

Curriculum Guide Middle School

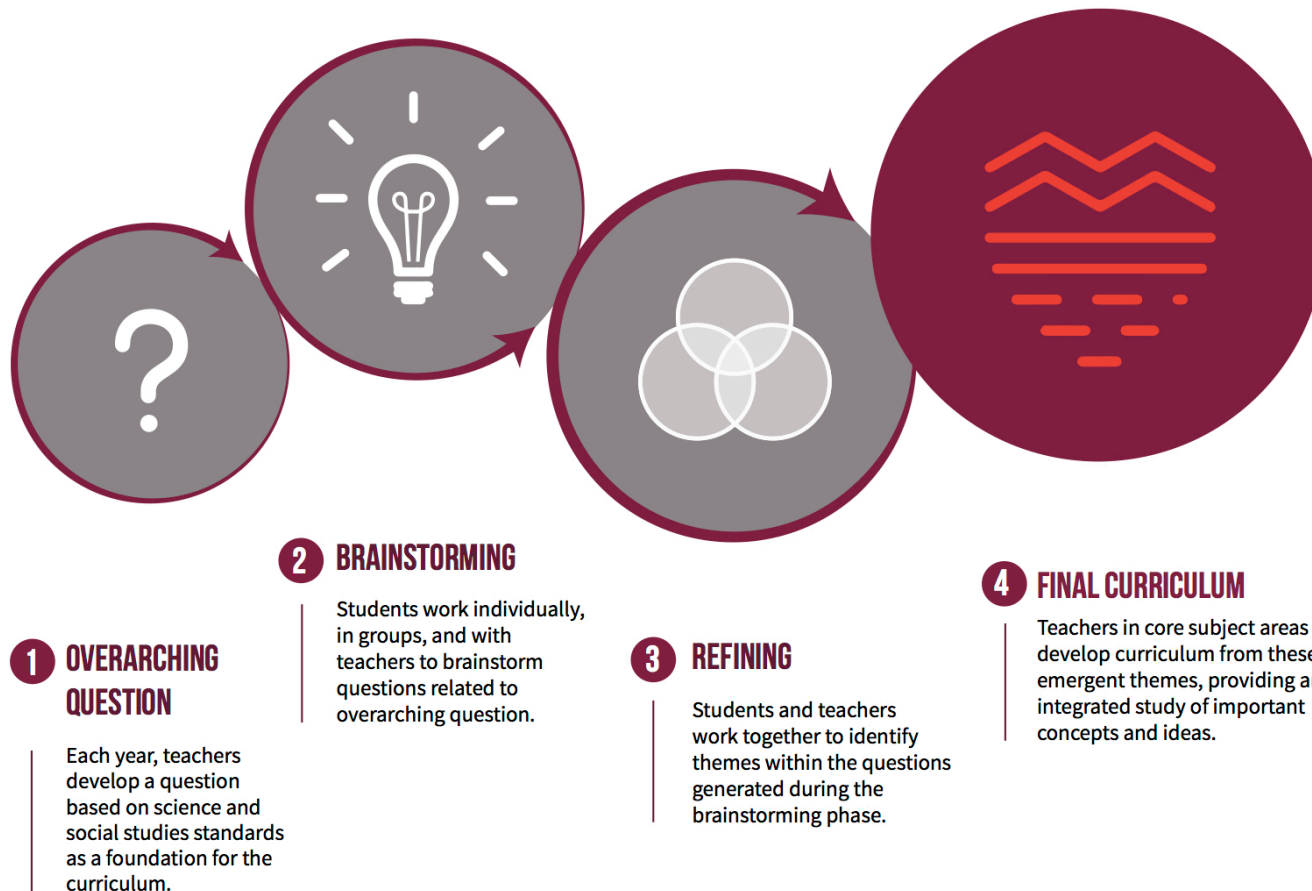
**FRIENDS
SCHOOL**



Challenging minds, nurturing spirits.

