

Hampden-Wilbraham Regional School District

Parent Guide
to
Grade Four Curriculum



HWRSD MISSION STATEMENT

*Our mission is to be one community of learners
committed to educating productive and responsible world citizens
within a safe, healthful environment.*

CURRICULUM OVERVIEW

The Hampden-Wilbraham Regional School District has a rich and rigorous core curriculum, as evidenced by students' excellent accomplishments. The curriculum renewal process is ongoing and ensures continuity and consistency in grades PreK-12. The allocation of grant and local funds has allowed the District to establish equity in access to high quality curriculum materials and resources in every classroom. All teachers use these assets to design powerful, standards-based learning opportunities that actively engage students in the learning process. The narrative below highlights current elementary and middle school programs in technology integration, reading, mathematics, and science.

Strengthening the integration of technology into instruction to improve learning is a high priority. The Hampden-Wilbraham Regional School Committee recently approved a plan to improve staffing, infrastructure, equipment, reliability, and professional development so that all students have suitable access to technology. Research tells us that technology makes learning more interactive, enjoyable, and customizable, and this improves students' attitudes toward the subject and their interest in learning. Our goal is to ensure that students maximize their learning while developing the technology competencies they need for the 21st century.

Through sound planning, incremental investment, and creative allocation of staffing, information centers are the learning hub of every school with grades 2 and higher. Each school's information center is considered a "dynamic agent of learning." These centers feature a library with a collection of both fiction and non-fiction, a research section with traditional print media and a bank of computers for internet searches, a computer lab with at least twenty five computers and publishing media tools for the development of presentations or productions. The level of technology integration and professional development across the curriculum has intensified with full-time information specialists and paraprofessionals to support assimilation efforts.

Our current elementary reading program incorporates National Reading Panel recommendations for curriculum, instruction, and assessment which address the five components of literacy learning: vocabulary/oral language comprehension, phonemic awareness, phonics, fluency, and reading comprehension. The core program, based upon the Houghton-Mifflin *Invitations to Literacy* (1997) balanced literacy series, is supplemented by classroom libraries and a steadily increasing number of leveled books for guided reading at the primary grades. *Accelerated Reader* is also accessed to encourage children to focus attention on careful reading of books, which improves students' critical-thinking skills and builds an intrinsic love of reading. Finally, to complete the language arts program, Collins Writing is consistently used in grades PreK-8 to support writing to learn across the curriculum.

Given the National Reading Panel recommendations, there is a need to find the right tools and use them with the right children. HWRSD supplemental regular education, Title 1, and/or Special Education reading interventions for students who are experiencing difficulty include: *Reading Recovery*, *Early Reading Intervention*, and small literacy groups for first graders who are performing at the lowest 20%

of their class, *Soar to Success* and *Story Grammar Marker* for students in grades 3-6 who need support in developing habits of mind for improving comprehension, *Lindamood-Bell* sensory-cognitive learning processes, and *Phonographix*, for students who need explicit phonics instruction.

The HWRSD mathematics curriculum is designed to develop understanding of mathematics concepts through student-centered activities while developing skills through meaningful practice. Rich, rigorous, in-depth units of study are balanced by direct instruction, selected textbook activities, and varied opportunities to review and practice skills. *Investigations* and *Mathematics* published by Addison-Wesley Scott-Foresman are used as the primary resources at the elementary level, while *Connected Mathematics* is the primary resource for students in grades six to eight.

Though the general curriculum is designed to invite inquiry by diverse learners, there is often a need to provide extra support or challenge to meet student needs. The District has adopted *Accelerated Math*, a technology based resource to address this problem. *Accelerated Math*

- Supplements the core curriculum;
- Meets NCLB definition for scientifically based research;
- Is a vehicle for individualized instruction;
- Generates unlimited practice assignments tailored to each student;
- Gives immediate, individualized feedback;
- Lets teachers and students know that all objectives are being mastered;
- Automatically scores all assignments and tasks;
- Helps students practice the skills needed to move ahead at their own pace.

