



# STEM Academy for Environmental Studies at Memorial Middle School

3205 Underwood Drive, Conyers, GA 30013 • 770-922-0139 • rockdaleschools.org



@MemorialMS



Specialty & Choice Options

## Program Overview

Students will participate in our Science and Engineering Fair, NASA week, lunch-and-learn assemblies, and telecommunication activities with universities, corporations, and local businesses, as well as various competitions and field trip experiences. Students will work individually and collaboratively, using the scientific method and the engineering design process to solve problems and think critically using project-based learning. Students will learn how to write a research paper, use research articles from a variety of sources to select and present their findings, and utilize skills from this program to participate in various competitions.



## 6th grade - Introduction to Environmental Science and Engineering

While this is the first time students will have a dedicated research class and rigorous lab equipment set up to allow exploration in STEM, the primary focus of student learning coincides with 6th grade Next Generation Science Standards curriculum in Earth Science with an emphasis on weather, soil/water/air quality, and engineering.

## 7th grade - Citizen Science & Bioengineering

This grade level focuses on environmental factors that affect health and wellness with an emphasis on agricultural and bioengineering inquiry research. Students will be required to focus on enhancing their research skills in a fifth core class dedicated to that critical writing, critical thinking and problem solving experience in order to collaborate with our partner organizations. This class coincides with the 7th grade Next Generation Science Standards curriculum in Life Science.

## 8th grade - STEM College and Career Readiness

This grade level focuses on preparing for high school rigor and post-secondary STEM careers. Students will be provided a choice of competitions, projects, and problems that investigate the potential for alternative and green energy sources. They will work cooperatively with peers, community members and partner organizations to complete a project with the goal of applying research skills, content knowledge and interpersonal relationship skills to produce a solution that creates a change in their community or partner organization's mode of operation. This course coincides with 8th grade Next General Science Standards curriculum in Physical Science with an emphasis on Engineering fields of study.

## Components for Student Success

- Multiple opportunities to earn high school credit through a variety of learning platforms, such as virtual classes, high school certified teachers at the 8th grade level for Math and Science, and a partnership with Rockdale Career Academy.
- High School Offerings:
  - Spanish (Rockdale Virtual Campus)
  - Coordinate Algebra
  - Accelerated Coordinate Algebra
  - Physical Science
  - Personal Fitness and Health (Rockdale Virtual Campus)
- Field Trip Agreements: Fernbank Museum, The High, Elachee, Gwinnett Heritage, Rock Eagle, and more
- Competitions/Challenges: Science Fair, E-Cybermission, Georgia Tech InVenture, 3M Envision, Duke TIP, & Buck Institute Problem-Based Learning
- Project mentors from UGA, Georgia Tech, RMSST
- Exposure to STEM professionals (GBI, AT&T, NASA)
- Math enrichment, mentoring, and after-school tutoring.
- Learning with meteorologists, High-Touch/High-Tech Science Interactive Program, Georgia Tech scientists, NASA astronauts/scientists, and more
- WeatherBug™ live global data to support STEM components with emphasis on data collection utilizing weather drones and labquest Vernier probeware
- Hands on learning through Victory Gardens, two large campus gardens to cultivate STEM
- Industry partnerships with the Environmental Protection Agency (EPA), Georgia Tech, Georgia Power, NASA
- AVID (Advancement Via Individual Determination) provides post-secondary readiness and organization/study skills
- Georgia Tech D2D Student Programs
- Technology Skills (Microsoft Office Suite)
- Advanced Research Writing Courses

## Application, Eligibility, and Lottery

RCPS will use an electronic application process for 2017 - 18 School Choice programs. **No paper applications will be accepted.** Students may apply for one School Choice program only for the 2017-18 school year.

