

# **Gull Lake Middle School**

## **Curriculum Guide**

### **2021–2022**

*GLMS: Growing Learners, Becoming Leaders*

## **Making Sense of Middle School Curriculum**

Education continues to change at an accelerated rate. As we gather information on changes, we generate and implement ideas to improve the education of our students. These changes stem from various places including district, state, and federal guidelines. To stay compliant with the guidelines, we review our curriculum each year and make changes that we believe will help our students be college and career ready. Here is some information that we believe will assist you as your child takes courses at Gull Lake Middle School.

The Michigan Department of Education with assistance from many educational organizations developed a system of learning goals for students from kindergarten through twelfth grade in many subject areas. The state of Michigan requires learning standards to be taught in public schools with an assessment administered to measure the student level of attainment. Not only do we make sure that we follow the state and federal guidelines for education, but also give our students opportunities to explore various topics that may inspire them to pursue a field of interest. We also provide a middle school curriculum designed to fully prepare our students to meet the academic rigor at the high school.

### **Core Classes**

All students must take English/Language Arts (ELA), math, science, and social studies at each grade level. When our students enter high school, they will be expected to earn four ELA and math credits each and three science and social studies credits each. Therefore, our classes are designed to help students be ready for the rigor that is expected at the high school level.

### **Non-Core Classes**

All students will have the opportunity to take exploratory classes. Our goal is for students to experience art, music, physical education, health, STEM (science, technology, engineering, mathematics), writing, and Spanish for at least a trimester sometime in their 6<sup>th</sup> or 7<sup>th</sup> grade experience. 8<sup>th</sup> grade allows for more individual specialized elective options that expand on the skills learned in the foundational courses experienced in the first two grades at Gull Lake Middle School.

### **Interventions**

We gather data on all students including grades, state and local assessment scores to determine their academic progress. When students show the need for support, we offer classes and programs to help them improve in the areas specifically in math, literacy, and resiliency which are foundational skills in our curriculum. We continue to develop our interventions to better support our students.

### **Enrichment Classes**

Students who meet certain requirements are eligible to take additional challenging courses in ELA and math through our Academically Talented Youth Program offered through a partnership with Western Michigan University or accelerated classes at the middle school. Some math, Spanish, and STEM classes will allow eighth graders to receive a high school credit. Additionally, we are able to offer virtual course opportunities for particular student needs or interests on an individual basis.

This guide provides a list of courses that we offer at the middle school. Our courses are reviewed and revised each year to ensure that our students get the best possible education at Gull Lake.

## Gull Lake Middle School 2021-22 Course Offerings

### 6th Grade Courses

<b>Required core classes for all 6th Graders:</b> ELA, Math 6 or Math 6/7, Science, Social Studies	
<b>Option 1 - Band Rotation:</b> <ul style="list-style-type: none"> <li>● Band (full year)</li> <li>● Spanish A, Authors Workshop, PE</li> </ul>	<b>Option 2 - Choir Rotation:</b> <ul style="list-style-type: none"> <li>● Choir (full year)</li> <li>● Spanish A, Authors Workshop, PE</li> </ul>

### 7th Grade Courses

<b>Required core classes for all 7th Graders:</b> ELA 7 or ELA 7/8, Math 7 or Math 7/8, Science, Social Studies		
<b>Option 1 - Band Rotation:</b> <ul style="list-style-type: none"> <li>● Band (full year)</li> <li>● Health, Design &amp; Modeling</li> <li>● 1 additional trimester class (Team Sports, Art, Current Events, Spanish B, Virtual)</li> </ul>	<b>Option 2 - Choir Rotation:</b> <ul style="list-style-type: none"> <li>● Choir (full year)</li> <li>● Health, Design &amp; Modeling</li> <li>● 1 additional trimester class (Team Sports, Art, Current Events, Spanish B, Virtual)</li> </ul>	<b>Option 3 - Other Rotation:</b> <ul style="list-style-type: none"> <li>● Health, Intro to Innovation or Design &amp; Modeling</li> <li>● 4 additional trimester classes (Team Sports, Art, Current Events, Spanish B, Virtual)</li> </ul>

