

D. W. Daniel High School

140 Blue and Gold Blvd., Central, SC 29630 (864) 397-2900

Information Sheet

Course Title: Honors Anatomy & Physiology

2018-2019

Room: 233

Teacher: Mr. Chuck Conrad

Teacher email: chuckconrad@pickens.k12.sc.us

Course Description:

Course Description: Anatomy and Physiology is a course designed for students with a serious interest in human biology and for those considering a career in the medical fields such as dentistry, physical or occupational therapy, nursing or clinical medicine. The course will examine the majority of human body systems in detail and will require that students dissect a sheep heart, kidney, and brain, as well as a chicken leg quarter and fetal pig. **Students will be graded on the dissections and will complete a lab practical assessment on each dissection unit.**

Be prepared for daily quizzes and identification assessments in lab!

Scope & Sequence:

First Semester

Intro to Body
Histology
Integumentary System
Skeletal System
Muscular System
Endocrine System

Second Semester

Blood, Immune, Lymphatic System
Cardiovascular System
Respiratory System
Urinary System
Digestive System
Reproductive System

Field Trip: Gross Anatomy Lab USC Medical University's Greenville campus

Honors students will complete various projects due each quarter to differentiate the course from the CP level.

Due Date: First Day of the course! No exceptions!!

Honors Anatomy and Physiology **Summer Assignment** 2018-2019
Mr. Conrad chuckconrad@pickens.k12.sc.us

“Anatomy is to physiology as geography is to history; it describes the theatre of events.” — Jean Fernel

The purpose of this summer assignment is to prepare you for anatomy class and get you thinking about dissections and the nature of anatomy.

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Note: All work should be **HAND WRITTEN** and turned in on the first day of class.

DO NOT TYPE, please write neatly, and do your own work!

Assignment: Read *Stiff: The Curious Lives of Human Cadavers* by Mary Roach & answer the following questions. cost \$6-10 on Amazon.com or see Pickens County Library.

Introduction

- Explain what the author meant when she said she saw “her mother’s cadaver”.
- Why do you think the author wrote this book?

Chapter 1

- What does “objectify the body” mean and why is it important for doctors (and students) to learn?
- Why do plastic surgeons use the malar fat? What is a malar fat pad?
- Why is the head shaved and covered on cadavers?

Chapter 2

- Do medical schools encourage respect for the dead? How?
- How have cadavers been acquired before the modern “donation” method?
- How did early surgeons learn anatomy when their government did not sanction human dissection?

Chapter 3

- Describe autolysis?
- Why do bodies bloat? (And do dead people really pass gas?)
- How are the dead prepared for a traditional burial?
- Why should science understand how bodies decay?

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Chapter 4

- a. Why should cadavers be in crash test vehicles?
- b. Describe why side impacts are particularly dangerous?
- c. Why are parts of a cadaver sometimes used instead of the whole cadaver?

Chapter 5

- a. What kind of information is included in the Aerospace Pathology book?
- b. How is the information useful to air crash investigators?
- c. How does an investigator know if an airplane crash victim over water was in or out of the plane?
- d. Why would an airline not use features that would make flying less dangerous?

Chapter 6

- a. How are large and small caliber bullets different? Why are large preferred over small?
- b. Why do people (and some animals) fall to the ground after being shot?
- c. What is the scientific value of bullet research with cadavers give?

Chapter 7

- a. Describe experiments performed determining the physiological effects of a crucifixion?

Chapter 8

- a. Describe a beating-heart cadaver?
- b. What is a “waiting mortuaries” and what was the need?
- c. Where does the quote “saved by the bell” have its origin?
- d. Why does a heart get so much credit for as the seat of life (or the soul)?
- e. Define death in the modern world?

Chapter 9

- a. Describe experiments used to determine if a severed head still keeps consciousness?
- b. Can you think of a value to science for these experiments and explain?

Chapter 10

- a. What is an Arabian “mollified man?” How formed and what the elixir?
- b. How long is blood sterile after death? Can the Red Blood Cells still hold oxygen?
- c. Why does cannibalism exist?

Chapter 11

- a. Describe tissue digestion and how does it occur?
- b. Why should we compost the dead? Benefits?
- c. Where does the water inside a human (or cadaver) come from? Where does it go?

Chapter 12

- a. How are human skeleton models prepared (from real bodies)?
- b. What is plastination? How long does it take to plastinate a body?