Friends Middle School Integrated Curriculum: A Collaboration Between Students, Staff, and Standards

One of the hallmarks of Friends School’s middle school program is our commitment to an Integrated Curriculum (IC) that stems from the important questions that students have about themselves and the world, and state and local standards. Using an overarching question as inspiration, students and staff work together to determine major themes of study for the school year. All core classes, regardless of content area, examine these themes, providing challenging content that is exciting and relevant to their lives. The Integrated Curriculum model not only connects what students are learning, it ensures creative and critical thinking and meets their social and emotional needs while referencing essential standards in preparation for high school.



MATH

Taught in a block- all students have math class at the same time

Ability-based

Units reinforced with online practice (MobyMax)

Problem-of-the-Week (POW) focuses on problem solving a real world scenario and articulating the mathematical thinking process

Practice Standards for All Mathematicians:

- **Make sense of problems and persevere in solving them**
- **Use appropriate tools efficiently**
- **Attend to precision**
- **Model with mathematics**

Teachers make an effort to connect to the overarching question for the year so as to illuminate the pervasiveness and integrated nature of math throughout life

Math A

- **Rational Numbers**-efficiently uses all four operations and understands factors and multiples to solve real world scenarios
- **Integers**- understands relationships that can be described with positive and negative numbers, add and subtract with integers and explore the idea of absolute value
- **Decimals**- place value and operations
- **Fractions**-operations and problem solving
- **Fraction-Decimal- Percent**-relational understanding between the three and use that understanding to solve problems
- **Ratios and Proportions**- can apply the concept of ratios and ratio language to describe relationships between two quantities.
- **Coordinate Plane Graphing**- understand that numbers have a location on the coordinate grid and can plot points
- **Geometry**- angles, perimeter and area of 2 and 3d shapes and complex shapes
- **Statistics and Data**- measures of central tendency, reading and creating a variety of data representations

Math B

- **Rational Numbers** –applies and extends understanding of rational numbers operations to solve problems.
- **Integers**- extends and applies previous knowledge to solve real world problems with integer.
- **Algebraic Expressions and Equations**- write and solve equations with one and two steps including integers, fractions and decimals and an understanding of variables
- **Linear Graphing**- using tables, equations and graphs to solve linear growth problems
- **Proportions**- use proportional reasoning to solve multistep ratio, rate, and percent problems.
- **Percent Application**- using the percent proportion to solve problems about increase and decrease.
- **Statistics and Data and Probability**- Understand how central tendency measures can affect data by examining samples
- **Geometry**- Pythagorean Theorem and problem solving

Algebra

- **Rational Number, Variables, Percentages**- review to ensure ready for algebra.
- **Solving equations, Proportions, and Scale**- defining variables, multi-step equations and proportions, and using those proportions to understand scale
- **Solving Inequalities**- making connections between inequalities and real world application to solve problems
- **Linear Equations and Graphs**- create and describe a linear relationship, represent and solve equations graphically, interpret functions
- **Systems of Equations and Inequalities**- solving a system of 2 equations using substitution, elimination, and/or various methods
- **Exponents**- using properties of exponents to evaluate exponential expressions and graph exponential functions
- **Polynomials**- add, subtract, multiply and perform single term factoring
- **Quadratics**- graphing a quadratic equation from a table, understand and interpret the intercepts of a parabola

Advanced Levels

Will be offered in 2018-2019. More details to follow.

LANGUAGE ARTS

Friends Middle School students are active agents in their learning. Students engage with the world—past, present, and future—through reading, writing, speaking, and listening. They're inspired to learn through both their own passions and teacher-directed assignments. Students read, write, and communicate across the curriculum.

Lucy Calkins Units of Study in Reading and Writing are foundational to the Humanities program.

