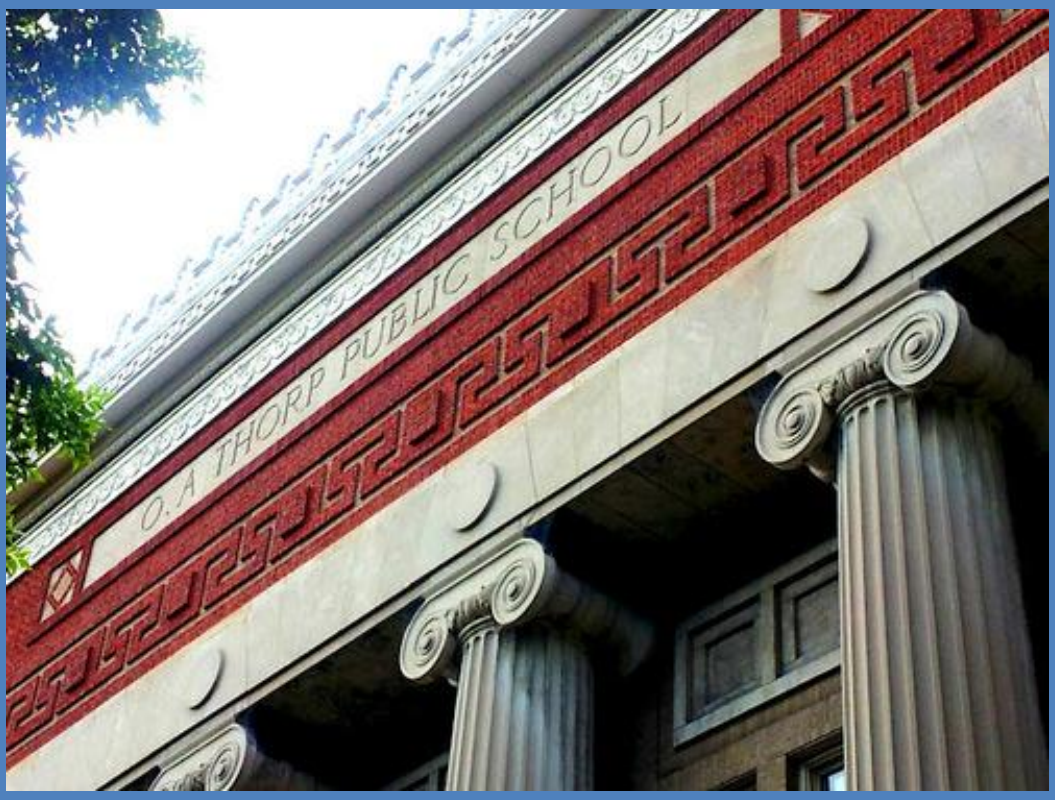


O.A. Thorp Scholastic Academy

Curriculum Overview

At O.A. Thorp Scholastic Academy a rigorous curriculum allows us to challenge students individually, while providing opportunities in real world problems and situations. This rigor, paired with an accelerated pace and a vertically aligned curriculum, ensures that Thorp students are often working above their grade level regardless of their instructional track. Thorp's unique Kindergarten through Eighth grade problem-based continuum provides students with the opportunity to graduate as prepared critical thinkers and efficacious problem-solvers, ready to take on the challenges of high school and the world beyond.

This whole school curriculum overview will demonstrate how we have aligned our instruction. It will also provide parents, teachers, students and community members our road map to success: A curriculum anchored in the 21st century skills of Communication, Collaboration, Critical Thinking, Creativity and Caring, that will help prepare our students for a future that is being invented daily.

The leadership of Thorp Scholastic Academy takes a personal interest in each of our students. This sense of community encourages students to explore authentic learning opportunities and take risks in a safe and supportive environment.

At Thorp Scholastic Academy, we aspire to create a rich community of lifelong learners equipped with the tools and meaningful learning moments that prepare students to achieve their personal goals while positively contributing to their neighborhood, country and world.

Mathematics Scope & Sequence:

Kindergarten to 5th

6th to 8th

Language Arts Writing Sequence:

Pam Allyn's Core Ready Reading and Writing Program Culminating Assessments by Grade Level

Kindergarten

Curriculum Description:

In the kindergarten classrooms, you will find rich and engaging learning environments. As you look around the rooms, you will see reading and mathematics manipulatives, word walls, learning centers, calendar, writing examples, anchor charts, behavior chart, classroom library, dramatic play materials and samples of children's work. You immediately know what is happening on the day of your visit by the classroom set up and displays, i.e., calendar, days of the week, words and numbers and children's artwork featuring current lessons.

Learning centers, designed to supplement curriculum presentations, are equipped with hands-on materials and age appropriate activities for independent exploration. Our learning centers include a writing center, classroom library, dramatic play, math games, puzzles, building toys, i-pads, and educational games. Teachers may be reading to the entire class or with a small group. You may see children working/playing independently, in pairs or in small groups.

Your child has been learning new skills daily during the first five years of their life. Kindergarten is a transition from this random kind of learning, to a more structured format. We begin to place more emphasis on learning specific skills in a systematic way.
These social skills include, learning to attend, exercising self-control, learning to cooperate and share, learning to work independently and with others, respecting ourselves and others, and taking responsibility for oneself.

Expected Prior Skills

Before Kindergarten, Children should know the following:
Letter Recognition and most letter sounds, number recognition 0-10, rote count 0-30, basic shapes and colors, first and last name, how to hold pencil correctly and able to write or copy letters of the alphabet, numbers 0-10 and first name, scissor safety and correct scissor grip.

Communication Skills and Work Habits: Paying attention, using appropriate vocabulary, expressing ideas well, and in complete sentences, being a good listener, following directions, taking pride in your work, completing work on time

Reading Skills: Identify and print all letters of the alphabet in random order - upper and lowercase, name and read all basic colors, give the sound for each letter, sound out words, memorize sight words, read and write sentences containing sight words, identify rhyming words, tell and retell a story in sequence, make predictions and draw conclusions, make connections to stories, naming colors

Writing Skills: Learn how to write thoughts in a complete sentence using good sentence structure, knowing and applying "Give Me 5" (1-capitals, 2-punctuation, 3-Use space between words, 4-write sight words correctly, 5-read it with a finger), writing stories with a focused beginning, middle, and end

Math Skills:

- Compare whole numbers up to 100 using the words more than, less than, and same as or equal to
- Count, read, write and order numbers to 100
- Represent numbers using physical models
- Recognize number words one through ten
- Represent number facts (sums) through ten
- Recall number facts (sums) through ten
- Add and subtract 1-digit numbers
- Devise stories/situations familiar to student experiences that use addition and subtraction
- Solve stories/problems that involve addition and subtraction
- Demonstrate the use of the addition symbol (+), subtraction symbol (-) and the equal symbol (=)
- Count forward and backwards 1-100 100-1
- Count by 2's, 5's, 10's to 100
- Demonstrate how to measure and compare using non-standard units
- Identify and give the value of a penny, nickel, dime, and quarter
- Count up to a dollar using only pennies, only nickels, only dimes, and only quarters
- Classify and sort objects by common attribute.
- Identify equal and unequal groups
- Locate numbers on a number line and grid 1-100
- Model the concepts of equal and unequal groups using concrete objects
- Make up and solve a story problem that could be derived from a picture
- Identify, sort, classify and compare familiar one-dimensional shapes
- Give and respond to directions about location: up, down, over, under, above, below, left, right, 1st, 2nd, 3rd, 4th
- Collect data based on likes, dislikes, and favorites using concepts of more and less
- Read and interpret information from a picture graph

