

# Lockhart Middle School

## Center for the Advancement of Science and Engineering

### **CASE Vision**

The vision of CASE at Lockhart Middle School is to provide meaningful opportunities in a learning community that encourages collaborative decision making, teamwork and problem solving through the use of 21st century thinking skills and technology.

### **Magnet Description**

The Lockhart STEM Academy provides a rigorous integrated curriculum that focuses on Science, Engineering and Math. Students will have a selection of science-based electives, combined with core curriculum that infuses STEM practices of inquiry-based thinking and project-based learning. Students will, also, have a variety of extracurricular activities to strengthen their STEM knowledge. Through Lockhart Middle School's partnerships with Project Lead the Way (PLTW), Lockheed Martin and NAPE, Lockhart Middle School's STEM electives take students through a progression of many types of engineering. Partnerships with nearby Edgewater and Wekiva High Schools allow mentorship opportunities and vertical planning with their STEM-based magnet programs. English Language Arts, Social Studies and Math teachers within the academy utilize STEM-based texts and work on grade-level, cross-curricular projects.

### **Admissions Requirements**

- GPA 3.0
- Signed Terms of Agreement for Enrollment
- Signed Magnet Policy Acknowledgment
- Excellent conduct and citizenship

### **General Expectations**

- Magnet students are expected to earn and maintain A's and B's in all courses (As reflected on the student's report card).
- Magnet students will maintain excellent citizenship and behavior.
- Magnet students will participate in STEM competitions.
- Magnet students will enroll in all advanced/honored classes (See complete course list below).
- Students will keep an ongoing digital portfolio that will prepare them for high school magnet entrance requirements (Project Portfolios).
- Exiting students (8th grade) are expected to be ready for the high school magnet program.

## Core Courses

6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8 <sup>th</sup> Grade
Advanced Language Arts I	Advanced Language Arts II	Advanced Language Arts III
Advanced Math 6 (or) Advanced Math 7	Algebra I Honors (HS Credit)	Algebra I Honors (HS Credit) Geometry Honors (HS Credit)
Advanced World History	Advanced Civics	Advanced U.S. History
Advanced Life Science	Earth/Space Honors (HS Credit)	Physical Science Honors (HS Credit)

## CASE Courses

	6 <sup>th</sup> Grade	7 <sup>th</sup> Grade	8 <sup>th</sup> Grade
First Semester	Science of Technology	Design & Modeling	Energy & Environment
Second Semester	Medical Detective	Flight & Space	Magic of Electrons

## Additional CASE STEM Electives

- Automation & Robotics
- Green Architecture (requires Design & Modeling as a prerequisite)
- Intro. to Engineering (HS Credit)

## Lockhart Middle School Communication Methods

- 1. Website** <https://lockhartms.ocps.net>
- 2. Facebook**
  - LMS Facebook Page: <https://www.facebook.com/LockhartMiddleSchool/>
  - Lockhart PTSA Page: [https://www.facebook.com/Lockhart-Middle-School-PTSA-194462110644547/?hc\\_ref=SEARCH&fref=nf](https://www.facebook.com/Lockhart-Middle-School-PTSA-194462110644547/?hc_ref=SEARCH&fref=nf)
- 3. Student Handbook/Planner**

This has a yearly calendar and is where students copy their homework assignments and agendas for each week. This also has the Lockhart Policies and Procedures.
- 4. Progressbook**

This is where students and parents can check on their progress in class and see current grades.
- 5. Student Work**
  - All classes at Lockhart Middle School utilize Edmodo. This educational website allows students to stay connected and current on daily work assignments and class announcements. Parents are encouraged to create an account in order to stay informed on the daily work and classroom interactions.
  - Some courses may also use an “Interactive NoteBook” (INB). The Interactive NoteBook is used for that course and contains a table of contents which shows the page for each assignment. This is useful for when a student is absent to see what is missing.
  - As our students move toward a one-to-one platform, students will create and maintain an electronic portfolio of the projects they’ve collaborated on during their time at CASE.

