



## What is STEM?

**STEM** stands for *science, technology, engineering, and math*. STEM curriculum combines those subjects in order to teach “21st-century skills,” or tools to prepare students for the workplace of the “future.” Students will learn how to solve problems, find and use evidence, collaborate on projects, and think critically.

## The Curriculum



Hickory Creek’s STEM curriculum is through IMSA (Illinois Math and Science Academy). Their *Fusion* program is designed for intermediate and middle school students. The learning experiences focus on helping students “learn how to learn” and emphasize logic, mathematical thinking and experimental scientific thinking.

<h3>Secret Communications: Q1</h3>	<h3>Take Flight!: Q2</h3>
<p><i>Throughout history people have needed to share information in ways that prevented others from obtaining it. Cryptology is the science of secure communication. The most obvious examples come from the arena of military conflict. Critical information concerning the placement and/or movement of forces, strategic plans, and other sensitive material needs to be kept secret. <b>Secret Communications</b> will explore various ways in which information can be encrypted and shared, including codes and ciphers.</i></p>	<p><i>Studying the basic principles of flight has long been a staple of middle school physical science curricula. <b>TAKE FLIGHT!</b> steps beyond those basics to examine the Science, Technology, Engineering, and Mathematics involved in every aspect of the modern aviation industry. At the conclusion of this curriculum, you will have a greater appreciation of how air travel works and what is going on behind the scenes. You may even want to pursue a career in the industry.</i></p>

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# Student Expectations

This class relies heavily upon your participation and collaboration. You are expected to be engaged, share ideas, and collaborate in teams. At the end of each inquiry based activity, you will complete “debrief questions” that will require elaboration upon observations and communication of ideas. That means you will have to explain what you see and what you think.

## Grades will be calculated as follows:

1. **Participation in activities: 50%** \*\*\*Note: Students will begin each unit with a set number of participation points (dependent upon the length of the unit). Students will lose points for non-participation.\*\*\*
2. **Debrief questions: 50%**

## Steps for Success in my Classroom

1. **Be on time.** Enter through room 1304 (not through the library), take out what you need and put the rest of your belongings in the cubby or on the shelf at your table.
2. **Be prepared.** Bring a writing utensil and a 3-ring binder to class everyday.
3. **Work hard.** This class is supposed to be a struggle so that you learn how to work with others and think critically and creatively. You have to be engaged in the activities in order for that to happen.
4. **Be respectful.** Respect me, your classmates, and yourself. No rude comments or behavior.
5. **Have fun!** This is not a traditional class. You get to do hands on activities for the majority of the semester. Think outside of the box and have fun with it!

I am looking forward to a fantastic semester of STEM!

Ms. Giammarco

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***Please detach and return this portion of the syllabus to Ms. Giammarco.***

I have reviewed the Student Expectations section of the STEM syllabus with my parent/guardian.

Student: \_\_\_\_\_

Parent/Guardian: \_\_\_\_\_ Date: \_\_\_\_\_

