

Hampden-Wilbraham Regional School District

Parent Guide
to
Grade Eight 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.*

Hampden-Wilbraham Regional School District

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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: Prentice Hall Literature Anthology, Prentice Hall Writing and Grammar, Collins Writing

LEARNING OUTCOMES

- ☆ Present an organized interpretation of a literary work, film, or dramatic production.
- ☆ Identify correct mechanics, correct usage, and correct sentence structure.
- ☆ Locate and analyze elements of plot and characterization.
- ☆ Respond to and analyze the effects of sound, form, figurative language, and graphics in order to uncover meaning in poetry.
- ☆ Write and justify a personal interpretation of literary, informational, or expository reading that includes a topic statement, supporting details from the literature, and a conclusion.
- ☆ Write poems using poetic techniques, figurative language, and graphic elements.
- ☆ Write reports based on research that include quotations, footnotes or endnotes, and a bibliography.
- ☆ Write multi-paragraph compositions that have clear topic development, logical organization, effective use of detail, and variety in sentence structure.
- ☆ Apply steps for obtaining information from a variety of sources, organizing information, documenting sources, and presenting research in individual projects.
- ☆ Use criteria to assess the effectiveness of media presentations.

MATHEMATICS (ALGEBRA)

Primary Curriculum Resources

All students in grade 8 study algebra content. Those who meet the criteria for the advanced level use the textbook *Algebra 1* (Glencoe, 2005) for the formal study of algebra. Other students study the ideas of algebra from a problem-based perspective using selected *Connected Mathematics* units (Prentice-Hall, 2002): *Thinking with Mathematical Models*; *Looking for Pythagoras*; *Growing, Growing, Growing*; *Say It With Symbols*. *Scientific/Graphing Calculators* are frequently used. In addition to assignments that are closely connected to the content studied in the classroom, homework includes a weekly review assignment from *Math's Mate* (Learning Cycles, 2004) to keep skills sharp.

LEARNING OUTCOMES

- ☆ Demonstrate an understanding of the concepts and apply formulas and procedures for determining measures, including those of area and perimeter/ circumference of parallelograms, trapezoids, and circles. Given the formulas, determine the surface area and volume of rectangular prisms, cylinders, and spheres. Use technology as appropriate.
- ☆ Estimate and compute with fractions, integers, decimals, and percents.
- ☆ Extend, represent, analyze, and generalize a variety of patterns with tables, graphs, words, and, when possible, symbolic expressions. Include arithmetic and geometric progressions.
- ☆ Create, use, and evaluate symbolic expressions and relate them to various representations.

- ☆ Use linear equations to model and analyze problems involving proportional relationships. Use technology as appropriate.
- ☆ Use ratio and proportion (including scale factors) in the solution of problems.
- ☆ Use models, graphs, and formulas to solve simple problems involving rates, e.g., velocity and density.
- ☆ Explain and analyze how a change in one variable results in a change in another variable in functions.
- ☆ Use tables and graphs to represent and compare linear growth patterns. In particular, compare rates of change and x- and y-intercepts of different linear patterns.
- ☆ Define, compare, order, and apply frequently used irrational numbers, such as $\sqrt{2}$ and π .
- ☆ Apply the rules of powers and roots to the solution of problems. Extend the Order of Operations to include positive integer exponents and square roots.
- ☆ Identify the slope of a line as a measure of its steepness and as a constant rate of change from its table of values, equation, or graph. Apply the concept of slope to the solution of problems.
- ☆ Demonstrate an understanding of the Pythagorean Theorem and apply it to solve problems.
- ☆ Set up and solve linear equations and inequalities with one or two variables, using algebraic methods, models, and/or graphs.

SCIENCE

The science curriculum is designed to help students develop scientific reasoning as they investigate and solve complex, real-world problems using the tools they need. Major units of study are: *Cells, Genetics, Biodiversity, Properties of Matter, Elements, Compounds, and Mixtures, Motion of Objects, and Forms of Energy* (Prentice-Hall, 2002).

LEARNING OUTCOMES

- ☆ Recognize that all organisms are composed of cells.
- ☆ Compare and contrast plant and animal cells.
- ☆ Describe the hierarchical organization of multicellular organisms.
- ☆ Recognize that every organism requires a set of instructions that specifies its traits.
- ☆ Give examples of the effects of genetic variation and environmental factors.
- ☆ Define density.
- ☆ Explain and give examples of how mass is conserved in a closed system.
- ☆ Recognize that there are more than 100 elements that combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.
- ☆ Differentiate between an atom and a molecule, mixtures and pure substances, and physical and chemical changes.
- ☆ Explain and give examples of how the motion of an object can be described by its position, direction of motion, and speed.
- ☆ Graph and interpret distance vs. time graphs for constant speed.
- ☆ Differentiate between potential and kinetic energy.

SOCIAL STUDIES

LEARNING OUTCOMES

- ☆ Demonstrate understanding of the development, significance, and impact of the founding documents.
- ☆ Demonstrate understanding of U.S. government exists on a Federal, State, and Local level.
- ☆ Demonstrate knowledge of the key events of the early presidents and understand that their actions often set the precedent for future presidents.
- ☆ Explain the idea of Manifest Destiny and its role in government decisions.
- ☆ Explain the causes, major events, and effects of the Civil War.
- ☆ Explain the impact of the Industrial Revolution.
- ☆ Students should understand the U.S. role in World War I and its significance. Students should be able to explain the causes of the Great Depression and its impact on society.
- ☆ Explain the causes, major events, and effects of World War II.
- ☆ Demonstrate understanding of the Cold War and its impact on American society and policy.
- ☆ Explain the major changes in American society during the Civil Rights Era.

FOREIGN LANGUAGE

The foreign language program at WMS and TWB is a two-year sequence that prepares students for second year French or Spanish at the high school. French and Spanish are offered at WMS, and Spanish is offered at TWB. Research shows that learning a foreign language improves student performance across the curriculum; often, the knowledge acquired in the foreign language class acts to complement and reinforce what is being taught in classes such as language arts and social studies. Upon completion of the middle school foreign language course, students acquire a strong foundation in the areas of listening, speaking, reading, and writing in the target language, as well as an appreciation of the target culture.

Students whose language arts, reading, and study skills need extra attention may enroll in the F.L.A.R.E. (foreign language and reading exploration) program at WMS, or the CRWS (critical reading and writing) program at TWB. Students enrolled in these alternative courses at both schools explore a foreign language while simultaneously developing stronger skills in English.

RELATED ARTS

For students at all ability levels, the related arts play a central role in human development. Cognitive, language, and social- emotional development are positively impacted by participation in the related arts. Eighth grade students participate in a variety of related arts courses. The options and time frame differ slightly at Wilbraham Middle School and Thornton W. Burgess School. Students are randomly scheduled for the following related arts courses: art, computers, family consumer science, and modern music. All students are scheduled for physical education/health. Band and concert choir are also available for study.

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