## COURSE DESCRIPTIONS

### High School Credit Courses

- **Spanish 1:** Spanish 1 introduces students to the target language and its culture. The student will develop communicative skills in all 3 modes of communication and cross-cultural understanding. Emphasis is placed on proficient communication in the language. An introduction to reading and writing is also included as well as culture, connections, comparisons, and communities.
- **Spanish 2:** Spanish 2 reinforces the fundamental skills acquired by the students in Spanish 1. The course develops increased listening, speaking, reading, and writing skills as well as cultural awareness. Specific content to be covered is a continuation of listening and oral skills acquired in Spanish 1. Reading and writing receive more emphasis, while oral communication remains the primary objective. The cultural survey of the target language-speaking people is continued.
- **Physical Science Honors:** While the content focus of this course is consistent with the Physical Science course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course.
- **Algebra I Honors:** The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades. The critical areas, called units, deepen and extend understanding of linear and exponential relationships by contrasting them with each other and by applying linear models to data that exhibit a linear trend, and students engage in methods for analyzing, solving, and using quadratic functions.
- **Geometry Honors:** Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Important differences exist between this Geometry course and the historical approach taken in Geometry classes. For example, transformations are emphasized early in this course. Close attention should be paid to the introductory content for the Geometry conceptual category found in the high school standards.
- **Earth & Space Honors:** While the content focus of this course is consistent with the Earth/Space Science course, students will explore these concepts in greater depth. In general, the academic pace and rigor will be greatly increased for honors level course work. Laboratory investigations that include the use of scientific inquiry, research, measurement, problem solving, laboratory apparatus and technologies, experimental procedures, and safety procedures are an integral part of this course.

### STEM courses

- **Design and Modeling:** Students discover the design process and develop an understanding of the influence of creativity and innovation in their lives. They are then challenged and empowered to use and apply what they've learned throughout the unit.
- **Automation and Robotics:** Students trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics® platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms.
- **Energy and the Environment:** Students are challenged to think big and toward the future as they explore sustainable solutions to our energy needs and investigate the impact of energy on our lives and the world. They design and model alternative energy sources and evaluate options for reducing energy consumption.
- **Flight and Space:** The exciting world of aerospace comes alive through Flight and Space. During this unit, students delve into the history of flight and space, discover the science behind aeronautics, and explore traveling and living in space. Students are then challenged to use their knowledge to design, build, and test an airfoil.
- **Science of Technology:** Science impacts the technology of yesterday, today, and the future. Students apply the concepts of physics, chemistry, and nanotechnology to STEM activities and projects, including making ice cream, cleaning up an oil spill, and discovering the properties of nanomaterials.

- **Magic of Electrons:** Through hands-on projects, students explore electricity, the behavior and parts of atoms, and sensing devices. They learn knowledge and skills in basic circuitry design, and examine the impact of electricity on the world around them.
- **Green Architecture:** Today's students have grown up in an age of "green" choices. In this unit, students learn how to apply this concept to the fields of architecture and construction by exploring dimensioning, measuring, and architectural sustainability as they design affordable housing units using Autodesk's® 3D architectural design software.
- **Medical Detectives:** Students play the role of real-life medical detectives as they analyze genetic testing results to diagnose disease and study DNA evidence found at a "crime scene." They solve medical mysteries through hands-on projects and labs, investigate how to measure and interpret vital signs, and learn how the systems of the human body work together to maintain health.

## Electives

- **Beginning Band:** This course is open to students in grades 6 – 8 who wish to learn an instrument. No experience necessary. Students will learn the basics of every instrument then choose their "Top 3" favorites. Students will audition or try-out each of these 3. With the band director's help, we will choose the best instrument for each student. Students will also learn to read Treble & Bass Clefs and learn the basic fundamentals of music performance on their chosen instrument. Students will perform in a minimum of three concert performances per year.
- **Concert Band:** This course is open to students with one year of experience on an instrument. Students will build upon the fundamentals of performance that they learned in Beginning Band and will perform intermediate band literature. Students will perform in a minimum of three concert performances per year.
- **Jazz Band:** This course is available to students with at least one year of playing experience and play Trumpet, Trombone, Alto/Tenor/Baritone Saxophone, Drum Set, Piano, Bass Guitar, and Electric Guitar (other instruments are possible to add). This can be their main instrument OR their secondary instrument. In this course, students will learn the fundamentals of Jazz performance including swing style and improvisation.
- **Beginning String Orchestra:** This course is open to students in grade 6-8 who have never played a stringed instrument before. Students may choose to play violin, viola, cello or bass. They will learn the fundamentals of string playing, note reading, rhythm, and musicianship. Students will perform in a minimum of three concerts per year.
- **Intermediate String Orchestra:** This course is open to students in grade 6-8. At least one year of private or group instruction is required. Private lessons are highly recommended, but not required. Students will continue in their development of great technique, musicianship and music theory. Students will perform in a minimum of three concerts per year.
- **Advanced String Orchestra:** This course is open to students in grade 6-8. At least one year of private or group instruction is required. Private lessons are highly recommended, but not required. Students will continue in their development of great technique, musicianship and music theory. Students will perform in a minimum of three concerts per year.
- **Chorus (6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup> grade):** This chorus is open to all students, regardless of previous experience. Anyone can learn to sing! Students will learn basic, healthy vocal technique, and they will also explore a wide range of music genres.
- **Theatre (Beginning, Intermediate, Advanced):** The purpose of this course is to enable students to participate in varied aspects of acting, stage movement, and characterization.
- **Physical Education:** The purpose of this course is to develop the physical skills necessary to be competent in many forms of movement, knowledge of team sports concepts such as offensive and defensive strategies and tactics, and appropriate social behaviors within a team or group setting. The integration of fitness concepts throughout the content is critical to the success of this course