Writing

Opinion/Argument Writing

- Literary Essay (Compare/Contrast)
- Research-Based Essay (The Art of Argument)
- Literary Essay (Analyzing Craft and Theme)

Information Writing

- Books, Websites, and Presentations (Teen Activism)
- Writing about Reading (Respond to Literature)
- Position Papers: Research and Argument

Narrative Writing

- Crafting Powerful Life Stories
- Realistic Fiction
- Investigative Journalism

Mechanics

- Spelling
- Punctuation
- Capitalization
- Paragraphs

Usage

Sentence Formation

Reading

- Thinking and Reasoning Critically
- Reading for All Purposes
- Read a wide range of literature (American and world literature) to understand important universal themes and the human experience
- Vocabulary Development
- Self-assess, and reflect on personal learning while engaging with increasingly more difficult texts
- Engage in a wide range of nonfiction and real-life reading experiences to solve problems, judge the quality of ideas, or complete daily tasks
- Gather information from a variety of sources; analyze and evaluate the quality and relevance of the source; and use it to answer complex questions
- Evaluate explicit and implicit viewpoints, values, attitudes, and assumptions concealed in speech, writing, and illustration
- Demonstrate the use of a range of strategies, research techniques, and persistence when engaging with difficult texts or examining complex problems or issues
- Use primary, secondary, and tertiary written sources to generate and answer research questions (source: Colorado State Standards)

Listening & Speaking

- Collaboration skills including preparation, questioning, goal setting, time management, delegating roles, problem solving
- Presentation skills including voice volume, dress, eye contact, clarity of content, etc.
- Appropriate Language for Audience
- Inferential and Evaluative Listening
- Listening for meaning and understanding

SOCIAL STUDIES

The four strands of social studies are examined through several lenses throughout the middle school years: **Western Hemisphere, Eastern Hemisphere, American History: Revolution up to Reconstruction, Current Events**

Social Studies is integrated with Literacy as Humanities in our Integrated Curriculum

History

- Formulate and respond to historical questions using primary and secondary sources
- Analyze sources for accuracy, point of view
- Construct and defend arguments using primary and secondary sources
- Interconnection/ interdependence of people, products, and culture and the change over time
- Social, political, cultural, economic, and technological development and change over time
- Sources of historical conflict and compromise
- Impact of age, gender, class, geography, etc. during different events and eras in history
- Historical contexts of events/ ideas/ people of early western cultures (ex. Maya, Aztec, Inca, Inuit, early Native American, explorers, colonizers), eastern cultures (ex. Greek, Roman, Chinese, African, Medieval)
- Critical ideas of American History (democracy, federalism, capitalism, abolition, temperance, nativism, expansionism)

Geography

- Use maps and other geographical tools for gathering information, finding patterns, and analyzing issues
- Analyze data
- Formulate and respond to questions using geographic data
- Identification of various physical features
- Analyze interaction between humans and earth's physical features including adaptations, economics, interdependence, and human settlements
- Expansion of the United States: land, security, sovereignty from a geographical lens
- Analyze how geography influences perspectives on historic and current events and issues.

Economics

- Impact of economic systems on jobs, careers, standards of living
- Personal career exploration
- Market economy including supply/ demand, price/ profit
- Personal finance including saving, investing, credit, debt
- Role of taxes, tariffs and impact on income and spending
- International trade including purposes of debt, trade policies, negotiation strategies

Civics

- Advantages/ disadvantages of living in an interconnected world
- Current events / political issues over time
- Citizenship in various governments including rights, responsibilities, avenues for voicing opinions, avenues for monitoring government, and bringing about change
- Changes in citizenship over time
- Comparing governments and their authority
- Analyzing primary sources supporting democratic freedoms (Declaration of Independence, Constitution, Bill of Rights) and how they provide for continuity and change
- How nations solve differences
- Laws: various types, strengths and weaknesses of rule of law
- Identify tensions between individual rights, state laws, federal laws, international law
- Political activism and advocacy

SCIENCE

Science strands are part of our Integrated Curriculum. Equal weight is given to Life Science, Earth Science, and Physical Science

All courses include lab safety, supplies, protocols and materials; use of metric system; application of Greek and Latin based scientific language

Earth

Anatomy of Earth & landforms

- Rock & mineral classification
- Rock cycle
- Plate tectonics, convection currents & Earth evolution

Astronomy

- Explore solar system, galaxy, universe
- Key astronomical landmarks, formations and evolution
- Key thinkers in astronomy

Ecology

- Biomes
- Cycles of matter: Carbon, Oxygen, Nitrogen, Water
- Major components of environment
- Organism interactions

Physical

States of matter

- Behavior of gasses, pressure and temperature
- Kinetic theory of matter
- Phase changes of matter
- Application of Bernoulli, Pascal, Venturi & Archimedes principles

Chemistry

- Anatomy of the atom
- Acids Bases Periodic Table and pH scale
- Mixtures, compounds & molecules
- Ionic & Covalent bonding

Physics (energy and motion)

- Newton's laws and principles in the physical world
- Motion, velocity, acceleration
- Weight vs mass
- Balanced, unbalanced and net forces

Life

What is life?

