



## Mother Clelia Morning Star High School

### 2022-2023 Course Catalogue

#### **Algebra I A & B (Determined by placement)**

The purpose of this course is developing critical mathematical skills and concepts used in subsequent math courses and life activities. Topics include Number Sense; Algebraic Reasoning with 1 and 2 unknowns; using Function Relationships to find solutions; Geometric Reasoning, Transformations, and Angle/Triangle Relationships to solve problems; Financial literacy; and Data Statistical Analysis and Probability. Students will be able to read and communicate mathematically, estimate, and verify answers and solutions, use logical reasoning to answer real world questions, and use mathematical tools/technology.

#### **Algebra II (Determined by placement)**

The purpose of this course is developing critical mathematical skills and concepts used in subsequent math courses and life activities. Topics include Number Sense including exponent and logarithmic rules; Algebraic Reasoning using systems of linear equations and inequalities including quadratic relationships; Function Relationships including rational, absolute value and square/cubic root functions; Geometric Reasoning including proving relationships and theorems about lines, figures, and angles and working with transformations of figures and conic relationships; Financial literacy such as comparing compound interest; Trigonometry especially in real world applications; Logic and Discrete Theory using 'if' and 'then' statements; and Statistical Data Analysis of charts and distributions and Probability Relationships. Student will also be able to read and communicate mathematically, estimate, and verify answers and solutions, use logical reasoning to answer real world questions, and use mathematical tools/technology.

#### **American History (Grade 11)**

American History provides students with the opportunity to acquire an understanding of the chronological development of the American people and government by examining the political, economic, social, religious, military, scientific, and cultural events that have affected the rise and growth of the nation. Content covered includes but is not limited to an understanding of geographic-historic and time-space relationship, changes, and trends in American culture through the centuries, the technological and urban transformation of the country, and American foreign political development. One credit of American history is required for graduation.



### **Biology 1a (Grade 10)**

Biology 1a will investigate cellular structures, functions, and organization of plants and animals including the cell cycle and abnormalities (diseases) in the cell cycle; Prokaryote and Eukaryote organisms and their cellular structures; genetic processes of plants and animals including DNA replication, transcription, translation, mitosis, meiosis, mutations and genetic variation; inheritance patterns involved with dominant and recessive genes creating phenotypes and genotypes; Life cycle of plants and animals especially focusing on the human life cycle; reproduction processes including understanding gametes, k and r strategies, and asexual and sexual reproduction. Labs will provide students experiences with the scientific method, hypothesis, use of different microscopes, dissection, and experimentation supporting topics in class.

### **Biology 1b (Grade 11)**

Biology 1b will investigate the major organs and biosystems within plants and animals; the use of energy and other biochemical activities for living things to function such as in the processes of photosynthesis and cellular respiration; the involvement of the food web and water's special characteristics for life; various theories of the origin of life including looking at the fossil record in light of our faith; natural selection and distribution of life in the world including population size factors; benefit and potential loss of biodiversity including interaction between life and ecosystems; impact of Biotechnologies on life; and the taxonomic organization of life. Labs will provide students experiences with the scientific method, hypothesis testing, use of microscope, and experimentation supporting topics in class.

### **Digital Literacy (Grade 9)**

The purpose of this course is building essential 21<sup>st</sup> century digital skills such as typing, composition, and document. This class will correspond directly with the core courses offered through the Mother Clelia Morning Star curriculum.

### **English Language Arts 1 (Grade 9)**

This course is designed to assist students in developing fundamental language arts skills in reading comprehension and writing. Writing instruction in this course is tailored to enhance each student's abilities. Students read and respond to a variety of literary forms. Vocabulary study is based on the classical roots of Greek and Latin. Students undertake research skills and examine various resources.



### **English Language Arts 2 (Grade 10)**

Students undertake a comprehensive study of literature from a variety of literary forms. Reading instruction includes strategies to analyze the features of and think critically on a literary work. Vocabulary study is based on the classical roots of Greek and Latin. Writing instruction in this course is tailored to enhance each student's abilities. Critical thinking and strong organizational skills are necessary for the significant amount of independent work required.

### **English Language Arts 3 (Grade 11)**

Students study American literature including short stories, essays, poetry, drama, and nonfiction. Reading instruction includes strategies to analyze the features of and think critically on a literary work. Vocabulary study is based on the classical roots of Greek and Latin. Writing instruction in this course is tailored to enhance each student's abilities. Students write a research paper using MLA formatting.

### **Geometry (Determined by placement)**

The fundamental purpose of the course in Geometry is to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. Topics covered include Transformations and Congruence; Lines, Angles, and Triangles on the coordinate plane; Quadrilaterals and Coordinate Proofs; Similarity; Trigonometry; Properties of Circles; and Measurement and Modeling in Two- and Three-Dimensional figures.

### **Introduction to the Faith (Grade 9)**

The purpose of this course is to provide an overview of Catholic values with an introduction to the basic principles for understanding and interpreting the Bible. Every effort is made to project a sense of the unity of the narrative with the divine plan of salvation, the presence of God's action in this record of His revelation, and His desire to share His love with us.

### **Math I (Determined by placement)**

The purpose of this course is developing critical mathematical skills and concepts used in subsequent math courses and life activities. Topics include Number Sense, Algebraic Expressions and Equations, Inequalities, Rate and Ratio relationships, Geometric Reasoning, and Data Analysis. Student will demonstrate prealgebra readiness indicator of linear problem solving in on step, reading and communicating mathematically, estimating, and verifying answers and solutions, logical reasoning, and use of mathematical tools/technology.



### **Math II (Determined by placement)**

The purpose of this course is developing critical mathematical skills and concepts used in subsequent math courses and life activities. Topics include Number Sense, Algebraic Expressions and Equations, Rate and Ratio relationships, Geometric Reasoning, and Data Analysis. Student will demonstrate prealgebra readiness indicator of creating equivalent equations using like terms, distribution, and factoring algebraic expressions, linear problem solving in two step equations and inequalities, reading, and communicating mathematically, estimating and verifying answers and solutions, logical reasoning, and use of mathematical tools/technology.

### **Pre-Algebra (Determined by placement)**

The purpose of this course is developing critical mathematical skills and concepts used in subsequent math courses and life activities. Topics include Number Sense, Algebraic Expressions and Equations, Rate and Ratio relationships, Geometric Reasoning, and Data Analysis. Student will demonstrate algebra readiness indicators of linear problem solving in two steps with variables on both sides of an equation or inequality, understanding the x and y relationship in functions to solve and graph for unknowns, solving for two unknown variables using systems of equations, using x and y relationships to create geometric transformations of 2-d figures, using angle and triangle relationships to solve for missing angles or unknowns, reading and creating bi-variate charts of data, reading and communicating mathematically, estimating and verifying answers and solutions, logical reasoning, and use of mathematical tools/technology.

### **Scripture (Grade 11)**

The purpose of this course is to provide an overview of Sacred Scripture with an introduction to the basic principles for understanding and interpreting the Bible. Every effort is made to project a sense of the unity of the narrative with the divine plan of salvation, the presence of God's action in this record of His revelation and His desire to share His love with us.

### **Sacraments (Grade 10)**

Students will understand that they can encounter Christ in a full and real way. Students will examine each of the Sacraments in detail to learn how they may encounter Christ throughout life.

### **World History (Grade 10)**

The purpose of this course is to give you a better understanding of the complex global community that we live and participate in daily. Throughout the year, we will look at many aspects of our global community as they relate to political, economic, historical, geographic, religious, and culture themes as they relate to the past and present events of both the Eastern and Western Hemispheres.