



Stamford Public Schools Middle School Transformation

A Reference Guide for Grade 6
2009-2010

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Stamford Public Schools

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MESSAGE FROM THE SUPERINTENDENT

Spring 2009

Dear Families and Staff,



Since I became Superintendent of Schools in 2005, the Stamford community has consistently asked for improvements in our middle schools. Parents of children of at all levels of academic achievement have expressed the need for our middle school program to be more rigorous, more relevant, and more responsive to individual student strengths and challenges.

A 21st century curriculum that reflects high standards and appropriately challenges, engages, and supports each and every child will require us to become more flexible in how we structure teaching and learning. Some of our students excel in one area and struggle in another. They should be in classes that are appropriately aligned to their needs and strengths. Students who are ready to accelerate should be placed in courses that push them further, and maybe even have the opportunity to earn high school credit in middle school if they can complete the coursework. Students who are struggling should be placed in courses that guarantee their mastery of high standards. By the time all students complete grade 8, they will be ready to pursue a high school course of study that will prepare them for college upon graduation.

Starting in September 2009, we will provide our grade 6 children with opportunities for course placement that meet their individual needs. Our journey toward Middle School Transformation began two years ago, with the creation of the Middle School Reform Think Tank. Chaired by Deputy Superintendent Dr. Winnie Hamilton, a group of parents, teachers, students, and administrators read research, visited schools in Stamford Public Schools and beyond, and wrestled with the big question of what our middle schools should look like in the 21st century. In 2009, a Middle School Advisory Council expanded and continued that work. Public meetings and focus groups provided qualitative information to help refine the middle school reform plan. We received a great deal of additional input through emails, phone calls, and personal conversations with parents and staff, and expect further information from the Spring 2009 Family Survey this summer. All of this has been extremely helpful in making sure questions and concerns are properly addressed. This feedback has also assisted us in compiling this Reference Guide, which provides the “what, when, and how” of Middle School Transformation.

Our school district, in partnership with our families, looks forward to implementing our new vision for middle school education over the next three years. That vision includes high quality instruction, a challenging, standards-based curriculum, flexible classroom grouping, and a personalized educational experience. We often hear of the need to raise the bar for all children. Starting now, all of us can say we are raising the bar for each individual child as well.

Sincerely,

A handwritten signature in black ink that reads "Joshua Starr". The signature is fluid and cursive, with a long horizontal flourish at the end.

Joshua P. Starr, Ed.D.
Superintendent of Schools

WHAT DOES THE RESEARCH SAY ABOUT CURRICULUM AND ACADEMIC ENRICHMENT?

High Standards for All

- Schools must hold all students to the same high standards so that no students graduate or leave school without essential competencies needed to succeed in the 21st century economy (Murnane & Levy, 1996; Lachat & Williams, 2003; Lachat, 2001; Siskin, 2003; McLaughlin & Talbert, 2001).
- Today, only students who can think critically, work successfully in teams, analyze problems and assemble solutions, and continue learning as technology changes will succeed in the 21st century economy (Toch, 2003; Murnane & Levy, 1996; McLaughlin & Talbert, 2001).

Instructional Improvement

- In order to improve the quality and level of student learning, improvements in the instructional core, consisting of the level of content, teachers' knowledge and skill, and student engagement, must occur (City, Elmore, Fiarman, and Teitel, 2009).
- Accountability systems must include the task in which students are asked to engage in classrooms, not just the outcome of student performance. The instructional task, the work that students are asked to do in the process of instruction, is what predicts student performance (City, et. al., 2009).
- In order to improve instruction, reforms must adjust the interactions among teachers and students around educational material; simply providing teachers with a new curricula or providing teachers with training will not change instruction (Cohen and Ball, 1999).
- As stated by Neufeld and Roper (2003, July), "Instructionally focused, whole-school improvement depends on the existence of a professional school culture in which teaching practice is public and all adults are engaged in improving their work with students" (p. 8).

Cultural Relevance in and Differentiation of Instruction

- Minority students are more likely to succeed when teachers use culturally relevant curricula and instructional strategies (Ladson-Billings, 1995; Lynn, 1999).
- Instead of grouping students based on differences in preparedness for school that may result from their distinct cultural backgrounds, Delpit (1995) recommends that teachers utilize instructional strategies appropriate for all children within their classrooms to ensure the success of all students.
- Students in middle school grades are a developmentally varied group; it is essential that middle school teachers differentiate so that students will begin to see themselves as successful in the subjects we teach. Differentiation requires that teachers have clear learning goals for students and provide various avenues and support systems for students to reach those goals (Tomlinson, 2005).

Assessment

- In addition to focusing on high learning standards for all students, professional development that improves classroom teaching also considers evidence of student learning (Annenberg Institute for School Reform, 2004; DuFour et al., 2008).
- Professional learning communities assess current levels of student achievement and set goals for improvement, in addition to studying evidence of student progress throughout the year, as shown on formative assessments (DuFour, 2004).
- Improving formative assessment raises standards for student learning. Effective types of formative assessment include teacher questioning, effective feedback to students on their work to enhance learning and motivation, and the use of peer and self-assessment (Black, Harrison, Lee, Marshall and William, 2004).

WHAT IS STAMFORD PUBLIC SCHOOLS DOING TO IMPROVE MIDDLE SCHOOL CURRICULUM & INSTRUCTION?

The following curricula apply to all students in both the College Prep and Honors groups. Students in the Honors group will progress more quickly through introductory components of a given curriculum, allowing more time for related extension projects and activities. Special Education and English Language Learners (those in the Bilingual, New Arrivals, and English as a Second Language programs) will be included in the College Prep and Honors groups as appropriate. Exceptions are Individualized Education Plan (IEP) directed exclusions. Regular Education, Special Education, and English Language Learner teachers receive professional development to support the following curricula.

MATH CURRICULUM

Introduction

According to Connecticut State Math Standards, the National Council of Teachers of Mathematics, and international assessments, students need to become problem-solvers, learn to reason and communicate mathematically, value mathematics, and become confident in their ability to do mathematics in order to be prepared for higher education and the global workforce. Students learn more than just mathematical procedures; they learn the “why” and “how” of mathematics. The Stamford Public Schools middle school mathematics curriculum using the *Connected Mathematics Project 2* (CMP2), provides students the opportunity to do this by developing their skills, helping them make meaning of the mathematics they learn, as well as helping them obtain the math skills and knowledge needed for success on the Connecticut Mastery Tests (CMTs).

Textbook

Fey, J., Fitzgerald, W., Friel, S., Lappan, G., Phillips, E. (2006). *Connected Mathematics 2*. Boston, MA: Pearson Prentice Hall.

