

# Sixth Grade Curriculum Guide

## Our Mission as a Friends School: Quaker Beliefs, History and Practice

Quaker beliefs and practice are woven into our middle school on a daily basis in our emphasis on community and conflict-resolution, in collaborative and reflective teaching methods, in cooperative projects and assignments, in the language we use and the choices we offer, in the construction of our curricula, in our focus on questions and queries, in our incorporation of diverse experiences and perspectives, and in our practice of silence.

For sixth-graders, the SPICES are woven into the curriculum. Discussions of Community and Integrity which began in the fifth grade are reframed through considerations of systemic and systematic influence. Studies of the human body and animal kingdoms address issues of organic growth and cell specialization and the balance which must be achieved for health. Students learn about practices which promote healthy bodies and how to resist social and media influences which endorse unhealthy choices. In mathematics, students become increasingly familiar with mathematical vocabulary and concepts such as integers, equalities, and equations. In language arts, students read and discuss the themes of Influence and Identity, considering how different social and environmental influences define an individual's identity and how an individual may exert intentional decision-making in the midst of influences. Issues of Equality, influence, Integrity and identity are considered as well in Spanish class as students explore immigration from a number of angles including social and economic policy as well as the day-to-day life experiences of immigrants. The SPICES, particularly Community, Integrity and Equality, as well as the themes of Influence and Identity, allow students in the sixth grade to explore connections between subject areas as well as to link academic studies to their personal lives and community values.

### STUDENTS WILL LEARN ABOUT

- The six Quaker testimonies (SPICES): Simplicity, Peace, Integrity, Community, Equality, Stewardship
- The purpose of Silent Meeting
- The “inner light” or “that of God” in each of us
- The historical beginnings of Quakerism

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- Basic religious beliefs of Quakers
- The actions of Quakers on behalf of social justice
- The value of community service
- The value of stewardship and conservation

## **STUDENTS WILL HAVE OPPORTUNITIES TO EXPERIENCE AND TO PRACTICE**

### **SILENCE**

- Have strategies for settling into silence
- Use silence to regain balance
- Use silence to reflect
- Use silence as part of conflict resolution
- Understand silence as something other and more than the absence of sound

### **SIMPLICITY**

- Identify cultural values that are at odds with simplicity and understand personal choices in relationship to that tension
- Recognize commercialism and the ways in which commercial culture encourages materialism and generates “false” needs
- Recognize that we can be satisfied and nurtured by the “fruits of the spirit”
- Recognize that simple ways of living better preserve and conserve our natural resources
- Recognize that sometimes the simple solution can be the best solution and learn to look for the simple solution

### **PEACE**

- Identify the physical and emotional feelings of being at peace
- Identify forces or influences that erode personal peace
- Know and use strategies to restore personal peace
- Identify and articulate personal needs in particular situations
- Identify and express a range of emotions
- Use “I” statements in negotiating conflict

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- Tell one's own story/perspective with integrity
- Listen without interruption to someone else's story/perspective
- Take responsibility for one's words and actions
- Make and accept apologies
- Identify differences of opinion and/or perspective
- Problem-solve how to arrive at "win/win" solutions
- Identify steps that escalated a conflict and steps to de-escalate a conflict
- Seek help at the appropriate time
- Walk away to disengage
- Identify responses to personal, social, and historical conflicts that involve aggressive and/or violent uses of power along with the destructive effects of such power
- Identify forces or factors that erode the peace of communities, societies, and cultures
- Know about and use alternative, non-violent options in response to conflict

## INTEGRITY

- Recognize the connection and/or gap between personal values and actions
- Speak one's own truth regardless of popular opinion/peer pressure
- Take responsibility for one's words and actions
- Recognize that words are actions with effects and not "just words"
- Embrace the courage to tell the truth regardless of consequences
- Embrace the courage to express one's truth and to support others in doing the same
- Understand academic integrity and the definition of plagiarism

## COMMUNITY

- Make contracts and agreements for peaceable cooperation within a community
- Articulate affirmations for self and others
- Problem-solve with the needs of the group in mind along with the needs of the self
- Act on behalf of the community willingly and cooperatively as "second-nature"
- Recognize that the actions of "elders" influence younger students and choose to be a positive influence
- Identify when simmering or underground tensions or conflicts are harming the community and bring them out into the open to be addressed
- Recognize actions that can harm community and make personal choices to strengthen community

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- Speak up when others are considering actions or are acting in ways that are harmful to others and/or the community
- Act to assist and/or care for people in need
- Identify the importance of ritual in life passages and share celebrations
- Participate actively in serving the community

## EQUALITY

- Identify actions, language, and practices that create inequities
- Speak on behalf of those who lack power or privilege in specific situations
- Know how to respond when people are put-down or called names
- Recognize stereotypes
- Act inclusively to allow everyone access to resources, activities, relationships
- Analyze social institutions to identify ways in which equality is supported or eroded
- Examine history to understand how people have worked to create equality within communities, societies, and cultures

## STEWARDSHIP

- Make use of daily habits that maintain the school facility and materials
- Understand different types of resources and how they are used at school; act to conserve resources
- Recognize the connection between values and expenditure of resources
- Identify equitable distribution and inequitable distribution of resources in communities ranging from the classroom to the world
- Plan with a consideration of resource management
- Perform actions voluntarily and cooperatively to serve the community and/or preserve the environment
- Identify cultural practices and legal actions that preserve and erode the environment

## COMMUNITY SERVICE

For centuries, Quaker testimonies of simplicity, peace, integrity, community, equality, and stewardship have led individuals and groups toward transformative civic engagement. The desire to seek a world in closer alignment with the values of the testimonies calls Quakers to a higher level of awareness about social justice and injustice.

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It is in this tradition of service to build a greater good that FSA asks of its students to perform community service hours in the middle school. In addition to the possibility of improved social outcomes for our community, we believe that volunteering yields significant educational and social enhancements to students.

Students blossom as they discover a new area of interest, make a connection between subject matter and the “real world,” take pride in a job well-done, or succeed in leading a community wide effort. Additionally, we know that as students transition to high schools, a record of community service signifies a quality of character that is valued. Finally, serving others is personally fulfilling, satisfying what we believe is a deeply held need: to, in some small way, make a positive difference in the world. Serving others is a booster to self-esteem and quite simply, feels great.

## Requirements

In an effort to support our students in their cognitive and social development, our requirements for fulfilling community service grow incrementally over the four years of middle school. We have made a distinction between two levels of service: one which involves students in manageable community service activities and supports success, another which exhibits a significant commitment to a life of service. **Sixth graders are asked to contribute ten hours of community service and twenty hours to show significant commitment.**

Upon completing a community service opportunity, students must complete a community service slip (located in their homerooms) indicating the number of hours served. Students should obtain a signature of a person at the agency where the student performed the service or from a parent who can verify the participation. Students can turn in the completed slip to the designated teacher.

Community service hours are tallied at the end of each quarter and recorded on students’ reports.

## Opportunities for community service at FSA:

There are a variety of ways students can obtain community service hours at FSA.

- Grandparents and Special Friends Day Day
- Open House Days
- Field Day
- Other Special Events
- Administrative Support

From time to time, other opportunities arise. Teachers make an effort to alert students of these opportunities.

## Guidelines for Community Service:

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We wish to encourage students to volunteer outside of FSA at nonprofit organizations that benefit the greater community in some way. While enterprises such as babysitting or working in a general office provide useful and meaningful experiences for students, they do not constitute community service activities. However, if the babysitting happened at a women's shelter or the office work happened at a nonprofit organization, then the activity would match the spirit we are intending for community service at FSA.

We feel that community service opportunities are a great way to deepen existing student interests or develop new ones. One way to seek meaningful community service opportunities outside of school is for families to have a discussion with their student about what ways he or she might like to help in the community. Conversations about social issues in their neighborhood are a great catalyst for learning more about what appeals to a student.

## **EMPOWERING CONFIDENCE AND SUCCESS: INTERNALIZING STRATEGIES AND EXERCISING HABITS**

In middle school, students learn how to learn and to negotiate the demands of an increasingly complex and demanding school day. Their books and papers multiply. Their backpacks get bigger and heavier. Their assignments become more varied in tasks and timelines. All of this occurs as students are transitioning into greater independence and increased freedoms and choice. To manage these changes successfully, students need to internalize the strategies and habits of successful students, who are punctual, prepared, participatory, proactive, productive, and purposeful. In fact, these strategies and habits form the foundation of life-long learning and contribute to attitudes of confidence and well-being.