Science Skills: Discussing, exploring, and understanding nonfiction information

Social Science: Gain an understanding of how and where we live, how we "fit" into the world and an grow an appreciation for different cultures and traditions

Kindergarten Thematic Units

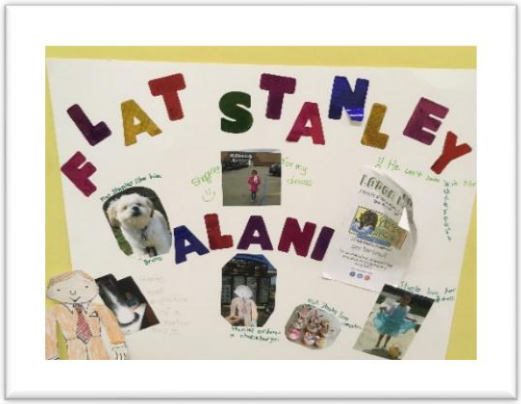
Most of the content standards are integrated into the curriculum by posing questions around unifying themes throughout the year. Listed below are the main themes we focus on during the school year.
Going to School, Apples, Pumpkins, Bears & Hibernation, Spiders, Native Americans, Madeline & France, The Gingerbread Man, Holidays Around the World, Winter, Presidents, Post Office & Letter Writing, Living Things

Problem Based Learning Capstone Projects:

Recycling "Solving the Problem of Wasted Resources"


Sedona


SPRINGFIELD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1st Grade

Curriculum Description:
In the first grade classroom you will find rich and engaging learning environments. As you look around the room, you will see a classroom library complete with books of various genres and differentiated to meet the needs of different guided reading levels., You will see the calendar and calendar based number work, and mathematics manipulatives, science and social studies materials, posters with words and numbers, learning centers, reading corner. Technology is utilized across all subject areas. Word walls, an essential ingredient of the first grade environment, are abundant, along with visuals and anchor charts reinforcing the skills. Student work is displayed throughout the room and hallways to highlight accomplishments, and foster a sense of community. Students are arranged in flexible groups which allows for collaboration, communication, creativity and critical thinking. The teacher acts a facilitator, questioning and encouraging discussion.

Students build upon and continue to internalize school behaviors emphasized in kindergarten.

Literacy:

Students engage in reading and writing experiences that extend throughout all the subjects.
Children learn to read independently.
Pam Allyn Core Ready Literacy

Content Mastery

- Demonstrate growing vocabulary
- Use grammar and punctuation correctly
- Apply phonics concepts and spelling rules
- Write creatively
- Build reading skills and strategies
- Read independently with comprehension and fluency
- Compare and contrast genres

Math Skills: Math in Focus

Content Mastery

- Sorting, classifying and patterning

- Fact families through 20
- Place value and order through 100
- geometry and measurement
- Spatial sense
- Problem solving through reading, writing and graphing

Science: National Geographic Science

Content Mastery

- Environments
- Animal habitats and characteristics
- Apply sequence and safety rules to conduct experiments and record observations.
- Conduct simple experiments and observations, explain discoveries and compare results.
- Select and use instruments to collect, organize and present data
- Ask questions and formulate hypotheses

Social Science: Studies Weekly and Scholastic News

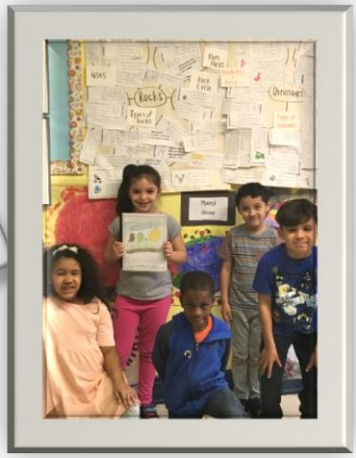
Children explore concepts of family, school and community, learn the importance and responsibility of citizenship, and study famous people and holidays.

Content Mastery

- Understand the earth's shape
- Find & identify locations on maps and the globe
- Understand the importance of transportation

Problem Based Learning Capstone Projects:

How can we zoologists design functioning habitats for animals to survive in the zoo?



2nd Grade

Curriculum Description:

In the second grade classrooms, you will find rich and engaging learning environments. As you look around the room, you will see a classroom library complete with various genres and differentiated reading levels. Students are arranged in flexible groups which allows for collaboration, communication, critical thinking and creativity. Students work in stations and utilize technology across all subject areas. The teacher acts as facilitator encouraging discussion and questioning. Student work is displayed throughout the room and hallways to highlight accomplishments and foster a sense of community.

At times, you will see the teacher reading to the entire class, and other times, you will see children working independently, in pairs or in small groups.

Literacy:

Students engage in Literacy experiences that extend throughout all subjects.

Content Mastery

- Read with understanding and fluency
- Compare and contrast genres of literature
- Understand explicit and implicit meaning in literature representing individual, community, national, world scientific and historic perspectives
- Write to communicate for a variety of purposes
- Listen and speak effectively and in a grammatically correct manner in a variety of situations
- Use the language arts for inquiry and research to acquire, organize, analyze, evaluate and communicate effectively
- Exploring Point of View
- Read closely to determine the point of view of characters using text evidence.
- Compare and contrast the point of view of characters within a story
- Consider whether their own point of view differs from that of a character
- Determine who is telling a story
- Acknowledge a character's point of view when reading aloud
- Compose a series of short, focused, writings that explore a variety of ways to convey point of view
- Present the results of their reading and writing work with point of view to an audience

- Using Text Features to Locate Key Information.
- -Choose a topic and generate who, what, where, when, why and how questions for further investigation.
- -Read closely and think analytically to determine the big ideas in informational text.
- -Identify and use informational text features to effectively navigate texts.
- -Build note-taking and research skills as they gather information from multiple sources.
- -Use their research to create and present information to an authentic audience.

Literacy and Reading—Pam Allyn Core Ready to discuss narrative, expository and persuasive writing. Learning themes are explored through novel studies that explore themes like: Family, Overcoming Obstacles, and Friendship. Authors include Roald Dahl, Kate Dicamillo and othters.

Math Curriculum Description:

Simple computation is expanded to problems that involve regrouping to the hundreds place. Writing number words through one hundred and multiplication are introduced, as well as decimals through monetary values of paper and coin currency to five dollars.

Content Mastery

- Demonstrate and apply a knowledge and sense of numbers, including basic arithmetic operations and number patterns
- Estimate, make and use measurement of objects, quantities and relationships and determine acceptable levels of accuracy
- Use algebraic and analytical methods to identify and describe patterns and relationships in data and predict results
- Use geometric methods to analyze, categorize and draw conclusions about points, lines, planes and space
- Collect, organize and analyze data using statistical methods to predict results and interpret uncertainty and change in practical applications

Mathematics –Math in Focus

Science:

Students are exposed to physical, life and earth sciences are studied in more depth, experiments are more difficult and research projects are expected.

