

CTE STEAM Lab: CS for Innovators & Makers Syllabus

You can access all of the lessons, slides, videos and help at IM.mreaton.com.

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STEAM Lab: Innovators & Makers



Course Description

Innovators & Makers will allow students to discover computer science concepts and skills by creating personally relevant, tangible, and shareable projects. Students will learn about programming for the physical world by blending hardware design and software development. They will design and develop a physical computing device, interactive art installation, or wearable, and plan and develop code for micro-controllers that bring their physical designs to life. Physical computing projects will promote student awareness of interactive systems, including Internet of Things (IoT) devices, and broaden their understanding of abstract computer science concepts through meaningful and authentic applications.

Objectives

By the end of this course students will be able to use the design process to solve a variety of physical computing challenges.

Overview

Unit 1: Design Process

Unit 2: Physical Computing with Micro:bit

Technology

As technology becomes a part of our society, technology must be implemented in education. Students are expected to use technology to complete many activities. Students will have the ability to come before school, and after school to work in the computer lab. Although projects and use of websites can be done at home. The technology used is considered a district property; appropriate behavior and academic language must be used at all times.



.Net Account

Each student in Garden Grove Unified School District has a Google account with @ggusd.net domain. Students are required to access the many websites using their .Net Account, including: Google Workspace ([Drive](#), [Docs](#), [Slides](#), [Spreadsheets](#), [Sites](#)), [Google Classroom](#), [Seesaw](#) and [Mr. Eaton's .Net Website](#).

Classroom Behavior

All Students will abide by the following guidelines of correct classroom behavior:

1. Treat everyone how they would like to be treated, be respectful to all.
2. Once the beginning bell has rung, students are quietly waiting for instructions from Mr. Eaton.
3. Be prepared and organized.
4. Always ask questions, curiosity increases knowledge.
5. School Policy is: ALL electronic devices are turned off (or on silent mode) and stored in backpacks during class. Do not have electronics out on the desk or distracting students. Devices will be taken away and given back at the end of the day.

Positive consequences for good behavior:

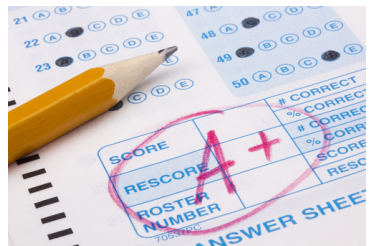
1. Verbal "Thank you"
2. Fire Card
3. Contact guardian via parent square
4. Mail postcard home

Negative consequences for breaking the rules:

1. Verbal Warning
2. Held after class AND contact guardian via parent square
3. Referral to Assistant Principal's office AND Detention

Grading

Students will be graded on participation, classwork, and completion of design challenges.

Course work:	Percentage	Grade Scale	
Participation	30%	A 90% - 100%	
		B 80% - 89%	
Classwork	30%	C 70% - 79%	
		D 60% - 69%	
Projects	40%	F 59% and below	

Parents/Guardians: Please check the parent portal regularly to see how well your student is performing.

Participation

If students are off task or distracting other students, participation points will be subtracted. Students can add participation points by working on more extensions or going above and beyond the expectations of the assignment. Or students can come after school to work on classwork to make up the missing participation points. While students are working with a partner in paired programming assignments, students will be graded based on partner review. While students are working on design challenges, students will be graded based on team check out.

Classwork

Assignments are graded based on completion. Students will earn at least:

50% - when they are wasting class time.

60% - when they are working most of the time.

70% - when they complete the minimum expectations of the assignment.

80% - when they are able to complete almost everything.

90% - when they are able to complete every level in the assignment.

100% - when they go above and beyond what is expected.

Assignments can be turned in for a better score by going back and making up the assignment.

Projects

Projects are graded based on a rubric. If a student is working on a project with a partner, students will receive a grade based on a group scoring rubric. A group scoring rubric allows students to grade each other based on each partner's contribution to the project.

Homework and After School Computer Lab

Depending on the assignment or productivity of the students, some classwork may take more time than the 50 minute class period. Students may need some time at home to complete their classwork. Students are welcome to come after school and work in the STEAM Lab. The lab will be open Monday, Thursday and Friday from 2:20 pm to 3:20 pm. If there is an after school meeting, the lab may be closed or can close early. Updated times are found in the [STEAM Calendar](#).