The goal for student skills support is for students to practice and internalize the skills, habits, and processes of independent, life-long learners. Students will achieve independence at different rates, so opportunities exist for students to maintain support as long as they require it. At the same time, students who have internalized these skills and habits are allowed more independence. Communications between home and school provide a strong foundation for supporting students in organizational growth. Homeroom teachers, who are also student advisors, oversee plans for incremental support and manage home-school communications.

Sixth grade students continue learning student and study skills through consistent routines and direct instruction. Teachers of all academic subjects actively teach students the skills that are needed to do well as a student of their subject. In addition to the skills developed in the fifth grade, sixth graders increase their experience with subject-specialization. As students move through middle school and into high school, their subject-area reading becomes more specialized and requires note-taking. Sixth graders focus on these skills in classes as well as in a reading class which meets two days a week. This class reinforces and stretches students' reading skills while also engaging them in subject-specific strategies for reading and note-taking.

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Students in the sixth grade continue to learn effective homework and study habits. The goal of homework in middle school is to develop productive work habits, practice target skills, reinforce learning and gain experience in extended projects. As subject-area specialization increases, students also spend more time reviewing and learning concepts and knowledge. It is important for students to learn strategies to store and access information in long-term memory, strategies which are tailored to a student's learning profile and will therefore be most effective. Middle school students typically need a great deal of structure to develop successful homework completion habits and routines. We provide this structure through an incremental increase in homework expectations across the middle school grades and the consistent applications of communication and assessment routines.

Students in sixth grade are expected to do up to an hour and thirty minutes of homework a night without outside reading. Homework includes an organization component. A key to success in middle school is organization! To be organized, students must spend time every day reviewing assignments and dispatching papers to the appropriate locations. We have included time for organization because we know that students who are successful attend to their systems on a regular basis.

Students can expect homework to include organization (10 minutes); language arts (15 minutes); math (20 minutes); science (20 minutes); social studies (20 minutes); Spanish (5 minutes). These times are guidelines, and students should not be working for much longer than the specified amount except to do outside reading. All students in middle school are required to engage in sustained outside reading on a nightly basis to increase fluency and skills. This reading requirement is one way that teachers are able to tailor homework to the individual. For students who read slowly or who work slowly, the reading times may include reading for subject-area classes such as social studies and science. For example, time spent reading a chapter of science and taking notes may count for the reading requirement minutes for that night's homework. For students who read and work more swiftly, and who are ready for additional challenge, the expectation for outside reading could be designated as non-subject-area-assignment reading. In this way, teachers are able to adjust based upon a student's learning profile and goals for high school. Teachers also provide an increased challenge amount of reading for students ready and able to do more, and this challenge is noted on a student's academic report.

## **ACROSS THE FOUR YEARS OF MIDDLE SCHOOL, STUDENTS WILL PRACTICE AND INTERNALIZE STRATEGIES FOR AND HABITS OF BEING**

### **PUNCTUAL**

- Be on time for school and class
- Let people know if you cannot be where you are supposed to be

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## PREPARED

- Keep an accurate and up-to-date agenda (planner) and use it successfully
- Come to class and arrive home with the necessary materials, including homework and printed assignments
- Set materials up for class before the teacher begins
- Complete homework each night with care and effort
- Come to discussions having read or studied required material and ready to support ideas with specific examples and evidence
- Know how technology can assist with writing, note-taking, and project production
- Create accurate plans to manage time in order to complete assignments
- Develop incremental project plans for longer-term assignments

## PARTICIPATORY

- Follow class processes
- Adhere to complete work processes for various disciplines
- Volunteer answers/comments in class using elaboration and detail
- Demonstrate active listening and attending by being able to reflect and paraphrase multiple perspectives
- Engage effectively in a range of collaborative discussions and small group work with diverse partners
- Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed
- Use strategies for productively negotiating differences of opinion, attitude, and ability

## PROACTIVE

- Understand one's own learning style or profile and know supportive learning strategies
- Identify areas of challenge and difficulty
- Understand different resources that can be used for solving different problems
- Actively seek assistance when problems arise
- Advocate for self academically and socially
- Demonstrate leadership in the classroom by helping others and modeling productive and respectful behaviors

## PRODUCTIVE

- Manage focus and energy appropriately in class
- Take the necessary time to read and interpret directions
- Begin work right away, recognizing and responding to procrastination with useful strategies

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- Self-identify off-task behavior and redirect
- Sustain periods of focused work
- Take notes successfully given learning profile
- Study for tests successfully given learning profile
- Commit time to checking work, reviewing, and proofreading

## PURPOSEFUL

- Aim for personal best
- Seek discovery and take advantage of learning opportunities
- Maintain a positive attitude
- Demonstrate resilience by learning from mistakes and making productive use of feedback
- Engage in effective self-assessment (set reasonable goals, develop plans for reaching goals, and implement plans with purpose)
- Demonstrate academic integrity by doing one's own work, differentiating between one's own and others' words, and adhering to conventions of citation and reference

## STUDENT SKILLS EMPHASIZED IN FIFTH AND SIXTH GRADES

The list below identifies skills and processes focused on in fifth and sixth grades. Because students have different learning profiles and come to mastery at different times, students are seen as having both years to practice and master skills.

Sixth graders continue to receive direct instruction in student skills in their academic classes as well as homeroom. Sixth graders also spend three days a week in a class which focuses on reading instruction. As students move through middle school, subject-area instruction becomes more specialized, as do texts and textbooks. In sixth grade reading class, students focus on learning strategies for discipline-specific reading and for taking notes while they read. Students continue to read for pleasure and are encouraged to explore new genres. They also read to explore themes and investigate problems that arise in their personal lives and middle school community. A goal of the reading class is to demonstrate the efficacy of reading in many areas of academic, personal, social and civic life.

Students moving into seventh grade are expected to have ownership of most student skills and habits. That being said, some students continue to need additional practice and support in order to gain mastery. For these students, student skills classes continue to be offered as an alternative to learning a second language.

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## KEEPING A WEEKLY PLANNER

- Have a consistent location for weekly planner
- Get planner out at the appropriate times
- Write assignments down accurately and legibly
- Double-check planner and know how to get missing information (website, study buddy, teacher)
- Ask for help when an assignment is confusing

## KEEPING A NOTEBOOK

- Be familiar with systems and supplies
- Clip or file papers where they are supposed to go right away
- Keep notebook sections in order
- Clean out notebooks on a regular basis (making decisions about what should be kept in notebook, filed, and discarded)

## HAVING THE RIGHT MATERIALS AT THE RIGHT TIME

- Keep a copy of schedule handy for packing up during the school day (locker door is a great spot)
- Keep locker tidy and organized
- Select necessary materials for next block of classes (between locker breaks)
- Use planner at end of day to select materials needed to complete homework
- Use planner at home to select materials needed to pack up for the next day
- Pack up at home ahead of time after completing homework

## COMPLETING HOMEWORK ON TIME

- Keep and use a planner
- Have a routine time, place, and process for doing homework tasks that includes breaks
- Refer to planner at home to make a homework plan that estimates how much time tasks will take and organizes the task into workable, manageable order with breaks
- Follow homework plan and check off each homework assignment when it is finished
- Double-check planner and check-marks to be sure all assignments have been finished

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- Print papers and assignments the night before to have them ready for class, or, if printing must happen at school, develop plan for printing BEFORE class
- Use trouble-shooting strategies: phone a friend, check website, ask a parent for help, get a parent note, etc.
- Have a fool-proof pack-up routine that involves returning materials to backpack and filing homework in a consistent, easy-to-access spot

## HAVING A PRODUCTIVE CLASS ROUTINE

- Locate a seat that works for focused concentration
- Get the appropriate materials out before class begins (including planners, homework, and sharpened pencils)
- Write down homework without reminders
- Ask questions when confused
- Use space breaks as needed to stay on track
- Follow processes defined for class
- Put materials away in the appropriate places in the classroom and in notebooks or other personal materials (not stuffed randomly in backpacks, books, or notebooks)

## READING

- Select “just-right” books
  - Sustain reading for an extended period of time on a regular basis
  - Sustain listening focus to a book being read aloud
  - Maintain chart or record of reading
  - Recognize key words in directions and the actions those words represent
  - Make predictions about what may happen based upon textual clues
  - Identify cause and effect in plot
  - Create “mind-pictures” while reading
  - Recognize the many features of a text and use them to comprehend, including pictures and graphics, headings and sub-headings, front and back covers, tables of contents, copyright pages, glossaries, and indices
  - Scan and reread to locate information to answer questions
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- Identify the difference between reading for entertainment, reading to evaluate, and reading for information.
  - Identify main ideas and supporting details
  - Summarize main ideas in logical sequence using one’s own words

