

Series: 2000-2001

Circular Letter: C-8

TO: Superintendents of Schools, High School Principals,
Connecticut Coalition on Education, Curricular Professional
Organizations

FROM: Theodore S. Sergi, Commissioner of Education

DATE: October 16, 2000

SUBJECT: **YOUR REACTION TO ENCLOSED MONOGRAPH
AND PROPOSED CHANGES TO HIGH SCHOOL
GRADUATION REQUIREMENTS**

In February 2000, the Connecticut State Department of Education (CSDE) convened a group of high school educators, researchers and educational practitioners all of whom were recognized as individuals who had done some significant thinking about the high school and were responsible for instituting major changes in their respective educational settings. (See the end of the monograph for a listing of the people and their affiliations.) The group was charged to produce a monograph that set forth an ideal vision for a Connecticut high school education and to identify the implications of that vision for the requirements of a high school graduate.

Based on that vision and the realities of present practice, the study group examined the Connecticut General Statutes (CGS) 10-221a, high school graduation requirements, and CGS10-16b, prescribed courses of study. They reviewed and discussed relevant literature and explored high school graduation requirement issues in other states. (The literature and works from other states they used can be found in the reference list at the end of the text). In addition, the group analyzed the current practices and experiences of Connecticut students' high school education. The attached monograph

identifies the vision for the New Connecticut High School derived from this work and offers a proposal for a revision to the present high school graduation requirement statute.

The monograph is organized in the following manner. Section one addresses the need for change or the reason why high school education in this state needs to be reviewed and revised. Section two identifies the guiding principles of a quality high school experience for students. The guiding principles are meant to form the foundation of a quality high school. Section three defines the proposed mission of the New Connecticut High School that reflects the goals and intentions of the guiding principles. Section four identifies specific recommendations for changes to high school graduation requirements (CGS 10-221a) and prescribed courses of study (CGS 10-16b). The fifth and final section addresses the implications for instruction, technology, assessments, organizational/climate, professional development of high school educators, and leadership in order to achieve this vision.

The monograph was presented to the SBE at its October meeting for discussion. While the Board did not officially endorse the contents of the report, they were interested enough in its contents to direct us to solicit your feedback for their further consideration.

To that end, we are sending this draft to you with the enclosed survey and ask that you complete it by November 13, 2000 and return to Dr. Betty Sternberg. We are mailing this draft to all superintendents, high school principals, the Connecticut Coalition on Education, and the professional subject area associations to solicit reaction to the monograph through their organizations. In addition, Dr. Betty Sternberg will be meeting with interested groups to review the contents of the monograph and solicit reaction to it. We then plan to bring a summary of your reactions back to the State Board of Education for its consideration in drafting proposed high school graduation requirements legislation.

TSS:bjs
Attachments

Review Form:
The New Connecticut High School: Re-Defining Graduation Requirements

Please return completed form, NO LATER THAN **November 13, 2000**, to:
 Dr. Betty J. Sternberg, Associate Commissioner
 Division of Teaching and Learning
 Connecticut State Department of Education
 P.O. Box 2219
 Hartford, CT 06145-2219

Please mark the number which most closely coincides with your perception:

	Not at All	A Little	Somewhat	A Great Deal
To what extent would the “credit equivalents” approach to high school graduation requirements allow you to make changes in your high school program?	1	2	3	4
To what extent would educators in your high school support this “credit equivalents” approach to graduation requirements?	1	2	3	4
To what extent would this approach to high school graduation requirements be accepted by students?	1	2	3	4
To what extent could this approach to high school graduation requirements be explained to parents or the larger school community?	1	2	3	4
To what extent do you agree with the following aspects of the proposed New Connecticut High School:	1	2	3	4
✓ The Mission	1	2	3	4
✓ The Guiding Principles	1	2	3	4
✓ Graduation requirements based on the Common Core of Learning	1	2	3	4
✓ Earning “credit equivalents”	1	2	3	4
✓ Credit distribution	1	2	3	4
To what extent would the new graduation requirements improve:	1	2	3	4
✓ Curriculum	1	2	3	4
✓ Instruction	1	2	3	4
✓ Assessment	1	2	3	4
✓ School Organization/Climate	1	2	3	4
✓ Professional Development	1	2	3	4
✓ Leadership	1	2	3	4

(OVER )

(Optional) **What I most like is...**

(Optional) **What I least like is...**

(Optional) **Other Comments :**

POSITION

ORGANIZATION AND/OR DISTRICT

NAME (Optional)

CONNECTICUT STATE BOARD OF EDUCATION
Hartford

TO: State Board of Education

FROM: Theodore S. Sergi, Commissioner of Education

SUBJECT: Revision of High School Graduation Requirements

In February 2000, the Connecticut State Department of Education (CSDE) convened a group of high school educators, researchers and educational practitioners, all of whom were recognized as individuals who had done some significant thinking about the high school and were responsible for instituting major changes in their respective educational settings. (See the end of the monograph for a listing of the people and their affiliations.) The group was charged to produce a monograph that set forth an ideal vision for a Connecticut high school education and to identify the implications of that vision for the requirements of a high school graduate.

Based on that vision and the realities of present practice, the study group examined the Connecticut General Statutes (CGS) 10-221a, high school graduation requirements, and CGS10-16b, prescribed courses of study. They reviewed and discussed relevant literature and explored high school graduation requirement issues in other states. (The literature and works from other states they used can be found in the reference list at the end of the text). In addition, the group analyzed the current practices and experiences of Connecticut students' high school education. The attached monograph identifies the vision for the New Connecticut High School derived from this work and offers a proposal for a revision to the present high school graduation requirement statute.

The monograph is organized in the following manner. Section one addresses the need for change or the reason why high school education in this state needs to be reviewed and revised. Section two identifies the guiding principles of a quality high school experience for students. The guiding principles are meant to form the foundation of a quality high school. Section three defines the proposed mission of the New Connecticut High School that reflects the goals and intentions of the guiding principles. Section four identifies specific recommendations for changes to high school graduation requirements (CGS 10-221a) and prescribed courses of study (CGS 10-16b). The fifth and final section addresses the implications for instruction, technology, assessments, organizational/climate, professional development of high school educators, and leadership in order to achieve this vision.

It is our expectation that this monograph will be used by school leaders to plan or revise high school programs that enable students to take increasing responsibility for their own education and learning. Further, it is hoped that this monograph will be used by institutions of higher education as they define their expectations and standards for admission. Finally, we expect you to consider the recommendations in this monograph as you develop your proposal to revise the current high school graduation requirements and course offering statutes.

