

Sidwell Friends Lower School Curriculum Guide

2004-2005

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Sidwell Friends School Philosophy

Sidwell Friends School is a community dedicated to educating and nurturing the mind, body, and spirit of girls and boys in grades pre-kindergarten through twelve. Embracing the Quaker belief in the unique worth of each individual, we seek students of diverse cultural, racial, religious, and economic backgrounds—students of ability and promise whose qualities of mind and heart indicate that they will thrive in an atmosphere of intellectual, creative, and physical vitality intended to foster strength of character and concern for others.

We offer our students a challenging curriculum and a vigorous learning environment built on long-held standards of Quaker education. In keeping with the ideals of justice and peace, we emphasize personal integrity, respect for consensus, and commitment to service. We undertake to develop in our students a combination of independent thinking and high personal expectation, complemented by openness to the ideas of others and a spirit of compassionate generosity. We encourage our students to inquire, to challenge, to be adventurous, yet to cherish stillness and quiet reflection. We strive to be sensitive to differences in learning styles and developmental needs. Above all else, we seek to nourish in all our students that genuine love of learning which will enrich them and animate their efforts to engage thoughtfully and responsibly with others throughout their lives.

Lower School Philosophy

Sidwell Friends Lower School is dedicated to educating the mind, body, and spirit of each child with special emphasis on the Quaker principles of dignity, self-worth, and reverence for life. We treasure our diverse backgrounds; we stress acceptance of differences; we emphasize cooperation with and concern for others; and we encourage a sense of commitment toward the larger community. Above all, we prize the unique worth of each individual.

We seek to provide a challenging curriculum with flexibility to meet the needs of each student. We believe that to be effective, education must be founded on secure mastery of basic skills, taught not only in isolation but also in integration with one another. We place strong emphasis on reading, personal expression of ideas through speaking and writing, and the mastery of computational and problem solving skills. We also encourage scientific exploration, artistic creativity, physical activity, second language acquisition, and technology as a tool for learning. In every area we stress independent thinking and judgments balanced by receptivity to the ideas of others.

Our high expectations for academic achievement are balanced with a growing awareness of others. We seek to develop in our students a broader sense of the world and the obligation to perform service to others. We want children to realize the importance of standing up for their own beliefs, as well as the value of quiet reflection.

Our school atmosphere is informal and friendly. Although the styles of teaching vary, we recognize and respect different learning styles and are united in our commitment to reach each child. Our faculty is excited about education and constantly learning and growing. They show children a caring community by working together and respecting one another. In addition they strive to reach consensus on issues that affect them.

We believe in the Inner Light in every individual and hope to nurture well-rounded, curious, self-respecting, and friendly children.

Sidwell Friends Lower School Curriculum

The Sidwell Friends Lower School campus in the Edgemoor section of Bethesda, Maryland, has five acres of athletic fields, play areas, gardens, and four buildings, including a facility for art, music, and science. One building houses the Bethesda Friends Meeting with which the School shares a Friends Meeting Room and other common areas. In addition to thirteen classrooms the Lower School contains a large and inviting library, a computer lab, a health center, a multi-purpose room and stage, conference and tutoring areas, a Resource room for the learning specialist, and administrative offices.

Lower School students range from pre-Kindergartners through fourth graders. Children are assigned homeroom classes where they investigate core subjects such as language arts, mathematics, and social studies. Special resource classes are scheduled outside the homeroom, and include science, music, art, physical education, library, Spanish, and computer lab. The frequency and length of special classes vary according to the age of the children.

The Lower School Curriculum is a regularly examined and revised document. With guidance from the principal and the all-school curriculum coordinator, the faculty frequently addresses different aspects of the Curriculum and works toward consensus on common themes and topics. It is meant to inform parents and members of the community and to serve as a guide to faculty as they create, structure, connect, and focus on school subjects in their classrooms.

The Parents Association Guide, **Traditions**, published annually, includes much information about Lower School not included in the Curriculum. Topics such as Special Events, All-School Events, Communication with Teachers and the Principal, Extra-Curricular and Social Life Off Campus, and some of the School Day Routines are discussed in detail in this booklet.

Homeroom subjects

Language Arts

The Lower School Language Arts program seeks to develop lifelong learners who view reading, writing, speaking, and listening not only as essential tools but as sources of discovery, inspiration, and satisfaction. Talk and shared stories establish our foundation, and books of every variety create the framework for our program at all levels. Our goal is to help young students become joyful, thoughtful, imaginative, and critical readers, writers, speakers, and listeners.

Our teachers acknowledge and promote the close connection between reading and writing by creating classrooms rich in a variety of language experiences. Our curriculum is designed to spiral through grade levels, as well as through the three divisions, so that skills and concepts are reviewed and reinforced regularly. Our writers use and share their written work for reading so that authorship is experienced firsthand. Children learn a range of reading and writing skills and strategies to enable them to respond thoughtfully to text.

Our reading program provides for a range of reading styles, needs, and interests and is designed to develop readers who read for pleasure and information. To that end, we incorporate a variety of techniques to teach reading, including phonics, structural analysis, word patterns, and whole words. Specific decoding skills and vocabulary are taught as a means to an end, that is, to comprehend the material. Children practice these specific skills to further their understanding of fiction, non-fiction, and poetry.

Our writing program is designed to develop writers who communicate clearly, whether to convey information, to express ideas and feelings, to describe experience, or try out new formats. At all levels our students tell and write stories, and develop an awareness of a variety of genres through their own reading and writing. Students focus both on the skills and process of writing and learn to draft, revise, edit, and proofread as aspects of their craft.