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- Evaluate book on a scale of 1-5 and provide personal reasons for that evaluation
- Demonstrate an understanding of the difference between the words of another text and one's own words
- Use strategies for defining unfamiliar words including use of context clues, dictionaries, and prefix, suffix, root analysis
- Use strategies for marking and noting information while reading (graphic organizers, notecards, sticky notes, computer tools)
- Identify purpose for reading and use strategies appropriate to purpose
- Practice active reading by previewing and reviewing texts when appropriate

## DEVELOPING BASIC NOTE-TAKING AND STUDY SKILLS

- Understand the importance of reading, re-reading, and checking directions
- Use notecards to record information and to study
- Decide what information is important to write down, to study, and what materials should be available at the right times
- Use graphic organizers to take notes
- Make studying active by using strategies that appeal to different modalities
- Become familiar with different computer note-taking tools and practice using them
- Select note-taking strategies with an awareness of personal learning profile
- Use resources to ensure notes are accurate and comprehensive (classmates, teachers, books)

## DEVELOPING BASIC TEST-TAKING SKILLS

- Understand the importance of reading, re-reading, and checking directions
- Know strategies for taking matching tests
- Know strategies for taking multiple choice tests
- Notice key words that tell you what to do or give you important information
- Take a "bubble" test
- Write a clear and comprehensive short answer in a complete sentence or a few complete sentences
- Know the importance of and practice checking over work

## PARTICIPATING IN GROUP ASSIGNMENTS OR PROJECTS

- Read group assignment directions
- Define the problem or assignment and brainstorm approaches

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- Identify and assign tasks
- Focus and follow-through on discussions and tasks
- Listen to questions and ideas of others
- Offer ideas and ask questions
- Recognize balance between contributing and listening
- Know roles that can be assigned in group work (clerk/leader, recorder, time-keeper, etc.) and respect the roles as assigned
- Seek assistance as needed from teacher

## CONDUCTING RESEARCH

- Know about different resources: dictionaries, encyclopedias, almanacs, atlases
- Identify the question or topic
- Use table of contents, glossary, index, headings and sub-headings to find information
- Generate key words and phrases for information searches
- Identify information pertinent to question or topic
- Use methods to note information (both hand-written and computer methods)
- Identify source for noted information
- Put information in “your own words”
- Use citations for pictures and information

## SETTING AND MEETING GOALS

- Assess performance realistically
- Consider input from others and determine how to respond
- Identify areas for growth as well as achievements
- Specify a manageable benchmark on path to goal
- Ask for assistance
- Recognize and celebrate when a benchmark has been reached
- Keep trying when success proves difficult and maintain positive attitude

## Academic Subjects

### LANGUAGE ARTS

#### TEXT SELECTION

##### Textbooks

*Reader's Handbook*, Grades 4-5, Grades 6-8 (to support differentiated instruction)  
Daily Grammar Practice Grade 6

##### Additional Materials Include

Evan-Moor: *A Word a Day*, *Poetry Comprehension*, *Poetry Patterns to Read and Understand*, *Writing Poetry*  
Harcourt Family Learning: *Writing Skills*, *Language Arts*  
Houghton Mifflin: *English*, Grade 6  
Jossey-Bass: *The Blue Book of Grammar*, *Grammar Grabbers*  
The Learning Works: *Prefixes and Suffixes*  
Lipson: *Poetry Writing Handbook*  
The Princeton Review: *Word Smart Junior*  
Sylvan: *Vocabulary Success*  
Scholastic: *Mastering the 5 Paragraph Essay*, *Super Sentences and Perfect Paragraphs*, *Styles of Writing*, *Writing Lessons that Work*, *100 Vocabulary Words Kids Need to Know*, *Ten Fabulous Forms of Poetry*, *Teaching Grammar with Playful Poetry*  
Spark Publishing: *Daily Spark for Writing*, *Spelling & Grammar*, *Reading Comprehension*, *Critical Thinking and Poetry*  
Spectrum: *Language Arts*, *Prefixes and Suffixes*  
Walch Publishing: *Find the Errors!*

##### Textbooks

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## Other Texts

First and foremost, texts for Language Arts classes are selected based upon a teacher's vision for his or her class and specific instructional goals. In addition, however, text selection in middle school is subject to a variety of considerations arising in part from the "in-between" nature of middle school readers. Students are at a variety of reading levels and maturity levels. Especially as students move into the seventh and eighth grades, the books aimed at nine to twelve-year-old readers become too easy to provide challenge for some students. Young adult fiction, however, often presents serious and more mature subjects that not all students or their parents are ready to have introduced. The reverse is also true. Some older readers may have the skills for nine-to-twelve year-old books but feel pinched by the younger point of view. Many parents ask about the classics, and certainly students need to begin experiencing the classics, but issues of reading and maturity levels arise as many classics were written for an adult readership. Adults often wish to prolong students' introduction to serious topics, and some students recognize inside a quiet desire to remain a child for just a bit longer. Other middle school students want nothing more than to consider life's hardest questions and saddest problems, and they wish to discuss these in detail and depth as they come to terms with growing up in a complex world. Selecting appropriate books for groups of middle school readers presents a number of challenges.

At FSA we attempt to navigate this complex of variables by following some guidelines in a thoughtful and reflective way. First of all, we remember our mission as a Quaker school, which calls us to bring considerations of justice and peace into our selection process. We would not choose to teach a text, for example, that extolled the use of violence to solve problems. Of course, many texts represent acts of violence in order to critique them or to raise questions about the culture that values such acts. In choosing such a text, we would do so carefully and with a plan for how to teach to the issues raised by the text. This approach would be the case for other issues or choices called into question by our mission or values. We do not shy away from reality, but we do look carefully at the ways in which the text responds to that reality. When thorny issues are addressed, we inform families ahead of time so that any concerns can be communicated and addressed. Teachers consider how to involve students in reflecting upon what they encounter in a productive and positive way. Any specific recommendations for students are made with the individual student and family in mind. Another guideline in our text selection is that we turn to families for support and input.

In choosing texts, we are guided by our commitment to diversity within an inclusive community. We try to ensure that all students experience authors and characters with whom they can identify as well as from whom they can learn about different perspectives and experiences. Our reading should be representative in authorship and depiction of the diversity within our community. A goal is to engage students in multiple viewpoints while remaining aware of the age affinity of middle school students. We challenge ourselves to be aware of stereotypes in texts, selecting against them or, in the case of historically-based and/or biased texts, discussing the effects of such stereotypes on real readers. We ask students to read within the text, understanding the world that is created from the inside, and then to step outside of the text and assess it within the context of their own values and beliefs.

At FSA we are committed to selecting quality texts that inspire and engage students. We often choose books that have been given awards for excellence. Teachers select texts that enhance the thematic investigations of their classes and/or address issues relevant to the lives of middle school students. We try to prepare students for the world in a developmentally-appropriate way, although this process is never a clear formula that applies to all students at all times. We believe that the most productive approach is open communication with students and parents.

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## KEY CONTENT THEMES

In shaping our language arts program, we have embraced research showing that students gain literacy skills more effectively in a rich textual environment in which the real-world uses of reading and writing are demonstrated and emphasized. At the same time, we have listened to students through the years speak of their experience, which overflows with words: magazine advertisements, television, lyrics, the internet, newspapers, textbooks, billboards, and on and on. Wherever they look or whenever they listen, words tumble at them, whispering or screaming some sort of message. Often their response to this barrage is to conclude, “They’re just words,” words with no authentic connection to truth or reality, words that do not really matter. One of our goals is to convince students that not only does effective language-use enhance academic and real-world success, but language does, in fact, shape truth, reality, and identity.

Another of our goals is to provide students with the knowledge and skills needed to use language wisely and well. Then students will increase their academic and vocational effectiveness. They will better their abilities to negotiate the adult affairs, issues, and institutions that are coming their way. They will strengthen their ability to shape truth, reality, and identity. Rather than being unreflective consumers of language, or naïve rebels who oppose the enterprise even as it impacts who they are and what they can do, we want students to be active and astute writers, readers, and speakers, aware of how language impacts them, aware of their own language choices. The testimony of integrity calls us to use words intentionally and authentically. We want students to have the courage as well as the skills to answer that call.

Finally, we want students to appreciate and enjoy language, to recall the early magic of discovering the world again by learning the words to name its parts. Before babies ever speak, they recognize the voices of those most important to them, delighting in the tones and sounds of the words, soaking up stories and songs and just plain silliness. Then the mystery of speech unfolds. The circle of familiarity enlarges as words are put to things and actions and then relationships. Such serious, important work remains playful. Children know well how to do some serious play. Our goal is for middle school students to retain that ability, or, if necessary, to rediscover it no matter how long ago it might have been lost. We want words to provide them with the comfort of a familiar voice, the delight of tones and sounds, the breathless “what’s next” of a great story, and the satisfaction of an apt ending. We want words to provide answers and counsel in times of trouble and to shape the questions that lead to revelation.

