

Autrey Mill Middle School



Connections Math STEM Course Syllabus

Teacher Names	Email Address	Scheduled Help Sessions for STEM
Debbi Dean	deand@fultonschools.org	By appointment

Course Description

This STEM Course has been completely developed by Georgia Tech's CEISMC (Center for Education Integrating Science, Mathematics, and Computing). The mission of this course is to improve middle school student engagement and interest in STEM, develop students' 21st century skills and increase academic achievement in math and science through the development and implementation of curriculum materials that stress real-world problems, inquiry learning, engineering connections and active engagement with foundational mathematics and science practices and skills.

Course set-up:

The course is divided into STEM Innovation and Design (STEM-ID) challenges. The curriculum requires that students use the engineering design process within a problem-based learning context, and that they actively practice foundational mathematics skills and NGSS-aligned scientific practices to solve engaging challenges. The Math and Science Modules are designed to promote inquiry learning and engage students in the process of collecting, representing, interpreting, and making decisions based on data.

During each quarter, students will be completing 2 STEM-ID challenges, and 2 modules.

Stem modules will focus on data visualization, data-driven decision making, ratios and proportional relationships, and expressions and equations. All courses in the multi-year sequence follow a similar trajectory and incorporate many of the same skills, but within different contexts and with increasingly more challenging technological manipulatives.

FORMAT: This class will be taught on/with Microsoft Teams. General class structure will be traditional lecture, class discussion, individual & group work, as well as written assignments. Notes will be given, and class participation is highly encouraged.

GRADING PROCEDURE:

Grading Scale

A – 90 and Above
B – 80-89
C – 70-79
F – 69 and below

Codes in Infinite Campus:

W – Withdrawn NG – No Grade
I – Incomplete M – Missing

Grades are weighted based on the assignment type/category:

MAJOR: (minimum of 2 per 9 weeks) An assignment that is cumulative in nature, representing multiple standards and skills. Assignments in this category may include Large Group Performance Evaluation, Performance-Based Assessments (PBAs), concerts, tests, and projects that allow for demonstration of mastery of priority standards/skills.	6th & 7th Grades	8th Grade (HS Course)
	50%	55%
MINOR: (minimum of 3 per 9 weeks) An assignment that measures mastery of a single skill or learning target. Assignments in this category may include Performance-Based Assessments focused on one skill or learning target, rhythmic dictation, music theory, short individual or group demonstrations, and quizzes.	40%	35%
PRACTICE: (minimum of 3 per 9 weeks) An assignment that is intended to allow students to make mistakes as they practice skills recently learned in class. Assignments in this category may include progress checks, class participation, skill builders, and exit tickets.	10%	10%

LATE WORK:

Students are expected to turn in all work on time. Assignments not turned in will be entered as a zero and “Missing” until the assignment is completed and turned in. Assignments turned in late are subject to point deductions up to 25 points.

1 day late: -10 pts.

2 days late: -20 pts.

3+ days late: -25 pts.

Students who are absent will have an equal number of days as they were out to turn in late assignments.

RECOVERY POLICY:

- Students may recover their grade on any **MAJOR** assignment for which they made below a 75%.
- Recovery of a major assessment should occur before the next major is given. A replacement grade on a recovery will be no higher than 75%.
- Recovery is a “gradeable” experience that allows a student to demonstrate mastery of standards to “recover” his/her grade.

NON-ACADEMIC SKILLS:

This year, each student will receive feedback in the 4 areas below:

- **Self-Direction** – *Is the student on task during independent work time?*
 - The student follows directions and procedures, sustains attention during class, and/or resists distractions.
- **Collaboration** – *Is the student fulfilling their role in the ensemble?*
 - The student works well with others, asks for help when needs it, and/or shares ideas.
- **Problem-Solving** – *Does the student attempt to find solutions when they are stuck?*
 - The student can describe a problem, finds more than one way to solve a problem, and/or is aware that all actions have outcomes.
- **Work Habits** – *Does the student consistently turn in work on time and submit work that reflects their best effort?*
 - The student comes prepared for class , manages time and materials, and/or stays on task.

Non-academic skills will be reported in a separate section from academic performance. Feedback will be given to students and parents/guardians every 9 weeks on the progress report/report card.

Fulton County Schools will use the following key to report non-academic skills critical to student success.

- Consistently demonstrates
- Often demonstrates
- Sometimes demonstrate
- Rarely demonstrates

ABSENCES:

If a student is absent, it is his/her responsibility to get the information missed. Attendance will be taken daily during each class period. Absences and/or being unprepared will affect a student's performance and overall grade.

ACADEMIC INTEGRITY:

- Cheating and plagiarism will not be tolerated in school. Incidences of cheating and/or plagiarism will have either academic or behavioral consequences as determined by the teacher in conjunction with administration, up to and including OSS for repeated offenses.
- **Cheating examples** –Sharing test, quiz, or homework answers or content with other students; Putting one's name on another's work as your own, among others.

HOMEWORK EXPECTATIONS:

Homework is not expected for this course.

BASIC CLASSROOM PROCEDURES AND EXPECTATIONS:

SEE HANDBOOK FOR FUTURE PROCEDURES AND EXPECTATIONS

Prompt - Prepared - Polite - Present – Positive

RIGOR -RELEVANCE-RELATIONSHIPS-RESPECTFUL-RESPONSIBLE

1. Bring agendas, pencils, laptop, and supplies to class daily.
2. Participate in all classroom activities.
3. Maintain an open, positive attitude about all literature and learning activities.
4. Be on time to class.
5. Strict adherence to all rules as they appear in the student handbook.
6. Be an active participant in class.
7. Do your own work, your best quality work, be thorough, and turn it in on time and complete.
8. Show respect to your fellow classmates, teacher, and materials/instruments/equipment.



Additional Practice Opportunities:

In lieu of traditional homework, students will have the opportunity to use extra resources to use as practice skills (extra practice is completely **optional** and is **not** for a grade).

- See General Academic Guidelines and Expectations for communication, recovery, discipline and other general information.
- Fulton County's Learning Objectives brochure offers more detailed information about each course.
- See the Georgia Performance Standards for math at: <https://www.georgiastandards.org/Georgia-Standards/Documents/Grade-6-8-Mathematics-Standards.pdf>

The standards are organized using domains, overarching ideas that connect topics across the grades, clusters that illustrate progression of increasing complexity from grade to grade, and standards which define what students should know and be able to do at each grade level. These standards include skills and knowledge – what students need to know and be able to do, as well as mathematical practices – habits of mind that students should develop to foster mathematical understanding and expertise.

The 6-8 standards are organized in the following domains: ratios and proportional relationships, the number system, expressions and equations, functions, geometry, and statistics and probability.

All units include the Standards for Mathematical Practices:

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning