November 7, 2011

WESTPORT BOARD OF EDUCATION

AGENDA

PUBLIC CALL TO ORDER: 6:30 p.m. Staples High School, Principal's Conference Room 1025C

ANTICIPATED EXECUTIVE SESSION: Pending Litigation

PUBLIC SESSION/PLEDGE OF ALLEGIANCE: 7:30 p.m. Staples High School, Cafeteria B (Room 301)

ANNOUNCEMENTS FROM BOARD AND ADMINISTRATION

MINUTES: October 24, 2011

PUBLIC QUESTIONS/COMMENTS ON NON-AGENDA ITEMS (15 MINUTES)

RECOGNITION:
Acknowledgement of Retiring Members of the Board of Education: Sandy DeFelice and Faith Taylor

PRESENTATION:

Westport Education 2025: Meeting the Global Challenge	(Encl.)	Ms. Comm Dr. Landon

DISCUSSION:

1. Policy P5131.911: Bullying Prevention and Intervention Policy P5131.912: Safe School Climate Plan	(Encl.)	Ms. Gilchrest Dr. Landon
2. Re-Coating Hypalon Roof at CMS: Approval of Capital Project Specifications and Resolutions	(Encl.)	Ms. Harris

DISCUSSION/ACTION:

1. Acceptance of Gift: Document Cameras from Green's Farms PTA	(Encl.)	Dr. Landon
2. Approval of Stipulation: Staples High School Football Field Lights		Dr. Landon

ADJOURNMENT

*A 2/3 vote is required to go to executive session, to add a topic to the agenda of a regular meeting, or to start a new topic after 10:30 p.m.
The meeting can also be viewed on cable TV on channel 78.

PUBLIC PARTICIPATION WELCOME USING THE FOLLOWING GUIDELINES:

- Comment on non-agenda topics will occur during the first 15 minutes *except* when staff or guest presentations are scheduled.
- Board will not engage in dialogue on non-agenda items.
- Public may speak as agenda topics come up for discussion or information.
- Speakers on non-agenda items are limited to 2 minutes each, except by prior arrangement with chair.
- Speakers on agenda items are limited to 3 minutes each, except by prior arrangement with chair.
- Speakers must give name and use microphone.
- Responses to questions may be deferred if answers not immediately available.
- Public comment is normally not invited for topics listed for action after having been publicly discussed at one or more meetings

11.4.11 posting

westport2025

meeting the global challenge

Mission Statement

To prepare all students to reach their potential as leaders and innovators as well as life-long learners and contributors to our global community

We will extend and deepen existing best practices in terms of teaching 21st century skills, focusing this school year of 2011-12 on critical thinking.

By June 2012, teachers and administrators will have collaborated to accomplish the following:

I. Develop and implement a common language K-12 for critical thinking.

II. Begin to use the critical lens that is being developed by the teachers and administrators on the Task Force in order to plan, develop, and reflect on teaching lessons and units that focus on 21st century skills as well as to assess student work.

III. Teachers and administrators will observe lessons, units, and student work with two primary questions in mind: Where is the thinking? How do we know?

IV. Share lessons and units, during regularly scheduled meetings and PD days as well as on the Westport 2025 web site, that make clear and specific what the 21st century survival skills look like and sound like in the classroom. Teachers will build a repertoire of strategies for teaching 21st century skills.

westport2025

meeting the global challenge

1. **Critical Thinking and Problem-Solving**
2. **Collaboration Across Networks and Leading by Influence**
3. **Agility and Adaptability**
4. **Initiative and Entrepreneurialism**
5. **Effective Oral and Written Communication**
6. **Accessing and Analyzing Information**
7. **Curiosity and Imagination**

From *The Global Achievement Gap: Why Even Our Best Schools Don't Teach the New Survival Skills Our Children Need—And What We Can Do About It* by Tony Wagner (Basic Books, 2008)

Westport, CT Lens for Examining 21st Century Capacities in Teaching and Learning
Adapted from SEI/Teachers College Global Capacities Framework

	Critical Capacities	Creative Capacities	Communication Capacities	Global Capacities
Keywords:	*Critical Thinking*[3,4]	*Creative Thinking*	*Self/Other-Directed Thinking; Systems Thinking*	*Engaging in Global Issues, Strategically engaging across media and contexts*
Keywords	Interpreting content (C1)[4] *Formulating deeper understanding*	Questioning and Curiosity[2] (R1) *Demonstrating curiosity[2], possessing a sense of wonder*	Reflecting and Meta-Analysis[6] (P1) *Contemplating thoughtfully on learning*	Engaging in Real-World Problem Solving[5] (G1) *Developing innovative solutions to real-world problems* *Working across the disciplines to solve problems*
Keywords	Accessing and Analyzing Content (C2)[4] *Forming evidence-based conclusions*	Observing and Imagining Possibilities (R2)[1,2] *Noticing, Creating original possibilities[6], performing/simulating*	Expressing effectively across different contexts and through varied media (P2) *Understanding audience; using modes of communication effectively*	Engaging in Global Issues (G2) *Analyzing interrelationships and international dynamics, demonstrating global awareness*
Keywords	Synthesizing and Applying Content (C3)[2,4] *Accessing information, combining, integrating*	Risk-Taking[1] and Tolerating Ambiguity (R3) *Taking initiative, working with comfort in the unknown*	Influencing and Negotiating[1] (P3) *Reconciling viewpoints effectively to reach goals; leading by example*	Engaging Multiple Perspectives[6] (G3) *Understanding self within the context of the Other, empathizing,*
Keywords	Evaluating Content (C4)[4] *Using deep understanding to value and assess content*	Agility and Adaptability[1] (R4) *Showing flexibility and resourcefulness under varying conditions*	Strategically Collaborating (P4)[6] *Collaborating[3], leading by influence[1], tapping into multiple skill-sets, working in teams*	Working Fluidly Across Boundaries (G4) *Using multiple literacies to strategically solve problems[2], interacting across modalities[5],*

Westport, CT Lens for Examining 21st Century Capacities in Teaching and Learning
Adapted from SEI/Teachers College Global Capacities Framework

1. Wagner (2008) 2. Jenkins, et al (2006);3. Partnership for 21st Century Skills (P21) (2006);4. Bloom et al (1957); and Anderson (2001)5. Organization for Economic Cooperation and Development (OECD) (2005);6. Csikszentmihalyi (2006);7. Ennis (1985)8. Choo, Sawch, Villanueva, 2011

Footnotes:

1. Wagner (2008)

2. Jenkins, et al (2006)

3. Partnership for 21st Century Skills (P21) (2006)

4. Bloom et al (1957); and Anderson (2001)

5. Organization for Economic Cooperation and Development (OECD) (2005)

6. Csikszentmihalyi (2006)

7. Ennis (1985)

8. Adapted from Choo, Sawch, Villanueva, 2011

From: Tony Wagner: The Global Achievement Gap, 2008

7 Survival Skills for the Future:

1. The First Survival Skill: Critical Thinking and Problem Solving

In one form or another, the ability to ask good questions has been a recurrent theme in almost all of my conversations about core competencies and skills for success in today's workplace. The habit of asking good questions was most frequently mentioned as an essential component of critical-thinking and problem-solving skills. It turns out that asking good questions, critical thinking, and problem solving go hand in hand in the minds of most employers and business consultants, and taken together they represent the First Survival Skill of the new global "knowledge economy." Equally important, they are skills that our kids need in order to participate effectively in our democracy. ...

I had a long conversation with Annmarie Neal, who is vice president for Talent Management at Cisco Systems— a global company that is the leading supplier of network equipment and network management for the Internet. ... She argued that critical-thinking and problem-solving skills were the most important competencies at her company. But she offered a slightly different explanation for the significance of these skills:

"Peter Senge's idea of the 'Learning Organization is on steroids now because organizations today need to deal with all this flow of information. [Senge is the author of *The Fifth Discipline,* a book about the importance of continuous learning and systems thinking in organizations' ability to adapt to change.] Employees need to sift through an overwhelming amount of information in order to figure out what's important and what's not. To do this you have to think critically."

In schools, *critical thinking* has long been a buzz phrase. Educators pay lip service to its importance, but few can tell me what they mean by the phrase or how they teach and test it—in part, because, as we will see, critical-thinking skills are not tested in any of the new state tests or even college entrance tests like the SAT and ACT. So I wanted to hear Neal's definition of *critical thinking.* I was interested to know if she had an operational definition of this term more clearly in mind than many teachers I'd talked to.

Her response was impressive: "Taking issues and situations and problems and going to root components; understanding how the problem evolved—looking at it from a systemic perspective and not accepting things at face value.

"It also means being curious about why things are the way they are and being able to think about why something is important." Indeed, Neal herself went on with a list of questions: "What do I really need to understand about this; what is the history; what are other people thinking about this; how does that all come together; what frames and models can we use to understand this from a variety of different angles and then come up with something different?" ...

2. The Second Survival Skill: Collaboration Across Networks and Leading by Influence

My … conversation with CEO Christy Pedra at Siemens suggested to me that the concept of teamwork today is very different from what it had been twenty years ago. "Technology has allowed for virtual teams," she explained. "The way some engineering projects in our company are set up is that you are part of a virtual team. We have teams working on major infrastructure projects that are all over the U.S. On other projects, you're working with people all around the world on solving a software problem. They don't work in the same room, they don't come to the same office, but every week they're on a variety of conference calls; they're doing web casts; they're doing net meetings.

"Seven or eight years ago, I was part of a pilot program for the company in creating the virtual office here in New England. We reduced our office footprint, reduced our square footage, and gave people technology so they could work from the road. One of the lessons we learned quickly was that the hardest thing to change was the behavior of the employees. They didn't know how to operate individually and then collaborate from afar, and so we had to provide coaching and counseling on how you communicate via e-mail and conference calls."

Pedra further explained that the creation of virtual offices and teams that communicated electronically made the development of trust an enormous challenge: "I once read that trust is the total number of interactions divided by the number of positive interactions," she explained. "The higher the number of positive interactions, the greater the trust. Knowing that you're not face to face with people, that you don't see them when you're taking off your coat in the morning, or setting up your desk, or grabbing a cup of coffee, how do you provide the opportunity to interact so that they have the ability to develop trust?"

The challenges involved in virtual and global collaboration also came up during my discussions with Annmarie Neal from Cisco. "Collaboration is an essential skill for us," she said. "Command-and-control leadership style is becoming less and less valued in organizations. People have to understand the importance of working fluidly and across boundaries. As organizations become more global, the ability to work fluidly around the world is a competitive advantage: understanding how to leverage the globe, time zones, where the work can best be done, where there are skills that best match the task, either because of the culture or the training." …

3. The Third Survival Skill: Agility and Adaptability

The portrait of the New World of Work that is emerging is a complex one. The shift from a hierarchal authority that tells you what to do to a team-based environment has been both rapid and profound. Similarly, the intensifying rate of change, the overwhelming amount of data, and the increasing complexity of problems that individuals and teams face every day in their work are dramatic new challenges for everyone in the organization. All of these changes illuminate the importance of another set of essential survival skills for work today: agility and adaptability. These skills have been consistently mentioned during all of my discussions with leaders from every kind of organization.

Clay Parker explained that anyone who comes to work at BOC Edwards today "has to think, be flexible, change, and be adaptive, and use a variety of tools to solve new problems. We change what we do all the time. I've been here four years, and we've done fundamental reorganization every year because of changes in the business. People have to learn to adapt. I can guarantee that the job I hire someone to do will change or may not exist in the future, so this is why adaptability and learning skills are more important than technical skills." ...

4. The Fourth Survival Skill: Initiative and Entrepreneurialism

Employees can be good problem solvers and team players, and they can be agile and adapt to new surroundings and ideas, but I learned that mastery of these survival skills is not enough in many companies— and likewise in many communities that face new challenges requiring proactive leadership. In the interviews I conducted, I heard a strong and consistent concern about the ways in which today's workers (and citizens) use or apply these survival skills: Leaders today want to see individuals take more initiative and even be entrepreneurial in terms of the ways they seek out new opportunities, ideas, and strategies for improvement.

... It was Mark Maddox from Unilever who said that "we need self-directed people who . . . can . . . find creative solutions to some very tough, challenging problems." And Karen Bruett explained that the members of her education group, for whom understanding technology has traditionally been their most important skill, "need to shift to understanding the problems of our customer—in this case, in education. They need to help educators figure out how to use technology effectively, and the group is going to have to figure this out for themselves."

5. The Fifth Survival Skill: Effective Oral and Written Communication

During our exploration of the Second Survival Skill, Pedra described one of the first problems she encountered when her group began to work less face to face and in more of a "virtual office." "We had to provide coaching and counseling on how you communicate via e-mail and conference calls," she told me. In fact, her concerns about workers' poor communication skills are widespread among the people I have spoken with, emerging in most of the interviews I conducted. Communication skills are a major factor highlighted in dozens of studies over the years that focus on students' lack of preparation for both college and the workplace, and these skills are only going to become more important as teams are increasingly composed of individuals from diverse cultures. The ability to express one's views clearly in a democracy and to communicate effectively across cultures is an important citizenship skill as well.

When employers were asked about the skills of high school graduates in the Partnership for 21st Century Skills study mentioned earlier, "[m]ore than half (52.7 percent) say [that] Written Communications, which includes writing memos, letters, complex reports clearly and effectively, is 'very important' for high school graduates' successful job performance," and "80.9 percent of employer respondents report high school graduate entrants as 'deficient.'" The study continued with an assessment of two-year and four-year college graduates' writing skills: "46.4 percent of employer respondents report new

workforce entrants with a two-year college diploma as 'deficient,' and over a quarter (26.2 percent) report that new workforce entrants with a four-year college diploma are 'deficient.' Almost two-thirds of employer respondents (64.9) say Writing in English is 'very important' for two-year college graduates; almost 90 percent (89.7 percent) say these skills are 'very important' for four-year college graduates."7

As Annmarie Neal told me, "The biggest skill people are missing is the ability to communicate: both written and oral presentations. It's a huge issue for us."

... While it's obviously important to write and speak correctly, the complaints I heard most frequently were more about fuzzy thinking and the lack of writing with a real *voice*. What business leaders don't understand, however, is that most teachers aren't trained or encouraged to teach this kind of writing. Instead, as we'll see, they are often asked to teach 120 or more students a day a simplistic formula style of writing that will enable the students to pass standardized tests, and they have very little time to do anything more.

6. The Sixth Survival Skill: Accessing and Analyzing Information

Employees in the twenty-first century have to manage an astronomical amount of information flowing into their work lives on a daily basis. As Mike Summers told me, "There is so much information available that it is almost too much, and if people aren't prepared to process the information effectively it almost freezes them in their steps." Annmarie Neal pointed out that organizations need to be able to understand how people deal with the flow of information. She also stressed the importance of critical thinking in the context of how an employee receives and uses information. Rob Gordon said that all high school graduates need to learn how to access and analyze different kinds of information. And Susan, the woman who works in the retail industry, talked about needing "people who can conceptualize but also synthesize a lot of data." As she mentioned: "There's so much more data that people have to synthesize. And they can't just produce a bunch of reports. They have to find the important details and then say 'here's what we should do about it.'"

In writing about the growing importance of the knowledge worker in the 1960s, Peter Drucker explained that it was the increasing availability of information and the need to know how to analyze it that, in fact, enabled and even required more and more employees to become knowledge workers. In other words, the ability to analyze information in order to discern new challenges and opportunities had become, even in Drucker's time, a vital core competency in the workplace. Today, this is even truer. In a very short period of time, with the advent of the Internet and the increasing availability of fast connections, we have evolved from a society where only a few people had limited information to one where all of us experience information flux and glut—and can look up almost anything imaginable on our computer in a search that takes nanoseconds. ...

Instant access to overwhelming amounts of information raises fundamental questions about the nature of the curriculum in our schools today. But before we can explore this issue, we have one more survival skill to consider.

7. The Seventh Survival Skill: Curiosity and Imagination

The words *curiosity* and *inquisitiveness* are almost always mentioned when I ask leaders to tell me what skills matter most today. Creativity and innovation are key factors not only in solving problems but also in developing new or improved products and services. And so today's employees need to master both "left-brain" skills—such as critical thinking and problem solving, accessing and evaluating information, and so on—and "right-brain" skills such as curiosity, imagination, and creativity. It's not enough to just be trained in the techniques of how to ask questions—as lawyers and MBAs often are, for example. Employees must also know how to use analytical skills in ways that are often more "out-of-the-box" than in the past, come up with creative solutions to problems, and be able to design products and services that stand out from the competition. In other words, they have to be new and improved knowledge workers—those who can think in disciplined ways, but also those who have a burning curiosity, a lively imagination, and can engage others empathetically. ...

Annmarie Neal described curiosity as an essential element of critical thinking. She told me that curiosity is about "taking issues and situations and problems and going to root components; understanding how the problem evolved—upstream and downstream components, looking at it from a systemic perspective; not accepting things at face value but being curious about why things are the way they are." In other words, the ability to do a "systems analysis" is important, but it is the habit of curiosity that allows an individual to begin to wonder how a system might be substantively improved or even reinvented. As I've heard time and time again, new employees straight out of high school and even college do not know how best to think about problems and how to approach them. We need to be curious.

Charlie Chaplin's silent movie *Modern Times* is a classic parody of the "Old World" of blue-collar work. As an assembly-line worker, Chaplin's character is always getting into trouble with the bosses and ends up getting caught in the cogs of the machine. He's simply another replaceable part. What I've come to learn is that the most successful companies in the emerging economy need a new and very different kind of worker who teams with others to continuously reinvent the machine as well as the products and services it creates. And I've discovered that, for some of us at least, our stereotypes of both white- and blue-collar work are badly out of date. As out of date, perhaps, as our beliefs about what constitutes an adequate education. As out of date, we shall see, as the schools we created to meet the needs of a very different era.

Wagner, Tony. 2008. *The Global Achievement Gap: Why Even our Best Schools Don't Teach the New Survival Skills our Children Need, and What We Can Do About It.* New York: Basic Books, pp.1-41.

Comparing Frameworks for "21st Century Skills"

Chris Dede
Harvard Graduate School of Education
July, 2009

Many groups have called for all students to learn "21st century skills." In response, some organizations have developed, as part of their institutional brand, frameworks for the new millennium content and processes teachers should convey as part of students' schooling. How diverse are these definitions for "21st century skills," and is the term becoming an umbrella phrase under which advocates from various groups can argue for almost any type of knowledge? Lack of clarity about the nature of 21st century skills would be problematic, since many educational reforms have failed because of a reverse Tower-of-Babel problem, in which people use the same words, but mean quite different things. What do the various frameworks for 21st century skills have in common, and what does each uniquely add to an overarching conception about the knowledge that graduates at this time in history should have as effective workers and citizens? After defining the nature of 21st century skills, this chapter provides a comparison of the themes major organizations' frameworks are presenting about what students need to know for full participation in the 21st century.

The Rationale for Formulating "21st Century Skills"

The 21st century is quite different than the 20th in the capabilities people need for work, citizenship, and self-actualization. 21st century skills are different than 20th century skills primarily due to the emergence of very sophisticated information and communications technologies. For example, the types of work done by people—as opposed to the kinds of labor done by machines—are continually shifting as computers and telecommunications expand their capabilities to accomplish human tasks. Economists Frank Levy and Richard Murnane (2004) highlighted a crucial component of what constitutes 21st century knowledge and skills:

> Declining portions of the labor force are engaged in jobs that consist primarily of routine cognitive work and routine manual labor—the types of tasks that are easiest to program computers to do. Growing proportions of the nation's labor force are engaged in jobs that emphasize expert thinking or complex communication—tasks that computers cannot do. (pp. 53–54)

These economists went on to explain that "expert thinking [involves] effective pattern matching based on detailed knowledge; and metacognition, the set of skills used by the stumped expert to decide when to give up on one strategy and what to try next" (Levy & Murnane, 2004, p. 75). What a skilled physician does when all diagnostic are within normal limits, but the patient is still feeling unwell is expert decision making: inventing new problem solving heuristics when all standard protocols have failed. "Complex communication requires the exchange of vast amounts of verbal and nonverbal information. The information flow is constantly adjusted as the communication evolves unpredictably" (Levy & Munane, 2004, p. 94). A skilled teacher is an expert in complex

communication, able to improvise answers and facilitate dialogue in the unpredictable, chaotic flow of classroom discussion.

As another illustration of how 21st century skills differ from the knowledge communicated by schooling through the 20th century, sophisticated information and communication technologies are changing the nature of "perennial" skills valuable throughout history, as well as creating new "contextual" skills unique to new millennium work and citizenship (Dede, in press). For example, "collaboration" is a perennial capability, always valued as a trait in workplaces across the centuries. Therefore, the fundamental worth of this suite of interpersonal skills is not unique to the 21st century economic context. However, the degree of importance for collaborative capacity is growing in an era where work in knowledge-based economies is increasingly accomplished by teams of people with complementary expertise and roles, as opposed to individuals doing isolated work in an industrial setting (Karoly, 2004).

Further, the nature of collaboration is shifting to a more sophisticated skillset. In addition to collaborating face-to-face with colleagues across a conference table, 21st century workers increasingly accomplish tasks through mediated interactions with peers halfway across the world whom they may never meet face-to-face. Thus, even though perennial in nature, collaboration is worthy of inclusion as a 21st century skill because the importance of cooperative interpersonal capabilities is higher and the skills involved are more sophisticated than in the prior industrial era.

In contrast, the ability to rapidly filter huge amounts of incoming data, extracting information valuable for decision making, is a "contextual" capability. Due to the prevalence of information and communications technologies, for the first time in human history people are inundated by enormous amounts of data that they must access, manage, integrate, and evaluate. Rather than rummaging through library stacks to find a few pieces of knowledge, an activity characteristic of information access in the 20th century, users of modern search engines receive thousands or even millions of "hits." However, many of these resources are off-target, incomplete, inconsistent, and perhaps even biased. The ability to separate signal from noise in a potentially overwhelming flood of incoming data is a suite of 21st century skills not in degree – because this is novel in history as a valuable capability – but in type.

Weinberger (2007) describes the power of "digital disorder," which takes advantage of the fact that virtual information can transcend the limited properties of physical objects (like books or index cards). Rather than relying on a single method of organization with a fixed terminology (such as the Dewey Decimal System as a means of categorizing knowledge), modern information systems now can respond to natural language queries and can instantly sort digital data into whatever category structure best suits a particular person's immediate needs. This creates a new set of contextual 21st century skills centered on "disorderly" knowledge co-creation and sharing.

Overall, the distinction between perennial and contextual skills is important because, unlike perennial capabilities, new, contextual types of human performances are typically not part of the legacy curriculum inherited from 20th century educational systems. Conventional, 20th century K-12 instruction emphasizes manipulating pre-digested information to build fluency in routine problem solving, rather than filtering data

derived from experiences in complex settings to develop skills in sophisticated problem finding. Knowledge is separated from skills and presented as revealed truth, not as an understanding that is discovered and constructed; this separation results in students learning data about a topic rather than learning how to extend their understand beyond information available for assimilation. Also, in 20th century instruction, problem solving skills are presented in an abstract form removed from their application to knowledge; this makes transfer to real world situations difficult. The ultimate objective of education is presented as learning a specific problem solving routine to match every situation, rather than developing expert decision making and metacognitive strategies that indicate how to proceed when no standard approach seems applicable.

In the legacy curriculum, little time is spent on building capabilities in group interpretation, negotiation of shared meaning, and co-construction of problem resolutions. The communication skills stressed are those of simple presentation, rather than the capacity to engage in richly structured interactions that articulate perspectives unfamiliar to the audience. Face-to-face communication is seen as the "gold standard," so students develop few capabilities in mediated dialogue and in shared design within a common virtual workspace.

Given that the curriculum is already crowded, a major political challenge is articulating what to deemphasize in the curriculum – and why – in order to make room for students to deeply master core 21st century understandings and performances. This is not a situation in which one must eliminate an equivalent amount of current curriculum for each 21st century understanding added, because better pedagogical methods can lead to faster mastery and improved retention, enabling less reteaching and more coverage within the same timeframe (Van Lehn and the Pittsburgh Science of Learning Center, 2006). However, what education should emphasize as its core outcomes is politically controversial even if substantial sections of the 20th century legacy curriculum are not eliminated.

Beyond curricular issues, classrooms today typically lack 21st century learning and teaching in part because high-stakes tests do not assess these competencies. Assessments and tests focus on measuring students' fluency in various abstract, routine skills, but typically do not assess their strategies for expert decision making when no standard approach seems applicable. Essays emphasize simple presentation rather than sophisticated forms of rhetorical interaction. Students' abilities to transfer their understandings to real world situations are not assessed, nor are capabilities related to various aspects of teamwork. The use of technological applications and representations is generally banned from testing, rather than measuring students' capacities to use tools, applications, and media effectively. Abilities to effectively utilize various forms of mediated interaction are typically not assessed. As discussed later, valid, reliable, practical assessments of 21st century skills are needed to improve this situation.

Lack of professional development is another reason 21st century skills are underemphasized in today's schooling. Providing educators with opportunities to learn about the ideas and strategies discussed in this volume is only part of the issue. A major, often unrecognized challenge in professional development is helping teachers, policy makers, and local communities unlearn the beliefs, values, assumptions, and cultures underlying schools' industrial-era operating practices, such as forty-five minute class

periods that allow insufficient time for all but superficial forms of active learning by students. Altering deeply ingrained and strongly reinforced rituals of schooling takes more than the superficial interchanges typical in "make and take" professional development or school board meetings. Intellectual, emotional, and social support is essential for "unlearning" and for transformational relearning that can lead to deeper behavioral changes to create next-generation educational practices. Educators, business executives, politicians, and the general public have much to unlearn if 21st century understandings are to assume a central place in schooling.

Reflecting educators' usage of 20th century pedagogy, current approaches to using technology in schooling largely reflect applying information and communication technologies as a means of increasing the effectiveness of traditional, 20th century instructional approaches: enhancing productivity through tools such as word processors, aiding communication by channels such as email and threaded asynchronous discussions, and expanding access to information via Web-browsers and streaming video (Dede, 2009a). All these have proven worthy in conventional schooling, as they have in workplace settings; however, none draw on the full power of information and communications technologies for individual and collective expression, experience, and interpretation – human capabilities emerging as key work and life skills for the first part of the 21st century. So how are various organizations that advocate for 21st century skills formulating these capabilities?

Current Major Frameworks for 21st Century Skills

Current conceptual frameworks for "21st Century Skills" include the Partnership for 21st Century Skills (2006), the Metiri Group and NCREL (2003), the American Association of Colleges and Universities (2007), and the Organization for Economic Cooperation and Development (2005). In the particular area of information and communications technology, which as discussed above is richly interwoven with 21st century skills, 21st century frameworks include the revised ISTE student standards for technology in the curriculum (2007), as well as digital literacy standards from the Educational Testing Service ICT Literacy Panel (2007). Individual scholars such as Dede (2005) and Jenkins et al (2006) have also formulated lists of "digital literacies" that complement reading, writing, and mathematics as core capabilities for the 21st century. In the boxes that follow, highlights of each framework are presented, followed by an analysis of what each formulation adds to the Project for 21st Century Skills (P21) framework.

The Partnership for 21st Century Skills Framework (2006) and P21's many ancillary publications produced since then serve as a baseline for this analysis because P21's conceptualization of 21st Century skills is more detailed and more widely adopted than any of the alternatives discussed later. For reasons of space, this chapter can present only a bare-bones outline of the P21 framework, which the reader is urged to browse in order to comprehend its full extent (http://www.21stcenturyskills.org).

Partnership for 21st Century Skills (P21)

Core subjects. The No Child Left Behind Act of 2001, which reauthorizes the Elementary and Secondary Education Act of 1965, identifies the core subjects as English, reading or language

arts; mathematics; science; foreign languages; civics; government; economics; arts; history; and geography.

21st century content. Several significant, emerging content areas are critical to success in communities and workplaces. These content areas typically are not emphasized in schools today:
- Global awareness
- Financial, economic, business and entrepreneurial literacy
- Civic literacy
- Health and wellness awareness

Learning and thinking skills. As much as students need to learn academic content, they also need to know how to keep learning — and make effective and innovative use of what they know — throughout their lives. Learning and thinking skills are comprised of:
- Critical-thinking and problem-solving skills
- Communication skills
- Creativity and innovation skills
- Collaboration skills
- Contextual learning skills
- Information and media literacy skills

ICT literacy. Information and communications technology (ICT) literacy is the ability to use technology to develop 21st century content knowledge and skills, in the context of learning core subjects. Students must be able to use technology to learn content and skills — so that they know *how* to learn, think critically, solve problems, use information, communicate, innovate and collaborate.

Life skills. Good teachers have always incorporated life skills into their pedagogy. The challenge today is to incorporate these essential skills into schools deliberately, strategically and broadly. Life skills include:
- Leadership
- Ethics
- Accountability
- Adaptability
- Personal productivity
- Personal responsibility
- People skills
- Self-direction
- Social responsibility

21st century assessments. Authentic 21st century assessments are the essential foundation of a 21st century education. Assessments must measure all five results that matter — core subjects; 21st century content; learning and thinking skills; ICT literacy; and life skills. Assessment of 21st century skills should be integrated with assessments of core subjects. Separate assessments would defeat the purpose of infusing 21st century skills into core subjects. To be effective, sustainable and affordable, assessments must use modern technologies to increase efficiency and timeliness. Standardized tests alone can measure only a few of the important skills and knowledge students should learn. A balance of assessments, including high-quality standardized testing along with effective classroom assessments, offers students and teachers a powerful tool to master the content and skills central to success.

In contrast to the P21 framework used as baseline in this analysis, in 2003 the Metiri Group and NCREL produced a 21st century skills framework that pre-dated P21:

EnGauge Framework from Metiri/NCREL

Digital-Age Literacy
- Basic, Scientific, Economic, and Technological Literacies
- Visual and Information Literacies
- Multicultural Literacy and Global Awareness

Inventive Thinking
- Adaptability, Managing Complexity, and Self-Direction
- Curiosity, Creativity, and Risk Taking
- Higher-Order Thinking and Sound Reasoning

Effective Communication
- Teaming, Collaboration, and Interpersonal Skills
- Personal, Social, and Civic Responsibility
- Interactive Communication

High Productivity
- Prioritizing, Planning, and Managing for Results
- Effective Use of Real-World Tools
- Ability to Produce Relevant, High-Quality Products

The EnGauge Framework adds "visual literacy" as related to information literacy. "Curiosity" and "risk taking" are included as core skills, as is "managing complexity." "Prioritizing, planning, and managing for results" is stressed. "Multicultural literacy" is an explicit component. With the exception of the "Effective Communication" category, this shorter list focuses less than does P21 on the overlap with 20th century curriculum. More emphasis is placed on new contextual skills and knowledge.

In 2005, the Organization for Economic Cooperation and Development provided its conception of 21st century skills:

Organization for Economic Cooperation and Development

Competency Category 1: Using Tools Interactively
A. Use language, symbols and texts interactively
B. Use knowledge and information interactively
C. Use technology interactively

Competency Category 2: Interacting in Heterogeneous Groups
A. Relate well to others
B. Co-operate, work in teams
C. Manage and resolve conflicts

Competency Category 3: Acting Autonomously
A. Act within the big picture
B. Form and conduct life plans and personal projects
C. Defend and assert rights, interests, limits and needs.

The OECD competencies highlight "using language, symbols, and texts," as well as "managing and resolving conflicts." "Acting autonomously" is a major category in this framework that includes "life plans" and "defending and asserting rights, interests, limits, and needs." This framework focuses less than P21 on overlaps with the 20th century curriculum and, like the Metiri/NCREL skillset, more on new contextual skills. Affective and psychosocial skills receive greater emphasis than in frameworks generated by US organizations.

