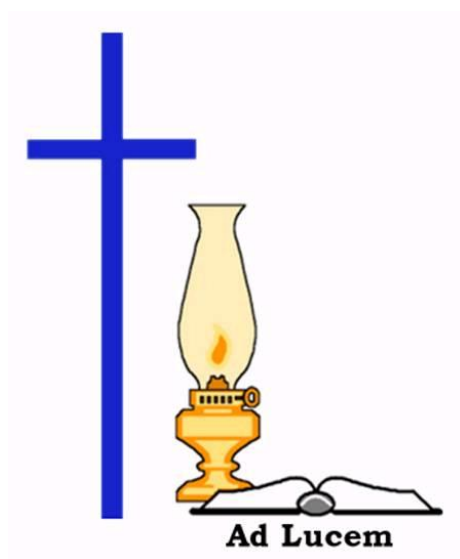


GSLS

Academy of Fine Arts and Sciences

Middle School Curriculum



MIDDLE SCHOOL MATH CURRICULUM

6th Grade - Introduction to Concepts of Pre-Algebra

The purpose of this course is to prepare students for Pre-Algebra 7. Topics include strengthening number and operation skills in the use of fractions, decimals, and exponents. Students will continue to write and solve equations and expressions with variables. Students will build on their understanding of the use of integers, ratio, proportion, percent, and probability. Geometry concepts will include the study of plane and solid figures using formulas, and angle relationships. Students will begin to graph linear relationships.

7th Grade - Pre-Algebra

Students will continue to strengthen and expand on problem-solving skills and be able to apply them to solving real world problems. Topics of study will include the solving of equations with variables on both sides, solving inequalities, slope-intercept form, and graphing linear equations and systems. Geometry topics will include the study of plane and solid figures using formulas to determine area, circumference, and volume. Students will solve equations with monomials, binomials, trinomials, and polynomials, as well as quadratic functions.

8th Grade - Concepts in Algebra

This course furthers the study of algebraic concepts introduced in Pre-Algebra. Students will demonstrate an understanding of formal algebra methods used to solve problems and apply this knowledge to solve real world problems. Data analysis will be used to make connections between the academic disciplines. Linear functions and non-linear functions will be thoroughly studied.

MIDDLE SCHOOL LANGUAGE ARTS CURRICULUM

Language arts in the middle school curriculum will encompass literature, grammar, spelling, and writing. Contemporary and classic literature, as well as reading for information will be practiced through textbook and various novel experiences.

The Six-Trait Writing Model will be the basis of the writing process, which will be used to communicate ideas using proper conventions (spelling and mechanics, grammar, and paragraph construction), sentence fluency, word choice, voice, and organization. Each year will require higher expectations in length and maturity of writing, culminating in a research paper in the 8th grade.

MIDDLE SCHOOL SCIENCE CURRICULUM

Life Science:

- ◆ Producers, Consumers, and decomposers
- ◆ Ecosystems
- ◆ Living/non-living interactions
- ◆ Relationships of organisms
- ◆ Biotic and abiotic factors
- ◆ Human impact on environment
- ◆ Pollution
- ◆ Cellular functions
- ◆ Plants and photosynthesis
- ◆ Traits and heredity

Physical Science:

- ◆ Understanding the many forms of energy (such as heat, light, sound, electrical and mechanical).
- ◆ Kinetic and potential energy
- ◆ Transfer of energy via radiation, conduction, and convection

- ◆ Waves and energy
- ◆ Elements and compounds
- ◆ Understanding the atom
- ◆ Periodic table

Earth Science:

- ◆ Plate tectonics - composition of earth, volcanoes, earthquakes
- ◆ Soils
- ◆ Rocks
- ◆ Weathering/erosion
- ◆ Solar system/the sun/hydrogeology
- ◆ Weather
- ◆ Earth's atmosphere
- ◆ Interior of the earth
- ◆ Oceans and climate
- ◆ Climate change
- ◆ Severe weather
- ◆ Earth history and geologic time

MIDDLE SCHOOL SOCIAL STUDIES CURRICULUM

Social studies will explore the five themes of geography: location, place, region, movement, and human-environment interaction in conjunction with their focus area of the world. Students will also apply the five fields of social studies: history, geography, economics, government, and culture to their grades' field of study.

Focus of study:

- ◆ 6th grade - the Western Hemisphere: the United States, Canada, Latin America, and Western Europe.
- ◆ 7th grade - the Eastern Hemisphere: Eastern Europe, Asia, and Africa.
- ◆ 8th grade - the development of the United States, with an emphasis on history and important events such as the Revolution, Constitution, Civil War, etc.

ART

6th Grade

Students will utilize the basic art skills and concepts of elementary art class. They will create individual artwork consisting of drawing, painting, sculpture and crafts. Students will continue to use problem-solving techniques to solve fine art problems.

VARSITY BAND

6th Grade

Varsity band is designed for the intermediate middle school instrumentalist. In order to be placed in this course, students must demonstrate the appropriate ability and skill to accommodate a high degree of musical independence. All performances are required and graded.

7th - 8th Grades

Varsity band is designed for the advanced middle school instrumentalist. In order to be placed in this course, students must demonstrate the appropriate ability and skill to accommodate a high degree of musical independence. All performances are required and graded.

TECHNOLOGY

6TH Grade

Students will develop skills in the basic operations of Windows operating system. Students will access, store, and manipulate data to design a hypermedia presentation. Students will explore general features of the Internet and will knowledgeably utilize various search engines in order to find relevant information.

7th – 8th Grades

This course is designed to develop proficient computer literacy skills for students interacting in our information driven world. This course incorporates a majority of the METS (Michigan Educational Technology Standards), and facilitates an integrated approach to word processing, spreadsheets, and databases. Students utilize integrated software for word processing to produce documents, a database for managing lists of information, and spreadsheets for manipulating numbers.

INTRODUCTION TO ROBOTICS

Students will learn to build a virtual robot layout, and program a robot task using a 3D Virtual Robot Simulation Program. Simple CAD modeling will introduce the idea of parametric modeling using geometric primitives such as block, cylinder, cone and sphere. Students will learn to measure distances and angles. Cartesian coordinates and speed will be introduced. Student will learn to write a robot program. By course end, students will be able to identify classes of industrial robots and name typical applications. The course is designed to compliment the math and science curriculums.

PHYSICAL EDUCATION

6TH Grade

Physical education emphasizes involvement in a variety of activities to promote physical fitness, including cardiovascular endurance, strength, and flexibility. In addition, skill enhancing games and sport skills will be introduced to encourage a positive attitude towards life-long involvement in physical activity.

- ◆ Exposure to individual sports, team sports, dance, personal conditioning, and recreational activities.
- ◆ Strive to exercise continuously for 20 minutes at a moderate intensity level during physical activity.
- ◆ Develop and maintain muscular strength and endurance.
- ◆ Develop and maintain flexibility of the body.
- ◆ Explain and apply the essential steps in learning motor skills.
- ◆ Describe the affects of activity and inactivity and formulate examples of lifestyle choices that result I the development and maintenance of health-related fitness.
- ◆ Demonstrate appropriate behavior including perseverance, respect, compassion, leadership, and teamwork.
- ◆ Value the benefits of physical activity.

7th – 8th Grades

This course is designed to increase the fitness awareness of 7th and eighth grade students as well as develop their skills in a variety of team and individual sports. Students are exposed to concepts, strategies, rules, and basic movement skills. Emphasis will be placed on individual improvement through goal setting, development of teamwork, sportsmanship and respect for self and others which will encourage life-long participation in physical activity.

GRAPHIC ARTS

7th – 8th Grades

Publications focuses on the creation and development of the school yearbook and newspaper. Students will learn to use digital cameras, scanners, and other related equipment. A desktop publishing program will be used to create professional publications. Good writing and organizational skills are a necessary prerequisite for this class; some background in computers is recommended but not necessary.

RELIGION

Our purpose at *GSLS* is to help people know, love and follow Jesus, the Good Shepherd, and to grow His flock. To assist in this, *GSLS* uses the *Voyages* curriculum from Concordia Publishing House. *Voyages* is a Christ-centered curriculum giving students optimal opportunity to grow in their relationship of faith and life with God.

- ◆ Introduce students to the stories of the Bible.
- ◆ Apply the lessons to daily life to form the moral and spiritual life of each student.
- ◆ Provide a foundation of faith and knowledge so students will know sound Biblical doctrine.
- ◆ Memorization of weekly scripture passages, which are age-appropriate and help the student grow in faith.
- ◆ Foster a life-long love and appreciation for God's Word.