UNITS AND LEARNING OUTCOMES

Factors & Multiples

- Understand relationships among factors, multiples, divisors, and products
- Recognize and use properties of prime and composite numbers, even and odd numbers, and square numbers
- Use rectangles to represent the factor pairs of numbers
- Develop strategies for finding factors and multiples, least common multiples, and greatest common factors
- Recognize and use the fact that every whole number greater than one can be written in exactly one way as a product of prime numbers
- Use factors and multiples to solve problems and to explain some numerical facts of everyday life
- Develop a variety of strategies for solving problems, building models, making lists and tables, drawing diagrams, and solving simpler problems

Understanding Fractions, Decimals, & Percents

- Build an understanding of fractions, decimals, and percents and the relationship between and among these concepts and their representations
- Develop ways to model situations involving fractions, decimals, and percents
- Understand and use equivalent fractions to reason about situations
- Compare and order fractions
- Move flexibly among fractions, decimals, and percent representations
- Use benchmarks such as 0, $\frac{1}{2}$, and 1 to help estimate the size of a number or sum
- Develop and use benchmarks that relate to different forms of representations of rational numbers (for example, 50% can be represented as 0.5)
- Use physical models and drawings to help reason about a situation
- Look for patterns and describe how to continue a pattern
- Use context to help reason about a situation
- Use estimation to understand a situation

Two-Dimensional Geometry

- Understand some important properties of polygons and recognize polygonal shapes both in and out of the classroom
- Investigate the symmetries of a shape – rotational or reflectional
- Estimate the size of any angle using reference to a right angle and other benchmark angles
- Use an angle ruler for making more accurate angle measurements
- Explore parallel lines and angles created by lines intersecting parallel lines
- Find patterns that help determine angle sums or polygons
- Determine which polygons fit together to cover a flat surface and why
- Explain the property of triangles that makes them useful as a stable structure for building
- Find that the sum of any two side lengths of a triangle is greater than the third side length
- Find that the sum of any three side lengths of a quadrilateral is greater than the fourth side length
- Reason about and solve problems involving shapes

Understanding Fraction Operations

- Use benchmarks and other strategies to estimate the reasonableness of results of operations with fractions
- Develop ways to model sums, differences, products, and quotients with areas, strips, and number lines
- Use estimates and exact solutions to make decisions
- Look for and generalize patterns in numbers
- Use knowledge of fractions and equivalence of fractions to develop algorithms for adding, subtracting, multiplying, and dividing fractions
- Recognize when addition, subtraction, multiplication, or division is the appropriate operation to solve a problem
- Write fact families to show the inverse relationship between addition and subtraction, and between multiplication and division
- Solve problems using arithmetic operations with fractions

Two-Dimensional Measurement

- Understand area and related area to covering a figure
- Understand perimeter and related perimeter to surrounding a figure
- Develop strategies for finding areas and perimeters of rectangular shapes and non-rectangular shapes
- Discover relationship between perimeter and area, including that each can vary while the other stays fixed
- Understand how the areas of simple geometric figures relate to each other
- Develop formulas and procedures – stated in words and/or symbols – for finding areas and perimeters of rectangles, parallelograms, triangles, and circles
- Develop techniques for estimating the area and perimeter of an irregular figure
- Recognize situations in which measuring perimeter or area will help answer practical questions

Decimals

- Add, subtract, multiply, and divide decimals

Computing with Decimals & Percents

- Build on knowledge of operations on fractions and whole numbers
- Develop and use benchmarks and other strategies to estimate the answers to computations with decimals
- Develop meaning of and algorithms for operations with decimals
- Use the relationship between decimals and fractions to develop and understand why decimal algorithms work
- Use the place value interpretation of decimals to make sense of short-cut algorithms for operations
- Generalize number patterns to help make sense of decimal operations
- Choose between addition, subtraction, multiplication, or division as an appropriate operation to use to solve a problem
- Understand that decimals are often associated with measurements in real world situations
- Solve problems using operations on decimals
- Use understanding of operations and the meaning of percents to solve percent problems of the form $a\%$ of b equals c for any one of the variables a , b , c

Probability

- Understand that probabilities are useful for predicting what will happen over the long run
- Understand the concepts of equally likely and not-equally likely
- Understand that fairness implies equally likely outcomes
- Understand that there are two ways to build probability models:
by gathering data from experiments and by analyzing the possible equally likely outcomes
- Understand that experimental probabilities are better estimates of theoretical probabilities when they are based on larger number of trials
- Develop strategies for finding both experimental and theoretical probabilities
- Critically interpret statements of probabilities to make decisions or answers questions

Data Analysis

- Compute mean, median, mode, range of the data
- Understand and use the process of data investigations by posing questions, collecting data, analyzing data distributions, and making interpretations to answer questions
- Represent data distribution using bar graphs, line graphs, stem-and-leaf plots, and coordinate graphs
- Make informed discussions about which graph to use to describe data
- Develop strategies to compare data

Measurement

- Convert commonly used customary and metric units to other units within the same system
- Estimate the length and areas using both customary and metric units of measurement
- Identify the appropriate unit of measure (length, capacity, mass) for a given situation

Expectations

All students will:

- Communicate their reasoning and justifications for mathematical ideas with their peers and the teacher
- Use mathematical vocabulary during discussions
- Be engaged during the explore section of the lesson
- Use concrete representations or manipulatives when appropriate for the problem
- Provide multiple methods and solutions for problems
- Use technology when appropriate for the problem
- Organize their materials in a notebook
- Use math talk and explain their thinking
- Show confidence in explaining their solutions
- Show mathematics proficiency in understanding, computing, applying, and reasoning
- Be engaged throughout the lesson
- Be empowered to *THINK!*

Grading Practice

1. Participation	25%
2. Math Notebooks	20%
3. Homework	15%
4. Assessments	40%

MATH ACADEMIC ENRICHMENT

The Academic Enrichment (AE) period was introduced into the middle schools during the 2008-2009 school year. With a systemic AE schedule for both teachers and students during the 2009-2010 school year, materials and resources can be used to support or enrich the middle school standards-based math program. Therefore, the curriculum for the AE math classes would mirror the pacing and sequencing of the core math classes.

The AE math period will follow the district math curriculum. A pacing guide for the AE period will be developed by the Middle School Math Committee during the summer to follow the concepts and sequencing of the core math classes. Students in both the core math course and the AE period will keep a math notebook. These notebooks will include the five district components for math notebooks criteria and also the any additional components created by the individual schools.

There are many materials and resources that can be utilized by teachers for the students in the AE periods. The Connected Mathematics Program 2 (CMP2) materials will be the main resources used while the Connecticut State Department of Education has "Suggested Learning Activities" which will be used particularly during the AE period. In addition, the diagnostics and activities from the *First Steps in Mathematics* program will be used to fill in gaps in math knowledge for those students who need it. Each school's math coach will be the main coordinator to make sure the AE math classes provide either support or enrichment of the concepts currently being taught in the core math courses.

