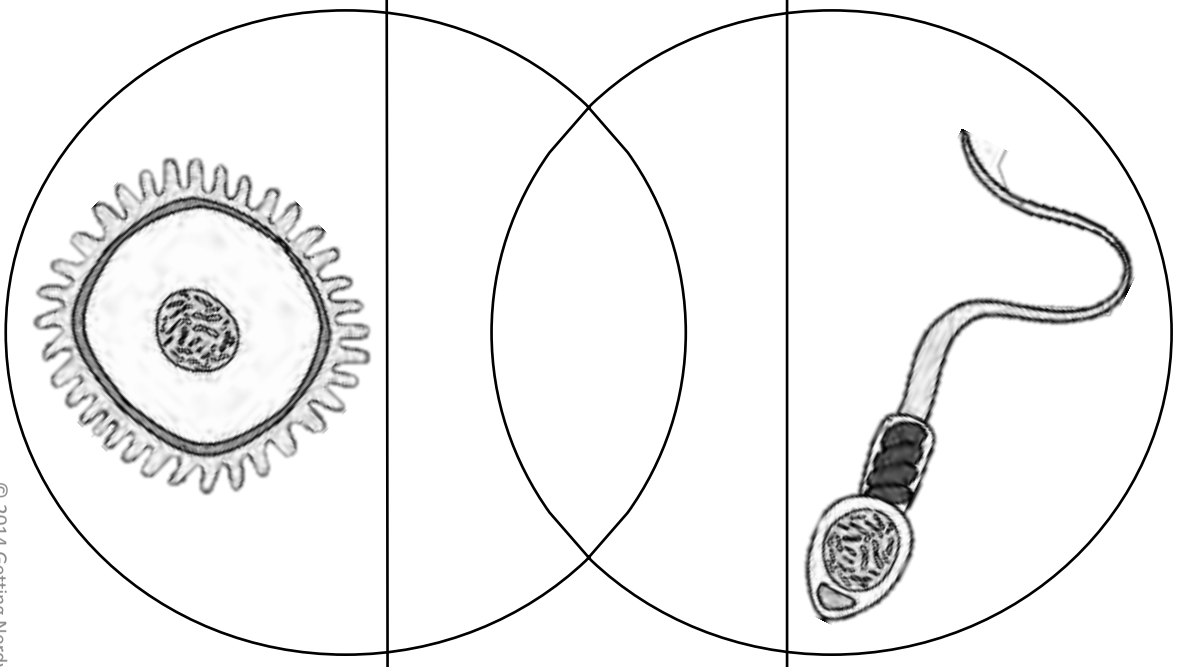
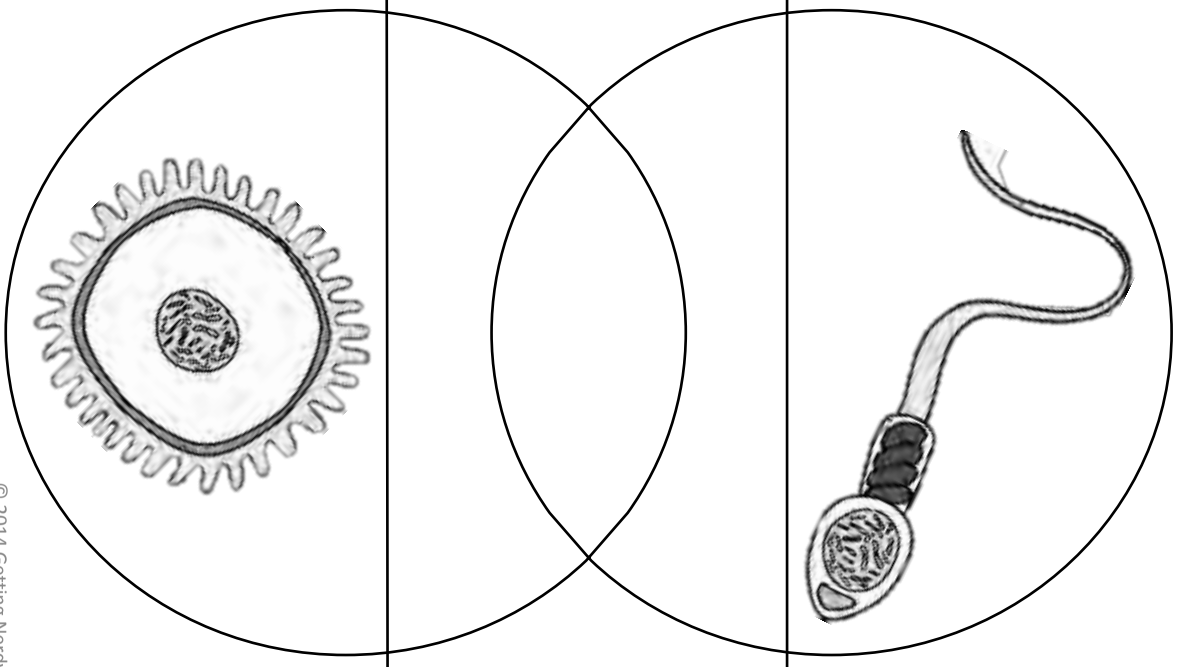
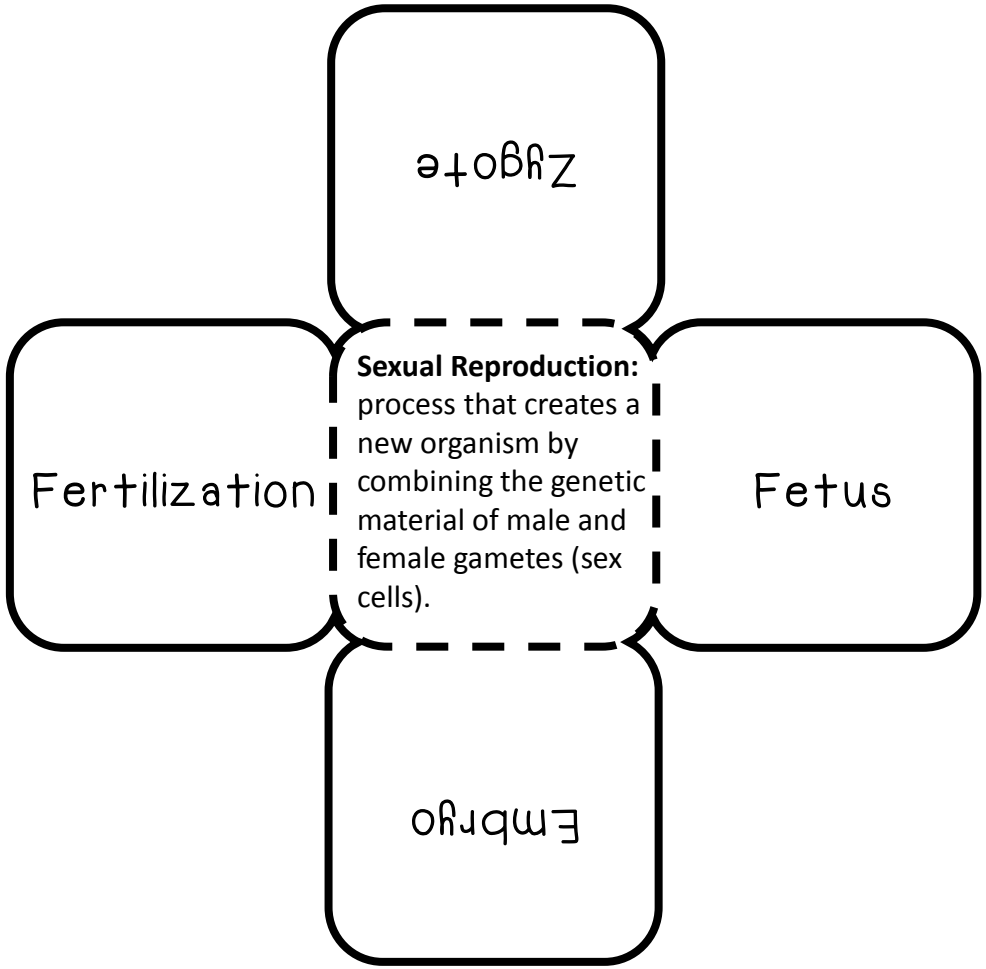


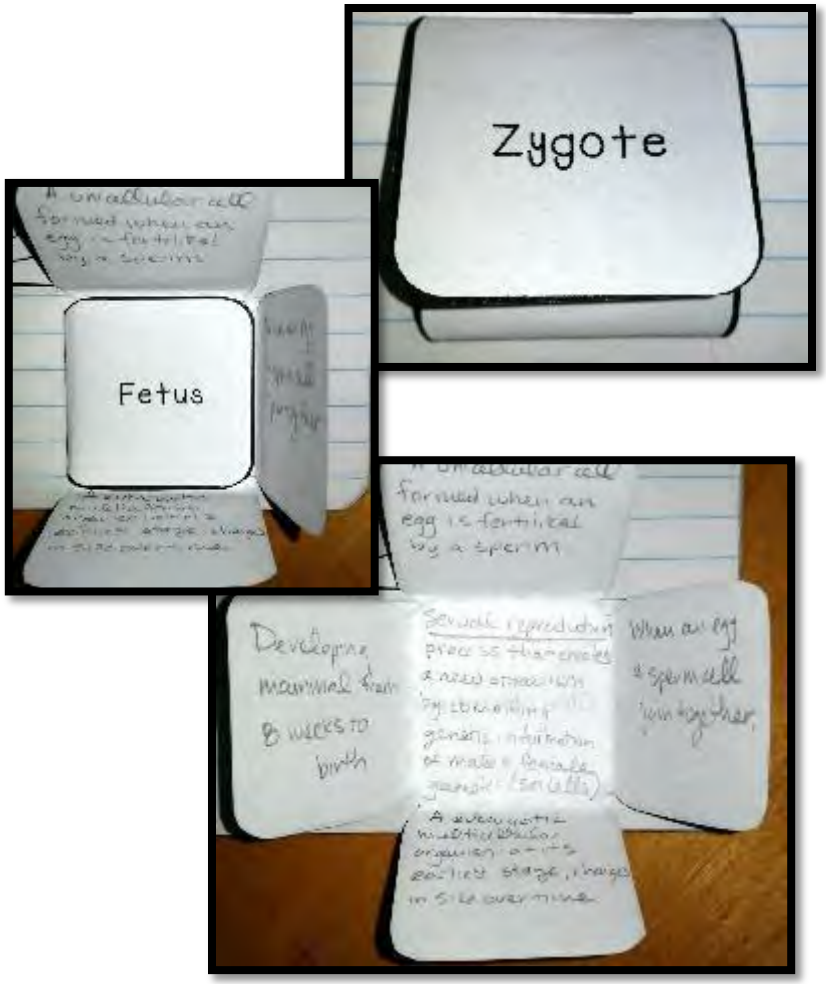
Sex Cells

Apply glue behind this tab and place in notebook



Stages of Human Development Teacher Notes/Answer Key





Directions: Underneath each door/flap students write notes about the stages of development in humans :
Fertilization: When egg and sperm join together
Zygote: a unicellular cell formed when an egg is fertilized by a sperm cell; stays the same size
Embryo: a eukaryotic multicellular organism at its earliest stage; changes in size over time – after a zygote and before a fetus.
Fetus: developing mammal from 8 weeks to birth

Zygote

Fertilization | Glue down here | Fetus

Embryo

Directions: Cut out the diagram and glue the "glue down here" side of the square into your notebook while leaving the flaps free. In the center square describe sexual reproduction. Crease along the dotted lines and fold in the sides followed by the bottom and top