Content Mastery

- Have a working knowledge of the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems

- Have a working knowledge of the fundamental concepts and principles of the life, physical and earth/space sciences
- Have a working knowledge of the relationships among science, technology and society in historical and contemporary contexts

Science –National Geographic

Social Science:

Children research and study in a more in-depth manner historically significant people, events and trends that helped to shape the contemporary United States.

Content Mastery

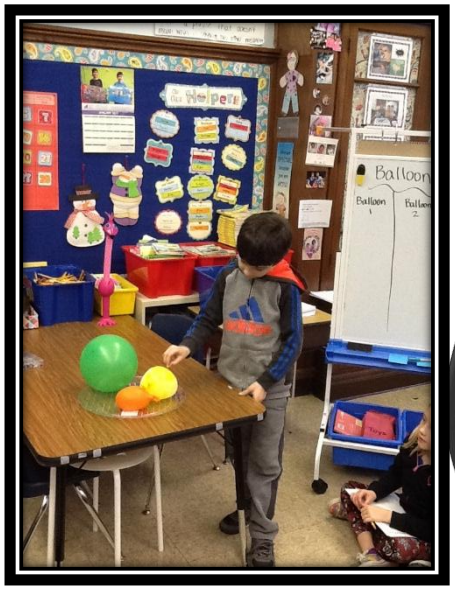
- Understand, analyze and compare political systems, with an emphasis on the U.S.
- Understand, analyze and compare economic systems, with an emphasis on the U.S.
- Understand and analyze events, trends, individuals and movements shaping the history of Illinois, the U.S. and other nations
- Demonstrate knowledge of world geography, as well as an understanding of the effects of geography on society, with an emphasis on the U.S.
- Understand, analyze and compare social systems, with an emphasis on the U.S.

Social Science – Time for Kids, Scholastic News, Studies Weekly

Problem Based Learning Capstone Projects:

How can we as zoologists design functioning habitats for animals to survive in the zoo?


adidas


Balloon


Reynolds Wrap


Panda

3rd Grade

Curriculum Description:

In the third grade classes, you will find students becoming 21st century learners through rich and engaging activities. Each classroom is equipped with a student friendly library filled with enriching text from all genres. All our teachers have student centers during class blocks. Family picture walls and classroom jobs foster the community that we believe in. Students work in whole group, small groups, partners, and individually. Our students learn to cooperate, collaborate, create, and communicate with one another. Our novel based literacy curriculum is unique in that it is created by our teachers. Each novel carries strong messages about perseverance, acceptance, compassion, and courage. We value teaching the child academically and socially. Our goal is to foster the growth of our future leaders.

Literacy Curriculum Description:

Students use novel studies and teacher created units to help further develop students' comprehension, fluency, higher order thinking skills, as well as knowledge of the world around them. Our goal is to challenge and enrich students so that they not only grow as learners but also as people. When walking through our classrooms, you will find students becoming 21st century learners, fluent speakers, and educated thinkers. Each classroom has a library where students choose books that fit their reading and interests. Students also build writing through daily activities as well as long term projects.

Content mastery:

- Nonfiction reading and writing
- Connecting our reading to our experiences and current events
- Drawing conclusions
- Main idea, supporting details and summarization
- Character development
- Theme
- Exposure of all genres
- Writing for different audiences and purposes
- Journaling
- Figurative language
- Poetry and drama
- Root word knowledge
- Grammar

Math Curriculum Description:

Students use the Math in Focus Series to build on concepts from previous grades (addition/subtraction/place value) while being introduced to new ideas such as: multiplication, division, geometry, elapsed time, data interpretation, probability, fractions and decimals. Concepts developed using manipulatives and games allow students to share and discuss various strategies. Problem-solving strategies such as bar modeling are used to work out real-life situations.

Content Mastery

- Understand place value
- Develop an understanding of multiplication and division and strategies for multiplication and division within 100
- Develop an understanding of fractions, especially unit fractions (fractions with numerator 1)
- Develop an understanding of the structure of rectangular arrays and of area
- Describe and analyze two-dimensional shapes
- Understand and plot coordinate points
- Understand elapsed time
- Demonstrate understanding of addition/subtraction/multiplication/division in word problems using the bar model (tape diagram)

Science:

Students use hands-on activities to develop a better understanding of the scientific method using the Next Generation Science Standards.

Content Mastery

- Understand and utilize the Scientific Method through hands on experiments and investigations.
- Gain environmental awareness, including understanding of living organisms, the Water and Animal Life Cycles
- Understand the importance of recycling, reusing, and reducing Earth's resources.

Social Science:

Students develop map skills through learning about our community, country and the world. Students are introduced to the basic ideas of geography, government, and citizenship.

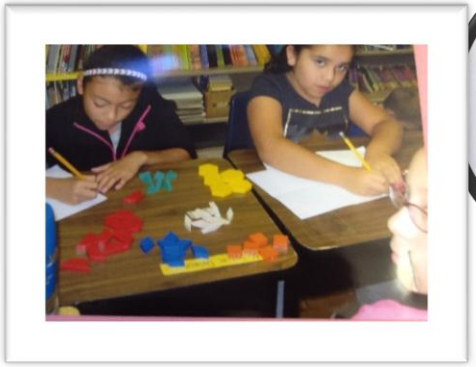
Content Mastery

- Identify the differences between continents, countries, states, and cities.
- Use information gained from illustrations (maps, photographs, etc) to demonstrate understanding of the text

- Recognize historical figures (presidents, pioneers, political activists)
- Understand Chicago history, people, and landmarks
- Describe logical connections within a text (comparison, cause/effect, and sequencing)
- Determine the main idea of a text, as well as, recounting key details. They must also explain how the details support the main idea.

Problem Based Learning Capstone Projects:

Sole Hope "Solving Uganda's Tangiasis Problem"




VOLUME WI
GRADUATED CYLINDER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different items
using a 2-pan
balance and grams

4th Grade

Curriculum Description:
Reading objectives are designed to help students develop a deeper understanding of the author's purpose, style, technique, character development, and plot structure. Students learn to effectively respond to various types of literature in written word or through meaningful discussions. Students are actively involved and engaged in the learning process and use various close reading strategies to develop a deeper understanding of the text.

Literacy

Content Mastery:

- Cite evidence from the text when explaining what the text says explicitly and when drawing inferences from the text
- Determine the theme of a story, drama, or poem
- Summarize text
- Describe in depth a character, setting, or event in a story or drama.
- Compare and contrast the point of view from which different stories are narrated.
- Determine the main idea of a text and explain how it is supported by key details
- Describe the overall text structure of events, ideas, concepts, or information in a text or part of a text.
- Compare firsthand and secondhand accounts of the same event or topic
- Analyze poems to understand structural elements and figurative language.
- Read novels from a variety of genres

Writing:

- Write opinion pieces on topics or texts, supporting a point of view with reasons and information
- Write informative/explanatory texts to examine a topic and convey ideas and information clearly
- Write narratives to develop real or imagined experiences or events using descriptive details and clear event sequences.
- Conduct short research projects that build knowledge through investigation of different aspects of a topic.

Vocabulary:

- Determine the meaning of words or phrases as they are used in a text.
- Determine the meaning of general academic and domain-specific words or phrases in a text.

Math Curriculum Description:

In 4th grade, students use Math in Focus and Eureka Math to build on concepts learned in 3rd grade. Students will be introduced to decimal place value, adding/subtracting/multiplying/dividing fractions, solve for area and volume of complex shapes, and form an understanding of 2 dimensional shapes and their attributes. Students will continue to use the bar model to show understanding when solving word problems.

Content Mastery

- Develop understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends.
- Extend division to 2-digit divisors, integrating decimal fractions into the place value system and developing understanding of operations with decimals to hundredths, and developing fluency with whole number and decimal operations.
- Develop an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers.
- Understand that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.
- Develop understanding of area, perimeter, and volume.
- Demonstrate understanding of (#1) and (#2) using the bar model strategy.

Science:

Students are involved in a hands-on experience in science. They will be actively involved and implement the scientific method in a variety of experiments and investigations using the Next Generation Science Standards.

Content Mastery:

- Properties of matter
- Magnetism
- Life Cycles from molecules to organisms
- Electricity
- Rock Cycles
- Body systems

Social Studies

Students learn about and discuss key historical concepts and the tools of social science to explain and analyze events in state, national and world communities.

Content Mastery

- Early exploration
- Illinois region; it's history, economic and geographic features, the impact of people, and its government
- State, country, and world maps
- Globe

Problem Based Learning Capstone Projects:

Sole Hope "Solving Uganda's Tangiasis Problem"


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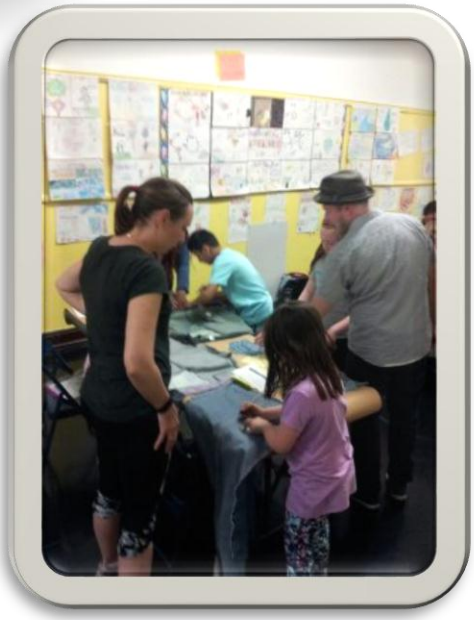


5th Grade

Curriculum Description:

In the 5th Grade classes, you will find rich and engaging learning environments. As you look around the room, you will see children's literature books, as well as a variety of non-fiction reading materials, social studies materials, posters with various literary conventions, the writing process, and test taking strategies, learning centers, a writing center, a reading corner, samples of children's work, and computers. When you look around, you immediately know what's happening in this class by the classroom set up and displays: KWL charts on integrated Social Studies lessons, including content area reading, varying and creative book reports designed to extract important comprehension points from literature, and authentic student work representing current topics being taught. The learning centers, designed to supplement curriculum presentations, are equipped with hands-on materials and age appropriate activities for the children to explore independently. At times, you will see the teacher reading to the entire class, and other times you will see children working independently, in pairs or in small groups. Projects to develop higher order thinking are also completed when appropriate. Continuing to develop cooperative learning and working skills, as well as completing individual work, are all important parts of the fifth grade academic and social / emotional curriculum.

Most of the standards listed below are integrated into the curriculum at some level, mainly through content area-reading. For example, if the theme is Ancient Egypt, activities connect content standards in language arts, math, science, social studies and art projects, as well as field trips. As the opportunities arise, these activities will be multi-grade level collaborations, as well as completely interdisciplinary.

Literacy Curriculum Description:

Fifth grade Language Arts students at O.A. Thorp Scholastic Academy explore themes of social justice by reading and responding to a diverse selection of literature, poetry and nonfiction texts. Students continue to develop close reading skills as they actively engage with rigorous texts. Through both discussion and writing, students develop meaning by analyzing elements of literature, such as theme and symbolism. Students also utilize the writing process to produce research

projects, memoirs, poetry, and argumentative essays. By the conclusion of the 5th grade, students will have grown as readers, writers, and global citizens.

Math Curriculum Description:

5th grade mathematics at O.A. Thorp solidifies the number sense students need to excel in pre-algebra and Algebra in the coming years. Students not only develop their number sense, but also work to become mathematicians who can explain their reasoning as well as use mathematical text to gain new mathematical understanding. Students are encouraged to push themselves and to work at a pace appropriate to their learning and understanding. In order to facilitate the various levels and understandings, 5th grade math classrooms will frequently contain students at various places throughout the curriculum. You will see students working together on bar modeling, problem solving, developing note taking skills, using online adaptive learning, and receiving small group or 1:1 instruction with the teacher.

Content Mastery for 5th grade includes operational fluency with whole numbers, decimals, and fractions which in turn leads to ratio and percent understanding and usage. Students also build algebraic skills using variables to represent real-world situations as well as learning to simplify and solve expressions and equations up to 3 steps. Knowledge of 3-D shapes including calculation of surface area and volume are among the geometric skills students will gain in addition to angle geometry including transversals and triangles. Probability is also extended to include independent and dependent events.

The resources predominantly used include Math in Focus 5th grade with additional problem solving and online resources utilized when appropriate for extension or extra help.

Science Curriculum Description:

National Geographic Science unlocks the Big Ideas in science for all learners, immerses students in the nature of science and science inquiry, and builds scientific and content literacy. This research-based program brings science learning to life through the lens of National Geographic while meeting core science content and Next Generation Science Standards for life, earth and physical sciences. Connections to real scientists and explorers along with visually engaging media and hands-on, scaffolded inquiry activities encourage students to “think like scientists” as they learn standards-based science content. Students will also research biographies of inventors to learn about engineering/science related careers and create their own inventions to solve a problem or improve on a product already

made. The teacher will facilitate and guide students through various hands-on lab experiments utilizing scientific processes, inquiry based learning strategies, and critical thinking skills. Student work will be displayed in the classroom and hallways to create learning environment which demonstrates both collaborative and independent achievements.

Content Mastery

- Have a working knowledge of the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems
- Have a working knowledge of the fundamental concepts and principles of the Life, Physical, and Earth Sciences and their connections
- Have a working knowledge of the relationships among science, technology, and society in historical and contemporary contexts.

Social Science Curriculum Description:

The 5th Grade Social Studies curriculum focuses on beginning ancient civilizations and how they impact society today. Students are also exposed to current U.S. and world events through the CNN Student News broadcasts. Each unit concludes with a creative project that combines students' personal interests and what they learned to make a project that displays how ancient cultures influence our world today.

