



AcadeMir Charter School East Middle “Expect Excellence”

Educational Program

The purpose of AcadeMir Charter School East (ACSEM) is to prepare students to reach their maximum potential in all subjects with particular emphasis in Science, Technology, Engineering, Mathematics (STEM), and Reading using research-based proven exemplary curricula and enhancement programs. The school program incorporates critical thinking, communication, collaboration, creativity, and technological literacy to prepare students for post-secondary studies and the career demands of the 21st Century. Students with a challenging and rigorous curriculum are well prepared for higher education and life through adherence to an unwavering mission, shared purpose, and articulated goals. Students will experience a cross-curricular instructional approach in math, science, and reading. Our program allows for scientific exploration and mathematical application, and technology integration through real-world connections: by incorporating critical thinking, communication, collaboration, creativity, and technological literacy that goes far beyond the basic knowledge to meet the challenges of the 21-century global economy. Our goal is to develop students into critical thinkers and problem solvers by providing them with hands-on learning experiences to achieve academic success and become lifelong learners.

The ACSEM educational program will focus on research-based methods and strategies to best meet the learning needs of all students and help them achieve the Florida BEST Standards, as applicable to course and grade level expectations in order to accomplish this mission. The school is committed to Fostering 21 Century learning program that offers inquiry-based, applied learning experiences that emphasize collaboration, investigation, and problem-solving. AcadeMir Schools strive to promote Academic Excellence and Leadership development as a key component of our educational programs. To this end the school will offer students opportunities to engage in hands-on learning experiences High-quality programs that offer hands-on learning experiences and promote community engagement beyond the classrooms, all while preparing students for success in college and the workforce. Students are engaged in service-learning projects which encourages students to become leaders in the community by participating in community service projects like: Preparing and delivering food for the homeless, beach clean-ups, canned food drives, toy drives, book drives, partner up with local charity organization and fundraise for a good cause, tutor elementary students and /or engage in other service projects that

promote civic engagement, responsibility and leadership skills while serving their community.

ACSEM has established the following best practices in their 6-8 programs that have shown to be successful in obtaining its goals and achieving its Mission and Vision:

- Create a safe, nurturing academic environment where all students will achieve high academic standards.
- Utilize research-based exemplary curricula to emphasize the teaching of mathematics, science, and reading.
- Provide ongoing professional development to staff and administrators to facilitate high-quality teaching/leadership by implementing new technology tools and evaluating teaching/leadership effectiveness to ensure maximum student learning.
- Ensure students are exposed to a broad swath of cultural and academic experiences as preparation for success in a global economy. In addition, students will recognize the importance of international collaboration and teamwork.
- Ensure high-quality resources are available to achieve the mission, including recruiting and retaining highly qualified teachers and motivated staff.
- Meet or exceed performance by comparable student populations within the District.
- Serve all students needing specialized instructional services according to their IEP, EP, 504, ELL plans and follow a multi-tiered Response to Intervention (RtI) support model.
- Improve academic achievement of all students.

English Language Arts

AcadeMir Charter School East Middle will provide instruction in Reading and Language Arts using Florida's B.E.S.T Standards to promote academic excellence in Reading, Speaking & Listening, Language and Writing. The grade specific standards will guide instruction at each grade level and help ensure that students gain adequate exposure to an increasingly complex range of texts and tasks as they progress from grade to grade. The ELA program will provide instruction and promote academic excellence in reading, writing, oral communications, and the interpretation of literature. The content will include, but not be limited to, the study and interpretation of traditional and contemporary literature, application of the writing process, formal grammar and usage, and effective use of speaking and listening skills, higher-order reading skills, and study skills enabling student academic success. At ACSEM Students will be required to successfully complete three middle school annual courses in Language Arts, which emphasize Reading literature, Informational Text, Argumentative and Informative Writing, Speaking and Listening and language.