### Reading

Reading ability is critical for academic success in all areas. Research has shown that sustained, independent reading outside of school positively correlates with reading fluency, comprehension, vocabulary enrichment, verbal intelligence, general knowledge about the world (schema), standardized test scores, general academic achievement, and even with regular adult exercise. Unfortunately, research also indicates that during middle school students tend to spend less time reading. A central goal for our program is to involve students regularly in sustained, independent reading in order that they derive the

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benefits listed above. Additionally, we would like to see students develop a sense of pleasure in reading that will support the habit for a lifetime. To do so, we must remain aware of the purposes for which students read and the kinds of materials they like to read while also introducing them to new purposes and genres that strengthen their reading muscles. Structured choice is central to our approach to reading. We offer students a combination of free choice, guided choice, and required reading assignments in order to best perform this dance of partnered attention to students' purposes and the demands of academic mastery and flexibility.

Books recently included in the sixth grade reading repertoire include: *Tuck Everlasting* by Natalie Babbit, *Where the Mountain Meets the Moon* by Grace Lin, *Hoot* by Carl Hiassen, *The Firemaker's Daughter* by Philip Pullman, *Maniac McGee* by Jerry Spinelli, *White Giraffe* by Lauren St. John, *Harriet the Spy* by Louise Fitzhugh, and *Death by Eggplant* by Susan O'Keefe.

## Outside Reading

For the four years of middle school, students engage in sustained, independent outside reading. In recognition that this rigid structure defies the rather fluid nature of reading habits for many, teachers begin to individualize the reading requirement and structure to suit the student. Some students absolutely need a rigid structure to support the habit of reading. Others may gain more satisfaction and success if the schedule is altered to fit their family's weekly round of activities. Still others need to be completely in charge of when and where they read. Teachers, students, and parents work out these plans together. Another adjustment that can be made to better address the needs of individuals involves the amount of reading time. While forty minutes of reading for some students is a nightly achievement, for others it is just one lap of many in a day spent with a book. These students can increase the amount of nightly reading and the difficulty of the reading in order to achieve the strengthening effect targeted by this requirement.

Central to the success of the outside reading requirement is that students have a degree of choice in the material they read. While students are often asked to read specific materials for classes, they retain some choice over their reading, which can be adventure, mystery, science fiction, fantasy, biography, science, history, poetry, drama, and more. Some of the time, teachers will ask students to select a book from a reading list, making a choice that departs from the usual fare, in order to encourage students to try new genres or authors. On occasion, teachers will ask students to read the same text as a group or a class. At these times, reading assignments can count as outside reading—or not, if the student wishes to continue the other book at the same time. Teachers are available to help students select books, but perhaps the most effective counselors are other students. The more students talk to each other about the books they read, offering evaluations and suggestions, the more that reading becomes an integrated part of their lives and of the school culture. Teachers often support this development by providing students with opportunities to talk about their books. The more this forum is addressed to students rather than teachers, the more successful it will be. Therefore, in addition to then writing the traditional book report, teachers might ask students to write postings for a class website designed to provide suggestions for outside reading, or students might be given a variety of fun options for displaying their information about their books such as cover designs or dramatic enactments or pyramid sculptures.

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## Reading Aloud

Middle school students have not outgrown the read-aloud experience. They continue to take pleasure in hearing a story read aloud. Additionally, the activity of reading becomes communal rather than individual, which appeals to the social nature of middle school students. There continues to be an advantage in having students hear new words and their correct pronunciations. Additionally, in this communal environment, teacher and students can pause to discuss aspects of the text, which results in increased comprehension as well as new schemas for comprehension. There are many ways that readers engage with the texts they read. Academic strategies are but one set of approaches, a critical set for success in school. Through discussion of a shared text, students learn and reinforce through practice academic reading strategies that are modeled by the teacher. Students learn what details are given greater value, how to locate patterns in those details, how to identify the pattern called a “main idea” or “theme,” how to ask the kinds of questions that skilled academic readers ask, and so forth. Teachers at FSA recognize that academic success requires a comfortable mastery of these strategies, but they also recognize that these strategies, while critical for success, are not inherently superior to other ways of reading that students may carry with them that have been developed and reinforced in other environments. The experiences and strategies that students bring into the classroom are recognized as having value while, simultaneously, students are taught the academic strategies that will bring them success. Students learn to select successful strategies for the purpose before them.

## Academic Reading Instruction

Academically-successful readers have a bountiful collection of strategies available to them as well as the ability to match the appropriate strategy to the situation. As students move through the four years of middle school, their collection of strategies increases. In the fifth and sixth grades, students continue to refine and practice literal comprehension skills to increase the accurate decoding of textual information. Students also practice the inferences expected of skilled readers and build their knowledge of patterns, conventions and connections that characterize different genres of text. They practice identifying main ideas, sequencing ideas or events, and summarizing.

Students learn that a text can be read from multiple perspectives, for different purposes, resulting in a variety of experiences or readings. As teachers who are passionate about our subject, we are very aware of this multitude of possibilities. As we move students into literary experiences, we select texts that will provide a particular learning experience which is based upon and contributes to a conversation we are building in our classes.

Included in academic reading instruction are research methods and skills. Students throughout middle school are involved in research activities because our courses are investigative. We emphasize asking good questions and knowing how to go about answering them. Students learn about different resources, where to find them, how to access them, and how to use them. They learn about search strategies. They practice the detective mindset that characterizes the best researchers. They develop the ability to reframe a question, to pursue an alternative search strategy, to look in the obvious and less-obvious places, thereby strengthening the resilience, persistence and flexibility characterizing successful creators and inventors. They learn strategies for

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tracking information and resource-use along with the appropriate applications of bibliographic form. They encounter and revisit the ethics of citation and the definition of plagiarism.

## Writing

In the middle school, we teach writing as a process. We ask students to learn about and to move through the stages of writing that researchers have identified expert writers as using: pre-writing, drafting, revising, editing, and proofreading. Our emphasis is on learning strategies that help writers articulate their thoughts, beginning when they first read an assignment and ending when they correct the last grammatical error. This approach breaks writing into a series of defined, smaller tasks that make a difficult process more manageable.

A foundational goal for any writer is fluency: students need to get comfortable producing text. For a while, students need to write often to become better at generating ideas. These ideas may not be cohesive or fully developed, but over time students will master these aspects of writing, too. We ask students to focus on and practice particular aspects of writing, gaining control over those, and then moving on to others. The ability to summarize a text is developed in the fifth and sixth grades. Summary seems simple, yet to summarize students must decode accurately, recall details, assign importance and value, generate sequence, and draw conclusions, all of which must be cast into language and form. A one-sentence summary is different from a paragraph summary, which is different again from a two-page summary. A novel summary is different from a textbook summary. Students build their skills at writing summaries as they practice the writing process and become better at adapting that process to the writing task at hand and to their individual learning and composing styles. In addition to standard academic writing tasks such as the summary, review, report, and argument, students use the writing process to compose a variety of other forms such as poems, stories, autobiographies, letters, editorials, newspaper articles, and scripts.

Revision relies upon reading. To revise, a writer needs to step back from his or her text and read it to see what works and what does not. This kind of reading departs from what students typically do, for they must analyze how a text works as well as what it says. Once the troublesome areas are pinpointed, the writer problem-solves how to rework problem areas in order to make each and every part of a text successful in contributing to the whole. In the middle school, we spend time teaching students how to do this specialized kind of reading not only for their own papers and but also for their peers' papers. Students learn how to identify and communicate strengths. They practice expressing problems specifically and neutrally so that their feedback can be heard. They practice hearing feedback with a positive attitude. In writing conferences, students share ideas about how to solve problems and improve their work. Over time, students develop their skills as critical readers of writing. They also begin to internalize the voices of their peers and their teachers, increasing the options available to them when they write and revise independently.

Students learn how to read their writing in order to correct grammar, syntax, punctuation, and spelling. This stage of the writing process requires that students build a storehouse of knowledge. They need to know spelling rules and exceptions. They need to know how to use a dictionary. They need to know rules for capitalization, punctuation, and usage. They need to know how to use a grammar handbook. They need to be able to hear or sense when a word or phrase or idiom is misused. They need to read carefully and closely enough to see when a word is missing or a letter is left off. They

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need to know how to recognize complete and incomplete sentences, as well as several sentences that have been erroneously spliced together. This very particular kind of reading typically requires knowledge of the parts of speech so that the sentences can be analyzed and their grammatical completeness determined. Over the four years of middle school, this storehouse of knowledge gets built and used as students learn grammar and usage and rules that are then put to work in their own writing. Students also practice proofreading and are asked to proofread every assignment they turn in, providing as part of the heading the number of minutes spent locating errors in the paper. Our goal is to signal the importance of this final stage of writing so that students, through practice, make habitual this specialized act of reading.