### 8th Grade Courses

<b>Required core classes for all 8th Graders:</b> ELA 8 or ELA 9, Math 8 or Algebra, Science, Social Studies	
<b>Choose enough elective classes to fill TWO class periods (6 trimesters):</b>	
Full year classes: <ul style="list-style-type: none"> <li>● Band (full year or 3 tri required)</li> <li>● Jazz Band (full year or 3 tri)</li> <li>● Choir (full year or 3 tri)</li> </ul> For High School credit: <ul style="list-style-type: none"> <li>● Spanish 1 for one credit (full year or 3 tri required)</li> <li>● Intro to Computer Science for .5 credit (2 tri required)</li> </ul>	Trimester classes (3 tri = 1 class period): <ul style="list-style-type: none"> <li>● Lifetime Sports</li> <li>● Studio Art</li> <li>● Guitar</li> <li>● Robotics</li> <li>● Medical Detectives</li> <li>● Into to Innovation</li> <li>● Project Lead the Way</li> <li>● Virtual</li> </ul>

Elective Specials combinations will be based on enrollment and teacher availability

Lab intervention classes will be offered to students qualifying for those classes. Interventions are designed to improve ELA and/or math skills of students demonstrating deficiencies from data gathered from state testing, grade history, and universal screening scores. These classes will serve as Specials classes.

# CORE CLASSES

## ENGLISH

### **English Language Arts 6**

Students will be actively involved in reading, writing, speaking, and listening. Specifically, students will read short stories and novels, both in and outside of class time and will share in their reading in a variety of ways. Daily Oral Language, Compare and Contrast, Historical Fiction, Personal Narrative, and Research Writing Assignments will be the main focus of the students' written work throughout the year. As students share their reading and writing, they will be required to present to a partner, a small group, or to the whole class. In addition, there will be an emphasis on the continued development of lifelong skills, such as active listening and critical thinking.

### **English Language Arts 7**

Students will be involved in a year of activities centered on reading, writing, speaking and listening at a more complex level. Specifically, students will read short stories and novels, both in and outside of class time and will share in their reading in a variety of ways. This course includes two novel studies: *The Giver* by Lois Lowry and *The Cage* by Ruth Minsky Sender. One of the year's highlights includes a class trip to the Holocaust Museum in Farmington Hills. The research process and writing is also a large focus. Narrative writing and poetry will also be included throughout the year. As students share their reading and writing, they will be required to present to a partner, a small group, or to the whole class. In addition, there will be an emphasis on the continued development of lifelong skills, such as active listening and critical thinking.

### **English Language Arts 7/8**

English 7/8 is an accelerated course that combines the skills, strategies, and essential components of both 7th and 8th grade language arts. Students will be expected to master basic material at a faster speed in order to develop a higher level of application and evaluation of key concepts. Students will read various short stories, *The Pearl* by John Steinbeck, *The Giver* by Lois Lowry and *I Have Lived a Thousand Years* by Livia Bitton-Jackson. Developing stronger writing skills will be a large focus throughout the year. At minimum, students will write four formal essays focusing on theme, dystopian literature, and research. Students will also give numerous presentations both formal and informal, both collaboratively and independently. One highlight of the year will feature a novel study of a Holocaust memoir, which will prepare students for the annual 7th grade field trip to the Holocaust Museum in Farmington Hills. This course is designed for ambitious, self-motivated, and high-achieving English students who seek to be challenged in this condensed format of thought, interpretation, and creation of the equivalent 7th and 8th grade curricula. **Prerequisite:** Successful completion of ELA 6 and qualifying score on placement test.

### **English Language Arts 8**

Eighth Grade English Language Arts students are expected to strengthen their academic writing, public speaking presentation skills, and collaborative communication. Students will read a variety of short stories and novels, including *A Christmas Carol* by Charles Dickens and *The Pearl* by John Steinbeck both in and outside of class time and will share their reading in a variety of ways. Over the course of the year, students will be expected to write two formal essays, give one formal speech, study poetry and participate in a media literacy unit focused on analyzing advertisements. Oral communication skills are strengthened as students read, respond, and evaluate through both self and peer feedback techniques in both discussions and writing. In addition, the eighth-grade student will work to develop independence of thought and action, while gaining maturity in communication skills.