Mathematics

The mathematics curriculum, ay ACSEM aims to develop students' mastery of mathematical concepts as well as their ability to engage mathematics to reason, communicate, and problem solve making them able to remain competitive in an ever changing, fast-paced and technology-rich society. The development of these skills will

help students develop numerical literacy, wherein they will have acquired the mathematical knowledge, problem solving ability, and communication skills required to excel at or above grade level expectations. Students will be required to successfully complete three middle school annual courses. ACSEM will follow the state course descriptions for the following courses to be offered in grades 6-8. The purposes of these courses are to provide instruction and promote academic excellence in basic mathematical skills, geometry, algebra, problem solving, and mathematical reasoning. The skills covered will prepare students for the FAST and BEST EOC, as well as promote student success for the real-world application.

Science

The science curriculum will prepare students to achieve the NGSSS/ Florida Standards by incorporating an inquiry-based approach to learning of the central science themes: matter and energy, force and motion, earth and space, processes of life, and the scientific method. ACSEM will have a dedicated, applied, project-based way of teaching and learning that allows students to understand and appreciate the relevancy of their work to their own lives and the world around them. The science program engages students in cross-disciplinary activities that spark a lifelong love of learning and building knowledge and skills in areas including computer science, engineering, and biomedical science. In addition, each module empowers students to develop essential skills such as problem solving, critical and creative thinking, communication, collaboration, and perseverance through the design process. Once they grasp core concepts, students can choose a problem and use their own creativity and curiosity to research, design, test and improve a viable solution. We offer fully equipped classroom-based science labs where students will conduct hands-on activities and they will be able to explore and investigate the steps to the scientific method. Scientific inquiry-based instruction is offered to all students in Grades 6-8th through the implementation of the STEM Academy in the middle school, which students are required to participate in. All students will participate in a classroom-based science labs and investigate scientific concepts weekly.

Social Studies

AcadeMir Charter School East Middle will deliver a Social Science curriculum that will prepare students to achieve mastery of Social Science NGSSS as well as content area literacy standards for all grades. Social Science education will promote loyalty and love of country and community, and it will prepare students to participate intelligently in public affairs. Its component disciplines foster in students the knowledge and skills needed to understand current political and social issues. Social Science education will provide students with an understanding of the democratic principles and ideals upon which good citizenship is founded and an understanding of the world beyond their borders. The comprehensive Social Science program will emphasize content, concepts, and skills from the social sciences, the humanities, and, where appropriate, mathematics, and the natural sciences. Students are required to successfully complete three annual courses in Social Studies. Students in 7th grade will be required to take the Civics EOC Exam, which will constitute 30% of student course grade and 100 points of school accountability grade.

Foreign Language

The Spanish curriculum encompasses systematic development of phonemic awareness, reading, writing, and listening skills through learning strategies for native and non-native Spanish speaking students. These skills reinforce a full understanding of the Spanish language and Hispanic culture. In addition, our teachers will use online resources e-books to support their instructional core program. Reading and writing will be introduced as students gain mastery over the sounds, structures, and vocabulary in the instructional program. Reading and writing serve not only to reinforce control over the oral language, but also to develop literacy skills. ACSEM will focus on developing students' understanding of cross-cultural issues as well as their ability to communicate in more than one language. In grades 6-8 students will be able to take a Spanish course elective each year. The course will be available at the following levels: Beginning, Intermediate or Advanced.

Physical Education

The physical education program at ACSEM promotes an appreciation for sports, physical activity, health education and safety to promote habits of healthy living. Physical Education and Health Education is a state requirement, and we understand that physical activity is important for the prevention of teen obesity and to ensure the health of adolescents. The P.E. program will consist of a standard based, balanced, sequential and progressive program-involving moderate to vigorous physical activity. It always strives to be in step with the current practices and procedures in education and to contribute to the all-around development and education of students. This course also focuses on Health. In Grades 6th -8th, the equivalent of one class period per day of physical education for one semester of each year is required. Students are taught not to take their health for granted, but rather to develop habits of health that contribute to the continued good functioning of the body.