Pre-Kindergarten and Kindergarten

Four and five year olds develop language skills through active learning experiences. Children engage in imaginative play. They create puppet shows, build block structures, invent games, and shape sand castles. They care for pets and gardens and observe nature. They learn to listen thoughtfully, and to share ideas, questions, and information during group discussions. Books are everywhere. Children listen to stories and poems read aloud every day. Children begin to tell their own stories. They learn to organize ideas and to present events and information sequentially. Classroom poetry recitations, plays, and concerts give even our youngest students opportunities to participate in a variety of performances. Fluent language, a burgeoning vocabulary, and thoughtful listening build the foundation for reading and writing.

Pre-kindergarteners learn to recognize and identify letters in signs, labels, lists, calendars, charts, and graphs around their classroom and throughout the school. Letter-sound associations are presented in many ways. Charts, poems, a morning message, the daily schedule, and predictable Big Books are read aloud with the help of a few children at a time, or with the whole class in chorus. Letters, repeated words, phrases, and rhymes are highlighted to help students learn about print. Children continue their investigation of letters and sounds as they write their names, captions, or simple messages, and dictate stories.

Kindergarteners deepen and refine their understanding of letters and sounds, words and phrases. Predictable stories, poetry, literature, simple non-fiction, and a wealth of reference books are part of each classroom's library. Children take home short reading books each week to share with their families. Kindergarteners have many opportunities to write. They make signs for the block area, labels, and short sentences for pictures and paintings. They offer thoughts, impressions, compose notes and messages, and write about their experiences. Writing may be a collaborative effort or a solitary pursuit. Invented spelling is encouraged. Students "write what they hear" with the understanding that a story can be edited with the help of a teacher when they are ready to produce a completed work. Children look forward to publishing their own stories and proudly read their finished books to friends, teachers, and partners in other classes.

PK

Reading

Phonemic awareness through rhyming words, blends, and syllables

Phonic skills with upper case letters and initial consonants

Sight read familiar names

Appreciate and understand picture books, books read aloud, and books browsed

Writing

Write and spell familiar names

Use drawings to express ideas

Tell and dictate stories

K

Reading

Phonemic awareness through substituting and blending sounds

Identify sounds in words

Recognize and name lower case letters

Read words with short vowel sounds

Match final consonant sounds with letters

Use phonics to read unknown words

Read common classroom words

Read predictable books

Read own dictation, class dictation, familiar songs and poems

Read high-frequency words

Expand sight vocabulary through independent reading

Choose an appropriate book for independent reading

Discuss and recommend books to peers

Writing

Use magic spelling to write simple words and messages

Tell and dictate stories

Establish correct pencil grip

Print with proper orientation to the page

Print words with proper spacing

Print upper case letter

First and Second Grade

First and second graders develop their listening and speaking skills in daily discussions, shared experiences, oral presentations, dramatic play, cooperative learning groups, interviews, and in informal conversations. As spoken vocabulary builds, so too does reading and writing vocabulary. Regular read-aloud sessions enhance language skills along with an appreciation for literature. Book talks encourage thoughtful responses and cultivate a sense of story. Teachers elicit opinions and comparisons of characters, setting, and plot, and introduce new authors, illustrators, and genre during story times.

First and second graders develop their reading skills through a variety of strategies which include direct instruction in phonics as well as practice with sight words, context clues, visual aids, and syntactic clues. Their text most often is a trade book selected from the classroom library, which also includes works authored by the children themselves. Children read independently, in partner pairs, and as members of book clubs. Daily reading activities might include choral reading, dramatic presentations, puppet shows, and poetry recitations. As decoding skills grow, and sight vocabulary increases, emphasis is placed on discussing, recording, and utilizing information acquired through independent reading. Additional goals for students include being able to select appropriately challenging books, to identify one's own reading interests, and to read a variety of authors and types of books.

First and second graders write on a daily basis. Whether composing an original story, recording observations, collecting thoughts and experiences in a journal, responding to literature, documenting an interview of a visiting "expert," composing a letter, completing a simple research project, or experimenting with the style of an author, children are helped to write in a clear and focused manner. Children practice legible penmanship and second graders begin to be accountable for standard spellings. These older children also learn to proofread and revise selected drafts into "published" pieces.

Grade 1

Reading

Identify number of sounds and syllables in words

Read words with long vowel sounds, digraphs, and blends

Read phonetically regular words with accuracy

Read compound words, plurals, possessives, contractions, and common endings

Use visual and auditory patterns to decode unfamiliar words

Recognize common word parts

Expand vocabulary by using context

Recognize multiple meanings of words

Recall facts and details

Follow printed directions

Monitor comprehension for understanding

Reread for meaning
Identify main idea of passage
Predict action of story
Describe characters
Retell story, restate passage
Read for enjoyment, to gather information
Self-correct when errors distort meaning

Writing

Identify and use complete sentences
Use capital letters to begin sentences, for names of persons and places
Use end punctuation correctly
Represent sounds in a word when spelling independently
Utilize pre-writing strategies
Write a personal narrative
Write in response to literature
Write with a beginning, middle, and end
Choose a topic for independent writing

Grade 2

Reading

Identify number of syllables in words
Read common root words, prefixes and suffixes, and multi-syllable words
Use knowledge of root words to expand vocabulary
Follow plot sequence
Select important details
Skim for information
Draw inferences from reading
Empathize with characters
Set purpose for reading
Identify story elements
Differentiate between reality and fantasy in content
Identify author's purpose
Read multiple books by a favorite author
Read with fluency

Writing

Use correct past tense of regular verbs, and simple irregular verbs
Use capital letters for days, months, and holidays
Use contractions correctly
Identify and use different sentence types
Differentiate common homophones
Proofread for grammar and punctuation
Learn spelling words corresponding to targeted phonic rule
Transfer knowledge of mastered spelling patterns into independent writing

Define and develop a main idea in writing
Stay on a theme or topic throughout a story
Write in a logical sequence
Write with a sense of voice
Share writing and make revisions in response to peer suggestions
Edit work in preparation for publication

Third and Fourth Grade

Books, and the conversations and questions they inspire, make up the core of the third and fourth grade language arts program. Children become increasingly insightful readers by focusing on comprehension skills as they move from literal interpretations to more predictive and interpretive viewpoints. Classroom programs include read-aloud sessions, book club discussions, reading with partners, individual conferences, and sustained silent reading. Children primarily use trade books to investigate fiction, non-fiction, and poetry. Discussions might focus on character, plot, setting, mood, audience, style, historical period, language, or story structure. Readers pay attention to facts and details but also begin to look for themes in order to craft summaries of their stories. Some children experience their first success with chapter books at this level, while others are engrossed in sequels and series.

