

# MIDDLE SCHOOL (MS)

## 6-8 ACADEMICS



### Mathematics

At Good Shepherd Catholic School our middle school students in grades six and seven build and focus upon mathematic concepts that fall under similar domains. They include: ratios and proportional relationships; number systems; expressions and equations; geometry, and lastly statistics and probability.

#### In 6<sup>th</sup> grade math, students will be able to...

- Use ratio and rate reasoning to solve real world math problems.
- Compute multi-digit numbers using all 4 operations fluently.
- Identify and evaluate the dependent and independent variables of basic functions.
- Solve real world math problems involving area and volume.
- Read and interpret a line graph, histogram and box plots.

#### In 7<sup>th</sup> grade math, students will be able to...

- Analyze proportional relationships.
- Compute using inverse operations.
- Solve real life mathematical problems using numerical and algebraic expressions and equations.
- Draw and describe geometrical figures.
- Use random sampling to draw inferences about a population.

Students in 8<sup>th</sup> grade are either placed in Pre-Algebra or Algebra. \*\*8<sup>th</sup> grade students in the Diocese of Orlando will be enrolled in Algebra I based on a required criteria.

#### Pre-Algebra students will be able to...

- Evaluate, estimate, and compute irrational numbers.
- Write and solve expressions using square and cube roots.
- Identify and interpret linear equations in slope intercept form.
- Construct and interpret a two-way table.
- Understand and apply the Pythagorean theorem.

In Algebra students primarily focus on the following mathematic domains: creating equations; reasoning with equations and inequalities; quantities; real number systems; interpreting and building functions; linear, quadratic and exponential models; interpreting categorical and quantitative data; seeing structure in expression; and arithmetic with polynomial and rational expressions.

#### Algebra students will be able to...

- Reason and use units to solve problems.
- Create and solve equations and inequalities with two variables.
- Solve system of equations and inequalities using substitution, elimination, and graphing.
- Compute rational and irrational numbers using all four operations.

- Calculate rate of change.
- Solve equation with extraneous solutions.
- Interpret the slope and intercepts of a linear model in the contexts of the data.
- Determine explicit and recursive function.
- Solve polynomials and identify the roots.

## English/ Language Arts

In middle school, the ELA program concentrates throughout all grade levels on several broad concepts. These concepts include: reading literature; reading informational text; writing; speaking and listening; and syntax. Each year these concepts build upon one another forming a more in-depth understanding of the curriculum. Below are some, but not all, of the Florida State Standards taught at each grade level.

### In 6<sup>th</sup> grade students will...

- Compare and contrast texts in different forms or genres in terms of their approaches to similar themes and topics.
- Identify the author's argument in the text, and distinguish whether the reasoning and evidence is relevant and sufficient.
- Write argumentative and informative texts to support claims with clear reasons and relevant evidence.
- Follow rules for academic discussions.
- Acquire and use accurate and grade appropriate academic vocabulary.
- Explore and develop the conventions of English syntax: capitalization, punctuation, and spelling when writing.

### In 7<sup>th</sup> grade students will...

- Determine a central idea or theme of a story or drama.
- Analyze how the author organizes the text in order to develop main ideas.
- Use transition words, precise language, and descriptive details to capture the action and convey the plot.
- Come to discussion prepared by referring to evidence on the topic or issue and reflect upon those ideas during discussion.
- Further demonstrate command of conventions of English capitalization, punctuation, and spelling when writing.

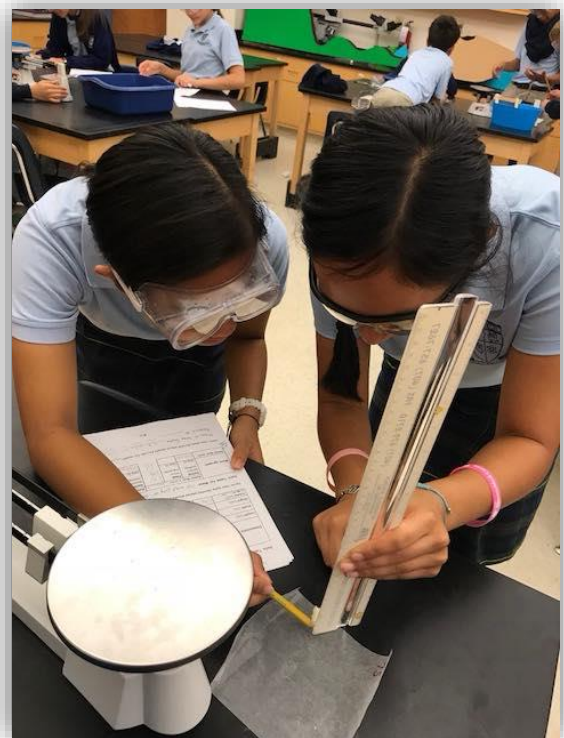
### In 8<sup>th</sup> grade students will...