Directions: Cut out the diagram and glue the "glue down here" side of the square into your notebook while leaving the flaps free. In the center square describe sexual reproduction. Crease along the dotted lines and fold in the sides followed by the bottom and top

Zygote

Fertilization | Glue down here | Fetus

Embryo

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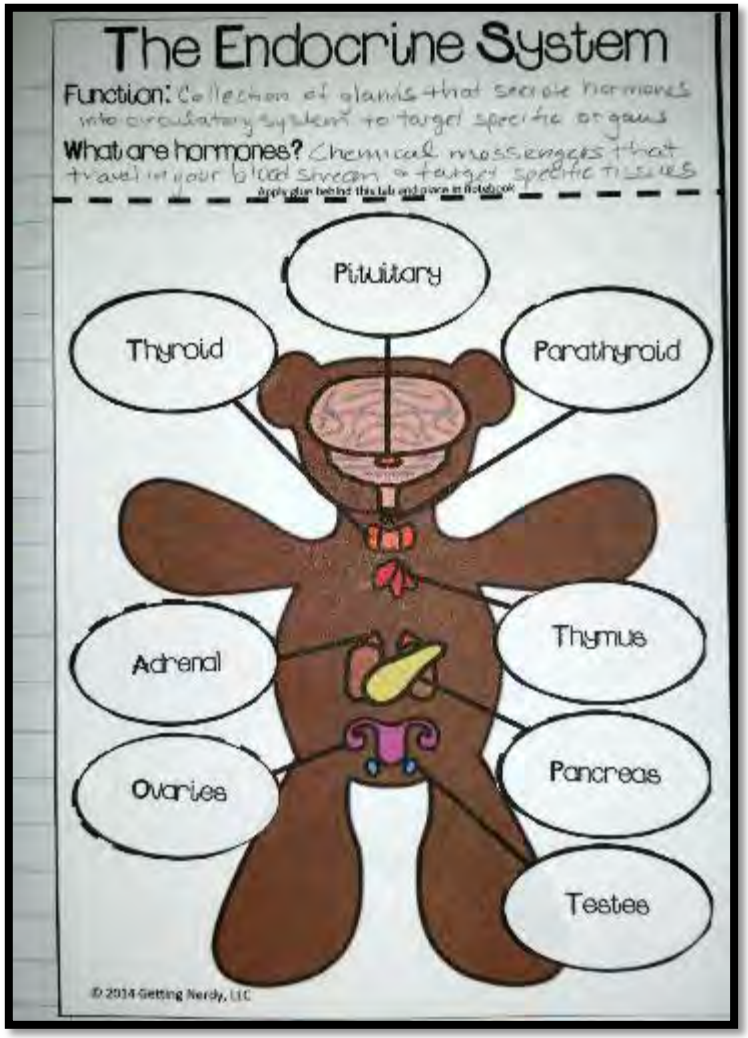
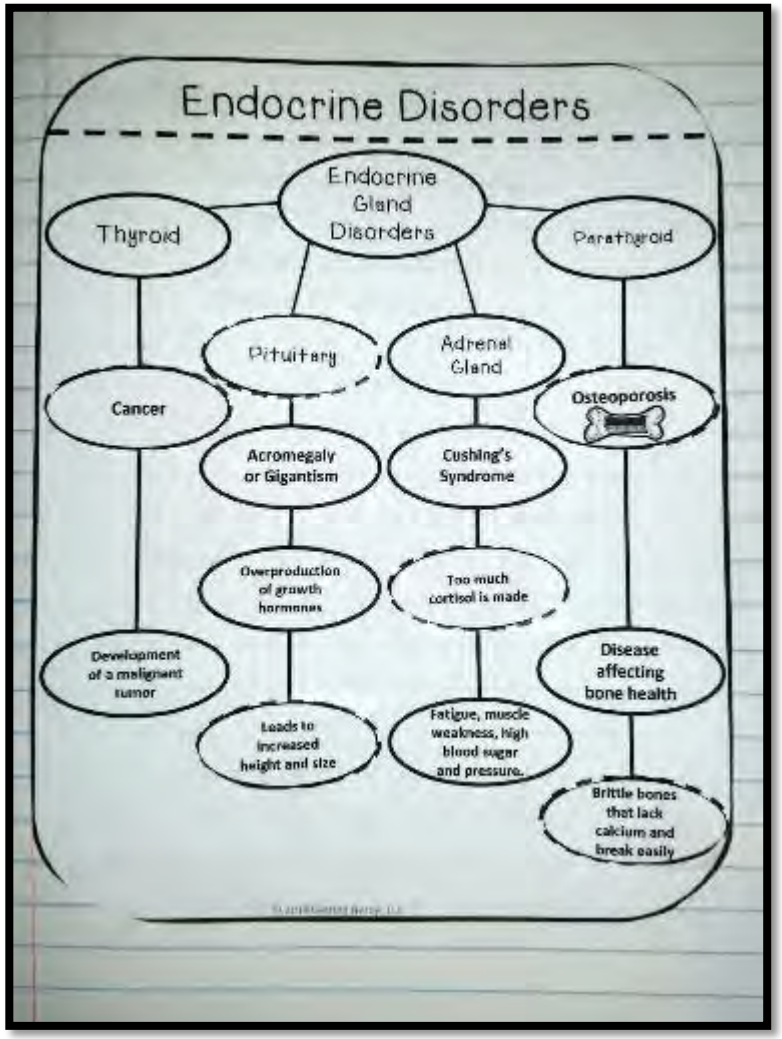
2 ENDOCRINE SYSTEM INB ACTIVITIES





I'm Learning About the Endocrine System!

I'm Learning About the Endocrine System!

I'm Learning About the Endocrine System!

I'm Learning About the Endocrine System!

Glue Human Body System Page Here

K	W	L

Glue Human Body System Page Here

K	W	L

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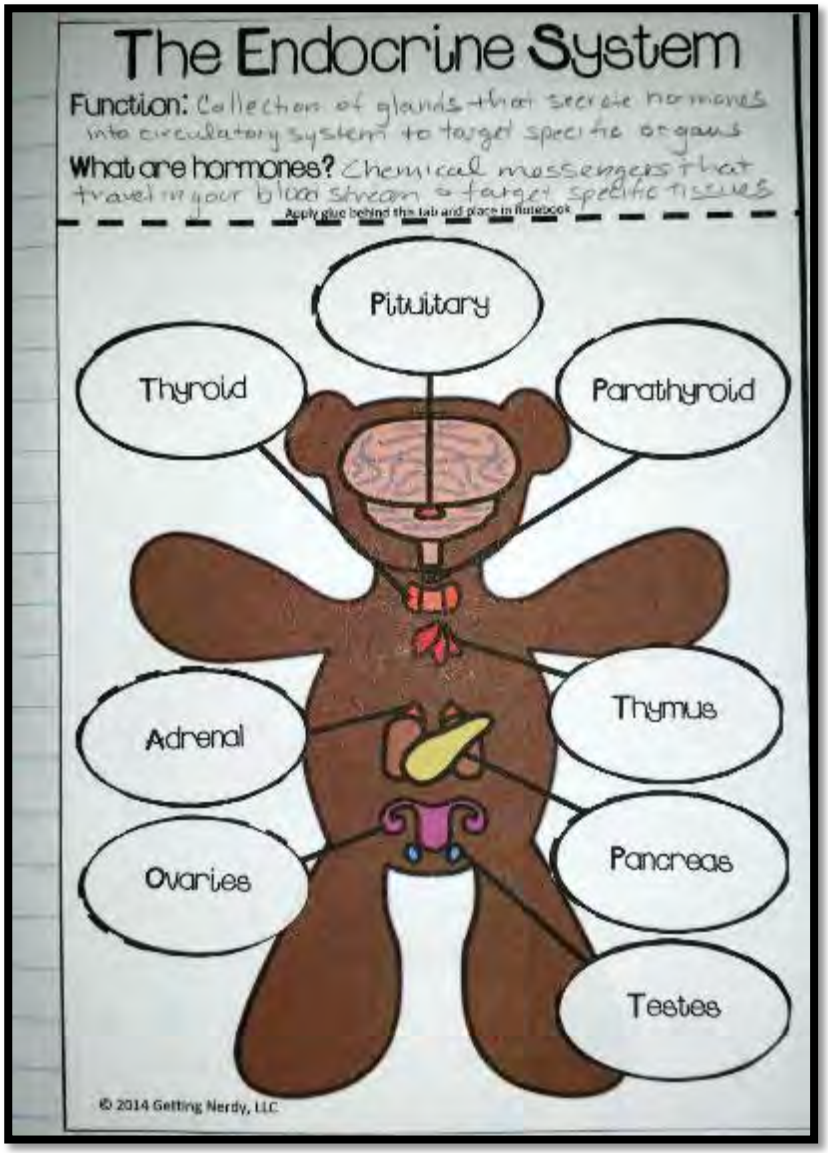
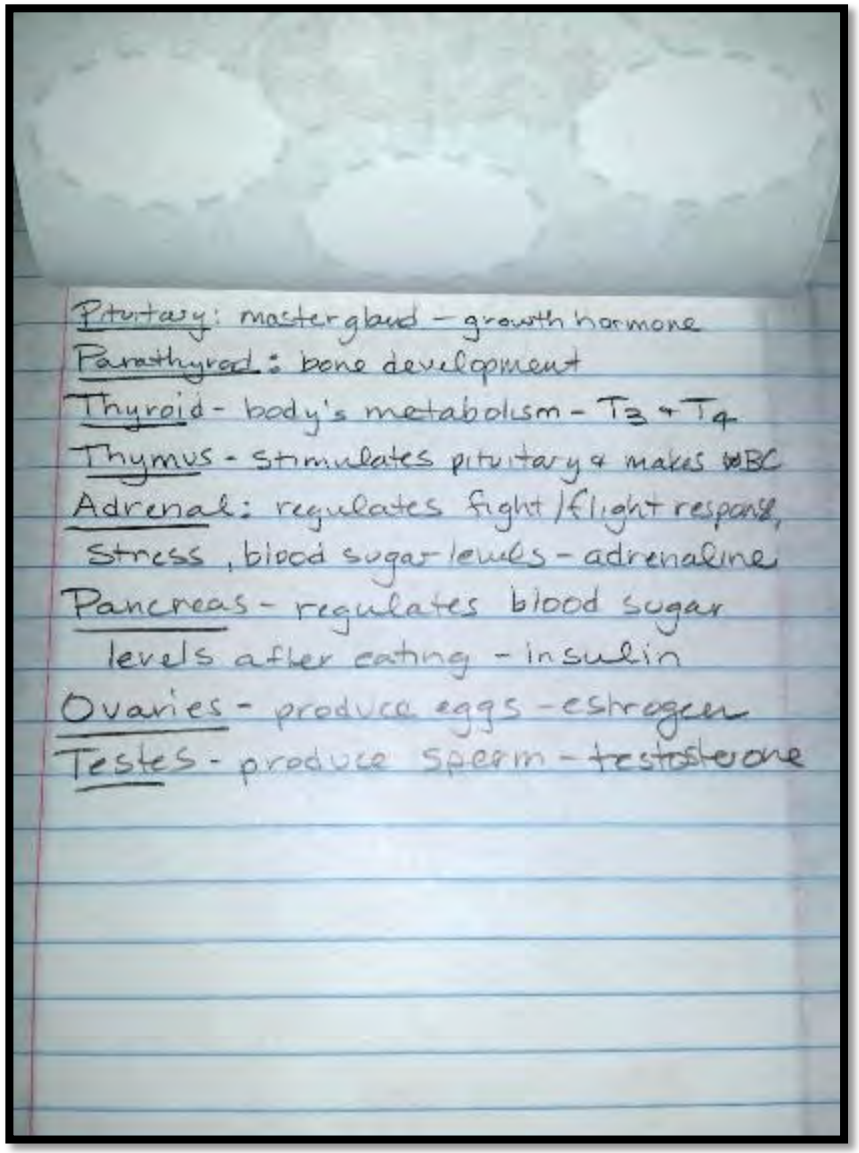
The Endocrine System Teacher Notes/Answer Key

Directions: Cut out and glue the Endocrine bear diagram into your notebook along the top tab. Cut out the terms in the circles and paste them in the appropriate spot to correctly label the endocrine glands. In your notebook, underneath the diagram, describe the function and/or hormones released by each endocrine gland.





