

COURSE TITLE: **Human Anatomy and Physiology**

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Forsyth County Schools Course Syllabus 2020/2021

Course Description: The human anatomy and physiology curriculum is designed to continue student investigations that began in grades K-8 and high school biology. Areas of study include organization of the body; protection, support and movement; providing internal coordination and regulation; processing and transporting; and reproduction, growth and development. The course integrates careers related to medicine, research, health-care and modern medical technology and utilizes case studies concerning diseases, disorders and ailments.

Standards: *Course Standards can be found at www.georgiastandards.org . Standards are also included in the course outline attached to this syllabus.*

Required Assignments: Students will be expected to complete case studies and dissections of preserved specimens. Labster will be utilized as an online laboratory assignment. A lab fee may be requested to cover the cost of the online lab resource. Formative assessments will be assigned and graded prior to summative assessments. **Summative assessments will not be given until all formative feedback has been returned.**

Availability for Extra Help: Additional help will be available upon request. Students should make an appointment to meet with the teacher before or after school.

Teacher Expectations for Students: Students are expected to attend class on a consistent basis, participate in all laboratory exercises including dissections of preserved animal specimens and turn in assignments by the due date. Students are also expected to arrive in class on time and remain on task until dismissed by the teacher. Cell phone use is prohibited during teacher lectures, quizzes, and tests. Use of cell phones for in-class assignments is up to the discretion of the teacher. Failure to follow cell phone use policies will result in disciplinary measures and conference with parents.

Student Expectations for Teacher: There will be a minimum of four formative assessments and one summative assessment per content unit. Case studies will be assigned throughout the semester which include practical application of the content presented. Some case studies may be graded as a summative assessment. The teacher will be available for additional help upon request. Students should make an appointment with the teacher for additional help outside of class time. The teacher will schedule conferences with parents of students who are missing class, receiving low grades on summative tests or failing to turn in assignments on time.

Makeup Work: Make up work is defined as work assigned during a student's absence, not work assigned prior to an absence. The student has five (5) school days upon returning to school to complete make-up work. The teacher has the discretion to grant a longer period to make up work, if there are extenuating circumstances.

Safety Goggles

To reduce the possible spread COVID-19 by lab safety goggles, every lab will be equipped with a spray bottle of 70% isopropyl alcohol solution to sterilize goggles between each use. Students are welcome to bring their own goggles provided the goggles meet safety standards. They must be splash proof and have a Z87+ impact rating. The linked goggles should meet the safety guidelines required at most colleges as well. Safety glasses are not acceptable protection. Suitable goggles are linked below. An electronic copy of the syllabus can be accessed on Itslearning so that you can follow the links.

Flinnsci.com [AP3306](#) or [AP3309 for Fog Free.](#)

Amazon.com - [Green Safety Goggles](#)

Labster

To support student learning, your instructor would like to use Labster.com to provide a safe laboratory experience. Labster.com will provide an online platform for students to simulate a laboratory experience. This is a requested lab fee of \$8 to cover the fee for registration with the website. Please speak to your individual instructor if you have questions or concerns.

Grading Calculations:

Non-EOC Course Average = 50% (1st Sem. Course Work) + 50% (2nd Sem. Course Work)

1st and 2nd Semester Course Work = 75% Summative + 25% Formative

Grading Policy:

A = 90 – 100

B = 80 – 89

C = 70 – 79

Failing = Below 70

Formative Assessments include, but are not limited to homework, class work, practice tests, rough drafts, and sections of projects/research papers/presentations.

Summative Assessments include, but are not limited to unit tests, final projects, final essays, final research papers, and final presentations.

