



galileoschool  
FOR GIFTED LEARNING

2023-2024

# MS Curriculum Guide

## Welcome to Galileo!

Our goal is to engage our students through an integrated curriculum using science, technology, engineering, and mathematics (STEM) content while simultaneously providing them with the guidance to see its applications and purpose through history, literature, and the arts; thereby producing our country's next generation of independent thinkers. Galileo provides innovative, research-based education in a nurturing environment for gifted and talent students and those who want to learn in a gifted learning environment that will challenge and motivate them to pursue their passionate interests in service to others.



At Galileo we believe that ability is not fixed; it can increase or decrease based on effort. Success is a result of hard work and children can increase their ability in all subject areas alike. We strive to continuously engage our students in their learning throughout their Galileo day, as they actively construct an understanding of the subject matter at hand. One of our core beliefs is to teach students in their “zone”- the place where skills and challenge intersect. These initial understandings shape how students learn, and thus shape how the curriculum is taught.

**Welcome! Administration/Guidance**

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**Registration Information**

Students will be provided an online registration form each school year to request elective course classes. Core content classes (math, language arts, social studies, science) will be assigned to each student based on teacher recommendation, standardized test scores, and previous academic success. If wishing to participate in a higher-level course the student must make a request to his/her teacher or administration.

## Schedule Change Policy

Students may request schedule changes during the first week of each semester by completing a schedule change form. These forms can be found in the front office and must be turned into the front office within the first week of the semester. Scheduling requests will be thoroughly reviewed, however, not all requests can be granted due to scheduling conflicts.

## Registration

\*ESOL and ESE students will be placed in appropriate courses based on their IEP or ESOL plan.

Required Courses- All students are required to take four core content classes each year. These courses include math, science, language arts, and social studies. All students are required to take one-semester of Careers for a high school graduation requirement.

Creative Productivity/PBL- All students will be able to participate in CP and PBL for the last 50 minutes of each day. CP units will be created based on student interest and rotated through the year.

Electives- Students will be provided two periods of electives per day. These electives will be scheduled based on student choice. GSGL will do its best to provide students

with their top choices when scheduling permits. Please note, student electives may be replaced with intensive reading and/or math classes when necessary.

## High School Credit

The following courses will be offered for high school credit. Students are able to retake course for grade recovery during their 9<sup>th</sup> grade year.

Algebra 1 Honors

Geometry 1 Honors

Algebra 2 Honors

Spanish 1

## Standardized Testing

Progress Monitoring – Students will participate in iReady and STAR assessments 3 times per year in order to assess progress in Math and Reading

End-of Course Assessments – EOC assessments will be given once per year during the second semester. An EOC will be given for Algebra 1, Geometry 1, Algebra 2, and Civics. The overall score for the EOC will be 30% of the overall grade for that course.

Intensive Reading- Students who are performing below grade level will be provided with an intensive reading course. This course is designed to strengthen students' weaknesses with phonics, reading comprehension, fluency, vocabulary, phonemic awareness, and writing.

Intensive Math – Students who are performing below grade level will be

provided with an Intensive Math course. This course is designed to strengthen student's weaknesses with grade level math skills.

## **Language Arts Courses**

### **6<sup>th</sup> Grade Language Arts Advanced 1**

The sixth grade Language Arts course has an emphasis on composition skills, and comprehension through a focus on short stories, novels, and nonfiction texts.

Students will engage in project-based assessments to show mastery of standards.

In sixth grade, students focus on personal narratives, specific novel studies, comparison essays, arguments, poetry and plays (specifically, A Midsummer Night's Dream). Students who exceed the grade-level standards will also be introduced to literary analysis and exposition of various texts in various manners including projects and interdisciplinary activities. All middle school language arts students receive an education utilizing a technology-based classroom wherein they hone typing, technological, and most importantly, independent functioning skills.

### **6<sup>th</sup> Grade Language Arts Gifted 1**

In addition to the description listed above, this course will help students to work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### **7<sup>th</sup> Grade Language Arts Advanced 2**

The seventh grade Language Arts course has an emphasis on composition skills, and comprehension through a focus on short stories, novels, and nonfiction texts.