Art

AcadeMir Charter School East Middle will offer art education as an elective course, this course will follow the Florida Standards/NGSS for Visual Arts. At ACSEM the goal of art education is to allow students the opportunity to explore and develop their creative potential. ACSEM will follow the Florida standards and will expose students to the many components of art including production, history, criticism, and aesthetics. ACSEM will participate in district exhibitions, competitions, participate in community-based art experiences and will display their creations in an annual art show hosted at the school. Our goal is to develop students' critical thinking skills, creative confidence, hands-on skills, visual literacy, self-esteem, and an appreciation for the arts. Middle school students will have the opportunity to choose a Fine Arts course as their second elective during the regular school day.

Music

AcadeMir Charter School East Middle will follow the Florida Standards/NGSS and offer a music program that will instill instruction in music skills and appreciation for various genres of music. The curriculum will follow the Florida Standards and skills that involve singing, playing instruments, interpretation of music, and creative expression. The music teacher(s) will have an opportunity to collaborate with core instructional teachers to

assist in interdisciplinary projects or assignments. Practicing music reinforces teamwork, communication skills, self-discipline, and creativity. Furthermore, students at the middle school level will have the opportunity to choose a fine arts Music elective as a second elective. This course will be offered at the Beginning, Intermediate or Advanced levels. M/J Music Techniques 1, students will be offered to students, and techniques through scales, etudes, and solo literature.

ACSEM will offer students STEM education that is innovative and focuses on a student-centered learning environment that sustains an educational culture that promotes creativity, innovation, and collaborative problem-solving. Additionally, all students will participate in a STEM Academy, which will expose students to an interdisciplinary curriculum, that integrates Science, Technology, Mathematics and Engineering, while engaging in the exploration of career interests, and courses relating to Engineering, Robotics, and Coding. The purpose of the STEM academy is to increase student achievement, through the cross curricular integration of STEM. Students will have opportunities to conduct hands-on STEM investigations, improve team building and leadership skills, explore certification/career options, and interact with community stakeholders to solve real world problems.

STEM Curriculum

AcadeMir Charter School East Middle students will have the opportunity to enroll in a distinct STEM Academy where students will engage in scientific exploration and mathematical application along with technology integration allowing students to see the value of critical thinking and creativity and generate interest in STEM 21st century global learners. In the STEM Academy, students will be exposed to an interdisciplinary curriculum that includes Science, Technology Engineering, and Mathematics (STEM).

ACSEM will adopt the proven STEM Enrichment program, Project Lead the Way as its core instruction 6-8th grade. Through this STEM curriculum students will be able to learn the Engineering Design Process a method of approaching and solving problems. The curriculum involves students and teachers using this process throughout the STEM challenge, from clearly identifying the problem to creating and developing solutions. To assist in this process the school will utilize Project Lead the Way a STEM curriculum that offers K-12 pathways in computer science, engineering, robotics, coding, and biomedical sciences. This high-quality STEM curriculum allows student to experience authentic hands-on learning experiences, understand how key science, math, technology, and engineering concepts are applied in the world. STEM teaching involves inquiry-based lessons where students carry out hands-on investigations that encourage critical thinking and problem solving. The lessons are not prescriptive, and teachers play a facilitator role, providing just enough guidance and monitoring. Students have the opportunity to plan, make decisions, and test their ideas as possible solutions. Multiple right answers are possible as students work to solve a problem. The classroom environment is risk-free, and mistakes and design failures are treated as good methods of learning. This comprehensive curriculum was selected because over the last several years, numerous reports and external organizations have validated Project Lead The Way's success in engaging the hearts and minds of students.

STEM 6th -8th - PLTW Gateway

The Middle school STEM curriculum is Project Lead the Way Gateway. PLTW Gateway provides 10 units of instruction that building on a strong foundation for high school, college, and career readiness. Each PLTW Gateway unit engages students in activities that not only build knowledge and skills in areas including computer science, engineering, robotics, coding, and biomedical science, but also empowers students to develop essential skills such as problem solving, critical and creative thinking, communication, collaboration, and perseverance.