To these ends, we are presenting this draft to you for discussion. In addition, we will be mailing this draft after your meeting to all high school principals with a reaction form. We will also work with Connecticut Association of Schools, Connecticut Association of Public School Superintendents, Inc., Connecticut Association of Boards of Education and the other professional subject area associations to solicit reaction to the monograph through their organizations. We then plan to bring your points offered

during discussion and the reactions of the groups back to the Study Group and ask them to make revisions to the draft based on this information. Then we will seek your endorsement of the recommendations to be incorporated into a legislative proposal.

The following table summarizes the current high school graduation requirements and shows the proposed changes to them:

CURRENT High School Graduation Requirements	PROPOSED High School Graduation Requirements
<ul style="list-style-type: none"> ▪ Minimum number of credits: 20. 	<ul style="list-style-type: none"> ▪ Minimum number of credits and/or credit equivalents: 21.
<ul style="list-style-type: none"> ▪ Expectations expressed as credits. 	<ul style="list-style-type: none"> ▪ Expectations derived from the Common Core of Learning (CCL) and expressed as credits or credit equivalents.
<ul style="list-style-type: none"> ▪ Credits based on “seat time,” with a credit consisting of no less than the equivalent of a forty-minute class period for each school day of a school year. 	<ul style="list-style-type: none"> ▪ Credit redefined as one school year of study. ▪ Credit equivalents based on exhibition of achievement of CCL standards as shown on standardized tests, through accredited college course work, or other district devised means such as portfolio assessment and supervised internships.
<ul style="list-style-type: none"> ▪ Credit requirements: <ul style="list-style-type: none"> ➤ English Language Arts: not fewer than 4 credits ➤ Mathematics: not fewer than 3 credits ➤ Science: not fewer than 2 credits ➤ Social Studies: not fewer than 3 credits ➤ Arts or Vocational Education: not fewer than 1 credit ➤ Physical Education: not fewer than 1 credit 	<ul style="list-style-type: none"> ▪ Credit requirements: Completion of study that ensures mastery of the program goals and content standards as defined in the CCL in each of the following respective areas: <ul style="list-style-type: none"> ➤ English Language Arts: a minimum of 3 years ➤ Mathematics: a minimum of 3 years ➤ Science: a minimum of 3 years ➤ Social Studies: a minimum of 3 years (including 1 year of US History and 1/2 year in civics/government) ➤ World Languages: a minimum of 1 year ➤ The Arts: a minimum of 1/2 year ➤ Physical Education: a minimum of 1/2 year ➤ Technology Education: a minimum of 1/2 year ➤ Health: a minimum of 1/2 year ➤ Applied Education: Meeting a standard of performance determined by the local school district. For example, a district designed portfolio, an internship in the field, shadowing experiences in the field and/or service projects. ➤ Learning Resources and Information Technology: Meeting a standard of performance determined by the local school district. For example, a district-designed assessment or portfolio; an internship in the field; technology-based projects.

<p>Credit Equivalents:</p> <ul style="list-style-type: none"> ▪ Local school district may grant credit for successful completion of coursework at an institution regionally accredited or accredited by the Department of Higher Education. (3 credit semester course = ½ credit) ▪ Local school district may offer ½ credit in community service as part of the 6 remaining elective credits 	<p>Credit Equivalents:</p> <ul style="list-style-type: none"> ▪ English Language Arts: ▪ Mathematics: ▪ Science: ▪ Social Studies: ▪ World Languages: ▪ The Arts: <ul style="list-style-type: none"> ➤ Successful completion of an accredited college course that assures mastery of program goals and content standards as defined in the CCL. ➤ Meeting a standard of performance determined by the local school district on a standardized assessment measure such as the CAPT, SAT II, SAT I verbal for English Language Arts, SAT I Math for Mathematics and/or the AP examination in the appropriate subject area. ➤ Meeting a standard of performance determined by the local school district on a district-designed assessment or portfolio of student-designed projects, products, and/or performances. ➤ Meeting a standard of performance determined by the local school district on in-depth experiences such as independent study, internship, and/or community service in the field. ▪ Physical Education: ▪ Technology Education: ▪ Health: <ul style="list-style-type: none"> ➤ Successful completion of an accredited college course that assures mastery of program goals and content standards as defined in the CCL. ➤ Meeting a standard of performance determined by the local school district on a district-designed assessment or portfolio of student-designed projects, products, and/or performances. ➤ Meeting a standard of performance determined by the local school district on in-depth experiences such as independent study, internship, and/or community service in the field.
	<p>NOTE: Each student may take a combination of the credit and credit equivalents in each of the areas listed above. The exact combination would be determined jointly by the student, the educators most familiar with the student’s strengths and needs, and parents or guardians of the student.</p>

We believe that the proposed graduation requirements enumerated in this monograph will help high schools offer to each of their students a more challenging, rigorous, appropriate and relevant program of studies and experiences. The proposal, while providing a standard state framework, enables those closest to each student to help that student devise a program that builds on the student's strengths and enables each to take a set of experiences that meaningfully meets his/her educational needs.

We look forward to your discussion of this monograph and proposed set of high school graduation requirements.

Prepared by:

Eileen S. Howley, Chief
Bureau of Curriculum and Instruction

Betty J. Sternberg, Associate Commissioner
Division of Teaching and Learning

October 4, 2000

The New Connecticut High School: Re-Defining Graduation Requirements

The Need for Change

The time has come for educational reform in the Connecticut High School. According to the National Association of Secondary School Principals (1996):

High schools are complex and diverse institutions in this country. They are, in our society, an absolute necessity if you are to be successful at adult understandings. Graduation from a high school in America is the entrance to adult life. In an ever-changing global environment where interdependency abounds the best and highest quality of education is a necessity no longer reserved for the few, but demanded for all. Any other course of action shall doom our future generations and nation to a third-class status. (p. 3.)

For the last few decades, education and government leaders have used the coming of the 21st century as opportunity to establish new beginnings or at least to change some of the practices in their institutions. During this same time, futurists have presented a vision of the 21st century that would be very different from the life experiences and practices of the 1980's and 90's. The future is now. It is time for change to ensure that Connecticut students are prepared to live in a new era and a new millennium. Any delay in action puts CT's high school students at risk of failure in this fast-changing world.

Further, the National Association of Secondary School Principals (1996), in *Breaking Ranks: Changing an American Institution*, set forth nine purposes that represent their vision for our nation's high schools and for the recommendations made in their report. The recommendations are as follows:

- I. High school is, above all else, a learning community and each school must commit itself to expecting demonstrated academic achievement for every student in accord with standards that can stand up to national scrutiny.
- II. High school must function as a transitional experience, getting each student ready for the next stage of life, whatever it may be for that individual, with the understanding that, ultimately, each person needs to earn a living.
- III. High school must be a gateway to multiple options.
- IV. High school must prepare each student to be a life long learner.
- V. High school must provide an underpinning for good citizenship and for full participation in the life of a democracy.
- VI. High school must play a role in the personal development of young people as social beings who have needs beyond those that are strictly academic.
- VII. High school must lay a foundation for students to be able to participate comfortably in an increasingly technological society.

- VIII. High school must equip young people for life in country and a world in which interdependency will link their destiny to that of others, however different those others may be from them.
- IX. High school must be an institution that unabashedly advocates in behalf of young people. (p. 8)

This vision guided the development of this monograph and begins to address the needs of Connecticut's high school students. Unfortunately, every high school in Connecticut does not necessarily embrace this vision. High school, a pivotal time in students' lives, meets only a few of these purposes. Connecticut high schools demonstrate both strengths and weaknesses. For example, the annual drop-out rates have continued to decline, yet the cumulative four-year dropout rates for the class of 1999 is 14.3%. While the number of high school students taking courses offered for college credit exceeds 20,000, the numbers taking AP exams are significantly lower. While the percentage of students at or above state goal on the Connecticut Academic Performance Test has shown some gains, the percentage of students that do not meet the goal remains too large. In 1999, 43% met goal in mathematics, 39% met goal in Language arts, 38% met goal in science, and 42% met goal in the interdisciplinary (*Profiles of our Schools: Condition of Education in Connecticut*, 2000).

Beyond the statistics, students' lived experience of high school remains all too often one of quiet alienation. In their experience, school ends at 2:00, or earlier, homework assignments are irrelevant, and apathy dominates. Student isolation and lack of personal responsibility fuel these feelings toward high school. It is time to better meet the needs of Connecticut's students and to continue to challenge them to grow. What follows is a discussion of areas in need of change.

CURRICULUM

Curriculum has many orientations (Eisner, 1979) and may seek to achieve multiple purposes, such as the development of cognitive process, academic rationalism, social reconstructionism, personal relevance, or technology. Yet, curriculum has generally suffered from inertia and a limited zone of acceptance for change (Glatthorn & Jailall, 2000). Current state curriculum resources and assessment programs have influenced curriculum design and delivery. Content-specific teacher expectations are clearly defined in the Beginning Educator Support and Training program and the *Connecticut Framework: K-12 Curricular Goals and Standards* (CSDE, 1998). These frameworks define what students are expected to know and be able to do by the end of their K-12 experience. Yet, these expectations are set forth in areas that are presently required and areas that are not required through a specified credit distribution in the high school. Additionally, several dimensions of the high school experience in curriculum continue to be problematic. For example, the current credit distribution encourages breadth of content coverage, yet such distribution also begins to create conflict among content areas that are not required (such as the choice between one credit in the arts versus vocational education). Students' experience quickly becomes one of coverage of topics versus

meaningful learning of concepts and development of ideas. This experience contributes to students' feelings of alienation and the irrelevancy of school.

Furthermore, the nature of the separateness among courses in content areas has created isolation between content areas and a pervasive sense of compartmentalization for students. Hence, the students' experience is that of a disconnected series of classes that lacks any interdisciplinary connection from one content area to another. Further, the lack of connection extends to the students' lack of connection between what is taught in school and what they are experiencing in the world around them. This disconnect between the real world and the students' school experience contributes to students' apathy and boredom.

In addition, the concept of mastery of learning is often overshadowed by the current high school graduation requirement's emphasis on seat time and course completion. Since criteria for mastering a content area is not clearly defined, the taught and the tested curriculum are frequently different. Students learn to play the "game" of school instead of learning how to learn. In fact, many schools inadvertently reward students for such "gamesmanship".

INSTRUCTION

Teacher expectations have grown clearer through state and national standards for teachers, such as the *National Board for Professional Teaching Standards* (1990) expectations or the *Connecticut Common Core of Teaching* (1998). These standards specify the knowledge, skills and dispositions that competent teachers utilize. The National Commission on Teaching and America's Future (1996) specifies four kinds of expertise that link to learning: knowledge of content, repertoire of instructional skills, knowledge of students, and attitudes that support high levels of learning. It is not possible to meet these types of expectations with one type of presentation. It requires more highly developing teaching practice. Recent brain research supports the concept that all students do not learn in the same way or at the same time (Gardner, 1983). Instructional strategies that may have worked successfully 20 years ago may no longer be sufficient to meet the changing needs of students. Teachers need to learn to vary the lesson to suit the learning styles and needs of students.

"The quality of instruction in a school is the single most important factor affecting the quality of student learning and is the link between curriculum, learning expectations, and student performance" (New England Association of School and Colleges [NEASC], 1998). Teaching and learning that focuses only on recall and memorization of facts is insufficient. Lacking instructional strategies that emphasize analysis, synthesis, and evaluation of work fails to adequately prepare students. In addition, students need to make sense of what they learn, to connect their new learning to prior learning and to their life experiences. Without this, high school becomes boring and disjointed to students. Changes in teaching practices may require some teachers to make significant shifts; however, such shifts in practice do not mean that existing practices are to be totally

abandoned. Rather, it is time to build and extend teaching repertoires to better meet the needs of students.

PROFESSIONAL DEVELOPMENT

The on-going growth and development of teachers is essential for teaching effectiveness. Connecticut's system of Continuing Education Units (CEUs) for professional educators is designed to ensure that teachers continue to learn. The integration of that learning into the classroom, however, is not always readily apparent. Further, professional development systems that focus exclusively on teaching and do not consider student learning are limited at best. In addition, the structure of schools for many years has allowed teachers to work individually in their classrooms, isolated from their peers. Teaching generally continues to be a very private endeavor. The "closed door approach" to teaching and individual professional development can not support or sustain the needs of today's high school students.

