

James Clemens High School

11306 County Line Road
Madison, AL 35756



Phone: 256-216-5313

Extension: 95131

Email: kmweir@madisoncity.k12.al.us

Course Syllabus

Human Body Systems Fall 2022

Instructor: Katie Weir

Dear Parent/Guardian,

I look forward to having a great year! I feel fortunate to have your son/daughter in my class this semester and hope that you will contact me should you have any concerns about the progress of your son/daughter or any aspect of the instruction. With your son/daughter, please read the attached policies, then complete the [Classroom/Lab Class Google Form here](#) (this will count as a signed classroom/lab contract paper form). The lab contract can be found [here](#) as well as our Schoology Classroom. Please provide a current email address and phone number at which I can contact you should the need arise. Please contact me at school with any concerns.

Thank you,

Mrs. Katie Weir

kmweir@madisoncity.k12.al.us

My child and I have read and discussed the classroom syllabus. Please complete the [Classroom/Lab Class Google Form here](#) instead of completing the form below.

Student Name (Print) _____ Date _____

Student Signature _____ Date _____

Parent/Guardian Name (Print) _____ Date _____

Parent/Guardian Signature _____ Date _____

Email Address(es) _____

Phone number(s) _____
Cell Home Work



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Human Body Systems Fall 2022
Instructor: Katie Weir

Course Description:

This course is a prerequisite for Medical Interventions (MI), the third course in the Biomedical Science program. Students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis. Exploring science in action, students build organs and tissues on a skeletal Maniken®; use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration; and take on the roles of biomedical professionals to solve real-world medical cases.

Course Objectives:

Students will:

1) Students will become acquainted with the various levels of organization of the human body. 2) Students will integrate anatomical structures with functions that involve support, movement, integration, coordination, transport, absorption, and excretion within the human body. 3) Students will explore the human life cycle in the process of reproduction, growth, and development.

Classroom Rules and Expectations:

1. **BE ON TIME.** Tardy means that you are not **in the room** and getting seated when the bell rings. If you are not in the room when the tardy bell rings, you will need to go to the attendance office for a tardy slip. JCHS policy governs the consequences for tardiness.
2. **BE RESPECTFUL:** Practice courtesy and mutual respect. Treat others as you would like to be treated. The classroom and laboratory is to be regarded as a safe and supportive learning environment.
3. **BE YOUR OWN PERSON:** Many assignments are to be completed by lab partners or within a group. However, **ALL students are expected to contribute and/or work is to be done individually.** Plagiarizing/copying assignments from lab partners is not acceptable and can result in a zero on the assignment.
4. **BE PREPARED:** Come prepared for class—mentally and with proper materials.
5. **BE WHERE YOUR FEET ARE:** Anything distracting to you, your classmates, or your teacher should be put away during class (phone, food, candy, drinks, etc.) **Cell phones should always be on silent and put away unless you have permission to use them for class assignments.** **The use of cell phones during tests/quizzes, lecture, and group work can result in a lower grade or “0” on the assignment. Please practice proper cell phone etiquette! If your cell phone becomes a problem, they will go into a “cell phone home” where you can focus on your assignment.**

Please try to take care of any personal business before or after class. I do not want you to miss valuable class time!

CTSO: Students are encouraged to participate in HOSA. Competitive events that relate to a specific topic discussed in class will be highlighted.

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Culminating Product: Basis of knowledge required in preparation for Medical Interventions (MI).

Career Readiness Indicator: Students who are age 15 and older and meet the American Red Cross requirements for Lifeguarding are eligible to receive this credential paid for by the Alabama State Department of Education. See Teacher for further details.

*Choosing not to follow these classroom guidelines will result in the following: warning, student conference, parent notification/conference, or office referral.

Accommodations: Requests for accommodations for this course or any school event are welcomed from students and parents.

Concerning Laptop Utilization: Student laptops should not be hard-wired to the network or have print capabilities. 2. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers. 3. Neither the teacher, nor the school is responsible for broken, stolen, or lost laptops. 4. Laptops and other electronic devices will be used at the individual discretion of the teacher.

Turnitin Notice: The majority of writing assignments in this course will be submitted to Turnitin via the Schoology learning platform. The primary focus of this software is to help students become better writers and scholars. Turnitin generates a report on the originality of student writing by comparing it with a database of periodicals, books, online content, student papers, and other published work. This program will help students discern when they are using sources fairly, citing properly, and paraphrasing effectively - skills essential to all academic work. Students will have the opportunity to review their Turnitin originality report and will have the opportunity to make revisions before submitting their work for grading. Once their work is submitted, teachers have the opportunity to view the student's originality report and grade accordingly.

