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| **Human Body Systems Project** |
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| Description & important information1. You will design a scrapbook about the six major human body systems. A two page *minimum* is required for each system. (One page, front and back, counts as only one page and your references are a separate page).
2. A scrapbook can be created by attaching the pages using a folder, 3 ring binder, page protectors,

scrapbook pages, manila folder, construction paper, etc. * You will submit one system at a time according to the due dates listed.
* Please use a consistent paging system for your entire project. For example, if you place your information on construction paper, please do this for each system.
* Please use a consistent format for the system titles, functions, disease, and relationships.
1. Draw means DRAW (so if it doesn’t say DRAW…you may use a print-out). Be creative and use color!
2. A reference page for each system is required. All printed images as well as information gathered must be cited using MLA format. You may use easybib.com to cite your sources.
3. When describing how one system relies on another to perform its functions, you may not use the same relationship more than once. Example: Because you show the bones, muscles & nerves working together for the skeletal system portion of this project, you must use different relationships for the muscular and nervous systems portions.
4. Be sure you understand the terms you are using. You may be asked to explain what you wrote if your understanding is unclear.
5. Each new assignment will begin with an in class video.

**Don’t plagiarize, don’t cut and paste, and don’t pretend that someone else’s writing is yours!****ASSIGNMENT 1: Introduction 1/30/20 DUE 2/13/20**  *Skeletal System*1. List and describe the functions of the system and explain how this system works to maintain homeostasis.
2. Explain how bones, ligaments, muscles, tendons and nerves work together to enable movement.
3. Provide a picture of a labeled skeleton.
4. Include your bone drawing or a colored printout of a bone which illustrates the 5 parts of the bone and their functions.
5. Explain at least 1 major disease that occurs within this system, include:
* A brief description
* Signs and symptoms
* Who is most affected by it? How many people? How often?
* Treatment options
* Is it preventable? If so, how?

**ASSIGNMENT 2 : Introduction 2/18/20 DUE 2/28/20***Muscular System* 1. List and describe the functions of the system and explain how this system works to maintain homeostasis.
2. Draw, color, and describe the 3 types of muscle tissue.
3. Explain in detail how this system relies on another system to perform its functions.
4. Explain at least 1 major disease that occurs within this system, include:
* A brief description
* Signs and symptoms
* Who is most affected by it? How many people? How often?
* Treatment options
* Is it preventable? If so, how?

**ASSIGNMENT 3: Introduction 3/3/20 DUE 3/16/20***Digestive System*1. List and describe the functions of the system and explain how this system works to maintain homeostasis.
2. List and describe the functions of the organs in the digestive system, including: mouth, esophagus, stomach, small intestine, large intestine, anus, liver, pancreas and gallbladder.
3. Explain why digestion of large food molecules is essential.
4. Explain the need for enzymes for digestion.
5. Include a colored and labeled diagramof the digestive system.
6. Draw, color, and label a cross section of the small intestine. Be sure to include villi.
7. Explain in detail how this system relies on another system to perform its functions.
8. Explain at least 1 major disease that occurs within this system, include:
* A brief description
* Signs and symptoms
* Who is most affected by it? How many people? How often?
* Treatment options
* Is it preventable? If so, how?

**ASSIGNMENT 4: Introduction 3/18/20 DUE 4/2/20***Circulatory System*1. List and describe the functions of the system and explain how this system works to maintain homeostasis.
2. Include your Blood Vessel flip book.
3. Draw, color, and label a diagram of the heart showing the four chambers, major blood vessels and valves.
4. Explain the route of blood through the heart and body.
5. Include your completed blood component chart from your Blood WS.
6. Explain in detail how this system relies on another system to perform its functions.
7. Explain at least 1 major disease that occurs within this system, include:
* A brief description
* Signs and symptoms
* Who is most affected by it? How many people? How often?
* Treatment options
* Is it preventable? If so, how?

