

## Middle School Curriculum Grades 5, 6, 7, and 8

### Mathematics

The content of the Mathematics curriculum at this level is closely related to the Common Core standards and those established by the NCTM (National Council of Teachers of Mathematics). Much emphasis will be placed on active participation of all students. This includes exploration, conjecturing, analyzing, and applying mathematical concepts in both a mathematical and real world context. The use of appropriate technology is also necessary as well as the use of concrete materials in order to prepare each student for the challenges of facing the next century.

In fifth grade, the curriculum objectives include place value, adding and subtracting whole numbers and decimals, dividing whole numbers, using algebraic expressions, using equations and function tables, displaying and interpreting data, fraction concepts including addition and subtraction, measurement, geometric figures, perimeter area, volume, and simple probability.

Key components of the Mathematics curriculum at the sixth grade level, with the emphasis on building skills include: representing data, geometrical concepts, decimals, patterns functions and equations, measurement, fraction operations, rate, proportion, percent, probability, integers and coordinate graphing.

At the seventh grade level the emphasis is on real-world applications. Areas to be covered include: interpreting data, geometry, applications of decimals, an introduction to algebra, measurement, patterns and functions, number theory, fraction applications, reasoning with proportions, probability and graphing on the coordinate plane.

At the eighth grade level the Mathematics curriculum, with an emphasis on using appropriate strategies to thoroughly understand concepts, includes: drawing conclusions from data, patterns in geometry, integers and variable expressions, algebraic equations and inequalities, graphing in the coordinate plane, functions, rational numbers, applications of proportions, probability, applications of percent, geometry and measurement.

Manipulatives play a key role in developing all these areas of unified mathematics. Multicultural math games are used to reinforce problem solving, reasoning and number sense. Probability packs are used to develop a clear understanding of difficult probability concepts. Algebra tiles are used to help students make the transitions from concrete to symbolic thinking and a number of various geometric tools are used to help students visualize and manipulate dimensions of geometric concepts.

### Religion

The Religion curriculum for Grades Five, Six, Seven and Eight focuses on the changing world of young teenagers. The challenge, confusion, anxiety and excitement that accompanies the teen years is addressed through various activities. Our primary goal is to communicate the Christian message while offering the children at this age a place to focus their growing curiosity and explore the many questions that they have about their faith.

In fifth grade, the Religion program is rooted in Scripture and in being disciples to the traditions of the Catholic Church. The goal is to celebrate their faith in the sacraments and to learn and share their faith with others.

In sixth grade, the students explore the beginnings of the People of God. They study the early history of the Bible and its role in bringing about the story of salvation.

At the seventh grade level the New Testament and the teachings of Jesus and His continuing presence in the Church are explored. Activities and prayers will focus on a seventh graders search for maturing faith.

The eighth grade program serves as a transition between elementary and high school religious education focusing on the Church itself. It offers a detailed look at how the followers of Jesus approach the ultimate questions of life. Lessons focus on the world of an eighth grader with all its challenges, questions, sorrows, and joys from a Catholic perspective.

### **Social Studies**

In Social Studies, our goal is to provide educational opportunities and stimulating learning experiences that will open the door to lifelong learning as well as meeting the students' immediate needs. Students must be given the opportunities to develop their own agendas for learning, which can then be put into action through cooperative learning experiences.

In fifth grade, the students learn about the founding of the United States and how our country's past effects us today.

In sixth grade, the major emphasis is on the World of the past and in the present. The curriculum focuses primarily on the beginning of civilization and the continents of Asia and Europe.

The curriculum for Grade Seven is centered around our early United States history. It offers the most current reflections of thinking skills and economics.

The Eighth Grade curriculum provides students with a lively chronological history of the United States, from its beginning to the present. Issues such as forging a national identify from a multicultural population, strengthening democratic institutions, building our economy managing and respecting the environment and developing a global perspective are emphasized.

Another important component of Social Studies at this level is a special supplement specifically designed for Catholic schools. It is called "Integrating Catholic Heritage." This allows the teachers and students to look specifically at the Catholic presence in today's society and how it relates to various cultures present in our world.

Technology and use of computers provides a valuable resource to enhance the curriculum as will the connections made in bringing lessons to life using appropriate theme related literature.

## **Science**

The science curriculum provides a hands-on learning program for grades five, six, seven and eight. These interactive units of study cover the life, earth, and physical sciences. Each unit includes numerous activities in a laboratory setting, as well as engaging interactive consumable textbooks, eTexts, interactive digital lessons, online versions of print books, and multiple approaches to scientific inquiry. The primary goal of our science program is to actively involve students in scientific exploration and discovery. Our program supports solid science inquiry through higher-order thinking questions and through lab activities. By engaging students in hands-on investigations, they will be able to master scientific concepts while developing process, inquiry, and critical thinking skills.