Writing is an integral part of the third and fourth grade language arts experience. Children respond to literature through shared discussion, writing, art, or drama, and they use the information found in texts or media to write non-fiction pieces. Students express their ideas in a variety of forms, as when they write memoirs, stories, poems, letters, journal entries, interviews, and reports. Finished pieces usually have gone through a process of drafting, revising, editing, and proofreading before being presented to an audience. Standard spellings are taught and children learn to use increasingly specific vocabulary and more complex sentences to express their ideas. By the end of fourth grade most students have developed their own voice and write clearly organized paragraphs with topic sentences, essays reflecting their own experience, and vividly expressed poetry.

Reading

Read an increasing variety of genres

Identify elements of many genres: memoir, poetry, biography, historical fiction, non-fiction

Identify problem, discuss resolution

Differentiate between fact, fiction, and opinion in content

Identify author's point of view

Relate novel to personal experience

Compare, contrast books by same author

Compare, contrast books on same topic

Read with expression and attention to punctuation

Use the dictionary or thesaurus to find the meaning of an unknown word

Writing

Identify subject and predicate in a sentence

Identify nouns, verbs, and adjectives

Use capital letters in more complex applications, including titles and initials

Use common abbreviations correctly

Use apostrophes correctly

Use commas in dates, letters, locations, series, and quotations

Use quotation marks correctly
Proofread for grammar and punctuation
Use dictionary and other references to check spelling
Develop and describe characters
Establish and develop a setting for a story
Use increasingly complex vocabulary
Use established conventions to write a friendly letter
Plan and complete research reports and projects using multiple sources
Understand how to use a topic sentence
Organize work into paragraphs
Write for a particular audience
Use a strong lead to open a piece
Use appropriate detail in writing
Use language descriptively to enhance meaning
Use a variety of revision strategies to clarify meaning
Revise sentences for length and variety
Craft a variety of endings
Craft a title
Write upper and lower case cursive letters with proper spacing and orientation

Mathematics

The mathematics program at Lower School is designed to help children approach math capably and confidently. Math is taught with the goal of developing students who are able to address problem-solving flexibly and creatively, drawing from a foundation of necessary mathematical skills. These skills are fostered through a systematic spiral curriculum that increases in complexity while reinforcing and building upon previous experiences. Children are encouraged to experiment with a range of problem-solving strategies, to become comfortable taking risks, and to be open to different approaches.

Children from pre-Kindergarten through fourth grade are provided with a variety of mathematical experiences in their homerooms. Students regularly receive direct instruction, work independently and in cooperative groups, play math games, and use manipulative materials. Topics are introduced as developmentally appropriate in keeping with the National Council of Teachers of Mathematics standards. As children grow more able to extend their thinking from hands-on projects to abstract reasoning, they learn to employ concrete, pictorial, verbal, and symbolic models for problem solving. Real-life problems and data provide opportunities for the students to analyze, organize, develop strategies, estimate, and calculate.

Mathematical themes are integrated into other areas of the Lower School curriculum. The creative and analytical approaches stressed in the math program produce ways of thinking that have value for future learning.

Pre-Kindergarten and Kindergarten

Through a variety of teacher-planned activities and self-directed learning stations, the pre-Kindergarten and Kindergarten math program offers a stimulating environment for fostering emergent mathematical thinking. Teachers encourage the free exploration and manipulation of classroom materials, including pattern blocks, Cuisenaire rods, buttons, coins, shells, and seeds. Children are exposed to practical “daily life” math. Many activities involve counting, such as “counting around the circle” to determine daily class attendance. Classroom calendars are dated and tracked by students. Classrooms provide opportunities to sort, classify, and compare objects. Students work on assessing attributes, duplicating and creating patterns, building recognition of numbers and geometric shapes, estimating, and graphing. Group work and free choice activities offer times to practice number concepts, number writing, and oral number tasks. Skills such as exhibiting one-to-one correspondence, sequencing, and linking numeric symbols with quantity are regularly practiced in classroom programs.

Number

- Arrange sets of objects in one-to-one correspondence
- Compare number of objects in various groupings
- Make connections between objects and numbers in groups
- Count up to 15 or 20
- Learn to estimate how many
- Write numerals 0 through 9
- Learn about ordinal numbers (1st, 2nd ...)

Patterns

- Recognize simple patterns, continue the sequence, and make up new patterns

Measurement

- Estimate and compare: taller or shorter, longer or wider, largest or smallest, heaviest or lighter
- Employ nonstandard units of measurement

Geometry

- Recognize and classify simple shapes, circles, triangles, squares and rectangles
- Hold more than one attribute in mind at a time
- Develop spatial sense- investigate order: next to, in between, first, last
- Recognize proximity: near, far, above, below

Data

- Make and talk about simple graphs of everyday objects (pets, foods, birthdays)

Problem-Solving

- Apply math thinking to everyday applications

Communication and Representation

- Connect numbers, words, and numerals to quantities using models and representations

First and Second Grade

First and second graders become effective mathematicians by using a range of math and thinking skills to solve familiar, everyday problems. The focus of the math program is on helping children understand key math concepts, develop and communicate strategies for solving a variety of problems, and use estimation and number operations to find solutions. Most students begin with concrete representations of problems and move to numeric notations and increasingly abstract thinking. The math curriculum includes the following strands: patterns and relationships, number concepts and operations, estimation, geometry and spatial relationships, measurement, data analysis, and probability and statistics.

