



Together for a Better Future

TRIANGLE MATH AND SCIENCE ACADEMY | CARY, NORTH CAROLINA

Our Mission:

Triangle Math and Science Academy's mission is to prepare students to become competent, responsible, and successful individuals in a globalized and technology-based society through strong academic programs, school-family-community partnerships, and strong teacher-student relationships.



TMSA Administration Team



Mr. Kara
Principal



Mrs. Warcup
Elementary Dean of
Academics



Ms. Lanham
Elementary Dean
of Students



Mrs. Sandora
Middle School
Dean of Academics



Mr. Scranton
Middle School
Dean of Students

TMSA Support Staff



Mrs. Wood
Administrative Assistant



Mrs. Garland
Administrative Assistant



Mrs. Bell
PowerSchool Coordinator



Mrs. Powell
School Nurse Aid



Mr. Rasin
K-12 Student Support

Additional Support Staff

- Full time School Social Worker K-12
- Full time School Counselor K-5
- Reading Interventionist K-5
- EC: 5 EC teachers
- EC Support contracted (OT, Speech, Psychologist)
- ELL Teacher
- Full-time School Library Assistant

School Performance Grade

Year	School Performance Grade	School Performance Score	NC Report Card
2018-2019	A	89	Click Here
2017-2018	A	89	Click Here
2016-2017	A+NG	90	Click Here
2015-2016	A+NG	89	Click Here
2014-2015	A+NG	85	Click Here
2013-2014	A	85	

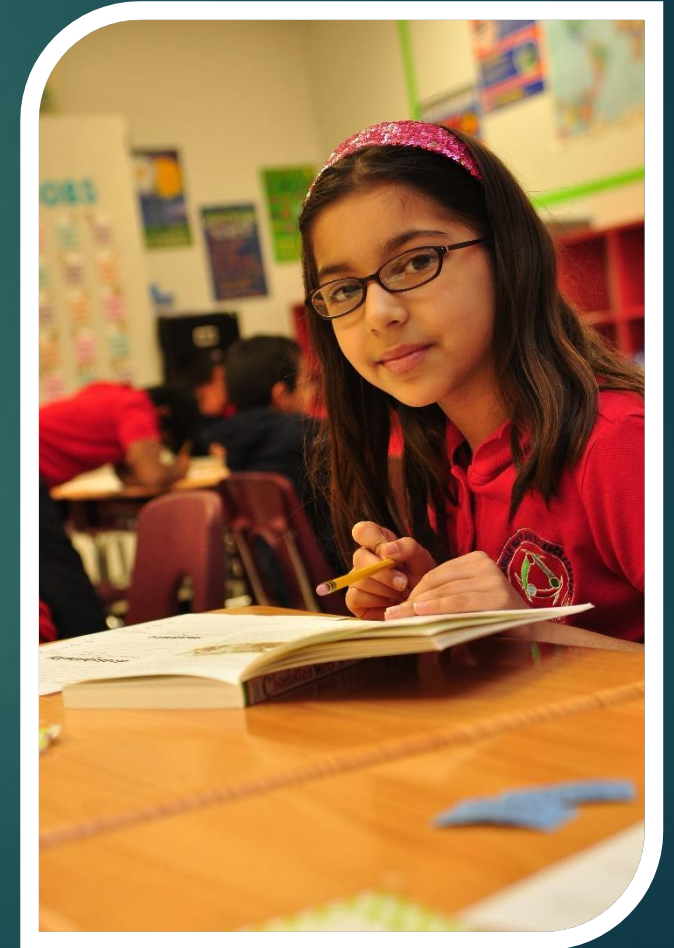
*TMSA received the highest possible School Performance Grade (SPG) for the last 6 years. DPI no longer awards A+ to any school as of 2017-2018. (The plus sign recognized no gaps in any subgroups.) TMSA exceeded its expected growth for the 2017-2018 school year.

2018-19 school year we received an A rating with another 89% and we met our academic growth.