- What does something need to be "alive"?

Defining the characteristics of life

- **Cellular Biochemistry and Interaction (Plant and Animal)**
- Anatomy of the cell
- Respiration: cytoplasm, cellular, mitochondria
- Photosynthesis: light dependent and independent
- Roll of ATP in energy exchange
- Meiosis and Mitosis

Genetics

- Mendelian Genetics
- Alleles: dominant, recessive, co-dominance
- Chromosomes
- Genes & Pedigrees
- Phenotypes & Genotypes
- Applications of Punnett squares

Science Fair

- Choose a scientific question
- Develop hypothesis
- Apply scientific method
- Create scientifically sound and testable experiment
- Think about independent dependent variables
- Develop procedures
- Analyze results
- Explain process, errors, and potential next experiments
- Present to a variety of audiences, including Denver Metro Regional Science Fair

TECHNOLOGY

Our student's use of technology will play a vital role in their education by empowering lifelong learning, creating digital citizens, developing creative problem solvers, strengthening their construction of knowledge & meaning, promoting innovative design solutions, and strengthening their communication & collaboration within local and global communities.

With an integrated curriculum, students will help guide our themes, topics, and questions throughout the year where technology will be used both as a tool for learning and as a topic of learning.

Tools

- Utilize technology to demonstrate competency of their learning goals
- Recognize both the responsibilities and affordances a digital world can provide
- Start to understand the safety, ethical, and legal concerns of digital environments
- Employ effective research strategies and evaluate the credibility of sources
- Express themselves for a variety of purposes in a variety of formats
- Use digital tools to construct knowledge & meaning individually and collaboratively
- Explore the maker movement and the design process
- Solve real-world problems

Topics

- Hardware & software
- Internet & world wide web
- Robotics
- Coding
- 3D design
- Engineering
- Circuits & Electronics
- Video Editing, Documentary Making, Film Making
- Computational Thinking

SPANISH

All students taking Spanish participate in once a week Culture class. This class builds cross-cultural understanding and perspective necessary for global living.

Culture

- Oral and aural language skills: communicative, comprehensible input (CI) and teaching proficiency through reading and storytelling (TPRS) methods.
- Literacy Skills: descriptive, interpersonal and presentational
- Cultural concepts: compare and contrast world and local cultures
- Geography of Latin America

Year 1

- **Vocabulary:** thematic vocabulary units from K-5 Risas and Sonrisas, TPRS story vocab, reflexive verbs
- **Grammar:** present progressive, preterite tense, gender agreement, number agreement, articles, prepositions, personal pronouns, irregular verbs, "gustar" verbs, reflexive verbs

Year 2

- High frequency words and TPRS story vocabulary, irregular/stem changing verbs, prepositions
- Object pronouns, compound future, stem changing verbs, irregular verbs, using the two past tenses together (preterite/imperfect), comparatives/superlatives, saber/conocer, past progressive, formal commands

Year 3

- Technological world, daily routine and household chores, culture and the arts, TPRS story vocabulary
- Subjunctive mood and the "que" clause, double object pronouns, accidental "se" and impersonal "se", irregular preterite verbs, informal commands

FRENCH

During the 2017-18 school year Introduction to French is being offered twice a week, after school as a year long class.

This is an introduction to the French language and culture, organized around games and activities.

This first year focuses primarily on speaking the language over writing. Writing will be used as a learning tool but will not be a goal in itself.