In 2007, the American Association of Colleges and Universities developed a framework delineating the 21st century skills graduates of higher education should attain:

American Association of College and Universities

The Essential Learning Outcomes

Beginning in school, and continuing at successively higher levels across their college studies, students should prepare for twenty-first-century challenges by gaining:

Knowledge of Human Cultures and the Physical and Natural World
• Through study in the sciences and mathematics, social sciences, humanities, histories, languages, and the arts

Focused by engagement with big questions, both contemporary and enduring

Intellectual and Practical Skills, including
• Inquiry and analysis
• Critical and creative thinking
• Written and oral communication
• Quantitative literacy
• Information literacy
• Teamwork and problem solving

Practiced extensively, across the curriculum, in the context of progressively more challenging problems, projects, and standards for performance

Personal and Social Responsibility, including
• Civic knowledge and engagement—local and global
• Intercultural knowledge and competence
• Ethical reasoning and action
• Foundations and skills for lifelong learning

Anchored through active involvement with diverse communities and real-world challenges

Integrative Learning, including
• Synthesis and advanced accomplishment across general and specialized studies

Demonstrated through the application of knowledge, skills, and responsibilities to new settings and complex problems

The AACU college-level essential learning outcomes (presumably developed as a foundation in K-12 schooling) add "knowledge of human cultures" to the P21 framework. This skillset stresses "engagement with big questions, both contemporary and enduring," an intellectual capability that higher education has long sought to inculcate. "Inquiry" and "quantitative analysis" are specifically cited as important analytic skills. Learning by doing, rather than by assimilation of information, is tacitly stressed in the language the AACU uses.

Current Conceptual Frameworks for Digital Literacies

In part to emphasize the ways in which information and communications technology skills are central to the 21st century, in 2007 the International Society for Technology in Education (ISTE) revised its student standards for technology in the curriculum:

International Society for Technology in Education ICT Skills

1. Creativity and Innovation
Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students:
a. apply existing knowledge to generate new ideas, products, or processes.
b. create original works as a means of personal or group expression.
c. use models and simulations to explore complex systems and issues.
d. identify trends and forecast possibilities.

2. Communication and Collaboration

Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students:
a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.
b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
c. develop cultural understanding and global awareness by engaging with learners of other cultures.
d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency
Students apply digital tools to gather, evaluate, and use information. Students:
a. plan strategies to guide inquiry.
b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.
c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making
Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Students:
a. identify and define authentic problems and significant questions for investigation.
b. plan and manage activities to develop a solution or complete a project.
c. collect and analyze data to identify solutions and/or make informed decisions.
d. use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship
Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior. Students:
a. advocate and practice safe, legal, and responsible use of information and technology.
b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
c. demonstrate personal responsibility for lifelong learning.
d. exhibit leadership for digital citizenship.

6. Technology Operations and Concepts
Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:
a. understand and use technology systems.
b. select and use applications effectively and productively.
c. troubleshoot systems and applications.
d. transfer current knowledge to learning of new technologies.

Beyond P21, the ISTE ICT skills stress "creating original works as a means of personal or group expression," "using models and simulations to explore complex systems and issues," and "identifying trends and forecasting possibilities." Other capabilities include "identifying and defining authentic problems and significant questions for investigation" and "using multiple processes and diverse perspectives to explore alternative solutions." "Safe, legal" use of information and technology is highlighted, as is "digital citizenship." "Troubleshooting systems and applications" and "transferring current knowledge to learning of new technologies" are seen as key skills. As might be expected, the digital literacies this educational technology organization articulates are more detailed than those in the overall P21 framework.

In a similar vein, in 2007 the Educational Testing Service (ETS) ICT Literacy Panel released its digital literacy standards:

Educational Testing Service ICT Literacy

ICT LITERACY

ICT Proficiency

Access Manage Integrate Evaluate Create

Cognitive Proficiency Technical Proficiency

Cognitive Proficiency — the desired *foundational skills* of everyday life at school, at home, and at work. Literacy, numeracy, problem solving, and spatial/visual literacy demonstrate these proficiencies.

Technical Proficiency — the basic components of digital literacy. It includes a foundational knowledge of hardware, software applications, networks, and elements of digital technology.

ICT Proficiency — the integration and application of cognitive and technical skills. ICT proficiencies are seen as enablers; that is, they allow individuals to maximize the capabilities of technology. At the highest level, ICT proficiencies result in innovation, individual transformation, and societal change.

As an illustration of the five levels listed above (2007, pg. 20):

Access Select and open appropriate e-mails from inbox list.

Manage Identify and organize the relevant information in each e-mail.

Integrate Summarize the interest in the courses provided by the company.

Evaluate Decide which courses should be continued next year, based on last year's attendance.

Create Write up your recommendation in the form of an e-mail to the vice president of human resources.

The ETS Digital Literacy skills add "technical proficiency: a foundational knowledge of hardware, software applications, networks, and elements of digital technology." The example digital literacy activities provided in this framework seem less sophisticated than those implied by the other frameworks analyzed; the illustration is closer in spirit to the ISTE framework for digital literacies developed in the late 1990s.

As the ISTE and ECS ICT frameworks suggest, much of what distinguishes 21st century skills from 20th century competencies is that a person and a tool, application, medium, or environment work in concert to accomplish an objective unobtainable otherwise (e.g., remote collaboration via groupware among a problem finding team scattered across the globe). However, ICT are not mere mechanisms for attaining the desired behavior; through distributed cognition, the understandings they enable are intrinsic to the fluent performance (e.g., a group co-constructing a sophisticated conceptual framework using the representational tools available in a wiki).

Frameworks that discuss new "literacies" based on the evolution of ICT help to illuminate this aspect of 21st century learning. With funding from the Macarthur Foundation, Henry Jenkins and his colleagues produced a list of digital literacies (2006):

Jenkins' Literacies based on New Media

Play — the capacity to experiment with one's surroundings as a form of problem-solving

Performance — the ability to adopt alternative identities for the purpose of improvisation and discovery

Simulation — the ability to interpret and construct dynamic models of real-world processes

Appropriation — the ability to meaningfully sample and remix media content

Multitasking — the ability to scan one's environment and shift focus as needed to salient details.

Distributed Cognition — the ability to interact meaningfully with tools that expand mental capacities

Collective Intelligence — the ability to pool knowledge and compare notes with others toward a common goal

Judgment — the ability to evaluate the reliability and credibility of different information sources

Transmedia Navigation — the ability to follow the flow of stories and information across multiple modalities

Networking — the ability to search for, synthesize, and disseminate information

Negotiation — the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms

These digital literacies have a different tone than the ISTE and ETS frameworks above. The emphasis is not on proficiency with the tool, but on types of intellectual activity performed by a person working with sophisticated ICT. While some perennial capabilities are listed (e.g., judgment), other skills (e.g., performance) are contextual in their emphasis on new types of 21st century capacities.

All these digital literacies not only represent skills students should master for effective 21st century work and citizenship, but also describe the learning strengths and preferences people who use technology now bring to educational settings. Dede (2005) presented a framework of "neomillennial learning styles" that are based on new digital literacies:

Dede's Neomillennial Learning Styles

Fluency in multiple media, valuing each for the types of communication, activities, experiences, and expressions it empowers.

Active learning based on collectively seeking, sieving, and synthesizing experiences, rather than individually locating and absorbing information from some single best source.

Expression through non-linear, associational webs of representations as well linear media (e.g., authoring a simulation and a webpage to express understanding, in contrast to writing a paper).

Co-design by teachers and students of learning experiences personalized to individual needs and preferences.

Since the articulation of this framework, the emergence of Web 2.0 media has fueled a shift in leading-edge applications on the World Wide Web that reinforces these learning strengths and preferences. The predominant learning activities on the Internet have changed from the presentation of material by website providers to the active co-construction of resources by communities of contributors. Whereas the twentieth-century web centered on developer-created material (e.g., informational websites) generated primarily by a small fraction of the Internet's users, Web 2.0 tools (e.g., Wikipedia) help

large numbers of people build online communities for creativity, collaboration, and sharing.

Dede (2009b) delineated a category system for current Web 2.0 tools:

1. *Sharing*
    - Communal Bookmarking
    - Photo/Video Sharing
    - Social Networking
    - Writers' Workshops/Fanfiction
2. *Thinking*
    - Blogs
    - Podcasts
    - Online Discussion Forums
3. *Co-Creating*
    - Wikis/Collaborative File Creation
    - Mashups/Collective Media Creation
    - Collaborative Social Change Communities

This framework shows a loose progression from top to bottom, with sharing leading to thinking together and then collective action in which sophisticated groups seeking change use subsets of the nine media listed earlier to accomplish their collective objectives. Overall, growing usage of these Web 2.0 tools has led to an intensification of the learning styles and digital literacies described above.

Leu and his colleagues (2007) described four characteristics of the "new literacies" generated by ICT. First, emerging ICT tools, applications, media, and environments require novel skills, strategies, and dispositions for their effective use. Second, new literacies are central to full economic, civic, and personal participation in a globalized society. Third, new literacies constantly evolve as their defining ICT continuously are renewed through innovation. Fourth, new literacies are multiple, multimodel, and multifaceted. These characteristics are in accord with the media-based styles of learning presented above and with the 21st century capabilities this chapter discusses.

Comparing Alternative Frameworks for 21st Century Skills

In summary, all these 21st century skills frameworks are generally consistent with each other. The additions to the P21 skillset the alternative frameworks offer are of two types. First, other groups identify some subskills within P21 categories as particularly important. As an illustration, "troubleshooting systems and applications" is seen as a key subskill by ISTE within the P21 overall category of ICT Literacy, and this ISTE subskill requires the foundational subskill of "technical proficiency: a foundational knowledge of hardware, software applications, networks, and elements of digital technology" advocated by ETS. Highlighting this subskill may reflect an assessment of which aspects of a larger capability teachers are likely to overlook given the current culture of schooling; for example, students seldom have opportunities to learn "troubleshooting" because teachers instinctively don't ever want problems to emerge in an instructional situation.

Second, groups other than P21 stress some areas they feel are underemphasized in its categories. As an illustration, "students acting autonomously" is a major category for OECD that, again, is contrary to the current culture of US schooling. Similarly, the Metiri/NCREL framework stresses student "risk taking," but this is unlikely to be encouraged by many US teachers unless special emphasis is put on this skill as crucial to 21st century work and citizenship.

The stress on what may be underemphasized because those skills are inconsistent with current classroom culture highlights a substantial challenge to infusing these 21st century skills frameworks into educational practice and policy. At this point in history, the primary barriers to altering curricular, pedagogical, and assessment practices are not conceptual, technical or economic, but instead psychological, political, and cultural. We now have all the means necessary to move beyond teaching 20th century knowledge in order to prepare all students for a future quite different from the immediate past. Whether society has the professional commitment and public will to actualize such a vision remains to be seen.

Advances in the Assessment of 21st Century Skills

Several metrics for assessing 21st century skills are discussed in the Education Board's report, "Measuring Skills for the 21st Century" (Silva, 2008). Which parts of the synthesized 21st century skills framework do these assessments cover?