Both professional development and the assessment and evaluation of teaching must become a shared activity between and among teachers and administrators alike. (Newmann & Wehlage, 1995; Darling-Hammond and McLaughlin, 1995). This shared experience needs to focus on the examination of student work and progress. Without this, professional development remains an isolated experience for teachers with little consequence for their daily teaching activities. If time in professional development is not spent in careful examination of student work, along with diagnosis of student progress that influences both teaching and learning, then the professional development of teachers is inadequate.

ASSESSMENT

Assessment is a critical form of accountability and should be an integral part of teaching and learning. Little attention is given to the sharing of accountability measures within high schools, let alone between high schools. External accountability measures, such as the CAPT or SAT can no longer be the sole source of accountability in high school. Quality assessment programs should ensure that students are meeting the agreed upon standards, and if not, should provide for the necessary assistance to help them to meet those expectations. Paper and pencil tests alone are not sufficient to assess student progress. Moreover, assessments that focus on lower levels of thinking and learning are inadequate to ensure that students meet quality performance standards. The absence of alternative assessments suggests a limited curriculum in high school that does not ensure that students are acquiring the necessary knowledge, skills, and abilities to succeed in life. (Wiggins, 1989). In addition, grade point averages alone are insufficient to communicate a students' work and progress; report cards that report only grades serve few evaluative purposes and limit parents' and students' understanding alike.

SCHOOL ORGANIZATION/CLIMATE

Teaching and learning is grounded in the environment in which it takes place. “School environment should be a catalyst for ensuring that students pursue their education under circumstances that foster the very difficult work of teaching and learning” (National Association of Secondary School Principals, 1996, p. 17). It is a troubling time in the climate of the American High School. Events such as the shooting rampage in at Columbine High School, may appear far away from Connecticut; however, it speaks to the subtle yet powerful experience of students’ perception of the climate and experience of school.

There is a serious need for a school climate and organizational structure which better attends to students’ emotional and social needs. Students should no longer be able to get “lost” in high school, to lack significant interaction with adults, or to behave in ways that endanger other students. Each student needs to count on an adult as his/her advocate (Sternberg, 1999). Many high school students, including successful ones, experience school and learning as disconnected from them, their goals, and interests (Institute for Education in Transformation, 1992). High school must be a safe, positive environment that supports students’ growth and development, not only academically, but also socially, emotionally, and physically. A healthy environment supports students’ development of healthy self-esteem, including “connectiveness, uniqueness, sense of power, and sense of models” (Bean, 1992). Without healthy self-esteem, students will be less functional as adults.

LEADERSHIP

School administrators who solely administer and do not lead, do not support the vision of a quality high school experience. “For the success of school reform, leadership must diffuse itself throughout the school community” (National Association of Secondary School Principals, 1996, p. 26). Unless every member of the school community functions as a leader, then high school is inadequate. The school administrator who does not lead forgoes the critical role of providing leadership both by building and sustaining the mission and vision of the high school. The New Connecticut High School will require leadership that supports the development of the school as a total community (Bolman and Deal, 1997; Fullan and Hargreaves, 1996). The delegation of instructional supervision to department chairs is inadequate; instructional supervision must begin with and be supported by the principal’s leadership and support for high standards and performance-based expectations of high school graduates. Teachers are leaders and must share responsibility for inspiring, coaching, and helping one another to continue to grow.

Leadership extends beyond the school walls as well. The larger community, together with parents and guardians, must work to support the mission and the vision of the high school. Community resources must become an integral part of the high school learning experience. Parents and guardians must support students’ increasing responsibility for

themselves as they seek to graduate from high school; school leaders and educators must work with parents in the best interests of their children.

In summary, the educational experience of students in high school is a collective responsibility. To develop maturity and independent skills that help students meet their present life's demands and will prepare them for life after high school requires that we both allow and demand that students have a greater voice and choice in their learning. They need to be empowered to make decisions within the framework of the community of school and learn to make better informed decisions as they assume increasing responsibility for their own learning. To succeed in high school, students need the support, guidance and sometimes a push in the right direction by significant adults. A new vision of the Connecticut High School must consider its impact on curriculum, instruction, professional development, the school environment/climate, and leadership. The New Connecticut High School must begin with a clear vision that supports and sustains students' growth and development as maturing young adults in a supportive community.

In response to these identified needs, we propose the mission of the New Connecticut High School:

MISSION STATEMENT FOR THE NEW CONNECTICUT HIGH SCHOOL

The New Connecticut High School is a community of learners that appreciates and supports each individual's background and needs, and expects each of its members to master the skills, knowledge and attitudes needed to contribute to society as a caring and responsible citizen.

To achieve this mission is no small task. Connecticut schools wishing to embrace this mission should be guided by the following principles:

Guiding Principles for the New Connecticut High School

1. The New Connecticut High School must provide a more challenging, rigorous, appropriate and relevant program of studies and experiences to each of its students. It accomplish this, it must embrace the *Connecticut Common Core of Learning* (1998) as a broad and critical definition of the educated citizen. Given this focus on student learning, it enables the school to shift the focus away from solely test scores or counting credit hours to focus on evidence of student learning and accomplishment. The importance of the *Common Core of Learning* should not be taken lightly; it establishes the foundation of the high school curriculum and helps to define the content knowledge, skills, attitudes and attributes required to successfully graduate from high school. Such standards must form the foundation of what students are

expected to know and be able to do as they graduate from high school. These standards will let the school community know what students have achieved.

2. High school must be made to be a place of great relevance and importance to students. It is critical that students can see the value and some direct connections of their education to the present world around them. High school students must see connections to their own lives in order to apply their learning in other contexts. Additionally, learning must have lasting value if it is to help students prepare for their future beyond high school. The experiences that students have in high school must be designed to increase motivation to continually learn, ultimately ensuring the development of life-long learners.
3. Students need to be taught in the ways that they learn best. The high school staff must be responsive to students' learning styles and needs, and offer differentiated instructional experiences designed to meet those needs. For example, school must provide opportunities for students to learn not only through text and discussions that are schoolhouse bound, but also through active applied experiences available beyond the schoolhouse walls. In this way, students will be able to learn more in the comprehensive sense than ever before.
4. Instruction must be directly related to ongoing assessment. Assessment of student progress must have an impact on both teaching and learning. Continual assessment of student progress must be utilized not only to chart student growth, but even more importantly to influence future instruction. Additionally, students need to learn to monitor their work, their progress, and their own strengths and weaknesses.
5. In order to be successful, it is essential that students and teachers collaborate. Such collaboration requires students to have opportunities to determine portions of their studies, to have and exercise choice, and to have productive working relationships with teachers. Since high school is the last step before students officially enter the adult world, it is essential that students be given opportunities to take increasing responsibility for themselves and their decisions. For example, some courses in the curriculum should be determined in part by each student according to his/her own interests, success, skills and needs. Students should be given opportunities to determine what they will study, with the appropriate guidance from significant adults (parents, guardians and teachers).
6. The environment of the high school must embrace the unique talents of all of the members of the school community. Students need to be an integral part of the high school community; each student needs to be known and valued as an individual. Each student should be connected to at least one significant adult who guides his/her development. This connection must be the norm, not the exception. No student should be allowed to "get lost." Every Connecticut high school must create a mechanism for each student to achieve his/her individual goals through membership in the school community. To successfully achieve in high school, students must contribute to that community. Their needs, interests, and aspirations must be valued.