Students will engage in project-based assessments to show mastery of standards.

In seventh grade, students focus on analysis of narratives, specific novel studies (e.g

genre studies), literary analysis essays, arguments and debates, poetry and plays (specifically, Hamlet). Students who exceed the grade-level standards will also be introduced to literary analysis and exposition of various texts in various manners including projects and interdisciplinary activities. All middle school language arts students receive an education utilizing a technology-based classroom wherein they hone typing, technological, and most importantly, independent functioning skills.

### **7<sup>th</sup> Grade Language Arts Gifted 2**

In addition to the description listed above, this course will help students to work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### **8<sup>th</sup> Grade Language Arts Advanced 3**

The eighth grade Language Arts course has an emphasis on composition skills, and comprehension through a focus on short stories, novels, and nonfiction texts.

Students will engage in project-based assessments to show mastery of standards.

In eighth grade, students focus on personal narratives and biographies, specific novel studies (focusing on high school level content), literary analysis essays, arguments and debates, poetry and plays (specifically, Romeo and Juliet). Students who exceed the grade-level standards will also be introduced to literary analysis and exposition of various texts in various manners including projects and interdisciplinary activities. All middle school language arts students receive an education utilizing a technology-based classroom wherein they hone typing, technological, and most importantly, independent functioning skills. The focus of eighth grade language arts is to prepare students for the rigorous expectations of high school and college. By the end of

eighth grade, it is the hope of teachers and staff that students have mastered independent functioning skills and are capable of intrinsic motivation to achieve goals and tasks.

### 8<sup>th</sup> Grade Language Arts Gifted 3

In addition to the description listed above, this course will help students to work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

## **Social Studies**

### 6<sup>th</sup> Grade World History Advanced

World History social studies curriculum covers the world's earliest civilizations to the ancient and classical civilizations of Africa, Asia, and Europe. Students will be exposed to the multiple dynamics of world history including economics, geography, politics, and religion/philosophy. Students will study methods of historical inquiry and primary and secondary historical documents. Students engage in multiple opportunities to complete experiences to bring the curriculum alive such as cave paintings, Greco-Roman pottery, and creating a living museum.

### 6<sup>th</sup> Grade World History Gifted

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### 7<sup>th</sup> Grade Civics Advanced

Civics provides students with the opportunity to explore the structure of the United States government on a national, state, and local level. This course will allow students to learn and understand fundamental concepts and philosophies that

led to the creation of the United States Constitution, as well as analyze political parties, national and global economic markets, and investigate what it means to be an American citizen

### 7<sup>th</sup> Grade Civics Gifted

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### 8<sup>th</sup> Grade U.S. History Advanced

In US History, students will explore the past, present and future of the United States of America; starting from the early years when we were the 13 colonies up to present time. Once learning core content standards, students apply their knowledge to express their creativity in creating personal timelines, re-creating a colony, engaging in classroom discussions about current events and how they are related to our unit. The goal for this class is not only to learn about history but become problem solvers in the real world.

### 8<sup>th</sup> Grade U.S. History Gifted

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

## **Science**

### 6<sup>th</sup> Grade Comprehensive Science I

Students will take a revised science course that has been designed to support understanding through big ideas in science. This course will allow students to learn content across six interconnected units that will build throughout middle school. The major concepts covered during 6th grade Comprehensive will be: Atoms and

Molecules, Classification of Organisms, Ecosystems, Plate Tectonics, The Geosphere and Cryosphere, and Our Solar System. The class will be supported by digital content as well as hands-on, cooperative, and literacy-based activities.

#### 6<sup>th</sup> Grade Comprehensive Science I Gifted

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student. Students will be provided opportunities to dive deeper into the content and to make even more connections across science and with other disciplines.

#### 7<sup>th</sup> Grade Comprehensive Science II

Students will take a revised science course that has been designed to support understanding through big ideas in science. This course will allow students to learn content across six interconnected units that will build from the content covered in 6th grade and will be developed further in 8th grade. The major concepts covered during 7<sup>th</sup> grade Comprehensive will be: Cell Structure and Function, Homeostasis in Cells, Heredity, Weathering and Erosion, The Hydrosphere and Atmosphere, and Stars and Galaxies. The class will be supported by digital content as well as hands-on, cooperative, and literacy-based activities.

#### 7<sup>th</sup> Grade Comprehensive Science II Gifted

Students in Advanced classes will be provided opportunities to dive deeper into the content and to make even more connections across science and with other disciplines. In addition to the description listed above, this course will help students to work towards Education Plan goals as specified for that student. Progress towards

goals will be monitored by teacher and student.

#### 8<sup>th</sup> Grade Comprehensive Science III

In addition to demonstrating the standard level, 8<sup>th</sup> grade science students will make connections among unifying concepts and processes to explain the natural world and the dynamic nature of science. The cognitive complexity for students at this level reaches into a higher level of thinking, requiring frequent responses, citing evidence, drawing conclusions, explaining phenomena, and using concepts to solve problems. Students extend many of the higher-level thinking skills over an extended period of time, making connections between related concepts and phenomena and synthesizing ideas into new concepts. They will propose new problems, questions and/or experimental designs based on results or research. Students analyze information to provide new insights and draw related logical conclusions that are not immediately obvious. They will identify issues, evaluate science information and principles, and make and support decisions, with justification. Students independently research how scientific knowledge changes and grows due to the contributions of individuals.

#### 8<sup>th</sup> Grade Science Gifted

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### **Mathematics**

#### 6<sup>th</sup> Grade Mathematics Advanced 1

The sixth-grade mathematics course continues to build on elementary math skills

in preparation for Algebra 1. Students will expand their knowledge in six critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; (4) developing understanding of statistical thinking; (5) developing understanding of and applying proportional relationships; and (6) developing understanding of operations with rational numbers and working with expressions and linear equations. Within each critical area, students will engage in problem solving activities through both individual and group-work practice.

Students who seek challenge beyond the six critical areas will engage in enrichment activities that encourage the use of critical thinking skills.

#### 6<sup>th</sup> Grade Mathematics Gifted 1

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

#### 7<sup>th</sup> Grade Mathematics Advanced 2

The seventh-grade mathematics course continues to build on 6th grade skills as a foundation for high school Algebra 1 in 8th grade. This course focuses on five critical areas: (1) solving problems involving scale drawings and informal geometric constructions, and working with two- and three-dimensional shapes to solve problems involving area, surface area, and volume; (2) drawing inferences about populations based on samples; (3) formulating and reasoning about expressions and equations, including modeling an association in bivariate data

with a linear equation, and solving linear equations; (4) grasping the concept of a function and using functions to describe quantitative relationships; and (5) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence. Students who seek challenge beyond the five critical areas will engage in enrichment activities that encourage the use of critical thinking skills.

#### 7<sup>th</sup> Grade Mathematics Gifted 2

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

#### 8<sup>th</sup> Grade Pre-Algebra Advanced

The pre-algebra course continues to build on skills from 6th and 7th grade as a foundation for high school Algebra 1. This course will focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. Students who seek challenge beyond the three critical areas will engage in enrichment activities that reflect the complexity in Algebra 1.

#### 8<sup>th</sup> Grade Pre-Algebra Gifted

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.



### Algebra 1 Honors \*for high school credit

This course is designed to provide the foundation for future secondary mathematics courses and to develop skills needed to solve mathematical problems. Topics shall include the following: functions; linear equations and inequalities; systems of linear equation and inequalities; polynomials; simplifying radical and rational expressions; solving and graphing quadratic equations; exponential functions; linear regression analysis including residuals; and introductory probability. Additionally, students will work on test taking skills and problem solving techniques to prepare for the End of Course Exam (EOC).

- Algebra 1 or its equivalent is required for high school graduation.

### Algebra 1 Gifted \*for high school credit

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### Geometry Honors \*for high school credit

This course is designed to develop critical thinking skills in mathematical situations using deduction and discovery. Practical applications of geometric skills and concepts in the real world are included. Topics include, but not limited to the following: logic and reasoning; proofs; the study of Euclidean geometry of lines, planes, angles, triangles; similarity; rigid transformations; congruence; geometric inequalities; explorations with polygons and circles, area and volume; constructions. Additionally, students will work on test-taking skills and problem-solving techniques to prepare for the End of Course Exam (EOC).