By the end of second grade most children have developed a strong number sense including place value through hundreds; can identify concrete and numeric patterns; can recall addition and subtraction facts to 20; have developed linear measurement and time-telling skills; can identify the characteristics of two and three dimensional figures; have a beginning understanding of fractions; and are able to undertake basic analysis of numeric data in charts and graphs.

Number and Operations

- Estimation skills
- Count by 2s,5s,10s
- Learn basic addition and subtraction facts
- Develop an understanding of place value
- Learn about odd and even numbers
- Count to 100; learn to read and write numbers through 1000
- Develop fractional concepts
- Balance an equation
- Introduction to multiplication and division
- Explore use of calculator

Patterns, Algebra, Reasoning

- Recognize numerical and geometric patterns
- Be able to add to existing patterns, complete missing sections, and make up new patterns

Measurement

- Learn to read time and determine temperature
- Measure with nonstandard and standard units
- Compare lengths, areas, weights
- Recognize coins, count and combine coins
- Make change with coins and bills
- Use a calendar to find dates, know days of week and months

Geometry

- Identify characteristics of two-dimensional shapes
- Recognize lines of symmetry
- Find congruent shapes (same size and shape)

Name squares, rectangles, circles, and basic polygons
Explore 3-D shapes

Data and Probability

Make and interpret simple graphs, using physical objects and
manipulative materials
Collect, compare and describe data
Do simple probability activities

Problem-Solving

Apply effective strategies to solve problems, such as drawing diagrams,
organized guessing, putting problems into own words
Create and solve word problems in measurement, geometry, data and
probability as well as with arithmetic
Translate problems into numerical equations

Communication and Representation

Communicate problem-solving strategies
Observe change in real life
Create and explain number models and representations

Third and Fourth Grade

Third and fourth graders continue to develop their conceptual understanding of mathematics while they solidify the basic skills they need to address increasingly complex problems. Higher order thinking skills requiring logic, reasoning, and making connections are emphasized as well as procedures and techniques.

Students are engaged in applying a variety of strategies, generating concrete and abstract models, and recognizing and extending patterns. Third and fourth graders are exposed to new topics in geometry, measurement, probability, and statistics as well as beginning work involving functions, algebraic thinking, and spatial reasoning. They continue to attain proficiency in the four basic operations through regular practice and reinforcement. They also work on an increasing number of multi-step problems and processes requiring estimation skills, mental computation, and appropriate calculator use. Students continue to develop their number sense as they learn more about place value and fractions, and are introduced to decimals and percents. Children have opportunities to work individually and in small groups for problem-solving explorations as well as for collecting, organizing, analyzing, and interpreting data.

Number and Operations

- Read and write numbers through millions, billions
- Understand and apply basic place value concepts
- Learn basic facts multiplication and division
- Add and subtract multi-digit numbers
- Create models for multiplication and division; understand remainders
- Understand prime and composite numbers
- Solve using factors and multiples
- Multiply and divide two digit and three digit numbers by single and double digit numbers
- Learn algorithms for multiplication and division
- Represent fractions and decimals with appropriate models
- Recognize equivalent fractions; compare fractions and decimals
- Estimate, judge, and order fractions and percents
- Combine fractions; simple addition and subtraction
- Explore positive and negative integers and powers of 10

Algebra, Patterns and Reasoning

- Explore patterns on number grids and charts
- Investigate functions, solve open number sentences
- See patterns in multiplication/division facts
- Use number models with parentheses
- Solve logic problems
- Learn formulas for area, perimeter and volume
- Balance equations

Measurement

- Estimate before measuring; calculate elapsed calendar and clock time

Use US customary units; decimals with the metric system
Calculate perimeter, area and volume
Understand the tools of measurement for length, weight, and volume
Measure angles; classify by type, explore angles within polygons
Use map scales and coordinate grid; explore longitude and latitude

Geometry

Name polygons and identify the characteristics of polygons
Sort, classify and categorize shapes by attributes
Understand symmetry, rotation, reflection, slides and flips
Build 3-D shapes from 2-D shapes
Improve spatial visualization and understand spatial relationships
Establish a vocabulary for 3-D shapes
Use coordinates or simple maps
Measure angles with a protractor and construct with a compass

Data Analysis and Probability

Collect data, organize and represent in graphs
Interpret, analyze, and pose questions based on data
Find median, range, mean and mode of data
Explore probability and chance

Problem-Solving

Practice a variety of problem-solving strategies to solve problems which involve multiple steps
Develop effective mental computation strategies
Make reasonable estimates to predict outcomes and check results
Generate appropriate models and equations
Work in cooperative groups to solve problems
Generate several strategies for solving problems
Select efficient and effective strategies

Communication and Representation

Use mathematical symbols to represent situations and compare amounts
Develop a formal and informal mathematical vocabulary to communicate ideas clearly
Represent ideas with numbers, drawings, diagrams, graphs, charts, and models
Create, analyze and solve word problems in all of the concept areas and develop facility for explaining mathematical thinking

Social Studies

The Lower School Social Studies program is designed to help children discover and better understand the world around them. Beginning with self, family, and community in pre-Kindergarten and Kindergarten, students move beyond their own experiences to explore other times and cultures in the older grades. We encourage children to share their ideas, listen to others, and develop a spirit of inquiry as they broaden their perspective. Hands-on projects, field trips, dramatizations, class discussions, and carefully chosen texts bring to life specific areas of study.

