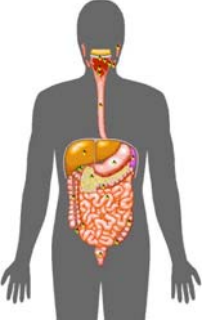
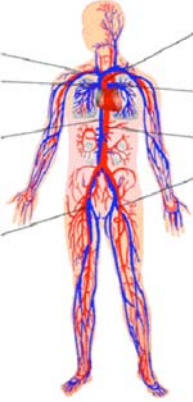
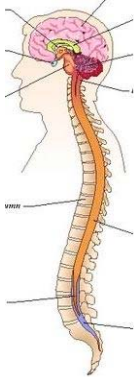
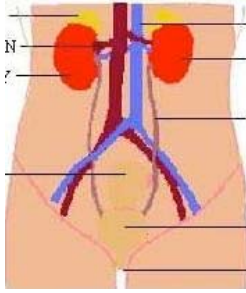
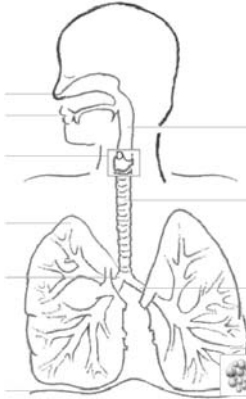


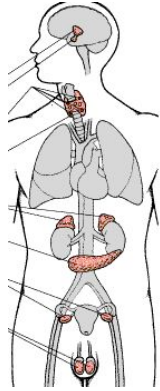
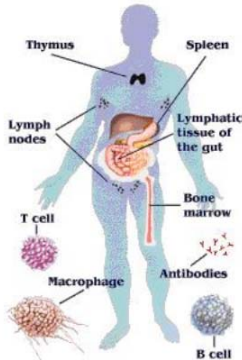



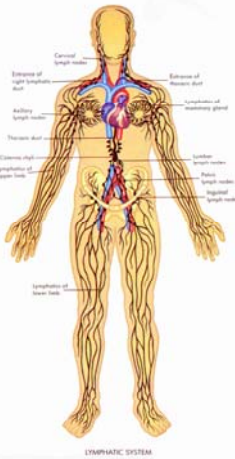
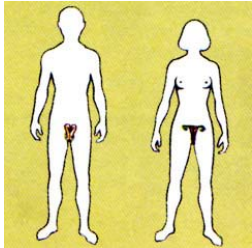
Name _____ Period _____ Date _____

THE HUMAN BODY SYSTEMS

System	Function	Diagram	Major Organs	Interactions- Working with Other Systems
Digestive	<ol style="list-style-type: none"> 1. take in food (ingestion) 2. digest food into smaller molecules and absorb nutrients 3. remove undigestible food from body (feces) 		<p>Mouth, esophagus, stomach, Sm. Intestine, Lg. intestine, rectum, anus</p> <p>Salivary glands, pancreas, liver, gall bladder</p>	<ol style="list-style-type: none"> 1. w/circulatory - absorb & deliver the digested nutrients to the cells 2. w/muscular - control the contractions of many of the digestive organs to pass food along 3. w/nervous - hypothalamus maintains homeostasis by triggering appetite (stomach growling), digest.
Circulatory	Transport materials to and from cells		<p>Heart Veins Arteries Capillaries Red blood cells</p>	<ol style="list-style-type: none"> 1. w/respiratory - deliver O_2 from lungs to cells and drop off CO_2 from cells to lungs 2. w/digestive - absorb and deliver digested nutrients to cells 3. w/excretory - kidneys filter cellular waste out of blood for removal 4. w/lymphatic - both transport things to and from cells 5. w/immune - transports WBCs throughout body to fight disease 6. w/nervous - brain controls heartbeat 7. w/endocrine - trans. hormones
Nervous	<ol style="list-style-type: none"> 1. gathers and interprets information 2. responds to information 3. helps maintain homeostasis 		<p>Brain Spinal cord</p> <p>Nerves Nerve cells = neurons</p> <p>hypothalamus</p>	<p>Controls all other systems</p> <p>Hypothalamus - maintains homeostasis by working with all systems</p>