7. The collective responsibility to provide a quality educational experience for students must be shared, not only by students and teachers, but also by parents, families, and the larger community. Students spend only a portion of their days in school; the home and family life must support the vision of the school. The New Connecticut High School must ensure positive working relationships with parents, citizens, community leaders, businesses, and other members of the community that have an interest in education of children.

Given the guiding principles of the New Connecticut High School and the vision that the principles embrace, it is time to revise the expected requirements for high school graduation. What follows is a description of the current expectations and a discussion of the recommendations for each of the following subject areas: English, Mathematics, Social Studies, Science, World Languages, Technology Education, Arts, Physical Education, Healthy and Safety, Applied Education, and Learning Resources and Information Technology.

The Current Connecticut High School Graduation Requirements and Prescribed Courses of Study

The current existing Connecticut High School Graduation Requirements are driven by the concept of course “credits.” The current statute (10-221a) requires a minimum of twenty credits. Of these credits, the following must be taken. Not fewer than:

- Four English
- Three Mathematics
- Three Social Studies
- Two Science
- One in the Arts or Vocational Education
- One Physical Education.

Prescribed courses of study (C.G.S. 10-16b), specifies that public schools must at least offer the following subject matter: the arts, career education; consumer education; health and safety; language arts; mathematics, physical education; science; social studies, and at the secondary level, one or more foreign languages and vocational education.

Together, these two statutes direct what is offered in the school, and what is required to be taken by Connecticut’s high school students.

Notwithstanding, the credit-based approach to achievement fails to describe the knowledge and skills required to achieve completion of the credit. The concept of credit hours alone is no longer sufficient to ensure that students have achieved the expectations of an educated citizen as described in the *Common Core of Learning* (1998) or the mission of the Connecticut high school. It all too often becomes a calculation of “seat time” instead of student learning. To ensure that the guiding principles of the New

Connecticut High School are met, the recommendations for each of the content areas will be addressed in kind.

PROPOSED HIGH SCHOOL GRADUATION REQUIREMENTS FOR THE NEW CONNECTICUT HIGH SCHOOL

The new Connecticut graduation requirements must include student demonstration of the meeting of standards. It is recommended that the *Common Core of Learning* be used as the description of the foundational knowledge and skills that students must develop and demonstrate to graduate. Students' ability to demonstrate those competencies becomes critical in determining whether or not a student has achieved the standard; not solely time spent in class. Hence, it is proposed that the statutory requirement for credit hours be modified to include "equivalents" as determined by the local school district as a new high school graduation requirement.

The concept of "equivalents" suggests that there is no single way to achieve the standard. Rather, a quality high school education, grounded in the guiding principles and the vision of the New Connecticut high school, must design programs and processes that ensure that students have achieved the key skills, not simply spent time in class. "Equivalents" could include one or more of the following: achieving the standard through Advanced Placement (AP) performance or SAT performance; meeting district performance standards as assessed by locally determined assessments; alternative coursework at colleges and universities or through the internet; interdisciplinary projects as approved by the local departments or school teams; internships approved by the local departments or administration; or community service experiences that are connected to coursework. These "equivalents" will allow students to receive credit for mastery of content without necessarily spending a particular number of hours in a class.

In addition, the proposed changes still maintain some connections to the previous schemata of credit hours. Such credit hours must be based on whether or not students have achieved the standard. In some subject areas, the number of credits has been reduced. The intention is to allow students greater opportunity for choice within the prescribed curriculum and to recognize that skills can be learned in more than one content area. In some cases, credits have been added to ensure that some opportunity is provided for students to experience subjects at a minimum that might otherwise be omitted. In some instances, demonstration of competency is expected but it is not directly linked to particular coursework. In these areas, it will require staff to work together to determine both when, where and how students will have an opportunity not only to acquire the skills but also to demonstrate them. Further, it is proposed that the total number of required credit hours be extended to **21 credits** as a minimum set of expectations.

What follows is a description of the proposed set of standards or expectations for high school graduation for each content area and recommendations for evidence of student accomplishment. The standards are derived from the *Common Core of Learning*, but are modified as appropriate to establish graduation expectations.

English Language Arts:

In language arts, the Connecticut High School graduate will demonstrate proficiency, confidence, and fluency in reading, writing, listening, speaking, and viewing; the graduate will explore and respond to classical and contemporary texts from many cultures and historical periods.

Mathematics:

In mathematics, the Connecticut High School graduate can apply a range of numerical, algebraic, geometric, and statistical concepts and skills to formulate, analyze and solve real world problems.

Science:

In science, the Connecticut High School graduate will demonstrate knowledge of the basic concepts of, and interrelationship among biology, chemistry, physics, earth (including ecology) and space sciences, and will be able to apply scientific skills, processes and methods of inquiry to the real world.

Social Studies:

In social studies, the Connecticut High School graduate will demonstrate a knowledge of history, civics and government, geography and economics, the social sciences, and humanities.

World Languages:

In world languages, the Connecticut High School graduate will demonstrate knowledge of one language other than English, and will understand the culture of that language.

The Arts:

In the arts, the Connecticut High School graduate will create, perform, and respond with understanding in at least one art form, and appreciate the importance of the arts in expressing human experience.

Physical Education:

In physical education, the Connecticut High School graduate will recognize the importance of and participate in physical activities designed to maintain and enhance healthy lifestyles.

Technology Education:

In technology education, the Connecticut High School graduate will know about the nature, power, influence and effects of technology, and will be able to design and develop products, systems and environments to solve problems.