Our students engage in a wide range of historical and social issues at increasing levels of complexity as they progress through the Lower School Social Studies program. Students gain perspective on the diverse heritage of their own society while developing an understanding of themselves in the larger world. We foster a sense of commitment and responsibility, as well as active participation in our school and regional community.

PK

Study of self

Life now and long ago in the US

Holidays and family traditions

Field trips, read aloud

Listen, observe, question, discuss

K

Study of self, my roots, my heritage

Family immigration and cultural inheritance

Holiday traditions

Field trips, read aloud, projects

Listen, observe, question, discuss

Grade 1

Community themes, such as: water, architecture, transportation, which encompass global, cultural, and historical perspectives.

Listen, observe, question, discuss; group participation and cooperative activities

Beginning map and globe skills

Collect, organize, express information through projects

Grade 2

Thematic, in-depth examination of an American Indian culture, plus a focus on modern Japan

US physical geography

Listen, observe, question, discuss

Group participation and individual activities

Charts, graphs, maps

Sequence and time skills

Collect, organize, express information through research projects

Grade 3

Examination of topics related to the history of the Americas, including the experience of the US, using a multi-cultural approach

English, Spanish, and French explorers

Jamestown and slavery

Northern, middle, and southern colonies

French and Indian War

American Revolution

Time travel study of era in US history

Study of Inca, Maya, or Aztec civilizations

Current events

Map skills, US geography

Compare, analyze information

Guided research and projects

Grade 4

Examination of an ancient Asian civilization or traditional culture,
including Chinese history and culture, using a thematic approach

Current events

Map skills, world geography, study of regional influences on culture

Compare, analyze information

Synthesis of information from primary sources, texts, literature, realia

Guided research and projects

Special Resource Subjects

Science

Science is infused throughout the Lower School curriculum and occurs in a focused way once a week for every student in the science room. The lab space is used for small groups to experiment, create and experience science and what it means to do investigations, observations and studies in a scientific manner. Students in Pre-kindergarten through fourth grades all have time in the lab in addition to time spent on science topics in their classrooms. At the elementary school level, the most important point is to expand and build upon children's natural curiosity and to give them experiences with the world around them such that they learn to find their own answers through careful observation and guided exploration.

The science room experiences for the PK and K students build upon topics presented in the classroom. Past themes have included insects, water, dinosaurs, sinking & floating, wheels, birds, mammals, seasons and plants. The youngest students play, sing, build, observe and manipulate materials to broaden their knowledge base of a wide range of topics.

First and second graders spend 45 minutes a week in the science room in groups of about 12. In these sessions, experiments related to themes from their classroom studies are done. They also build models and "action" projects that relate to a topic of study so that their observation skills are honed and their propensity for dramatic play is connected to factual information. This age group loves to teach what they have just learned and working with science-based creations encourages further query. The science projects for this age group have included caterpillar-to-moth puppets, water filtering devices, models of insects living under logs, birds, simple wheeled machines, and weather reporting tools-- to name a few. Experiments that require daily observation are done in the classroom and the science teacher and classroom teachers collaborate throughout the year on these projects.

Third and fourth graders spend an hour a week in the science room in groups of 8-15. They also work on projects related to scientific themes. For third graders, the curriculum includes the study of soil and plants, garbage and decomposition, the solar system, simple physics principles, and the human body systems. Fourth graders learn about recycling, rocks & minerals, plate tectonics, simple chemistry, electricity, the skeleton and human growth. Exact topics can vary from year to year as the classroom teachers and the science teacher determine what is going to be pertinent to the interests of a given group of students. At the "upper" elementary age level, students begin to set up experiments and learn how to test variables using the scientific method. Emphasis is placed on accurate recording of the process and truthful reporting of what actually does happen throughout the experiment.

By the end of their time at the Lower School, students have a broad knowledge base of many science topics. They have become good at observing and using what they see to answer some of their own "how" questions. The fun they have had with building models and toys related to science and doing experiments relevant to their age level and interest insures that they are ready to move on to Middle School with a very positive attitude about the study of science. Students leave Lower School ready and eager for the challenge of daily science classes in Middle School and more in-depth study of both the familiar and the new. The Lower School approach to science is to give them both a grounding in basic knowledge and confidence in their own abilities to find more answers.

Visual Arts

The exuberant display of art spills from every corner of the Lower School campus. Children's artwork dangles from ceilings, decorates walls and hallways, perches on shelves, peers out of niches, transforms the stage, and stencils bodies. While art activities enrich classroom experiences at every level, the art room at the top of the SAM building is the creative heart of the school.

The art program provides children an opportunity to explore their ideas in visual form through a variety of two and three dimensional materials. They experiment with color, pattern, composition, form, texture, shape, and size. Students work alone and in collaboration with others. They educate their eyes as well as their hands as they invent new ways of representing ideas, or notice and incorporate the ways of experienced artists into their own works.

The art experience for the youngest students, pre-Kindergartners and Kindergartners, is based primarily in their own classrooms with their own teachers. The first and second graders attend regularly scheduled weekly classes of forty-five minutes. Third and fourth graders attend hour-long classes each week. All students work in the art room in half-class groupings which affords ample time with materials and with the art teacher.

The first and second grade curriculum focuses on the exploration of fundamental art concepts and skills, with an emphasis on art-making rather than on specific products. Projects tend to be short-term but allow the acquisition of basic techniques, such as sculptural clay animals, paper-mache puppets, print-making, paper and fiber weavings, and many kinds of paintings.

