

Half Hollow Hills Central School District



**Elementary Curriculum Overview
September 2017
FOURTH GRADE**

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September 2017

Dear Parents:

The Half Hollow Hills School District is committed to providing meaningful opportunities and outcomes for all children, designed to help them reach their fullest potential.

This guide provides parents with an overview of the fourth grade curriculum and the skills the students will acquire in English language arts, mathematics, science, and social studies. Additionally, it will serve as a resource in helping you to understand the total elementary instructional program. While our goals, expectations, and aspirations are the same for all of our students, we recognize that children develop at different rates socially, emotionally, and academically. Our program is supportive and nurturing, and it will also excite, motivate, and challenge all students to achieve.

Every member of our district team is an essential *ally in learning* for our students and their families. It is my hope that this guide will offer each parent important information to become collaborative partners toward this same goal.

Sincerely,

Dr. Patrick Harrigan
Superintendent of Schools

Welcome

English Language Arts

New York State P-12 Common Core Learning Standards for English Language Arts & Literacy

Reading Literature and Informational Text

Reading Foundational Skills

Writing

Listening and Speaking

Language

Literacy skills cross over multiple categories. They are interrelated, and often applied in combination with each other. By the end of the fourth grade year, students should be able to:

Reading Literature/Informational Text and Foundational Skills

- Read grade-level stories, drama, poetry, and informational texts, independently and proficiently
- Read routinely across a variety of text types and genres to develop ideas, fluency, stamina, volume of reading, independence, and a love of reading, in school and at home
- Compare and contrast themes from literary texts
- Analyze examples of similes and metaphors in literary text and explain how they enrich the text
- Determine the meaning of words and phrases as they are used in a text
- Use details and examples from the text when drawing inferences or summarizing the text
- Determine the main idea and explain how it is supported by key details
- Describe the overall structure (chronology, comparison, cause/effect, problem/solution) of information in a text or part of a text
- Interpret information in charts, graphs, diagrams, timelines, or interactive elements on web pages
- Integrate information from two texts on the same topic
- Know and apply grade-level phonics and word analysis skills to decode words

4 /Fourth Grade

Language

- Develop and use grade-level appropriate vocabulary
- Determine or clarify the meanings of words and phrases using a range of strategies and tools
- Use knowledge of standard English grammar, usage, and spelling appropriate to grade four when speaking and listening, writing, and reading

Writing

- Produce clear and coherent writing pieces across a variety of text types for varied purposes and audiences
- Write routinely to respond to reading and to develop ideas, fluency, stamina, volume of writing, independence, and a love of writing, in school and at home
- Approach writing as a process that includes planning, drafting, revising, conferring with others for feedback, revising, and editing for final copy
- Write opinion pieces on topics or texts, supporting a point-of-view with reasons and information
- Write informative/explanatory texts to examine a topic and convey ideas and information clearly
- Write narratives to develop real or imagined experiences using effective techniques (dialogue, description, pacing, transitions)
- Conduct short research projects that build knowledge through investigation about different aspects of a topic, take notes, and list sources

Speaking and Listening in whole class, small groups and one-to-one conversations

- Engage effectively in a range of collaborative conversations on fourth grade topics and texts
- Come to discussion prepared, link comments to what others say, pose and respond to specific questions
- Paraphrase text presented in different formats (print, audio, film)
- Identify reasons and evidence a speaker uses to support particular ideas
- Speak clearly with appropriate pace, volume, and expression



Mathematics

New York State P-12 Common Core Learning Standards for Mathematics

In fourth grade, instructional time will focus on three critical areas: (1) developing understanding and fluency with multi-digit multiplication, and developing understanding of dividing to find quotients involving multi-digit dividends; (2) developing an understanding of fraction equivalence, addition and subtraction of fractions with like denominators, and multiplication of fractions by whole numbers; (3) understanding that geometric figures can be analyzed and classified based on their properties, such as having parallel sides, perpendicular sides, particular angle measures, and symmetry.

The Standards for Mathematical Practice describe varieties of expertise that all students are expected to develop. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

1. Make sense of problems and persevere in solving them
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Look for and express regularity in repeated reasoning

By the end of fourth grade year, students will be able to:

Operations and Algebraic Thinking Domain

- Use the four operations with whole numbers to solve problems
- Gain familiarity with factors and multiples
- Generate and analyze patterns

Number and Operations in Base Ten Domain

- Generalize place value understanding for multi-digit whole numbers
- Use place value understanding and properties of operations to perform multi-digit arithmetic

Number & Operations in Fractions Domain

- Extend understanding of fraction equivalence and ordering
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers
- Understand decimal notation for fractions, and compare decimal fractions



Measurement and Data Domain

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: understand concepts of angle and measure angles.