## Supplementary Areas of Study

Best practices in language arts instruction specify that learning about language happens contextually. Students need to experience chunks of text written for actual readers for authentic purposes. Mastery of vocabulary or textual convention is best achieved when connected to actual texts and language-use. Still, students in Middle School often need to focus on vocabulary development and grammar in order to grasp the analytic techniques used to describe and manipulate language; students also often need to build knowledge of these fairly rapidly in order to prepare for the academic demands of high school and standardized testing.

Throughout Middle School attention is given to vocabulary development and grammar, which includes learning the rules for Standard English. Students engage in mini-lessons and practice exercises to cement mastery. Whenever possible, however, teachers tie these lessons and practice exercises to whole-piece reading and writing. Students may be asked, for example, to do an exercise in which they match a new vocabulary word to its definition. But then they may also be asked to write a story using the new vocabulary words, thereby placing the words in context. When these stories are read to the class, the text becomes even more “real-world,” for it gains an audience in addition to the teacher. Teachers strive to teach vocabulary using multi-sensory practices so that students with a variety of learning styles can discover the exuberance of words! In addition to creating the tried-and-true flashcards, students might play vocabulary tag, offer a definition as a pass to enter or exit class, draw pictures of the words, engage in vocabulary charades, or use an on-line study site that offers games tailored to the student’s vocabulary words.

Grammar instruction occurs both formally, with students learning parts of speech and sentence analysis, as well as contextually through editing and proofreading their own and their peers’ texts. Students may, for example, be introduced to active and passive verbs and given explanations as to what they are and how to identify them. Then they may be asked to identify active and passive verbs in stand-alone sentences. But will also be asked to identify those verbs in their own writing, noting differences in how well the sentences convey meaning and why when using verbs in the active and passive voice. As teachers continually link practice exercises to actual texts, students begin to understand the motivation for knowing conventions and applying them effectively. As students return to their own texts, and receive feedback from other readers, we hope they discover the relevance of knowledge that can too easily seem like arcane and mysterious riddles.

The language arts skills listed below are adopted from the Common Core Standards <http://www.corestandards.org/>.

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## SKILLS

### Reading

#### Reading Informational Text

Students will:

- Cite textual evidence to support analysis of what the text says explicitly, as well as inferences drawn from the text.
- Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
- Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
- Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
- Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
- Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.
- Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
- Compare and contrast one author's presentation of events with that of another (e.g., a memoir written by and a biography on the same person).

#### Reading Literature

Students will:

- Cite textual evidence to support analysis of what the text says explicitly, as well as inferences drawn from the text.
- Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.

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- Describe how a particular story’s or drama’s plot unfolds in a series of episodes, as well as how the characters respond or change as the plot moves toward a resolution.
- By the end of the year, read and comprehend literary nonfiction in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
- Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.
- Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
- Explain how an author develops the point of view of the narrator or speaker in a text. By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.

## Integration of Knowledge and Ideas

Students will:

- Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they “see” and “hear” when reading the text to what they perceive when they listen or watch.
- Compare and contrast texts in different forms or genres (e.g., stories and poems, historical novels, and fantasy stories) in terms of their approaches to similar themes and topics.

## Writing

### Text Types and Purposes

Students will:

- Write arguments to support claims with clear reasons and relevant evidence.
  - Introduce claims and organize the reasons and evidence clearly.
  - Support claims with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text.
  - Use words, phrases, and clauses to clarify the relationships among claims and reasons.
  - Establish and maintain a formal style.
  - Provide a concluding statement or section that follows from the argument presented.

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- Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization and analysis of relevant content.
  - Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting (e.g. headings), graphics (e.g., charts tables), and multimedia when useful to aiding comprehension.
  - Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.
  - Use appropriate transitions to clarify the relationships among ideas and concepts.
  - Use precise language and domain-specific vocabulary to inform about or explain the topic.
  - Establish and maintain a formal style.
  - Provide a concluding statement or section that follows from the information or explanation presented.
- Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
  - Engage and orient the reader by establishing a context and introducing a narrator and/or characters, organize an event sequence that unfolds naturally and logically.
  - Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters.
  - Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another.
  - Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events.
  - Provide a conclusion that follows from the narrated experiences or events.

## Production and Distribution of Writing

Students will:

- Produce clear and coherent writing in which the development, organization, and style are appropriate to the task, purpose, and audience.
- With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- Use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of three pages in a single sitting.

## Research to Build and Present Knowledge

Students will:

- Conduct short research projects to answer a question drawing on several sources and refocusing the inquiry when appropriate.
- Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic.

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- Draw evidence from literary or informational texts to support analysis, reflection, and research.

## **Range of Writing**

Students will:

- Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

## **Language**

### **Conventions of Standard English**

Students will:

- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
- Ensure that pronouns are in the proper case (subjective, objective, possessive).
- Use intensive pronouns (e.g., myself, ourselves).
- Recognize and correct inappropriate shifts in pronoun number and person.
- Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents).
- Recognize variations from standard English in their own and others' writing and speaking, and identify and use strategies to improve expression in conventional language.
- Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- Vary sentence patterns for meaning, reader/listener interest, and style.
- Maintain consistency in style and tone.

### **Vocabulary Acquisition and Use**

Students will:

- Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.
  - Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
  - Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., audience, auditory, audible).

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- Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
- Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
  - Interpret figures of speech (e.g., personification) in context.
  - Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.
  - Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *stingy*, *scrimping*, *economical*, *unwasteful*, *thrifty*).
- Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

## MATHEMATICS

The mathematics program strives to develop sound mathematical understanding, procedural fluidity and accurate computational skills that can be combined for effective use in a variety of situations. Our goal is for students to internalize concepts to the point of ownership in order to orchestrate them with confidence as required by different problem-solving situations. We hope for students to develop this conceptual facility as opposed to a mechanical application of routines and formulas, for it is in conceptual flexibility, adaptation and application that true mathematical reasoning resides. At the same time, we do not intend to undervalue the importance of procedural fluidity and computational accuracy, which, in combination with conceptual understanding, transforms students into successful mathematical practitioners. To achieve these goals, teachers adapt instruction to students' learning styles and needs, utilizing a variety of instructional modalities and methods in order to teach to strengths and address skill and concept gaps. Teachers engage frequently with each learner to assess how best to deliver instruction, optimal practice, and enrichment opportunities to extend and deepen learning.

The Friends School of Atlanta uses Everyday Mathematics, which is consistent with the elementary curriculum, and is in the process of transitioning to USCSMP Grades 6-12 for sixth, seventh and eighth grade math classes. Both Everyday Mathematics and USCSMP Grades 6-12 (Chicago Math) have been developed by The University of Chicago School Math Project to provide “a continuous Pre-K through Grade 12 curriculum with an articulated sequence of conceptual understanding, skills development, problem solving, and reasoning.” The UCSMP primary and secondary programs reflect 1) children’s experience and interests; 2) learning research; and 3) content and instructional standards identified by the National Council of Teachers of Mathematics.

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## TEXT SELECTION

USCSMP: Pre-Transition Math

From “The University of Chicago Mathematics Project Curriculum Alignment” [https://www.mheonline.com/assets/wg\\_download/lit/EM\\_UCSMP\\_Curriculum\\_Alignment.pdf](https://www.mheonline.com/assets/wg_download/lit/EM_UCSMP_Curriculum_Alignment.pdf)

USCSMP 6-12 provides a developmental curriculum with a goal of upgrading student achievement. The program offers materials appropriate to the goal of having Algebra taught to eighth-graders. Another goal is to increase the number of students who take math classes beyond Algebra and Geometry.

In addition, the developers of USCSMP 6-12 affirm the importance of an up-to-date curriculum by including current technology, statistical ideas, discrete mathematics, and applications. The enriched context of USCSMP 6-12 includes more statistics and transformational geometry at every level than traditional math programs. There are numerous opportunities for problem-solving with real-world applications in order to prepare students for job opportunities related to computers, technology, and information.

USCSMP 6-12 provides students with multiple opportunities to read and write mathematical language. As they become familiar with and then adept users of mathematical vocabulary and symbols, students increase their ability to navigate a wide range of textbooks, problems, and situations with success and confidence. Students are also invited to explore connections between mathematics and other disciplines.