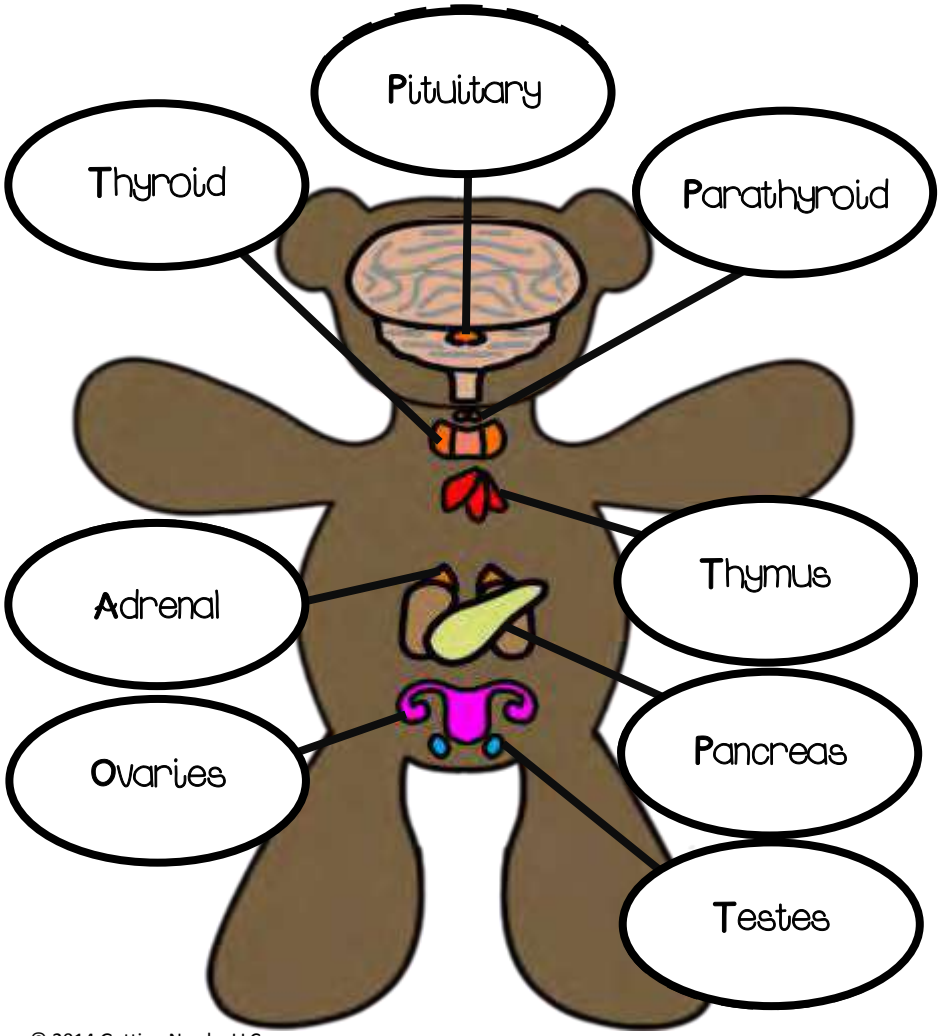
The Endocrine System Teacher Notes/Answer Key

The Endocrine System

Function: A collection of glands of that secrete hormones directly into the circulatory system to be carried toward specific target organs.

What are hormones? Hormones are your body's chemical messengers. They travel in your bloodstream to specific tissues or organs.

Apply glue behind this tab and place in notebook



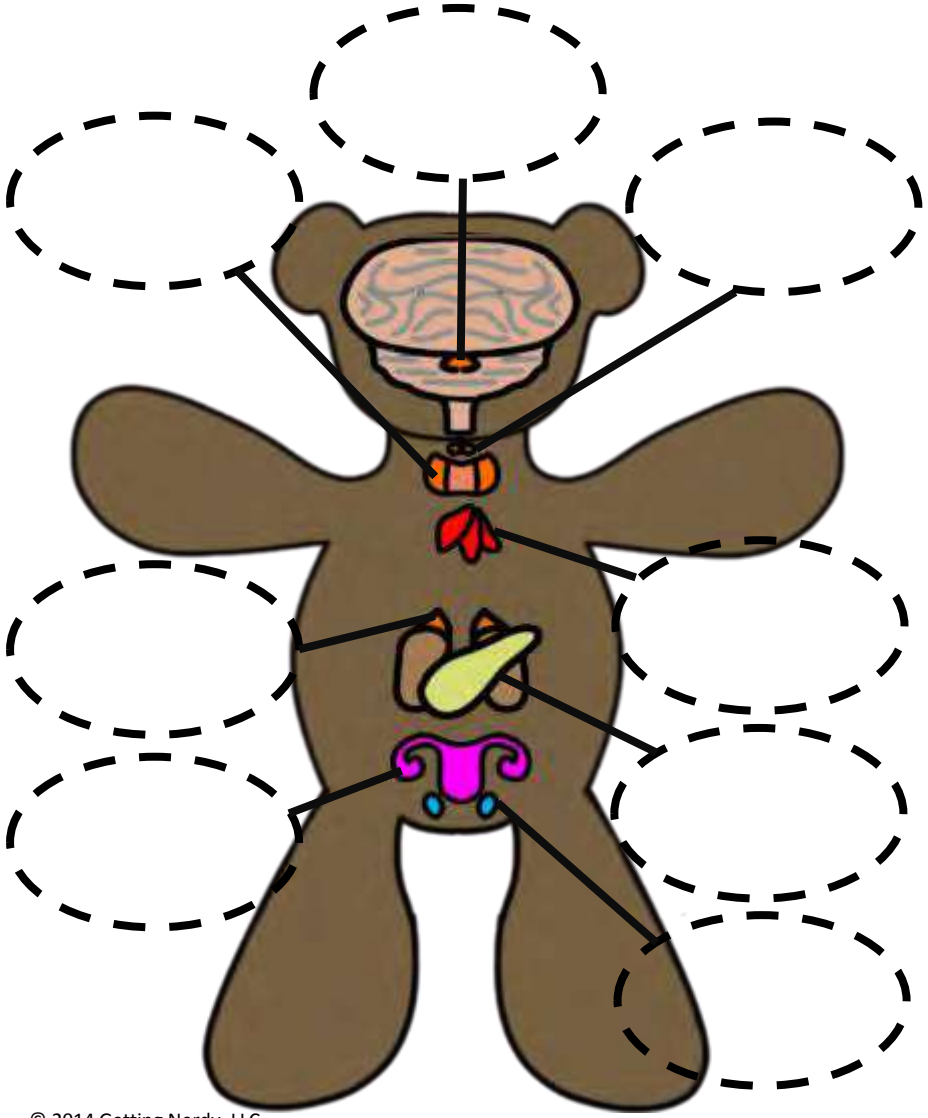
Endocrine Gland	Function	Hormones Released
Pituitary	Known as the "master gland" for its control of the endocrine system. Stimulates growth and repair of body cells.	Produces seven hormones including human growth hormone (hGH) and thyroid-stimulating hormone (TSH)
Parathyroid	Regulates calcium and phosphorous levels which help in bone development.	Parathyroid hormone
Thyroid	Controls the rate at which the body produces energy from nutrients - metabolism.	Triiodothyronine (T3) and Thyroxine (T4)
Thymus	Increases white blood cell function. Increases immune response and stimulates certain pituitary hormones.	Thymosin, Thymulin
Adrenal	Helps to react to danger- fight or flight response. Regulates the body's response to stress, blood sugar levels, cardiovascular and gastrointestinal function.	Adrenaline and steroid hormones like Cortisol
Pancreas	Hormone lowers blood glucose levels after a meal by stimulating the absorption of glucose by the liver and muscle tissue.	Insulin
Ovaries	Produce eggs, sexual maturity, healthy menstrual cycle.	Estrogen and Progesterone
Testes	Promotes the production of sperm, sexual maturity, maintains healthy levels of muscle and bone mass	Testosterone

The Endocrine System

Function:

What are hormones?

Apply glue behind this tab and place in notebook



Directions: Cut out and glue the Endocrine Bear diagram into your notebook along the top tab. Cut out the terms below and paste them in the appropriate spot on the diagram to correctly label each gland. In your notebook, underneath the diagram, describe the function of each of these endocrine glands and list some of the hormones each gland releases.

Pituitary

Thyroid

Parathyroid

Adrenal

Thymus

Pancreas

Ovaries

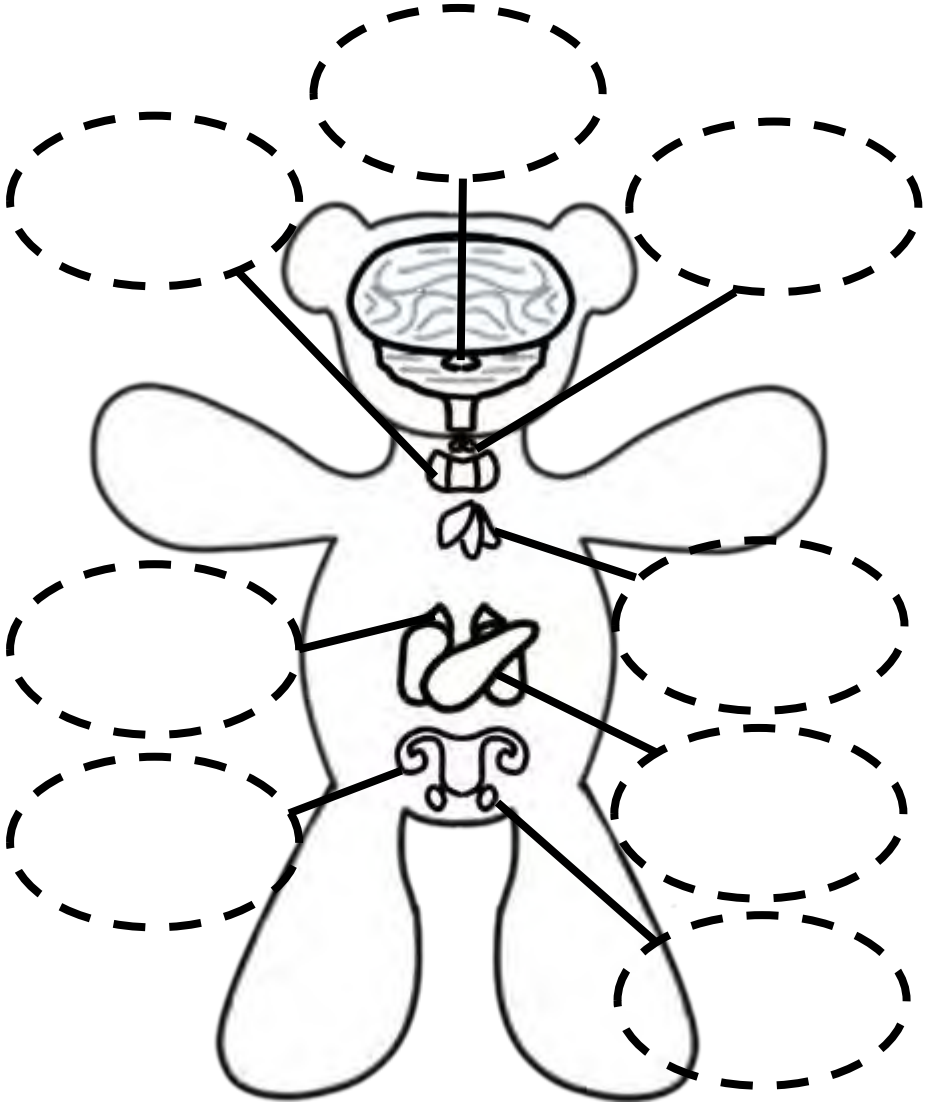
Testes

The Endocrine System

Function:

What are Hormones?