Below are the resources and materials available for students who need math support or math enrichment:

While the grade 6 core math class is working on...	AE Support classes will use the following resources...	AE classes will use the following resources...
CMP2 Prime Time module (factors and multiples)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 1-16), • <i>Special Needs Handbook</i> (p. 3-12) 	<ul style="list-style-type: none"> • <i>Prime Time</i> Unit project, "My Special Number" • students create their own Product/Factor game with rules • <i>Connections & Extension</i> problems not completed in core math class • CT State Dept of Ed "Network News" worksheet
CMP2 Bits & Pieces I module (understanding rational numbers)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 17-30), • <i>Special Needs Handbook</i> (p. 13-17) • Students solve and create their own fraction/decimal mysteries. For example: "My numerator is six less than my denominator. I am equivalent to 0.75." 	<ul style="list-style-type: none"> • CT State Dept of Ed's lesson plan entitled <i>Using Egyptian Hieroglyphics to Understand Place Value</i> • <i>Connections & Extension</i> problems not completed in core math class • <i>Figure This!</i> activity "Which Tastes Juicier?" • CT State Dept of Ed <i>Suggested Learning Activity</i> "Have students solve and create their own fraction/decimal mysteries. For example: 'My numerator is six less than my denominator. I am equivalent to 0.75.'"
CMP2 Shapes & Designs module (two-dimensional geometry)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 31-42), • <i>Special Needs Handbook</i> (p. 18-27) 	<ul style="list-style-type: none"> • <i>Shapes and Designs</i> Unit project, "What I Know About Shapes & Designs," • <i>Connections & Extension</i> problems not completed in core math class
CMP2 Bits & Pieces II (understanding fraction operations)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 43-58), • <i>Special Needs Handbook</i> (p. 28-34) 	<ul style="list-style-type: none"> • <i>Figure This!</i> challenges, • CT State Dept of Ed's "Suggested Learning Activities"
CMP2 Covering & Surrounding module (two dimensional measurement)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 59-79), • <i>Special Needs Handbook</i> (p. 35-41) 	<ul style="list-style-type: none"> • CT State Dept of Ed's lesson plan entitled <i>Polygons and their Transformations</i> • <i>Connections & Extension</i> problems not completed in core math class
CMP2 Bits & Pieces III module (computing with decimals & percents)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 80-99), • <i>The Special Needs Handbook</i> (p. 42-49) 	<ul style="list-style-type: none"> • CT State Dept of Ed's lesson plan entitled <i>Connecting Fractions and Percentages with a Human Circle Graph</i> • <i>Connections & Extension</i> problems not completed in core math class
CMP2 How Likely Is It module (probability)	<ul style="list-style-type: none"> • <i>Additional Practice and Skills</i> workbook (p. 100-111), • <i>Special Needs Handbook</i> (p. 50-56) 	<ul style="list-style-type: none"> • CT State Dept of Ed's lesson plan entitled <i>Six Dinner Sid</i> • <i>Connections & Extension</i> problems not completed in core math class
To be used during various units throughout the school year	<ul style="list-style-type: none"> • <i>Assessment Resources</i> for grade 6 (problems not used in the district-wide common assessments or used by core math teachers), • <i>Test-Taking Strategies with Transparencies</i> resource (Course 1, p. 1-12) • <i>Test Prep Workbook</i> for grade 6 • <i>Online Skills Practice</i> (www.phschool.com/cmp2) • Online games & quizzes (www.phschool.com/cmp2) 	<ul style="list-style-type: none"> • <i>Assessment Resources</i> for grade 6 (problems not used in the district-wide common assessments or used by core math teachers), • <i>Test-Taking Strategies with Transparencies</i> resource (Course 1, p. 1-12) • <i>Test Prep Workbook</i> for grade 6 • Online games& quizzes (www.phschool.com/cmp2) • <i>Data About Us</i> Unit Project "Is Anyone Typical?"

While the grade 6 core math class is working on...	AE Support classes will use the following resources...	AE classes will use the following resources...
	<ul style="list-style-type: none"> • Figure This! website (www.figurethis.org) • CT State Dept of Ed "Suggested Learning Activities" • <i>First Steps in Mathematics</i> diagnostics and activities to fill in math gaps 	<ul style="list-style-type: none"> • Figure This! website (www.figurethis.org) • CT State Dept of Ed "Suggested Learning Activities"

PROFESSIONAL DEVELOPMENT TO SUPPORT THE MATH CURRICULUM

PD Dates for Grade 6 Math and Special Education Teachers during the 2008-2009 School Year:

- June 4, 2008 (3 hrs)
- August 26, 2008 (6 hrs)
- Sept 25, 2008 (6 hrs)
- Nov 4, 2008 (6 hrs)
- Dec 17, 2008 (6 hrs)
- Jan 21, 2009 (6 hrs)
- Feb 11, 2009 (6 hrs)
- March 18, 2009 (6 hrs)

Because the *Connected Math Project 2 (CMP2)* is constructed to support the learning of mathematics by students placed in mixed ability groups, the Connected Math consultant, Melinda Grove, has focused professional development sessions on ensuring that teachers know how to differentiate instruction to serve a range of student learning needs. During professional development sessions this year, the consultant:

- Introduced the program materials, which specifically describe: (1) how and why to differentiate in class, and (2) which homework questions and in-class problems to give to various levels of students
- Explained and modeled a variety of ways teachers can put students in groups and/or pairs
- Prepared teachers to implement open-ended, exploration activities (investigations) that allow for differentiation by supporting students who have gained an understanding of a concept to move to the next level of thinking, and by being "reachable" by students at a beginning level of understanding
- Demonstrated how to use homework problems to build on student learning and push students to higher levels of development
- Facilitated conversations in which teachers identified strategies for challenging students and for supporting students in a differentiated classroom

CMT preparation and readiness was embedded in the SPS pacing guide, instructional practices, and unit assessments.

In year two of the grade 6 implementation of CMP2, teachers will be provided with a total of 4 ½ days with the Connected Math consultant at their school site to model and/or co-teach lessons (3 full days and 3 half days).

ENGLISH LANGUAGE ARTS CURRICULUM

Introduction

The English Language Arts (ELA) Curriculum Committee has developed a new standards-based curriculum for all students. The curriculum consists of teaching the core texts using strategies that engage students in reading, writing, thinking, and communicating. Additionally, the curriculum is designed to increase the amount of reading and writing done in the ELA classroom. Motivation for students to read more is provided through the Middle School Literacy Book Clubs. Book Clubs offer a choice of interesting and independently readable texts at various levels of difficulty. The writing in the English Language Arts classroom includes both formal writing such as expository essays and informal writing such as personal response writing and writing to learn activities. The formal writing takes place during Writer's Workshop, whereas the informal writing occurs daily in the classroom and outside of the classroom. The purpose of the informal writing is to deepen student understanding of the text and to prepare students for the formal written assessment.

Requirements for Reading

Students will read widely in literary texts. A minimum of eight books will be read during Grade 6: four whole class books and four books of choice from a thematic set. Additionally, students will read independent texts and supplemental texts that provide background knowledge and/or interdisciplinary connections. The grade 6 booklist is intended to provide varying levels of challenge for students.

Requirements for Writing

Students produce four formal expository essays per year, as well as writing daily in various modes: personal responses, personal narratives, and genre pieces (poems, short stories, etc.)