As in Everyday Mathematics, USCSMP recognizes that students learn best when they are active and involved in dynamic instructional situations which have been adapted to students’ differing strengths and needs. Differentiated instructional support and independent learning are fostered by the multi-dimensional SPUR approach, which defines four dimensions of mathematical understanding: Skills, Properties, Uses, and Representations. Students’ zone of proximal development can be addressed in part by working more intensively in one of the SPUR dimensions and by varying the number and depth of dimensions.

S: Skills understanding means knowing a way to obtain a solution.

P: Properties understanding means knowing properties which you can apply. (Identify or justify the steps in obtaining answer.)

U: Uses understanding means knowing situations in which you could apply the solving of this equation. (Set up or interpret a solution.)

R: Representations understanding means having a representation of the solving process or a graphical way of interpreting the solution.

Finally, UCSMP 6-12 organizes student learning to improve performance by structuring instruction according to how students learn best. Each lesson begins with Mental Math to provide ongoing practice. Each lesson ends with review questions designed to engage students in concepts from different perspectives. Students are given numerous opportunities for concept and skill and assessment opportunities that allow students to identify areas for

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further study and practice. Students are encouraged to explore four types of questions: Covering the Ideas questions, Applying the Mathematics questions, Review questions, and Exploration questions (CARE).

## LEARNING OBJECTIVES

### Numbers and Numeration

Students will:

- Write word names for decimals, and vice versa
- Identify place values in a decimal number
- Translate back and forth from words into the decimal system
- Correctly use the raised-bar symbol for repeating decimals
- Find the percent of a quantity
- Find the percent of a quantity in real-world situations
- Rewrite numbers in base-10 using exponents
- Calculate the values of and simplify expressions with exponents
- Given a simple fraction, write other fractions equal to it
- Rewrite improper fractions as mixed numbers
- Recognize the Equal Fractions Property and the meaning of a fraction in terms of division
- Convert among fractions, decimals, and percents
- Convert between the language of fractions and the language of division
- Tell whether a fraction equals a terminating or repeating decimal
- Understand and use the Ratio Comparison Model for Division
- Use the Ratio Comparison Model to compare two quantities as percents
- Find percents of quantities in real situations

### Operations and Computation

Students will:

- Add positive and negative numbers
- Picture addition of positive and negative numbers on a number line

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- Subtract positive and negative integers, fractions, and mixed numbers
- Use the Putting-Together Model for Addition in real-world situations
- Use the Slide Model for Addition
- Picture subtraction of positive and negative numbers on a number line
- Use the Add-Opp Property to rewrite subtraction problems as addition problems
- Multiply by 10,  $\frac{1}{10}$ , 100,  $\frac{1}{100}$ , 1000,  $\frac{1}{1000}$ , and so on
- Use fact triangles to find related facts for addition and subtraction
- Find answers to whole-number divisions
- Use fact triangles to solve equations and show relationships involving multiplication and division
- Write the answer to a division problem as a mixed number
- Multiply decimals
- Find answers to whole-number divisions
- Divide by small whole numbers using short division
- Use whole number division in real situations
- Use decimal division in real situations
- Round any decimal to the indicated degree of accuracy
- Multiply positive and negative numbers
- Divide positive and negative numbers
- Use the rate model for division
- Generate random numbers
- Use division with positive and negative numbers in real situations
- Find quotients in rational number and decimal divisions
- Add fractions and mixed numbers
- Use fractions to add mixed numbers or numbers with mixed units in real-world situations
- Multiply fractions and mixed numbers
- Apply the Property of Reciprocals
- Use division of fractions and mixed numbers in real situations
- Represent the multiplication of a sum by areas
- Divide fractions and mixed numbers using reciprocals
- Multiply fractions in real-world situations
- Use arrays to picture divisibility
- Represent the multiplication of a sum by areas

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## Patterns and Functions in Algebra

Students will:

- Solve equations involving addition and subtraction
- Apply simple equations involving addition or subtraction
- Use balance scales to picture equations
- Solve proportions
- Use equation of the form  $a = xb$  to solve problems in life situations
- Use proportions in real situations
- Evaluate numerical expressions using the correct order of operations
- Identify and apply the following properties of addition:  
Commutative Property of Addition, Associative Property of Addition, Additive Identity Property of Zero, Additive Property of Opposites, and Opposite of Opposites Property
- Use the Addition Property of Equality to help solve simple equations
- Use the Take-Away Model for Subtraction
- Use the Comparison Model for Subtraction
- Use the Slide Model for Subtraction
- Identify the Commutative and Associative Properties of Multiplication
- Use the Array Model for Multiplication in real-world situations
- Solve equations of the form  $a = xb$  using the Multiplication Property of Equality
- Know and apply the Substitution Principle for decimals and percents
- Apply the Mult.-Rec Property of Division

## Geometry

Students will:

- Name and measure angles
- Apply the properties of angle addition
- Apply the Triangle-Sum Theorem and the Quadrilateral Sum Theorem
- Given steps with diagrams, create a figure out of paper
- Relate simple paper folds to geometric figures

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- Know relationships among linear pairs and vertical angles formed by intersecting lines
- Recognize acute, right, and obtuse angles, and complementary and supplementary angles
- Use properties of angles to find unknown measures of angles
- Find the measures of various angles created by a pair of parallel lines intersected by a transversal
- Given three side lengths, determine if they make a triangle
- Given the side lengths and/or angle measures, draw a triangle
- Given side lengths and/or angle measures, draw a quadrilateral
- Construct perpendiculars to a line through a point
- Construct the perpendicular bisector of a segment
- Given the steps of a construction written in symbols, perform the construction and tell what has been constructed
- Given the information about side lengths and angle measures, determine if all triangles drawn would be congruent
- Use definitions and properties of quadrilaterals to indicate relationships among isosceles trapezoids, kites, parallelograms, rectangles, rhombuses, squares, and trapezoids
- Draw and interpret diagrams relating the various kinds of triangles and the various kinds of quadrilaterals

## Measurement and Reference Frames

Students will:

- Measure lengths in customary units
- Draw a line segment with a given length
- Draw and measure lengths in the metric system
- Name and measure angles
- Find the perimeter of a polygon
- Find areas in real-world situations
- Find the areas of a parallelograms, triangles, and circles
- Find the circumference of a circle
- Use addition and subtraction to calculate the areas of geometric figures formed from combinations of parallelograms, triangles, and circles
- Find the volume of a box
- Use the formula for the circumference of a circle in real situations
- Use the formulas for areas of parallelograms, triangles, and circles in real situations
- Name the faces, edges, and vertices of a box and give the dimensions for each face of a given box
- Draw and label a net for a given box

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- Find the surface area of a box
- Use addition and subtraction to calculate areas formed by combining geometric figures in real situations
- Rewrite mixed units using a single unit
- Add lengths in real-world situations
- Multiply positive and negative numbers in real-world situations
- Convert among metric units for mass, length, and capacity
- Describe properties of points graphed on a coordinate grid
- Graph simple equations involving addition and subtraction on a coordinate grid
- Graph points on a coordinate grid
- Graph pairs of numbers from equal ratios or rates

## Data and Chance

Students will:

- Read and draw circle graphs
- Construct a histogram or stem-and-leaf plot
- Construct a circle graph by hand or by using technology
- Construct a line graph by hand or by using technology
- Differentiate between categorical and numerical data
- Create and interpret a double bar graph or double histogram
- Calculate the maximum value, minimum value, median, mode, mean, and range of a set of data
- Locate, use, and draw conclusions from data in a table
- Interpret information displayed in a histogram or stem-and-leaf plot
- Interpret information displayed in a circle graph
- Interpret information displayed in a line graph
- From data, obtain means, medians, and ranges, and compare distributions
- Relate probability to the likelihood or unlikelihood of an event
- Find the size of a sample space
- Calculate the relative frequency for an event
- Find the probability of an event
- Use the Multiplication Counting Principle

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- Use relative frequencies to estimate the probability of an event
- Understand the “Law of Large Numbers”
- Find the probability of an event in a life situation
- Represent counting situations using lists and tree diagrams
- Represent probability situations using probability trees

## SCIENCE

Our middle school science program is designed to introduce students to important scientific concepts while providing numerous opportunities for students to investigate and explore through hands-on activities, experiments and demonstrations. Students have many opportunities to learn how to think scientifically: to ask questions, use tools, collect data, make observations, generate hypotheses, conduct tests, interpret observations and data, and analyze results. They gain experience with a variety of devices and tools. They begin to learn how to express measurements, relationships and equations as well as how to use diagrams and graphs. They have opportunities to learn about and practice basic experimental design. Finally, they gain experience with expressing concepts and findings scientifically, including how to comprehend scientific writing, negotiate terminology, write sentences that articulate scientific relationships such as cause and effect, and compose subject-specific texts such as research papers and lab reports.