## **ACADEMIC PROBATION**

Magnet students are required to take the most rigorous course load available and must maintain an overall minimum quarterly GPA of 2.5 as well as a 3.0 or higher in all STEM courses.

Students who do not earn an overall minimum quarterly GPA of 2.5 will be placed on probation until the end of the next grading period. If sufficient progress is not made, the student is subject to removal from the CASE magnet program.

Students who do not maintain a 3.0 or higher in each STEM course will also be placed on probation until the end of the next grading period and are subject to removal from the CASE magnet program.

All students who are removed from the CASE magnet program will be required to withdrawal from the CASE magnet program and enroll in their zoned school.

### **Academic Probation Process**

1. Upon being placed on Academic Probation, the student will be given their probation contract that requires the signatures of each subject area teacher(s), parent(s), student, guidance counselor and CASE program coordinator. Parents will also be notified via phone call from the CASE program coordinator.
2. After probation contract is returned (with signatures) the student is required to complete the following:
  - Print weekly progress reports
    - Write a detailed grade reflection outlining any missing assignments and low test scores for each course that is preventing them from meeting the CASE grade/GPA requirement.
    - Reflection will include an action plan that the student will take that week to ensure grade/GPA progress.
    - This reflection is due to the CASE program coordinator every Monday before first period.
3. A student is removed from Academic Probation when the next report card shows an overall 2.5 G.P.A. or higher for that nine week marking period and a 3.0 GPA in STEM course.

### **Academic Resources**

- **Progressbook-** Parents and students are both provided with login information to Progressbook where each student's grade summary and a detailed report for each class can be viewed and printed. Progressbook will provide grades for all assignments which have been completed and turned in as well as show which assignments are missing. Students and parents are encouraged to check Progressbook weekly.
- **Inform Teachers/ Staff that help is needed.** Students should let their teacher know if they feel overwhelmed with a subject and need extra help understanding the material. Students are also encouraged to speak to the Magnet Coordinators, and/or Guidance Counselors regarding any area of school in which they are struggling. The teachers and staff want each student to succeed and often have resources that can help achieve success.

### **CASE Magnet Benefits**

- Opportunity to earn high school credits.
- Membership in a community with high behavioral and academic expectations.
- Promote 21st Century Skills in critical thinking/problem solving.
- Membership in a community of focused learners with common goals.
- Easier transition to Edgewater Engineering Magnet or Wekiva Laser & Photonics High School Magnets.
- Increased exposure to extracurricular opportunities in STEM, Science and Math competitions.

## **Media Center**

Media Center hours are from 8:40 a.m. until 4:00 p.m. During lunches, students are allowed to use the media center only with a teacher's pass or an honor card.

## **Conferences with Guidance Counselors**

Students may request a conference with his/her grade level guidance counselor by signing in at the front office with the guidance secretary. If the guidance counselor is not available at the time, the student will be required to return to class until called, unless the situation requires immediate attention.

## **Parent/Teacher Conferences**

Conferences with your child's teacher(s) may be arranged by calling the the front office at (407) 296-5120. Conferences will be scheduled as timely as possible. Conferences are normally scheduled for between 8:35 a.m. unless other arrangements are made with the teacher(s). Telephone conferences are encouraged if time is of essence. Your child's teachers will provide you with their voicemail numbers so that you may contact them for a telephone conference, if necessary. Teachers may also provide you with an email address if you wish to communicate in this manner.