Literature Experience

Students will:

- Learn and use reading strategies according to purposes for reading and the nature of the text
- Respond to the ideas of others and recognize the validity of differing views in book clubs and class discussions
- Make connections to self, other texts, and the world
- Analyze author's intent and cite evidence in the text that supports their ideas
- Draw and/or support a conclusion in regard to characters' actions/conflicts or setting and use material from the text to support the interpretation
- Formulate literal, inferential, and interpretative questions that lead to interpretation of the text
- Analyze the meaning of words and phrases in context
- Determine how point of view, flashbacks, figurative language, imagery, and other literary devices tell the stories and affect the meaning of texts
- Identify meaningful passages and explain their importance within the text
- Analyze texts by considering how social, cultural, and historical contexts contribute to the meaning

Writing Experience

Students will:

- Use the writing process to produce formal pieces (brainstorming, exploring, drafting, revising, editing, and publishing)
- Write extensively in narrative and expository modes using a strong personal voice
- Write frequent, informal responses to the literature using interpretive, analytical, and evaluation skills
- Use supporting details from texts in meaningful ways
- Share their writing with partners and response groups who recommend revisions
- Publish and/or present final products in a myriad of ways including the use of the arts and technology

Language Study Experience

Students will:

- Master the following from the CMT checklist for Editing and Revising for capitalization: names of people, places, groups, months, days and holidays, titles of people, first word in dialogue, names of organizations, nationalities, buildings, historical events, opening and closing of a letter
- Master the following from the CMT checklist for Editing and Revising for punctuation: comma after a letter closing, comma in a series, comma in a date, comma with quotation marks, comma with city and state, quotation marks, apostrophe with contractions, apostrophe with a possessive
- Master the following from the CMT checklist for Editing and Revising for usage: subject/verb agreement (a singular and plural subject, intervening phrase) verb tense (present and past, present, past and future) pronoun reference, comparative/superlative, special problems in usage (a/an, they're/their/there, to/too/two, its/it's, I/me, know/no, then/than, your/you're, were/we're
- Master the following from the CMT checklist for Editing and Revising for spelling grade appropriate words
- Demonstrate correct practices in content, organization and tone: topic sentence, supporting details, extraneous material, chronological order/logical order, redundancy of ideas
- Demonstrate correct practices in syntax: on and on, run-on, awkward construction, fragment, sentence combining
- Demonstrate correct practices word choice: redundancy of word and phrase, transition words, generality/specificity
- Use resources for proofreading and editing

Assessment

Students will be assessed continually throughout the quarter both informally and formally. Informal assessments are given throughout the quarter to inform instruction. Examples of informal assessments may include the following: student self-evaluation, reader response, book club discussion records. Formal assessments will be given at the end of each unit to indicate student proficiency of the intended Grade Levels Expectations of the unit. Examples of formal assessments may include the following: expository essay and comparison/contrast essay.

ENGLISH LANGUAGE ARTS ACADEMIC ENRICHMENT

Academic Enrichment (AE) will provide all grade 6 students two hours a week, beyond the regular language arts class period, for extending and supporting the new language arts curriculum. This AE reflects the most valued and significant research in language arts education to date. Students will receive support or enrichment based on targeted needs in reading, writing, and communication. According to one of the leading language arts authors, Kelly Gallagher, there are nine specific reasons why students should read:

1. Reading is rewarding
2. Reading builds a mature vocabulary
3. Reading makes one a better writer
4. Reading is hard, and "hard" is necessary
5. Reading makes one smarter
6. Reading prepares one for the world of work
7. Reading well is financially rewarding
8. Reading opens the door to college and beyond
9. Reading arms one against oppression

The AE period is a scheduled class, with grades and achievement expectations to accelerate student progress, particularly to read more, for reasons articulated by Gallagher. If students read 20 minutes each day, they will read one million words a year.

(*Reading Reasons: Motivational Mini-lessons for Middle and High School* by Gallagher: 2003; *Readicide* by Gallagher: 2009)

Literature Experience

Students are given adequate time in class to read independently both fiction and non-fiction texts to develop stronger reading habits and practice reading strategies. Students select from a variety of high interest reading material and real world, fiction and non-fiction.

Students will:

- Understand the value of “second draft” reading (*Readicide* by Gallagher)
- Keep a reading log
- Learn and use reading strategies according to purposes for reading and the nature of the text
- Make connections to self, other texts and the world
- Analyze author’s intent and cite evidence in the text that supports their ideas
- Draw and/or support a conclusion in regard to characters’ actions/conflicts, or setting and use material from the text to support the interpretation
- Formulate literal, inferential and interpretative questions that lead to interpretation of the text
- Analyze the meaning of words and phrases in context
- Keep a vocabulary journal
- Learn tools for the development of academic vocabulary
- Determine how point of view, flashbacks, figurative language, imagery, and other literary devices tell the stories and affect the meaning of texts
- Identify meaningful passages and explain their importance within the text
- Analyze texts by considering how social, cultural and historical contexts contribute to the meaning

Writing Experience

Students write both formally and informally. They will produce formal writing in the expository mode and produce informal writing to deepen their understanding of a text, to set reading and writing goals and to reflect on their progress as readers and writers. Students are responsible for building a writing portfolio that tracks and monitors student progress.

Students will:

- Use the writing process to produce formal pieces (brainstorming, exploring, drafting, revising, editing and publishing)
- Write extensively in narrative and expository modes using a strong personal voice
- Write frequent, informal responses to the literature using interpretive, analytical and evaluation skills
- Use supporting details from texts in meaningful ways
- Share their writing with partners and response groups who recommend revisions
- Publish and/or present final products in a myriad of ways including the use of the arts and technology

Assessment

Students will be assessed continually throughout the quarter both informally and formally. Informal assessments are given throughout the quarter to inform instruction. Examples of informal assessments may include student self-evaluation and reader response. The informal assessments help the teacher set targets for mini-lessons and small group instruction. The teacher will monitor student progress in the regular Language Arts classroom as a further diagnosis of student need. Formal assessments will be given periodically to indicate student progress. Examples of formal assessments may include expository essays and comparison/contrast essays.

PROFESSIONAL DEVELOPMENT TO SUPPORT THE LANGUAGE ARTS CURRICULUM

PD Dates for Grade 6 Teachers during the 2008-2009 School Year:

- August 26, 2008 (6 hrs)
- November 4, 2008 (6 hrs)
- December 18, 2008 (2 hrs)
- January 14, 2009 (1 hr)
- January 21, 2009 (2 hrs)
- March 11, 2009 (1 hr)
- March 18, 2009 (2 hrs)
- April 8, 2009 (1 hr)
- April 15, 2009 (2 hrs)

This year, professional development has been provided to Language Arts teachers to support them in teaching a heterogeneous group of readers, writers, thinkers, and communicators in the classroom. Sessions have focused on developing teachers' ability to target areas of student need and further a high level of student thinking and learning. Specific PD sessions have focused on how to:

- Develop mini-lessons to target needs based on student writing and assessment results
- Engage in ongoing assessment of students in the classroom
- Score the CMT Direct Assessment of Writing, preparing teachers to better identify student needs
- Support students in identifying their own areas for improvement through student self-evaluations
- Foster student discussion in small groups while using discussion prompts as a guide, thereby providing the opportunity for students to move to higher levels of thinking and understanding as they are ready
- Implement instructional strategies to motivate students and support students as readers throughout a text
- Help students to develop questions based on their own thinking and understanding at various parts of a text so that all students can participate in the classroom discussion, while high-achieving students can move onto higher levels of analysis.

In the 2009-2010 school year, additional professional development sessions will be dedicated to supporting teachers in fostering meaningful discussions in the classroom. Professional development will continue to support teachers' own development and ability to identify students' strengths and assess students' needs in order to target instruction.

SCIENCE CURRICULUM

Introduction

The new Stamford Public Schools science program will provide all students with rich, rigorous, engaging, and relevant student-centered experiences. The science program takes a modular approach, with four units of instruction on physical science, one unit on Earth science, and one unit on life science. Differentiated instruction is built into every unit so that all students' learning needs are addressed. A key feature of the program is an emphasis on an issue-oriented approach. Each unit begins by presenting a real-world problem or challenge designed to engage and motivate students. As the unit continues, students will experience activities that broaden their knowledge of concepts and ask them to collect evidence that relates to the initial problem or challenge. By the end of the unit, students will be able to weigh evidence and make informed decisions about the problem or challenge. Another key feature of the new Stamford Public Schools science program is its inquiry-based approach that nurtures students' curiosity about the world around them. Students have many opportunities to improve their inquiry skills. In this way, the program fosters rigorous scientific habits of mind.