- Analyze how particular lines of dialogue or events in a story propel the action or reveal aspects of a character.
- Evaluate the advantages and disadvantages of using different mediums to present a topic.
- Use appropriate and varied transitions to create cohesion and clarify relationships among ideas and concepts.
- Present claims in a focused, coherent manner
- Demonstrate mastery of the conventions of syntax: capitalization, punctuation, and spelling when writing.

Recognize and correct shifts in verb, voice and mood.

## Science

In middle school our science program combines lecture, labs, and hands-on learning to facilitate the progressing Florida State Standards.



**In 6<sup>th</sup> grade the core focus is Earth Science, 7<sup>th</sup> grade is Life Science, and 8<sup>th</sup> grade is Physical Science/Chemistry.**

### In Earth Science students will...

- Recognize that there are a variety of different landforms on Earth's surface and relate these landforms as they apply to Florida.
- Explain why scientific investigations should be replicable.
- Develop problem solutions using visual representations of problem states, structures and data.
- Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition.

### In Life Science students will...

- Determine the probabilities for genotype and phenotype combination.
- Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.
- Compare and contrast the relationships among organisms.
- Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.

### In Physics and Chemistry students will...

- Explore the scientific theory of atoms by using models to explain the motion of particles.
- Recognize that elements are grouped in the periodic table according to similarities of their properties.
- Distinguish among mixtures and pure substances.
- Differentiate between weight and mass.

## Social Studies

In social studies, nonfiction texts are used to guide students in their understanding and exploration of the past and present, as well as how they can and will affect the future. Multiple resources aid in the growth of understanding of the following concepts: historical knowledge; beginning economics; the world in spatial terms; civic and political participation; places and regions; and physical systems.



In 6<sup>th</sup> grade social studies students focus on four major domains, which include civics and government, economics, geography, and world history.

### In 6<sup>th</sup> grade students will...

- Compare and contrast the ancient government systems.
- Identify and describe physical and cultural barriers to exchange.
- Interpret how geographic boundaries invite or limit interaction with regions and cultures.
- Identify key figures and the basic beliefs of early Christianity and how these beliefs impacted the Roman Empire.

In 7<sup>th</sup> grade social studies students concentrate on civics and government, economics, and geography.

### In 7<sup>th</sup> grade students will...

- Analyze origin and application of natural rights and the role of government.
- Recognize the Constitution as doctrine.
- Explain principles of a market and mixed economy.
- Interpret maps to identify geopolitical divisions and boundaries in places in North America.

In 8<sup>th</sup> grade social studies students focus on American history, civics and government, economics, financial literacy, and geography.

### In 8<sup>th</sup> grade students will...

- Describe the contributions of key groups to society and culture of colonial America.
- Apply the rights and principles contained in the Constitution and the Bill of Rights to citizens today.

- Examine economic motivating factors including scarcity, supply and demand, opportunity costs, incentives, profits and entrepreneurialism.
- Explain economic choices related to spending, saving and investing.
- Use political maps to describe changes in boundaries and governance throughout American history.

## Religion

The Diocese of Orlando religion curriculum promotes lifelong faith formation. The curriculum is structured according to the six fundamental tasks of Catechesis set forth in the general directory for Catechesis. The curriculum is based on a spiral approach to learning in which the same fundamental faith topics are presented each year so that the students may gradually deepen his/her understanding of the faith according to his/her age and ability.

- Explore, profess and reflect on our Catholic faith, which is the content of God's revelation

found in Sacred Scripture and Sacred Tradition and lived out in the Creed and Church doctrine.

- Recognize the presence of Christ and enter into communion with Him through active, full and conscious participation in the Liturgical celebrations and Sacraments of the Church.
- Develop a moral conscience that is informed by Church teachings and conformed to Christ, as modeled in a personal life of virtue and demonstrated in service of the Gospel's demands for society.
- Experience and engage in Catholic expressions of prayer to deepen their relationship with God and the Church.
- Study and participate in the life and mission of the church, the Body of Christ and the community of believers, as expressed in the Church's origin, history, ecclesiology, the Communion of Saints and their family, the domestic church.
- Acquire and demonstrate skills to recognize their gifts from God and their vocation to share the good News of Jesus Christ in word and deed in the world.



## Florida Standards

## Diocese of Orlando Religion Standards