### **English Language Arts 9 (For High School Credit)**

This course will meet the state requirement for an English 9 high school credit. This course has rigorous homework and in-class workload. The expectation is high for quality work. This course will include reading, vocabulary study, and writing assignments related to literature. The main units are a short story unit, independent novel project, *Of Mice and Men* literature study, a research genius hour project with formal speech, *Romeo and Juliet* literature study, and *The Odyssey* literature study. In addition, there will be an emphasis on the continued development of lifelong skills, such as active listening and critical thinking. A student must maintain a 78% C+ average across the three trimesters in order to move successfully into English 10.

**Prerequisite:** Successful completion of ELA 7/8 course or a 70% C- on the placement test (English 8 exam equivalent).

### **ELA Lab**

ELA Lab allows students to work in small groups while focusing on reading and/or ELA skills. Each student has the opportunity to enhance fluency and comprehension skills through a variety of research based intervention programs such as *Rewards*, *Rewards Plus* (Science or Social Studies), *Six-Minute Solution* reading strategy or the *Read to Achieve* program. All strategies are modeled and practiced in a variety of ways. As the strategies become habits, the students are then encouraged to use them in other classes when reading or writing in order to find more success with the content in core subjects.

**Prerequisite:** Students who qualify for the class have demonstrated the need for additional assistance based on reading scores on the M-STEP or MAP standardized tests, fluency and comprehension assessments, and grades/progress in current and prior ELA classes.

### **Author's Workshop**

Sixth graders will take a trimester writing course in addition to their year long ELA course. The goal of the course is to enhance student writing skills in order to produce concise, coherent, and fluent writing. A variety of writing opportunities, including expository, narrative, persuasive, and creative, are employed to showcase standard English writing skills of organization, use of effective transitions, and precise word choice. Time is allocated for cross-curricular writing with math, science, and social studies in addition to content area writing. Brief periods of discussion is interspersed at appropriate times throughout the writing process in order to facilitate launching and analyzing student work. Time dedicated to writing followed by collaboration with peers and teachers supports the further development of writing growth.

## **MATH**

### **Math 6**

This course focuses on proportional reasoning, the number system, expressions & equations, and geometry. Students will understand and use ratio concepts to solve problems. They will compute multi-digit numbers and apply their understanding of numbers to fractions and decimals. Students will explore algebraic expressions and solve one-variable equations and inequalities. They will solve real-world problems involving area, surface area, and volume and will begin to develop an understanding of statistical variability.

### **Math 6/7**

This course covers all of the Common Core 6<sup>th</sup> Grade Math Curriculum, in addition to parts of the 7<sup>th</sup> grade Common Core Curriculum. This course will extend understanding of proportional reasoning to solve real-world mathematical problems. Students will also increase their understanding of fractions to add, subtract, multiply, and divide rational numbers. Students will also study algebraic expressions, solve problems using algebraic equations, and learn to graph functions on coordinate planes. This class moves at an accelerated pace.

**Prerequisite:** Must achieve qualifying scores for 5<sup>th</sup> grade math, the MobyMax assessment, and placement test.

### **Math 7**

This course allows students the opportunity to explore the concepts of numbers & operations, algebra, measurement, geometry, and data & probability. Specific attention will be given to topics such as understanding all operations of rational numbers (both positive and negative) and developing an understanding of and applying proportionality, including similarity. Students will also be analyzing and representing linear functions, including solving linear equations.

### **Math 7/8**

This course covers all of the Common Core 7<sup>th</sup> Grade Math Curriculum not covered in Math 6/7, in addition to the majority of the 8<sup>th</sup> Grade Common Core Curriculum. Topics will include, transformations, solving equations and inequalities, linear functions, Pythagorean Theorem and Volume. This class moves at an accelerated pace.

**Prerequisite:** Successful completion of Math 6/7 **or** students must have a qualifying MobyMax score after 2<sup>nd</sup> trimester of Math 6 or teacher recommendation.

### **Math 8**

This course focuses on the number system, expressions & equations, functions, geometry, and statistics & probability. Students will relate rational numbers to irrational numbers. They will explore integer exponents, understand

connections between proportional relationships, lines, and linear equations, analyze and solve linear equations, as well as evaluate functions. Students will understand congruence & similarity, the Pythagorean Theorem, and will solve real-world problems involving volume.