Textbooks

- *Issues and Life Science*. Lawrence Hall of Science, University of California at Berkeley. Published by Lab-Aids, Inc., Ronkonkoma, NY (2008).
- *Issues and Physical Science*. Lawrence Hall of Science, University of California at Berkeley. Published by Lab-Aids, Inc., Ronkonkoma, NY (2007).
- *Issues and Earth Science*. Lawrence Hall of Science, University of California at Berkeley. Published by Lab-Aids, Inc., Ronkonkoma, NY (2006).

Units and Selected Learning Outcomes

Studying Materials Scientifically

- Laboratory safety
- Physical and chemical properties of substances including density
- Identifying unknown substances

The Chemistry of Materials

- Physical and chemical properties of substances
- Elements and compounds
- Chemical reactions and conservation of mass

Water

- Water quality
- Mixtures and solutions
- Solubility
- Particle theory of matter
- Acids and bases

Energy

- Energy transfer and transformations
- Electrical energy and electrical currents
- Measuring energy and energy efficiency

Weather and Atmosphere

- Water cycle
- Sun as a source of energy
- Atmosphere: structure and properties
- Global patterns

Ecology

- Introduced species
- Animal behavior and classification
- Ecosystems: producers, consumers, and decomposers
- Population dynamics; habitats and carrying capacity
- Food webs and energy levels

Expectations

All students will:

- Actively engage in science investigations
- Engage in a range of inquiry activities
- Use science materials to investigate a scientific problem
- Use evidence to discuss and explain their understandings from scientific investigations
- Think critically and differentiate between observation and inference
- Produce oral and written reports that present the results of their scientific inquiries.
- Share in the work of cooperative learning groups
- Gather scientific evidence through inquiry activities and readings
- Interpret and/or evaluate the nature of scientific evidence
- Answer analysis questions to think about and apply important ideas from the activities
- Used science vocabulary
- Design investigations
- Organize data
- Analyze and interpret data
- Communicate scientific information
- Recognize evidence
- Use evidence to make trade-offs
- Keep a science notebook

Grading Practice

To be finalized in consultation with the middle school science curriculum committee.

Component	Grade %
Formal Assessment: Quizzes and Tests	35-40%
Class Work	10-15%
Homework	10-15%
Alternative Assessment: Formal laboratory reports, research papers, essays, projects, and performance tasks	35-40%

PROFESSIONAL DEVELOPMENT TO SUPPORT THE SCIENCE CURRICULUM

PD Dates for Grade 6 Teachers during the 2008-2009 School Year:

- August 26, 2008 (6 hrs)
- September 10, 2008 (2 hrs)
- November 4, 2008 (6 hrs)
- December 17, 2008 (2 hrs)
- January 21, 2009 (2 hrs)
- March 18, 2009 (2 hrs)
- April 15, 2009 (2 hrs)
- May 19, 2009 (6 hrs)

This past year, grade 6 science teachers have engaged in a wide variety of professional learning activities during full and half-day PD sessions. Teachers have:

- Reviewed new, standardized pacing guides
- Learned how to use science notebooks in their classrooms
- Shared best practices of how to support students at differing levels of understanding
- Use of technology (such as interactive white boards) to support instruction
- Increased their own content knowledge
- Learned how to use ongoing assessments to identify student needs so that those needs can then be addressed with specific instructional strategies in the classroom.

This spring, teachers and science administrators received professional development on the new science program, entitled Science Education for Public Understanding Program (SEPUP) that will be implemented in the 2009-2010 school year in grade 6. In 2009-2010, grade 6 teachers and science administrators will receive five full days and two half days of professional development for the new program focusing on:

- How to implement all units of instruction
- How to use specific program supports for the achievement of students with special needs, English Language Learners, and high achieving students
- How to engage students through a variety of instructional approaches, including hands-on activities that provide concrete experiences
- How to provide literacy support strategies to improve reading comprehension and writing, and discussion strategies to facilitate communication

SOCIAL STUDIES CURRICULUM

Introduction

The Social Studies curriculum is organized around the following three interrelated standards:

1. The knowledge of concepts and information from history and social studies is necessary to promote understanding of our nation and our world;
2. Competence in literacy, inquiry, and research skills is necessary to analyze, evaluate, and present history and social studies information; and
3. Civic competence to address historical issues and current problems requires the use of information, skills, and empathic awareness.

The social studies curriculum was written according to an inquiry-based framework. Inquiry—a process of asking and refining questions, of debating ideas and making predictions, and of collecting data from multiple sources and asking new questions that organize teaching and learning—focuses on information processing (“how’s” and “why’s,” not simply “what’s”) and promotes a three-tiered continuum: a) teachers constructing goals and objectives linked to national, state, and local standards; b) students and teachers creating answerable and compelling essential questions that form the focus of inquiry, specific subject content providing multiple responses; c) students examining initial questions, searching for relationships and patterns among data, analyzing and evaluating information against initial hypotheses, and concluding research with post-instruction assessments and/or performance tasks.

Requirements for Reading

Students will read widely, using a variety of print sources, for each unit of study. They will be provided time in class and independently to read these sources.

Students will:

- Use a variety of print sources, both primary and secondary, to gather information
- Identify details to support main idea
- Be able to describe and sequence events based on their reading
- Compare and contrast relationships described in print materials
- Analyze and sequence information and summarize key ideas
- Analyze cause and effect
- Use the internet to gather information
- Collect facts to form conclusions

Requirements for Writing

Students will produce writing pieces for each unit of study as well as writing in various genres and writing using technology.

Students will:

- Write short, first draft expository answers to questions based on the Content Knowledge Objectives of each unit
- Use graphic organizers to explain and organize ideas
- Write an essay
- Write an informative brochure
- Create a booklet
- Take a critical stance and defend a position
- Use Microsoft Publisher to produce a newsletter
- Label maps
- Create poems
- Create an original piece of writing

Writing Experience

Students write both formally and informally. They will produce formal writing in the expository mode and produce informal writing when deepening their understanding of the social issues addressed in their units and being reflective as readers, writers, and thinkers.

Students will:

- Use the writing process to produce formal pieces (brainstorming, exploring, and drafting, revising, editing and publishing)
- Write extensively in expository mode
- Write frequent, informal responses to the text addressing social issues, using interpretive, analytical and evaluation skills
- Publish and/or present final products in a variety of ways including the use of the arts and technology

Assessment

Students will be assessed continually throughout the quarter both informally and formally. Informal assessments are given throughout the quarter to inform instruction. Examples of informal assessments may include students' self-evaluation and response to reading. Formal assessments (performance tasks) will be given at the end of each unit to indicate student proficiency in answering the focus question. Graphic organizers and rubrics are used to guide and score these assessment outcomes.

WHAT DOES THE RESEARCH SAY ABOUT GROUPING AND TRACKING?