The College Work and Readiness Assessment

The College and Work Readiness Assessment (CWRA) measures how students perform on constructed response tasks that require an integrated set of critical thinking, analytic reasoning, problem solving, and written communication skills. The CWRA is delivered entirely over the Internet in a proctored setting... Critical thinking, analytical reasoning, problem-solving, and writing are "collective outcomes" that cannot fully be taught in any one class or year; so all teachers and faculty have a responsibility to teach for such skills within each subject area and discipline.

Performance Tasks Students must complete a "real-life" activity (such as preparing a memo or policy recommendation) by using a series of documents that must be reviewed and evaluated. Completion of these instruments does not require the recall of particular facts or formulas; instead, the measures assess the demonstrated ability to interpret, analyze and synthesize information.

Analytic Writing Tasks Evaluate students' ability to articulate complex ideas, examine claims and evidence, support ideas with relevant reasons and examples, sustain a coherent discussion, and use standard written English.

The Programme for International Student Assessment (PISA)

PISA is based on the OECD Definition and Selection of Key Competencies project (DeSeCo), discussed earlier under formulations of 21st century skills. PISA seeks to measure how well young adults, at age 15 and therefore approaching the end of compulsory schooling, are prepared to meet the challenges of today's knowledge societies – what PISA refers to as "literacy". The assessment is forward looking, focusing on young people's ability to use theirknowledge and skills to meet real-life challenges, rather than merely on the extent to which they have mastered a specific school curriculum. This orientation reflects a change in the goals and objectives of curricula themselves, which increasingly address what students can do with what they learn at school and not merely whether they can reproduce what they have learned.

The domains of reading, mathematical and scientific literacy are covered not merely in terms of mastery of the school curriculum, but in terms of important knowledge and skills needed in adult

life. Pencil-and-paper tests are used, with assessments lasting a total of two hours for each student. Test items are a mixture of multiple-choice items and questions requiring students to construct their own responses. The items are organized in groups based on a passage setting out a real-life situation. A total of about seven hours of test items is covered, with different students taking different combinations of test items. Students answer a background questionnaire, which takes 20-30 minutes to complete, providing information about themselves and their homes. School principals are given a 20-minute questionnaire about their schools.

Key Stage 3 ICT Literacy Assessment

This ICT literacy assessment gauges students' ICT capability at the end of "Key Stage 3" (ages 12-13) in Great Britain's national curriculum. The test not only assesses students' ICT skills, but also their ability to use those skills to solve a set of complex problems involving research, communication, information management, and presentation. Test results provide both summative information - in the form of a national score for each student - and detailed feedback about student performance that could be used formatively to inform future teaching and learning.

The ICT test is set in a complex virtual world, within which students carry out tasks using a "walled garden" of assets (e.g., text, pictures, data and "canned" websites) to take the test without access to the Internet. Students are also provided with a toolkit of applications to enable them to complete the tasks; all of these assets are generic software programs developed by the QCA to provide the same capabilities as familiar productivity software on the level playing field of a non-brand-specific platform. As students work through the test session, their actions are tracked by the computer and mapped against expected capabilities for each level of the national curriculum; this includes both technical skills and learning skills, such as "finding things out," "developing ideas" and "exchanging and sharing information." The information collected about a student's performance allows a score to be awarded along with a profile of individual strengths and weaknesses.

All three assessments potentially could cover substantial amounts of the 21st century skills delineated in the frameworks above. However, CWRA and PISA are limited in their effectiveness by their formats: paper-based and at times test-item-focused. The Key Stage 3 has more potential to measure the full range of 21st century capabilities, including digital literacies, because it is conducted in a virtual world and based on activities more sophisticated than making forced-choice decisions among a limited number of alternatives.

Beyond these current assessments, many researchers are working on virtual performance assessments for specific higher order intellectual performances, such as scientific inquiry, that soon may provide reliable, usable, and valid measures for many 21st century skills (Ketelhut, Dede, Clarke, Nelson, & Bowman, 2007). Research has documented that higher order thinking skills related to sophisticated cognition (e.g., inquiry processes, formulating scientific explanations, communicating scientific understanding, approaches to novel situations) are difficult to measure with multiple choice or even with constructed-response paper-and-pencil tests (Resnick & Resnick, 1992; Quellmalz & Haertel, 2004; National Research Council, 2006). In the late 1980s and 1990s, educators attempted to use performance assessments in accountability programs. However, the developers of both hands-on and virtual performance assessments encountered a number of technical, resource, and reliability problems in large scale administration (Cronbach, Linn, Brennan, & Haertel, 1997; Shavelson, Ruiz-Primo, & Wiley, 1999). At that time, these problems were substantial enough to undercut the potentially greater construct validity for science inquiry that performance assessments can provide over paper-and-pencil tests. Now, however, teams of scholars are using

modern technologies to develop virtual performance assessments of various types (e.g., http://virtualassessment.org) that may solve this problem of providing reliable, valid measurements for sophisticated intellectual and psychosocial skills (Quellmalz & Pellegrino, 2009).

Overall, the increasing availability of valid assessments for 21st century skills is leading to calls for all states to participate in "international benchmarking": comparing their educational processes and outcomes to the best models around the world (National Governors Association, Council of Chief State School Officers, and Achieve, Inc., 2008). Widely used international assessments centered on curricular areas include the Trends in International Math and Science Study (TIMSS) for grades four, eight, and twelve, as well as the International Association for the Evaluation of Educational Achievement PIRLS assessment of fourth grade reading levels (Silva, 2008). "Benchmarking for Success: Ensuring US Students Receive a World-class Education" calls on states to implement five types of benchmarking (page 6):

Action 1: Upgrade state standards by adopting a common core of internationally benchmarked standards in math and language arts for grades K-12 to ensure that students are equipped with the necessary knowledge and skills to be globally competitive.
Action 2: Leverage states' collective influence to ensure that textbooks, digital media, curricula, and assessments are aligned to internationally benchmarked standards and draw on lessons from high performing nations and states.
Action 3: Revise state policies for recruiting, preparing, developing, and supporting teachers and school leaders to reflect the human capital practices of top-performing nations and states around the world.
Action 4: Hold schools and systems accountable through monitoring, interventions, and support to ensure consistently high performance, drawing upon international best practices.
Action 5: Measure state-level education performance globally by examining student achievement and attainment in an international context to ensure that, over time, students are receiving the education they need to compete in the 21st century economy.

Recent US federal activities to promote coordination among states in developing comparable, high quality curriculum standards are building momentum to generate and use assessments that can measure sophisticated intellectual and psychosocial skills needed for the 21st century.

Conclusion

Fortunately, groups developing conceptualizations of 21st century skills have built sufficiently on each other's ideas to avoid a "Tower of Babel" situation. As this analysis shows, organizations that argue for 21st century skills have frameworks largely consistent in terms of what should be added to the curriculum. However, each group has different areas of emphasis within the overarching skillset. As an illustration, taking the P21 framework as a baseline, groups focused on technical skills--such as ISTE, ETS, and those who advocate for digital literacies--emphasize that aspect of P21 and articulate in greater detail which fluencies in information and communications technologies are most important.

Each rganization also each introduces complementary ideas to the concept of 21st century skills. For example, as discussed earlier additions to the P21 framework from OECD and Metiri/NCREL incorporate autonomous actions by students that typically are not a part of conventional classroom culture. This highlights a meta-cognitive challenge

for the 21st century skills movement: to systematically examine all the tacit beliefs and assumptions and values about schooling that are legacies from the 20th century and the industrial age. Compilations such as this volume are making important contributions in aiding this reconceptualization of education for the 21st century.

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To: Members of the Board of Education

From: Elliott Landon

Subject: Bullying Prevention and Safe School Climate Plan Policies

Date: November 7, 2011

Among the laws that passed during the 2011 regular and special session of the Connecticut General Assembly and have an impact on public education is Public Act 11-226, ***An Act Concerning the Strengthening of School Bullying Laws.*** Specifically:

> *This act defines bullying, including cyberbullying. The act (1) makes the school principal responsible for investigating or designating someone to investigate and address bullying whether it occurs in or out-of-school, if it affects the school or students in the school or school district and (2) requires all school employees, not just teachers and administrators, to report bullying incidents they see or that are reported to them to the principal or his or her designee.*
>
> *It requires schools and school districts to adopt safe school climate plans, rather than policies, to address bullying. Policies are required to (1) establish deadlines for reporting, investigating; (2) prohibit retaliation against those who report bullying; and (3) require school officials to notify police when they believe bullying conduct constitutes a crime.*
>
> *The act requires certified and non-certified employees working in public schools to receive annual training in how to identify, intervene, and prevent bullying and youth suicide among students. It also requires beginning teachers and teacher candidates to complete training on these topics. It grants immunity to school boards, school employees, students, parents, and others against damage claims arising from good faith reports of bullying and responses to bullying in accordance with a district's safe school climate plan* [CABE, July 2011, "2011 Education Law Summaries].

Working collaboratively with legal counsel, we have prepared for Board of Education review Policy P5131.911, Bullying Prevention and Intervention and Policy P5131.912, Safe School Climate Plan. These two polices are being placed on the agenda of the meeting of November 7 for discussion purposes only. It shall be our intention to bring these before the Board again at our meeting of November 21 for Board approval.

POLICY P5131.911

BULLYING PREVENTION AND INTERVENTION

BULLYING PREVENTION AND INTERVENTION

The Westport Board of Education is committed to creating and maintaining an educational environment that is physically, emotionally and intellectually safe and thus free from bullying, harassment and discrimination. In accordance with state law and the Board's Safe School Climate Plan, the Board expressly prohibits any form of bullying behavior on school grounds; at a school-sponsored or school-related activity, function or program, whether on or off school grounds; at a school bus stop; on a school bus or other vehicle owned, leased or used by a local or regional board of education; or through the use of an electronic device or an electronic mobile device owned, leased or used by the Board of Education.

The Board also prohibits any form of bullying behavior outside of the school setting if such bullying (i) creates a hostile environment at school for the student against whom such bullying was directed, (ii) infringes on the rights of the student against whom such bullying was directed at school, or (iii) substantially disrupts the education process or the orderly operation of a school. Discrimination and/or retaliation against an individual who reports or assists in the investigation of an act of bullying is likewise prohibited.

Students who engage in bullying behavior shall be subject to school discipline, up to and including expulsion, in accordance with the Board's policies on student discipline, suspension and expulsion, and consistent with state and federal law.

