Journey Middle School

217 Celtic Drive, Madison, Alabama 35758

Medical Detectives

PLTW Grade 7-8

Mrs. Amy Ramsdell

Teacher Contact Information	**Email:** acramsdell@madisoncity.k12.al.us **Classroom Phone:** 256-774-4695 ext: 84320
Classroom Digital Platforms	**Webpage Link:** https://www.madisoncity.k12.al.us/Domain/3386 **Schoology Link:** https://madisoncity.schoology.com/home
Textbook Information (Please give textbook information and list the online textbook codes in Schoology. Let students in parents know the code is accessible in Schoology)	Curriculum: www.pltw.org Parents and guardians can access other supplementary materials through the Schoology platform.
Course Description	*This course is designed to introduce students to the world of medicine and epidemiology. Medical Detectives is a Project Lead The Way Gateway course where students will play the role of real-life medical detectives. They will solve medical mysteries through hands-on projects and labs. We accomplish this through small group and whole group discussions, labs, and numerous hands-on activities both inside and outside the classroom. By the end of this course, students should have a solid base in biology, as well as a thorough understanding of correct lab procedure and safety, experimentation, and how science relates to the world around us.*
Prerequisites	Successful completion of Life Science
Course Objectives	By the end of this course, students should have a solid base in biology, as well as a thorough understanding of correct lab procedure and safety, experimentation, and how science relates to the world around us.
Instructional Delivery Plan, Course Outline, & Culminating Project	**Instructional Delivery Plan:** **Multiple delivery methods will be used during our instructional time these include but are not limited to: lecturing, modeling, interactive lectures, demonstrations, recap sessions, group discussions, and teacher led simulations.** **Course Outline:** **Unit 1: Disease Detectives** **Students discover how healthcare professionals act as medical detectives to identify, treat, and prevent illness in their patients. Students collect and interpret vital signs to evaluate patient health, explore different infectious disease agents, and design and conduct experiments to test the effectiveness of antibiotics on bacteria. In the end-of-lesson project, students collect and analyze medical data to diagnose a patient with a mystery illness.**

	Unit 2: Mysteries of the Human Body **This lesson introduces the human body as a collection of body systems, with a focus on the nervous system. Students investigate how the nervous system collects information from the outside world, moves this information through neurons, processes this information in the brain, and initiates the body's response accordingly. Students create neuron models and perform a sheep brain dissection. They use their knowledge to explore symptoms as they relate to specific nervous system dysfunction and analyze evidence to identify the cause of the dysfunction. In the end-of-lesson project, students create educational resources to help their patient understand the medical condition.** **Unit 3: Outbreak!** **A mysterious toxin is endangering the health of a community. Using their understanding of human body systems, students describe how the suspected toxin has impacted the health of the patient. Students analyze patient symptoms and perform lab analyses of patient samples to identify the culprit and determine how it is spreading. In the end-of-unit problem, students locate the source of the toxin using a map of the community, patient histories, and lab data, then present their findings to help community leaders mitigate the situation.** **This is subject to change.*
Credentialing	**None**
CTSO Integration ***(JMS Career Technical Student Organization is Technology Student Association)***	Technology Student Association, TSA, is a career technical student organization and a fundamental part of this course. It is a national career and technical student organization of students engaged in science, technology, engineering, and mathematics (STEM). TSA is integrated into the program which includes competitions and leadership opportunities. TSA provides students with activities during their class time and after school with our local TSA Chapter. Previous TSA based activities include but are not limited to: Coding Challenges, Career Prep, Cyber Security, Essays on Technology, Challenging Tech Issues. The exact project for Digital Publications is TBD.
Embedded Numeracy Anchor Assignment	**A mysterious toxin is endangering the health of a community. Using their understanding of human body systems, students describe how the suspected toxin has impacted the health of the patient. Students analyze patient symptoms and perform lab analyses of patient samples to identify the disease pathogen using logical reasoning based on evidence. Students will calculate the food specific attack rates to determine the source of foodborne illness and determine how it is spreading. In the end-of-unit problem, students locate the source of the toxin using a map of the community, patient histories, and lab data, then present their findings to help community leaders mitigate the situation.** **ALCOS Numeracy: Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables. [8-SP4]**
Embedded Literacy Anchor Assignment	**A mysterious toxin is endangering the health of a community. Using their understanding of human body systems, students describe how the suspected toxin has impacted the health of the patient. Students analyze patient symptoms and perform lab analyses of patient samples to identify the disease pathogen using logical reasoning based on evidence. Students will calculate the food specific attack rates to determine the source of foodborne illness and determine how it is spreading. In the end-of-unit problem, students locate the source of the toxin using a map of the community, patient histories, and lab data, then present their findings to help community leaders mitigate the situation.** **ALSCOS Literacy: Write arguments to support claims with clear reasons and relevant evidence. [W.8.1]b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text. [W.8.1b]**
Embedded Science Anchor Assignment	**A mysterious toxin is endangering the health of a community. Using their understanding of human body systems, students describe how the suspected toxin has impacted the health of the patient. Students analyze patient symptoms and perform lab analyses of patient samples**