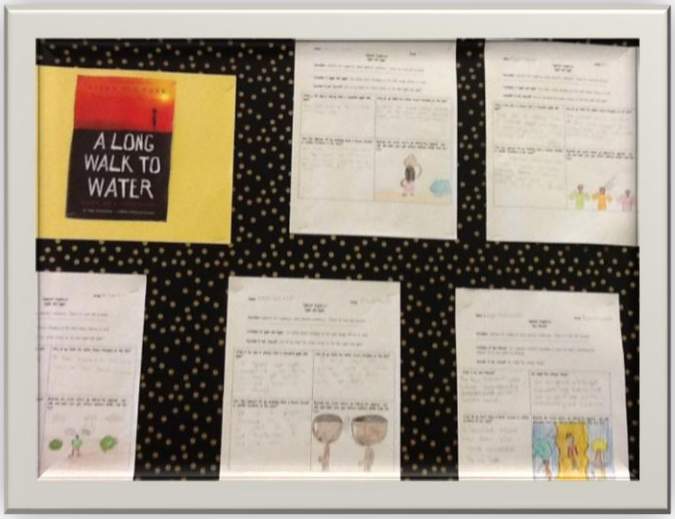
Content Mastery

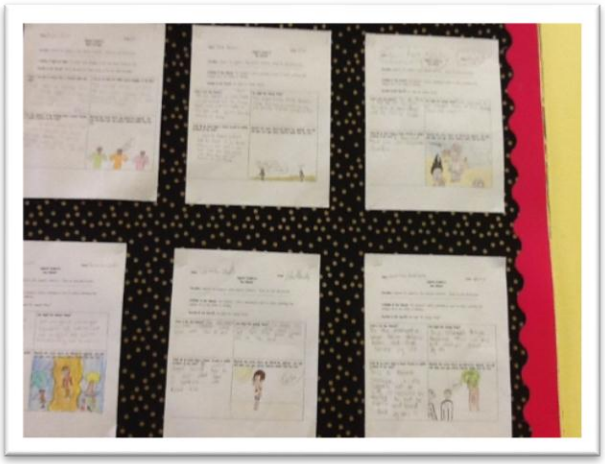
- Current issues in the political climate of the world and nation
- Political systems of ancient societies
- Understand events, trends, individuals, and movements that shaped the world
- Understanding of individual ancient cultures
- Understand World Geography and the effects of geography on world society
- Historically significant regions in the ancient world in relation to modern day significance and importance
- Understand social systems

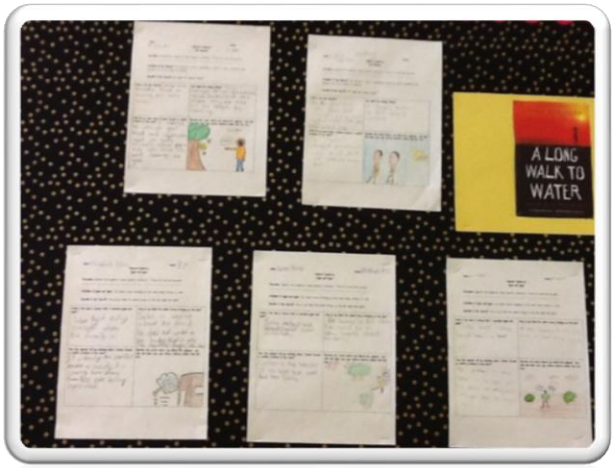
Problem Based Learning Capstone Projects:

Inventors and World Changers "How Solving Problems Created Opportunities"


DO OR DO NOT. THERE IS NO TRY.
Metric Conversion
PAPER ACT


A LONG WALK TO WATER




A LONG WALK TO WATER

6th Grade

Literacy Curriculum Description:

In the sixth grade classes, you will find rich and engaging learning environments. As you look around the room, you will see children's literature books, as well as a variety of fiction and non-fiction books, interdisciplinary materials, social studies materials, posters with various literary conventions, the writing process, and test taking strategies, learning centers, a writing center, a reading corner, samples of children's work, and computers. When you look around, you immediately know what's happening in this class by the classroom set up and displays: KWL charts on integrated lessons, including content area reading, varying and creative book reports designed to extract important comprehension points from literature, and authentic student work representing current topics being taught. The learning centers, designed to supplement curriculum presentations, are equipped with hands-on materials and age appropriate activities for the children to explore independently. At times, you will see the teacher reading to the entire class, and other times, you will see children working independently, in pairs or in small groups. Projects to develop higher order thinking are also completed. Continuing to develop cooperative learning and working skills, as well as completing individual work, are all important parts of the sixth grade academic and social / emotional curriculum.

Most of the standards listed below are integrated into the curriculum at some level, mainly through content area-reading. For example, if the theme is Ancient Egypt, activities connect content standards in language arts, math, science, social studies and art projects, as well as field trips. As the opportunities arise, these activities will be multi-grade level collaborations, as well as completely interdisciplinary.

Content Mastery

- Read with understanding and fluency
    - Learn age-appropriate vocabulary, necessary for reading a wide variety of material and comprehending it correctly
    - Activation of prior knowledge to allow students to make connections between reading material, both for pleasure and informational purposes, and their lives
    - Identify literary elements and conventions
    - Develop inferential comprehension skills

    - Draw conclusions and identify author's purpose
    - Understand figurative language, as well as distinguish between fact and fiction
    - Read, interpret, and create charts, diagrams, graphs, timelines and visual sources for a variety of reasons
- Read and understand literature representative of various societies, eras, and ideas
    - Read a wide variety of genres
    - Develop inferential comprehension skills
    - Draw conclusions and identify author's purpose
    - Read selected works representing diverse cultures and groups
    - Read, interpret, and create charts, diagrams, graphs, timelines and visual sources for a variety of reasons
- Write to communicate for a variety of purposes
    - Summarize written material
    - Summarize materials to aid in comprehension of these materials
    - Read, interpret, and create charts, diagrams, graphs, timelines and visual sources for a variety of reasons
- Listen and speak in a variety of situations
    - Follow directions to accurately complete classroom and homework projects
    - Gain information from presentations given by guest speakers, as well as docents or other staff members at field trip sites
- Use the language arts to acquire, assess, and communicate information
    - Summarize materials to aid in comprehension of these materials
    - Summarize written material
    - Write for various purposes and audiences
    - Generate and organize ideas through mapping or outlining
    - Research and write several projects (Science Fair, History) for evaluation and competition
    - Read, interpret, and create charts, diagrams, graphs, timelines and visual sources for a variety of reasons

Math Curriculum Description:

Sixth grade math classes have students diving into problems as soon as they sit at their desk. Each day starts with a warm-up of ten problems, some review and some new. What you see afterward depends on the day and the lesson being taught. Sometimes the teacher will be giving a whole class lesson with interactive study notes. Other times individual or small groups of students will be sharing and presenting ideas to the rest of the class, while the teacher participates as an audience member. Sometimes students will be working independently, with the teacher checking in as they progress or with immediate feedback on an online

program. Often students will be working in small groups or partners discussing with and learning from each other, while the teacher acts as a guide and facilitator. Together, the students work on projects, solve problems, and figure out math puzzles.

Here are some of the main skills and understandings students master in sixth grade.