System	Function	Diagram	Major Organs	Interactions- Working with Other Systems
Excretory	<ol style="list-style-type: none"> removes waste products from cellular metabolism (urea, water, CO_2) filters blood 		<p>Kidneys Ureters Bladder Urethra</p> <p>Lungs Skin - sweat glands Liver (produces urea)</p>	<ol style="list-style-type: none"> w/circulatory - filters waste out of blood w/lungs - removes excretory waste w/integumentary - removes excretory waste
Respiratory	Takes in oxygen and removes carbon dioxide and water		<p>Nose Trachea Bronchi Bronchioles Alveoli lungs</p>	<ol style="list-style-type: none"> w/circulatory - takes in O_2 for delivery to cells and removes CO_2 brought from cells w/excretory - removes excretory waste w/nervous - controls breathing w/muscular - diaphragm controls breathing
Skeletal	<ol style="list-style-type: none"> protects organs provides shape, support stores materials (fats, minerals) produces blood cells allows movement 		<p>Bones Cartilage ligaments</p>	<ol style="list-style-type: none"> w/muscular - allow movement w/circulatory - produce blood cells w/immune - produce white blood cells w/circulatory and respiratory - protects it's organs

System	Function	Diagram	Major Organs	Interactions- Working with Other Systems
Muscular	Allows for movement by contracting		Cardiac muscle Smooth muscle Skeletal muscle tendons	<ol style="list-style-type: none"> 1. w/skeletal - allow movement 2. w/digestive - allow organs to contract to push food through 3. w/respiratory - diaphragm controls breathing 4. w/circulatory - controls pumping of blood (heart) 5. w/nervous - controls all muscle contractions
Endocrine	Regulates body activities using hormones. Slow response, long lasting		Glands *Hypothalamus *Pituitary *Thyroid *Thymus *Adrenal *Pancreas *Ovaries *Testes Glands produce Hormones	<ol style="list-style-type: none"> 1. w/circulatory - transports hormones to target organs 2. w/nervous - maintain homeostasis, hormone release 3. w/reproductive - controlled by hormones 4. w/skeletal - controls growth of bones
Immune	Fights off foreign invaders in the body		White Blood Cells *T cells *B cells -produce antibodies *Macrophages Skin	<ol style="list-style-type: none"> 1. w/circulatory - transports WBCs to fight invaders 2. w/lymphatic - has lots of WBCs to fight invaders, spleen filters bacteria/viruses out of blood 3. w/skeletal - WBCs made in bone marrow 4. w/integumentary - prevents invaders from getting in

System	Function	Diagram	Major Organs	Interactions- Working with Other Systems
Integumentary	<ol style="list-style-type: none"> 1. barrier against Infection (1st line of defense) 2. helps regulate body temp. 3. removes excretory waste (urea, water) 4. protects against sun's UV rays 5. produces vitamin D 		<p>SKIN</p> <ul style="list-style-type: none"> *Epidermis *Dermis <ul style="list-style-type: none"> - sweat gland - sebaceous gland (oil) - hair follicle - blood vessels - nerves 	<ol style="list-style-type: none"> 1. w/excretory - removes cellular waste 2. w/nervous - controls body temperature (sweating, goose bumps) 3. w/immune - prevents pathogens from entering
Lymphatic	<ol style="list-style-type: none"> 1. stores and carries WBC's that fight disease 2. collects excess fluid and returns it to blood (2nd circulatory system-reaches places other one can't - between cells) 		<p>Lymph (liquid part of blood - plasma, when it's in lymph vessels)</p> <p>Lymph Vessels Lymph Nodes Contain WBCs</p>	<ol style="list-style-type: none"> 1. w/immune - holds lots of WBCs to fight pathogens 2. w/circulatory - to transport materials to and from cells
Reproductive	<p>Allows organisms to reproduce which prevents their species from becoming extinct.</p>		<p>Ovaries *produce eggs</p> <p>Testes *produce sperm</p>	<ol style="list-style-type: none"> 1. w/endocrine - controls production of sex cells 2. w/muscular - uterus contracts to give birth - controlled by hormones