2019-2020 NCDPI did not provide SPG for this school year due to no EOY testing caused by the Covid-19 Pandemic.

What is a Charter School?

- ▶ Public School that is governed by a nonprofit board
- ▶ Open enrollment through a lottery process
- ▶ No tuition
- ▶ No academic eligibility requirements
- ▶ Accountable to DPI through yearly performance goals



Why TMSA?

- ▶ An A/A+ NG School Proficiency Grade 6 years in a row
- ▶ STEM Focus: Science, Technology, Engineering, and Math
- ▶ All courses follow NCDPI Standard Course of Study
- ▶ Technology Enriched Education
- ▶ Research-based Curriculum
- ▶ Advanced Learner Options
- ▶ Free Tutoring
- ▶ Remediation Classes
- ▶ Free Saturday School Tutoring
- ▶ College Prep School
- ▶ Academic Teams



Why TMSA? (continued)

- ▶ TMSA “Family”
- ▶ Build Relationships
- ▶ Home Visits
- ▶ Caring Staff
- ▶ Diverse Student Body
- ▶ Extracurricular Activities
- ▶ Structured Environment
- ▶ Safe Environment
- ▶ Character Education
- ▶ Active PTO
- ▶ School Uniform Policy

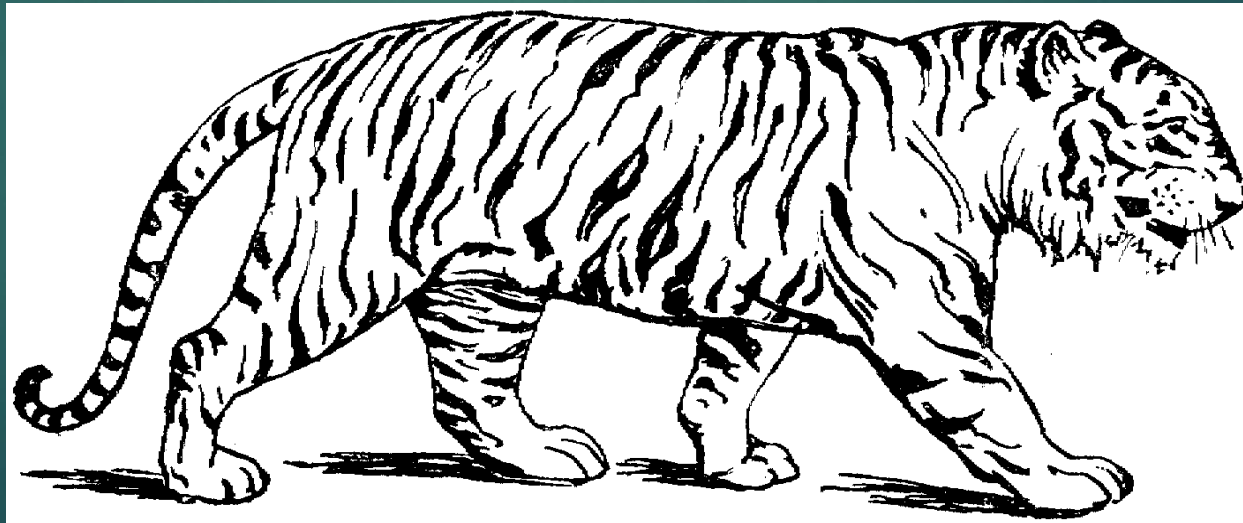


The Most Successful Students at TMSA:

- Learn independently
- Display a high level of motivation
- Show a strong work ethic and are driven to succeed academically
- Exhibit academic strength in Math and Science
- Perform well at an accelerated pace
- Demonstrate leadership qualities
- Participate in academic extracurricular activities
- Plan to be college bound

K-5 Tiger TAILS Program

The **Tiger TAILS** classes were created to help individualize instruction at TMSA. The acronym stands for **T**ime for **A**ctivities that **I**nspire **L**earning and **S**uccess. Currently, classes include academic teams, enrichment classes, and required remediation in math and reading.