### **Algebra** (For High School Credit)

This course will meet the state requirement for an Algebra I credit. Topics will include, linear functions, exponential functions, quadratic functions, power and polynomial functions and other topics to meet the state requirements.

**Prerequisite:** Successful completion of Math 7/8 or students must have a qualifying MobyMax score after trimester 2 of Math 7 or teacher recommendation.

### **Math Lab**

Math Foundations is a Title 1 funded program. It is a class that focuses on building basic math skills, vocabulary, and problem-solving skills. This is a supplemental math class for students designed to allow for increased small group instruction as well as one-on-one support. Each grade level has specific learning targets based on individual student data in addition to studying current grade level topics.

These targets include:

- 6<sup>th</sup> Grade: Evaluating expressions, multiplying & dividing multi-digit whole numbers, and all fraction operations.
- 7<sup>th</sup> Grade: Evaluating & simplifying expressions, translating expressions, solving one-step equations, finding coordinate points on a plane, and multiplying & dividing fractions.
- 8<sup>th</sup> Grade: All operations involving negative numbers, expanding & factoring expressions, adding & subtracting expressions, solving multi-step equations, and calculating slope from a given graph.

**Prerequisite:** Students who qualify for math foundations have demonstrated the need for additional assistance based on M-STEP scores, math screening scores (MobyMax), and overall trimester math grades.

## **SCIENCE**

### **Science 6**

Students will investigate physical, earth, and life sciences. Students will develop questioning techniques and use the scientific method to conduct experiments. Through the activities, students will develop solutions to problems through reasoning and observations. The topics are aligned with the Next Generation Science Standards (NGSS). Topics studied in this course include weathering and erosion, plate tectonics and earthquakes, minerals, rocks, force and motion, ecology, and environmental issues. As part of the course, students will have the opportunity to raise and release salmon.

### **Science 7**

Students will explore concepts in Earth, Physical, and Life sciences by making observations and getting hands-on experience through labs. Topics in this course include weather, chemistry, waves, cells, heredity, and the environment.

### **Science 8**

Students will investigate science topics including basic Science Processes, Matter and Energy, Astronomy, Ecology and Decomposition. Students will continue to refine their skills in questioning, observing, and problem-solving through hands-on experiments and the scientific investigation process. Students are expected to embrace the struggle of solving complex real-world problems. This class will provide a heavy emphasis on the application of both quantitative and qualitative data in order to prepare students for the Gull Lake High School science curriculum.

## **SOCIAL STUDIES**

### **Social Studies 6**

Gull Lake utilizes TCI's online *History Alive! Geography Alive Regions and People Program* to transform the middle school social studies class into a multi-faceted learning experience. Lessons start with a big idea — Essential Question — and incorporate graphic note taking, group work, and step-by-step discovery. Students are the center of instruction that taps a variety of learning styles, allowing students of all abilities to learn and succeed. Utilizing a stimulating, case-study approach to geography that was created in partnership with scholars from the National Council for Geographic Education, students will explore various aspects of human life across the globe that affect the modern world.

### **Social Studies 7**

Gull Lake utilizes TCI's online *History Alive! Ancient World Program* to transform the middle school social studies class into a multi-faceted learning experience. Lessons start with a big idea — Essential Question — and incorporate graphic note taking, group work, and step-by-step discovery. Students are the center of instruction that taps a variety of learning styles, allowing students of all abilities to learn and succeed. We introduce students to the beginnings of the human story. As they explore the great early civilizations of Egypt and the Near East, India, China, Greece, and Rome, students discover the secrets of these ancient cultures that continue to influence the modern world.

### **Social Studies 8**

Gull Lake utilizes TCI's online *History Alive! The United States through Industrialism Program* to transform the middle school social studies class into a multi-faceted learning experience. Lessons start with a big idea — Essential Question — and incorporate graphic note taking, group work, and step-by-step discovery. Students are the center of instruction that taps a variety of learning styles, allowing students of all abilities to learn and succeed. This interactive program immerses students in a powerful journey through the history of the United States from its earliest foundations to the age of industrialism. Students will explore how the founding fathers continue to have an impact on America today.