For purposes of this policy, **"Bullying"** means the repeated use by one or more students of a written, verbal or electronic communication, such as cyberbullying, directed at or referring to another student attending school in the same school district, or a physical act or gesture by one or more students repeatedly directed at another student attending school in the same school district, that:

1) causes physical or emotional harm to such student or damage to such student's property;

2) places such student in reasonable fear of harm to himself or herself, or of damage to his or her property;

3) creates a hostile environment at school for such student;

4) infringes on the rights of such student at school; or

5) substantially disrupts the education process or the orderly operation of a school.

Bullying shall include, but not be limited to, a written, verbal or electronic communication or physical act or gesture based on any actual or perceived differentiating characteristics, such as race, color, religion, ancestry, national origin, gender, sexual orientation, gender identity and expression, socioeconomic status, academic status, physical appearance, or mental, physical, developmental or sensory disability, or by association with an individual or group who has or is perceived to have one or more of such characteristics.

For purposes of this policy, **"Cyberbullying"** means any act of bullying through the use of the Internet, interactive and digital technologies, cellular mobile telephone or other mobile electronic devices or any electronic communications.

Consistent with the requirements under state law, the Westport Board of Education authorizes the Superintendent or his/her designee(s), along with the Safe School Climate Coordinator, to be responsible for developing and implementing a Safe School Climate Plan in furtherance of this policy. As provided by state law, such Safe School Climate Plan shall include, but not be limited to provisions which:

(1) Enable students to anonymously report acts of bullying to school employees and require students and the parents or guardians of students to be notified annually of the process by which students may make such reports;

(2) enable the parents or guardians of students to file written reports of suspected bullying;

(3) require school employees who witness acts of bullying or receive reports of bullying to orally notify the safe school climate specialist, or another school administrator if the safe school climate specialist is unavailable, not later than one school day after such school employee witnesses or receives a report of bullying, and to file a written report not later than two school days after making such oral report;

(4) require the safe school climate specialist to investigate or supervise the investigation of all reports of bullying and ensure that such investigation is completed promptly after receipt of any written reports made under this section;

(5) require the safe school climate specialist to review any anonymous reports, except that no disciplinary action shall be taken solely on the basis of an anonymous report;

(6) include a prevention and intervention strategy for school employees to deal with bullying;

7) provide for the inclusion of language in student codes of conduct concerning bullying;

(8) require each school to notify the parents or guardians of students who commit any verified acts of bullying and the parents or guardians of students against whom such acts were directed not later than forty-eight hours after the completion of the investigation;

(9) require each school to invite the parents or guardians of a student who commits any verified act of bullying and the parents or guardians of the student against whom such act was directed to a meeting to communicate to such parents or guardians the measures being taken by the school to ensure the safety of the student against whom such act was directed and to prevent further acts of bullying.

(10) establish a procedure for each school to document and maintain records relating to reports and investigations of bullying in such school and to maintain a list of the number of verified acts of bullying in such school and make such list available for public inspection, and annually report such number to the Department of Education and in such manner as prescribed by the Commissioner of Education;

(11) direct the development of case-by-case interventions for addressing repeated incidents of bullying against a single individual or recurrently perpetrated bullying incidents by the same individual that may include both counseling and discipline;

(12) prohibit discrimination and retaliation against an individual who reports or assists in the investigation of an act of bullying;

(13) direct the development of student safety support plans for students against whom an act of bullying was directed that address safety measures the school will take to protect such students against further acts of bullying;

(14) require the principal of a school, or the principal's designee, to notify the appropriate local law enforcement agency when such principal, or the principal's designee, believes that any acts of bullying constitute criminal conduct;

(15) prohibit bullying (A) on school grounds, at a school-sponsored or school-related activity, function or program whether on or off school grounds, at a school bus stop, on a school bus or other vehicle owned, leased or used by a local or regional board of education, or through the use of an electronic device or an electronic mobile device owned, leased or used by the local or regional board of education, and (B) outside of the school setting if such bullying (i) creates a hostile environment at school for the student against whom such bullying was directed, (ii) infringes on the rights of the student against whom such bullying was directed at school, or (iii) substantially disrupts the education process or the orderly operation of a school;

(16) require, at the beginning of each school year, each school to provide all school employees with a written or electronic copy of the school district's safe school climate plan; and

(17) require that all school employees annually complete the training described in Conn. Gen. Stat. §10-220a.

The notification required pursuant to subdivision (8) (above) and the invitation required pursuant to subdivision (9) (above) shall include a description of the response of school employees to such acts and any consequences that may result from the commission of further acts of bullying. Any information provided under this policy or accompanying Safe School Climate Plan shall be provided in accordance with the confidentiality restrictions imposed under the Family Educational Rights Privacy Act ("FERPA") and the district's Confidentiality and Access to Student Information policy and regulations.

Not later than January 1, 2012, the Westport Board of Education shall approve the Safe School Climate Plan developed pursuant to this policy and submit such plan to the Department of Education. Not later than thirty (30) calendar days after approval by the Board, the Board shall make such plan available on the Board's and each individual school in the school district's web site and ensure that the Safe School Climate Plan is included in the school district's publication of the rules, procedures and standards of conduct for schools and in all student handbooks.

Legal References:

Public Act 11-232, *An Act Concerning the Strengthening of School Bullying Laws*

Conn. Gen. Stat. 10-145a

Conn. Gen. Stat. 10-145o

Conn. Gen. Stat. 10-220a

Conn. Gen. Stat. § 10-222d

Conn. Gen. Stat. 10-222g

Conn. Gen. Stat. 10-222h

Conn. Gen. Stat. §§ 10-233a through 10-233f

Policy Adopted:

WESTPORT PUBLIC SCHOOLS
Westport, Connecticut

POLICY P5131.912

SAFE SCHOOL CLIMATE PLAN

SAFE SCHOOL CLIMATE PLAN

The Board is committed to creating and maintaining a physically, emotionally, and intellectually safe educational environment free from bullying, harassment and discrimination. In order to foster an atmosphere conducive to learning, the Board has developed the following Safe School Climate Plan, consistent with state law and Board Policy. This Plan represents a comprehensive approach to addressing bullying and cyberbullying and sets forth the Board's expectations for creating a positive school climate and thus preventing, intervening, and responding to incidents of bullying.

Bullying behavior is strictly prohibited, and students who are determined to have engaged in such behavior are subject to disciplinary action, which may include suspension or expulsion from school. The district's commitment to addressing bullying behavior, however, involves a multi-faceted approach, which includes education and the promotion of a positive school climate in which bullying will not be tolerated by students or school staff.

I. Prohibition Against Bullying and Retaliation

A. The Board expressly prohibits any form of bullying behavior on school grounds; at a school-sponsored or school-related activity, function or program whether on or off school grounds; at a school bus stop; on a school bus or other vehicle owned, leased or used by a local or regional board of education; or through the use of an electronic device or an electronic mobile device owned, leased or used by Board of Education.

B. The Board also prohibits any form of bullying behavior outside of the school setting if such bullying (i) creates a hostile environment at school for the student against whom such bullying was directed, (ii) infringes on the rights of the student against whom such bullying was directed at school, or (iii) substantially disrupts the education process or the orderly operation of a school;

C. In addition to prohibiting student acts which constitute bullying, the Board also prohibits discrimination and/or retaliation against an individual who reports or assists in the investigation of an act of bullying.

D. Students who engage in bullying behavior in violation of Board Policy and the Safe School Climate Plan shall be subject to school discipline, up to and including expulsion, in accordance with the Board's policies on student discipline, suspension and expulsion, and consistent with state and federal law.

II. Definition of Bullying

A. **"Bullying"** means the repeated use by one or more students of a written, verbal or electronic communication, such as cyberbullying, or a physical act or gesture directed at another student attending school in the same district that:

1. causes physical or emotional harm to such student or damage to such student's property;

2. places such student in reasonable fear of harm to himself or herself, or of damage to his or her property;

3. creates a hostile environment at school for such student;

4. infringes on the rights of such student at school; or

5. substantially disrupts the education process or the orderly operation of a school.

B. Bullying shall include, but not be limited to, a written, verbal or electronic communication or physical act or gesture based on any actual or perceived differentiating characteristics, such as race, color, religion, ancestry, national origin, gender, sexual orientation, gender identity and expression, socioeconomic status, academic status, physical appearance, or mental, physical, developmental or sensory disability, or by association with an individual or group who has or is perceived to have one or more of such characteristics.

III. Other Definitions

A. **"Cyberbullying"** means any act of bullying through the use of the Internet, interactive and digital technologies, cellular mobile telephone or other mobile electronic devices or any electronic communications.

B. **"Electronic communication"** means any transfer of signs, signals, writing, images, sounds, data or intelligence of any nature transmitted in whole or in part by a wire, radio, electromagnetic, photoelectronic or photo-optical system;

C. **"Hostile environment"** means a situation in which bullying among students is sufficiently severe or pervasive to alter the conditions of the school climate;

D. **"Mobile electronic device"** means any hand-held or other portable electronic equipment capable of providing data communication between two or more individuals, including, but not limited to, a text messaging device, a paging device, a personal digital assistant, a laptop computer, equipment that is capable of playing a video game or a digital video disk, or equipment on which digital images are taken or transmitted;

E. **"Outside of the school setting"** means at a location, activity or program that is not school related, or through the use of an electronic device or a mobile electronic device that is not owned, leased or used by a local or regional board of education;

F. **"Prevention and intervention strategy"** may include, but is not limited to, (1) implementation of a positive behavioral intervention and support process or another evidence-based model approach for safe school climate or for the prevention of bullying identified by the Department of Education, (2) school rules prohibiting bullying, harassment and intimidation and establishing appropriate consequences for those who engage in such acts, (3) adequate adult supervision of outdoor areas, hallways, the lunchroom and other specific areas where bullying is likely to occur, (4) inclusion of grade-appropriate bullying education and prevention curricula in kindergarten through high school, (5) individual interventions with the bully, parents and school employees, and interventions with the bullied child, parents and school employees, (6) school-wide training related to safe school climate, (7) student peer training, education and support, and (8) promotion of parent involvement in bullying prevention through individual or team participation in meetings, trainings and individual interventions.

G. **"School climate"** means the quality and character of school life with a particular focus on the quality of the relationships within the school community between and among students and adults.

H. **"School employee"** means (1) a teacher, substitute teacher, school administrator, school superintendent, guidance counselor, psychologist, social worker, nurse, physician, school paraprofessional or coach employed by a local or regional board of education or working in a public

elementary, middle or high school; or (2) any other individual who, in the performance of his or her duties, has regular contact with students and who provides services to or on behalf of students enrolled in a public elementary, middle or high school, pursuant to a contract with the local or regional board of education.

I. **"School-Sponsored Activity"** shall mean any activity conducted on or off school property (including school buses and other school-related vehicles) that is sponsored, recognized or authorized by the Board of Education.

