Body System Project

Your group will create a power point to educate your classmates about the body system you are assigned. A rubric is provided at the end of this document.

Your presentation should include:

- The main function(s) of the body system
- The main organs (or cell types) of this system and the function of each part
- At least one example of how this system helps to maintain homeostasis in the body
- Explanation of how the system works with other systems (some specified below)
- A description of at least 2 disorders/diseases that can affect this system.
- Answer the additional questions for specific body systems given below
- The title of your power point should be your body system and class period (Example: Digestive System Period 7) and it should be emailed to me with this title by the due date.

Circulatory (Cardiovascular) System:

- Number of chambers in the human heart (and all mammals)
- Pathway of oxygenated and deoxygenated blood- including through chambers of the heart
- How/where the circulatory system interacts with the respiratory & digestive systems
- Structural and functional differences between arteries and veins
- Components of the blood
- Explanation of blood pressure

Digestive System:

- Pathway of food (digestive tract)
- Describe the major digestive enzymes including their function and organ in which they are present
- How/where the digestive system interacts with the circulatory system
- Explanation of villi and their role

Endocrine System:

- Definition of a hormone
- Role of insulin and glucagon in blood sugar (homeostasis example)

Respiratory System:

- Describe the breathing process- what causes inhalation to occur
- How/where the respiratory system interacts with the circulatory system

Nervous System:

- Describe the central and peripheral nervous system
- Describe how a nerve impulse travels from stimulus to response- within a neuron and between neurons
- Types of sensory receptors in the nervous system
Immune System:

- Describe how a vaccine works
- Functions of the different types of white blood cells and proteins involved in immunity
- Innate vs. Acquired (Adaptive) Immunity
- At least one immune system disease given should be an autoimmune disorder (include definition of autoimmune disorder).

Excretory System:

- Describe the structure of the kidneys including a definition of nephron
- An explanation of kidney dialysis treatment

Lymphatic System:

- Interactions with both the immune system and the digestive system.
- Three diseases that can affect the lymphatic system- including mononucleosis.

Skeletal and Muscular Systems:

- Explain how muscles work in pairs using biceps and triceps as the example.
- Describe the following types of joints including examples: ball and socket, hinge, gliding and pivot
- Define cartilage, tendon and ligament
- Describe the structure of large bones.
- Explain the differences between the 3 main muscle types: skeletal, cardiac and smooth
Body Systems Project Rubric

Content

Clear explanation of the following:

_____ Overview of system function (2)
_____ Parts of the system and their function (18)
_____ Role in homeostasis (5)
_____ How the system interacts with other body systems (5)
_____ Reviews two disorders/diseases (10)
_____ Discusses additional questions/bullet points (10)
_____ Bibliography (5)

Power Point Presentation

_____ Powerpoint includes interesting visuals and useful diagrams. All diagrams are appropriate. (10)
_____ Powerpoint font is large enough to be easily read (5)