Content Mastery

- Fluently divide multi-digit numbers using the standard algorithm.
- Understand the concept of ratio and use ratio language to describe proportional relationships.
- Use multiplication or division to write equivalent ratios
- Understand the concept of a unit rate associated with a ratio a: b ($b \neq 0$), and use rate language in proportional situations.
- Solve problems involving percents, including finding the whole when the percent and percentage is known.
- Understand rational numbers as points on the number line.
- Understand that the absolute value of a number is its distance from 0 on the number line.
- Represent fractions, decimals, and integers on a number line.
- Find the square, cube, square root, and cube root of a number.
- Write, interpret, and explain statements of order for fractions and integers
- Interpret and compute quotients of fractions.
- Fluently multiply and divide multi-digit decimals using standard algorithms.
- Use the distributive property to factor the sum of two whole numbers, or algebraic terms with whole-number coefficients.
- Write a composite number as a product of its prime factors.
- Find the greatest common factor or least common multiple of two whole numbers.
- Use variables to write equations representing two real-world quantities that change in relation to one another.
- Write and evaluate algebraic expressions using the order of operations.
- Solve problems using variable expressions in real-world contexts.
- Write and evaluate an inequality of the form $x < c$ or $x > c$ to represent a realworld situation.
- Use negative numbers to identify and locate points in all four quadrants of the coordinate plane.
- Solve real-world problems by graphing points in all four quadrants of the coordinate plane.
- Find the lengths of horizontal and vertical segments on a coordinate plane.
- Identify the center, radius, diameter, and circumference of a circle.
- Understand π to be the ratio of the circumference to the diameter of a circle.

- Solve real-world problems involving the areas of triangles, parallelograms, trapezoids, regular polygons, and circles.
- Find the volume of nonrectangular prisms using the formulas V = Bh.
- Represent data in frequency tables, dot plots, and histograms.
- Solve real-world problems involving the mean or median, such as finding a missing data value given the mean.

Class Materials/Resources

- Math in Focus and Program
- Khan Academy
- ST Math
- Math Minutes
- Composition books, Notebooks, Graph Paper
- Integer number line
- Supplemental math resources
- Promethean Board
- Manipulatives
- Calculators
- Tape measures and yard sticks

Science Curriculum Description: **PBIS (Project Based Inquiry Science) Earth Science**

In Project Based Inquiry Science, students take part in science learning experiences framed around answering Big Questions or addressing Big Challenges that guide instruction and serve to organize their learning progressions. As students pursue answers, they conduct investigations, make models, collect and analyze data, weigh evidence, write explanations, and discuss and present findings. Big Questions addressed throughout the year in 6th grade are:

- How do scientists work together?
- How can we know if objects in space will collide?
- What processes within Earth cause geological activity?
- How can we plan for severe weather?

PBIS reflects the full scope of science content standards for middle school—those identified as the Disciplinary Core Ideas in A Framework for K-12 Science Education and the Next Generation Science Standards.The teacher will facilitate and guide students through various hands-on lab experiments utilizing scientific processes, inquiry based learning strategies, and critical thinking skills. Student work will be displayed in the classroom and hallways to create learning environment which demonstrates both collaborative and independent achievements.

Content Mastery

- Have a working knowledge of the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems
- Have a working knowledge of the fundamental concepts and principles of the Earth Sciences (astronomy, geology, and weather/climate) and their connections

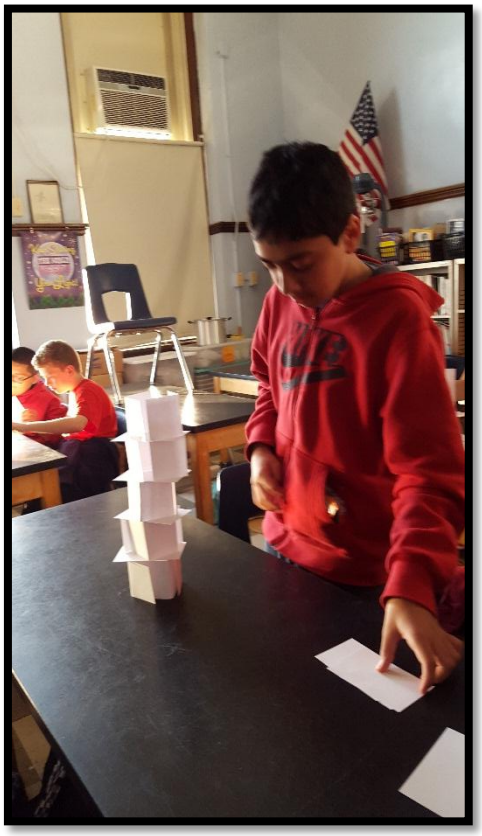
Social Science Curriculum Description:

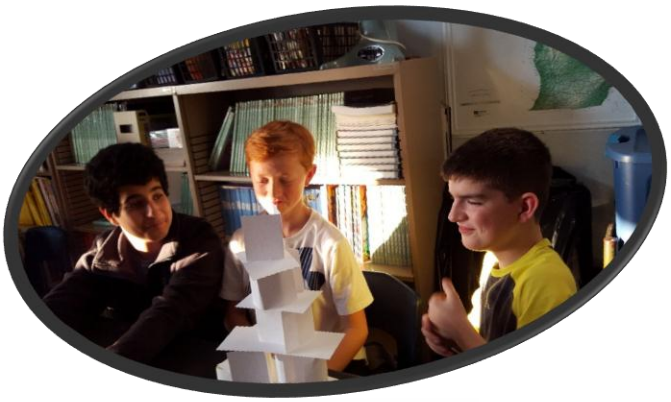
The 6th Grade Social Studies curriculum picks up where 5th Grade left off with more ancient civilizations and moving into the Middle Ages. Students are also exposed to current U.S. and world events through the CNN Student News broadcasts. Each unit concludes with a project that shows the student's ability to compare past civilizations with today's world. This helps students see the impact that past civilizations have on various aspects of modern society.

Content Mastery

- Current issues in the political climate of the world and nation
- Political systems of ancient societies
- Understand events, trends, individuals, and movements that shaped the world
- Understanding of individual ancient cultures
- Understand World Geography and the effects of geography on world society
- Historically significant regions in the ancient world in relation to modern day significance and importance
- Understand social systems

Problem Based Learning Capstone Projects:





7th Grade

Literacy Curriculum Description:

The seventh grade language arts curriculum has its primary emphasis on the reading and analysis of literature from various literary genres. Students will continue to develop their vocabulary and to refine their understanding and use of formal English grammar and mechanics through narrative, descriptive, argumentative, and expository essay writing.

Focus will be placed on the following:

- Review and reinforce basic elements of literature
- Use technology daily
- Gain appreciation of literature to become life-long readers
- Develop oral communication skills through whole-class debates and small group conversations
-
- Apply the rules of standard English usage in written and oral communication
-
- Define within works of fiction those elements developed by authors to create a story
- Recognize the use and effect of literary devices in creating works of fiction
- Adapt individual writing style to suit the purpose of informative and persuasive writing
- Read fictional work for appreciation and/or understanding of literature
- Be able to use a computer as an educational tool

Essay: Students will study and practice writing the following: journals, expository, persuasive, narratives essays, autobiographies, and research reports. Capitalization, punctuation, sentence types, parts of speech, figurative language and sentence structure will be studied thoroughly.

Vocabulary: New vocabulary and practice assigned each week will help to establish a more extensive vocabulary and make the students better communicators.

Poetry: To lay down a foundation for future literary studies and harvest an appreciation for poetic language and imagery, the third quarter will be devoted to extensive poetry study.

Literature: Time in the first two quarters will be spent on literary elements, examination of plot and meaning, character development and analysis.

