



2007 – 2008 Year-End Operational Report

Specific Program Tasks	Outcomes
<p>Deliver research-based, data-driven technical assistance, professional development and measurement tools to educators at the district-, school-, and classroom-levels.</p>	<ol style="list-style-type: none"> 1. Math: signed 6 contracts Total \$43,769 2. Science: signed 20 contracts Total \$67,032 3. Trained two CT Academy mathematics and science consultants on CSDE’s CT Accountability for Learning Initiative (CALI) common characteristics that are being used in schools identified as “in need of improvement” according to NCLB. 4. The CT Advanced Placement Grant – CAE Collaborating with CBIA, CSDE and CSDHE to implement AP Project Opening Doors. 5. Developed a new middle/high school “common formative assessments” (CFA) technical assistance tool that includes 75 CSDE performance expectations at grades levels six through twelve. The new assessment and training will help teachers to understand and then to build formative assessments: the process of assessing and then adjusting instruction based on individual and class progress. <ol style="list-style-type: none"> 5.1. CFA’s were piloted in East Windsor, Bloomfield, and Vernon Public Schools. 5.2. As of September 2008, Region One has purchased services for 2008-2009. 6. Trained three consultants and two district-level administrators in Measuring Mathematical Knowledge for Teaching. The program is the result of research conducted at University of Michigan and Harvard University and identifies areas of strength and areas in need of professional development for elementary and secondary school math teachers. <ol style="list-style-type: none"> 6.1. As of September 2008, East Windsor and Bloomfield have purchased services for 2008-2009. 7. As a result of successful science professional development initiative in Vernon, Bloomfield and East Windsor, the Hartford Foundation for Public Giving has agreed to accept a three-year extension proposal to expand to three new districts; Ellington, Windsor and Windsor Locks. The CT Academy will continue to work with the three original districts.
<p>Provide support to the Office for Workforce Competitiveness to promote and facilitate a 21st Century STEM-related talent &</p>	<ol style="list-style-type: none"> 1. Notified on June 25, 2008, that OWC will provide only first half of \$150,000 contract payments because of Governor Rell’s cut back on state spending. 2. Developed and distributed a survey to STEM-based



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<p>workforce agenda for Connecticut.</p>	<p>organizations (270 individuals /70 responses = 26% response rate) to prioritize most significant 21st Century STEM issues and occupations to help develop STEM-related exhibits/ program kiosks at the new CT Science Center. The purpose of these changing exhibits will be to motivate and engage students, teachers and parents to make connections between STEM-related careers, Connecticut’s science curriculum, and 21st Century learning skills.</p> <ol style="list-style-type: none"> 3. Provided the CT Science Center with the information and background as needed to begin development of STEM-related exhibits/program kiosks. 4. Responded April 18 to request from OWC to research and provide school dropout data to Janice Gruendel in support of Governor’s Office grant effort. 5. Provided OWC and Janice Gruendel with high school graduation information and workforce projections to 2014. 6. Continue to update the CT STEM Asset Directory 7. Represented on the ELearning Subcommittee for the CT Commission for Educational Technology and an ad hoc subcommittee called to develop a K-8 STEM proposal.
<p>Support the State’s Ad Hoc Committee on High School Redesign initiative.</p>	<ol style="list-style-type: none"> 1. Held a CT Town Meeting on March 17 at Northeast Utilities to discuss Secondary School Reform Initiative with Allan Taylor and Mark McQuillan. 110 people participated. 2. CT Academy board members and Fellows participated in the Commissioner’s “Listening Tour” at the suggestion of the OWC. 3. CT Academy Board of Directors and Fellows submitted 13 recommendations to the Commissioners of Education and Higher Education and the State Board of Education relative to the Secondary School Reform Initiative. 4. Facilitated a partnership with the CT State Department of Education and the CT State University System: Western, Central, Eastern, and Southern CT State Universities and seven high schools to respond to the National Science Foundation’s Math and Science Partnership 08-525 Solicitation. <ol style="list-style-type: none"> 4.1. The Linking Secondary and University Mathematics (<i>LINK</i>) plan supports development of state-level challenging and advanced mathematics courses and end of course assessments for Algebra I, Geometry, and Algebra II so that all students will be college ready. 4.2. Notified on September 19 that NSF declined proposal.