IV. Leadership and Administrative Responsibilities

A. Safe School Climate Coordinator

For the school year commencing July 1, 2012, and each school year thereafter, the Superintendent shall appoint, from existing school district staff, a District Safe School Climate Coordinator ("Coordinator"). The Coordinator shall:

1. be responsible for implementing the district's Safe School Climate Plan ("Plan");

2. collaborate with Safe School Climate Specialists, the Board, and the Superintendent to prevent, identify and respond to bullying in district schools;

3. provide data and information, in collaboration with the Superintendent, to the Department of Education regarding bullying;

4. meet with Safe School Climate Specialists at least twice during the school year to discuss issues relating to bullying the school district and to make recommendations concerning amendments to the district's Plan.

B. Safe School Climate Specialist

For the school year commencing July 1, 2012, and each school year thereafter, the principal of each school (or principal's designee) shall serve as the Safe School Climate Specialist. The Safe School Climate Specialist shall investigate or supervise the investigation of reported acts of bullying and act as the primary school official responsible for preventing, identifying and responding to reports of bullying in the school.

V. Development and Review of Safe School Climate Plan

A. For the school year commencing July 1, 2012 and each school year thereafter, the Principal of each school shall establish a committee or designate at least one existing committee ("Committee") in the school to be responsible for developing and fostering a safe school climate and addressing issues relating to bullying in the school. Such committee shall include at least one parent/guardian of a student enrolled in the school, as appointed by the school principal.

B. The Committee shall: 1) receive copies of completed reports following bullying investigations; 2) identify and address patterns of bullying among students in the school; 3) review and amend school policies relating to bullying; 4) review and make recommendations to the Coordinator regarding the Safe School Climate Plan based on issues and experiences specific to the school; 5) educate students, school employees and parents/guardians on issues relating to bullying; 6) collaborate with the Coordinator in the collection of data regarding bullying; and 7) perform any other duties as determined by the Principal that are related to the prevention, identification and response to school bullying.

C. Any parent/guardian serving as a member of the Committee shall not participate in any activities which may compromise the confidentiality of any student, including, but not limited to receiving copies of investigation reports, or identifying or addressing patterns of bullying among students in the school.

D. Not later than January 1, 2012, the Board of Education shall approve the Safe School Climate Plan developed pursuant to Board policy and submit such plan to the Department of Education. Not later than thirty (30) calendar days after approval by the Board, the Board shall make such plan available on the Board's and each individual school in the school district's web site and ensure that the Safe School Climate Plan is included in the school district's publication of the rules, procedures and standards of conduct for schools and in all student handbooks.

VI. Procedures for Reporting and Investigating Complaints of Bullying

A. Students and parents (or guardians of students) may file written reports of bullying. Written reports of bullying shall be reasonably specific as to the basis for the report, including the time and place of the alleged conduct, the number of incidents, the target of the suspected bullying, and the names of potential witnesses. Such reports may be filed with any building administrator and/or the Safe School Climate Specialist (i.e. building principal), and all reports shall be forwarded to the Safe School Climate Specialist for review and actions consistent with this Plan.

B. Students may make anonymous reports of bullying to any school employee. Students may also request anonymity when making a report, even if the student's identity is known to the school employee. In cases where a student requests anonymity, the Safe School Climate Specialist or his/her designee shall meet with the student (if the student's identity is known) to review the request for anonymity and discuss the impact that maintaining the anonymity of the complainant may have on the investigation and on any possible remedial action. All anonymous reports shall be reviewed and reasonable action will be taken to address the situation, to the extent such action may be taken that does not disclose the source of the report, and is consistent with the due process rights of the student(s) alleged to have committed acts of bullying. No disciplinary action shall be taken solely on the basis of an anonymous report.

C. School employees who witness acts of bullying or receive reports of bullying shall orally notify the Safe School Climate Specialist or another school administrator if the Safe School Climate Specialist is unavailable, **not later than one (1) school day** after such school employee witnesses or receives a report of bullying. The school employee shall then file a **written report not later than two (2) school days** after making such oral report.

D. The Safe School Specialist shall be responsible for reviewing any anonymous reports of bullying and shall investigate or supervise the investigation of all reports of bullying and ensure that such investigation is completed promptly after receipt of any written reports. In order to allow the district to adequately investigate complaints filed by a student or parent/guardian, the parent of the student suspected of being bullied should be asked to provide consent to permit the release of that student's name in connection with the investigation process, unless the student and/or parent has requested anonymity.

E. In investigating reports of bullying, the Safe School Climate Specialist or designee will consider all available information known, including the nature of the allegations and the ages of the students involved. The Safe School Climate Specialist will interview witnesses, as necessary, reminding the alleged perpetrator and other parties that retaliation is strictly prohibited and will result in disciplinary action.

VII. Responding to Verified Acts of Bullying

A. Following investigation, if acts of bullying are verified, the Safe School Climate Specialist or designee shall notify the parents or guardians of the students against whom such acts were directed as well as the parents or guardians of the students who commit such acts of bullying of the finding **not later than forty-eight hours** after the investigation is completed. This notification shall include a description of the school's response to the acts of bullying. In providing such notification, however, care must be taken to respect the statutory privacy rights of other students, including the perpetrator of such bullying. The specific disciplinary consequences imposed on the perpetrator, or personally identifiable information about a student other than the parent/guardian's own child, may not be disclosed except as provided by law.

B. In any instance in which bullying is verified, the Safe School Climate Specialist or designee shall also invite the parents or guardians of the student who commits any verified act of bullying and the parents or guardian of the student against whom such act was directed to a meeting to communicate the measures being taken by the school to ensure the safety of the student/victim and to prevent further acts of bullying. The invitation may be made simultaneous with the notification described above in Section VII.A., as it must include a description of the school's response to such acts, along with consequences, as appropriate. Normally, separate meetings shall be held with the respective parents; however, at the discretion of the Safe School Climate Specialist and with written consent of the parents/guardians involved, the meeting(s) may be held jointly.

C. If bullying is verified, the Safe School Climate Specialist or designee shall develop a student safety support plan for any student against whom an act of bullying was directed. Such support plan will include safety measures to protect against further acts of bullying.

D. A specific written intervention plan shall be developed to address repeated incidents of bullying against a single individual or recurrently perpetrated bullying incidents by the same individual. The written intervention plan may include counseling, discipline and other appropriate remedial actions as determined by the Safe School Climate Specialist or designee, and may also incorporate a student safety support plan, as appropriate.

E. Notice to Law Enforcement

If the Principal of a school (or his/her designee) reasonably believes that any act of bullying constitutes a criminal offense, he/she shall notify appropriate law enforcement. Notice shall be consistent with the Board's obligations under state and federal law and Board policy regarding the disclosure of personally identifiable student information. In making this determination, the Principal or his/her designee, may consult with the school resource office, if any, and other individuals the principal or designee deems appropriate.

F. If a bullying complaint raises concern about discrimination or harassment on the basis of a legally protected classifications (such as race, religion, color, national origin, sex, sexual orientation, age or disability), the Safe School Climate Specialist or designee shall also coordinate any investigation with other appropriate personnel within the district as appropriate (e.g. Title IX Coordinator, Section 504 Coordinator etc.)

VIII. Documentation and Maintenance of Log

A. Each school shall maintain written reports of bullying, along with supporting documentation received and/or created as a result of bullying investigations, consistent with the Board's obligations under state and federal law. Any educational record containing personally identifiable student information pertaining to an individual student shall be maintained in a confidential manner, and shall not be disclosed to third parties without written prior written consent of a parent, guardian or eligible student, except as permitted under Board policy and state and federal law.

B. The Principal of each school shall maintain a list of the number of verified acts of bullying in the school and this list shall be available for public inspection upon request. Consistent with district obligations under state and federal law regarding student privacy, the log shall not contain any personally identifiable student information, or any information that alone or in combination would allow a reasonable person in the school

community to identify the students involved. Accordingly, the log should be limited to basic information such as the number of verified acts, name of school and/or grade level and relevant date. Given that any determination of bullying involves repeated acts, each investigation that results in a verified act of bullying for that school year shall be tallied as one verified act of bullying unless the specific actions that are the subject of each report involve separate and distinct acts of bullying. The list shall be limited to the number of verified acts of bullying in each school and shall not set out the particulars of each verified act, including, but not limited to any personally identifiable student information, which is confidential information by law.

C. The Principal of each school shall report the number of verified acts of bullying in the school annually to the Department of Education in such manner as prescribed by the Commissioner of Education.

IX. Other Prevention and Intervention Strategies

A. Bullying behavior can take many forms and can vary dramatically in the nature of the offense and the impact the behavior may have on the victim and other students. Accordingly, there is no one prescribed response to verified acts of bullying. While conduct that rises to the level of "bullying", as defined above, will generally warrant traditional disciplinary action against the perpetrator of such bullying, whether and to what extent to impose disciplinary action (e.g., detention, in-school suspension, suspension or expulsion) is a matter for the professional discretion of the building principal (or responsible program administrator or his/her designee). No disciplinary action may be taken solely on the basis of an anonymous complaint. As discussed below, schools may also consider appropriate alternatives to traditional disciplinary sanctions, including age-appropriate consequences and other restorative or remedial interventions.

B. A specific written intervention plan shall be developed to address repeated incidents of bullying against a single individual or recurrently perpetrated bullying incidents by the same individual. This plan may include safety provisions, as described above, for students against whom acts of bullying have been verified and may include other interventions such as counseling, discipline, and other appropriate remedial or restorative actions as determined by the responsible administrator.

C. The following sets forth possible interventions which may also be utilized to enforce the Board's prohibition against bullying:

i. Non-disciplinary interventions

When verified acts of bullying are identified early and/or when such verified acts of bullying do not reasonably require a disciplinary response, students may be counseled as to the definition of bullying, its prohibition, and their duty to avoid any conduct that could be considered bullying. Students may also be subject to other forms of restorative discipline or remedial actions, appropriate to the age of the students and nature of the behavior.

If a complaint arises out of conflict between students or groups of students, peer or other forms of mediation may be considered. Special care, however, is warranted in referring such cases to peer mediation. A power imbalance may make the process intimidating for the victim and therefore inappropriate. In such cases, the victim should be given additional support. Alternatively, peer mediation may be deemed inappropriate to address the concern.

ii. Disciplinary interventions

When acts of bullying are verified and a disciplinary response is warranted, students are subject to the full range of disciplinary consequences. Anonymous complaints, however, shall not be the basis for disciplinary action.

In-school suspension and suspension may be imposed only after informing the accused perpetrator of the reasons for the proposed suspension and giving him/her an opportunity to explain the situation, in accordance with the Board's Student Discipline policy.