Disciplined and creative scientific thinking is built on a foundation of concepts and information. Our science program introduces students to substantial scientific content and builds their knowledge-base for future studies. The curriculum is organized topically and covers, over four years, a total of seven topics across the earth sciences, physical sciences, and biological sciences. Sixth grade science topics are The Human Body and Genetics, and Animal Kingdoms. Teachers use a variety of teaching methods and resources as they introduce and deepen students’ scientific knowledge. In addition to hands-on activities and experiments, teachers present concepts through lecture and discussion. Students read about and review concepts using a leading middle school science program, *Prentice-Hall Science Explorer*. The textbooks join content with hands-on scientific inquiry while also providing reading and study assistance. Teachers complement textbook study with enrichment materials they have collected themselves to pique students’ interest and to encourage connections between scientific discoveries and daily experiences. Students apply and synthesize new concepts through problem-solving investigations and creative projects. In science classes, students hear about, read about, write about, talk about, ask questions about, and do something with the new concepts to which they have been exposed.

FSA follows the endorsement of teaching evolutionary science by the National Science Teachers Association (NSTA). Their position statement can be found at the following address: [www.nsta.org/about/positions/evolution.aspx](http://www.nsta.org/about/positions/evolution.aspx).

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## TEXT SELECTION

Prentice Hall Science *Explorer, Human Biology and Health*

Prentice Hall Science *Explorer, Animals*

## KEY CONTENT THEMES

- Identify, describe, and investigate the functions and structures of the human body
- Define health and identify factors that contribute to health for humans, other animals, and ecosystems
- Distinguish between living and non-living structures
- Explain the classification system of animals
- Explain different methods of reproduction
- Explain genetic inheritance
- Identify ways that the physical and cultural landscapes impact each other
- Understand the interconnectedness of life forms
- Connect the flux of populations to resource availability, natural disaster, and disease
- Understand population diversity and species adaptation

## LEARNING AND LITERACY OBJECTIVES

- Ask quality questions
- Collaborate in groups to answer scientific questions through investigations
- Learn to read expository text for various purposes and develop the skills of independent readers including:
  - Preparing for reading by activating prior knowledge and developing a purpose.
  - Answering questions before, during, and after reading
  - Identifying main and supporting ideas
  - Using context clues and skimming for main ideas
  - Negotiating the often specialized vocabulary of the sciences and incorporating unfamiliar terms into personal vocabulary
  - Interpreting graphs, tables and charts
  - Synthesizing content information through various visual representations of information including Venn diagrams, concept maps, summaries, and outlines

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- Develop note taking abilities
- Organize data into graphs, tables and charts
- Practice writing successful short descriptions, definitions, and explanations
- Practice written forms specific to science such as short lab and research reports
- Develop strategies for internalizing information and concepts
- Develop planning skills through defining, time-lining, and implementing projects throughout the year

## SKILLS

- Begin to develop an understanding of the work of scientists through inquiry
- Learn about the kinds of questions scientists ask and methods scientists use
- Use scientific tools
- Make detailed and precise observations
- Collect and organize data
- Use proper units in scientific expressions and measurement
- Calculate conversions of measurement
- Identify cause and effect
- Identify like and unlike characteristics
- Make predictions
- Construct explanations and hypotheses
- Develop knowledge of the scientific method
- Design investigations to test explanations and hypotheses
- Record investigations clearly and accurately
- Recognize the importance of explaining data with precision and accuracy
- Recognize the importance of double-checking steps, records, and reasoning
- Follow directions and sequence of steps in performing experiments
- Implement safe practices when conducting experiments

## SOCIAL STUDIES

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The social studies program at FSA is designed to balance an introduction to several academic content areas and goals: investigations of geography, history, cultural studies and anthropology, government and civics, religion, economics and resources, as well as current events, all in addition to the development of foundational and discipline-specific skills, and all undertaken through the lens of our mission as a Quaker school. At FSA we have designed our program to prioritize learning how to engage in social science inquiry in the belief that students can study any area successfully so long as they have internalized the tools, processes, and methods of the discipline. Students will study American history and world history again in high school, so our goal is not comprehensive coverage of these areas. Instead, our classes provide strategically-defined explorations of content areas that cast into relief the processes of social study and the role of the social scientist in performing these processes. Students certainly learn important and time-honored concepts that are critical to becoming intelligent and thoughtful participants in community and world affairs. But they engage the content while mastering tools that can be carried into a wide variety of future courses and projects along with developing the confidence and self-awareness that will allow them effective use of those tools.

In social studies, students engage in geography studies in order to build a rich store of geographic knowledge that will help them not only to be successful in future classes but also to be literate citizens of our increasingly global community. Students learn about geographic representations, tools and technologies, and how to use them to gain information and to report information. They investigate how these representations have often been and can still be ethnocentric. They explore the ways that geographical representations, tools, and technologies can be used to gain and report information about places and regions as well as physical and human systems. They begin to use information to evaluate the ways in which the physical and ecosystem features of the Earth impact the characteristics, distribution, and migration of peoples across the Earth's surface. Students are asked to consider the reverse proposition as well and to draw conclusions about how people's actions impact the Earth's physical features and ecosystems, considerations which intersect with study in science classes. Students gain specific geographic competence as much as possible in topic-specific classes. Students studying environmental science will learn about the location of our Earth's biomes and the relationship between location, landforms, climate, and life adaptations. Students studying U. S. history and culture will study U. S. physical and political geography. Students studying Africa will learn the physical features and political geography of that continent, and so forth

During middle school, students will engage in a series of social science investigations that introduce them to areas of "social" study while teaching them how to conduct investigations: *how to frame questions, identify relevant materials, conduct research, articulate connections and patterns, draw conclusions, evaluate positions, and present findings*. Our mission as a Quaker school impacts the selection of the defining themes as well as the kinds of questions asked and possibilities considered. The Quaker testimonies of Simplicity, Peace, Integrity, Community, Equality, and Stewardship lead us always to ask how the actions of people can make these values become a living, breathing reality.

Studies of history and culture provide numerous opportunities for students to explore how human decision-making has sought to institute these values or has instead pursued outcomes that undermine these values. Studies of civics, government and citizenship urge students to be informed and reflective participants in democratic decision-making and social action. The testimony of integrity requires that we also confront the ways in which decision-makers may believe they seek an outcome, for example, the equitable distribution of resources, while choosing actions that actually undermine that outcome, whether through self-deception or the limitations of human understanding. Yet, what might tend toward a relentless gaze into human frailty and misdirection is redeemed by the Quakers' continual search for that of goodness or God in every individual and therefore in every decision-maker.

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A focus on decision-making has immediate relevance for middle school students, who must make increasingly independent decisions as they mature into adults. Our investigations into the past, considerations of the present, and imaginative excursions into the future, all prepare students to be decision-makers with integrity and conviction who can analyze a situation to the best of their abilities, recognize their own shortcomings and those of others, yet trust that goodness is at work in the world. Our study of the “social” is framed by Quaker and mission and values, which impacts our perspective but does not limit the events we consider or the questions we ask.

Our social studies classes are unified at a high level by the investigation of how people in different times and places have established relationships, including people with their environment, with “insiders,” with “outsiders,” and with government and other structured organizations of rule and belief. Students explore how relationships have been established, what kinds of values these relationships encode, and what kind of daily realities get produced for people from different walks of life. The goal is for each student to consider how “I,” how “we,” can contribute to equitable, peaceful, and sustainable relationships. “How can I make a difference?” is the question held continually before our students as they grow and mature.

## TEXT SELECTION

Prentice Hall *The American Nation*

## KEY CONTENT THEMES

### **6<sup>TH</sup> GRADE SOCIAL STUDIES: INVESTIGATIONS IN U.S. HISTORY**

For social studies in the 6<sup>th</sup> grade, four strands of history are fully integrated: geography, civics, and sociology. Students begin their study of United States history with the development of Native American cultures and conclude with the establishment of the Constitution. The geography strand emphasizes the influence of geography on early U. S. history and the location of present-day U.S. states and important geographic features. Students are asked to think about the ongoing concepts of American identity, family, and race in American society, all critical ideas that have been defined in the U. S. Constitution and continue to be redefined over time through American political action and policy. Students gain an in-depth comprehension of American civic duty, government structure, politics, and their rights as American citizens. They begin to understand their role in civic dialogue and how to inhabit that role responsibly and compassionately.