The third and fourth grade art curriculum is designed to help students refine their techniques, develop their aesthetic judgment, and learn to look at historical pieces. They begin to integrate design concepts and art historical information into their own works. The introduction of new materials, techniques, and processes allows students to undertake the creation of more complex products that develop over the course of several weeks. Some examples include clay figures and clay boxes; plaster life masks; Indonesian batik fabrics; printmaking with multiple prints; and large loom weavings. Drawing and painting skills are incorporated into many projects throughout the year.

Music

Children arrive at Lower School with music already an intrinsic part of their lives. The music program seeks to continue that love of music and to allow children opportunities to explore both familiar and new musical paths. Music's vital role in the life of the school is suggested by its frequent incorporation in classroom studies, assemblies, dramatic productions, and Meeting for Worship.

The music program uses several well-known pedagogical methods. The Orff-Schulwerk method is used to teach techniques in movement, rhythm, speech, drama and improvisation. The Kodaly choral method is used to teach sight reading of rhythm and melody notes and patterns. Both emphasize learning through hands-on participation and experiences. In twice-weekly classes, students learn and practice rhythm and melody, speech and movement, instruments, drama, and singing.

In pre-Kindergarten and Kindergarten, children begin to explore different kinds of sound. Traditional folk songs are taught by rote with some reading of simple notation by the end of their Kindergarten year. Simple dances and games serve to reinforce the beat and rhythmic and melodic patterns. Students explore percussion and barred instruments and play simple patterns to enhance a song or story.

In first and second grade classes, children learn increasingly complex songs by rote but also learn to read and sing simple pentatonic songs. They accompany songs on barred instruments, layering different patterns to form a collage of sound.

By third and fourth grade, the rhythmic and melodic patterns become more complicated. Students learn to read, sing, and play major and minor scales and patterns. Singing is performed in two and three parts, and includes descant and partner songs. These older students become familiar with many musical terms and definitions and utilize these elements when they compose their own music.

The fourth grade chorus includes all fourth graders in weekly classes which incorporate more advanced musical concepts. Students perform at the winter holiday concert, at a lively "Fun Concert" in the spring, and at their own graduation. Music concepts learned throughout Lower School culminate in this class. They have become musicians.

Physical Education

Children in pre-Kindergarten through fourth grade participate in an active and varied program of individual and team activities where they develop an appreciation for fitness as a lifetime goal. From the annual Field Day fun races to energetic play on the climbing equipment to volleyball, four-square, and soccer games our children are busily engaged in physical activity. The Lower School program is designed to develop student self-discipline along with a sense of personal commitment and fair play.

The youngest students, the pre-Kindergartners, have regularly scheduled P.E. classes twice weekly for 30 minutes. All other students, from Kindergarten through fourth grade, meet four days a week for 30 minutes. Activities are geared toward progressive skill-building and teamwork rather than specialization in a sport. The program develops and maintains efficient and effective motor skills in five major categories: basic tumbling skills, manipulative skills, basic movement skills, lead-up games to specific sports, and low-organized games.

The pre-Kindergarten and Kindergarten students are encouraged to learn to work cooperatively in large and small groups and to effectively perform locomotor and non-locomotor movements. Children learn to participate in simple games, to execute basic gymnastic rolls, and to express themselves creatively. Basic skills are developed and children are urged to accept responsibility for their own behavior.

The first and second graders learn to combine more complex movement patterns, to begin using hand apparatus, and participate in activities that include muscular endurance. They engage in discussions of physical fitness concepts and how to apply them individually. Children are expected to demonstrate self-control and to be attentive and focused during class.

Third and fourth graders continue skill-building activities with an emphasis on psychomotor skills. They participate in group games which require a higher level of strategic thinking and are expected to know and follow game rules. These older students are encouraged to work in small and large groups with limited supervision, and to begin to recognize their own athletic or fitness interests.

Library

“*Once upon a time*” is a phrase that stirs excitement in the hearts of children of all ages in the Lower School library. They know immediately that they’re going to be treated to a story, one that will entertain them, inform them about their world, and tickle their imaginations. By inviting children into the library with enticing multi-disciplinary book displays, the library aims to encourage an early and continuing love of literature while undertaking to teach children to use the many resources available in the library.

The mission of all three libraries at Sidwell Friends School is to enrich the intellectual life of the school. Our libraries provide an organized collection of resources, as well as instruction in the use of these materials. The Lower School library’s instructional program enables students to begin developing the skills needed to locate, analyze, evaluate, interpret, and communicate information and ideas in an information-rich world. These skills are refined throughout the students’ progress in all three divisional libraries.

Weekly classes at the pre-Kindergarten and Kindergarten levels focus on library orientation skills, basic computer use, production of simple art projects that illustrate the main ideas of stories, and reading guidance. Students are assisted in selecting library materials which are appropriate to their own ability levels and which may be used for enjoyment, personal interest, and information. Literature read aloud encourages students to begin to identify specific authors and illustrators and their works.

Students in the first and second grades identify the classification of fiction materials and learn the characteristics of various types of literature: biographies, mysteries, fables, fairy tales, folktales, and traditional rhymes and poetry. Research skills are introduced to help children use reference materials and nonfiction books to gather information, and often these skills are integrated into their classroom curricula.

During their last two years at Lower School, third and fourth grade students begin to identify and demonstrate an understanding of the Dewey Decimal Classification System for nonfiction materials. They also use the library’s electronic catalog to locate materials, and learn to identify and define the parts of a book.

The library program not only is integral to and supportive of the school curriculum but also provides a mechanism for choice and exploration beyond a prescribed course of study. Our library is a place where students may explore more fully classroom subjects that interest them, expand their imaginations, delve into areas of personal interest, and develop their abilities to think clearly, critically, and creatively.