Health:

In health, the Connecticut High School graduate will understand and develop behaviors that promote lifelong health.

Applied Education:

In applied education, the Connecticut High School graduate will demonstrate specific knowledge of or experience with one of the eight career clusters: arts and media; business and finance; construction technologies and design; environmental, natural resources and agriculture; government, education and human services; health and bio-sciences; retail, tourism, recreation and entrepreneurial; and technologies: manufacturing, communications and repair.

Learning Resources and Information Technology:

In learning resources and information technology, the Connecticut High School graduate will be competent users of information and technology and be able to apply related strategies to acquire basic skills and content knowledge.

The following table summarizes the current high school graduation requirements and shows the proposed changes to them:

<u>CURRENT</u> High School Graduation Requirements	<u>PROPOSED</u> High School Graduation Requirements
<ul style="list-style-type: none"> ▪ Minimum number of credits: 20. 	<ul style="list-style-type: none"> ▪ Minimum number of credits and/or credit equivalents: 21.
<ul style="list-style-type: none"> ▪ Expectations expressed as credits. 	<ul style="list-style-type: none"> ▪ Expectations derived from the Common Core of Learning (CCL) and expressed as credits or credit equivalents.
<ul style="list-style-type: none"> ▪ Credits based on “seat time,” with a credit consisting of no less than the equivalent of a forty-minute class period for each school day of school year. 	<ul style="list-style-type: none"> ▪ Credit redefined as one school year of study. ▪ Credit equivalents based on exhibition of achievement of CCL standards as shown on standardized tests, through accredited college course work, or other district devised means such as portfolio assessment and supervised internships.
<ul style="list-style-type: none"> ▪ Credit requirements: <ul style="list-style-type: none"> ➤ English Language Arts: not fewer than 4 credits ➤ Mathematics: not fewer than 3 credits ➤ Science: not fewer than 2 credits ➤ Social Studies: not fewer than 3 credits ➤ Arts or Vocational Education: not fewer than 1 credit ➤ Physical Education: not fewer than 1 credit 	<ul style="list-style-type: none"> ▪ Credit requirements: Completion of study that ensures mastery of the program goals and content standards as defined in the CCL in each of the following respective areas: <ul style="list-style-type: none"> ➤ English Language Arts: a minimum of 3 years ➤ Mathematics: a minimum of 3 years ➤ Science: a minimum of 3 years ➤ Social Studies: a minimum of 3 years (including 1 credit of US History and 1/2 year in civics/government) ➤ World Languages: a minimum of 1 year ➤ The Arts: a minimum of 1/2 year ➤ Physical Education: a minimum of 1/2 year ➤ Technology Education: a minimum of 1/2 year ➤ Health: a minimum of 1/2 year ➤ Applied Education: Meeting a standard of performance determined by the local school district. For example, a district designed portfolio, an internship in the field, shadowing experiences in the field and/or service projects. ➤ Learning Resources and Information Technology: Meeting a standard of performance determined by the local school district. For example, a district-designed assessment or portfolio; an internship in the field; technology-based projects.

<p>Credit Equivalentents:</p> <ul style="list-style-type: none"> ▪ Local school district may grant credit for successful completion of coursework at an institution regionally accredited or accredited by the Department of Higher Education. (3 credit semester course = ½ credit) ▪ Local school district may offer ½ credit in community service as part of the 6 remaining elective credits 	<p>Credit Equivalentents:</p> <ul style="list-style-type: none"> ▪ English Language Arts: ▪ Mathematics: ▪ Science: ▪ Social Studies: ▪ World Languages: ▪ The Arts: <ul style="list-style-type: none"> ➤ Successful completion of an accredited college course that assures mastery of program goals and content standards as defined in the CCL. ➤ Meeting a standard of performance determined by the local school district on a standardized assessment measure such as the CAPT, SAT II, SAT I verbal for English Language Arts, SAT I Math for Mathematics and/or the AP examination in the appropriate subject area. ➤ Meeting a standard of performance determined by the local school district on a district-designed assessment or portfolio of student-designed projects, products, and/or performances. ➤ Meeting a standard of performance determined by the local school district on in-depth experiences such as independent study, internship, and/or community service in the field. ▪ Physical Education: ▪ Technology Education: ▪ Health: <ul style="list-style-type: none"> ➤ Successful completion of an accredited college course that assures mastery of program goals and content standards as defined in the CCL. ➤ Meeting a standard of performance determined by the local school district on a district-designed assessment or portfolio of student-designed projects, products, and/or performances. ➤ Meeting a standard of performance determined by the local school district on in-depth experiences such as independent study, internship, and/or community service in the field.
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	NOTE: Each student may take a combination of the credit and credit equivalents in each of the areas listed above. The exact combination would be determined jointly by the student, the educators most familiar with the students' strengths and needs, and parents or guardians of the student.
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Prescribed Courses of Study

In spite of all of the course requirements, students' education does not begin in high school; rather, it builds upon many years of study, grounded in the prescribed courses of study required by state law.

Given the recommendations for change to high school graduation requirements, the statute governing the course offerings in public schools must also change (C.G.S. 10-16b). Given the shift in emphasis in the proposed high school graduation requirements, it follows that the prescribed course of study should assume a similar pattern. Hence, the prescribed courses of study should be modified to adequately reflect the new expectations of high school graduates. Its offerings should include the foundational skills and competencies expected in the Common Core of Learning: reading; writing; speaking, listening, and viewing; quantifying; problem solving, reasoning and creative thinking; learning resources and information technology; and working independently and collaboratively. It should include the understandings and applications of the discipline-based and interdisciplinary skills: language arts; mathematics; science; social studies; world languages; the arts; health and safety education; physical education; technology education; and applied education.

Further, this statute, in the spirit of the Common Core, should specify that such programming must be planned, ongoing and systematic, to ensure that students have the opportunity to learn and develop the expected skills and competencies from kindergarten through 12th grade.

IMPLICATIONS

The new vision of the Connecticut high school is a vision that will have implications for all parts of the school community. What follows is an elaboration of the implications of these requirements on curriculum, instruction, assessment, the school organization/climate, and school leadership. Each will be addressed in kind.

CURRICULUM

Currently, the *Connecticut Common Core of the Learning* and the *Connecticut Frameworks: K-12 Curricular Goals and Standards* represent a positive influence on curriculum design and delivery in Connecticut high schools. The frameworks provide a resource for the construction of curriculum goals, objectives, and programs. By providing a framework or guide with respect to the range of content in Connecticut's public schools, the frameworks help to ensure that a range of content is taught that involves both depth and breadth.