The application window is November 28 - December 16, 2016. The online application will be available on the district website at: [rockdaleschools.org](http://rockdaleschools.org)

The Student Registration Office at 1143 West Avenue will provide assistance to access the online application if needed, Monday through Friday, 8:00 a.m. - 3:00 p.m., on a first come, first served basis. Only complete applications will be accepted.

## Eligibility Criteria

- Students must meet standards in ELA, Reading, Math, Science, and Social Studies on the Milestones assessment. Students with strong math and science skills are encouraged to apply.
- Students must meet the student registration requirement for Rockdale County Public Schools.
- Students and parents must agree to the Choice contract.

## Lottery

In the event there are more eligible applicants than space available, students will be selected via a random lottery drawing. If needed, a lottery will be held in January.



# STEM Academy for Environmental Studies at Memorial Middle School

## A Message from the Principal

I am full of anticipation about what the new school term has in store for Memorial Middle School. Our vision of making Memorial Middle School an exemplary learning environment that supports the growth, development, and academic success of all students while preparing them for the rigors of high school and beyond will guide our work as well as our connections with each other. The faculty and staff of Memorial Middle School commits to the process that it will take to prepare our students for the rigors of high school and beyond. Our work, with your support and collaboration, will guide the successful preparation of every child for the next stages of life.

For students, our purpose is to give you a learning environment filled with experiences that will support your growth and development. We will do this by setting high expectations for academic achievement and behavior. Your Seminole Family will offer you a system of support to make sure that you are able to fulfill the role of a responsible and respectful young adult, ready to learn and ready for the future. As your principal, I will encourage and drive you to meet every goal set for you. I will need you to share in the daily responsibility for your success.

This program will help create memorable moments that will equip our students, challenge their minds, and push us to new limits to make Memorial Middle School an educational environment worthy of success, worthy of recognition. Please make a point to become involved in the many opportunities for us to work in partnership as a school community.

Every day is a great day to be a Memorial Seminole!

— Ms. Michell N. Glover

***Our students are well informed to make decisions that will help them progress in STEM in the following RCPS high school options:***

### **Rockdale Magnet School for Science & Technology**

Advanced Science Research, Engineering, Ivy League College and Career Preparation

### **Rockdale Career Academy**

Healthcare, Biotechnology, Agriculture, Engineering

### **Rockdale Institute for Advanced Technology**

Computer Programming and Gaming Design

### **Heritage High School**

Computer Graphic Visual Arts, Engineering Pathway Courses



*Experimenting with Pangaea power*



*STEM labwork*



*Exploring macro invertebrates on field study*



*Arduino Robotics with AT&T*

## Recent MMS Accolades

- 3M Young Scientist State Award winner
- Broadcom Masters Awards at Regional Science Fair; winners eligible to apply for nationals
- Duke TIP state recipients and national recipient – scored 3rd in the nation in the area of English/ Language Arts
- Numerous placings at Regional Science Fair
- Grand Champions at Regional Science Fair advancing to state competition
- Students invited to present work at Georgia Junior Science and Humanities Symposium
- Robotics teams invited to Super Regionals
- Debate Team invited to regional competition
- Winners in PTA Reflections Contest
- Lowe's Toolbox Grant Recipient
- Title I Reward School for High Progress

## Exploratory, Extracurricular, Additional Academic Services

4-H	Anime Club
Art Club	National Junior Beta Club
Advanced Art	News Club
Chorus	Reading Bowl Club
Drama Club	Robotics
Student Council	Yearbook Club
Cheerleading	TSA
Football	Science Olympiad
Softball	Envirothon
Basketball	Math Counts
Wrestling	Math Competition Team
Track	100 Girls of Code
Color Guard	Spelling Bee
Intramurals	Young Author's Club
	school-wide enrichment clusters

## Mentoring Programs

- First Ladies
- Junior Kappa League
- Diamond Girlz Forever
- Success Builders
- DIVAS
- Principal's Reading Club



*MMS is well represented among RCPS middle and high school students participating in the Georgia Science and Engineering Fair*