The National Forum to Accelerate Middle-Grade Reform (<http://www.mgforum.org/>) works to improve academic and developmental outcomes for all students in the middle grades, the organization also runs the Schools To Watch Program (<http://www.schoolstowatch.org/>). More and more schools are moving towards de-tracking (Ascher, 1992) and many prominent national and state organizations have criticized the practice of tracking:

- The National Governors Association published a report entitled *Ability Grouping and Tracking: Current Issues and Concerns* (1993) in which the organization stated its opposition to school tracking.
- The Carnegie Council for Adolescent Development's *Turning Points: Preparing American Youth for the 21st Century* (1989) has identified de-tracking as central to reforming middle grades education.
- National Association of Secondary School Principals *Breaking Ranks in the Middle: Strategies for Leading Middle Level Reform* (2006). There are 30 recommendations associated with *Breaking Ranks in the Middle*. Recommendation 20 states: "Each school will present alternatives to tracking and ability grouping."

Others who have criticized present tracking practices include the National Education Association, the National Council of Teachers of English, the California Department of Education, the State of Alabama, and a variety of federal and state courts.

There is a great deal of research on the topic of tracking. Studies that support detracking include:

- Boaler and Staples (2008) followed student performance at Railside High School, in which students were grouped in heterogeneous algebra classes. The study found that the students most advantaged by the teaching at Railside were the highest achieving students. The teachers at Railside, in comparison to the other two school sites, were also most successful in reducing the achievement gaps between different ethnic groups.
- A study by Burris, Wiley, Welner, and Murphy (2008), conducted in a diverse urban high school, analyzed the achievement of students who were offered an accelerated mathematics curriculum in a detracked middle school and then enrolled in heterogeneously grouped classes in the ninth grade. The authors found that detracking can effectively help students to reach high learning standards if the reform includes high expectations for all students, sufficient resources, and a commitment to the belief that students can achieve with the provision of an enriched curriculum.
- Doocy-Curry (1999) followed the achievement of six gifted students in a middle school English classroom, and found that the implementation of a differentiated curriculum supported the learning of gifted students.
- Slavin (1993) indicates that ability grouping has particularly detrimental effects on students in low groups. He indicates that districts moving away from grouping must also make improvements to curriculum and instruction to accelerate student learning and contribute to improved student achievement.

WHAT IS STAMFORD PUBLIC SCHOOLS DOING ABOUT DETRACKING?

Instructional Group Criteria for Placement

For the 2009-2010 school year, grade 6 students will be placed in September in instructional groups according to district-wide criteria for placement. For the first time, grade 6 students will be placed according to results from the following assessments: the Connecticut Mastery Test (CMT), the Otis Lennon School Ability Test (OLSAT) and the Naglieri Nonverbal Ability Test (Naglieri). The new assessments, OLSAT and Naglieri, were administered in March 2009 to grade 5 students so that more of students' strengths and abilities could be measured, beyond performance on the CMT. Also for the first time, students' math and reading assessment results will be evaluated separately to allow for different levels of support or acceleration for students in different content areas. Placement in social studies will follow reading placement and placement in science will follow math placement.

All grade 6 students and teachers will work with a standards-based, college preparatory curriculum that will prepare each and every student for higher education and success in the 21st century.

The assessments are described briefly below:

- | | |
|-----------------|---|
| CMT | Designed to measure student performance in the areas of mathematics, reading, and writing. The assessment focuses on content that is reasonable to expect students at each grade to master. |
| OLSAT | Measures a student's cognitive abilities that relate to learning in school. The OLSAT assesses a student's abstract thinking and reasoning abilities. |
| Naglieri | Language-free test that is a reliable, culture-fair measure of ability that can be used to evaluate students of diverse cultural and linguistic backgrounds. |

The results of these three assessments are reported differently.

On the CMT, students are not compared to one another in terms of performance; rather, student performance is compared to an absolute standard of specific learning goals and objectives. CMT results are reported in terms of the Performance Level that students achieve:

1. Below Basic
2. Basic
3. Proficient
4. Goal
5. Advanced

On the OLSAT and Naglieri, students are compared to one another in terms of performance; all scores in the norm group (current grade 5 Stamford Public Schools (SPS) students) are rank-ordered. The OLSAT and Naglieri results are reported in terms of *percentile rank*. The percentile rank identifies the percentage of a student's peer group (i.e., all current grade 5 SPS students) that a student's score surpassed. For example, Student A scores at the 67th percentile on the OLSAT, which means that Student A's score is higher than 67% of other grade 5 SPS students.

For September 2009, grade 6 students will be placed into one of two groups, College Prep or Honors, for math/science and for English Language Arts/social studies. All students will engage in standards-based curricula that will prepare them to be college ready upon graduation. Students in Honors classes will participate in a deeper exploration of College Prep topics and units of study and will be expected to move more quickly through the College Prep curriculum, which will allow for extensions of problems and prompts. Students will have opportunities during the school year to move from College Prep to Honors, based on standard, district-wide criteria. The criteria for placement into the College Prep and Honors groups for math/science and English Language Arts/social studies are as follows:

CRITERIA FOR GRADE 6 PLACEMENT, SEPTEMBER 2009

MATH/SCIENCE		
Instructional Group	Math CMT Performance Level Criterion	OLSAT and Naglieri Criterion
Honors	5	All OLSAT and Naglieri percentile ranks
	4	Scoring at or above the 70 th percentile on both OLSAT and Naglieri
College Prep	4	Scoring below the 70 th percentile on one or both OLSAT and Naglieri
	3	All OLSAT and Naglieri percentile ranks
	2	All OLSAT and Naglieri percentile ranks
	1	All OLSAT and Naglieri percentile ranks

ENGLISH LANGUAGE ARTS/SOCIAL STUDIES		
Instructional Group	Reading CMT Performance Level Criterion	OLSAT and Naglieri Criterion
Honors	5	All OLSAT and Naglieri percentile ranks
	4	Scoring at or above the 60 th percentile on both OLSAT and Naglieri
College Prep	4	Scoring below the 60 th percentile on one or both OLSAT and Naglieri
	3	All OLSAT and Naglieri percentile ranks
	2	All OLSAT and Naglieri percentile ranks
	1	All OLSAT and Naglieri percentile ranks

*Final placement will be determined based on grade 5 CMT results (Spring 2009).

NOTE:

Students new to the district will be placed on a case-by-case basis using available data, including the grade 5 CMT results.

The OLSAT and Naglieri percentile criteria for math/science placement ($\geq 70^{\text{th}}$ percentile) is higher than the percentile criterion for reading/social studies placement ($\geq 60^{\text{th}}$ percentile) because, district-wide, overall achievement in math is higher than in reading.

Notification to Families Regarding Placement

Families of rising grade 6 students will receive a letter in August 2009 to describe: (1) the grade 6 district-wide placement criteria; (2) their grade 6 student’s math/science placement and English language arts/social studies placement; and (3) eligibility requirements to participate in one or both *regrouping assessments*.

Placement Review Process

Regrouping assessments for math and English language arts will be available to students meeting the criteria, below, at the end of the first and second quarters during the 2009-2010 school year. Parents will be asked to submit in writing (a tear-off portion of the August 2009 letter) a request for their student to participate in the regrouping assessment. If a student meets the eligibility requirements for a regrouping assessment, and the Research Office has received the written request from the student’s parent(s), then a student may take a regrouping assessment.