Late or Making up Assignments

Students are allowed to make up late assignments and fix any assignments which received a low score. If the assignment is more than 10 days late, the score may be reduced based on the number of days late. To receive the credit for make up work, students **must** email Mr. Eaton AND re-submit the assignment into Google Classroom. In the email students will write the title of the assignment and explain why it was turned in late. Please allow up to 1 week from email submission for late work to be graded.

Extra Credit Typing

All of the class time will be dedicated to the course. However, Lake's Technology Department would like all Dragons to be able to type on a keyboard without looking and typing at least 45 words per minute. There is a typing test every Friday. Students will be graded based on their improvement in speed and accuracy. At the beginning accuracy is more important. Later, speed will become more important. As the semester progresses, students will start to take covered typing tests. Covered typing tests are graded based on their speed and accuracy compared to their faster typing test.

Absences, Tardies and Bathroom Passes

After returning from an absence, it is the student's responsibility to ask their peers for missing concepts. As a learning community we must help each other fill in what was missed. Students are not required to make up the assignment that was missed, however, they are responsible for understanding the concepts that were missed. If a student misses class time for a project, they may have extra time to complete the assignment.

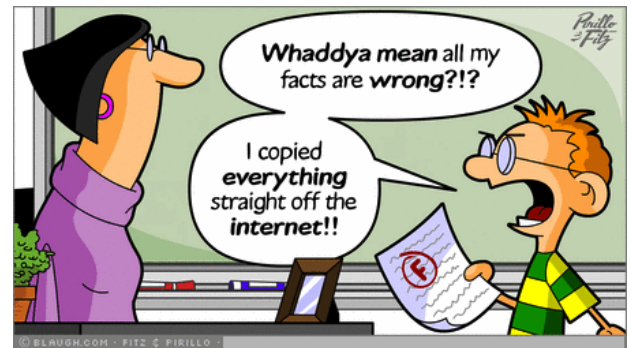
A student is considered tardy if they are not in their seat at the beginning bell.
Consequences for being tardy is lunch time detention.

Bathroom passes are to be used for emergencies only. If a student has a medical condition please notify Mr. Eaton at the beginning of the year / semester. Each quarter there will be a competition to see which period has the lowest amount of bathroom passes. The winning period will get a pizza or ice cream party.

Policy on Academic Dishonesty

Academic Dishonesty is strictly prohibited. This includes, but not limited to:

- Allowing a student to copy work.
- Representing someone else's work as your own
- Depending on each case, academic dishonesty may result in:
 - A phone call home
 - A zero on the project
 - A F in the class



Classroom Procedures

These procedures are in place to take advantage of the limited time we have together. They have been developed so we can transition quickly and use our learning time efficiently. Please keep these procedures in mind everyday in class.

Entering the classroom before class starts

Students should sit in their seats before the bell rings. If a warm up is on the whiteboard, students should quietly work on the warm up. If not, look at classroom.google.com for the newest entries. Otherwise, students should continue where they left off. The noise level should be kept to a minimum while Mr. Eaton is preparing for the lesson. You will be marked tardy if you are not following these procedures. Once Mr. Eaton is ready, quietly listen to Mr. Eaton's instructions.

Leaving the classroom after class

Students will be given a clean up reminder 4 minutes before the class time ends. Students will be dismissed by the teacher, not the bell. Computers are to be **logged off** and chairs are to be pushed in. **DO NOT TURN OFF** computers, they will be used in the next class.

Parent/Guardian Communication

All parents/guardians are currently signed up for ParentSquare. Watch for notifications based on the contact information given to the school office. Please make sure the office and ParentSquare have your **CURRENT** EMAIL and PHONE NUMBER. Parents & students will receive weekly reports from Aeries.

Extra Credit

Thank you for reaching the end of this document. If your student emails me (using: reaton@ggusd.net) saying they saw this message AND they add your email address in the to: field, I will give your student extra credit worth one assignment. This can only be redeemed during the first quarter of the semester. I will reply with an acknowledgement to both you and your student.