Learning Resources/Textbook(s): All learning resources, both print and digital, are meant to support and enhance the student learning experience of this class. Below are the names of the textbooks and websites that will be used in this course. Some of the web-based resources require parent permission per federal regulations. Federal laws that guide parent permission requirements are as follows:

- **Children's Internet Protection Act (CIPA):** The school is required by CIPA to have technology measures and policies in place that protect students from harmful materials including those that are obscene and pornographic. Any harmful content contained within inappropriate sites will be blocked. <http://fcc.gov/cgb/consumerfacts/cipa.html>
- **Children's Online Privacy Protection Act (COPPA):** COPPA applies to commercial companies and limits their ability to collect personal information from children under 13 years of age. No personal student information is collected for commercial purposes. <https://www.ftc.gov/tips-advice/business-center/guidance/complying-coppa-frequently-asked-questions-0>
- **Family Educational Rights and Privacy Act (FERPA):** FERPA protects the privacy of student education records and gives parents the right to review records. Under FERPA, schools may disclose directory information in certain circumstances. <http://www2.ed.gov/policy/gen/guid/fpco/ferpa>

Please review the resource list. Each website related to the curriculum resources is provided along with their privacy policies. Should you have any questions regarding these resources immediately contact the course teacher via email or phone.

Name of Resource*	Digital	Privacy Policy
Anatomy / Physiology - Body Structures & Functions - Cengage (2013)	Body Structures & Functions	Cengage
OpenStax	A&P	Terms of Service
Georgia Virtual School	A&P	http://www.gavirtuallearning.org/terms.aspx
Discovery Education	Classlink Access	Discovery Media Terms of Use
NewsELA	Classlink Access CLEVER	NewsELA Privacy Policy
CK-12 FlexBook: Biology	Classlink Access CLEVER	CK-12 Terms of Use

** The following resources are county approved. These resources may vary by school due to sequencing, pacing,*

Initials _____ (every page initialed by parent)

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curriculum design, and/or individual needs of students.

Parent Initial for Approval **	Name of Resource	Website	Privacy Policy
	NSTA Podcast for the Classroom	Blick on Flicks	Policy
	M.I.T. OpenCourseware	M.I.T. Science, Technology, & Society	Privacy Policy
	HHMI biointeractive	Classroom Resources	Ed Framework In Progress

**** The following resources are web-based resources that require parent permission. By signing the syllabus, the parent is approving these resources. Should you have any questions regarding any of these classroom resources, please contact your student's teacher via email.**

I, _____, have read this course syllabus and approve of its contents.
I agree to allow my student to use each of the classroom resources listed in the learning resource section. I will support my student following the classroom expectations outlined in this course syllabus. I agree that I am the person who is legally allowed to consent for my student whose name is listed below.

Student's Name (Print)

Parent's Name (Print)

Parent Signature

Date

Course Outline:

Unit	Labs/Activities	Approximate Time and Standards
Unit 1- Intro to Anatomy, Language of Anatomy	Lab Safety/ Dissection Techniques Orientation and Directional Terms Physiology Scavenger Hunt Lab-Homeostasis	2 weeks (8/13-8/26) Georgia Standards of Excellence SAP1-Anatomical Structures SAP1. Obtain, evaluate, and communicate information to analyze anatomical structures of the human body. a. Develop and use models to demonstrate the orientation of structures and regions of the human body. b. Construct an explanation about the relationship between a body structure (i.e., cells, tissues, organs, and organ systems) and its function within the human body.
Unit 2- Histology (tissues)	Lab-Epithelial Tissue Lab-Identification of Connective, Muscles and Nervous Tissue Case Study-Tissue disorders	3 weeks (8/27- 9/18) Georgia Standards of Excellence: SAP1. Obtain, evaluate, and communicate information to analyze anatomical structures of the human body. b. Construct an explanation about the relationship between a body structure (i.e., cells, tissues, organs, and organ systems) and its function within the human body.
Unit 3- Integumentary System (skin)	Lab-Skin Cube Model Lab- Chicken Wing Dissection Case Study- Skin Cancer	3 weeks (9/28-10/16) Georgia Standards of Excellence: SAP2. Obtain, evaluate, and communicate information to analyze the structure and function of the integumentary, skeletal, and muscular systems. a. Construct an explanation about the relationship between the structures of the integumentary system and their role in protection, eliminating waste products, and regulating body temperature.
Unit 4- Skeletal System	Lab- Bones Group Project Lab Practicum (Summative Grade)- Identify bone markings, types of joints and individual bones of the body (100 items)	3 weeks (10/19-11/6) SAP2. Obtain, evaluate, and communicate information to analyze the structure and function of the integumentary, skeletal, and muscular systems. b. Develop and use models to relate the structure of the skeletal system to its functional role in movement, protection, and support.