	to identify the disease pathogen using logical reasoning based on evidence. Students will calculate the food specific attack rates to determine the source of foodborne illness and determine how it is spreading. In the end-of-unit problem, students locate the source of the toxin using a map of the community, patient histories, and lab data, then present their findings to help community leaders mitigate the situation. **https://www.nextgenscience.org/** **● Gather, read, and synthesize information from multiple appropriate sources and assess the credibility,** **accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence. (MS-LS1-8)** **● MS-LS1-3.: Use arguments supported by evidence for how the body is a system of interacting subsystems** **composed of groups of cells.** **● Systems may interact with other systems; they may have sub-systems and be a part of larger complex** **systems. (MS-LS1-3)**
CTE Lab Safety Guidelines	Each student in a CTE/PLTW/STEM course will be required to complete a lab safety exam and score 100% correct before being allowed to use any tools on projects. We expect students to responsibly and safely use the CTE equipment. Examples of equipment used in CTE/PLTW/STEM courses may include and are not limited to the following: scissors, hot glue guns, box cutters, power tools, hand tools, measuring tools, electronic equipment, computers, medical supplies, adhesives, robotics equipment, & food items (consumable and non-consumable).
Classroom Expectations	● Come prepared to learn everyday and follow all directions quickly. ● Try to limit your time outside of the classroom as much as you can. ● Try your very best every single day. ● Be kind and respectful to everyone. ● Keep your area clean
Progressive Discipline ***(JMS Policy)***	**All progressive discipline will correspond with the Madison City Schools Code of Conduct regarding Class I and II offenses. Some Class II and all Class III offenses are a direct office referral.** ● Warning ● Conference with student with parent notification ● Parent Contact ● Detention ● Referral to administration for repeat Class I violations and initial Class II and III offenses---Consequences determined to be reasonable and appropriate by the school administration.
Electronic Communication Device Policy	Wireless Communication Devices A. Definitions 1. Instructional Day – • When school is open and in session: • During class time, lunch, transitions between classes, and any non-instructional periods; • Any time that students are required to store their Wireless Communication Devices under the Student Code of Conduct, or other school rules; or • Any other time, students are instructed to store their devices by school staff. 2. Wireless Communication Devices – Any portable electronic device that has the capability of exchanging voice, messaging, or other data communication with another electronic device, including, without limitation: • cellular telephones • tablet computers • laptop computers • pagers • gaming devices • smart watches • earphones or headphones (Air Pods, ear buds, over the ear headphones, etc., whether wireless or not) B. Possession of Wireless Communication Devices – Students are prohibited from bringing Wireless