**ASSIGNMENT 5: Introduction 4/06/20 DUE 4/21/20***Respiratory System*1. List and describe the functions of the system and explain how this system works to maintain homeostasis.
2. Describe how the alveoli allow gas exchange (include information on surface area, the type of tissue and capillaries).
3. Explain how carbon dioxide and oxygen are transported in the blood.
4. Draw, color, and label a diagram of the respiratory system, including trachea, lungs, bronchi, bronchioles and alveoli (the alveoli should be drawn as an inset diagram at a higher magnification).
5. Explain in detail how this system relies on another system to perform its functions.
6. Explain at least 1 major disease that occurs within this system, include:
* A brief description
* Signs and symptoms
* Who is most affected by it? How many people? How often?
* Treatment options
* Is it preventable? If so, how?

**ASSIGNMENT 6 Introduction 4/23/20 DUE 5/13/20** *Nervous System*1. List and describe the functions of the system and explain how this system works to maintain homeostasis.
2. Define central nervous system and peripheral nervous system and list the major parts of each.
3. Draw and label a diagram of a sensory neuron, motor neuron, and an interneuron.
4. Include a labeled diagram of a simple reflex arc and explain its elements (pg 629 in book).
5. Include your Parts of the Brain flip book.
6. Explain in detail how this system relies on another system to perform its functions.
7. Explain at least 1 major disease that occurs within this system, include:
* A brief description
* Signs and symptoms
* Who is most affected by it? How many people? How often?
* Treatment options
* Is it preventable? If so, how?
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**Human Body Systems Project Creator**

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Period:\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Assignment Number:\_\_\_**

**Overall Scores for Each System:**

Skeletal System: \_\_\_\_\_\_\_\_\_\_/69

Muscular System: \_\_\_\_\_\_\_\_\_/63

Digestive System: \_\_\_\_\_\_\_\_\_/95

Circulatory System: \_\_\_\_\_\_\_\_/85

***1st Quarter Grade is based on the 1st 4 systems***

Respiratory System: \_\_\_\_\_\_\_/83

Nervous System: \_\_\_\_\_\_\_\_\_\_/85

***4th Quarter Grade is based on the last 2 systems + Final***

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| **SKELETAL** | **Excellent** | **Good** | **Basic** | **Needs Work** | **Incomplete** |
| **Functions & Homeostasis** | **14** | **12** | **10** | **9** | **8 – 0** |
| 2 pts/function4 pts homeostasis | All functions listed and described with detail. A clear and thorough explanation showing deep understanding of homeostasis. | All functions are listed with some description. A clear and thorough explanation of homeostasis. | All functions are listed with no detail. A clear explanation of homeostasis. | One function is missing. Explanation of homeostasis is unclear. | Two or more functions are missing. No explanation of homeostasis. |
| **Enabling Movement** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
|  | A clear and thorough explanation showing deep understanding of all 5 elements working together. | A clear and thorough explanation of all 5 elements working together. | A clear explanation of all 5 elements working together. | Explanation is unclear or one element is missing. | Not done or more than one element is missing. |
| **Disease** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| 4pts/requirement | All requirements are completed and provide extensive details about the disease. | All requirements are completed and provide details about the disease. | All requirements are completed but there are few details about the disease. | Missing one or more requirements and few details about the disease are provided. | Most or all work incomplete. |
| **Others** | **10** | **8** | **7** | **6** | **5 – 0** |
| Printed materials & assignments completed in class. | Diagram of the skeleton and parts of a bone are complete and neatly colored.  | Diagram of the skeleton and parts of a bone are complete and colored. | Diagram of the skeleton and parts of a bone are complete. | Diagram of the skeleton and parts of a bone are incomplete. | One or both are missing. |
| **Visual Design** | **5** | **4** | **3.5** | **3** | **0** |
|  | Layout is visually pleasing, information is easy to find and understand. Extra effort given to appearance. | Layout is visually pleasing, information is easy to find and understand. | Information is easy to find and understand. | Information is disorganized and/or difficult to understand. | Very sloppy or incomplete work. |