Accelerated Math incorporates an assessment instrument called STAR Math. It is a helpful resource for Title 1 support programs, Academic Support Services, Special Education, after school and summer programs, and enrichment, but is also used within the regular classroom. The STAR Math assessment component provides norm-referenced achievement information, a good complement to the criterion referenced MCAS information.

The elementary science program is designed to help students develop scientific reasoning as they investigate and solve complex real-world problems using the tools they need. Standards-based science units are studied in the classroom and are enriched through a weekly science lab with a specialist.

HWRSD Academic Performance

Since its inception in 1998, the Massachusetts Comprehensive Assessment System (MCAS) has increasingly become a major source of information with regard to student achievement, curriculum evaluation, and diagnosis of individual student strengths and weaknesses.

The chart below displays a summary of MCAS performance data for 2002 - 2005.

Grade/Subject Tested	Percent of Students Scoring <i>Advanced/Proficient</i>				Percent of Students Scoring <i>Warning/Failing</i>			
	2002	2003	2004	2005	2002	2003	2004	2005
Grade 3 Reading	85%	87%	77%	80%	2%	0%	3%	2%
Grade 4 English Lang. Arts	71%	64%	75%	62%	4%	3%	2%	4%
Grade 4 Mathematics	50%	56%	58%	50%	10%	5%	5%	7%
Grade 5 Science/Engineering	N/A	70%	76%	72%	N/A	4%	3%	4%
Grade 6 Mathematics	60%	65%	59%	61%	8%	9%	9%	8%
Grade 7 English Lang. Arts	77%	77%	83%	77%	2%	2%	3%	1%
Grade 8 Mathematics	39%	56%	54%	65%	18%	13%	14%	11%
Grade 8 Science/Engineering	N/A	62%	51%	59%	N/A	10%	14%	6%
Grade 10 English Lang. Arts	77%	77%	75%	86%	4%	2%	2%	2%
Grade 10 Mathematics	66%	65%	70%	78%	10%	7%	3%	3%

Members of the graduating class of Minnechaug are required to pass both the grade 10 English Language Arts and the grade 10 Mathematics MCAS tests as one condition for receiving a high school diploma. Students starting with the graduating class of 2010 shall, in addition, need to pass a Biology test in order to satisfy State regulations.

The District is proud to announce that each year for the last two years, 90 or more students were eligible to accept the John and Abigail Adams Scholarship. Students qualified for this award by scoring in the Advanced category in English Language Arts or Mathematics and Advanced or Proficient in the other subject area on the grade 10 MCAS assessments. If they accepted the award, students received a tuition waiver to state colleges and universities that is in effect for 8 consecutive traditional semesters or 4 years.

It is important to note that the percentage of 10th grade students who scored at the Failing level in English Language Arts has decreased from 23% to 2% since spring of 2000, while the percentage of 10th grade students who scored at the Failing level in Mathematics has decreased from 36% to 3% since spring of 2000. These improvements are attributed to ongoing refinements of programs and the relentless pursuit of excellence throughout all levels of the educational system.

The state testing system has been evolving continuously for the last eight years. In 2006, the MCAS program tested all third through eighth grade children in reading and mathematics every year. This change is required by the No Child Left Behind Act, which was signed by President George W. Bush in January 2002. Other subjects will continue to be tested in the targeted grades.

In addition to MCAS performance, HWRSD educators use a range of information to monitor student achievement. One example of the data considered to be relevant is SAT scores. The table below provides longitudinal SAT results for students graduating from Minnechaug Regional High School.

MRHS	1995	1997	1998	1999	2000	2001	2002	2003	2004	2005
Verbal Mean	531	534	512	517	506	519	518	529	529	531
Math Mean	535	536	519	523	515	527	530	517	550	550

Consistent with other achievement tests, these results are well above the State average.