STEM Middle School Academy

In the grade 6-8th grade students will have the opportunity to enroll in two distinct STEM Academies the Engineering & Robotics Academy where students have the opportunity to follow Academic Strands that engage students in computer science, engineering, Robotics, and coding strands. The other Academy is the Medical Health Science Academy where students have the opportunity to be exposed to the medical and allied health professions. Students are able to explore a range of paths and possibilities where they can obtain the prerequisite skills needed for programs in high school and beyond.

The STEM Academy will provide a challenging and rigorous interdisciplinary approach to the middle school program that will create a fusion of Science, Technology, Engineering, and Mathematics. The program will prepare students with the ability to think critically, solve complex problems, and drive advancements in science and technology. In addition, through the Engineering strands students will learn how to design, program, and operate Robots. Students will be required to take the academy Courses as one of their annual elective courses.

The Academy for Pre-Medical Sciences offers students an opportunity to explore various careers in the medical field while acquiring the skills and knowledge necessary to successfully transition into high school medical programs or related fields of study. This introduction to medical sciences at the middle school level allows students to prepare academically for coursework necessary to becoming a health care professional. The early exposure will also aid students in deciding whether to pursue this course of study at the high school level.

ACSE will adopt the proven STEM Enrichment program, Project Lead the Way as its core instruction K-8th grade. Through the Engineering Design Process students will be able to successfully incorporate scientific exploration and mathematical application along with technology integration allowing students to see the value of critical thinking and creativity and generate interest in STEM 21st century global learners. In the STEM Academies, students will be exposed to an interdisciplinary curriculum that includes Science, Technology Engineering, and Mathematics (STEM).

The curriculum will place emphasis on two Academies:

- Engineering and Robotics
- Medical Health Science

Students participating in STEAM Academy will be prepared for the following High School programs:

- Informational Technology
- Advanced Placement Programs (AP)
- Dual Enrollment
- Possible Career and Technical Certifications
- Engineering and Robotics Programs
- Health Science and or Biomedical Programs

Pre-Medical Health Academy

The Medical and Health Science strand expose students to the medical and allied health professions. It provides student's exposure to professionals in the industry. This program utilizes innovative strategies to engage students in investigation and discovery. This program provides rigorous content aligned with challenging academic standards in Science. Students learn the complexities of medical and health science and the interactions of the body systems through stimulating hands-on laboratory and field experiences.

Students will address:

- Public health concerns and
- Explore careers in medicine and allied health sciences.

Upon completion of the Pre-Medical and Health Sciences Program, students may choose to continue their academic studies and career preparation in a high school medical magnet program that specialize in:

- Medical and Veterinary Sciences, Nursing, Allied Health, Dentistry, Pharmacology, Biotechnology, Health and Rehabilitation Services

Our program offers hands-on opportunities to simulate medical protocols and inquiry-based learning will receive mentoring by Florida International University Medical School Interns and will be exposed to Medical field expert presenters and participate in medical health related field trips.

Engineering/Robotics Academy

Students in the Robotics program will follow an intensive three-year program which emphasizes on science, mathematics, technology; engineering skills that will help prepare them to be highly competitive in the Engineering field.

The program is designed to encourage problem solving, decision making, verbal and written communication, and computer literacy. It will prepare students for entry into a high school robotics and engineering programs or related fields of study. The Engineering and Robotics Strand will feature creative and innovative programs that Focus on Math and Science investigation and discovery. In Computer Science students learn object-oriented programming using Java. Students take on the role of software engineers, and practice skills that are used in the field. The engineering courses are designed for middle school student who wish to continue their computer science education after completing an introductory course such as Computer Science Principles or Computer Science Discoveries.

The purpose of this program is to provide students with foundational knowledge and technically oriented experiences in the study of:

- Applied engineering
- Mechanical systems
- Energy transfer
- Machine automation
- Computer control systems