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## LEARNING AND LITERACY OBJECTIVES

Students will:

- Keep an organized notebook.
- Take notes during class and from reading using graphic organizers as well as student-initiated formats and computer tools.
- Communicate with other students and teachers to improve notes.
- Read directions, interpret questions, and provide appropriate and complete answers to questions.
- Compose questions to further understanding.
- Generate productive questions to ask of a text.
- Translate information into one's "own words."
- Identify relevant resources.
- Evaluate the trustworthiness of sources.
- Understand the difference between using the words of others and one's own words by including appropriate citations for sources.
- Use non-fiction texts (table of contents, glossaries, indices, maps, graphs, side-bars, headings, textual cues).
- Find the main idea and supporting points when reading social science.
- Conduct research: asking questions, refining questions, finding resources, accumulating information, tracking information and sources, citation of sources.
- Study for different kinds of tests in order to master concepts and build foundational knowledge.
- Develop project plans for long-term assignments.
- Represent social science knowledge in a variety of formats.
- Engage in civil debate that allows for differences of perspective and opinion.

## SOCIAL SCIENCE OBJECTIVES

Students will

- Identify social studies tools and knows how to access and use them.
- Use maps/globes to find specific locations, to describe specific features, or to gather information.
- Use maps/globes to help address questions of human movement, interactions, and activity over time.
- Represent physical space and characteristics through mapping and other forms of representation.
- Differentiate between different kinds of maps (physical, political, topographical, climatologically, etc.).

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- Develop substantial background knowledge of geographical and political locations and physical features around the world.
- Construct accurate timelines.
- Identify cause and effect as well as other patterns of relationship.
- Assign value and priority to information.
- Draw, test and revise inferences and conclusions.
- Compare and contrast information sets.
- Understand resource allocation at different times in history and how resources impact the distribution of power in a culture.
- Understand historical sequencing and cause and effect.
- Understand how people have worked together for a vision over time and through differences of opinion.
- Understand the relationship between government and people and the processes through which that relationship is defined and modified.
- Understand the foundational principles of American democracy and how they continue to impact contemporary debate and policy.
- Identify how encounters between cultures, and cultures and the environment, encode power and impact people differently.
- Identify how a people's beliefs and cultural practices impact their actions, relationships, explorations, and habitations.
- Explain how inventions and economies impact culture and vice versa.
- Imagine alternatives to cultural aggression, invasion, exploitation, and domination.
- Appreciate diversity and difference around the world as well as understand how to build bridges and find common ground.
- Understand possible actions that can be undertaken in different socio-political situations to provide assistance, promote intervention, or support transformation.

## SKILLS

### History

Students will describe how early Native American cultures developed in North America:

- Describe the migration and development of prehistoric and pre-Columbian Native American civilizations in both North and South America such as the Olmec, Maya, Aztec, and Inca.
- Locate where Native Americans settled with emphasis on the Arctic (Inuit), Northwest (Kwakiutl), Plateau (Nez Perce), Southwest (Hopi), Plains (Pawnee), and Southeast (Seminole).
- Describe how Native Americans used their environment to obtain food, clothing, and shelter and create unique and diverse communities.

Students will describe European exploration and invasion in North America:

- Survey and understand the motives for European exploration during the 15<sup>th</sup> century and the arrival of Columbus to the New World.

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- Describe the encounter and consequences of the conflict between the Spanish and the Aztecs and Incas and the roles of Cortes, Montezuma, Pizarro, and Atahualpa.
- Explain the impact of the Columbian Exchange on Latin America and Europe in terms of the decline of the indigenous population, agricultural change, and the introduction of the horse.

Students will compare and contrast the colonization of America by multiple European countries and cultures:

- Describe the reasons for, obstacles to, and accomplishments of the Spanish empire in the New World.
- Describe the reasons for, obstacles to, and accomplishments of French settlement in the New World.
- Describe the reasons for, obstacles to, and accomplishments of the English colonies in America

Students will compare and contrast the factors that shaped British colonial America:

- Describe the accomplishments and challenges of Jamestown, 1607 and development of the Southern colonies.
- Describe the accomplishments and challenges of Plymouth, 1620 and the development of the New England colonies.
- Describe the accomplishments and challenges of New York and Pennsylvania during the development of the Middle colonies.

Students will investigate the major events of life and society in colonial America from 1630s-1750s:

- Understand the growing conflict between Europeans and Native Americans such as King Phillip's War and Bacon's Rebellion.
- Describe colonial life in America as experienced by African slaves and the development of a Black American culture.
- Understand the social status and role of women through an in-depth investigation of the Salem Witch Trials.
- Describe the development of new religious and philosophic ideas in America such as The Enlightenment, the Great Awakening, and the scientific breakthroughs of Benjamin Franklin.

Students will explain the causes, events, and results of the American Revolution:

- Trace the events that shaped the revolutionary movement in America, including the French and Indian War, British Imperial Policy that led to the 1765 Stamp Act, the slogan "no taxation without representation," the activities of the Sons of Liberty, and the Boston Tea Party.
- Explain the writing of the Declaration of Independence; include who wrote it, how it was written, why it was necessary, and how it was a response to tyranny and the abuse of power.
- Describe the major events of the American Revolution and explain the factors leading to American victory and British defeat; include the Battles of Lexington and Concord, Saratoga, and Yorktown.
- Describe key individuals in the American Revolution with emphasis on King George III, George Washington, Benjamin Franklin, Thomas Jefferson, Benedict Arnold, Patrick Henry, and John Adams.

Students will analyze the challenges faced by the new nation:

- Identify the weaknesses of the government established by the Articles of Confederation.

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- Identify the major leaders of the Constitutional Convention (James Madison and Benjamin Franklin) and describe the major issues they debated, including the rights of states, the Great Compromise, and slavery.
- Identify the three branches of the U. S. government as outlined by the Constitution, describe what they do, how they relate to each other (checks and balances and separation of power), and how they relate to the states.
- Identify and explain the rights in the Bill of Rights, describe how the Bill of Rights places limits on the power of government, and explain the reasons for its inclusion in the Constitution in 1791.

## Geography

Students will be able to locate important physical and man-made features in the United States:

- Locate and describe major physical regions of the United States and their climates; include the Atlantic Coastal Plain, the Pacific Coast, the Interior Plains, the Intermountain region, the Canadian Shield, the Rocky Mountains, and the Appalachian Mountain region.
- Identify major geographic features of the United States such as the Gulf of Mexico, the St. Lawrence River, the Atlantic and Pacific oceans, the Great Lakes, the Mississippi River, the Rockies and Appalachian Mountains, the Grand Canyon, Death Valley, and the Great Salt Lake.
- Identify the states located within each of the physical regions of the U.S.

Students will describe how physical systems affect human systems:

- Explain why each of the Native American groups occupied the areas they did, with emphasis on why some developed permanent villages and others did not.
- Describe how the early explorers adapted, or failed to adapt, to the various physical environments in which they traveled.
- Explain how the physical geography of the New England, Mid-Atlantic, and Southern colonies helped determine economic activities practiced therein.
- Explain how each force (American and British) attempted to use the physical geography of each battle site to its benefit during the War for Independence.

## Government/Civic Understandings

Students will describe the meaning of:

- Natural rights as found in the Declaration of Independence (the right to life, liberty, and the pursuit of happiness).
- “We the people” from the Preamble to the U.S. Constitution as a reflection of consent of the governed or popular sovereignty.
- The federal system of government in the U.S.

Students will explain the importance of freedoms and rights guaranteed by the amendments to the U. S. Constitution:

- Freedom of speech, religion and expression

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- Rights during trials and charges of conviction
- Equal Rights and Protection under the Law
- Limitations on Government Power

Students will describe the functions and branches of federal government:

- Explain the process for making and enforcing laws carried within the Legislative and Executive branches.
- Explain how the federal court system of the judicial branch interprets laws.
- Describe providing for the defense of the nation.
- Explain how American government creates checks and balances.
- Explain the fiscal responsibility of government.
- Explain and describe executive agencies.
- Explain the impact and influence of political parties and their ideologies.

Students will explain the importance of Americans sharing certain central democratic beliefs and principles, both personal and civic:

- Explain the necessity of respecting the rights of others and promoting the common good.
- Explain the necessity of obeying reasonable laws/rules voluntarily, and explain why it is important for citizens in a democratic society to participate in public (civic) life (staying informed, voting, volunteering, communicating with public officials).

## **Sociological Understandings**

Students will:

- Explain how the influence of European ideas, culture, and religion affected the development of American identity.
- Explain how racism against Native Americans, Jews, and Africans created sub-cultural institutions in America and developed a unique assortment of national perspectives about history.
- Explain how women's roles and social status hinder the progress of women's rights and equality in America.
- Explain how a firm belief in democratic principles and Judeo-Christian social norms has a binding tie on American thinking, legal practices, and governmental institutions.