Geometry Domain

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Science

New York State Stands for Mathematics, Science, and Technology

Students will:

- Use mathematical analysis, scientific inquiry, and technological design to pose questions, seek answers, develop solutions
- Access, process, and transfer information using appropriate technologies
- Understand mathematical concepts and principles, communicate and reason mathematically, and apply mathematics to real-world settings
- Understand and apply scientific concepts, principles, and theories
- Understand technological concepts and apply technological knowledge and skills
- Understand the relationships and common themes connecting mathematics, science, and technology
- Apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions

Mathematics/ Science

By the end of the fourth grade year, students should be able to:

Scientific Inquiry

- Ask questions and formulate hypotheses
- Use measurement and graphing tools
- Make and record observations
- Make analyses and draw conclusions
- Collect and classify data
- Use variables to conduct a scientific investigation

Fourth Grade/9

Engineering Design

- Identify the problem
- Develop solutions
- Optimize solutions

The Physical Setting: Energy & Electricity

- Describe various forms of energy (ex: heat, chemical, light and mechanical) and the changes that occur in objects when they interact with those forms of energy
- Explain how the speed of an object relates to the energy of the object
- Observe the way one form of energy can be transferred into another form of energy present in common situations
- Build series circuits to discover how electricity flows through objects

The Living Environment: Animals

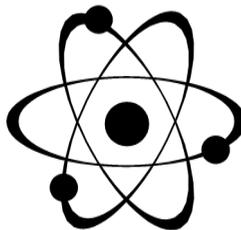
- Distinguish between living and nonliving things
- Recognize and interpret the kingdom of animals and understand the classification
- Investigate food chains and food webs and construct models or drawings to illustrate the flow of energy (producers, consumers, decomposers)
- Explain the consequences of a shift in the balance in a food chain or food web
- Recognize relationships between predators and prey in the food chain
- Investigate various animal adaptations and how those adaptations enable animals to thrive in their environment

The Living Environment: Human Impact on the Environment

- Explain how humans depend on their natural environment
- Identify ways humans change their environment
- Students will examine ways humans have negatively impacted the environment
- Students will examine ways humans have positively impacted the environment

Experimental Design and the Scientific Method

- Identify and research a problem in school or society
- Design and conduct an experiment that will provide insight into the problem
- Understand that scientists use the steps of the scientific method to gain knowledge of the world around us
- Produce a laboratory report that discusses their findings



Social Studies

In fourth grade, students study "New York State and Local History and Government". The course is organized into four unifying themes: Geography of New York State and Early Inhabitants; Exploration and Settlement; Colonial America and the Impact of the Revolution on New York and the New Nation; Change Comes to New York: Westward Expansion and Industrialization. Students will learn about similarities and differences between children, families and communities and about holidays, symbols and traditions that unite us as Americans. Students learn about respect for others, and rights and responsibilities of individuals.

By the end of the fourth grade, students should be able to:

Gathering, Using, and Interpreting Evidence

- Develop questions about New York State, its history, geography, economics and government.
- Recognize, use, and analyze different forms of evidence used to make meaning in social studies (including sources such as art and photographs, artifacts, oral histories, maps, and graphs).
- Identify and explain creation and/or authorship, purpose, and format for evidence; where appropriate, identify point of view.
- Identify arguments of others.
- Identify inferences.
- Recognize arguments and identify evidence.
- Create an understanding of the past by using primary and secondary sources.

Chronological Reasoning and Causation

- Explain how events are related chronologically to one another.
- Employ mathematical skills to measure time in years and centuries. Understand the difference between B.C.E. and C.E. Identify the chronological significance of data presented in time lines with the teacher support.
- Identify the relationship between multiple causes and multiple effects using examples from his/her life or from a current event or history.
- Distinguish between long-term and immediate causes and effects of a current event or an event in history.

- Recognize dynamics of historical continuity and change over periods of time.
- Use periods of time such as decades and centuries to put events into chronological order.
- Recognize and identify patterns of continuity and change in New York.

Comparison and Contextualization

- Identify a region in New York State by describing a characteristic that places within it have in common, and then compare it to other regions.
- Identify multiple perspectives from an historical event.
- Describe and compare New York State historical events.
- Recognize the relationship among geography, economics, and history in social studies.
- Describe historical developments in New York State with specific detail including time and place.