K-3 Self-Contained Classrooms

- We currently have 3 Homerooms per grade level in K-3
- All Kindergarten and first grade classrooms have a full-time teacher's aide
- Second and third grade classrooms have shared teacher aides
- As of 2018-2019 all K-3 teachers use standards based grading
- Students have a 90 minute daily reading block
- Daily Tiger Tails/Intervention Block



4th-5th Grade Transition Classes

- Designed as transition years to prepare students for Middle School
- Students have an ELA/Social Studies teacher half of the day and a Math/Science teacher for half of the day
- Students begin a math track at grade 4- on grade level and above grade level
- Emphasis is on organization and study skills to prepare them for independence needed in middle school and beyond

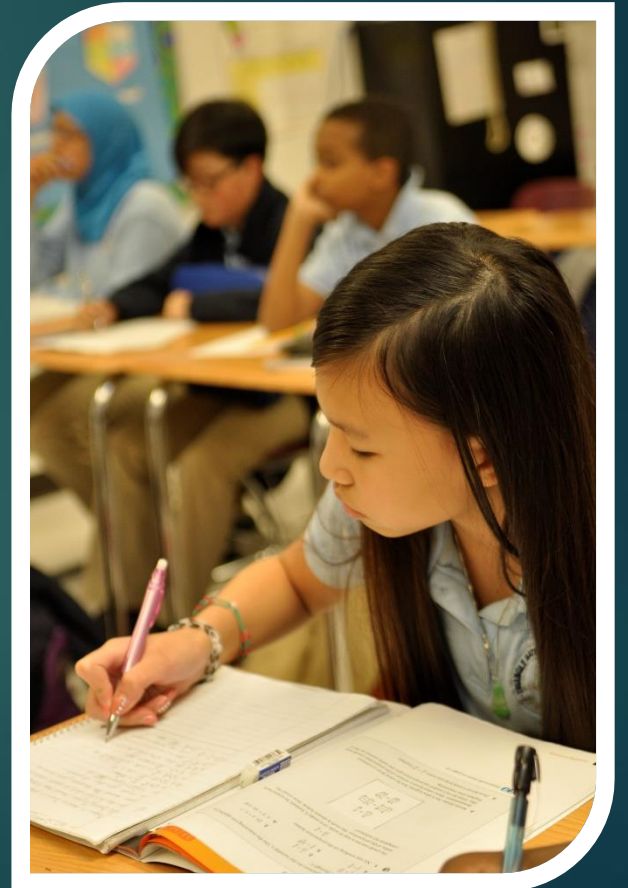
K-5 Activities

- Field trips to Durham Planetarium, pumpkin patch, Marbles, Jelly Beans forces of motion, Science Museum
- Multicultural Projects
- Hundredth Day of School
- Polar Express Day/Scholastic Pajama Drive
- Holidays Around the World
- STEM Nights
- Fall Festival
- Spirit Week
- Literacy Nights
- Drive Through Parades



K-5 Mathematics Curriculum

- K-5 use Bridges Math curriculum
- 4/5 above grade level uses the On Core Math
- Concepts are introduced, practiced, tested, and continuously reviewed
- Homework includes a spiral review section.
- Math centers and online math dashboards are extra features utilized in class
- Follow the NC Standard Course of Study



Math Pathways

Grade	On Grade Level	Above Grade Level	Advanced
4th	4th Grade Math	Accelerated Math	
5th	5th Grade Math	Accelerated Math	
6th	6th Grade Math	Accelerated Math	Foundations of Math 1
7th	7th Grade Math	Foundations of Math 1	Math I (HS Credit)
8th	8th Grade Math	Math I (HS Credit)	Math II (HS Credit)

*Math tracks are subject to change based on student population.
*Previous pathways only apply to currently enrolled students.
*Exceptions to this pathway will be considered on a case by case basis.