Examples of novels read during the year:

- The Pearl
- Lord of the Flies
- The Giver
- The Little Prince

Math Curriculum Description:

In the seventh grade math classes, you will find rich, engaging and interactive learning environments. As you look around the room, you will see student sample work, math vocabulary, number lines, math based literature, manipulatives, visual aids, calculators and computers. You immediately know what's happening in this class by the classroom set up and displays: thematic projects, mathematical applications (algebra, data analysis, and problem solving for example). Group conversation leads to a richer understanding of mathematical concepts, problem solving and math literacy. At times, you will see the teacher presenting lessons. Other times, the teacher is facilitating guided practice or questioning students to promote critical thinking. She is presenting small groups with thought provoking problems and suggestions to improve student solutions. You will see students working in pairs or in small groups. Mastery of age appropriate school behaviors (integrity of work, initiative, self-discipline, meta-cognition, problem solving, ownership and responsibility for learning) are all important parts of the seventh grade academic and social/emotional curriculum.

Content Mastery

- Use rational numbers to solve word problems with fluency using all four operations (Ex: finding tax and tip, probability)
- Translate with ease between fraction, decimal and percent representations.
- Students will be introduced to roots, powers and exponents
- Students will use estimation as a strategy to determine reasonableness of their solutions
- Explore the entire quadrant system and graph situations that have linear relationships
- Find measures of central tendency, describe how outliers would affect these measures and choose values that best represent the data
- Decipher which type of graph best represents various data collections.
- Move from arithmetic to basic algebraic representations by generalizing patterns and writing expressions using variables
- Students will explore problems and learn to utilize their mathematical knowledge to communicate their thinking and reasoning

Class Materials/Resources:

- Connected Mathematics Program
- Glencoe Mathematics Program
- Scientific Calculators
- Angle Rulers
- Tape Measures
- Rulers
- Graph paper
- Graphing Overheads
- GeoBlocks
- Spinners
- Compasses
- Protractors
- Number Cubes
- 2-sided counters
- Integer Number line
- Fraction Circles
- ISAT Test Prep books
- Color Tiles
- Classroom Visuals (Ex. Place value chart, word wall)
- GeoBoards
- National Council of Teachers of Mathematics selected materials
- Singapore Math workbooks
- Algebra Tiles
-

Science Curriculum Description:

Students are exposed to science safety, experiments, observations, earth science, life science, and physical science. Students are involved in the most effective instructional strategies and methods.

As you look around the Middle School Science Lab, you will see students working independently and in small groups, completing laboratory investigations. All the students are utilizing problem solving, collaborative inquiry and critical thinking skills. Lab tables, laboratory equipment, science texts, visual aids, literature (National Geographic), science kits, three dimensional models, discovery centers, tools for exploration (bones, cow tongue, to microorganisms and cells). The teacher is a guide for students' investigations, data analysis, and shared findings. Learning to attend, learning to cooperate, learning to work independently, and mastering general school behaviors are all important parts of the eighth grade academic and social/emotional curriculum. Preparation of students for eco-awareness is an essential school and grade level goal.

Content Mastery

- Students will develop competencies with scientific instruments
- Safely complete laboratory work
- Students will comprehend scientific terminology and maintain fluidity in scientific conversations
- Students will complete a science fair project and research paper
- Students will understand and practice ethics and ethical standards in completing scientific investigations
- Students will integrate projects with language arts by completing written packets, which detail the scientific method
- Students will understand the Earth's place in the Universe
- Students will be cognizant of the principals and theories of Earth and Space science
- Students will be cognizant of the principals and theories of Life science
- Students will understand theories and be able to discuss various theories pertaining to specific scientific topics and research
- Students will understand the history of science and scientific phenomena and progression
- Students will differentiate between scientific misrepresentations and misconceptions
- Students will understand how science solves societal problems, how technology affects society, and technological limitations
- Students will be exposed to careers in science and/or technology
-

Class Materials/Resources:

- Lab tables
- Microscopes
- Laptops
- Chemicals
- Discovery Centers
- Delta Science Modules
- Science magazines
- Textbooks

Social Science Curriculum Description:

The seventh grade social studies curriculum focuses on the development of America as a new nation. We begin with exploring our early national heritage and continue through the early shaping of America. The years of focus are 1600 to 1855.

Learning will be facilitated through a variety of methods to allow students to study areas of history more in depth and improve critical thinking skills. Students will improve critical thinking skills such as:

- Cause and Effect
- Better Decision Making
- Identify/Analyze Main Ideas
- Compare Interpret Points of View
- Recognizing Propaganda
- Interpret/synthesize Information and Problems

Students are challenged to become independent learners as well as contributing team members of a group. Students participate in the State Metro History Fair by developing an inquiry based research project and meet public law requirements in passing the Federal Constitution Exam.

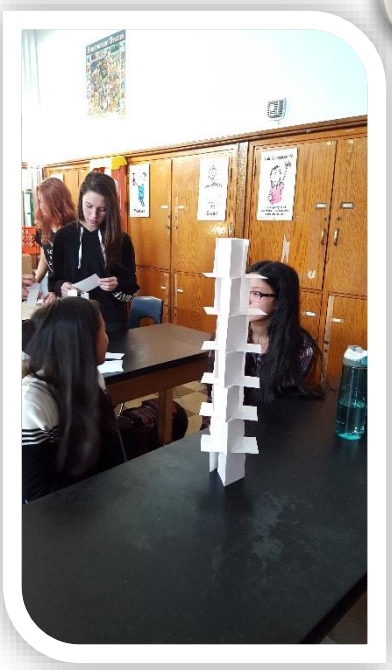
Content Mastery

- Geography Review
- A meeting of Americas Great Civilizations
- The 13 English Colonies
- A Road to Revolution History Fair
- The American Revolution and Creation of a republic
- State Required Constitution component
- The Constitution at Work
- Industry and Growth
- Democracy and Westward Expansion
- North and South-worlds apart
- Era of Reform and a dividing nation
- Historically based fiction and non-fiction novels

Problem Based Learning Capstone Projects:

Connecting the Body Systems to Amusement Parks


ME?
Let's Sleep in



8th Grade

Literacy Curriculum Description:

The eighth grade curriculum includes four required academic classes, which are taught by an Interdisciplinary Team. Interdisciplinary Team instruction allows staff members to know students and to connect the academic program of instruction for optimum student learning.

The eighth grade language arts curriculum has its primary emphasis on the reading and analysis of literature from various literary genres. Students will continue to develop their vocabulary and to refine their understanding and use of formal English grammar and mechanics through narrative, descriptive, and expository essay writing.

Focus will be placed on the following:

- Review and reinforce basic elements of literature
- Use technology daily
- Gain appreciation of literature to become life-long readers
- Develop oral communication skills
- Correctly complete sentences based with an appropriate complement
- Apply the rules of standard English usage in written and oral communication
- Use the correct forms and tenses of regular and irregular verbs in accurately relating events and details
- Use multi-word structures to combine ideas and develop sophisticated written and spoken sentence structures
- Define within works of fiction those elements developed by authors to create a story
- Recognize the use and effect of literary devices in creating works of fiction.
- Adapt individual writing style to suit the purpose of informative and persuasive writing
- Read fictional work for appreciation and/or understanding of literature
- Be able to use a computer as an educational tool

Essay: Students will study and practice writing the following: journals, expository, persuasive, narratives essays, letters, autobiographies, and research reports. Capitalization, punctuation, sentence types, parts of speech, figurative language and sentence structure will be studied thoroughly.