## **PTSA/SAC/ADDitions**

The administration and staff encourage all parents to get involved in your child's school. The PTSA welcomes your assistance in all areas. The ADDitions Volunteer Program is a district wide effort that encourages and promotes community involvement in Orange County Public Schools. Please go to [www.ocps.net](http://www.ocps.net) to sign up to be a volunteer or contact OCPS for more information.

## **Student Appearance and Dress Code**

Responsibility for the dress and appearance of students enrolled in Orange County Public Schools primarily rests with parents/guardians and the students themselves. Some student apparel, however, may not be appropriate to wear to school even though that same apparel may be appropriate to wear in other settings. To assist parents/guardians and students in making appropriate fashion and grooming decisions for school, the School Board has established guidelines for the appearance and dress of students. Please refer to the Student Code of Conduct for details. Students shall not dress or groom themselves in a manner that causes a disruption in the orderly operation of the school. Pants and/or shorts must be properly worn at the waist, and also no shorter than mid-thigh. There are to be no holes in the pants or shorts. If they have holes, leggings underneath do not qualify them to be dress appropriate. Spandex leggings are prohibited. Tank tops and midriiffs are strictly prohibited. A student's shirt MUST have either short or long sleeves. Dress code requirements will be addressed by the discipline office.

## **Make-Up Assignments and Assessments**

Regardless of whether an absence is excused or unexcused, students are required to make-up all coursework and assessments missed during the period of nonattendance. Immediately upon returning to class, it is the responsibility of the student to obtain missed coursework, confirm corresponding dates for completion, and schedule missed assessments. Full credit will be given for those short-term assignments turned in within the reasonable time limits set by the teacher, which shall be no less than the number of days the student was absent, plus one additional day. After the letter grade for the assignment has been determined, the teacher may reduce the grade by one letter grade for each day the assignment is turned in late.

## **Tests and Quizzes**

At a minimum, students have no less than the number of days they were absent, plus one additional day, to make up tests and quizzes missed during absences. The time and place for make-up is the decision of the teacher. The teacher's decision on make-up schedules shall be final. The teacher may administer an alternate form of a test or quiz

to assess competency or mastery of a subject matter. There shall be no academic penalty imposed for tests and quizzes completed within the reasonable time period set by the teacher. However, if a student fails to make up the test or quiz within the reasonable time period, then the teacher may impose a reasonable academic penalty, such as assigning a zero or a failing grade for the test or quiz, or the teacher may give the student another opportunity to make up the test or quiz.

### **Health Services Emergency Cards**

Unfortunately, emergencies can occur at school. Please fill out the emergency and student information cards completely and notify the school whenever information changes. It is very important that the school has up-to date and working phone numbers.

### **Medication Policies**

If a student needs to receive medication at school it may be done in one of three ways:

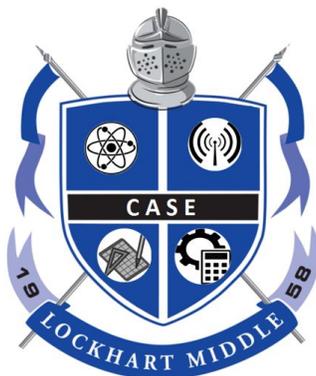
1. Prescription medication will be administered through the Clinic. The parent/legal guardian must bring medication into school, or it may be brought in by another authorized adult, counted and logged in. The physician and the parent/legal guardian, prior to the student receiving medication must complete a medication authorization.
2. Over-the-counter medication may be carried and administered by the student ONLY after the parent/legal guardian has completed the proper paperwork. The student may only carry enough medication for one day at school; it must be in the original container, labeled with the student's name and not exceed the recommended dosage.
3. The parent/legal guardian may come to school and administer medication to his/her child. They must complete the medication log kept in the front office. These forms may be obtained from the school.

### **Immunizations**

Immunization requirements must be met in order for your child to attend OCPS. Seventh grade immunization requirements include the Tdap (Tetanus, diphtheria, attenuated pertussis) vaccination. The blue 680 immunization certificate should be brought into school, to be filed in the student's health record. Immunizations may be obtained free of charge from the Orange County Health Department or from your health care provider.

