



Class Description:

In the Maker Studio you will have the chance to design and build as you learn about Engineering, Scratch Coding and 3D Modeling. This elective is designed to provide you with opportunities to explore STEM through hands-on projects, presentations, team collaboration and community involvement. The goal of the course is for you to experience STEM possibilities that may, one day, lead to marketable, real-world skills. This course is an amazing opportunity!

Class Goals:

- 1] Apply the **engineering cycle** and **design thinking process**.
- 2] Collaborate in teams to solve **STEM challenges**.
- 3] **Design, build, program, test** and debug models and document progress.
- 4] **Think creatively** in order to solve problems.
- 5] **Use technology** and **tools** that support STEM investigations and demonstrate digital citizenship.

Be Prepared:

...**Work** with a pencil & a composition book (your engineer's notebook) in class.

... **Participate** enthusiastically & intelligently.

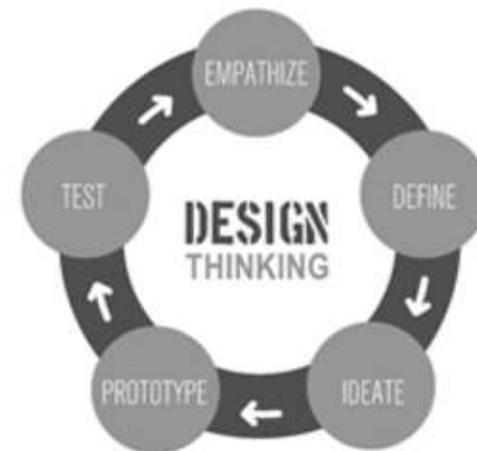
... **DUCK**. (Don't Use Conversation Killers, like: "That will never work!" or "That's a dumb idea!") Join in on discussions! We want to know your opinion! You matter!

... **Challenge yourself** - the world is yours! What will you do with it? This class is your launching pad!

Learning Resources

utilized during this course will include:

- * Scratch
- * WhiteBox STEM
- * LittleBits
- * TinkerCad
- * Imagination Foundation
- * Google Apps for Education
- * Google CS



I'm Ms. Eastman & I'm pleased to have you join the STEM elective class! The adventure begins! Through hands-on, project-based learning & collaboration, you will cultivate the confidence and skills needed to tackle real-life, messy & challenging problems! We are going to have a ton of fun along the way!

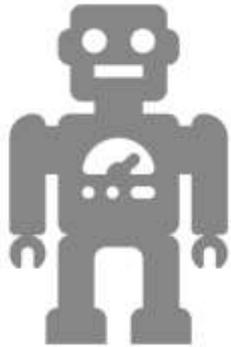
Contact me: eeastman@houstonisd.org
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Visual Syllabus

Help? Please ask!

Don't stay lost!

Homework assignments will be given periodically. It is the responsibility of an absent student to get any missed assignment(s)!



'Creativity is not rocket science! If you are a problem-solver, you are creative.'

Professor Stefanos Zenios-Stanford GSB

Grading Policy:

Grades will consist of participation grades, daily work grades which includes review of the S.T.E.M. notebook, projects and quizzes. Rubrics will be used for student self-assessment as well as instructor assessment.

Required Materials:

Each student must have a graph-ruled notebook and pocket folder for S.T.E.M. Your design notebook is your "toolkit" and will consist of written notes of important concepts and vocabulary learned in the class in the form of warm-ups, explorations, and project work. You will also define problems, ask questions, imagine and brainstorm solutions, make plans and drawings, create prototypes, and make improvements. As we work through stages of design process, you are expected to maintain a notebook that shows you are applying the skills learned through challenges and problems.



Expectations: Pride!

- **Prepared:** Be on time & on task,
- **Respect:** Honor people and property.
- **Initiate:** Participate in class, listen to others, & contribute to teamwork! [SLANT]
- **Do:** Do the work that is expected.
- **Excel:** Create your best work, every day in every way.

Class Rules: CHAMPS!

- Follow directions. Do what you are asked & expected to do.
- Use appropriate language: No negative talk or put-downs
- Use active listening. Focus on the speaker-quiet hands, feet +mouth.
- Be on task & focus on the task at hand.

Behavior &

Participation:

The classroom is a community and your actions affect others. When you choose to study, participate, and work hard, your knowledge and focus help the class learn more. You can help your partner and peers when they struggle, and you help the class keep our focus on learning new and exciting material. If you engage in disruptive behavior, disrespect your peers, and fail to be productive, these actions hurt the entire class.



Consequences:

1st occurrence—Student will receive a warning or verbal redirection from the teacher

2nd occurrence—Temporary removal from the group and teacher/student conference. Parent phone call.

3rd occurrence—20 minute teacher detention and parent notification by phone, email, or a note home.