Geographic Reasoning

- Use location terms and geographic representations (maps and models) to describe where places are in relation to each other, to describe connections among places, and to evaluate the benefits of particular places for purposeful activities.
- Distinguish human activities and human-made features from “environments” (natural events or physical features-land, air, and water-that are not directly made by humans).
- Identify how environments affect human activities and how human activities affect physical environments.
- Recognize relationships among patterns and processes.
- Describe how human activities alter places and regions.

Economics and Economic Systems

- Explain how scarcity necessitates decision making; compare the costs and benefits of economic decisions.
- Distinguish between the various types of resources (human capital, physical capital, and natural resources) required to produce goods and services.
- Explain the role of money in making exchange easier; examine the role of corporations and labor unions in an economy.
- Explain why individuals and businesses specialize and trade.

- Explain the meaning of unemployment.
- Explain the ways the government pays for the goods and services it provides, including tax revenue.

Civic Participation

- Demonstrate respect for the rights of others in discussions and classroom debates regardless of whether one agrees with the other viewpoint.
- Participate in activities that focus on a classroom, school, community, state or national issue or problem.
- Identify different types of political systems used at various times in New York State history and, where appropriate, United States history.
- Identify opportunities for and the role of the individual in social and political participation in the school, local, and/or state community.
- Show respect in issues involving differences and conflict; participate in negotiating and compromising in the resolution of differences and conflict.
- Identify situations in which social actions are required and suggest solutions.
- Identify people in positions of power and how they can influence people's rights and freedom.
- Identify rights and responsibilities as a citizen within your community and state.



Assessments

Assessment is a process for gathering information to meet a variety of evaluation needs. Educators collect and organize information or data to demonstrate the growth that each child makes in academic areas. Teachers use a variety of assessment tools, formally and informally, to determine where a child is in his developmental growth. Assessment is an integral part of the curriculum.

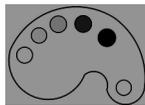
All students in grades 3-5 in Half Hollow Hills must participate in New York State Assessments.



Specials

The following programs enrich the classroom experience and are provided on a weekly basis for all students:

- Art
- Music
- Library
- Physical Education (two times a week)



Additional Services

The following personnel and/or services are available to students on an “as needed” basis:

- School Nurse
- School Psychologist
- Speech and Language
- Reading support
- Resource room
- Occupational and Physical Therapy
- ELL (English Language Learning)

Additional Programs

- Music Lessons – available to all students beginning in third grade for strings and in fourth grade for band instruments
- Orchestra – available to students in fourth and fifth grade
- Band – available to students in fourth and fifth grade



*Assessments/
Specials*

Elementary School Online Resources

Many of these sites are available through the HHH Website

<http://www.hhh.k12.ny.us>

Choose your school and
click on the link for "Library and Media Center"

Almanacs

- <http://www.farmersalmanac.com/> - Farmers Almanac.com
- <http://yahooligans.yahoo.com/> - Yahooligans Kids' Almanac
- <http://www.factmonster.com/almanacs.html> - Fact Monster Almanac
- <http://www.infoplease.com/almanacs.html?link=hptab> – Site to search all Info Please almanacs, or search individual almanacs by subject

Authors

- <http://www.ipl.org/div/kidspace/askauthor/>- Learn more about some of your favorite authors

Biographies

- <http://www.biography.com/> - Search over 25,000 of the greatest lives, past and present
- <http://www.s9.com/biography/> - This biographical dictionary covers more than 28,000 notable men and women who have shaped our world from ancient times to the present day

Calendars

- <http://www3.kumc.edu/diversity/> - Diversity Calendar
- <http://www.earthcalendar.net/> - Calendar of celebrations by month: Earth Calendar

Current Events

- <http://www.timeforkids.com/TFK/> - Time For kids brings the latest news of the world to you

Dictionaries

- <http://www.m-w.com/dictionary.htm> - Merriam Webster Dictionary Online
- <http://nhd.heinle.com/> - Newbury House online Dictionary
- <http://www.yourdictionary.com/> - Provides more than 1,800 dictionaries with more than 250 languages
- <http://www.yourdictionary.com/languages.html> - Language Translation Dictionaries

Thesauri

- <http://www.bartleby.com/62/> - Roget's Thesaurus
- <http://www.thesaurus.com/> - Basic-type in a word, choose thesaurus (online version of Roget's) or dictionary and search
- <http://www.m-w.com/dictionary.htm> - Merriam Webster Thesaurus Online