Technology

We use the term “technology” to describe the Lower School program because the word “computers” does not accurately reflect all we do. The goal of the technology curriculum is to provide students with the skills and knowledge they need to use technology to its fullest advantage, both at school and in their daily lives. An example of this is the use of digital photography to record our school experiences, and the application of those photographs in art projects, presentations, and stories. Fourth graders have the opportunity to express themselves through film-making and editing with our video cameras and editing equipment. Students become proficient in productivity software that prepares them for class work here and in Middle School. The TERC math program includes software and curriculum units that reinforce experiences in the classroom. In the Lab students learn to program using LOGO software, and after school we offer a Robotics Club in which students build and program small robots.

There are currently six curriculum-based websites linked to the Lower School webpage. Each offers parents and students the opportunity to further explore topics that are covered in classrooms and in Special Classes. The *Lower School Math Adventures* website is a collaborative effort between the Technology and Math Coordinators. Together we assess the current topics in math at the school and post problems that can be accessed from home or school. Students actively engage in this site, sending in answers, writing problems, and responding to our suggestions for other ways to solve the problems. This process, and many more interesting reflections on the math program, is described in the Parent pages on the math site. This site is frequently updated and has attracted visitors from all over the country.

Our school offers our teachers and students amazing resources in technology, from up to date labs and Smart Boards, to wireless laptops. These resources are gradually being applied by teachers to the advantage of the students and the program. An emphasis on the application of technology in the classroom, with professional development opportunities that give teachers time to develop meaningful curriculum units, is key to bringing our school into the forefront of technology use, applied in a way that takes advantage of our resources and gives the most to our students.

Grade 1

The goal in first grade is to become familiar with basic functions of technology from the use of digital cameras to familiarity with the keyboard, and becoming comfortable with the mouse and its relationship to the cursor on the screen. The classroom math program is augmented with lessons taught in the lab on related software.

Digital cameras – self portraits
Microsoft Paint – paint on portraits to create costumes.
PowerPoint – apply portraits to one slide. Learn to type a title.
Math programs from TERC curriculum
The Graph Club

Grade 2

The goal in second grade is to build on familiarity with Office software, begin to use the network to save and access files, and to augment the classroom math program with related lessons and software. Second graders begin to learn basic word processing skills.

Digital cameras – self portraits
Microsoft Paint – paint on portraits to create costumes
PowerPoint – apply portraits to one slide. Type and format title. Make additional slides and paintings.
Math programs from TERC curriculum, including programming in LOGO
The Graph Club
Introduction to Microsoft Word.

Grade 3

The goal in third grade is to be able to save and retrieve files from the network, to open and close programs, to begin keyboarding skills, to acquire specific skills in Word and PowerPoint, to augment the math program with related lessons and software, and to become familiar with Timeliner software.

Digital cameras – self portraits
PowerPoint – apply portraits to slides with formatted, colored titles.
PowerPoint slides to tell a story with a partner using hyperlinks within presentation.
Word – learn basics of editing text including the use of right-clicking for spell/grammar check. Learn to paint text to replace and move.
Type to Learn – begin basic keyboarding practice on a routine basis.
Math – focus is on programming in LOGO and projects in The Graph Club
Introduction to Tom Snyder's Timeliner.
Learn basic skills and rules about Internet use.

Grade 4

In fourth grade the goal is to continue to build skills in keyboarding, using productivity software, and to become comfortable with many aspects of the school network. Students use digital photography and learn to use digital video cameras and video-editing software. Basic programming skills are learned through LOGO and the Robotics program.

Digital cameras – self portraits

PowerPoint – apply portraits to slides with formatted, colored titles.

PowerPoint slides to tell a story with a partner using hyperlinks within presentation.

Word – learn/review basics of editing text including the use of right-clicking for spell/grammar check. Learn to paint text to replace and move.

Type to Learn – continue keyboarding practice on a routine basis.

Math – focus is on programming in LOGO and projects in The Graph Club.

Emphasis on interacting with math problems on Math Adventures website.

Application of Tom Snyder's Timeliner in a classroom project.

Introduce digital video through a Social Studies related project. Learn basics of video editing in iMovie.

Spanish

The Lower School introduced Spanish language to all students from pre-Kindergarten through fourth grade in the fall of 2001. During two or three sessions which total 45 minutes each week, children participate in circular dialogs designed to involve them in rhymes, songs, and cluster questions and responses. By the end of the first year, a common body of beginning Spanish language had been introduced and students joyfully practiced words, numbers, phrases, sentences, and songs in Spanish. Now students are building on these early experiences.

While the program is still in its infancy and is continually evaluated and adjusted, clear goals have been set. The program is designed to encourage near-native accents as children acquire language skills and to capitalize on the natural facility of children to absorb intricate and challenging linguistic structures at a young age. Each year as our children mature the curricular material will be adjusted to suit the students' improved language proficiency. As new children join the program, classes will be configured to differing levels of Spanish language experience. Specific language standards have been correlated with those outlined in the report of the American Council on the Teaching of Foreign Languages. The standards are organized under five broad categories and include communication, cultures, connections, comparisons, and communities.

Children in pre-Kindergarten through fourth grade are learning Spanish in ways that involve enjoyable experiences with props such as puppets, costumes, objects, tape recorders, and bingo games. Language teaching is uniquely challenging because of the inherent repetitive requirement for the reproduction of new sounds so the experiential method maintains high interest. Lower School students focus on developing oral language skills but if they continue to the Middle School Spanish program they will incorporate written language as well.

Academic Support

The Lower School Resource Room, filled with books, games, and props, is staffed by a learning specialist who is employed full-time to assist students experiencing academic difficulties. The specialist provides remedial and academic support, primarily in language arts, to small groups of children in pre-Kindergarten through fourth grade. The learning specialist also serves as a support to homeroom and special subject teachers by working with individuals in their classrooms, observing and conferring with teachers about specific students, and providing materials and information about techniques to meet learning differences.