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	<p>4.3. Reviews of the proposal were positive with three “very good” and two “good”. Reviewers recommended resubmitting with changes.</p> <p>4.4. Elements of the <i>LINK</i> proposal have been incorporated into CT Secondary School Reform Initiative regardless of NSF decision.</p>
<p>Implement recommendations within the draft CT STEM Plan (CONNvene) that do not require state or local policy interventions.</p>	<ol style="list-style-type: none"> 1. Collaborating with the CSDE to develop, distribute and analyze a survey on various elements of middle and high school Algebra education submitted to all CT school districts. 2. Successfully completed - on time and on budget - the STEM After School initiative with six other partners. The partners will deliver six modules that include multiple activities for middle- and high school-level students. Modules will be piloted in North End Middle School in Waterbury, New Haven Public Schools, and New London Science & Technology Magnet High School during 2008-09 school year. 3. Hosted a meeting of Principals of 6 STEM-based magnet and charter schools to discuss forming a network modeled after Illinois and North Carolina successes and designed to establish regional STEM hubs. They are interested, as are the Technology and Biotech Business Clusters, to work with the schools. Additional meeting to be held in winter 2008. 4. Hosted meeting of 13 leaders of STEM-based Competitions with the following results: <ol style="list-style-type: none"> 4.1. Need to build awareness among policy makers, school leaders, counselors, teachers, students, and parents about each individual event and STEM competitions in general; 4.2. Need to involve more students and build interest and excitement for STEM subjects and learning among children of all ages; 4.3. CT STEM Competitions identify many outstanding students who go on to win national and international competitions. Not enough recognition by policy, education, and community leaders and the media of these STEM-wise students; 4.4. Need to address scheduling of 32 separate competitions as it relates to getting children to participate, obtaining adequate supply of judges and program volunteers, staging events, and celebrating the results of the activities; 4.5. Discussed possible need for common "program standards" that all competition leaders could generally agree to;



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	<ul style="list-style-type: none"> 4.6. Prepare a common "white paper" to policy leaders as to how STEM Competitions support CT secondary school reform; and 4.7. General agreement of commonality of purpose and need to meet again targeting a more specific, outcome-driven agenda. 5. Met with President of Bristol-Myers Squibb Foundation, Quinnipiac University Science Chairman, and Wallingford Public School educators to discuss Connecticut participation in R_xeSEARCH program. The program is a partnership of the Pharma industry and National Science Resource Center at the National Academies designed to help high school students develop skills in integrated problem solving, critical thinking and decision making through a compressed biology/ chemistry/ mathematics/social studies/language arts curriculum built on the pharmaceutical R&D sequence. <ul style="list-style-type: none"> 5.1. Working with B-MS to involve Pfizer in the R_xeSEARCH program for southeastern CT. 5.2. Attended meeting in New Jersey to prepare for a 2008-2009 pilot in Wallingford in conjunction with Quinnipiac University. 5.3. Wallingford teachers participated in a training workshop in New Jersey and will pilot R_xeSEARCH program in 2008-2009 school year.
<p>In collaboration with WTNH Channel 8, other CT media outlets and others, execute a public outreach campaign (print, radio and television media) to increase public awareness and support for Pre K – 16 STEM-related initiatives.</p>	<ul style="list-style-type: none"> 1. Co-sponsored with WTNH Channel 8 and 60 informal science and nature centers to broadcast the Learning Doesn't Take a Vacation program this summer to help families locate fun and family friendly learning opportunities available through Connecticut's many informal science and nature centers. 2. Jon Hitchcock, VP and General Manager of WTNH Channel 8 and chairman of the CT Broadcasters Association will support the CT Academy's proposal to execute a public outreach campaign. Taking it to the 150-member CBA in October 2008.
<p>Sustain a network of STEM-related educational groups including, but not limited to, local science and nature centers, CT After-School Network, CT STEM-related Science Fairs, Contests and Competitions, to encourage interest and</p>	<ul style="list-style-type: none"> 1. Secured \$35,000 funding from Bristol-Myers Squibb (B-MS) to continue distributing the CT Building a Presence for Science network that communicates with 12,000 science educators weekly. <ul style="list-style-type: none"> 1.1. CT Building a Presence for Science is reaching 100% of the State's 1,375 public and private K-12 schools, plus all colleges and universities, and informal science centers that



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<p>participation by families and youth in STEM activities during weekends, summers, and other out-of-school time periods through a public outreach initiative.</p>	<p>reaches approximately 12,000 science educators weekly.</p> <ol style="list-style-type: none"> 2. Facilitated three meetings of the CT Mathematics, Science & Technology Leadership Council. Council consists of presidents and other leaders from 18 science teacher and administrator organizations that represent the majority of CT’s K-20 and informal science education practitioners with total membership of approximately 12,500 professionals. 3. Participated in the CT Science Fair held at Quinnipiac University in March. 4. Serve on CURE’s BioBus Board of Directors and helping to broaden active partnerships with other STEM-based nonprofits. 5. Serve on the Board of the CT Association of Mathematically Precocious Youth (CAMPY), and supported “Campy On Campus Day” at Western, Central and Southern CT State Universities, and the Coast Guard Academy. CAMPY conducts enrichment activities for students, their parents, and teachers who have been identified as mathematically gifted. There are estimated to be between 5,000 and 10,000 students statewide designated as gifted. 6. Supported the CT Junior Science & Humanities Symposium on March 10, 2008, by providing a moderator at the UCONN 44th Annual convocation. 7. Providing support to UCONN science faculty to facilitate a national CROSSROADS conference that will address K-20 science education research issues for university faculty. 8. Serving on advisory board of M²: Mentoring Mathematicians Project funded by the NSF and led by UCONN’s Center for Talented and Gifted. 9. Serving on the Steering Committee of the American Chemical Society Planning Committee for the October 9, 2009, regional conference. 10. Collaborating with Dr. Elena Gregerineko at Yale to develop a U.S. Department of Education proposal to improve the use of science assessment to inform and improve instruction based on difference in student learning styles.
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