Apply glue behind this tab and place in notebook



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Pituitary

Thyroid

Parathyroid

Adrenal

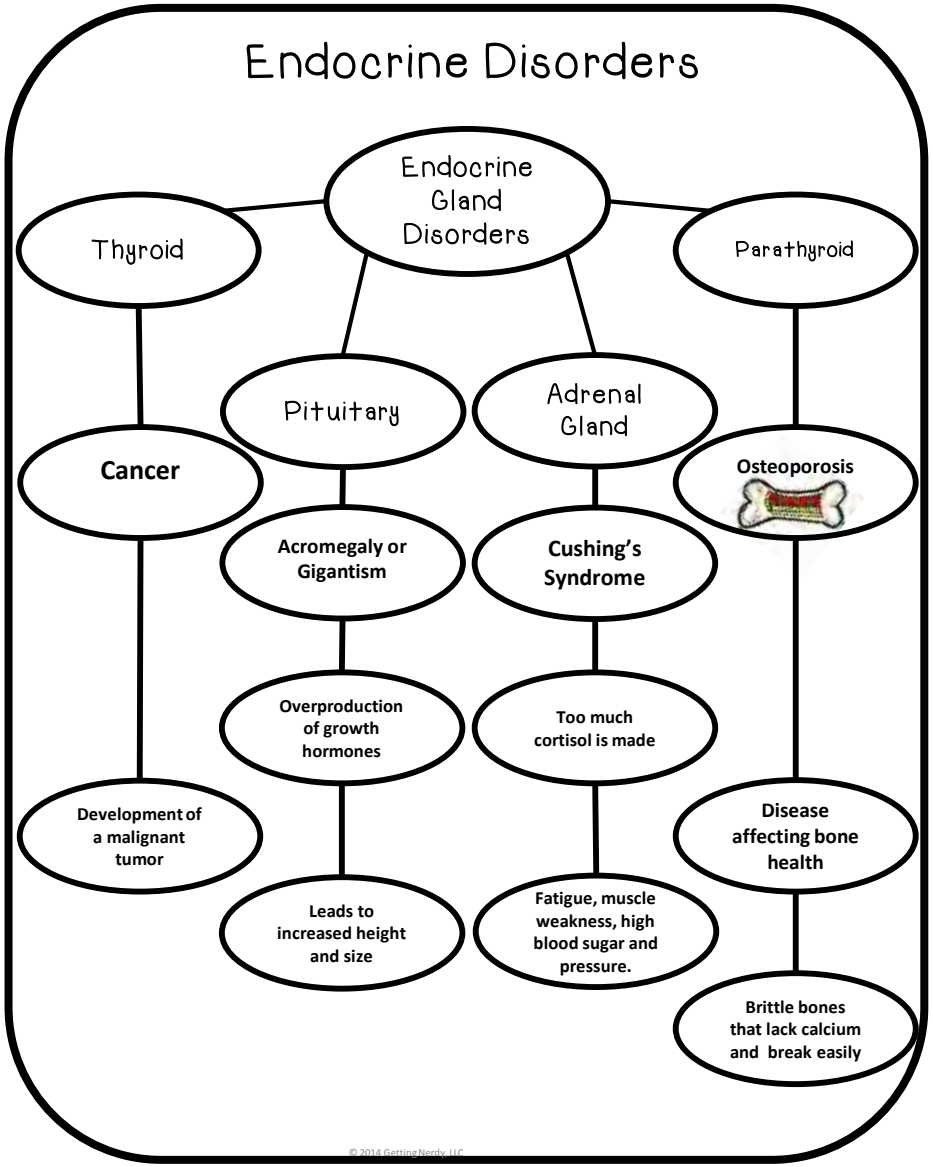
Thymus

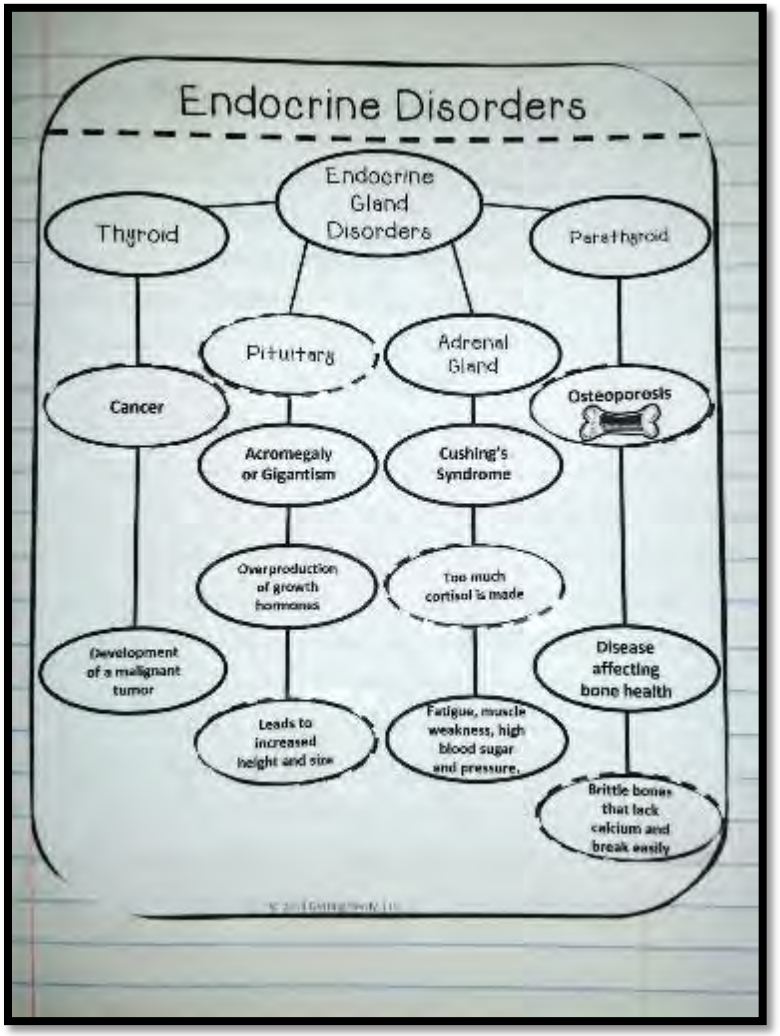
Pancreas

Ovaries

Testes

Endocrine Disorders Concept Map Teacher Notes/Answer Key





Endocrine diseases are usually the result of:
-**Hypersecretion-** Excessive release of hormones
-**Hyposecretion-** Insufficient release of hormones
-**Cancer** or tumors in the endocrine gland

Endocrine Disorders

Endocrine Gland Disorders

Thyroid

Parathyroid

Adrenal Gland

Acromegaly or Gigantism

Cushing's Syndrome

Overproduction of growth hormones

Development of a malignant tumor

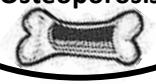
Disease affecting bone health

Fatigue, muscle weakness, high blood sugar and pressure.

Cut out the blank concept map and glue into your notebook along the top tab. Cut out the individual circles and complete the concept map for the different kinds of disorders of the endocrine system. Underneath the concept map, in your notebook, discuss how these endocrine diseases are classified.

Cancer

Osteoporosis



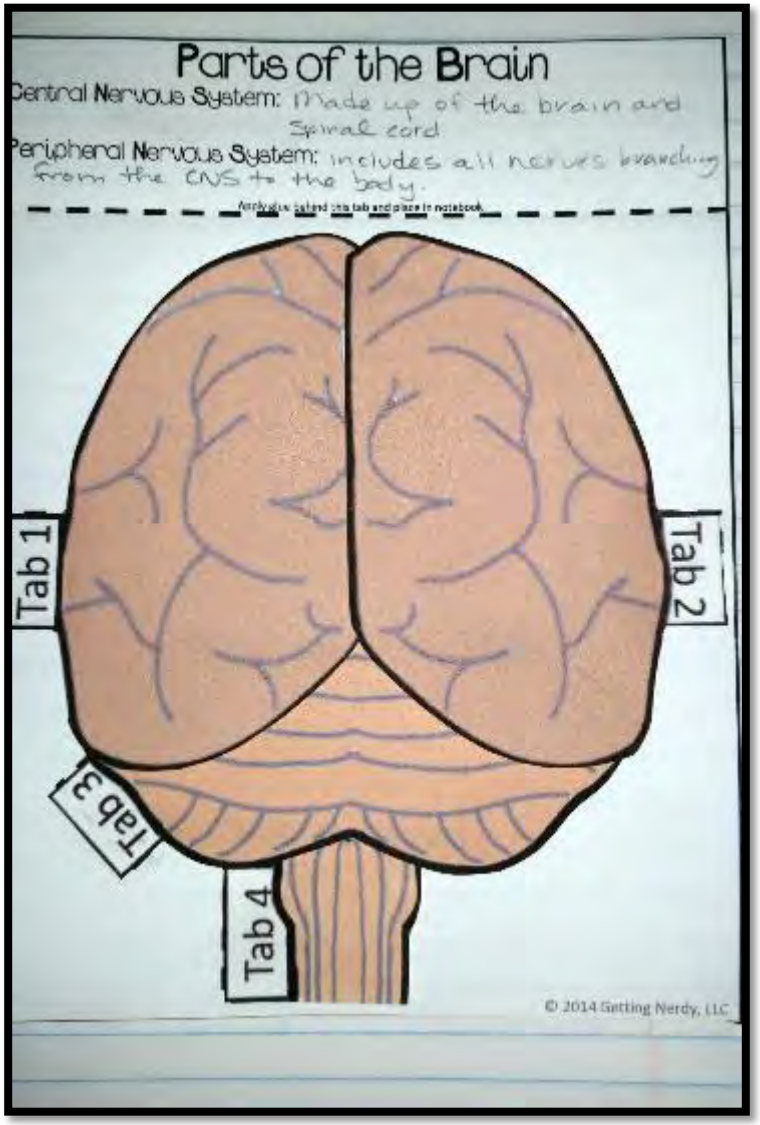
Pituitary

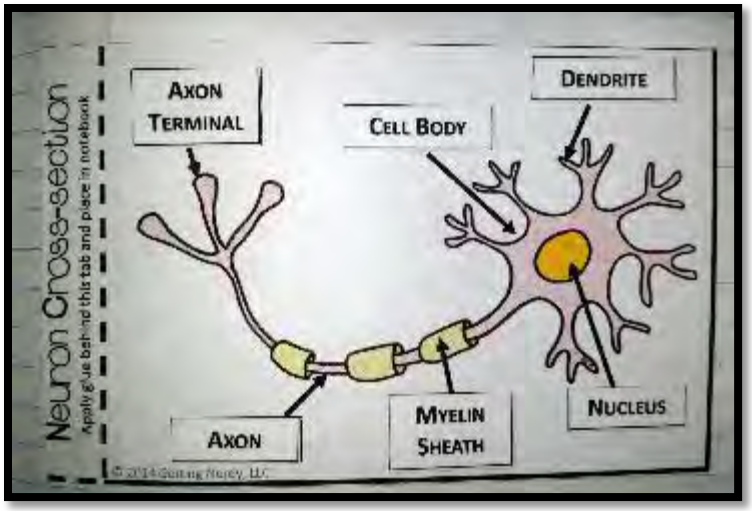
Too much cortisol is made

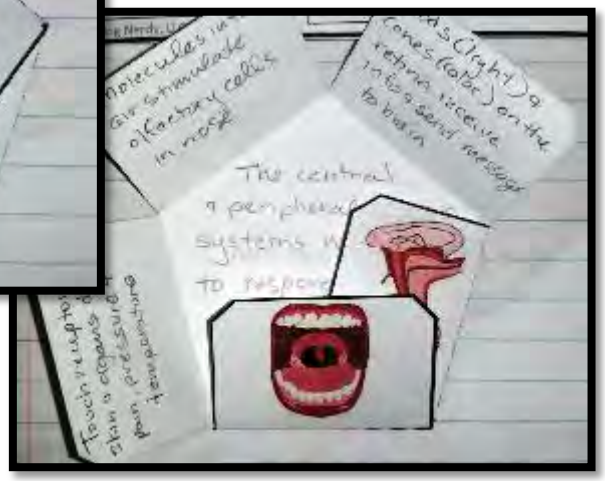
Brittle bones that lack calcium and break easily

Leads to increased height and size

3 NERVOUS SYSTEM INB ACTIVITIES







I'm Learning About the Nervous System!