Furthermore, since the state assessment programs of the Connecticut Mastery Test (CMT) and Connecticut Academic Performance Test (CAPT) are directly connected to the frameworks, these programs help to focus teachers' instruction. Specifically, the CAPT helps teachers to focus their instruction and to ensure that students are learning critical skills and competencies across disciplines. While the CMT is offered in grades 4, 6, and 8, it also helps high school teachers to identify and anticipate students' needs in reading, writing and mathematics. The statewide assessments have helped to ensure that essential skills, competencies, and understandings are addressed.

To build on these efforts, and to implement the new vision, the curriculum in the New Connecticut High School needs to place emphasis not on topics alone; but rather, on the key concepts, ideas, or understandings that are essential for students to learn. The concept of mastery of learning requires performance measures to ensure that mastery. Curriculum emphasis should be placed on identifying specific expectations of what students should know and the skills and performances that they must demonstrate by the time they graduate. Identification of how those knowledge, skills, and competencies will be assessed and how to make those expectations clear to students is vital.

Teachers must be supported in developing the instructional skills to teach toward these essential concepts versus "covering the content." Faculty must work together to build the necessary connection between and among content areas, using strategies such as vertical teaming, cross-disciplinary teams, and connections with the community. Reflection and analysis of teaching and learning must be an integral part of the on-going evaluation of curriculum and implementation.

INSTRUCTION

Several statewide initiatives support quality instructional practice. For example, the Beginning Educator Support and Training (BEST) program provides a comprehensive induction program of support and assessment for beginning teachers and a foundation for ensuring that new teachers have the necessary skills to teach in Connecticut's high schools. Mentors, who coach and serve as confidants to the beginning teachers, form the core of the support of the BEST program. Portfolios are used to assess content pedagogy in a novice teacher's classroom and have begun to be used to augment many teacher evaluation systems in local school districts. The new *Connecticut Guidelines for*

Teacher Evaluation and Professional Development shift the emphasis in evaluation of teaching from “inspecting teaching” to the examination of the teaching and learning process. The requirements for continuing education units (CEUs) help to ensure that practicing teachers continue to develop their craft throughout their careers.

To build on these efforts and to support effective instruction in high school, some shifts need to take place in teaching practice to help students develop greater understanding, and deeper knowledge and skills. For example, teachers will need to spend less time on whole class and teacher-directed activities and more time on experiential, hands-on and student-directed learning. There should be fewer work sheets and seat work and more active learning; less transmission of information and more facilitation that requires increasing responsibility on the part of the learner. The teacher should more frequently play the role of coach and mentor, and less frequently be the giver of information. Emphasis should be placed on more in-depth study of a few topics, more higher order thinking with less memorization of facts. Instruction should de-emphasize tracking and leveling of students and create more heterogeneously grouped classes. Less reliance should be given to standardized assessments and more reliance on teacher descriptions of student achievement and performance-based assessments. Old techniques should not be abandoned; rather, a more comprehensive approach to instruction should be embraced.

ASSESSMENT

The CT Mastery Test (CMT) and the CT Academic Performance Test (CAPT) have helped schools and teachers focus instruction. The CAPT helps high school teachers more than any other standardized test to focus their instruction to ensure students are learning critical skills across all disciplines. CMT and CAPT assessments identify the general areas where school districts, schools and students need to improve. At the same time, for high school students, the CAPT is of little consequence. Some do not take it seriously. It has little or no efficacy for them.

External state assessments such as SAT II Achievement Test, Advanced Placement, and International Baccalaureate Exams encourage students to enroll in challenging courses. The College Board through their summer institutes helps teachers identify what the course standards are, what instructional strategies are effective and how the students will be assessed. However, the population that participates in these assessments is limited. The New Connecticut High School must find ways to integrate the expectations of standardized tests and statewide assessments into their curriculum but not be limited by them.

There is a need to decrease the emphasis on SAT I scores as an achievement measure of high school content and the student's ability to do college work. There is a need to bridge the external large-scale assessment (CAPT) with teacher assessments so that daily classroom work naturally prepares students for the external (CAPT) assessments. This link requires embedding the content and skills assessed by the state (CAPT) into teacher's daily classroom lessons (Linn & Herman, 1997). Teachers should not have to stop

teaching and prepare for the "test." Teachers should know how well their students will do on CAPT because they have daily data on student progress and use this data to prepare their daily lessons and provide feedback to their students. Teachers need to spend more time working with students in the creation and use of analytic rubrics as a tool for understanding their performances.

Assessment should form the foundation of quality instructional decision-making. Student performance on classroom-based assessment should form the foundation of future instruction. Further, those assessments should reflect the quality learning experiences that students have in their classrooms. Every task that a student is asked to perform reflects not only the knowledge and skills, but also creates dispositions toward the various disciplines. Therefore, assessments should reflect high quality, authentic learning experiences. Assessment results must be easily understood by both students and parents to ensure that standards and expectations are clear. High schools need to work closely with parents and students as they seek to design more diagnostic assessments, rubrics that elaborate on performance expectations, and performance-based assessment tasks as the means for communicating what students need to know and be able to do to be successful.

School districts need to develop multiple means by which student achievement will be assessed. They need to link the results of student assessments to the design of subsequent learning activities. Schools need to develop a variety of performance exhibitions and portfolio reviews so students can demonstrate their level of performance against school district standards. Assessment needs to measure not only what students recognize and remember, but also to measure how well students research relevant facts and apply this information in a meaningful context. Assessment must measure how well students themselves are able to formulate meaningful questions and find the answers to them.

SCHOOL ORGANIZATION/CLIMATE

The experience of high school, all too often, allows students to “get lost” or rarely, if ever, have significant interaction with an adult. Given the expectations of the New Connecticut High School, the organizational climate of high school must place greater emphasis on supporting the development of students not only academically, but also socially, emotionally, and psychologically to adequately prepare them for work and life. To help each student succeed, high schools must create the organizational structures that allow each and every student to count on at least one adult who will serve as each student’s advocate, playing a significant role in that student’s life, thereby not allowing students to “fall through the cracks.”