In order for students to be appropriately prepared for high stakes tests as well as for multiple career and educational options in the 21st century, it is essential that teachers, administrators, parents, community, and students work together knowledgeably over the long-term. Fortunately, the necessary partnerships in the District are vigorous and effective, with a shared commitment to continuous improvement at all levels.

WRITING ACROSS THE CURRICULUM

Students in the Hampden-Wilbraham Regional School District write a great deal across the curriculum areas. Writing is critical to language development, learning content thoroughly, and developing thinking skills. In grades K-8, the Collins Writing Program is utilized. One feature of this program is the designation of Five Types of Writing.

Type One writing is the type used just to get ideas down on paper. It is not a composition, but rather a "quick-write" to generate ideas, express an opinion, make a prediction, or reflect on an event. *Type One* writing is not graded for spelling or writing conventions. *Type One* writing is done frequently in all subject areas because it contributes significantly to each child's learning and language development.

Students also do a great deal of *Type Two* writing, which is also a quick-write. With *Type Two* writing, your child will be answering a specific question about content that is being studied. In evaluating *Type Two* writing, teachers judge only the content of the writing - not the conventions. *Type Two* also contributes significantly to each child's writing fluency.

Type Three and *Type Four* writing are compositions done to produce ideas and develop specific writing skills. With *Type Three* and *Four* writing, teachers use a strategy called focus correcting. Focus correcting is based on the belief that writing improves more quickly when students work to improve a few skills at a time. You will know what the focus correction areas (FCAs) are on any writing project your child does because they will be listed at the top of the paper. On *Type Three* and *Four* writing, teachers evaluate only the focus correction areas. This strategy keeps students focused on key aspects of writing and avoids giving too much negative feedback.

Students also do some *Type Five* writing. This is the most difficult type for all writers, especially young, developing writers. *Type Five* writing is writing that is revised and edited to be as free as possible of all types of errors. This kind of "publishable" writing requires multiple drafts. Most of the *Type Five* writing students do will start as *Type Three* or *Four*. Then over time, students will polish it so that it becomes a publishable *Type Five* piece of writing.

ENGLISH LANGUAGE ARTS

Primary Curriculum Resources: *Invitations to Literacy* (Houghton-Mifflin, 1997), Collins Writing

LEARNING OUTCOMES

- ☆ Understand and acquire new vocabulary and use it correctly in reading and writing.
- ☆ Identify the four basic parts of speech (adjective, noun, verb, adverb).
- ☆ Identify correct mechanics (end marks, commas for series, capitalization), correct usage, and correct sentence structure.
- ☆ Read aloud grade-appropriate imaginative/literary and informational/expository text fluently, accurately, and with comprehension.
- ☆ Identify main ideas and details in a text and use the information for predicting, inferring, and drawing conclusions.
- ☆ Write with a clear focus, coherent organization, and sufficient detail.
- ☆ Summarize information gathered through research.
- ☆ Interpret and explain literary or informational text using evidence from the text as support.
- ☆ Revise writing to enhance level of detail and logical flow of ideas.
- ☆ Revise writing to improve word choice by using a dictionary and thesaurus to edit for grammar, spelling, and word choice.
- ☆ Gather, interpret, and communicate information from a variety of electronic and print resources.

MATHEMATICS

Primary Curriculum Resources

The fourth grade mathematics curriculum is anchored by four units of study from *Investigations in Number, Data, and Space* (Scott-Foresman Addison-Wesley, 2002), which are designed to develop understanding of mathematics concepts through student-centered activities. They are: *Landmarks in the Thousands; Arrays and Shares; Different Shapes, Equal Pieces; The Shape of the Data*. These units are balanced by selected activities from the textbook *Math* (Scott-Foresman Addison-Wesley, 2002). Teacher designed lessons are also used to address some content.