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I'm Learning About the Nervous System!

I'm Learning About the Nervous System!

Glue Human Body System Page Here

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Glue Human Body System Page Here

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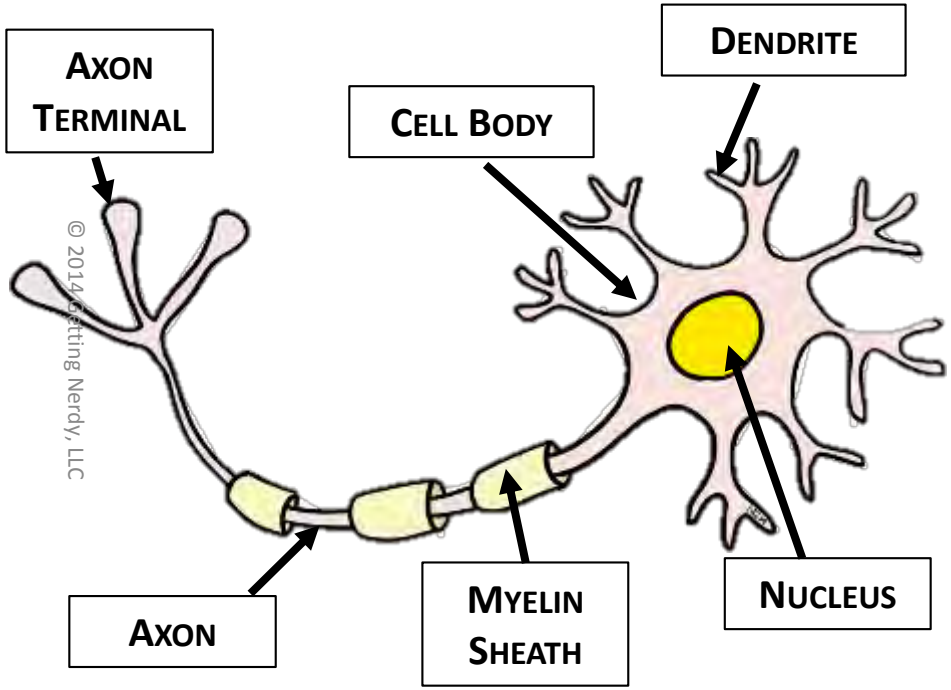
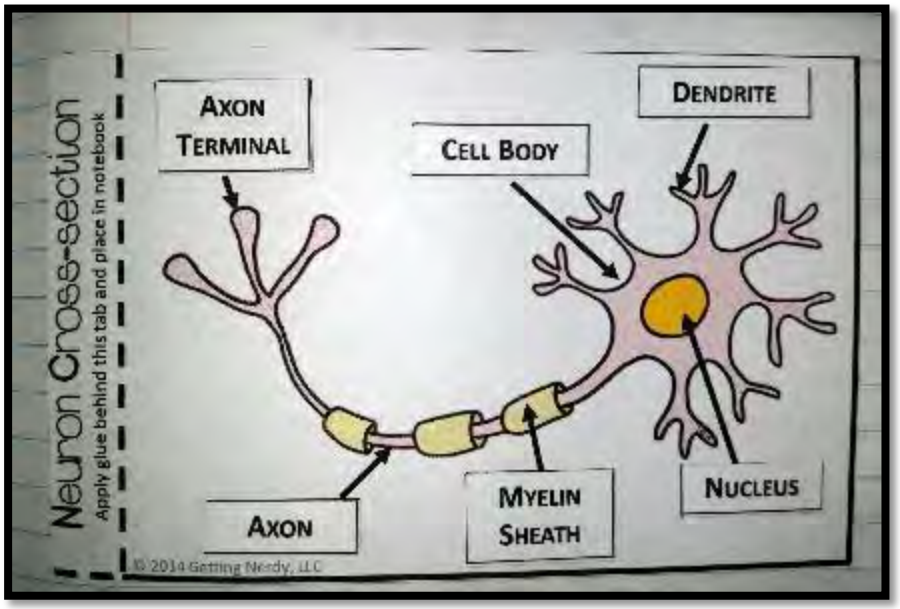
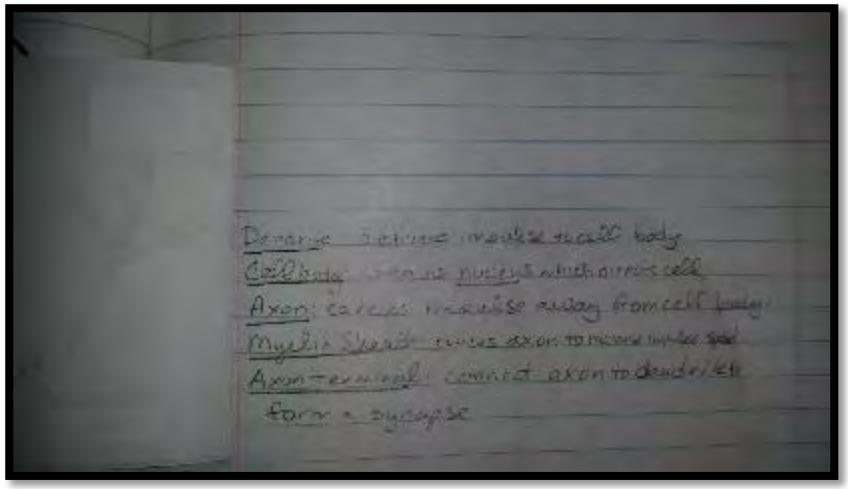
Parts of a Neuron Teacher Notes/Answer Key





Neuron: cell that carries nerve impulse information
Dendrite: delivers impulse to cell body
Cell body: contains **nucleus** which directs the cell's activities & organelles of the neuron.
Axon: carries impulse away from cell body.
Myelin Sheath: covers the axon of some neurons and aids in increasing the speed of neural impulses (electrical signals).
Axon Terminal: connecting point between two neurons that join axon to dendrite. Nerve cells have a space between them called a **synapse**. When a message reaches the end of a cell, a chemical moves across the synapse of the AXON to the DENDRITE of the next cell, delivering the chemical "message"



Parts of Neuron

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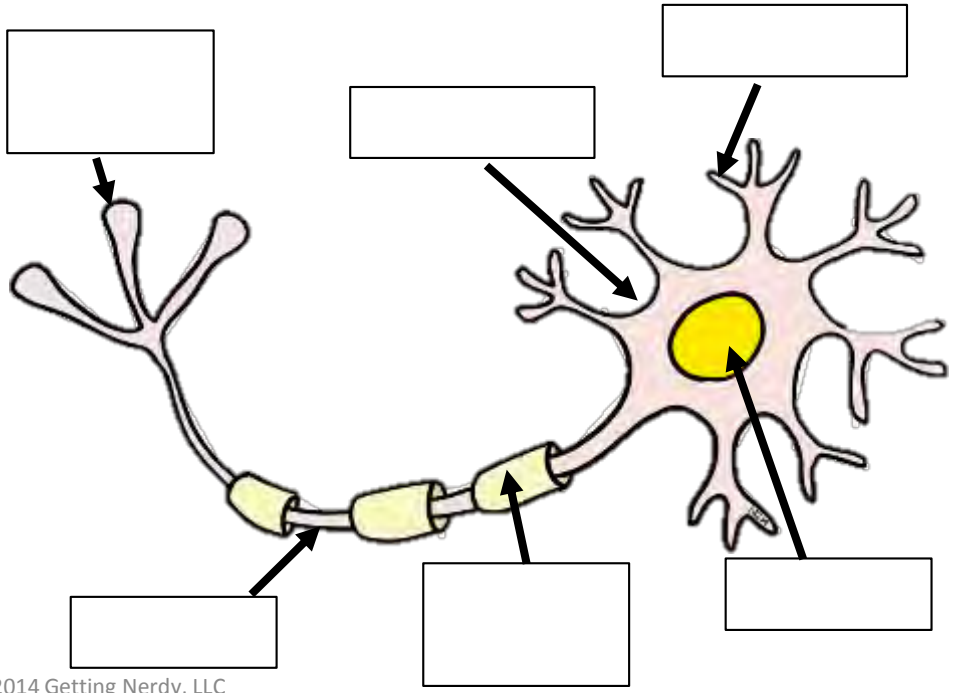
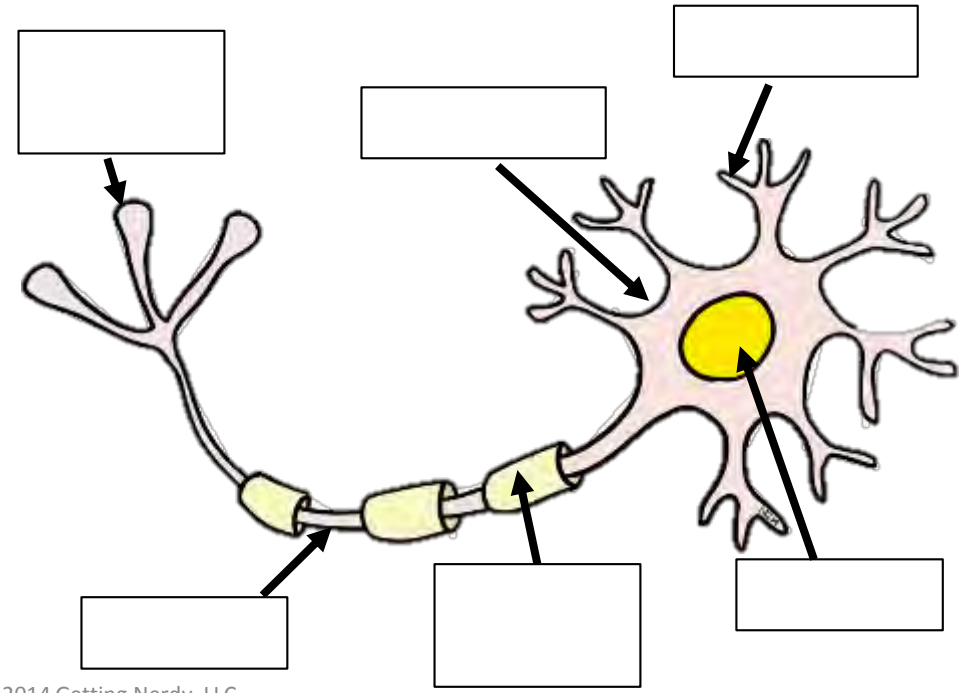


Directions: Cut out and glue the neuron diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the neuron. In your notebook, underneath the diagram, describe the function of each of these neuron parts.