The organizational climate of school must work to create a community that ensures a safe journey through high school for teachers and students alike. In this vein, students need to begin to take increasing responsibility for their own conduct as well as that of their peers. Students must become an integral part of the establishment of school policies, not only academically, but also in matters of ethical behavior. A significant adult must be

connected to and responsible for each and every student. Systems that include mentoring programs, community outreach, and other methodologies to build a network of support are essential.

Teachers need to belong to more than an academic department. Teachers need to belong to an interdisciplinary team that provides each student with continuous personal and academic growth. Teams can be the first step toward providing support for each individual child. Some options include the creation of personal learning plans for individual students. To ensure success, personal learning plans can identify the tasks required of the teachers, students and their parents. The school schedule must provide time for teams to meet for planning, assessment and parent/student communication. Parent participation can occur through the team and with their child's personal learning plan. Guidance counselors and special education teachers must be an integral part of the team. No child should go unnoticed.

PROFESSIONAL DEVELOPMENT

Several Connecticut statutes govern the professional development of school teachers. License to teach in Connecticut is governed by C.G.S. 10-14b. Teaching certificates for employees of local/regional boards of education are issued and valid for 5 years and continue for another 5 years providing that not less than 90 hours of continuing education are completed as determined by the local or regional board of education. Education personnel requiring an intermediate administrative certificate need at least 15 hours of training in teacher evaluation for each 5-year cycle. Each board of education is required to provide 18 hours of continuous education each year for its professional staff. Sec.10-151b requires all superintendents to develop an evaluation program for all certified personnel below the rank of superintendent. C.G.S. Sec. 220a requires all boards of education to develop a comprehensive professional development plan related to the goals of the school district. The new teacher evaluation and professional development guidelines expect educators to examine student work and progress as an integral part of their evaluation and professional development systems.

These efforts are all in the service of the development of teachers. As the New Connecticut High School comes into reality, old conceptions of professional development must also take new forms. Time for professional development must become an integral part of the teacher's workday. Teachers will need to focus less on their individual work and place more emphasis on working with their colleagues toward common goals for school improvement. Teacher will spend less time on the design of their teaching and more time on the design of learning with a focus on assessing student work as a tool for improving instruction.

As teachers focus on student work they will no longer think of themselves as technicians who are responsible for mastering a prescribed set of skills and techniques. They will need to see themselves as intellectuals engaged in a process of reflecting on student work, continuously collecting information so they may re-design learning strategies and

continually extend their teaching repertoires. Student work must become the central focus of professional development experiences for teachers. They must regularly work to examine student work and progress over time, to share those collective understandings, and seek to improve their performance in the service of student learning.

Teachers will build and draw on a wealth of information and basic research that will influence their teaching. With the change from teachers working as individuals to working as colleagues, teachers' individual concerns will move from how well their classroom is doing to how well the school is doing. They will move from their concerns about "my classroom" and "my students" to "our school" and "our students."

As professional development plans are developed in each district, the committee will need to understand that content knowledge is the key to learning how to teach subject matter to students. Learning to practice this craft in new ways is difficult and takes time to master. Teachers come to their new learning with their own beliefs and experiences that will affect how they learn. Teachers will need to continually extend their knowledge of the developmental stages of young adults, their likes and dislikes, their ideas and their way of thinking. As teachers learn and implement new ways of teaching, they should be provided time during the workday to analyze and reflect on their student's work (Leiberman & Miller, 1999). Further, they will need the time for parent contact, time to meet with individual students, and time to meet with their peers to share their craft.

LEADERSHIP

The vision of the New Connecticut High School can not be realized in the absence of school leadership that embraces that vision; however, the leadership of one school leader is inadequate to support this change. Rather, every member of the school community must approach the New Connecticut High School as a leader, charged with supporting the mission and vision of the school. The school principal's job becomes one of helping create and support the structures that will allow all teachers, parents, and students to contribute to this vision. Principals must work with teams of teachers and all members of the school community to define the vision of the school, and establish high school graduation requirements that meet the intent of the law and continue to challenge both teachers and students to grow and develop.

The school principal and school leaders must work to support the vision in every aspect of school: curriculum, instruction, assessment, professional development, and organizational climate. Clearly, this can not be accomplished single-handedly. The school leader must be adept at facilitating the work of others, securing community support, and building the learning community within the school.

CONCLUSION

In conclusion, Connecticut's high schools need to change in order to fully meet the needs of high school students to prepare them to be contributing members of society. The

purpose of this monograph is to identify the need for change through an examination of the current status of high school in terms of curriculum, instruction, assessment, professional development and school leadership. The mission for a New Connecticut High School that meets the needs of students is defined. To achieve this mission and vision, the current high school graduation requirements should be revised. Each of the curricular areas in need of change is identified and discussed and recommendations for modifications are specified. In addition, changes to the statute governing prescribed courses of study are also specified. Finally, the implications of this new vision for curriculum, instruction, assessment, professional development, school organization/climate, and leadership are specified.

To adequately implement these requirements, districts must ensure these high school graduation requirements are easily understood by students, parents, school districts and the public. Further, local boards of education will need to retain their authority to establish graduation requirements beyond those required by the law. By ensuring that local boards of education have the authority to establish graduation requirements based no longer solely on time and credit, but also based on standards and performance, it is a first step. This opportunity will assist high schools as they seek to create the New Connecticut High School and ultimately better prepare our students for work and for life. Local education agencies should not be limited by these requirements, but rather use them as a blueprint for change.

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Members of High School Study Group

Mr. Mark Cohan
Superintendent
Cromwell Public Schools
Cromwell, CT

Mr. Joseph DiMartino
Education Alliance-Lab
Brown University
Providence, RI

Mr. Edmund Higgins
Principal
Branford High School
Branford, CT

Mr. Eugene Horrigan
Principal
Shepaug Valley High School
Washington, CT

Ms. Alice Jackson
Wallingford Public Schools
Wallingford, CT

Ms. Mitzi Yates
Greater Hartford Academy of the Arts
Hartford, CT

Ms. Jean Wierzbinski
Asst. Superintendent
CT State Department of Education
Vocational-Technical School System
Middletown, CT

Staff to High School Study Group

Dr. Betty Sternberg
Associate Commissioner
CT State Department of Education
Division of Teaching and Learning
Hartford, CT

Ms. Eileen Howley, Bureau Chief
CT State Department of Education
Bureau of Curriculum and Instruction

Mr. Nelson Quinby, Retired High
School Principal
Regional School District No. 9
Easton/Redding, CT