2022-2023
Liberty Middle School
281 Dock Murphy Drive, Madison, Alabama 35758
Mrs. Jodi Jones
PLTW App Creators

Teacher Contact Information	**Email:** jodijones@madisoncity.k12.al.us **Classroom Phone:** 256-430-0001 ext. 83129
Course Digital Platforms	**Webpage Link:** https://www.madisoncity.k12.al.us/Domain/1079 **Schoology:** https://madisoncity.schoology.com/home **Coding:** https://appinventor.mit.edu/ **Curriculum:** www.pltw.org **Parent Communication:** ***Power Schools will be used for parent contact. Please make sure all contact information is up to date in powerschool.***
Textbook Information	*Online PLTW curriculum (no textbook) www.pltw.org (log in usernames provided in class)*
Course Description	App Creators introduces students to the field of computer science and the concepts of computational thinking, through the creation of mobile APPS. Students are challenged to be creative and innovative, as they collaboratively design and develop mobile solutions to engaging, authentic problems. Students experience the positive impact of the application of computer science to society as well as other disciplines, particularly biomedical science. The unit provides students opportunities for self-expression. Teams identify a personal or community problem of interest to them that can be solved with a mobile app solution. The problem can address issues such as health and wellness, the environment, school culture, emergency preparedness, education, community service—the options are endless!
Course Prerequisites	Computer Science Innovators & Makers (CSIM)
Course Objectives	*Apply computational thinking to solve problems. Recognize that computational thinking can be applied in multiple disciplines. Choose appropriate computational practices when solving a problem. Analyze and create algorithms. Analyze the structure and functionality of a program. Create programs by developing and testing code in a modular, incremental approach. Adapt or improve existing code.. Analyze the implications of computing in society. Consider accessibility and equity when designing Apps, creating solutions,and collaborating with others.*
Course Goals	**Students Will:** **1. Be able to follow the engineering design process** **2. Learn and use standard safety practices.** **3. Create algorithms and document the planning process for code** **4. Demonstrate proper Troubleshooting and Code Tracing techniques** **5. Use Loops, list, and procedures to streamline repetition and reduce redundancy in code** **6. Design & Develop a mobile App solution that meet consumer needs in today's world**
Instructional Delivery Plan, Course Outline & Culminating Project	**UNIT 1: Let's Create an App! *(GERM GUIDE & BUILD A BODY UNIT PROJECTS)*** *Students are introduced to the concept of pair programming, app development, and the MIT App Inventor development tool. They learn about the Model-View-Controller (MVC) design pattern, app graphical design, event-driven programming, debugging, and algorithm creation using variables and conditional logic. They create engaging biomedical science apps and fun interactive games that apply these concepts and use basic user interface features, media, and animation.* **UNIT 2: Taking It to the Next Level *(DISEASE TRACKER UNIT PROJECT)*** *Students further explore the concepts investigated in Lesson 1 and build upon their skills to use data in mobile applications. They create algorithms using loops to streamline repetition and iterate through lists, and create procedures to abstract the details of a task and reduce redundancy. They learn to organize and store persistent data collected from user input and device sensors.*