## **SPECIAL & ELECTIVE CLASSES**

### **MUSIC**

#### **Band 6**

This is a beginning band class where the basics of learning how to play an instrument and read music are taught. This class is a performance-based class which lasts for the entire school year. Students will meet every day and will study music theory, music history, and instrumental technique. In addition, they will learn team building, leadership, listening, and creative thinking skills; etiquette of working together to create a finished project; confidence, perseverance, and high work ethic skills. The skills gained from this class will guide students to become leaders in the workforce. Each student will have the opportunity to perform in an ensemble and as a soloist. It is a requirement of the class to attend all performances.

#### **Band 7**

This is the second year of band and is a performance-based class which lasts for the entire school year. Band meets every day and is composed of those students wishing to further their ability in, and knowledge of, instrumental music. Students will study music theory, music history, and instrumental technique. In addition, they will learn team building, leadership, listening, and creative thinking skills; etiquette of working together to create a finished project; confidence, perseverance, and high work ethic skills. The skills gained from this class will guide students to become leaders in the workforce. Each student will have the opportunity to perform in an ensemble and as a soloist through our home concerts, District Solo & Ensemble Festival, and District and/or State Band Festival competition. It is a requirement of the class to attend all performances.

**Prerequisite:** Successful completion of 6th grade band and/or performance audition.

#### **Band 8**

This is the third year of band and is a performance-based class which lasts for the entire school year. Band meets every day and is composed of those students wishing to further their ability in, and knowledge of, instrumental music. Students will study music theory, music history, and instrumental technique. In addition, they will learn team building, leadership, listening, and creative thinking skills; etiquette of working together to create a finished project; confidence, perseverance, and high work ethic skills. The skills gained from this class will guide students to become leaders in the workforce. Each student will have the opportunity to perform in an ensemble and as a soloist through our home concerts, District Solo & Ensemble Festival, and District and/or State Band Festival competition. It is a requirement of the class to attend all performances.

**Prerequisite:** Successful completion of 7th grade band and/or performance audition.

#### **Jazz Band (8<sup>th</sup> Grade)**

This is an instrumental music class designed for 8th grade band students who have an interest in pursuing jazz studies. Students will learn basic jazz scales, styles, chord structures, and improvisational skills. In addition, they will learn team building, leadership, listening, and creative thinking skills; etiquette of working together to create a

finished project; confidence, perseverance, and high work ethic skills. The skills gained from this class will guide students to become leaders in the workforce. Each student will have the opportunity to perform in an ensemble and as a soloist. It is a requirement of the class to attend all performances.

**Prerequisite:** Successful completion of 7<sup>th</sup> grade band and/or performance audition and participation in 8th grade band.

### **Blue Devil Chorale (6th, 7th, 8th Choir)**

This is an all year class focused on experiencing music and developing musical skills necessary to perform in a vocal music ensemble. Includes understanding of basic music terms and symbols and their use, and more advanced vocal technique and health. Preparation for performances is a key element, and students are required to perform in both in-school and evening events. Learning basic team etiquette and mutual effort, perseverance and continued focus on a learning task, and confidence and social awareness are all major aspects of this course.

### **Music 6**

This is a one trimester survey class that explores a wide variety of topics in music. Basic music symbols and terms are defined and experienced through development of musicianship skills like sight-reading. There are units on African Drumming and Rhythm, Melody and Harmony, singing and the science of the voice, History of Western music and culture, and Modern American genres. A wide variety of assessment tools are used including online presentations, sight-reading and performance, and composition. Learning basic team etiquette and mutual effort, perseverance and continued focus on a learning task, and confidence and social awareness are all major aspects of this course.

### **Beginning Guitar**

This class is an introductory class into learning and playing guitar. We focus on a folk and rhythm style of playing, but also cover the basics of lead guitar and melody playing. We learn the basics of musical rhythm reading to apply to song arrangement and composition for a solo performer or group setting. Working as a team, we will study play, and sing music from different time periods and styles of popular music, including the Beatles, Jason Mraz, and Bob Marley, just to name a few. Guitar will help a student to build confidence in performing, perseverance learning a new physical skill, and social team building.