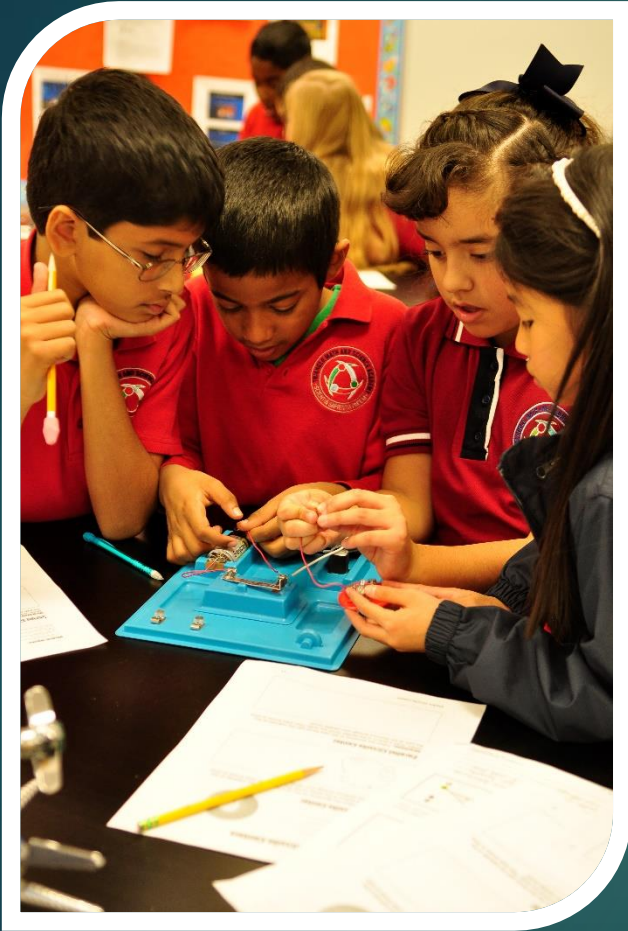
Extracurricular Mathematics Opportunities

TMSA has been regionally, state, and nationally ranked in most of our math competitions.

- Math Olympiad
- Math Kangaroo
- Math Counts
- Noetic Math Competitions
- RCML (Rockets to Math League)
- Math League
- State Math Contests
- AMC 8



K-8 Science (STEM) Curriculum



- TMSA integrates STC Science Kits, Project Lead the Way (PLTW), Project Based Learning, and the Scientific Method to explore science concepts
- Our goal is for students to study scientific information through hands on learning.
- Science experiments include making observations, solving real-world problems, using science tools, and designing experiments

Project Lead the Way (PLTW)

Each PLTW unit engages students in activities that build knowledge and skills in areas including computer science, engineering, and biomedical science; they also empower students to develop essential skills, such as problem solving, critical and creative thinking, communication, collaboration, and perseverance.

Kindergarten Launch Kits	First Grade Launch Kits	Second Grade Launch Kits	Third Grade Launch Kits	Fourth Grade Launch Kits	Fifth Grade Launch Kits
Structure and Function: Exploring Design	Light: Observing the Sun, Moon, and Stars	Materials Science: Properties of Matter	Stability and Motion: Forces and Interaction	Energy: Conversions	Robotics and Automation
Pushes and Pulls	Animal Adaptations	The Changing Earth	Variation of Traits	Input/Output: -Computer Systems -Human Brain	Infection: Detection