Unit 5- Muscular System	Lab-Identify muscles of the cranium Lab-Identify muscles of the axial and appendicular skeleton Muscle Practicum (Summative Grade)-Identify 55 muscles, describe the process of muscle contraction	3 weeks (11/9-12/4) *Thanksgiving break (11/23-11/27) SAP2. Obtain, evaluate, and communicate information to analyze the structure and function of the integumentary, skeletal, and muscular systems. c. Develop and use models to determine the relationship between structures of the muscular system and their role in movement and support.
Unit 6- Nervous System and Special Senses	Lab- Sheep Brain dissection Lab-Senses and Reflex Arcs Case Study-Nervous System Disorders Lab- Cow Eye Dissection	3 weeks (12/7-12/11, 1/4 – 1/15) SAP3. Obtain, evaluate, and communicate information to explain the coordination of information processing in the endocrine and nervous systems. a. Ask questions to investigate how the structures of the nervous system support the function of information processing (detection, interpretation, and response).
Unit 7 – Endocrine System	Lab-Positive and Negative Feedback Mechanisms Case Studies – Diabetes and Thyroid disease	2 weeks (1/18-1/29) SAP3. Obtain, evaluate, and communicate information to explain the coordination of information processing in the endocrine and nervous systems b. Analyze and interpret data to explain how the hormones of the endocrine system regulate physical and chemical processes to maintain a stable internal environment. (Clarification statement: This should include positive and negative feedback mechanisms, e.g. heart rate, blood sugar, childbirth, temperature, growth, etc. Ask questions about how the interdependence of the endocrine and nervous systems makes information processing (detection, interpretation and response) possible. (Clarification statement: Questions should address the homeostatic mechanisms, as well as the effects of and responses to aging, diseases, and disorders).
Unit 8 – Cardiovascular and Respiratory Systems	Lab- Sheep Heart Dissection Lab-Lung structure and Function	3 weeks (2/1- 2/19) SAP4. Obtain, evaluate, and communicate information to analyze the processing of matter and energy in the cardiovascular, respiratory, digestive and urinary

		systems. a. Plan and carry out an investigation to explore the structures and role of the cardiovascular and respiratory systems in obtaining oxygen, transporting nutrients, and removing waste.
Unit 9 – Lymphatic and Immune Systems	Case Study – Immune disorders	2 weeks (2/22 – 3/5) SAP1. Obtain, evaluate, and communicate information to analyze anatomical structures of the human body.
Unit 10 -Digestive and Urinary Systems	Lab- Pig Kidney Dissection Case Study – Digestive System	3 weeks (3/8 – 3/26) SAP4. b. Develop and use models to explain the relationship between the structure and function of the digestive and urinary systems as they utilize matter to derive energy and eliminate waste.
Unit 11 –Cat Dissection	Lab- Cat Dissection Cat Practicum – Summative Assessment	3 weeks (4/12 – 4/30)
Unit 12 – Reproductive System	Lab- Comparison of reproduction in the animal kingdom	2 weeks (5/3 – 5/14) SAP5. Obtain, evaluate, and communicate information to analyze the role of the reproductive system as it pertains to the growth and development of humans. a. Ask questions to gather and communicate information about how the structures of the reproductive system allow for production of egg and sperm, fertilization, and the development of offspring. (Clarification statement: Regulation of the functions by hormones should be addressed in this standard.) b. Develop and use models to describe the stages of human embryology and gestation. c. Ask questions about how the reproductive system makes growth and development possible. (Clarification statement: Questions should address the homeostatic mechanisms, as well as the effects of and responses to aging, diseases, and disorders).
Final Exam Review		1 week (5/17-5/21)