Vocabulary: Several words assigned each week will help to establish a more extensive vocabulary and make the students better communicators.

Spelling: In conjunction with the vocabulary words, spelling words are learned each week. These spelling words are practical and ones that are often misspelled.

Poetry: To lay down a foundation for future literary studies and harvest an appreciation for poetic language and imagery, each student will memorize several poems.

Literature: Time will be spent on literary elements, examination of plot and meaning, character development and analysis. The study of each book will conclude with students making an oral presentation special about the book.

- Dicey's Song
- Across Five Aprils
- A Christmas Carol
- The Diary of Anne Frank
- To Kill Mockingbird
- Night

Math Curriculum Description:

Eighth grade is designed to prepare students to be successful in High School Algebra and/or Geometry. Students will learn all of the concepts covered in Algebra I. Those students taking the High School Algebra course will also learn Algebra II concepts. Students are expected to clearly represent their answers through words, mathematical expressions, and with visual models.

Content Mastery

- Apply the use of rational numbers, exponents, roots and operations to solve algebraic problems
- Identify and apply basic algebraic properties to justify and communicate reasoning.
- Use ratios and proportions to reason and solve relevant problems
- Use appropriate tools to and units to measure one, two and three dimensional objects
- Investigate circle relationships and the use of pi
- Explore the use of the Pythagorean Theorem
- Use estimation to predict measures of angles, area, and volume
- Analyze sequences to determine patterns and express the generalization of the pattern using algebra

- Translate between table, graphs, equations and written representations of linear equations
- Apply slope and intercepts to meaningful situations
- Use inequalities in solving equations and graphing
- Analyze the results of transformations graphically and algebraically
- Investigate the relationships between linear equations (intersecting, parallel, and perpendicular)
- Represent probability problems using tables, graphs or tree-diagrams
- Solve probability problems involving permutations and combinations
- Compute with polynomials fluently
- Solve and manipulate radical equations
- Understand the concept of a function and determine when a relation is a function in a formats (table, coordinates, graph, equation, mapping, word problem
- Compute fluently with functions and determine how two different functions are related in terms of their domain and ranges
- Analyze the characteristics of a quadratic equation

8th Grade Math Texts:

- Glencoe Algebra I
- Math in Focus Grade 8

Science Curriculum Description:

Students are exposed to science safety, experiments, observations, earth science, life science, and physical science. Students are involved in the most effective instructional strategies and methods.

As you look around the Middle School Science Lab, you will see students working independently and in small groups, completing laboratory investigations. All the students are utilizing problem solving, collaborative inquiry and critical thinking skills. Lab tables, laboratory equipment, science texts, visual aids, literature (National Geographic), science kits, three dimensional models, discovery centers, tools for exploration (bones, cow tongue, to microorganisms and cells). The teacher is a guide for students' investigations, data analysis, and shared findings. Learning to attend, learning to cooperate, learning to work independently, and mastering general school behaviors are all important parts of the eighth grade academic and social/emotional curriculum. Preparation of students for eco-awareness is an essential school and grade level goal.

Content Mastery

- Students will develop competencies with scientific instruments
- Safely complete laboratory work

- Students will comprehend scientific terminology and maintain fluidity in scientific conversations
- Students will comprehend the scientific method and use the method to conduct laboratory investigations
- Students will complete a science fair project and research paper
- Students will understand and practice ethics and ethical standards in completing scientific investigations
- Students will integrate projects with language arts by completing written packets, which detail the scientific method
- Students will understand the Earth's place in the Universe
- Students will be cognizant of the principals and theories of Earth and Space science
- Students will be cognizant of the principals and theories of Life science
- Students will understand theories and be able to discuss various theories pertaining to specific scientific topics and research
- Students will understand the history of science and scientific phenomena and progression
- Students will differentiate between scientific misrepresentations and misconceptions
- Students will understand how science solves societal problems, how technology affects society, and technological limitations
- Students will be exposed to careers in science and/or technology

Class Materials/Resources:

- Lab tables
- Microscopes
- Laptops
- Chemicals
- Discovery Centers
- Delta Science Modules
- Science magazines
- Textbooks

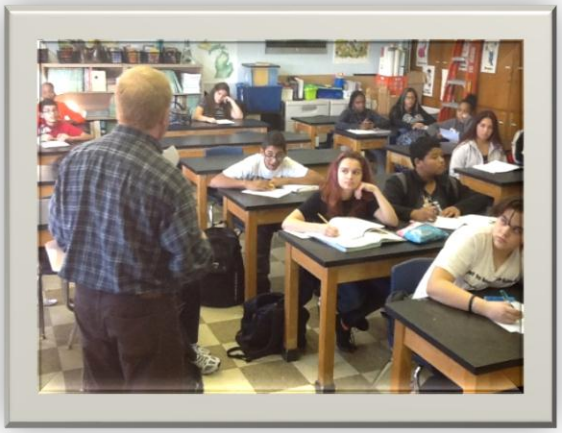
Social Science Curriculum Description:

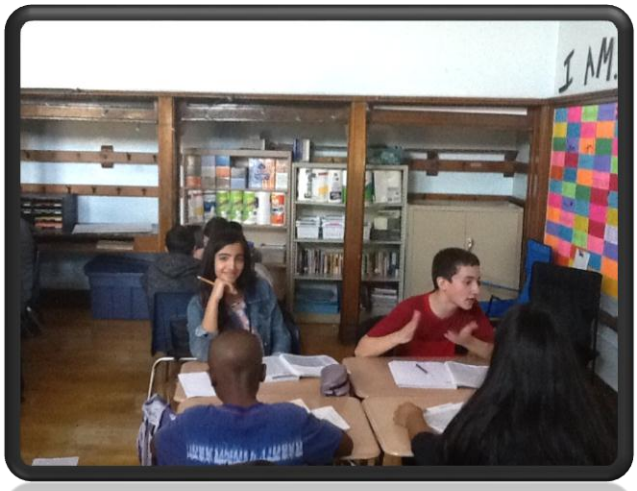
The Eighth grade curriculum seamlessly resumes where the seventh grade curriculum ends beginning with the Civil War. This was a crucial time in our history in our nation, as well as in the history of Illinois. Students will begin to explore the different eras from 1860 to present. A variety of instructional methods and strategies will be used to have students become active participants in learning how the past in both America and the world has led us to the present. Understanding the Illinois State Constitution and how it has changed over the eras is vital for the students. In order to fulfill public law requirements, eighth grade students must study and pass a test on the Illinois State Constitution. Participation in the State Metro History Fair will allow students to add and expand prior knowledge and strengthen and learn critical thinking skills. Through individual and group based projects, assignments, discussions and meetings students along with teacher facilitation will grow academically and be better aware/ready to further their participation as the leaders of tomorrow.

Content Mastery

- A Dividing Nation
- The Civil War
- Reconstruction Era
- End of an Era-Changing West
- Rise of Industry and Unions
- Immigration and Growth of Cities
- Progressives and Reformers
- A World Power Emerges
- World War I
- The Roaring 20's
- The Great Depression
- World War II
- The Cold War
- Prosperity and Reform
- New Direction-Diverse Nation
- Changing World

Problem Based Learning Capstone Projects:





O. A. THORP
SCHOLASTIC ACADEMY
Today's Learners . . . Tomorrow's Leaders