## **FOREIGN LANGUAGE**

### **Spanish A**

This 12-week course will introduce students to basic vocabulary and simple grammar structures in the Spanish language. Students will learn to discuss likes and dislikes, personality traits, forms of the verb ser, and pronouns through songs, video, games, and interactive activities. In addition, students will study cultural topics, art, and holidays.

### **Spanish B**

This 12-week course is a continuation of the Spanish A course. Through song, art, video, games, interactive activities, and Spanish conversation students will continue to expand their vocabulary and verb usage. Students will learn vocabulary related to school schedules, interests, and locations. They will also compare, and contrast shared cultural experiences between the US and Spanish-speaking countries. Students will finish the class by presenting in Spanish. The presentation will demonstrate their development in the language through both A/B courses.

**Prerequisite:** Successful completion of Spanish A or the equivalent

### **Spanish I (For High School Credit)**

The purpose of this class is to familiarize the student with the Hispanic culture and to help students gain mastery of the fundamental building blocks of the Spanish language. In Spanish 1, students will learn to read, write, speak and comprehend the present tense and past tense. Frequent speaking opportunities and assessments are incorporated so that students can confidently hold conversations in predictable situations. Spanish culture is introduced in each lesson and is further emphasized through various media and student projects. Spanish 1 is a high school course and a full year commitment. Students will be delivered the same content, assessments and amount of work that a high school student is given.

**Prerequisite:** Successful completion of Spanish A and 7th grade ELA or equivalent



## HEALTH & PE

### Health

Students will learn skills and information needed to apply the decision-making process to make choices that promote health and improve communication in and outside of the classroom. This course focuses on the different aspects of physical, mental, and social health and how they affect each person's overall wellbeing. Units of study are designed to increase student knowledge and skills in the areas of overall health and wellness, healthy relationships, hygiene, values, making healthy choices, decision making, growth and reproduction, BSE/TSE, HIV/AIDS education, alcohol, tobacco and drugs, safety, refusal skills, CPR, body image, eating disorders and nutrition

### PE 6

In this class, students will be taught the rules, techniques and strategies of various sports and physical activities. Upon completion of this course, the student will be equipped to be physically active as part of a healthy lifestyle. Most units cover approximately one week of class and are concluded with a skills test and a written quiz. Units may include: volleyball, soccer, basketball, football, recreational games, frisbee, floor hockey, track and field, pickleball and badminton, lifetime fitness activities.

### PE 7

In this class, students will be taught the rules, techniques and strategies of various sports and physical activities. Upon completion of this course, the student will be equipped to be physically active as part of a healthy lifestyle. Most units cover approximately one week of class and are concluded with a skills test and a written quiz.

### PE 8

The purpose of this class is to present students with up-to-date knowledge in various lifetime sports. Students will be taught rules, history, and strategies for various sports. Students will also be taught techniques in skill development appropriate for each sport. The class will also involve lifetime fitness. Most units cover approximately one week of class and are concluded with a skills test and a written quiz. The course will include the following sports: volleyball, softball, badminton, pickleball, ultimate frisbee, frisbee golf, bocce ball, weight training, shuffleboard and fitness. Within each sport will be an introduction, drills, skills, strategies, technique, games, and a tournament. Units can include volleyball, soccer, basketball, football, recreational games, frisbee, tennis, floor hockey, track and field, pickleball and badminton, lifetime fitness activities. Rules: Be Safe, Be Respectful and Be Active.

## ART

**May include one of the following courses:**

- **General Art**  
This is an exploratory class of the principles of design and art techniques. Each principle of design is broken down and taught in an individual unit with sketchnotes and a studio project. The studio projects will reflect the specific Principles being taught (i.e. pattern = zentangle insects).
- **Ancient Art**  
During this 12-week course, the students will be taught an overview of Prehistoric, Mesopotamian, Egyptian, and Greek/Roman art. Through the coursework, they will create projects that represent that art period/style using a variety of art materials and techniques.
- **Art History**  
During this 12-week course, the students will be taught an overview of the art periods ranging from the Medieval times, Romanesque/Gothic, Renaissance, Baroque, Neoclassicism, and Realism. The students will also be doing a research project on a modern artist (ranging from the Impressionist period to current). Through the coursework, they will create projects that represent that art period/style using a variety of art materials and techniques.
- **Art Around the World**  
During this 12-week course, the students will be taught an overview of famous buildings, structures, and sculptures (i.e. Stonehenge, Great Wall of China, Eiffel Tower, Taj Mahal, and Statue of Liberty) found

throughout the world. Through the coursework, they will create projects that represent that art period/style using a variety of art materials and techniques.