Dendrite	**Cell Body**
Nucleus	**Axon**
Axon Terminal	**Myelin Sheath**

Parts of a Neuron

Apply glue behind this tab and place in notebook



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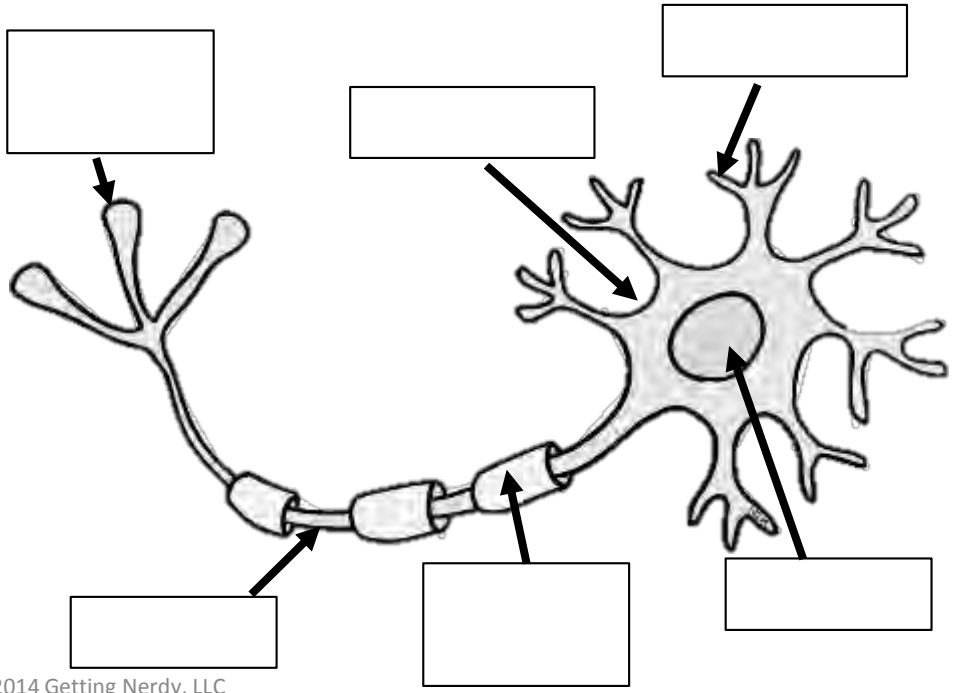
Dendrite	**Cell Body**
Nucleus	**Axon**
Axon Terminal	**Myelin Sheath**

Parts of Neuron

Apply glue behind this tab and place in notebook

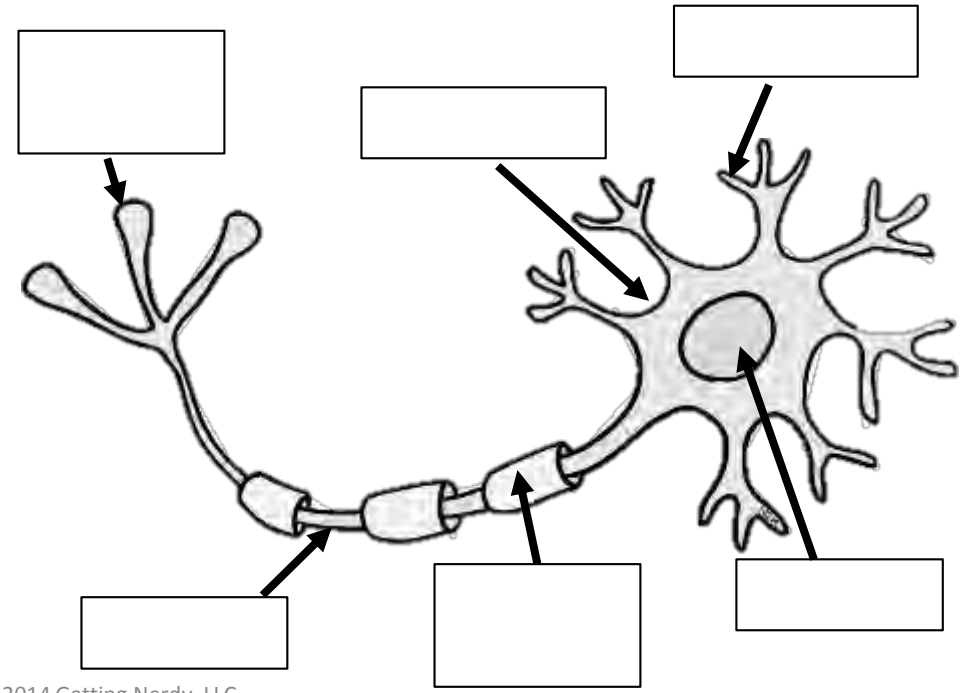


Directions: Color, cut out, and glue the neuron diagram into your notebook along the tab. Cut out the terms below and paste them in the appropriate spot on the neuron. In your notebook, underneath the diagram, describe the function of each of these neuron parts.

Dendrite	**Cell Body**
Nucleus	**Axon**
Axon Terminal	**Myelin Sheath**

Parts of Neuron

Apply glue behind this tab and place in notebook



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Dendrite	**Cell Body**
Nucleus	**Axon**
Axon Terminal	**Myelin Sheath**

Glue Parts of Neuron Tab Here

Dendrite:

Cell Body:

Nucleus:

Axon:

Myelin Sheath:

Axon Terminal:

Directions: Cut out and glue this cut out into your notebook. Glue the parts of the neuron page over the tab marked "glue parts of neuron tab here". Then, complete your activity.

Glue Parts of a Neuron Tab Here

Dendrite:

Cell Body:

Nucleus:

Axon:

Myelin Sheath:

Axon Terminal:

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Directions: Cut out and glue this cut out into your notebook. Glue the parts of the neuron page over the tab marked "glue parts of neuron tab here". Then, complete your activity.

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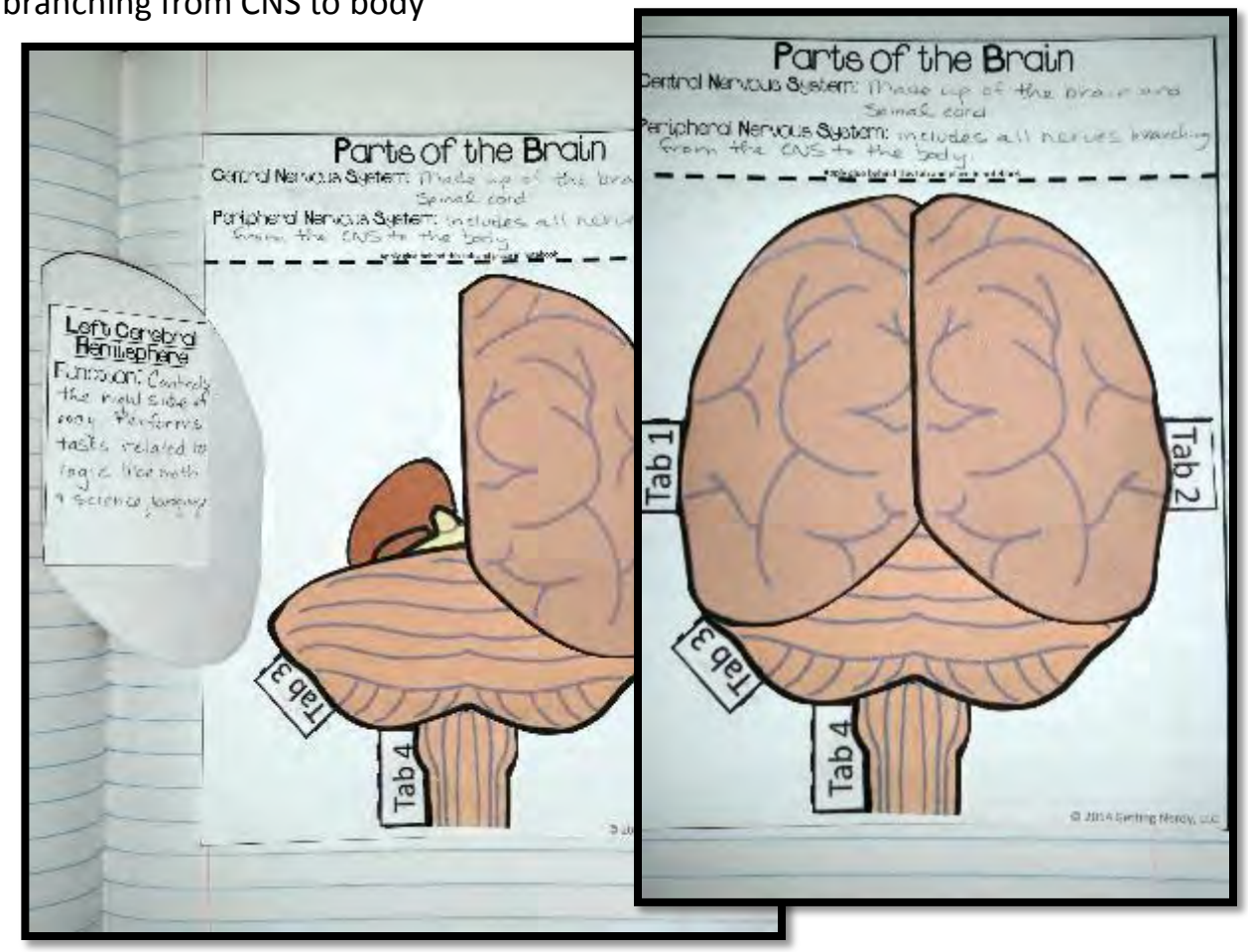
The Brain Teacher Notes/Answer Key

Central Nervous System (CNS): Made up of the Brain and Spinal cord/ **Peripheral Nervous System (PNS)**: includes all nerves branching from CNS to body



Left Cerebral Hemisphere

Function: controls the right side of the body and performs tasks related to logic like math and science.

Right Cerebral Hemisphere

Function: controls the left side of the body and performs tasks related to creativity and the arts.