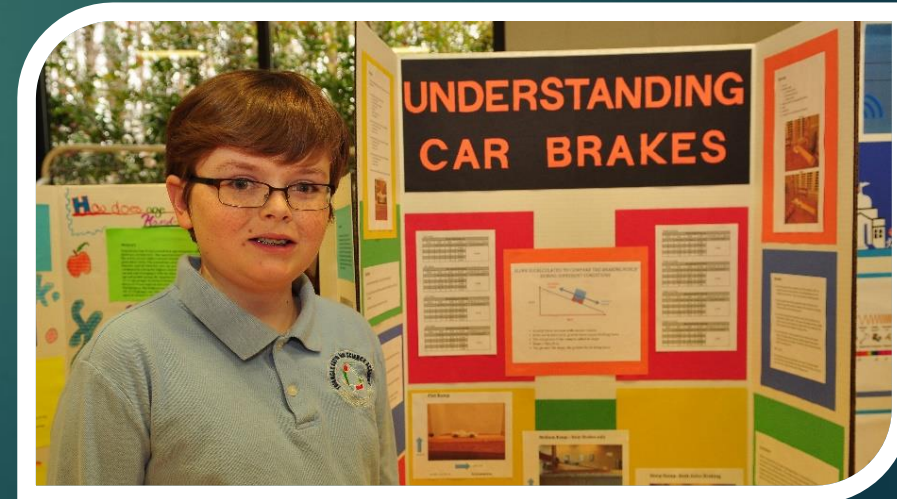
Middle School Gateway 1*:	Middle School Gateway 2*:
Flight and Space	Design and Modeling
Science of Technology	App Creators
Magic of Electrons	Automation and Robotics
Medical Detectives	Intro to Engineering Design

**PLTW Launch (ES) is worked into
the regular science curriculum.
PLTW Gateway (MS) is offered as a
middle school elective.**

***PLTW courses may vary depending on student interest and staff availability.**

STEM Science Fair

- ▶ Students in grades 4-8 design their own experiment and participate in the annual Science Fair
- ▶ Finalists from the TMSA Science Fair go on to compete in the Regional Science Fair



Science Olympiad Team

- One of our school's many academic teams
- Students in 4th-8th grades compete against other schools in different science events
- Events cover all fields of science, including engineering, biology, geology, and physics



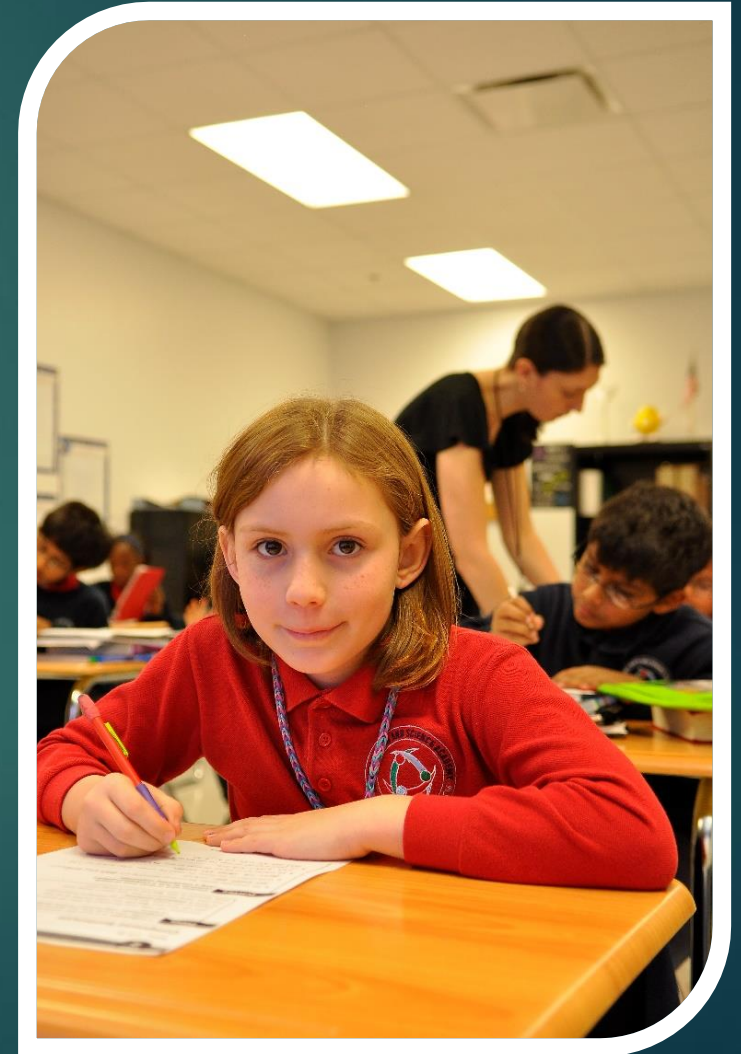
ELA Curriculum

K-5 Grade Classrooms use:

- K-3 Rooted in Reading
- 4-5 uses Pearson My View and novel studies
- 5 Pillars of Reading: phonemic awareness, phonics, vocabulary, reading comprehension, and fluency

Grades 6-8 Classrooms use:

- Novel Studies and additional materials
- No Red Ink
- The ELA curriculum includes all aspects of Language Arts: reading, writing, speaking, listening, vocabulary development, and word study



Social Studies Curriculum

ELEMENTARY SCHOOL:

Covers 5 main strands of social studies:

- history
- geography and environmental literacy
- economics and financial literacy
- civics and government
- culture



MIDDLE SCHOOL:

Focus on regional, national, global similarities, economies, governments, geography, and cultures



Specials/Electives

TMSA offers classes, such as the following:

- Physical Education/ Health
- Music
- Band 6-8
- Chorus 4-8
- Art
- Computer
- STEM
- Foreign Language*



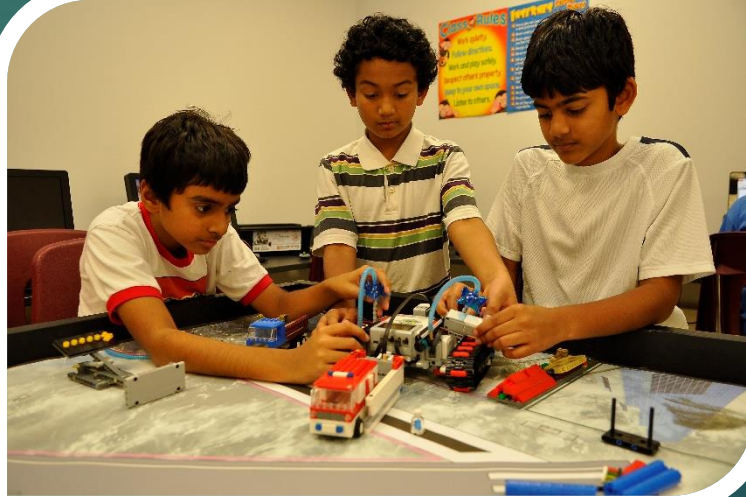
*6th-7th grade students can take intro to foreign language but not for HS credit.

*Currently Grade 8 can select from Spanish, Turkish, and German for HS credit, but languages offered may change from year to year.

Academic Teams

TMSA academic teams compete in regional, state, and national competitions.

- Math Olympiad
- Science Olympiad
- Robotics
- Science Bowl
- Odyssey of the Mind



MS Student Organizations

- National Junior Honor Society (NJHS)
- Student Council
- College Leadership Program (CLP)



After-School Clubs

Physical Fitness Clubs:

- Running
- Golf
- Tennis
- Basketball
- Martial Arts
- Yoga

Technology Clubs:

- Engineering for Kids- Junior Robotics
- Bricks for Kidz
- Gaming Club
- Girls Who Code

Enrichment Clubs:

- Chess
- Girl Scouts
- Photography
- Baking

Fine Arts Clubs:

- Art
- Drawing
- Painting

Math and Science Clubs:

- Little Medical School
- Mad Science

- Clubs change from year to year depending on student interest and vendor availability.