Criteria for Regrouping in Math/Science

If, at the end of the first and second quarters, a student:

1. Scored at or above Level 4 on the CMT in math in Spring 2009 (grade 5); AND
2. Receives an academic grade of A in both math and science; AND
3. Receives a recommendation from both his/her math and science teachers; AND
4. Has written permission from a parent/family member to participate in the regrouping assessment;

Then that student would be eligible to sit for a regrouping assessment. If a student demonstrates 95% or more correct on the regrouping assessment, a student may move to Honors at the beginning of the next quarter.

Criteria for Regrouping in English Language Arts/Social Studies

If, at the end of the first and second quarters, a student:

1. Scored at or above Level 4 on the CMT in Reading in Spring 2009 (grade 5); AND
2. Receives an academic grade of A in both English language arts and social studies; AND
3. Receives a recommendation from both his/her English language arts and social studies teachers; AND
4. Has written permission from a parent/family member to participate in the regrouping assessment;

Then that student would be eligible to sit for a regrouping assessment. If a student demonstrates 95% or more correct on the multiple choice items of the regrouping assessment and receives an 11- or 12-point score¹ on the essay portion of the regrouping assessment, that student may move to Honors at the beginning of the next quarter.

WHAT DOES THE RESEARCH SAY ABOUT PERSONALIZING THE EDUCATIONAL EXPERIENCE?

Rationale and Purpose

Every student should be well known by at least one adult. Students should be able to rely on that adult to help them learn from their experiences, comprehend physical changes and changing relations with family and peers, act on their behalf to marshal every school and community resource needed to succeed, and help to fashion a promising vision of the future (Turning Points, 2000). Advisory periods give students a time and a place where their non-academic needs can be met as well as providing support for academic needs. When done well, small-group advisories provide for personalized guidance and the active monitoring young adolescents need. When students make a lasting connection with at least one caring adult, academic and personal outcomes improve.

Some of the purposes of advisories are to:

- Ensure each student is known well at school by at least one adult who is that youngster's advocate (advisor)
- Guarantee that every student belongs to a peer group
- Help each student find ways of being successful within the academic and social options the school provides
- Promote communication and coordination between home and school

WHAT IS STAMFORD PUBLIC SCHOOLS DOING TO PERSONALIZE THE EDUCATIONAL EXPERIENCE?

Teachers' Role/Student Impact

Teachers serve as mentors and role models for students in their advisory group. The development of relationships to support learning is the primary purpose for advisories. Strong advisories help students gain emotional strength, self-knowledge, and social skills through peer interaction and the acceptance and personal affirmation of trusted adults (Fenwick, 1996).

Structure and Organization

While models of advisories vary nationally, in 2009-2010 Stamford Public Schools will provide weekly time dedicated to addressing the social/emotional needs of grade 6 students. The Efficacy Institute has provided training in supporting academic achievement for all students, as well as the book *Your Tools for Getting Smart*, to support the work of advisories.

¹ Two reviewers must evaluate each essay using a standard rubric. The sum of the reviewers' scores must equal 11 or 12 (i.e., each student must receive a 5 and 6 or a 6 and a 6 on the essay portion).

Activities

The range of potential advisory topics includes:

- interpersonal issues
- health-related questions
- concerns about school work
- stress management
- personal development
- social relationships
- study skills
- time management
- organizational skills
- teambuilding
- strengths and weaknesses
- interest inventories
- resume writing
- goal setting
- character traits
- learning styles
- life lessons
- community service

A SAMPLE MIDDLE SCHOOL SCHEDULE FOLLOWS, INCLUDING THE WEEKLY ADVISORY PERIOD AND 60 MINUTE INSTRUCTIONAL BLOCKS:

Day 1	1	2	3	4	Lunch	Advisory	5	6
	8:10-9:10	9:10-11:10	10:10-11:10	11:10-11:45	11:45-12:10	12:10-12:40	12:40-1:40	1:40-2:40
	AE	MUSIC ART PE	MATH	SCIENCE			SOCIAL STUDIES	LANGUAGE ARTS
Day 2	1	2	4	5	Lunch	Advisory	6	3
	8:10-9:10	9:10-11:10	10:00-11:10	11:10-11:45	11:45-12:10	12:10-12:40	12:40-1:40	1:40-2:40
	AE	MUSIC ART PE	SCIENCE	SOCIAL STUDIES			LANGUAGE ARTS	MATH
Day 3	1	2	5	6	Lunch	Advisory	3	4
	8:10-9:10	9:10-11:10	10:10-11:10	11:10-11:45	11:45-12:10	12:10-12:40	12:40-1:40	1:40-2:40
	AE	MUSIC ART PE	SOCIAL STUDIES	LANGUAGE ARTS			MATH	SCIENCE
Day 4	1	2	6	3	Lunch	Advisory	4	5
	8:10-9:10	9:10-11:10	10:10-11:10	11:10-11:45	11:45-12:10	12:10-12:40	12:40-1:40	1:40-2:40
	AE	MUSIC ART PE	LANGUAGE ARTS	MATH			SCIENCE	SOCIAL STUDIES

PROFESSIONAL DEVELOPMENT TO SUPPORT ADVISORIES

On April 28 and 29, 2009, 61 grade 6 teachers participated in the Efficacy Institute training on how “to motivate students to get smarter.” Teachers gained the knowledge and skills necessary to teach three tools students can use to manage their own development; to integrate Efficacy tools with their content area lessons; and to increase student motivation and interest for learning. The Efficacy Institute workshop, “Your Tools for Getting Smart,” will be the foundation for an advisory period in grade 6 in 2009-2010 and will be added to grades 7 and 8 in 2010-2011.

WHAT DOES THE RESEARCH SAY ABOUT PROFESSIONAL LEARNING COMMUNITIES (PLCs)?

- A recent evaluation of the potential for collaborative communities of teachers to bring about improvements in teaching and learning found that “...small [learning] communities that engaged in structured, sustained, and supported discussions as they investigated the relationships between practices and student work produced significant gains in student learning” (Supovitz & Christman, 2005, p. 650).
- Lee and Smith (1996) suggest that teachers’ willingness to assume responsibility for the results of their teaching (as gained through examination of student work) has a direct effect on student learning; teachers’ expectations of their students’ abilities to learn may change through this process.
- Professional learning communities have an agreed-upon objective of improvement (Stoll and Louis, 2007). Dufour, Eaker and Karhanek (2004) further clarify that PLCs establish specific, measureable goals to improve student learning.
- Schmoker (2004) emphasizes this focus on results in stating, “... The moment teachers begin to closely examine their lessons and the results of those lessons, instruction improves and competence increases” (p. 85).
- By engaging in ongoing inquiry, teachers can learn continuously as they establish goals for improvement and work together to achieve them (Annenberg Institute for School Reform, 2004).
- When adults are organized into learning communities that are interconnected in their purposes and unified by common goals, sustained, improved teaching and learning can result (DuFour et al., 2008).
- Elmore (2006) articulates that the effectiveness of professional development is inversely proportional to the distance of the professional development from the classroom; therefore, professional development must be conducted close to the classroom and related to the context in which teachers teach.

WHAT IS STAMFORD PUBLIC SCHOOLS DOING WITH REGARD TO PROFESSIONAL LEARNING COMMUNITIES (PLCs)?