## **STEM/PLTW**

### **Design & Modeling**

Students will develop a better understanding of the power of creativity and innovation in their lives. They will discover the design process engineers and problem-solvers use to meet needs and improve lives and use what they have learned to design a therapeutic toy for a child who has cerebral palsy.

### **Automation and Robotics**

Students will 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 will use the VEX Robotics® platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms.

**Prerequisite:** Successful completion of Design & Modeling

### **Flight and Space**

Students will use creative thinking and problem solving to explore how scientists and engineers make traveling around the globe and beyond possible. Students practice engineering skills as they design, prototype, and test models to learn about the science of flight and what it takes to travel and live in space. Problem based activities include solving real-world aviation and space challenges and planning a mission to Mars.

**Prerequisite:** Successful completion of Design & Modeling

### **Medical Detectives**

Students will 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 will 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.

**Prerequisite:** Successful completion of Design & Modeling

### **Intro to Computer Science (For High School Credit)**

The Introduction to Computer Science course is meant to give students foundational skills in app development and programming. MIT App Inventor will be used to program Android based apps and Python programming will be learned using a program called Canopy. We are using Project Lead the Way Learning Management Systems as a guide and will add additional projects as time allows. “Designed to be the first computer science course for students who have never programmed before, ICS is an optional starting point for the PLTW Computer Science program. Students work through paired programming to create simple apps for mobile devices using MIT App Inventor. Students explore the impact of computing in society and the application of computing across career paths and build skills and awareness in digital citizenship and cyber security. Students model, simulate, and analyze data about themselves and their interests. They also transfer the understanding of programming gained in App Inventor to learn introductory elements of text based programming in Python to create strategy games.”(PLTW)

**Prerequisite:** Successful completion of Design & Modeling

### **Intro to Innovation**

12-week innovation class where students will explore current innovation practices/methods of today’s cutting-edge innovators, from varying disciplines. They will use technology to Connect, Collaborate, Create, Communicate, and think Critically in ways that are Safe, Appropriate, Valuable, and Engaging. Students will plan and execute the completion of AT LEAST one self-directed project and will showcase final projects (each trimester) to invested stakeholders (peers, parents, GLCS employees, community members)

**Prerequisite encouraged:** Successful completion of Design & Modeling

## **OTHER COURSES**

### **Advisory**

Every student will be assigned to an advisory class. This is a short period of time in which teachers establish connections with their group of students and mentor them throughout the year. Teachers review their student’s

academic performance and also present a character development and social emotional learning curriculum through Positivity Project.

### **Guided Study**

Guided Study is an intervention class to help prepare students for the next academic level. This class focuses on helping students to improve both mentally and physically through a variety of study strategies and organizational techniques. Areas of focus will include organization of materials, time management, goal setting, personal responsibility and study strategies. Throughout the class students will explore areas of personal growth and character development that will help them to become efficient and effective learners

### **LINKS (7<sup>th</sup> and 8<sup>th</sup> Grade)**

This class is a trimester elective course designed to facilitate awareness of individuals with special needs, the systems they require for placement in general education classes, and the benefits of peer-to-peer support in the least restrictive environment. LINKS students will be supporting students with autism spectrum disorder in a variety of settings at the teachers' discretion.

**Prerequisite:** Application & interview

### **Resiliency for Growing Learners**

Resiliency for Growing Learners teaches lessons that provide simple, hands-on solutions to help students increase academic success. The curriculum utilizes a variety of methods to gain an understanding of each student and to teach and practice important life skills and executive functioning skills (decision making, healthy friendships/relationships, self-advocacy, self-concept, motivation, emotion regulation, prioritization, etc). Students will become mindful of these positive behaviors that push them towards success for both inside and outside of the classroom. This will be through completion of the Why Try Curriculum, weekly agenda, and in class completion of academic work.