TMSA Middle School Athletics

We offer the following for students in grades 6-8

- Boys and girls soccer
- Boys and girls basketball
- Co-ed Cross Country
- Girls Volleyball



Events at TMSA

- Career Fairs
- Guest Speakers
- Spelling Bee
- Annual Scholastic Book Fair
- STEM Fair
- Grade Level Breakfasts
- Cultural Festivals
- Community Events
- Home Visits
- Middle School Dances
- Talent Show
- Field Trips
- Robotics Competitions
- Math and Science Competitions
- Parent Teas
- Band/Choir Concerts



TMSA Accomplishments 2012-2020:

TMSA has won awards in the following areas:

- Science Fairs - regional and state winners
- Triangle Math and Science Academy Science Olympiad Team- ES , MS, and HS
- Raleigh Regional Science Olympiad competitions
- NC State Chess Championship
- AMC 8 Mathematics Contest and Noetic Learning Math Contest and Math League
- North Carolina Math Competitions and Trimathlon Math Contest and Math COUNTS
- Energy Whiz Competition, winning second place in the Solar Panel Car Race
- Regional NC Science & Engineering Fair
- TMSA FLL Robotics team-Sumobot Competition- Line Follower-
- TMSA's Future City Team
- North Carolina Eastern Region Tournament for Odyssey of the Mind
- NC Geo Bee
- NC Spelling Bee
- One of our students got 1st placed in UNCG State Math Contest
- State Fair Competitions and awards
- HS DECA competitions and awards
- Increased technology- adding Chromebooks, and Ipads, and moving to 1 to 1 devices for the 2020-2021 SY
- One of our students is one of the Winners of Math Kangaroo 2017., who also took 2nd place in Mathnasium Trimathlon.

TMSA Accomplishments 2012-2020 (cont.)

- Successfully launched high school in 2015
- Implemented an enrichment and remediation program during our 1st period known as Tiger TAILS
- Math Kangaroo Poster Contest
- Participated in the Hour of Code program
- TMSA Lady Tigers Volleyball defeated Thales Academy (2015)
- Science Olympiad team competed at state competition
- TMSA partnered with local company SAS which has donated 28 laptop computers to TMSA
- Science department received funding through Donors Choose a Quadcopter DJI Phantom 3 Professional
- TMSA partnered with Kaplan Test Prep to offer SAT preparation classes to TMSA and surrounding community students
- TMSA students had art entries exhibited at the NC State Fair
- TMSA added PLTW (Project Lead The Way) to their core curriculum
- TMSA held their first band concert in winter 2017
- Cyber Tigers and Cyber Patriots awards

Achievements 2012-2020 continued

- Annual Daddy Daughter dance
- Band Concert/Art Competition
- K-3 STEM FAIR
- Run-A-Thon was a success raised ~ \$12,000
- Annual IVY League Trip
- CLP Engineering Camp at NCSU campus
- HS Career Fair
- Geographic Information Systems (GIS) Day- Withers Ravenel visited and spoke to students about GIS real world applications
- MS Boys Basketball was undefeated
- First Homecoming Dance/Game/PEP Rally (2017)
- Purchased an activity bus (2017)

High School Information Sessions

- TMSA is a college preparatory school with its goal being to equip each student for the next level of education. We achieve this goal by offering a wide range of superior academics fostered by a culture of innovative learning. From elementary through high school, we believe our curriculum and robust extra curricular activities and clubs provide the best place for your child to achieve, grow, and learn the skill sets needed for future college success.
- For more information on our high school, please stay for our high school information session at 7:00 PM.

Application Process

- Now accepting applications for K-12
- Feb. 14, Noon Application Deadline
- Feb. 15, Lottery 11:00 AM
- Lottery at 11:00 AM. Results posted on school website by 5:00 PM



Virtual Tour of TMSA

- Due to pandemic restrictions, the tour of the school will be virtual
- [School Tour](#)
- Once the building has been reopened under Plan A, we will send an invitation to admitted families for a scheduled school tour

Questions and Answers:

Triangle Math and Science Academy

www.tmsacademy.org

Contact: enrollment@tmsacademy.org

School Address:

312 Gregson Dr.

Cary, NC 27511

Tel: (919) 628-0307

(919) 388-0077

Fax: (919) 651-1418

