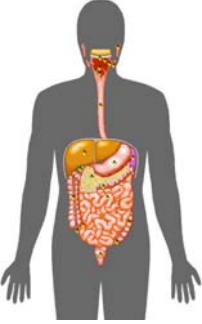
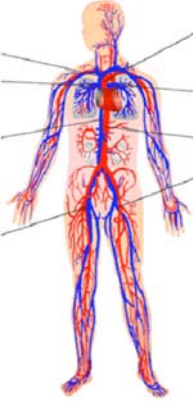
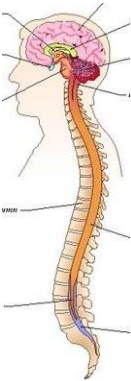
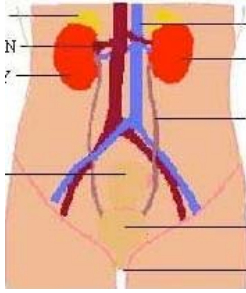
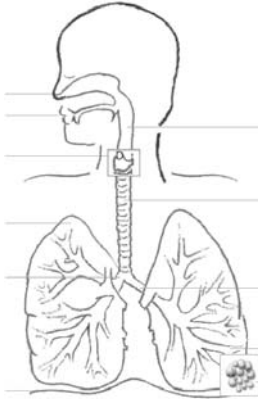


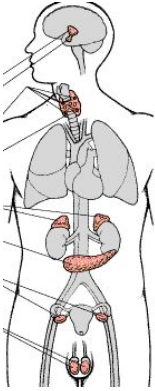
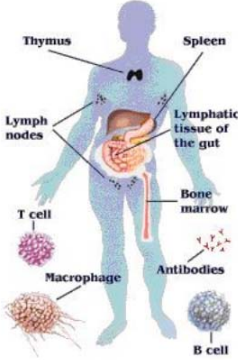



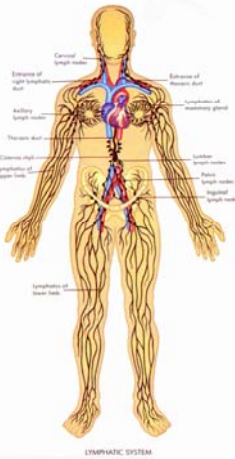
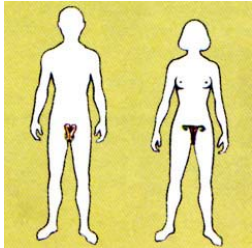
Name \_\_\_\_\_ Period \_\_\_\_\_ Date \_\_\_\_\_

## THE HUMAN BODY SYSTEMS

| System      | Function   | Diagram   | Major Organs   | Interactions-<br>Working with Other<br>Systems  |
|-------------|--|---|--|---|
| Digestive   | <ol style="list-style-type: none"> <li>1. take in food (ingestion)</li> <li>2. digest food into smaller molecules and absorb nutrients</li> <li>3. remove undigestible food from body (feces)</li> </ol> |    | <p style="text-align: center;">Mouth,<br/>esophagus,<br/>stomach, Sm.<br/>Intestine, Lg.<br/>intestine,<br/>rectum, anus</p> <p>Salivary glands,<br/>pancreas, liver,<br/>gall bladder</p> | <ol style="list-style-type: none"> <li>1. w/circulatory - absorb &amp; deliver the digested nutrients to the cells</li> <li>2. w/muscular - control the contractions of many of the digestive organs to pass food along</li> <li>3. w/nervous - hypothalamus maintains homeostasis by triggering appetite (stomach growling), digest.</li> </ol>  |
| Circulatory | <p>Transport materials to and from cells</p>   |   | <p style="text-align: center;">Heart<br/>Veins<br/>Arteries<br/>Capillaries<br/>Red blood cells</p>  | <ol style="list-style-type: none"> <li>1. w/respiratory - deliver O<sub>2</sub> from lungs to cells and drop off CO<sub>2</sub> from cells to lungs</li> <li>2. w/digestive - absorb and deliver digested nutrients to cells</li> <li>3. w/excretory - kidneys filter cellular waste out of blood for removal</li> <li>4. w/lymphatic - both transport things to and from cells</li> <li>5. w/immune - transports WBCs throughout body to fight disease</li> <li>6. w/nervous - brain controls heartbeat</li> <li>7. w/endocrine - trans. hormones</li> </ol> |
| Nervous     | <ol style="list-style-type: none"> <li>1. gathers and interprets information</li> <li>2. responds to information</li> <li>3. helps maintain homeostasis</li> </ol>                                       |  | <p style="text-align: center;">Brain<br/>Spinal cord</p> <p style="text-align: center;">Nerves<br/>Nerve cells =<br/>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-<br>Working with Other<br>Systems   |
|-------------|--|---|---|--|
| Excretory   | <ol style="list-style-type: none"> <li>removes waste products from cellular metabolism (urea, water, <math>CO_2</math>)</li> <li>filters blood</li> </ol>  |    | <p>Kidneys<br/>Ureters<br/>Bladder<br/>Urethra</p> <p>Lungs<br/>Skin - sweat glands<br/>Liver (produces urea)</p> | <ol style="list-style-type: none"> <li>w/circulatory - filters waste out of blood</li> <li>w/lungs - removes excretory waste</li> <li>w/integumentary - removes excretory waste</li> </ol>   |
| Respiratory | Takes in oxygen and removes carbon dioxide and water   |   | <p>Nose<br/>Trachea<br/>Bronchi<br/>Bronchioles<br/>Alveoli<br/>lungs</p>   | <ol style="list-style-type: none"> <li>w/circulatory - takes in <math>O_2</math> for delivery to cells and removes <math>CO_2</math> brought from cells</li> <li>w/excretory - removes excretory waste</li> <li>w/nervous - controls breathing</li> <li>w/muscular - diaphragm controls breathing</li> </ol> |
| Skeletal    | <ol style="list-style-type: none"> <li>protects organs</li> <li>provides shape, support</li> <li>stores materials (fats, minerals)</li> <li>produces blood cells</li> <li>allows movement</li> </ol> |  | <p>Bones<br/>Cartilage<br/>ligaments</p>  | <ol style="list-style-type: none"> <li>w/muscular - allow movement</li> <li>w/circulatory - produce blood cells</li> <li>w/immune - produce white blood cells</li> <li>w/circulatory and respiratory - protects it's organs</li> </ol>   |

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

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