	Communication Devices into school buildings and onto school grounds, except in compliance with this policy. The Board is not responsible for the theft, loss, or damage to any Wireless Communication Device brought onto campus by a student. C. Storage of Devices– At all times during the Instructional Day, students who possess a Wireless Communication Device on any campus or in any school must turn the device off and store the Wireless Communication Device off their person in a locker, car, backpack, purse, gym bag, or other storage location approved by school administrators. This storage requirement is subject to the exceptions set out in subsection D below. D. Prohibition on Use; Exceptions – Students are prohibited from using, operating, or possessing a Wireless Communication Device during the Instructional Day, except under the following limited circumstances: • The use, operation, and/or possession of the device is specifically included in the student's Individualized Education Plan (IEP), 504 Plan, or an Individualized Health Plan; • The use, operation, and/or possession of the device is for educational or learning purposes under the supervision of school personnel; and • The use, operation, and/or possession occur during an emergency threatening the life or safety of the student or another person. The Superintendent or designee is authorized to develop additional guidelines for implementation of these exceptions. E. Searches – School officials may read, examine, or inspect the contents of any wireless communication device upon reasonable suspicion that the device contains evidence of a violation of Board policy, the Code of Conduct, or other school rules, provided that the nature and extent of such reading, examination, and inspection shall be reasonably related and limited to the suspected violation. F. Disciplinary Action – Any violations of this policy may result in disciplinary action under the Student Code of Conduct. G. Additional Procedures Authorized – The Superintendent or designee is authorized to develop any additional rules necessary to carry out this policy.
Grading Policy ***(MCS Policy)***	**60%** = Assessments (Tests, Essays, Projects) **40%** = Daily Grades (Quizzes, Homework, Classwork, and Participation) Testing days: Monday and Thursday
Late Work Policy	• Students present in class on the day of instruction are expected to turn in all in-class and out-of-class assignments on time. • Late assignments will be reviewed and considered on an individual basis. As CTE/STEM courses simulate real-world work environments and emphasizes project-based learning, timely completion of tasks is essential. However, if circumstances arise, students are responsible for communicating with the teacher emulating positive employability traits; each situation will be assessed fairly and thoughtfully.
Make-up Work/Test Policy	• Students are permitted to make up work, tests, and other assignments, activities, etc., when absences are excused. Under normal circumstances, it is expected that students will submit previously assigned work upon return to school after an excused absence. All work missed on the day(s) of excused absence(s) must be made up within three school days after returning to school. However, for extended excused absences when homebound services are not necessary, the teacher may grant additional time, but not to extend beyond two weeks past the return to school. It is the joint responsibility of student and parent to ensure a student makes up work following excused absences. Teachers may alter assignments, tests, work, activities, etc., as necessary to ensure an accurate evaluation of the student's performance after an excused absence. • Students will not receive credit for and will not be allowed to make up any assignments, tests, work, activities, etc., missed during unexcused absences.
Technology	Student laptops should not be hard-wired to the network or have print capabilities. Use of discs, flash drives, jump drives, or other USB devices will not be allowed on Madison City computers. Neither the teacher nor the school is responsible for broken, stolen, or lost laptops. Laptops and other electronic devices will be used at the individual discretion of the teacher.

Cheating/Plagiarism	A student who cheats will not receive credit for the work in question. If any other student has cooperated in cheating, that student is also considered to have cheated and will not receive credit. Cheating students will also be subject to disciplinary consequences in Section XXII of this CSC. Cheating is defined to include, but is not limited to: (a) copying someone else's work in or out of class and identifying and submitting it as your own (b) failing to quote and/or list appropriate citations for material derived from published sources (including the Internet) and identifying and submitting it as your own (c) the use of unauthorized notes, other materials, or assistance during the accomplishment of graded work in or out of class (d) any other situation in which the student attempts to or accepts credit for work not his or her own.
Artificial Intelligence Acceptable Use Policy ***(MCS Policy)***	Madison City Schools acknowledges that technology is ever-changing and has a tremendous impact on our global society, local community, and classrooms. Artificial intelligence (AI), including generative forms of AI, is becoming more a part of our everyday lives. It is our responsibility to educate and train students to utilize AI in an ethical and educational way. Therefore, Madison City Schools is not banning the student or teacher use of AI, but each student will need to be aware of the limitations and guidelines of its usage: a. Madison City Schools student email accounts and Chromebook access to specific open AI software, such as ChatGPT, are blocked due to data and security concerns. b. Any misuse of AI tools and applications, such as hacking or altering data, is strictly prohibited. c. Teachers may allow the use of AI for curriculum purposes. Access to specific websites will be granted on an as-needed basis, adhering to specific data and privacy guidelines regarding age restrictions and usage. d. College Board and Dual Enrollment college and university classes may have additional restrictions and limitations regarding the use of Artificial Intelligence. e. Students who use AI software with a personal device and/or personal credentials should do so at their own risk, acknowledging that each platform is collecting various forms of data. f. Students must acknowledge the use of AI in any capacity related to their schoolwork, including text, images, multimedia, etc. The use of AI could be subject to the Academic Dishonesty Policy. h. Students should acknowledge that AI is not always factually accurate, nor seen as a credible source, and should be able to provide evidence to support its claims.
Materials & Supplies	• Students are expected to have a pencil, headphones with audio jack (not wireless) charged Chromebook & Composition Notebook
Homework	• All assignments and projects will be completed during class time. • In the case that a student may not utilize time wisely or are absent from class they may be expected to complete this work at home.
Parent & Student Acknowledgment Form	*https://forms.gle/vhu6ZCyhCTTBqqzNA*