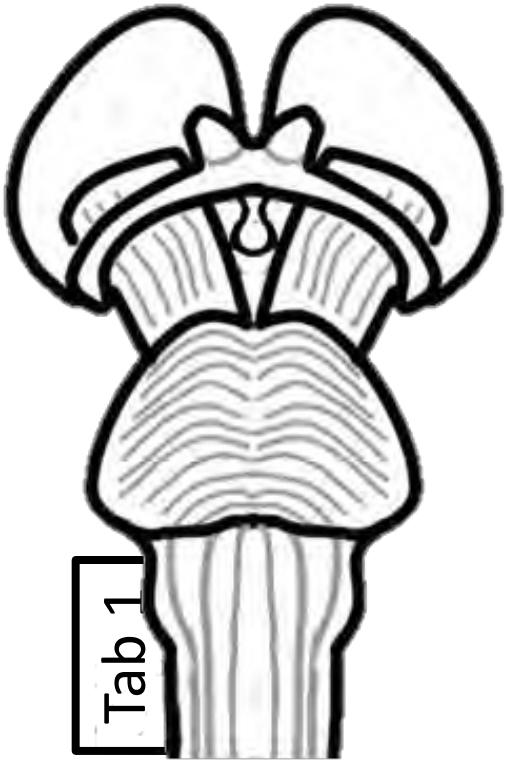
Brain Stem & Spinal Cord

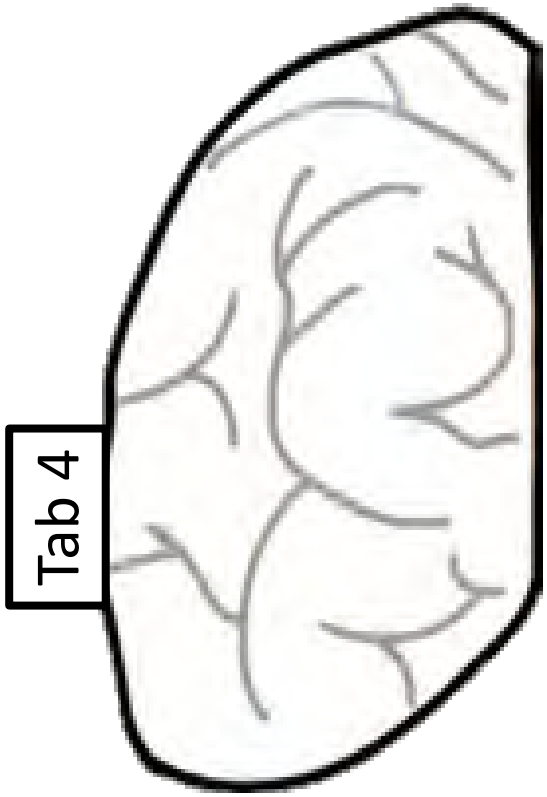
Function: BS controls involuntary actions like heart rate and breathing; connects brain to spinal cord; made of medulla, pons, and midbrain. SC links brain with body nerves, controls reflexes.

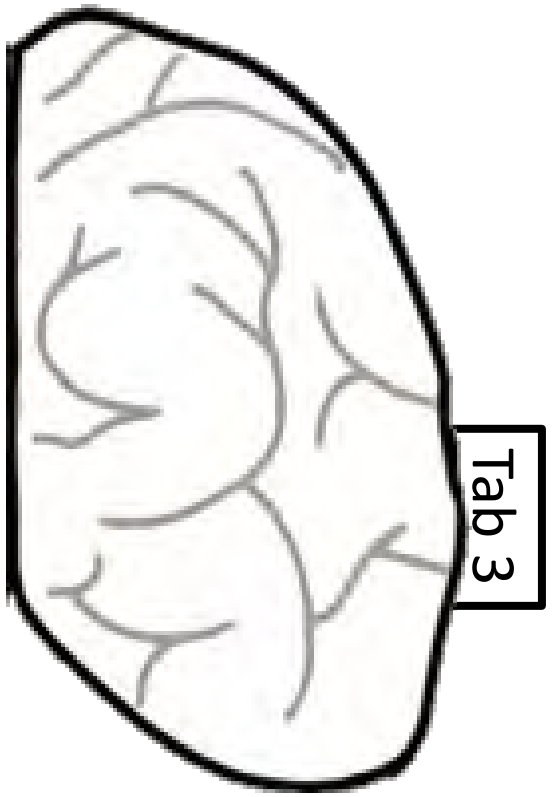
Cerebellum

Function: Performs everyday voluntary (movements you choose to carry out) tasks such as walking and writing. Helps us stay balanced and upright along with coordinating our muscles.

Extra info for under their ½ page sheet: Both hemispheres of the cerebrum are connected to each other by the corpus callosum, which allows the two sides to communicate with one another. This is necessary because the hemispheres work together in every task we perform. BRAIN STEM: comprised of the midbrain, pons, and medulla. Midbrain: Regulates body movement, vision and hearing. Pons: Links to the cerebellum to help with posture and movement. The Pons serves as a message station between several areas of the brain. It helps relay messages from the cortex and the cerebellum. Controls our sleeping states and dreams. Medulla Oblongata: Maintains involuntary body functions necessary for life such as breathing, swallowing, blood pressure, and heart rate







Directions: Color and cut out the parts of the brain on this page- do not cut off the tabs. Glue the parts of the brain in order onto the ½ page using the numbered tabs.

Parts of the Brain

Central Nervous System:

Peripheral Nervous System:

Apply glue behind this tab and place in notebook

Tab 4

Tab 3

Tab 2

Tab 1

Brain Parts Function Labels

Left Cerebral Hemisphere

Function:

Right Cerebral Hemisphere

Function:

Brain Stem & Spinal Cord

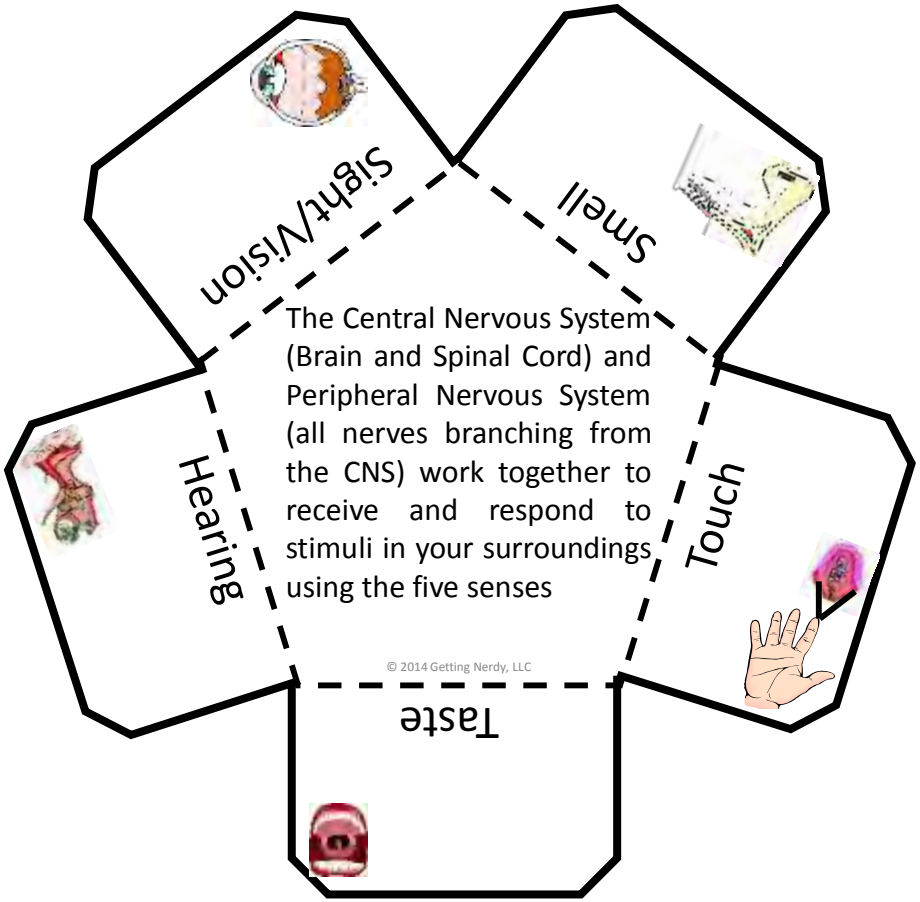
Function:

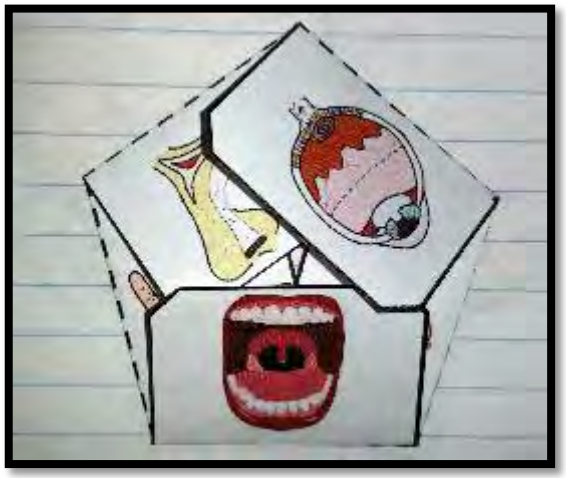
Cerebellum

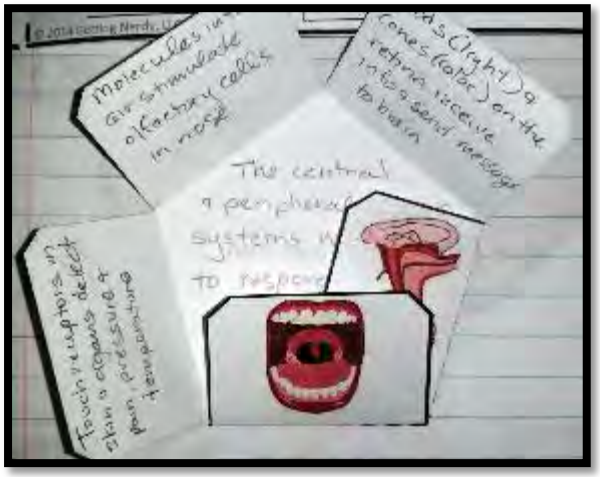
Function:

Directions: Cut out the Parts of the Brain ½ page and Brain Parts/Function labels. Glue the ½ page into your notebook along the tab. List the function of each brain part on the labels. On the back of each brain part, glue the appropriate Brain Parts/Function label. Fill out the top portion of the ½ page with a description of the Central and Peripheral Nervous Systems. Underneath the ½ page in your INB, include any extra information about he brain and its parts.

The Five Senses Teacher Notes/Answer Key







Underneath each door/flap they write notes about each of the five senses.

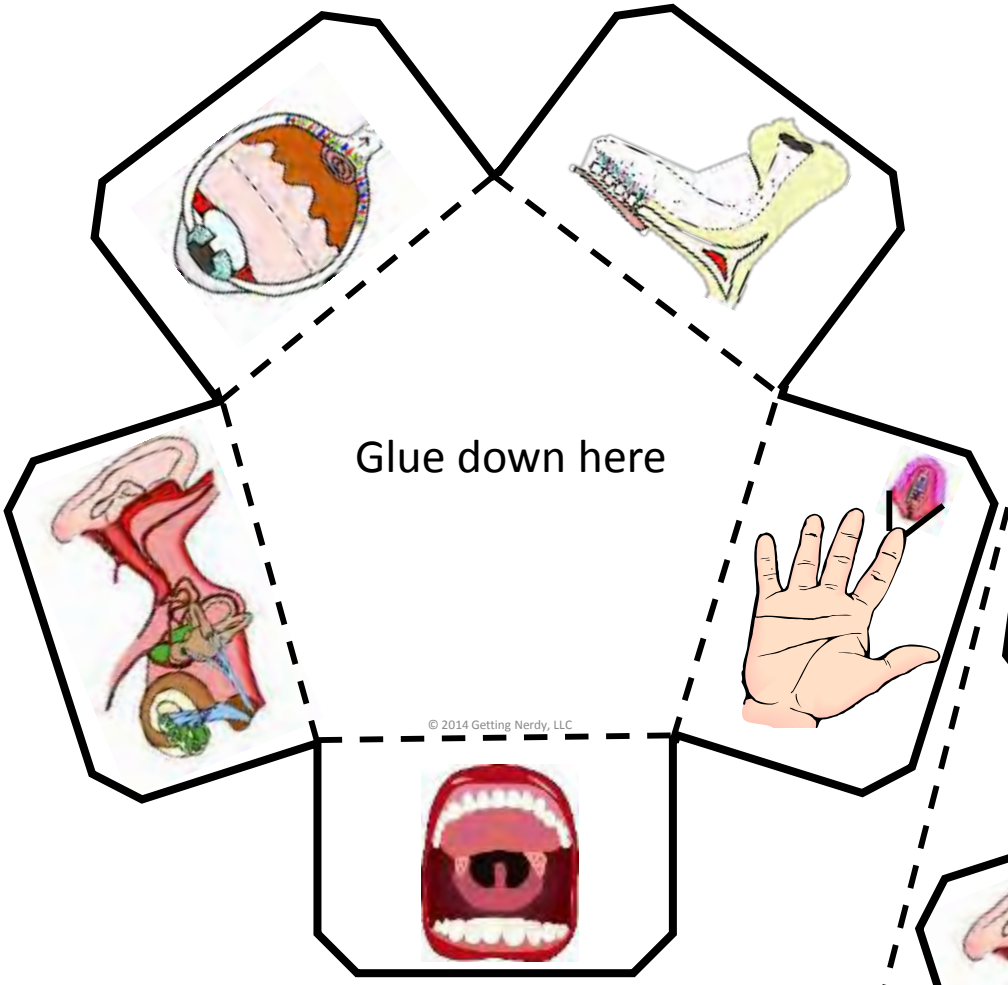
Sight/Vision: light enters through the eye through the pupil and stimulates special cells located in the retina found in the back of the eye. Rods detect dim light and cones detect colors – both send impulses to the brain.

