FRANKLIN LEARNING CENTER

Learning Activity Packet

Subject: Health Related Technology 3

Course #: 630

Teacher: Jessica Way

Lap #1 Title: Pathophysiology 1

Pennsylvania Academic Standards, Science 3.3.10

A. Explain the structural and functional similarities and differences found

among living things.

• Identify and characterize major life forms according to their placement in existing classification groups.

• Explain the relationship between structure and function at the molecular and cellular levels.

• Describe organizing schemes of classification keys.

B. Describe and explain the chemical and structural basis of living organisms.

• Describe the relationship between the structure of organic molecules and the function they serve in living organisms.

• Identify the specialized structures and regions of the cell and the functions of each.

• Explain how cells store and use information to guide their functions.

Pennsylvania Common Core Standards

ELA 1.2 Reading Informational Text

Students read, understand, and respond to informational text – with emphasis on comprehension, making connections among ideas and between texts with focus on textual evidence.

CC.1.2.9-10.J Acquire and use accurately general academic and domain- specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

1. Introduction

Understanding the basic functions of the human body is crucial to understanding assessment, diagnosis and treatment of basic pathology as well as understanding how to promote optimal wellness. As we review these symptoms let us take some time to see how disruption of these systems results in many of our most well known diseases.

1. Behavioral Objectives
2. Students will identify major and minor anatomical components of several major systems including: the integumentary system, the muscular system, the skeletal system, the cardiovascular system, the respiratory system and the lymphatic system.
3. Students will be able to explain the normal physiological function of several body systems and describe how they function in detail.
4. Students will gain a better understanding of each body system by looking at a detailed version of what happens when the system is not functioning optimally. Students will study one common disease related to each system as listed below:

Integumentary System – Eczema

Muscular System – Muscular Dystrophy

Skeletal System – Osteoporosis

Cardiovascular System – Myocardial Infarction

Lymphatic System – Hodgkin’s Lymphoma

1. Vocabulary

appendicular skeleton fontanels contract

axial skeleton foramina contractibility

carpals humerus contracture

clavicles joints elasticity

cranium ligaments excitability

diaphysis medullary canal extensibility

endosteum abduction extension

epiphysis adduction fascia

femur cardiac muscle flexion

fibula circumduction insertion

insertion involuntary muscle tone

muscular system origin rotation

skeletal muscle tendons smooth muscle

voluntary aortic valve arrhythmias circulation

Arteries capillaries circulatory system

Diastole endocardium erythrocytes

Hemoglobin left atrium left ventricle

Leukocytes mitral valve myocardium

Pericardium plasma pulmonary valve

Right atrium right ventricle septum

Systole thrombocytes tricuspid valve

alveoli bronchi bronchioles

cellular respiration cilia lymph

lymphatic capillaries right lymphatic duct thoracic duct

lymph nodes white blood cells

1. Activities/Projects

* Students will practice with models, either 2D or 3D of the systems studied and will correctly label each of the major and minor areas of the structures included. (Objective 1)
* Students will students will review via interactive discussion, Smart Notebook presentations and with computer assisted technology the normative functioning of each physiological system and one major illness caused by impaired functioning each system. (Objectives 1-3)
* Students will take weekly quizzes on each system of the body. At the end of the LAP students will take a final exam of all of systems studied. (Objectives 1-3)

1. Resources

* A.D.A.M. Inside Out computer software with tutorials
* Internet Sites:

<http://training.seer.cancer.gov/anatomy/body/> -- We will be using this website to review previous knowledge about different body systems and to take our learning a little deeper. There are practice quizzes on the website to help you see if you remember the material!

[www.getbodysmart.com](http://www.getbodysmart.com) -- Free interactive anatomy and physiology site that highlights prominent anatomical features and helps you to study!

* Diversified Health Occupations, Chapter 7!
* Other resources as needed

F. Assessment

* Completion of all weekly quizzes after completion of system review. (Objectives 1-3)
* Final LAP Exam to see what information you remember after one month of hard study! (Objectives 1-3)

G. Instructional Accommodations/ Alternative Assessments

All students with testing difficulties are encouraged to seek assistance in the resource room during quizzes and final exams.

All students having difficulty with reading comprehension will be provided with time afterschool to receive assistance with understanding the complex vocabulary of medicine.

**Checklist for LAP 1**

* **Completion of ALL weekly quizzes – combined they are 50% of your grade!**
* **Completion of the Final LAP Exam for LAP 1 – 50% of your grade!**