### **Frequently Asked Questions**

- **Can students be involved in sports and other school activities?**  
Yes! The teachers and coaches make every effort to work through any conflicts in scheduling so students who wish to participate in more than one activity can do so!
- **Do I have to be in the Academy to take the courses listed?**  
No. Courses listed are open to all students as long as a student's schedule and class size allow it.
- **If a student is involved in the Lockhart CASE magnet, does this automatically qualify them for entrance to High School magnet programs?**  
No. Students will still need to apply for High School magnet programs. However, we are working on partnerships with other engineering based magnets to create a more direct path.



**The Center for the Advancement of Science and Engineering  
at Lockhart Middle School  
Terms of Agreement for Enrollment  
(To be completed after admission to the magnet)**

Lockhart Middle School will be a safe and enthusiastic community of learners where every student reaches intellectual, social and creative potential in a smaller educational environment. With the support and guidance of parents, staff and community members, the students will build a foundation to successfully participate as members of society in the 21<sup>st</sup> century.

In order to maintain the educational environment that will be the foundation for success, the students and parents who choose the CASE Magnet Program will be required to adhere to the following:

- Student Specific
  - Students will enroll in the most rigorous course progression available.
  - Students must maintain a 2.5 or higher quarterly and overall GPA as well as be performing at or above grade level on district standardized tests.
  - Students must maintain a 3.0 or higher in all magnet courses based on report card and cumulative grades.
  - Students will be prepared for class each day with all required supplies.
  - Students will follow and support homework policies. (All assignments must be completed/turned in on time.)
  - Students must follow and support the LMS uniform policy.
  - Students are expected not only to attend school daily, but be prompt in arriving to class. Written excuses must accompany any absence. Students who have accumulated 3 tardies to school/class may be placed on probation per the provisions listed below.
  - Students must demonstrate appropriate behavior and follow the OCPS Student Code of Conduct with exemplary behavior (i.e., no discipline referrals.)
  - Students will participate in required competitions.
  - Students will maintain a portfolio of work.
  - Students are expected to utilize the tutoring program as needed.
  - Students must maintain all the “specific requirements” outlined in the CASE Handbook.
- Parent Specific
  - Parent will review classwork and homework with their child.
  - Parents must demonstrate and support appropriate behavior.
  - Parents will participate and support the Magnet Program. (Parents must attend parent conferences, chaperone special events, etc.)

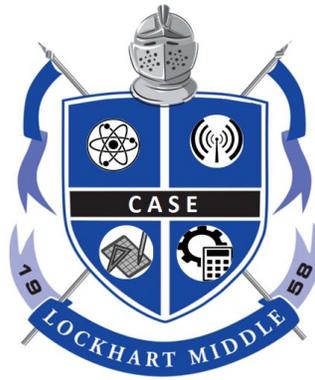
In the event that these guidelines are not followed the provisions below apply:

Students who fail to meet the standards established in this agreement will be placed on probation. The parent will be notified and a parent conference will be scheduled, if needed. **Probation will be for one grading period.** If the violation is corrected during that time period, the probationary period will end. If there is insufficient improvement at the conclusion of the probation period, the student will be exited from the magnet program and will be required to return to the zoned school at the end of the 1<sup>st</sup> Semester or end of the year, whichever comes first.

I have read and understand my responsibilities as a CASE Magnet Program student or parent.

**Student’s signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Parent’s signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_



## The Center for the Advancement of Science and Engineering at Lockhart Middle School

### Acknowledgement of Specific Magnet Student Policies

I understand that I may NOT withdraw my child from Lockhart Middle School for any reason during the enrolled school year while my residence is within Orange County, FL. Students may, however, be sent back to their home school for failing to meet the Magnet Student Terms of Agreement. My signature below indicates my acknowledgement and acceptance of this OCPS School Choice Policy.

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

If my child is a magnet student and attends Lockhart Middle School living outside its attendance zone, I understand that OCPS will NOT provide transportation to/from Lockhart Middle School. Furthermore, I understand that transportation hardship will not be viewed as a valid reason for withdrawal from Lockhart Middle School at anytime during the enrolled school year. My signature below indicates my acknowledgement and acceptance of this OCPS School Choice/Transportation Policy.

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Students must maintain a 2.5 or higher quarterly and overall GPA as well as be performing at or above grade level on district standardized tests.

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_