Expulsion may be imposed only after a hearing before the Board of Education, a committee of the Board or an impartial hearing officer designated by the Board of Education in accordance with the Board's Student Discipline policy. This consequence shall normally be reserved for serious incidents of bullying and/or when past interventions have not been successful in eliminating bullying behavior.

iii. Interventions for bullied students

The building principal (or other responsible program administrator) or his/her designee shall intervene in order to address incidents of bullying against a single individual. Intervention strategies for a bullied student may include the following:

a. Counseling;

b. Increased supervision and monitoring of student to observe and intervene in bullying situations;

c. Encouragement of student to seek help when victimized or witnessing victimization;

d. Peer mediation or other forms of mediation, where appropriate;

e. Student Safety Support plan; and

f. Restitution and/or restorative interventions.

iv. General Prevention and Intervention Strategies

In addition to the prompt investigation of complaints of bullying and direct intervention when acts of bullying are verified, other district actions may ameliorate potential problems with bullying in school or at school-sponsored activities. While no specific action is required, and school needs for specific prevention and intervention strategies may vary from time to time, the following list of potential prevention and intervention strategies shall serve as a resource for administrators, teachers and other professional employees in each school. Such prevention and intervention strategies may include, but are not limited to:

a. School rules prohibiting bullying, harassment and intimidation and establishing appropriate consequences for those who engage in such acts;

b. Adequate adult supervision of outdoor areas, hallways, the lunchroom and other specific areas where bullying is likely to occur;

c. Inclusion of grade-appropriate bullying education and prevention curricula in kindergarten through high school, which may include instruction regarding building safe and positive school communities including developing healthy relationships and preventing dating violence as deemed appropriate for older students;

d. Individual interventions with the perpetrator, parents and school employees, and interventions with the bullied student, parents and school employees;

e. School-wide training related to safe school climate, which training may include Title IX/Sexual harassment training, Section 504/ADA Training, cultural diversity/multicultural education or other training in federal and state civil rights legislation or other topics relevant to safe school climate;

f. Student peer training, education and support; and

g. Promotion of parent involvement in bullying prevention through individual or team participation in meetings, trainings and individual interventions;

h. Implementation of a positive behavioral interventions and supports process or another evidence-based model approach for safe school climate or for the prevention of bullying, including any such program identified by the Department of Education;

i. Respectful responses to bullying concerns raised by students, parents or staff;

j. Planned professional development programs addressing prevention and intervention strategies, which training may include school violence prevention, conflict resolution and prevention of bullying, with a focus in evidence based practices concerning same;

k. Use of peers to help ameliorate the plight of victims and include them in group activities;

l. Avoidance of sex-role stereotyping;

m. Continuing awareness and involvement on the part of school employees and parents with regards to prevention and intervention strategies;

n. Modeling by teachers of positive, respectful, and supportive behavior toward students;

o. Creating a school atmosphere of team spirit and collaboration that promotes appropriate social behavior by students in support of others;

p. Employing classroom strategies that instruct students how to work together in a collaborative and supportive atmosphere.

D. In addition to prevention and intervention strategies, administrators, teachers and other professional employees may find opportunities to educate students about bullying and help eliminate bullying behavior through class discussions, counseling, and reinforcement of socially-appropriate behavior. Administrators, teachers and other professional employees should intervene promptly whenever they observe mean-spirited student conduct, even if such conduct does not meet the formal definition of "bullying."

X. Annual Notice and Training

A. Students, and parents or guardians of students shall be notified annually of the process by which students may make reports of bullying.

B. The Board shall provide for the inclusion of language in student codes of conduct concerning bullying.

C. At the beginning of each school year, each school shall provide all school employees with a written or electronic copy of the school district's safe school climate plan and require that all school employees annually complete training on the identification, prevention and response to bullying as required by law.

XI. School Climate Assessments

On and after July 1, 2012, and biennially thereafter, the Board shall require each school in the district to complete an assessment using the school climate assessment instruments, including surveys, approved and disseminated by the Department of Education. The Board shall collect the school climate assessments for each school in the district and submit such assessments to the Department.

Legal References:

Public Act 11-232, *An Act Concerning the Strengthening of School Bullying Laws*

Conn. Gen. Stat. § 10-222d

Conn. Gen. Stat. §§ 10-233a through 10-233f

Connecticut State Department of Education Circular Letter C-8, Series 2008-2009 (March 16, 2009)

Policy Adopted:

WESTPORT PUBLIC SCHOOLS
Westport, Connecticut

MEMORANDUM

TO: ELLIOTT LANDON
SUPERINTENDENT OF SCHOOLS

FROM: NANCY J. HARRIS
ASSISTANT SUPERINTENDENT FOR BUSINESS

SUBJECT: COLEYTOWN MIDDLE SCHOOL HYPALON ROOF RECOATING PROJECT

DATE: NOVEMBER 3, 2011

CC: C. SCHMARR, PROJECT FILE

The Board of Education has planned to recoat the folded plate roof areas of Coleytown Middle School covered in Hypalon roofing materials over the gymnasium, library, and art wings. The roof was installed in 1994 with a fifteen (15) year warrantee.

Funds for this project have been included in the Board of Education Five Year Capital Forecast for the past several years. The Coleytown Middle School roof is now 17 years old and we are noticing that the textural material of this roof is washing away on a regular basis. There are a greater number of leaks appearing, especially in hard downpours and driving rain. The Town wide Maintenance Committee noted the need for this recoating in a report dated January, 2010 based on a November, 2009 inspection of Coleytown Middle School. Our roofing contractor, Silktown Roofing, has also indicated these roofs have reached maximum useful life under the current condition. At the completion of this project we expect to extend the life of this roof by approximately ten years. At that time all of the Hypalon roofing surfaces will require replacement.

William Silver, partner in the architectural firm of Silver, Petrucelli and Associates, of Hamden, Connecticut, has provided the budget estimate for this project. He has developed the design specifications and will prepare bid documents, review bidders, make recommendation for award, and provide oversight of the project upon approval of the funding request.

The estimated budget, including architectural fees, and is estimated at $151,131. Therefore, I am requesting that the Board of Education (BOE) approve a funding request of $152,000 to the Board of Finance for this recoating project. You will note that this project will not be eligible for state reimbursement as it is a roof recoating maintenance type project. The state will not reimburse any town for normal repair and maintenance items.

- The revised budget estimate is $98,869 less than that included in the BOE Five Year Capital Forecast.
- The actual cost of the project will not be confirmed until the bid is awarded.

In order to expedite this project, we recommend that the Public Site & Building Committee and the Board of Education be jointly designated as the Building Committee for the project. Nancy Harris would act as project manager.

Attachments
NJH:abm

EDUCATION SPECIFICATIONS
FOR
COLEYTOWN MIDDLE SCHOOL
PARTIAL ROOF RECOATING PROJECT

The Westport Public Schools will recoat the 1994 sections of folded plate Hypalon roofs in order to maintain the watertight condition of the school. Coleytown Middle School was built in 1964 with additions in 1998 and 1999.

PURPOSE:
The Hypalon roof areas on areas of the building are seventeen (17) years old and are in need of recoating in order to maintain watertight conditions and extend the useful life by an additional ten (10) years. The roofing areas of approximately 35,188 square feet show significant wear appropriate for their age. The watertight nature of the roof areas have been maintained by contracting for roof repairs on an ongoing basis. Leaks are a regular occurrence and can have a negative impact on the structural integrity of the building and on the Indoor Air Quality (IAQ) within the school.

SCOPE:
This project will replace approximately 35,188 square feet of folded plate roofs located over the gymnasium, library, art rooms and throughout the building. These seventeen year old roofs will be recoated with a chlorosulfonated polyethylene (CSPE) synthetic rubber material that will extend the expected life to ten additional years. The Board of Education expects to reduce repairs and maintenance costs with this roof replacement project. The recoated roofs will meet all requirements regarding insulation, pitch, and drainage.

PARTIAL ROOF RE-COATING COLEYTOWN MIDDLE SCHOOL 02-Nov-11

65 EASTON ROAD, WESTPORT CT

Owner: TOWN OF WESTPORT JOB NO: 11.127

OPINION OF PROBABLE CONSTRUCTION COST **RE-COAT EXISTING HYPALON ROOF MEMBRANE**

35,188 (SQUARE FEET)

SECTION NUMBER	WORK CATEGORIES	QTY.	UNIT	MATERIAL COST UNIT $	MATERIAL COST TOTAL	LABOR COST UNIT $	LABOR COST TOTAL	ALLOWANCE	TOTAL $
	OTHER COSTS								
	BONDS, INSURANCE & PERMIT PER STATE LAW	1	LS					$2,500.00	$2,500
				OTHER SUB-TOTAL				$2,500	
	DIVISION SEVEN								
	CLEAN EXIST ROOFS	1	LS	$0.00	$0	$15,000	$15,000		$15,000
	HYPALON PRIMER	250	GAL	$56.00	$14,000	$18.00	$4,500		$18,500
	HYPALON FINISH COAT	750	GAL	$71.00	$53,250	$18.00	$13,500		$66,750
				DIVISION SEVEN SUB-TOTAL				$100,250	
							SUBTOTAL =		$102,750
	CONSTRUCTION COST PER SQUARE FOOT =	$3.65							
							GEN. CONDITIONS	10.00%	$10,275
							OVERHEAD & PROFIT	15.00%	$15,413
							CONSTRUCTION TOTAL =		$128,438
							A/E DESIGN FEES =		$4,850
							ENVIRONMENTAL TEST/DESIGN FEES		$0
							A/E CONSTRUCTION ADMIN FEES=		$2,000
							BID PRINTING, LEGAL NOTICES =		$3,000
							CONSTRUCTION CONTINGENCY =	10.00%	$12,844
							PROJECT TOTAL:		**$151,131**

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To: Members of the Board of Education

From: Elliott Landon

Subject: Acceptance of Gift: Green's Farms PTA

Date: November 7, 2011

I am pleased to inform you that the Board of Education has been offered a gift of $3,253.69 from the Green's Farms PTA to be used towards the purchase of eleven (11) Document Cameras.

The Document Cameras we will be purchasing will give our early childhood teachers in Kindergarten and Grades 1 and 2 the ability to display and explore images of objects anytime without losing the momentum of their lessons. Our teachers will be enabled to transform images into interactive content anytime during a lesson. For example, they will be able to view a science experiment in real time with an entire class or display a book as they highlight key sections. Students will be able to share objects or schoolwork with the class.

These Document Cameras conveniently connect to other classroom technology products, including projectors, monitors, flat-panel displays and the SMART Board interactive whiteboard.

The Document Cameras will be used on a daily basis to enhance teacher implementation of the Singapore Math Program with its need to display many manipulatives and visuals, as well as other areas of our curriculum, such as Reader's Workshop, Writer's Workshop, and our Inquiry-Based Science Program.

ADMINISTRATIVE RECOMMENDATION

Be It Resolved, That upon the recommendation of the Superintendent of Schools, the Board of Education accepts with gratitude and appreciation a gift of $3,253.69 from the Green's Farms PTA to be used towards the purchase of eleven (11) Document Cameras to be used in Kindergarten and Grades 1 and 2.

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