### Geometry Gifted \*for high school credit

In addition to the description listed above, this course will help students work towards

Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.

### Algebra 2 Honors \*for high school credit

This course is designed to study the structure of Algebra by providing foundations for applying these skills to other math and science fields. Topics include, but are not limited to the following: complex numbers; polynomial functions and their inverses; systems of linear and nonlinear equations and inequalities; polynomials; rational and radical functions; reciprocal functions; exponential and logarithmic functions; graphing and transformations of all the previously named functions along with trigonometry; sequences and series; conditional probability; normal distributions; introductory inference and margin of error; categorical and quantitative variable statistical analysis.

### Algebra 2 Gifted \*for high school credit

In addition to the description listed above, this course will help students work towards Education Plan goals as specified for that student. Progress towards goals will be monitored by teacher and student.



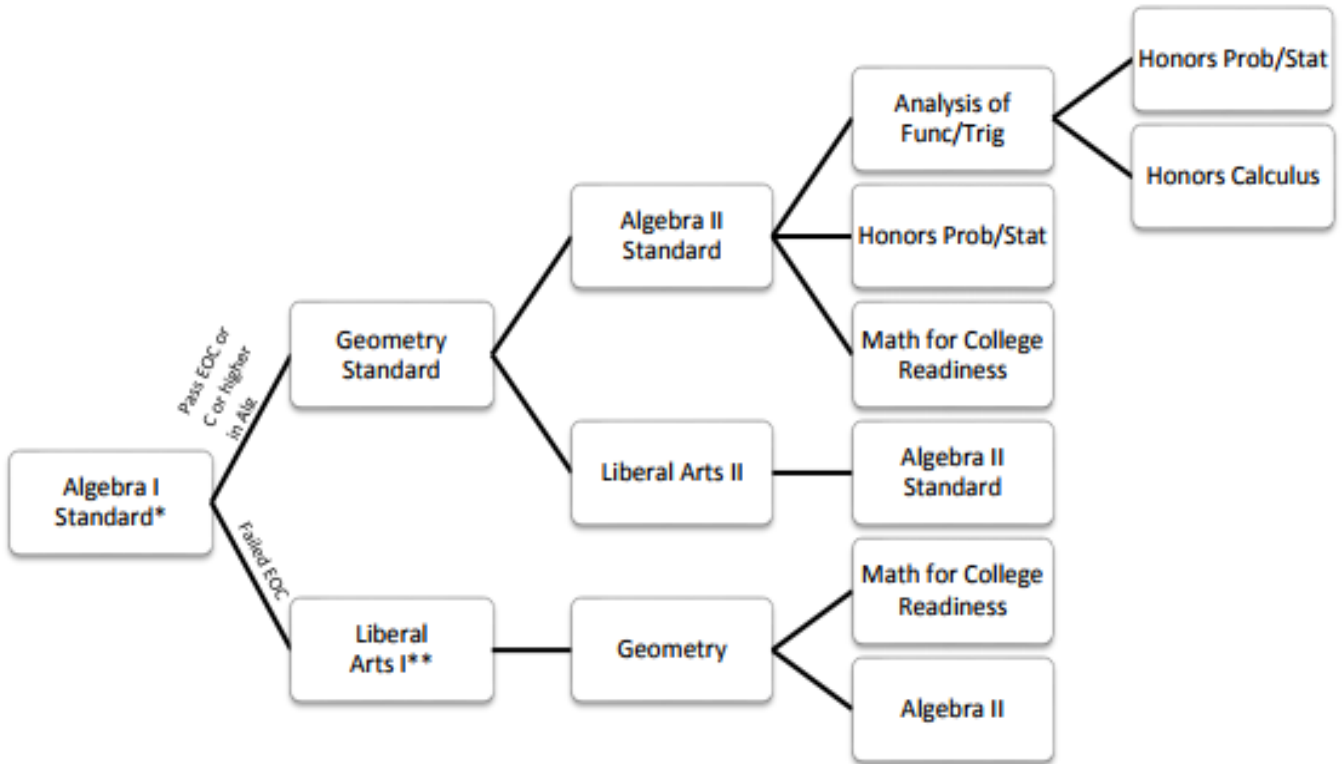
## Three-Year Overview

\*Further acceleration will be determined on a case by case basis. If your child would benefit from whole grade acceleration or further acceleration with core content classes, please contact Jana Spitalnick, Gifted Instructional Coach.