Quotations

- <http://www.bartleby.com/100/> - Bartlett's Quotations

Ecology-Animals and their environments

- <http://www.nwf.org/kids/> - Learn about animals and their environments

Dinosaurs

- <http://www.ucmp.berkeley.edu/diapsids/dinosaur.html> - Learn about dinosaurs

Encyclopedias

- <http://www.britannica.com/> - Includes the complete updated Encyclopedia Britannica
- <http://www.infoplease.com/> - Combines the contents of an encyclopedia, a dictionary, and several up-to-the-minute almanacs
- <http://www.encyclopedia.com/> - Puts tons of information right at your fingertips



Field Trips

- <http://www.ringling.com/> - Visit the circus
- <http://www.bronxzoo.com/> - Visit the Bronx Zoo
- <http://www.seaworld.com/> - Visit Sea World
- <http://www.sandiegozoo.org> - Visit the San Diego Zoo
- <http://www.amnh.org/home/> - Visit the American Museum of Natural History

Geography

- <http://www.geographic.org/> – Country profiles
- <http://www.50states.com/>- 50 states

Government

- <http://bensguide.gpo.gov/> - This site provides learning tools for K-12 students, parents, and teachers about how our government works

Presidents

- <http://www.whitehouse.gov/kids/index.html> You will find various information concerning different aspects of the White House
- <http://www.ipl.org/div/potus/> -Election results, cabinet members, notable events, and some points of interest on each of the presidents. Links to biographies, historical documents, audio and video files, and other presidential sites are included.

Homework Helpers

- <http://www.suffolk.lib.ny.us/youth/homework/kidindex.html> - Suffolk Library System lists of helpers
- <http://school.discovery.com/homeworkhelp/bjpinchbeck/index.html> - BJ Pinchbeck's Homework help

Search Sites for children:

- <http://sunsite.berkeley.edu/KidsClick%21/> - Search for homework by subject area
- <http://www.askforkids.com/> – Ask Jeeves for Kids
- <http://yahooligans.yahoo.com/> – Yahoo for Kids
- <http://www.icyber.com/homeschool/olr.html> - Home-School support
- http://www.kidinfo.com/School_Subjects.html - Kid Info

Just for Fun

- <http://www.seussville.com/> -Fun with Books by Dr. Seuss

Reading Lists

- <http://kids.nypl.org/reading/recommended2.cfm?ListID=61> - This is a list of 100 picture books everyone should know for teachers
- <http://kids.nypl.org/reading/recommendedz.cfm?listID=61> Book Lists
- <http://www.carolhurst.com/titles/allreviewed.html> – Find reviews of books you might like to read
- <http://www.ucalgary.ca/~dkbrown/bestbooks.html> - List of notable sites listed by the American Library Association

Search Engines

- <http://www.askforkids.com/> – Good search engine for homework helpers has a spell check feature for questions
- <http://www.dogpile.com> – Fun search engine, easy to use, lets you “fetch” information
- <http://www.yahooligans.yahoo.com> – Nice current events page, easy format
- <http://www.google.com> – Check out the kids and teen section in the web directory
- <http://www.discovery.com> – Homework helper site for students
- <http://www.ipl.org/youth/> - The internet public library youth section
- <http://www.mamma.com/> - This search engine contains the web, videos, mp3, audio, news, and images
- <http://www.msn.com> – This search engine features news and stock information
- <http://sunsite.berkeley.edu/KidsClick!/> - Search for homework help by subject area

Social Studies

- http://www.hyperhistory.com/online_n2/History_n2/a.html - Hyper History presents 3000 years of history with a combination of color lifelines, timelines and maps

Black History

- http://www.kn.pacbell.com/wired/BHM/bh_hotlist.html

Colonial America History Resources

- [http://pilgrims.net/Pilgrims Plantation](http://pilgrims.net/Pilgrims%20Plantation) - Virtual tour –illustrating many aspects of life at the time

Native Americans

- <http://www.hanksville.org/NAresources/> - Index of Native American Resources on the Internet

Revolutionary War

- <http://www.ushistory.org/tour/index.html> - This is a virtual tour of historic Philadelphia with great photos and information accompany you on this virtual tour
- <http://www.pbs.org/ktca/liberty> - This is an online game prepared by PBS to test your Revolutionary War knowledge

Western Movement

- <http://www.pbs.org/weta/thewest> - Oregon Trail
- <http://www.americanwest.com/trails/pages/oretrail.htm> - California Gold Rush
- <http://www.ohenrymace.com/GRHA.html> Remembering the Gold Rush History Alliance
- <http://www.lewis-clark.org/> - Explorers Lewis and Clark

Women's History

- <http://www.greatwomen.org/>