Grading Policy:

Test/project grades will account for 70% of the 9-weeks grade, with the remaining 30% being determined by quiz/daily grades. Some quizzes will count as test grades. The grading scale is as follows: A (90-100%), B (80-89), C (70-79), D (65-69), and F (below 65). Grades will be a reflection of mastery of the standards. Make sure all absences are excused as class work can be made up and graded for excused absences only. The final exam counts for 20% of the final grade. *There will be several projects assigned. Students should be prepared to work in the home with one to several students. All safety rules learned in class should be applied at home. Be aware that some of the materials students use at home may damage household contents. Students should be thoughtful of their working environment.*

Make-Up Work Policy:

Attendance is crucial for success in HBS as most of the work will be done in class and many of the activities are difficult to make up.

It is the **student's** responsibility to collect assignments that are missed during an absence from Schoology, another student, or by contacting the teacher. Students have the same number of days they were absent to make up an assignment/activity. Note: Certain lab activities cannot be made up due to logistical issues, and students will be given a possible alternate assignment to replace the lab grade.

Tests & quizzes that are missed will be completed outside of instructional/activity time. Please talk to me to set up a time to make up your assignment during Refuel. It is the **student's** responsibility to set up a time and make up your test or quiz.

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Late work will be accepted with the penalty of 20% deducted per day late for the maximum of 5 school days, but students must discuss turning in late work. **Late work will not be accepted after 1 week after the due date.**

Please monitor the Schoology calendar and classroom board for deadlines. Enable notifications on Schoology to get reminders!

Unexcused Absences

It is very important that you get all absences excused. If you do not, the computer will not allow me to enter a grade above a zero for any given assignment on the day you missed. It is **your** responsibility to take care of this and to let me know when the excuse has been updated. I do not receive notifications that absences have been excused.

Course Materials:

Per Individual:

One 1 ½-2 inch three ring binder*
Loose leaf paper
Roll of paper towels
Colored pencils
Scientific Calculator

Black/Blue ink pens & Pencils
Graph paper
Dividers
Laptop (school issued or personal)
Surviving the Extremes book/ebook ~\$15

Wishlist Items (but not required):

Pack of copy paper
Non-latex gloves
Sanitizing wipes
Tissues
Sanitizing aerosol spray

Hand sanitizer
Command poster strips
Dishwashing liquid
Handsoap

Texts/Required Readings:

Surviving The Extremes by Kenneth Kaimler

The course is online and the majority of the materials that accompany this class will be accessible online.



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18 - WEEK PLAN*	
WEEK 1	Unit One – Identity (13 Days) Lesson 1.1: Identity: Human (2 Days) Activity 1.1.1 – Amazing Facts Activity 1.1.2 – Orientation to the Maniken (Directional/Regional Terms) Lesson 1.2: Identity: Tissues (6 Days) Activity 1.2.1 – Identity of Your Maniken (Histology Review/Build Face) Activity 1.2.2 – Skeleton Scavenger Hunt
WEEK 2	Project 1.2.3 – Bone Detectives Activity 1.2.4 – Height Estimation from Bone Lesson 1.3: Identity: Molecules and Cells (5 Days) Activity 1.3.1 – DNA Detectives Activity 1.3.2 – Careers in Identity Project 1.3.3 – Who Are You?
WEEK 3	Unit Five – Protection (11 Days) Lesson 5.1: The Skin (3 Days) Activity 5.1.1 – Under My Skin Activity 5.1.2 – Burn Unit Activity 5.1.3 – Hurts So Good: Pain as Protection Lesson 5.2: Bones (4 Days) Activity 5.2.1 – Looking Inside Bone Activity 5.2.2 – X-ray Vision
WEEK 4	Activity 5.2.3 – Bone Remodeling and Repair Lesson 5.3: Lymph and Blood Cells (4 Days) Activity 5.3.1 – To Drain and Protect Activity 5.3.2 – Transfusion Confusion Activity 5.3.3 – Fighting the Common Cold
WEEK 5	Unit Two – Communication (19 Days) Lesson 2.1: The Brain (4.5 Days) Activity 2.1.1 – The Power of Communication Activity 2.1.2 – Build-A-Brain Project 2.1.3 – Map-A-Brain
WEEK 6	Lesson 2.2: Electrical Communication (7.5 Days) Activity 2.2.1 – The Neuron Activity 2.2.2 – The Secret to Signals Activity 2.2.3 – It's All in the Reflexes Activity 2.2.4 – Reaction Time
WEEK 7	Problem 2.2.5 – Communication Breakdown Lesson 2.3: Chemical Communication (3 Days) Activity 2.3.1 – The Hormone Connection