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| **MUSCULAR** | **Excellent** | **Good** | **Basic** | **Needs Work** | **Incomplete** |
| **Functions & Homeostasis** | **8** | **6** | **4** | **2** | **0** |
| 2 pts/function4 pts homeostasis | All functions listed and described with detail. A clear and thorough explanation showing deep understanding of homeostasis. | All functions are listed with some description. A clear and thorough explanation of homeostasis. | All functions are listed with no detail. A clear explanation of homeostasis. | One function is missing. Explanation of homeostasis is unclear. | Two or more functions are missing. No explanation of homeostasis. |
| **Drawing of Tissues** | **10** | **8** | **7** | **6** | **5 – 0** |
|  | Exceptionally neat, accurate and colorful illustration of the 3 tissues. | Neat, accurate and colorful illustration of the 3 tissues. | Accurate and colorful illustration of the 3 tissues. | Accurate illustration of3 tissues. | Very sloppy or incomplete work. |
| **Systems Relationship** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| How the muscular system relies on another system to perform its functions. | A clear and thorough explanation showing deep understanding of the relationship(s). | A clear and thorough explanation of the relationship(s). | A clear explanation of the relationship(s). | Relationship is unclear. | Not done or reused. |
| **Disease** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| 4pts/requirement | All requirements are completed and provide extensive details about the disease. | All requirements are completed and provide details about the disease. | All requirements are completed but there are few details about the disease. | Missing one or more requirements and few details about the disease are provided. | Most or all work incomplete. |
| **Visual Design** | **5** | **4** | **3.5** | **3** | **0** |
|  | Layout is visually pleasing, information is easy to find and understand. Extra effort given to appearance. | Layout is visually pleasing, information is easy to find and understand. | Information is easy to find and understand. | Information is disorganized and/or difficult to understand. | Very sloppy or incomplete work. |

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| **DIGESTIVE** | **Excellent** | **Good** | **Basic** | **Needs Work** | **Incomplete** |
| **Functions & Homeostasis** | **10** | **8** | **6** | **4** | **3 – 0** |
| 2 pts/function4 pts homeostasis | All functions listed and described with detail. A clear and thorough explanation showing deep understanding of homeostasis. | All functions are listed with some description. A clear and thorough explanation of homeostasis. | All functions are listed with no detail. A clear explanation of homeostasis. | One function is missing. Explanation of homeostasis is unclear. | Two or more functions are missing. No explanation of homeostasis. |
| **Explanations** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| - Role of enzymes- Importance of large food molecule digestion | A clear and thorough explanation showing deep understanding of both concepts. | A clear and thorough explanation of both concepts. | A clear explanation of both concepts. | Explanation of one concept is unclear. | One or more explanation is not done. |
| **Systems Relationship** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| How the digestive system relies on another system to perform its functions. | A clear and thorough explanation showing deep understanding of the relationship(s). | A clear and thorough explanation of the relationship(s). | A clear explanation of the relationship(s). | Relationship is unclear. | Not done or reused. |
| **Disease** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| 4pts/requirement | All requirements are completed and provide extensive details about the disease. | All requirements are completed and provide details about the disease. | All requirements are completed but there are few details about the disease. | Missing one or more requirements and few details about the disease are provided. | Most or all work incomplete. |
| **Others** | **10** | **8** | **7** | **6** | **5 – 0** |
| Printed materials & assignments completed in class. | Outline and diagram of the system are complete and neatly colored.  | Outline and diagram of the system are complete and colored. | Outline and diagram of the system are complete. | Outline and diagram of the system are incomplete. | One or both are missing. |
| **Illustration** | **10** | **8** | **7** | **6** | **5 – 0** |
|  | Exceptionally neat, accurate and colorful illustration of the small intestine. | Neat, accurate and colorful illustration of the small intestine. | Accurate and colorful illustration of the small intestine. | Accurate illustration of the small intestine. | Very sloppy or incomplete work. |
| **Visual Design** | **5** | **4** | **3.5** | **3** | **0** |
|  | Layout is visually pleasing, information is easy to find and understand. Extra effort given to appearance. | Layout is visually pleasing, information is easy to find and understand. | Information is easy to find and understand. | Information is disorganized and/or difficult to understand. | Very sloppy or incomplete work. |

