



EIGHTH GRADE BENCHMARKS

Saint Hilary students are challenged to be true Christians, inspired learners and effective communicators. Students are encouraged to develop self-advocacy skills. Students are encouraged to develop self-advocacy skills. Our departmentalized curriculum in the middle form includes a core academic program of English, Mathematics, Science, Social Studies, Spanish, Religion, Physical Education, Art and Music. Strong support for all students are provided through the use of differentiation strategies, adaptive technology, teacher aid support and learning resources.

Students are encouraged to explore their curiosity around spirituality and faith. Students gather for daily prayer to contemplate God's grace. Students are strongly and provided various opportunities to serve others and live out the Gospel Message.

The 8th graders are the leaders of the school. Much of their attention is focused on the high school application process, Confirmation and looking forward to the increased amount of freedom that will be granted to them in high school. Eighth graders are also expected to help lead the school and model the schoolwide learning expectations for other students.

MATH AND ENGLISH/LANGUAGE ARTS (ELA) – Based on Common Core Standards:

- [Common Core for Parents](#)
- [Ten Things Parents Should Know About the Common Core State Standards](#)
- [Growth Mindset and Common Core](#)

ENGLISH LANGUAGE ARTS

In grade eight, students will read major works of fiction and nonfiction from all over the world and from different time periods. They will continue to learn how to understand what they read and evaluate an author's assumptions and claims. They will also conduct research that will require the analysis of resources and accurate interpretation of literary and informational text.

- Identifying what a reading selection explicitly says and drawing inferences based on evidence from the text
- Analyzing the impact of specific word choices on meaning and tone, including analogies or allusions to other texts
- Evaluating the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient
- Connecting information and ideas efficiently and effectively in writing
- Analyzing the purpose of information presented in diverse media formats, such as video clips or interactive maps
- Participating in class discussions on various topics, texts, and issues by expressing ideas and building on the ideas of others
- Developing a large vocabulary of multi-use academic words and phrases
- Interpreting figures of speech, such as puns or verbal irony, in context

MATH

In grade eight, students take their understanding of unit rates and proportional relationships to a new level, connecting these concepts to points on a line and ultimately using them to solve linear equations that require them to apply algebraic reasoning as well as knowledge of the properties of operations. Students will also expand their understanding of numbers beyond rational numbers to include numbers that are irrational— meaning that they cannot be written as a simple fraction, such as the square root of 2 or $2\sqrt{2}$. Activities in these areas will include:

- Understanding that every rational number (such as $\frac{1}{2}$, 0.3, 2, or -2) can be written as a decimal, but that the decimal form of an irrational number (such as $\sqrt{2}$) is both non-repeating and infinite
- Applying the properties of exponents to generate equivalent numerical expressions
- Determining the value of square roots of small perfect squares (such as $\sqrt{49}=7$) and cube roots of small perfect cubes (such as $\sqrt[3]{64}=4$)
- Graphing proportional relationships and interpreting the unit rate as the slope (how steep or flat a line is)
- Solving and graphing one- and two-variable linear equations
- Understanding that a function is a rule that assigns to each value of x exactly one value of y , such as $y=2x$, a rule that would yield such ordered pairs as (-2,-4), (3,6), and (4,8)
- Comparing the properties of two functions represented in different ways (in a table, graph, equation, or description)
- Determining congruence (when shapes are of equal size and shape) and similarity (same shape but different sizes)
- Learning and applying the Pythagorean Theorem (an equation relating the lengths of the sides of a right triangle: $a^2 + b^2 = c^2$)
- Solving problems involving the volume of cylinders, cones, and spheres

ALGEBRA

For those students who demonstrate readiness for an advanced math class we offer Algebra in 8th grade. The fundamental purpose of the Algebra I course is to formalize and extend the mathematics that students learned in prior math classes. This course includes standards from the conceptual categories of Number and Quantity, Algebra, Functions, and Statistics and Probability

- Number and Quantity
 - The Real Number System
 - Extend the properties of exponents to rational exponents.
 - Use properties of rational and irrational numbers.
 - Quantities
 - Reason quantitatively and use units to solve problems.
- Algebra
 - Seeing Structure in Expressions
 - Interpret the structure of expressions.
 - Write expressions in equivalent forms to solve problems.
 - Arithmetic with Polynomials and Rational Expressions
 - Perform arithmetic operations on polynomials.
 - Creating Equations
 - Create equations that describe numbers or relationships.
 - Reasoning with Equations and Inequalities
 - Understand solving equations as a process of reasoning and explain the reasoning.
 - Solve equations and inequalities in one variable.
 - Solve systems of equations.
 - Represent and solve equations and inequalities graphically.
- Functions
 - Interpreting Functions
 - Understand the concept of a function and use function notation.
 - Interpret functions that arise in applications in terms of the context.
 - Analyze functions using different representations.
 - Building Functions

- Build a function that models a relationship between two quantities.
 - Build new functions from existing functions.
- Linear, Quadratic, and Exponential Models
 - Construct and compare linear, quadratic, and exponential models and solve problems.
 - Interpret expressions for functions in terms of the situation they model.
- Statistics and Probability
 - Interpreting Categorical and Quantitative Data
 - Summarize, represent, and interpret data on a single count or measurement variable.
 - Summarize, represent, and interpret data on two categorical and quantitative variables. Interpret linear models.

