

Anatomy and Physiology

Class Tasks and Skills

Content <u>Curriculum</u>	Class Tasks and Skills						
	Diagram	Create	Describe	Write	Identify	List	Draw
Body Region/Cavities	Draw the body areas and identify corresponding organs and body systems						
Directional Term	Describe the limbs of the body using directional terms						
Homeostasis	Write one paragraph describing homeostasis						
System Basics	Draw a Chart that lists the major systems of the body, and their relationship to each other				Draw a cell and its organs		
Skeletal System	List the types of bone fractures						
	Diagram the bones of the anterior rib cage						
	List the bones of the leg						
	Identify the bones and the bony landmarks of your arm, under the skin						
Appendicular Bones	Diagram the bones and identify palpable landmarks of the knee						
Axial Bones	Diagram the bones and identify palpable landmarks of the pelvis						
Integumentary System	Diagram and name the layers of skin						
	Create 'skin' using common household items such as wax paper or a sponge, use materials to make multiple layers of epidermis, fat, etc.						
	Identify skin disorders using yourself, friends, or family look for moles, warts, or other skin disorders						
The Four Tissue Types	Identify (Magnifying lens identification) – examine the skin and hair under a magnifying lens and describe what you observe						
	Identify - Use a tongue depressor to scrape the surface of the skin (lightly). What happens when the skin is stimulated this way?						

Muscular System	Describe - Stand in front of a mirror and move your arm through all the major forms of movement (flexion, extension, etc.)	
	Draw - Color over (use non toxic markers) the muscles of the forearm	
	Identify - Locate, palpate and list 25 muscles of the body	
	Create - Make a clay model of a tendon	
	Identify - Stand in front of a mirror and isolate and contract the muscles of the upper arm, - bicep, tricep, and deltoid.	
	Create - Sculpt four muscles (origin to insertion (use clay)	
	Diagram the parts of a muscle twitch	
	Identify - Using a weight or similar heavy object, lift it with the upper extremity through flexion and extension (biceps curl) and observe the reciprocal contraction of the upper limb. Describe what you observe.	
Reproductive System	Create - Make a uterus/ovary clay model	
	Write - Compare and contrast birth control methods	
	Describe the stages of conception, fetal development, labor & delivery	
	Draw the tissue layers of the uterus	Draw the male reproductive system
Excretory System	Create - Make a clay model of the kidney	
	Create - Make a clay model of the bladder and ureters	
	Create - Connect and dissect the kidney, bladder, and ureter models	
	Write - Research and report on the Liquid Ingestion/Urine Production Ratio	
Digestive System	Describe - Examine an intestine (chitlins) (pig intestines) sold at your local meat or supermarket. Describe what you observe.	
	Describe - Cut through the intestine and examine its internal structure	
	Describe - Place a small piece of meat in a glass jar with either lemon juice or meat tenderizer and observe the results, how is this similar to the process of digestion in the stomach?	
	Draw the following: Salivary Gland Anatomy of the Tooth Small Intestine Intestinal Wall Ileocecal Valve	Draw the stomach beginning with the esophagus, and ending at the small intestine

Respiratory System	Describe - Blow up a balloon and observe, palpate, and list the muscles used to blow air into the balloon	
	Describe - Using a common house hold sponge, cut it in half and describe its similarity to lung tissue	
	List - Measure your rate of respiration and the normal rate of respiration	
	Create - Make a clay model of the airway and lungs	
Cardiovascular System	List the blood types	
	Write - Research and report on how Hepatitis C is transmitted	
Heart	Identify - Take your resting pulse rate on the (neck) carotid or (wrist) radial. Jump up and down for 30 seconds and retake your pulse rate. List the two and determine the difference between the two.	
	Identify - Stand in front of a mirror and locate the carotid pulse in the neck	
	Identify - Use a non toxic color marker as a scalpel and outline and then divide your heart (on your chest) into its four chambers	
	Diagram - Make a flow chart of blood flow	Draw the tissue layers of an artery
Blood Vessels	Describe - Hold a flash light to your ear lobe in a darkened room and observe the effect	
	Describe - Cut through a small piece of water hose, and compare it to the layers of Muscle in an artery	
	Draw a graphical representation of the blood vessel connections to the kidney.	Draw the tissue layers of an artery
Lymphatic System	Create - Make a clay model of a lymph node	
	Describe - What is manual lymphatic drainage?	
	Identify - Stand in front of a mirror and locate the axillary and femoral lymphatic vessels and nodes	
	Write - Research and define lymphoma	
	Write - Research and describe the metastasis of cancer through the lymphatic system	

Endocrine System	Describe the thyroid gland and its function and effect on the musculoskeletal system	
	Describe - Cut a lemon in half and use it to describe the inside of a lymph node	
	Write - Research and describe the adrenal gland and its functions related to tissue healing	
	Draw a graphical representation of the endocrine connections to all the major body organs, with the hormones they produce	Draw the adrenal gland
Nervous System	Create - Make a clay model of a nerve cell	
	Write - Research and list disorders of the nervous system	
	Create - Make a life size clay model of the sciatic nerve (thickness not length) at the greater sciatic notch	
	Describe - Spin around several times (carefully) Why are you dizzy? What cells in the ear sense motion?	
	Describe - Go to the link and explore the vision games on the site http://www.vision3d.com	
	Describe - What are the different characteristics of the left and right brain?	
	Describe - Research and describe the neuro-muscular junction	
The Final Exam	When you are ready to take the Final Exam go to the testing area and proceed with taking the exam.	

Adapted from the work of Michael Lazaroff, author of *The Complete Idiot's Guide to Anatomy and Physiology*, available at Amazon.com (Concept used with author's permission)

Dr. Gregory T. Lawton

It (the chart) looks quite good. I appreciate your endorsement of my book at the end of the chart.

Thank you very much. I hope my work is of use to you and your students!

Sincerely,

Michael J. V. Lazaroff

Author of *THE COMPLETE IDIOT'S GUIDE TO ANATOMY AND PHYSIOLOGY*