During the 2008-2009 school year, content specific professional development sessions have provided explicit examples of instructional strategies and practices to be used in a differentiated classroom. These efforts will continue in 2009-2010.

WHAT DOES THE RESEARCH SAY ABOUT THE USE OF DATA?

Use of Data

- Schools must use data in order to assess student progress, ensure that the needs of all students are met, identify and solve problems, and monitor the effectiveness of programs initiated and changes made to support student learning (Killion & Bellamy, 2000; Ingram et al., 2004; Bernhardt, 1998; American Association of School Administrators, 2002).
- Bernhardt (1998) states, What separates successful schools from those that will not be successful in their reform efforts is the use of one, often neglected, essential element - data (p. 1).
- One essential element of effective data use in schools is a well-defined school improvement process (Armstrong & Anthes, 2001; Boudett, City, & Murnane, 2005; Holcomb, 2001; Love, Terc, & Regional Alliance for Mathematics and Science Education Reform, 2002)

HOW WILL STAMFORD PUBLIC SCHOOLS MONITOR AND EVALUATE MIDDLE SCHOOL TRANSFORMATION?

Implementation

- Monitor core curriculum implementation
- Monitor instructional strategies implementation
- Monitor Efficacy Institute strategies implementation
- Monitor professional development participation
- Monitor instructional leadership among school administrators
- Monitor instructional support from Central Office

Student Enrollment

- Number of students enrolled in courses by instructional group
- Number of students enrolled in each enrichment period by level

Student Outcomes

- Course marks
- Attendance
- Grade 6 to grade 7 transition rate
- Results of upcoming student surveys²
- CMT—increase in the percentage of students at/above GOAL
- District Benchmark assessment results
(e.g., CMP2 quarterly, mid-year, and end-of-year assessments)—track

Teacher Response

- Results of Spring 2010 teacher survey
- Professional development evaluation data

Family Response

- Results of Spring 2010 family survey
- Outcomes of Middle School Advisory Council

EXPECTATIONS FOR SCHOOL AND CENTRAL OFFICE LEADERS

Central Office administration will provide support, training, and PD at:

- August administrators' PD and retreat
- Principals meetings
- District administration meetings
- Schools when requested by principals

In addition, Central Office staff will assist building administrators in monitoring fidelity of curriculum implementation.

Building administrators will provide support, training, and PD to staff as well as monitor fidelity of curriculum implementation.

² In Spring 2009, student surveys were administered in grade 7.

APPENDIX A: GLOSSARY

Ability grouping³	Practice of organizing students according to scores on standardized tests of aptitude, intelligence, or ability. If ability groups stay together for all or most subjects, this practice becomes tracking.
Academic Enrichment Period	An additional 4 periods per week (two periods in math and two periods in English language arts) in which all grade 6 students receive enrichment or support.
Advisory	A weekly class period dedicated to addressing the social/emotional needs of grade 6 students.
College Prep Group	One of two flexible groups of students for math/science and English language arts/social studies. Criteria for placement into the College Prep group are based on student assessment results. Students in both groups will cover the same components of the curriculum.
Connected Mathematics Program 2 (CMP2)	New standards-based math curriculum implemented in grade 6 (2008-2009), grade 7 (2009-2010) and grade 8 (2010-2011).
Connecticut Mastery Test (CMT)	Annual, grade-level assessment administered statewide to students in grades 3-8 designed to measure student performance in the areas of mathematics, reading, and writing (all grades) and science (grades 4 & 8 in 2008). The assessment focuses on content that is reasonable to expect students at each grade to master.
Efficacy Institute	An organization providing professional development to build the capacity of adults based on the belief that virtually <i>all</i> children can get smart and achieve high academic standards. Efficacy is the capacity to mobilize the effort of adults and students toward development—the achievement of successive, targeted learning outcomes. Development is the process of getting better, stronger, and smarter at anything one does.
Flexible grouping³	The practice of organizing student groups within the classroom, either randomly or based on similar learning needs, strengths, or interests. Students are not assigned to a permanent group.
Heterogeneous grouping³	The practice of teaching students regardless of ability or assessment results in the same group.
Homogeneous grouping³	The practice of assigning students to separate classes or groups within a classroom based on overall achievement or specific skills.
Honors group	One of two flexible groups of students for math/science and English language arts/social studies. Criteria for placement into the Honors group are based on student assessment results. Students in the Honors groups will progress more quickly through introductory or standard components of the curriculum, allowing for additional extension activities and projects. Students in both groups will cover the same components of the curriculum.

³ Adapted from: Heacox, D. (2002). *Differentiating Instruction in the Regular Classroom*. Minneapolis, MN: Free Spirit Press.

Inquiry	An approach to scientific learning that has five key aspects for students: 1) engaging in scientifically-oriented questions; 2) using evidence to respond to those questions; 3) providing explanations based on evidence; 4) connecting explanations to scientific knowledge; and 5) communicating and justifying explanations. Inquiry activities vary from fully guided experiences where teachers model the inquiry approach, to open-ended experiences where students are entirely self-directed. With adequate modeling and practice, students progress toward open-ended inquiry and build their own scientific meaning.
Middle School Transformation	Expected changes to middle school curriculum, instruction and assessment, scheduling and student placement beginning in grade 6 in Fall 2009 to prepare each and every SPS student for higher education and success in the 21 st century.
Naglieri Nonverbal Ability Test	A language-free assessment that is a reliable, culture-fair measure of ability that can be used to evaluate students of diverse cultural and linguistic backgrounds. The Naglieri was administered to grade 5 students in Spring 2009.
Otis Lennon School Achievement Test (OLSAT)	An assessment that measures a student's cognitive abilities that relate to abilities to learn in school. The OLSAT assesses a student's abstract thinking and reasoning abilities. The OLSAT was administered to grade 5 students in Spring 2009.
Regrouping assessment	An assessment offered to eligible grade 6 students at the end of the first and second quarters to measure readiness to move to an Honors class.
Science Education for Public Understanding Program (SEPUP)	An issue-oriented science program (new to SPS grade 6 students in Fall 2009) that engages students in a variety of learning activities, including scientific investigations, to build students' knowledge of science ideas and skills. At the end of every unit, students will be asked to apply their new knowledge and skills by evaluating evidence and making informed decisions about an issue.
Tracking	Practice of organizing students according to general learning abilities, rather than particular talents or weaknesses. Groups of students that are tracked tend to stay together for all or most subjects and students rarely move out of their track, even from year to year.
Workshop model	An instructional technique used across content areas that maximizes student participation in learning through active participation with peers. The workshop model is generally comprised of a three-phase process: (1) introduction, when the teacher poses a question or relevant content; (2) student pair or group work on the question or content (with teacher guiding students); and (3) summary of the content by the teacher and/or student.

APPENDIX B: ADVISORY RESOURCES

- Forte, I., Schurr, S. (1997). *A to Z active learning: Advisory and affective education*. Nashville, TN: Incentive.
- Forte, I., & Schurr, S. (2004). *Advisory plus: Standards-based sessions with character education, learning styles, and assessment components - Grades 6-8*. 368 pages. \$29.99
- Hoversten, C., Doda, N., & Lounsbury, J. (1991). *Treasure chest: A teacher advisory sourcebook*. Columbus, OH: National Middle School Association.
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