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| **CIRCULATORY** | **Excellent** | **Good** | **Basic** | **Needs Work** | **Incomplete** |
| **Functions & Homeostasis** | **10** | **8** | **6** | **4** | **3 – 0** |
| 2 pts/function4 pts homeostasis | All functions listed and described with detail. A clear and thorough explanation showing deep understanding of homeostasis. | All functions are listed with some description. A clear and thorough explanation of homeostasis. | All functions are listed with no detail. A clear explanation of homeostasis. | One function is missing. Explanation of homeostasis is unclear. | Two or more functions are missing. No explanation of homeostasis. |
| **Explanation** | **10** | **8** | **7** | **6** | **0** |
| - Route of blood | A clear and thorough explanation showing deep understanding of concept. | A clear and thorough explanation of concept. | A clear explanation of concept. | Explanation of concept is unclear. | Explanation is not done. |
| **Systems Relationship** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| How the circulatory system relies on another system to perform its functions. | A clear and thorough explanation showing deep understanding of the relationship(s). | A clear and thorough explanation of the relationship(s). | A clear explanation of the relationship(s). | Relationship is unclear. | Not done or reused. |
| **Disease** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| 4pts/requirement | All requirements are completed and provide extensive details about the disease. | All requirements are completed and provide details about the disease. | All requirements are completed but there are few details about the disease. | Missing one or more requirements and few details about the disease are provided. | Most or all work incomplete. |
| **Others** | **10** | **8** | **7** | **6** | **5 – 0** |
| Printed materials & assignments completed in class. | Blood vessel flipbook and blood component chart are complete and neatly colored.  | Blood vessel flipbook and blood component chart are complete and colored. | Blood vessel flipbook and blood component chart are complete. | Blood vessel flipbook and blood component chart are incomplete. | One or both are missing. |
| **Illustration** | **10** | **8** | **7** | **6** | **5 – 0** |
|  | Exceptionally neat, accurate and colorful illustration of the heart. | Neat, accurate and colorful illustration of the heart. | Accurate and colorful illustration of the heart. | Accurate illustration of the heart. | Very sloppy or incomplete work. |
| **Visual Design** | **5** | **4** | **3.5** | **3** | **0** |
|  | Layout is visually pleasing, information is easy to find and understand. Extra effort given to appearance. | Layout is visually pleasing, information is easy to find and understand. | Information is easy to find and understand. | Information is disorganized and/or difficult to understand. | Very sloppy or incomplete work. |