Instructional Delivery Plan, Course Outline & Culminating Project	**UNIT 3: The App Challenge *(THE GREAT APP CHALLENGE UNIT PROJECT)*** *Students apply all of the knowledge and skills they have acquired to design and create a mobile app solution for a personal or community problem. They apply the design process and computational thinking skills to decompose the problem into smaller modules. Following user-centered design principles, they design and create an appropriate user interface and program the app to produce the desired behavior.*
Credentialing	None
CTSO Integration ***(LMS Career Technical Student Organization is TSA)*** ***https://www.madisoncity.k12.al.us/Domain/505***	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. *TSA Based Activities relevant to App Creators include but are not limited to: Lab Safety Posters, Coding Challenges, Career Prep, Cyber Security, Essays on Technology, Challenging Tech Issues*
Embedded Numeracy Anchor Assignment *(Disease Tracker Unit 2 Project 10 points)*	• Make sense of problems and persevere in solving them. These students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. These students consider analogous problems and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. • Use appropriate tools strategically. Mathematically proficient students consider available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and the tools' limitations. • Attend to precision. These students try to communicate mathematical ideas and concepts precisely. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. Mathematically proficient students are careful about specifying units of measure and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, and express numerical answers with a degree of precision appropriate for the problem context. • Solve multi-step real-world and mathematical problems involving rational numbers (integers, signed fractions and decimals), converting between forms as needed. Assess the reasonableness of answers using mental computation and estimation strategies.
Embedded Literacy Anchor Assignment *(Disease Tracker Unit 2 Project 10 points)*	• R1. Utilize active listening skills during discussion and conversation in pairs, small groups, or whole-class settings, following agreed-upon rules for participation. • R3. Use digital and electronic tools appropriately, safely, and ethically when researching and writing, both individually and collaboratively. • Expression: 7. Produce clear, coherent narrative, argument, and informative/explanatory writing in which the development, organization, style, and tone are relevant to task, purpose, and audience, using an appropriate command of language. • b. Write informative or explanatory texts with an organized structure and a formal style, incorporating a focused point of view, a clear purpose, credible evidence, and technical word meanings. • 29. Use academic vocabulary in writing to communicate effectively.
CTE Lab Safety Guidelines	Each student in a CTE/PLTW course will be required to complete a lab safety exam and score a 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 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	**1. Have a Vision 2. Lean into Struggles. 3. Be a Learner, Not a Finisher** **4. Feed Your Passion 5. Own Your Education. 6. Be Respectful 7. Cheerful Collaboration** 1. Be seated and ready for class when the bell rings. *Detention for tardies will be assigned per LMS policy.* 2. Come prepared for class. Bring all necessary supplies. 3. Respect your teacher, your classmates, and yourself.

	4. Listen and follow directions. 5. If it's not yours, don't touch it. Keep your hands and feet to yourself. 6. Follow all school rules. 7. The teacher dismisses the class, not the bell. 8. No food or drink around the computers and equipment 9. Do not visit gaming websites during class. Remain on our curriculum websites at all times.
Progressive Discipline ***(LMS Policy)***	**Step 1:** Verbal warning **Step 2:** Student/teacher conference **Step 3:** Parent contact/conference **Step 4:** Detention and a parent contact **Step 5:** Office referral
Grading Policy & Scale ***(MCS Policy)***	**60%** = Assessments (Tests, Mini-Assessment, Projects, Portfolio) **40%** = Daily Grades (Quizzes, Homework, Classwork, and Participation) **Grade Scale:** 90-100 = A; 80-89 = B; 70-79 = C; 65-69 = D; <64 = F
Late Work Policy	Late work will be considered on a case-by-case basis.
Make-up Work/Test Policy	Students with excused absences will be allowed to make-up all work within three days of returning to school. It is the student's responsibility to ask for make-up work. Students can get with a classmate or ask the teacher for help. Work that is not made up will become a zero (including quizzes/tests). Many times, missed quizzes and tests can be made up during school.
Technology Policy	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.
Accomodations	Requests for accommodations for this course or any school event are welcomed from students and parents.
Materials & Supplies	Paper & Pencil, headphones with audio jack(not wireless) Wish List: clorox wipes, colored copy paper, sharpies
Homework	All assignments and projects will be completed during class time.
Parent & Student Acknowledgment Form	***All Student assignments will be posted in Schoology; however, all grades will be posted in Powerschools. Thank you for your support and I encourage you to contact me with any questions or concerns. Students will return this signed copy and a digital version of this syllabus is available on schoology & my LMS website for reference. Please sign below that you have received and read the syllabus and will abide by all policies. Thank You! Jodi Jones*** **STUDENT FULL NAME (Please Print)** **BLOCK** **DATE** **PARENT SIGNATURE** **PARENT PHONE NUMBER(S)** ***Please include any concerns or notes to Mrs. Jones below:***