LEARNING OUTCOMES

- ☆ Select and use a variety of strategies to estimate quantities, measures, and the results of whole-number computations up to three-digit whole numbers and amounts of money to \$1000, and to judge the reasonableness of the answer.
- ☆ Add and subtract (up to five-digit numbers) and multiply three digits by two digits accurately and efficiently.
- ☆ Know multiplication facts through 12x12 and related division facts. Use these facts to solve related multiplication problems and compute related problems, e.g. 3x5 is related to 30x50, 300x5, and 30x500.
- ☆ Divide up to a three-digit number with a single-digit divisor accurately and efficiently. Interpret any remainders.

- ☆ Demonstrate an understanding of fractions as parts of unit wholes, as parts of a collection, and as locations on the number line.
- ☆ Use concrete objects and visual models to add and subtract common fractions.
- ☆ Create, describe, extend, and explain symbolic (geometric) and numeric patterns.
- ☆ Use pictures, models, tables, charts, graphs, words, number sentences, and mathematical notations to represent and interpret mathematical relationships.
- ☆ Identify, describe, and analyze shapes, lines, and angles.
- ☆ Locate and identify points using ordered pairs of positive whole numbers.
- ☆ Estimate and find area and perimeter of a rectangle.
- ☆ Understand and use appropriate units and tools to measure.
- ☆ Collect, organize, and represent data to construct, draw conclusions.
- ☆ Classify outcome as certain, likely, unlikely, or impossible.

SCIENCE AND ENGINEERING/TECHNOLOGY

The science program is designed to help students develop scientific reasoning as they investigate and solve complex real-world problems using the tools they need. The following units are studied in the classroom and are enriched through a weekly science lab: Animals, Solid Earth, and Weather and Climate.

LEARNING OUTCOMES

- ☆ Classify animals according to their physical characteristics.
- ☆ Give examples of how inherited characteristics may change over time.
- ☆ Describe how organisms meet some of their needs in an environment.
- ☆ Recognize that some animal behaviors are instinctive and others are learned.
- ☆ Identify, classify, and define minerals, rocks, and soil.
- ☆ Identify materials used to accomplish a design task based on a specific property, i.e., weight, strength, hardness, and flexibility.
- ☆ Identify a problem that reflects the need for shelter, storage, or convenience.
- ☆ Describe different ways in which a problem can be represented and identify relevant design features.
- ☆ Give examples of how the surface of the earth changes.
- ☆ Explain the factors which make up weather.
- ☆ Describe how global patterns influence local weather.
- ☆ Differentiate between weather and climate.
- ☆ Describe how water cycles on earth affect the climate.

HISTORY AND SOCIAL SCIENCE

Primary Curriculum Resources: Social Studies Alive, Maps, Globes, Graphs Workbook

History, geography, civics, economics concepts and skills are addressed through the following units of study: Geography, Peopling of the United States, Regions of the United States, Black History, and Canada. In grade 4, research projects are completed on selected states and national historic landmarks.

MUSIC AND VISUAL ARTS

For all children at all ability levels, the arts play a central role in human development. Cognitive, language, and social- emotional development are positively impacted by participation in the arts. Much research substantiates that good arts programs in elementary and middle schools not only build skills needed to learn math, reading, and writing, but motivate students, particularly those who are at risk of failure. In a weekly music class, students develop proficiency in singing; reading and notation; playing instruments; improvisation and composition; and critical response. In a weekly art class, students develop proficiency in methods, materials, and techniques; elements and principles of design; observation, abstraction, invention, and expression; exhibiting; and critical response.

HEALTH AND PHYSICAL EDUCATION

As an integral part of the total educational process, health and physical education will create opportunities to develop a lifelong physically active lifestyle as well as respect for self and others, through a safe learning environment. Through health literacy, self-management skills (Second Step), and health promotion, comprehensive health education teaches fundamental health concepts, promotes habits and conduct that enhance health and wellness, and guides efforts to build healthy families, relationships, schools, and communities (Massachusetts Department of Education, 1999). Students experience health/physical education class twice weekly.



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