Culture

- games
- songs
- geography
- staples of French cultural regions
- cooking

Year 1

- **Vocabulary:** foods, the body, numbers, colors and shapes, polite forms of address, time and dates, weather, landscapes, community, and feelings.
- **Grammar:** simple grammar, present tense verb formation, subject pronouns, and syntax forms to become familiar with the phonetics of French

ART

Art class: One day per week for 1.5 hours for one semester in 6th and 7th grades. Art is an elective for 8th grade.

Electives:

- Open Studio
- Photography

Art

- 3-D collage, assemblage and sculpture
- Composition and perspective studies
- Seeing the world like an artist
- Color wheel study
- Drawing and painting: A range of experiences from still life drawing through abstract painting techniques.
- Print making (Japanese Woodcut technique)
- Art History through the lens of various cultures

Photography

- Camera and photography basics
- Composition
- Evoking emotion
- Telling stories with photographs
- Editing software

Open Studio

Students work on projects of their design and inspiration. Teachers support through providing materials, suggestions, resources, etc. This is independent innovative time meant to unleash creative ideas, hone skills, and try new media.

MUSIC

Students interested in band or orchestra should have some previous experience either through private lessons or group classes.

Band and orchestra are year-long classes.

Marimba is available for all students, no experience necessary.

Marimba classes are one semester each in 6th and 7th grade.

Band

- Technical development, more advanced each year
- Performance skills (Performances each semester, including a spring music festival at Elitch's)
- Reading music, more advanced each year
- Ensemble skills (various parts, solos, hearing other instruments)

Orchestra

- Technical development, more advanced each year
- Performance skills (Performances each semester, including a spring music festival at Elitch's)
- Reading music, more advanced each year
- Ensemble skills (various parts, solos, hearing other instruments)

Marimba

- History of marimba music
- Mallet technique
- Aural music learning
- Rhythm security
- Performance skills (sharing at the end of the semester)
- Ensemble skills (various parts, leads, hearing other parts)

COMMUNITY

Fall camping trips (3 day/ 2 night) build community and understanding of each students' uniqueness and strengths to begin the school year with empathy and connection.

Spring trips celebrate a year of working and living together at school, growth, and revisit some themes from the school year.

Weekly grade-level classes taught by Middle School Counselor

Regular Advisory/ Insight class keeps each student connected to a teacher, builds social / emotional skills and community

Trips

- Camping trip in fall
- Week-long trip in spring
- Buddies with elementary school
- Service learning with Elders
- Field trips associated with classroom content and Integrated Curriculum

Classes

Classes that build community and social emotional skills:

- Advisory/Insights
- 6th Grade Life (with counselor)
- 7th Grade Seminar (with counselor)
- 8th Grade Seminar (with counselor)
- Transition Class - 6th Grade, 1 semester

Highlights

- Respect
- Emotional Literacy
- Executive function skills
- Organization and time management
- Communication
- Shared experiences, fun, trust, building grit through "right size" challenges, failure, frustrations and difficulty
- Self-awareness
- Self-advocacy
- Emotional safety
- Voice and choice in curriculum
- Career path exploration (8th)
- Demystification of self
- Identity building through thoughtful conversations and perspective taking

PHYSICAL EDUCATION

Taught in combined age groups for 6th and 7th grade

Ongoing through all years:
Rules and strategies, problem-solving and creativity

Motor skills, techniques, sports skills, coordination, flexibility, control

Positive attitude, sportsmanship, teamwork

Activities

May include:

- Yoga
- Field hockey
- Volleyball
- Basketball
- Frisbee
- Obstacle courses
- Circus
- Soccer
- Gymnastics
- Strength training
- Pilates
- Track and field events

TRANSITIONS

- Single semester course for 6th graders
- Time management
- Organization and materials management
- Study skills
- Staying focused
- Advocating for yourself with adults and peers
- Navigating Schoology
- Building flexibility
- Managing difficult situations with others

MINI COURSES

These 4-6 week courses come from student interests and connect us with to community experts, giving students exposure to new ideas and concepts in a dynamic and integrated way.

Examples

Examples of previous classes include:

- Bicycle Safety and Maintenance with Community Cycles
- Landscape Architecture with Native Edge Landscaping
- Photography with Cinder Trout
- Ecology with Wildlands Restoration Volunteers