An educational diagnostician is retained by the school on a part-time basis to test specific students, when parents and teachers agree that an educational evaluation would be of help in meeting the learning needs of that student. Following the testing, the educational diagnostician meets with the student's parents, teachers, and the learning specialist to discuss the findings of the evaluation. A final report detailing those findings and any suggested accommodations is sent to the parents and the school.

The Larger Classroom

Quaker Values

The values and beliefs of the Society of Friends, or Quakers, are the foundation for our Lower School and are integrated into every part of the community. These core values—or testimonies—are at the center of our teaching philosophy. Quaker testimonies include equality, peace, social justice, simplicity, and service to others. Friends believe in “that of God” in every person and in the peaceful resolution of conflict. The school fosters these values in all areas of the curriculum.

Quaker Meeting for Worship also is an integral part of the Lower School. Students are taught how to use moments of silence effectively. All Lower School children, from pre-kindergarten through fourth grade, join their teachers and staff members in weekly Meetings for Worship. These twenty-minute gatherings may take place in the Bethesda Meeting House, in our classrooms with a visiting class, or in the multi-purpose room. Meetings provide a time for silent reflection. Readings, music, and thoughtful observations may be included. Each classroom writes a monthly query for consideration by the school, often from topics of current interest, such as:

Do I stand up for someone who has been called a hurtful name or do I stand by?

How can we remember that the holidays are not just for receiving, but for giving, loving, and respecting the many different ways we celebrate?

How can we make the extra effort to widen our range of friends and learn new things from each other?

Volunteer community service plays an important role in the Lower School experience. For many years, on Wednesdays, students have cut soup vegetables for Martha’s Table, a Washington, D.C. soup kitchen. For this project younger children are paired with older children to guide and supervise the chopping of buckets of donated vegetables. On designated Saturdays families are invited to meet at Martha’s Table to make sandwiches to feed the hungry. Other service activities include class visits and exchange with a D.C. elementary school and visits to a nearby senior center. Opportunities for service within our own school community include a day of planting bulbs and flowers, rotating class responsibility for recess clean-up on the Upper Field, recycling, and partnerships between older and younger students.

Our Mediation training program for fourth graders grows out of the Quaker tradition of peaceful resolution of conflicts. After several sessions of discussion and role-playing, fourth graders don their “Peacemaker” caps and, in rotating partner-teams, join the first-second grade recess on the lower field to help listen to and mediate disagreements. Fourth grade children learn what it means to “fight fair,” not only in supervising younger children, but in their own interactions. Younger and older children grow to understand, through first-hand experience, that mediation can help people in conflict resolve their problems and reach an agreement that satisfies all parties.

Outdoor Education

Learning about the outdoors and learning to value the earth's natural resources are important curricular subjects at Lower School. Classrooms approach outdoor education in different ways, some of which are closely connected to the science curriculum. Younger children may visit an animal farm or the zoo or plant a butterfly garden. Others might observe bird and wildlife while tracing the course of Rock Creek or while exploring Sycamore Island in the Potomac River. Older children may spend a day or two at an outdoor education school, such as the Sheridan Mountain Camp, where they explore pond life and the woods while also practicing teamwork in ropes courses and on the zipline.

Education for Parenting, or Baby Watch

Fourth graders have the opportunity to learn about human development as they study and compare the maturation process of a group of babies to their own developmental history. In sessions every three or four weeks, children spend time participating in the care, feeding, movement, play, and early language experiences of a dozen or so infants and toddlers. These babies, with the help of their parents, teach the fourth graders about babyhood through interviews, observations, and plenty of hands-on activities.

A range of discussion topics focus these sessions, from pregnancy, names, grandparents, siblings, adoption, and twins to stages of physical development, such as walking and talking, to emotional development, including managing feelings. Children regularly interview members of their families about their own development and early experiences to compare their personal histories with observations of the infants and toddlers. From their conversations and observations, and brief readings, children begin to arrive at some generalizations about the range of typical human development and families.

Health Center

The Health Center, staffed by a registered nurse, focuses on the physical, emotional, and social well-being of Lower Schoolers. Children stop by for band-aids for scrapes, ice packs for bruises, and most of all, for comfort, advice, and reassurance. The purview of the health care coordinator extends to nutrition as she discusses with classes the components of a balanced diet and consults with the chef to plan menus. She also acts as coordinator and moderator of the Education for Parenting program.

Each spring the health care coordinator participates in a series of lunch meetings with fourth grade girls and their female teachers to focus on issues of maturation, and organizes a series of similar lunch meetings with fourth grade boys and male teachers. Prior to meeting with the students, the health care coordinator and faculty meet with interested parents. The health care coordinator convenes friendship groups for discussion and role-playing as needs arise, observes and consults on behavioral issues with homeroom and resource teachers, and works with the physical education and science teachers, and the learning specialist, to connect on common themes and topics.

Homework

Homework at Lower School varies from occasional, brief parent-child projects in the younger grades to regular read-aloud sessions at home to independent written assignments and short-term projects in the upper grades. Homework is connected in meaningful ways to the regular reading, writing, math, and social studies curricula in each classroom. Teachers keep in mind the variety of learning styles and special needs of their children. They try to balance the requirements of a rigorous academic experience with the wish to provide children with plenty of at-home creative play time and time for friends, family, and after-school activities. To that end, general guidelines have been established for each grade level, from second to fourth grades, for homework on school nights:

Second grade	about 30 minutes
Third grade	about 45 minutes
Fourth grade	about 60 minutes

No homework is assigned during religious holidays when school is in session. We do hope and expect that children of all ages will be encouraged to read regularly, or will be read to, as part of the home-school partnership.