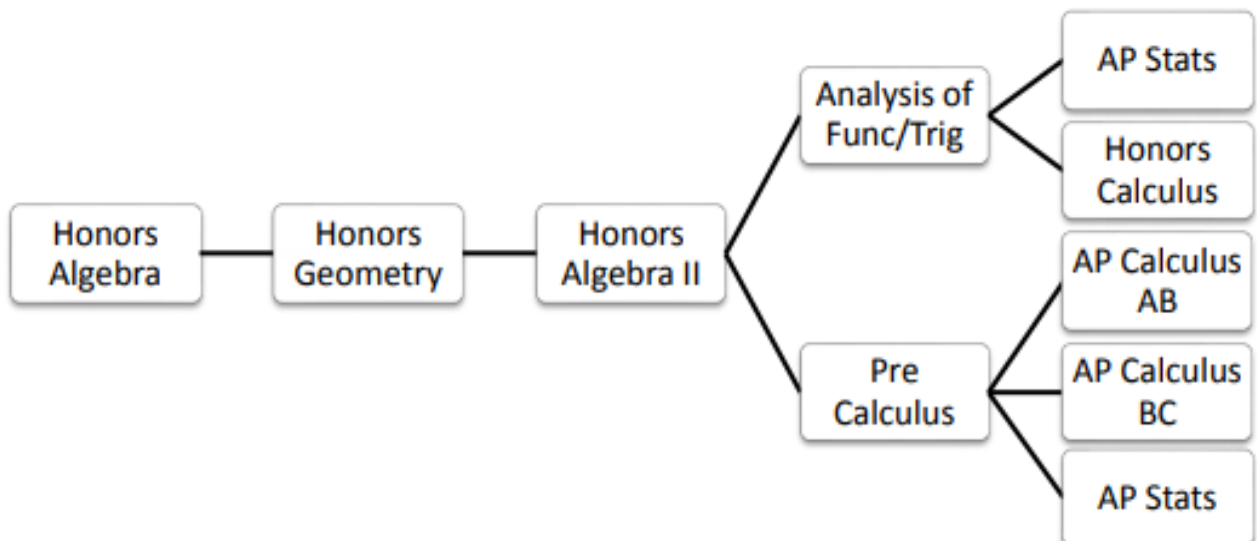
**\* Students are required to take four years of mathematics courses in high school regardless of the amount of high school mathematics courses taken in middle school.**

## Math Tracks for Middle School – High School

### Standard Track



### Honors Track



## Curriculum Background

Galileo's curriculum is centered around two foci: first, accelerated core content instruction; and second, complex problem solving via learning that is integrated thematically and conceptually in authentic, engaging contexts. All students at the middle school level at GSGL will receive daily instruction in English language arts (reading, literature, writing, spelling and language), social studies, science, and mathematics. Technology and computer skills will be infused throughout the curriculum. Movement, healthy behaviors, and physical education are likewise essential components of lifelong learning; therefore, students will have extended time each day for healthy physical activity.

Our curricular focus is closely tied to our mission—the Curriculum Model is drawn from cutting-edge **research** on gifted education by Renzulli and his colleagues and Tomlinson and her colleagues. The interdisciplinary units promote cross-grade collaboration based on students' **interests**, giving them **voices and choices** in their learning. Creative productivity time further promotes a spirit of collaboration as well as time for students to spend in extended activity on topics related to their **passionate interests** that will serve to **help others**. The following sections provide detailed specifics about the curriculum at GSGL.

