



NEW YORK CITY DEPARTMENT OF EDUCATION

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Medical Assisting 11th grade - Summer Assignment

This assignment is **due the first day of school!** Each day it is late will result in a 10 point deduction from the grade.

We will review the information in this assignment and you will be tested on it.

In addition to completing the questions/tasks in this packet, you will use colored pencils to complete the diagrams in the Anatomy Coloring Book for the human body systems. Follow the instructions on how to complete the coloring plates properly.

Your work must be legible!

Type your work: double spaced, size 10 font minimum (Ariel or Times New Roman font), one inch margins.

Type the question/task and the answer. Use charts and bullet points where instructed.

This assignment will be graded and count for the first marking period.

Coloring: Print out the pages as two sided. The instructions for each coloring plate will be on the left side and the plate to be covered will be on the right side, as in a book.

Do not use pens or markers, it will bleed through to the next page and make a mess. Color in lightly so that you can see the texture lines on the drawing.

If you have any questions, contact Dr. Savitzky @ MSavitzky@taehs.org

DO NOT SAVE THIS FOR THE LAST WEEKS OF AUGUST. YOU WILL BE OVERWHELMED AND HAVE POOR RESULTS!

See you in September!

Dr. Margaret Savitzky

Common Core Learning Standards

CCSS.ELA-LITERACY.WHST.11-12.1.A

Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.

CCSS.ELA-LITERACY.WHST.11-12.1.C

Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.

CCSS.ELA-LITERACY.WHST.11-12.2.B

Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.

CCSS.ELA-LITERACY.WHST.11-12.4

Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.WHST.11-12.8

Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

CCSS.ELA-LITERACY.WHST.11-12.9

Draw evidence from informational texts to support analysis, reflection, and research.

Each question is worth 4 points. Points will be given based on completeness & accuracy of the answers (3 pts) and proper citation (1pt). The anatomy plates will be graded for completeness and neatness of coloring. **Color in the terms in the same color as you color in the structure!** Each plate will count for 3.45 points).

Orientation to the Body:

Plates 1, 2, 3, 4, 5, 10

Digestive System: (12 points)

Plates 134, 140, 141, 143

1. Define essential nutrients and describe the six classes of essential nutrients (carbohydrates, proteins, lipids, water, vitamins, minerals). Give two HEALTHY examples from each class of nutrients. **Create a chart** for your answer (nutrient, functions, examples)
2. Describe the common processes and structural components of the human digestive system. **Create a chart** (structure & function)
3. Describe the major functions of the large intestine.

Cardiovascular/Respiratory Systems: (32 points)

Plates: 102, 103, 104, 105, 114, 121, 127, 132

1. List the structural components of the circulatory system and relate their structure to their functions. **Create a chart**
2. List the four heart valves, describe their location, and explain their functions. **Create a chart** (structure & function)
3. Define blood pressure and describe how it is measured.
4. Relate the structure of erythrocytes to their functions.
5. List the five main types of white blood cells and generally characterize their functions. **Create a chart** (name, structure & function)
6. Distinguish between: a heart attack and a stroke; atherosclerosis and arteriosclerosis; and low-density lipoproteins (LDLs) and high-density lipoproteins (HDLs). **Create a chart**
7. For the human respiratory system, describe the movement of air through air passageways to the alveoli, listing the structures that air must pass through on its journey.

Excretory System: (12 points)

Plates: 144, 147

1. Using the diagram; identify and give the function of each structure in the human excretory system. **Create a chart.**
2. Using the diagram; identify and describe the function of each part of the nephron. **Create a chart**
3. Explain the significance of the liver in maintaining homeostasis.

Immune System:

Plates: 121

Nervous System: (12 points)

Plates: 68, 83, 85

1. Compare the structures & functions of the central nervous system and the peripheral nervous system.
2. Distinguish between the functions of the autonomic nervous system and the somatic nervous system.
3. Describe the structures and functions of the following brain regions: medulla oblongata, pons, cerebellum, thalamus, hypothalamus and cerebrum. **Create a chart** (name & function)

Endocrine System: (32 points)

Plates 149, 151, 152, 153, 154

1. Distinguish between endocrine and exocrine glands.
2. Describe the location of the pituitary. **Create a chart** and explain in detail the functions of the hormones released from the anterior and posterior lobes.
3. Describe the location of the pineal gland. Explain the significance of its secretion melatonin.
4. List the hormones of the thyroid gland and explain their roles in development and metabolism. Explain the causes and symptoms of hyperthyroidism, hypothyroidism and goiter.
5. Note the location of the parathyroid glands and describe the hormonal control of calcium homeostasis.
6. Distinguish between alpha and beta cells in the pancreas and explain how their antagonistic hormones (insulin and glucagon) regulate carbohydrate metabolism.
7. Describe the development of the adrenal medulla. List the hormones of the adrenal medulla, describe their functions and explain how their secretions are controlled.
8. List the hormones of the adrenal cortex, describe their functions, and explain how their secretions are controlled.