Topics to be covered in a four-year cycle for all levels include:

### **CYCLE A (2015-2016)**

#### Astronomy and Space

- Earth, Moon, and Sun
- Exploring Space
- The Solar System
- Stars, Galaxies, and the Universe

#### Diversity of Life

- Intro to Living Things
- Viruses, Bacteria, Protists and Fungi
- Plants
- Intro to Animals
- Getting Around
- Obtaining Energy
- Animal Behavior

#### Water and the Atmosphere

- Fresh Water
- The Oceans
- The Atmosphere
- Weather
- Climate and Climate Change

### **CYCLE B (2016-2017)**

#### Ecology

- Populations and Communities
- Ecosystems and Biomes

- Resources and Living things
- Land, Air, and Water Resources
- Energy Resources

### Human Body Systems

- The Human Body
- Bones, Muscles, and Skin
- Digestion
- Circulation
- Respiration and Excretion
- Fighting Disease
- The Nervous System
- The Endocrine System

### Science and Technology

- What is Science?
- Science, Society and You
- The Tools of Science
- Technology and Engineering

## CYCLE C (2013-2014)

### Cells and Heredity

- Introduction to Cells
- Cell Processes and Energy
- Genetics: The Science of Heredity
- DNA: The Code of Life
- Human Genetics and Genetic Technology
- Change over Time

### Forces and Energy

- Motion
- Forces
- Work and Machines
- Energy
- Thermal Energy and Heat
- Electricity
- Magnetism and Electromagnetism

### Earth's Structure

- Introducing Earth
- Minerals and Rocks
- Plate Tectonics
- Earthquakes
- Volcanoes

## CYCLE D (2014-2015)

### Earth's Surface

- Mapping Earth's Surface
- Weathering and Soil
- Erosion and Deposition
- A Trip Through Geologic Time

### Introduction to Chemistry

- Introduction to Matter
- Solids, Liquids and Gasses
- Elements and the Periodic Table
- Atoms and Bonding
- Chemical Reactions
- Acids, Bases, and Solutions

### Sound and Light

- Characteristics of Waves
- Sound
- Electromagnetic Waves
- Light

### Literature

Literature is the foundation of a successful language arts program. By using appropriate literature for students at this age level it helps them gain insight into their own lives, as well as those of others. It also gives them a new way of looking at the world.

Our organization of language arts learning, specifically literature, offers instructional approaches and assessments of student achievement characterized by whole language strategies. Students encounter various elements and strategies to help them understand and develop cultural literacy. Vocabulary development, speaking, listening, study and thinking skills as well as the exploration and appreciation of literary elements and devices are incorporated throughout the curriculum.

Selected novels and poetry choices for each grade level include:

### Grade Five – Novels

Charley Skedaddle by Patricia Beatty

Johnny Tremain by Esther Forbes

Sing Down the Moon by Scott O'Dell

Bridge to Terabithia by Katherine Patterson

Charlie and the Chocolate Factory by Roald Dahl

The Wind in the Willows by Kenneth Grahame

The Mouse and the Motorcycle by Beverly Cleary

The Mixed Up Files of Mrs. Basil E. Frankweiler by E. L. Kronigsburg

The Light in the Forest by Conrad Richter  
The Witch of Blackbird Pond by Elizabeth George Speare  
The Sign of the Beaver by Elizabeth George Speare  
The House of Dries Drear by Virginia Hamilton

### **Grade Six - Novels**

"My Side of the Mountain" by George  
"The Egypt Game" by Snyder  
"Sadako and the Thousand Paper Cranes" by Coerve  
"The Lion, The Witch, and The Wardrobe" by Lewis  
"Roll of Thunder, Hear My Cry" by Taylor  
"Tuck Everlasting" by Babbitt  
"Island of the Blue Dolphins" by O'Dell  
"A Door in the Wall" by deAngeli  
"Curse of the Blue Figure" by John Bellaires

### **Grade Seven - Novels**

"Where the Red Fern Grows"" by Rawls  
"The Talking Earth" by George  
"Hatchet" by Paulsen  
"The Cay" by Taylor  
"Mrs. Frisby and the Rats of NIHM" by O'Brien  
"A Wrinkle in Time" by L'Engle  
"Gathering of Days" by Blos  
"The Westing Game" by Raskin

### **Grade Eight - Novels**

"Across Five Aprils" by Hunt  
"Shane" by Schaffer  
"My Brother Sam Is Dead" by Collier and Collier  
"The Summer of My German Soldier" by Greene  
"To Kill A Mockingbird" by Lee  
"A Day No Pigs Would Die" by Peck  
"The Adventures of Huckleberry Finn" by Twain  
"The True Confessions of Charlotte Doyle" by Avi

### **Grade Seven – Poetry**

"The Raven"  
"Annabel Lee"  
"Casey at Bat"  
Narrative Poetry by Silverstein, Poe, Nash, St. Vincent Millay, Longfellow, Giovanni, Whittier, and Kilmer.

### **Grade Eight - Poetry**

Poetry by Frost, Hughes, Nash, Silverstein, Poe, Cummings, Sandburg, Walker, Whitman, Dickinson, and Brooks.

### **English Grammar and Composition**

Our curriculum at the fifth, sixth, seventh and eighth grade levels emphasizes the importance of grammar, spelling, mechanics, punctuation and usage in the writing process. An increased exposure to writing is an essential element in preparing our students for high school and college.

Students learn to write through a variety of writing opportunities. Research has shown that writing improves reading comprehension, and we have discovered that writing enhances learning in every academic discipline

At each level the students practice using their grammar instruction to improve their poetic writing in narrating, creating, and imagining. They also use their skills in transactional writing as they learn how to write research papers, write to persuade and write to explain different concepts. The student also use these skills to learn how to write across the curriculum in any discipline. Students have the opportunity to use graphic organizers. Using the writing process they make patterns and organize their thoughts in order to adapt them to their own personal needs.

English Grammar lessons include sentence structure, parts of speech, word usage, capitalization, punctuation and spelling.

The five step writing process taught includes journal writing, creative writing, writing to learn, writing in response to literature, applied writing, and writing across the curriculum.