RELIGION (as outlined by the Archdiocese of San Francisco)

- CREED Students will:
 - recognize major periods in the Bible and the history of the Catholic Church: Genesis-Exodus; New Testament period; Development of the early Church
 - discuss the statements in the Apostles Creed and the Nicene Creed
 - demonstrate an understanding of the terms “grace and salvation”
 - demonstrate a deeper knowledge of the Church as one, holy, catholic, and apostolic
 - describe some of the key differences and similarities between the Roman Catholic Church and Protestant Churches
 - demonstrate respect for the great religions of the world
 - recognize and explain the role of Mary in the Church and in their lives
 - identify the ways in which the Church as an institution communicates with the faithful through councils and encyclicals
- SCRIPTURE Students will:
 - identify Sacred Scripture as God’s revelation
 - explain the significance of the Old Testament as it relates to the New Testament
 - know that God reveals who He is through His creation, in His relationship with the Israelites (the chosen people), and most fully in Jesus demonstrate knowledge that the Bible reveals the Paschal Mystery and saving actions of Jesus Christ
- PRAYER/WORSHIP Students will:
 - discuss the longing for God that is placed in the heart of every human being
 - reflect on Scripture in personal prayer
 - discuss how the Church nurtures their relationship with Jesus Christ within the Catholic community
 - evaluate their practice of personal prayer and describe changes that would strengthen their prayer life
 - show an understanding of the need for conscious participation in liturgy and other prayer experiences
- CHRISTIAN LIVING Students will:
 - identify one’s self as being a unique creation, made in God’s image
 - explain the importance of forming one’s conscience according to the Word of God and the teaching of the Church
 - describe the process of making a moral decision
 - identify situations of social injustice and explain how they respond to them as disciples of Christ
 - articulate a consistent Life Ethic from a Catholic perspective participate in and reflect on service activities, and explain how these activities helped them grow in faith
- PRAYERS
 - Nicene Creed

- Leading simple prayer celebrations
- Lectio Divina
- Christian Meditation

SCIENCE

- The velocity of an object is the rate of change of its position.
- Unbalanced forces cause changes in velocity.
- Understand the harnessing of human energy.
- Each of the more than 100 elements of matter has distinct properties and a distinct atomic structure. All forms of matter are composed of one or more of the elements.
- Chemical reactions are processes in which atoms are rearranged into different combinations of molecules.
- Principles of chemistry underlie the functioning of biological systems.
- The organization of the periodic table is based on the properties of the elements and reflects the structure of atoms.
- Scientific progress is made by asking meaningful questions and conducting careful investigations. As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will:
 - Plan and conduct a scientific investigation to test a hypothesis.
 - Evaluate the accuracy and reproducibility of data.
 - Distinguish between variable and controlled parameters in a test.
 - Recognize the slope of the linear graph as the constant in the relationship and apply this principle in interpreting graphs constructed from data.

NGSS (Next Generation Science Standards) were developed so that students could do less memorizing and more critical thinking, make connections between the Common Core and Science, align classroom practice with scientific research all while encouraging students to apply their knowledge in an appropriate framework. Please use the link below learn more and view the standards.

- [About the NGSS Standards](#)
- [The Standards](#)
- [Why Science Matters](#)

SOCIAL STUDIES (per California State Standards)

- Students will:
 - understand the major events preceding the founding of the nation and relate their significance to the development of American constitutional democracy.
 - analyze the political principles underlying the U.S. Constitution and compare the enumerated and implied powers of the federal government.
 - understand the foundation of the American political system and the ways in which citizens participate in it.
 - analyze the aspirations and ideals of the people of the new nation.
 - analyze U.S. foreign policy in the early Republic.
 - analyze the divergent paths of the American people from 1800 to the mid-1800s and the challenges they faced, with emphasis on the Northeast.
 - analyze the divergent paths of the American people in the South from 1800 to the mid-1800s and the challenges they faced.
 - analyze the divergent paths of the American people in the West from 1800 to the mid-1800s and the challenges they faced.
 - analyze the early and steady attempts to abolish slavery and to realize the ideals of the Declaration of Independence.
 - analyze the multiple causes, key events, and complex consequences of the Civil War.
 - analyze the character and lasting consequences of Reconstruction.
 - analyze the transformation of the American economy and the changing social and political conditions in the United States in response to the Industrial Revolution.