Hearing: outer ear gathers sound waves that vibrate tiny bones & fluid which sends the impulse to brain.

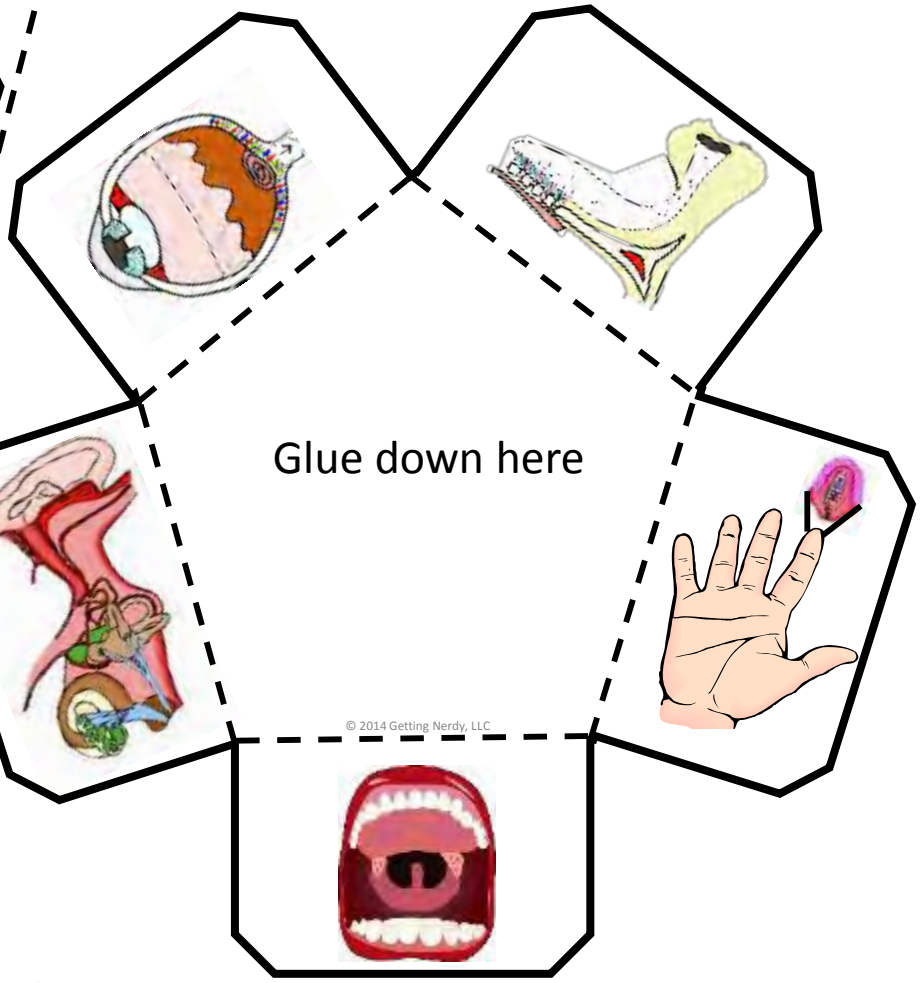
Smell: molecules in the air stimulate special nerve cells in the nasal passages called olfactory cells.

Taste: Taste buds are special cells found on the papillae of the tongue. They provide us with a sense of salty, sour, sweet, bitter, and umami. Our sense of taste is affected by our sense of smell.

Touch: Touch receptors found in organs & skin detect changes in pressure, pain, and temperature.



Directions: Cut out the diagram and glue the "glue down here" side of the pentagram into your notebook while leaving the flaps free. In the center pentagram describe the job of the nervous system and how it relates to our senses. Underneath each flap describe each of the five senses.



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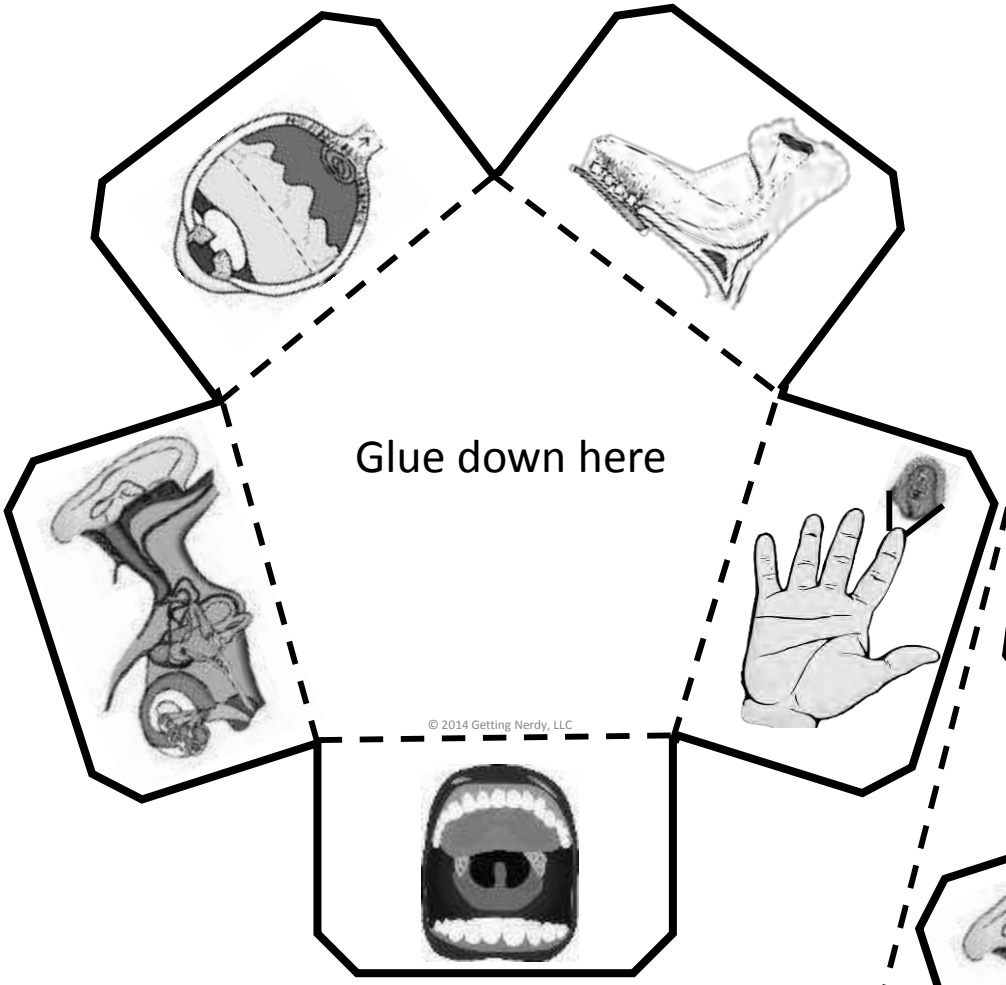

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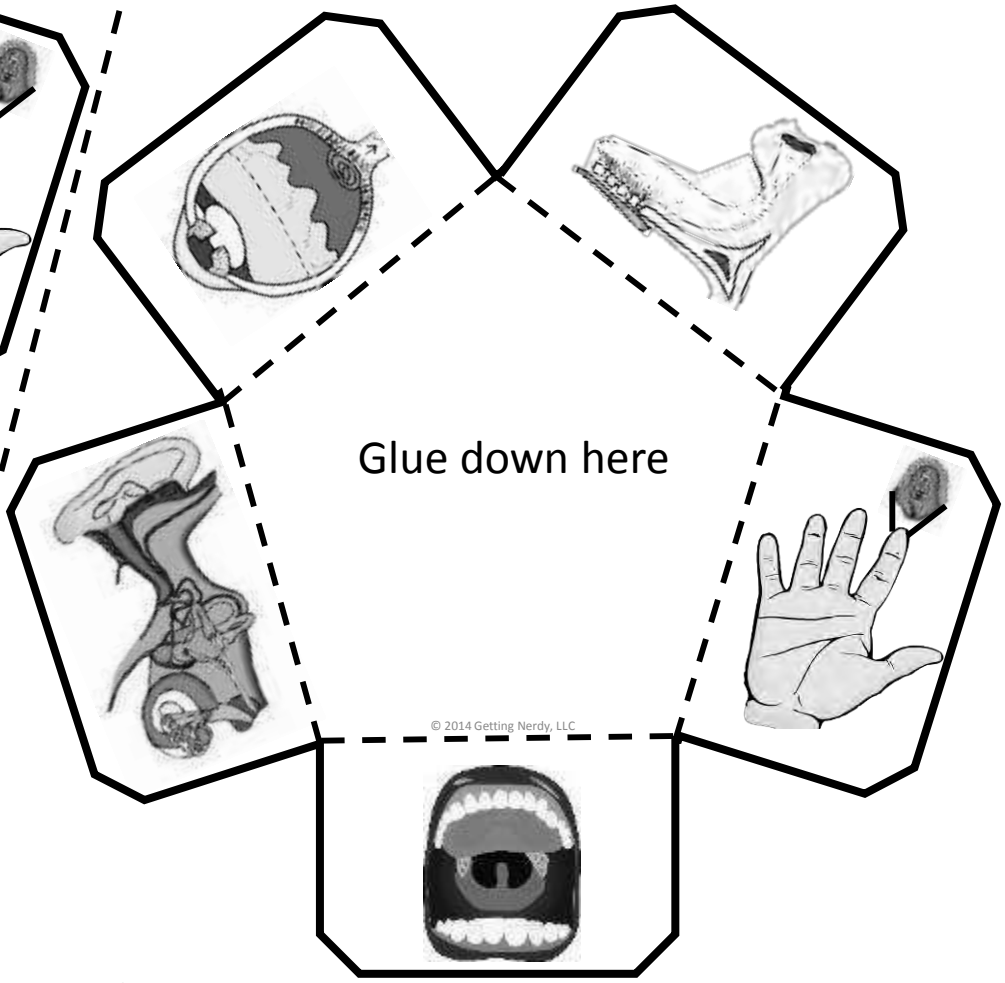

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Mel and Gerdy are two life science teachers with a true passion for curriculum design. We love creating engaging and fun activities for our classroom and we're excited to be sharing our products with you!

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