## Curriculum Model



cultural notes, and cultural interviews students will see and hear native speakers in authentic locations within the Hispanosphere. These exercises and activities will reinforce the language to help build competency in each of the four language skills—listening, speaking, reading, and writing. The quizzes, midterm, and final exam in this course are based on the activities completed in class. A key component of Spanish 1 is assessment through project-based learning. These projects will allow students to demonstrate their mastery of the Spanish language and cultural concepts they have learned in this course.

#### Junior ROTC:

This JROTC course is a survey of the history of the branches of the United States military. This course is designed to help students gain an understanding of the standards, practices, and opportunities of and within each military branch and to help prepare them for the next stage of JROTC at the high school level. This course will give students the opportunity to exercise the principles of leadership and develop skills that will aid them in becoming successful, responsible, productive members of the society. It is the express goal of this course to help the students to ascertain their personal goals for their future



#### Home Economics:

Students will learn the basic information regarding family finance, textiles, wellness, food science and nutrition. Students will be able to learn sewing techniques and

baking/cooking techniques through hands-on and creative projects.

#### Interior Design:

Students will gain knowledge and skills related to interior design from floor plans to home decorating through individual activities by applying creative thinking to real life hands-on projects.



#### Pre-Veterinary:

Students will gain knowledge and skills related to caring for animals, researching animal science, and understanding how you can support animal life and conservation.

#### Typing:

Students will learn two-hand typing skills in order to enhance speed and increase typing accuracy. Students will be engaged in activities that assist them with learning skills related to word, excel, and PowerPoint.



#### Creative Writing:

This course helps students develop creative writing skills and focuses on writing, speaking, and listening skills. Students will use a variety of methods for creating stories and learning about the writing process.

#### Engineering:

Students will explore different types of engineering, available careers in this field, and engage in hands-on labs and activities to show skills utilizing both mechanical and civil engineering skills. Students will present

original designs and work together to enhance product development and experiment with different types of materials.

Student Assistant:

This course is for students who are interested in exploring leadership abilities and have an interest in becoming an educator. Students will assist teachers with classroom materials and support students within the classroom. Students will be able to learn about the field of education and basic skills of working within a school.

Robotics:

Students will learn about the fascinating world of Robotics, as they apply their engineering skills to design and build robots to complete STEM based objectives. Students will learn robotic hardware and software with activities that will boost technical and creative skills, critical thinking, and problem-solving. Students will build their knowledge through projects and learn about parts, design, programming, building, and testing

Medical Detective:

Students become medical detectives while they solve real-life medical mysteries by collecting clues and analyzing data to diagnose and provide treatment. Investigators will learn some basic medical terminology, discover how doctors analyze and solve medical puzzles, and learn about the applicable physiology and pathophysiology as they investigate various types of medical cases.



# Extracurricular Activities

## Sports Programs

Competitive/Intramural Sports (flag football, basketball)

Volleyball

Track & Field

Cross Country

Lacrosse Club

Dance Club

Basketball

*\*GSL competes against SCPS middle schools for volleyball, track & field, basketball and cross country.*

## Clubs & Organizations

Middle School Ultimate Fitness Club

National Junior Honor Society

Student Government

Future Educators of America

Odyssey of the Mind Team

Chess Club

Rock Band

Math Club

Chorus



Lego Robotics

Origami Club

Art Club



## Galileo vs. Pre-IB

		
<b>Prepares Students for High School IB Curriculum</b>	✔	✔
<b>Interdisciplinary Studies</b>	✔	✔
<b>Long-term Projects</b>	✔	✔
<b>Service Learning</b>	✔	✔
<b>Real World Applications</b>	✔	✔
<b>Research/Independent Study</b>	✔	✔
<b>Differentiated Instruction</b>	✔	✔
<b>Self-Management Skills</b>	✔	✔
<b>Student Choice</b>	✔	✔
<b>Kinesthetic Movement</b>	✔	✔
<b>Curriculum Compacting</b>		✔
<b>Flexible Seating</b>		✔
<b>Small Campus</b>		✔
<b>Lessons Taught Infusing Gifted Framework</b>		✔