

STEM Exploration

Teacher: Mr. Cutler

Office Hours: By Appointment

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Phone: 330-798-1008 **Room:** 109

Course Length: 18 Weeks (1 semester)



Course Description: STEM (Science, Technology, Engineering, Mathematics) education can help students develop critical thinking, problem-solving, and design skills, and encourage creativity, collaboration, and communication. STEM courses can also help students make evidence-based explanations and design solutions in the real world.

Main Course Projects, Descriptions, and Timeline:

Bridge Building Competition	Ballon Power Car Competition	Recyclable Toy Competition	Marble Paper Roller Coaster	Rube Goldberg Project
A real challenge for students to consider how much money they have and how to budget it to build a sturdy bridge. Students will have to test their bridge to see who built the strongest bridge but who also stayed on budget.	In this activity, students will work in groups to harness the power of a balloon to power their car. Students will modify the design of their vehicle to produce the best travel distance possible.	In this STEM project, students collect and build a unique toy from various recyclables. A letter to parents is included to help facilitate the collection of recyclables.	In this activity, students will act as engineers (hired by a local theme park) to design and build a prototype for a new and more exciting ride. Students will research and plan and will then work in groups to design, build, test, and revise their project.	This final design challenge will take students into the mind and science behind his “outside of the box” thinking and challenge them to design a similar machine inside their heads.
2 ½ - 3 weeks	2 ½ - 3 weeks	2 ½ - 3 weeks	2 ½ - 3 weeks	3 – 4 weeks

Methods of Instruction: Students will be engaged in the learning process through:

- Individual exploration and research
- Group lectures and discussions
- Small group and team-oriented activities
- Hands-on activities such as projects and laboratory procedures
- Oral presentations/ lectures

Required Supply List:

1. A charged device (Chromebook & Charger)
2. 3-ring binder/Folder
3. Notebook/Notebook paper
4. Pencils/Pens/Highlighter



Grades:

Classwork/Homework- 35% Test/Quizzes- 15% Laboratories/Projects- 50%

Class Grading Scale:

Based on the school grading scale.

98-100 = A+	88-89 = B+	78-79 = C+	69-67 = D+
92-97 = A	82-87 = B	75-77 = C	66-62 = D
90-91 = A-	80-81 = B-	70-74 = C-	61-60 = D-
			59 & Below = F

Class participation by actively reading, listening, and speaking is a requirement in this class. You will be expected to bring the required supplies so that you can participate effectively. Your grade will be negatively affected if you are unprepared and/or unwilling to participate in activities.

***To check your student's progress in the class, Progressbook will show the most up-to-date information. Also, don't forget to check Progressbook for any missing or late assignments. ***

Attendance:

Attendance is mandatory, please be on time each morning and prepared to learn.

Homework & Missing Assignment Policy:

Throughout most of the year, there will not be "homework assignments" however, there is a limited amount of class time so some assignments may be given as "homework" to complete. Homework and classwork assignments must be turned in by the due date to receive full credit. If turned in late 50% will automatically be deducted and will be recorded in the grade book. Students who have any missing assignments have until the end of the grading period to turn the assignment in to receive ½ credit.

Absences & Make-up Work:

If you are absent for an excused reason, you can make up any work that you have missed. **You will have one day for every day you were absent to complete your make-up assignments.** It is **YOUR RESPONSIBILITY** to find out what you missed and turn it in. **You must see me to schedule a time after school or during your study hall to take make-up tests.** If you miss a laboratory, **you must see me to see if you can make up the lab.** Some laboratories might have a make-up lab for you to complete as homework. You might have to work outside the class time to make up the lab.

**Parents must acknowledge the syllabus has been read.
Turn this page only, into Mr. Cutler by August 27th.**

Greetings! Welcome to Springfield Jr. High School! My name is Sean Cutler, and I will be your child's STEM teacher for the 2024-2025 school year. During the year we will explore many different topics in science and experiments. I hope to have a positive year and provide many opportunities for students to demonstrate critical thinking and problem-solving skills.

As such, I am committed to communicating with you and supporting the individual needs of your child. To do this, I need to be able to keep in touch with parents/guardians regarding their students' progress.

We're also excited to showcase our brand-new course at Springfield Junior High and share photos of our students and your students working with the Springfield community. To ensure we have your permission, please fill out the photo release form indicating whether you would like your child to be photographed. Your cooperation is greatly appreciated!

PLEASE NOTE: Students will receive 10 Lab points after a parent completes the syllabus acknowledgment form.

By signing this document, I have read and know the course policies procedures, and outcomes.

Parents, what is the best way to reach you? (phone, email, text, etc.)

Parents, are we allowed to take pictures of your child and your child's work in this class and post them on the school's social media page? (Yes or no)

Student Name Print:

Parent Name Print:

Parent Signature:

Thank you, I look forward to working with you and your student this school year.