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| **RESPIRATORY** | **Excellent** | **Good** | **Basic** | **Needs Work** | **Incomplete** |
| **Functions & Homeostasis** | **8** | **6** | **4** | **2** | **0** |
| 2 pts/function4 pts homeostasis | All functions listed and described with detail. A clear and thorough explanation showing deep understanding of homeostasis. | All functions are listed with some description. A clear and thorough explanation of homeostasis. | All functions are listed with no detail. A clear explanation of homeostasis. | One function is missing. Explanation of homeostasis is unclear. | Two or more functions are missing. No explanation of homeostasis. |
| **Explanations** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| - Gas exchange in the alveoli- Transporting O2 & CO2  | A clear and thorough explanation showing deep understanding of both concepts. | A clear and thorough explanation of both concepts. | A clear explanation of both concepts. | Explanation of one concept is unclear. | One or more explanation is not done. |
| **Systems Relationship** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| How the Respiratory system relies on another system to perform its functions. | A clear and thorough explanation showing deep understanding of the relationship(s). | A clear and thorough explanation of the relationship(s). | A clear explanation of the relationship(s). | Relationship is unclear. | Not done or reused. |
| **Disease** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| 4pts/requirement | All requirements are completed and provide extensive details about the disease. | All requirements are completed and provide details about the disease. | All requirements are completed but there are few details about the disease. | Missing one or more requirements and few details about the disease are provided. | Most or all work incomplete. |
| **Illustration** | **10** | **8** | **7** | **6** | **5 – 0** |
|  | Exceptionally neat, accurate and colorful illustration of the system. | Neat, accurate and colorful illustration of the system. | Accurate and colorful illustration of the system. | Accurate illustration of the system. | Very sloppy or incomplete work. |
| **Visual Design** | **5** | **4** | **3.5** | **3** | **0** |
|  | Layout is visually pleasing, information is easy to find and understand. Extra effort given to appearance. | Layout is visually pleasing, information is easy to find and understand. | Information is easy to find and understand. | Information is disorganized and/or difficult to understand. | Very sloppy or incomplete work. |

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| **NERVOUS** | **Excellent** | **Good** | **Basic** | **Needs Work** | **Incomplete** |
| **Functions & Homeostasis** | **10** | **8** | **7** | **6** | **2 – 0** |
| 2 pts/function4 pts homeostasis | All functions listed and described with detail. A clear and thorough explanation showing deep understanding of homeostasis. | All functions are listed with some description. A clear and thorough explanation of homeostasis. | All functions are listed with no detail. A clear explanation of homeostasis. | One function is missing. Explanation of homeostasis is unclear. | Two or more functions are missing. No explanation of homeostasis. |
| **Explanations** | **10** | **8** | **7** | **6** | **0** |
| - Definitions and parts of CNS and PNS | Both definitions are described with detail and parts are listed. | Both definitions are described with some detail and parts are listed. | Both definitions are included and parts are listed. | One definition and/or some parts are missing. | Most or all work incomplete. |
| **Systems Relationship** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| How the nervous system relies on another system to perform its functions. | A clear and thorough explanation showing deep understanding of the relationship(s). | A clear and thorough explanation of the relationship(s). | A clear explanation of the relationship(s). | Relationship is unclear. | Not done or reused one from a previous portion of the project. |
| **Disease** | **20** | **19 - 16** | **15 - 14** | **13 - 12** | **11 – 0** |
| 4pts/requirement | All requirements are completed and provide extensive details about the disease. | All requirements are completed and provide details about the disease. | All requirements are completed but there are few details about the disease. | Missing one or more requirements and few details about the disease are provided. | Most or all work incomplete. |
| **Others** | **10** | **8** | **7** | **6** | **5 – 0** |
| Printed materials & assignments completed in class. | Brain flipbook and simple reflex arc are complete and neatly colored.  | Brain flipbook and simple reflex arc are complete and colored. | Brain flipbook and simple reflex arc are complete. | Brain flipbook and simple reflex arc are incomplete. | One or both are missing. |
| **Illustration** | **10** | **8** | **7** | **6** | **5 – 0** |
|  | Exceptionally neat, accurate and colorful illustration of all 3 neurons. | Neat, accurate and colorful illustration of all 3 neurons. | Accurate and colorful illustration of all 3 neurons. | Accurate illustration of all 3 neurons. | Very sloppy or incomplete work. |
| **Visual Design** | **5** | **4** | **3.5** | **3** | **0** |
|  | Layout is visually pleasing, information is easy to find and understand. Extra effort given to appearance. | Layout is visually pleasing, information is easy to find and understand. | Information is easy to find and understand. | Information is disorganized and/or difficult to understand. | Very sloppy or incomplete work. |