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	Project 2.3.2 – Hormones Gone Wild Lesson 2.4: Communication with the Outside World (4 Days) Activity 2.4.1 – Exploring the Anatomy of the Eye
WEEK 8	Activity 2.4.2 – Visual Perception Project 2.4.3 – Put Yourself in Someone Else’s Eyes (Optional) Activity 2.4.4 – Eye Care Professionals Unit Three – Power (16.5 Days) Lesson 3.1: Introduction to Power (1 Day) Activity 3.1.1 – Resources for Life Activity 3.1.2 – The Rule of Threes
WEEK 9	Lesson 3.2: Food (6 Days) Activity 3.2.1 - Action Molecules Project 3.2.2 – Digestive System Design Project 3.2.3 – Living in a Material World Project 3.2.4 – Investigating Enzyme Action Activity 3.2.5 – Metabolism- A Balancing Act
WEEK 10	Activity 3.2.6 – In Search of Energy Lesson 3.3: Oxygen (4 Days) Activity 3.3.1 – Gasping for Air Activity 3.3.2 – Measuring Lung Capacity Activity 3.3.3 – Rx – Understanding Prescriptions Activity 3.3.4 – Respiratory Therapy
WEEK 11	Lesson 3. 4: Water (5.5 Days) Activity 3.4.1 – Hook up the Plumbing Activity 3.4.2 – Spotlight on the Kidney Project 3.4.3 – The Blood/Urine Connection Activity 3.4.4 – Water Balance
WEEK 12	Activity 3.4.5 – Urinalysis Unit Four – Movement (21 Days) Lesson 4.1: Joints and Motion (2.5 Days) Activity 4.1.1 – Bones, Joints, Action! Activity 4.1.2 – Range of Motion Lesson 4.2: Muscles (7.5 Days) Activity 4.2.1 – Muscle Rules Activity 4.2.2 – Building a Better Body – Muscles of the Deep Chest
WEEK 13	Project 4.2.3 – Maniken Muscles Activity 4.2.4 – Laws of Contraction Project 4.2.5 – Rigor Mortis Modeling Activity 4.2.6 – You’ve Got Nerve
WEEK 14	Lesson 4.3: Blood Flow (5.5 Days) Activity 4.3.1 – The Heart of the Matter Project 4.3.2 – Varicose Veins Activity 4.3.3 – Go With the Flow Activity 4.3.4 – Cardiac Output Activity 4.3.5 – Smoking Can Cost You an Arm and a Leg!

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WEEK 15	Lesson 4.4: Energy and Motion: Exercise Physiology (5 Days) Project 4.4.1 – The Body’s Response to Exercise Activity 4.4.2 – Mind Over Muscle Activity 4.4.3 – Performance Enhancers Problem 4.4.4 – Training A Champion
WEEK 16	Unit Six – Homeostasis (7 Days) Lesson 1: Health and Wellness (7 Days) Problem 6.1.1 – Surviving the Extremes Activity 6.1.2 – Putting it All Together
WEEK 17	Problem 6.1.3 – Building a Case Activity 6.1.4 – Finishing Touches
WEEK 18	Review for Semester Exam and End of Course Test for PLTW

*** This syllabus serves as a guide for both the teacher and student; however, during the term it may become necessary to make additions, deletions or substitutions.**

Parent & Student Notifications

Students should check our Schoology classroom as soon as possible. Notes, videos, homework, extra credit, reminders, possible assignments and quizzes/tests will be uploaded often. To join the Schoology classroom as a student, you should have been automatically added, but let me know if you were not. If a parent would like a parent access code, please contact me.

Contact/Science Help:

I will be available to students during Refuel on most days. I encourage both the students and parents to let me know if there is anything I can do to help with student success. Email is the best way to reach me during the year. The only bad question is the one that is not asked. Please use me as a resource because I am here to help you! I look forward to helping each of you achieve success this year!