



# Magnet School

## Annual Report

2013-2014

**CREC Greater Hartford Academy of Math and Science**



**Greater Hartford Academy of Math and Science—Half Day Program**

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Name of School

**15 Vernon Street, Hartford, CT 06106**

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Address

**860-7576316**

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Phone

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E-Mail

**Paul Brenton, Principal**

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Director or Principal

**Participating (formally) School Districts**

Bloomfield, Bristol, Burlington, Canton,  
Coventry, East Granby, East Hartford,  
East Windsor, Ellington, Enfield,  
Farmington, Glastonbury, Haddam,  
Hartford, Hebron, Manchester,  
Middletown, New Britain, Newington,  
Plainville, Portland, Rocky Hill,  
Southington, Vernon, West Hartford,  
Wethersfield, Windsor, Windsor Locks

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*Information for Statewide Policymakers*

2013-14 continued to be a year of unprecedented inquiry into statewide interdistrict magnet schools by a range of policy groups and those holding the ultimate legislative and budgetary authority over our statewide program. The Connecticut General Assembly continues to require the CSDE to produce a Results-based Accountability template for determining program effectiveness and a comprehensive magnet school plan with specific recommendations for supporting and sustaining the program. In order for the CSDE to be able to answer specific questions to ensure the program’s long-term viability, we request information on the following objectives:

- 1) Describe the methods used to ensure recruitment and retention of a diverse student body, and how the demand for your program translates into sustained interest in the school. Please include any specific efforts in reaching families that may not yet be familiar with school choice programs. (Note: not applicable for those schools who were required to submit an enrollment management plan in the spring of 2014 due to non-compliance)**

CREC employed a diversified and aggressive marketing strategy to increase the number of students applying for CREC schools. This targeted marketing plan included specific strategies for Hartford families, suburban families, and communities for which we have not had a significant applicant pool in past lotteries. Through an intensive community outreach campaign, we were able to reach a number of applicants from families where English is their second language. This year’s marketing campaign included direct mail, advertising through social media, radio and television commercials, community events, application events, and various other outreach opportunities through our community partners. In addition to the district-wide marketing strategies, each CREC magnet school offered open houses and in-school events, presentations at magnet school fairs, and direct outreach to parents and students in both Hartford and suburban district public schools. As in previous years, CREC continued to see an increase in the number of applicants to a CREC school.

AAE/GHAMAS participates in five Regional School Choice Office (RSCO) Recruiting Fairs and hosts numerous Open Houses each school year to expose students and their families to our unique programs and curriculum. Our marketing plan ensures that we actively target and recruit students from all racial and ethnic backgrounds, students from households of low socioeconomic status, and English Language Learners. We communicate closely with home school districts in order to ensure a positive educational experience for all students we share. This positive experience then is often communicated to other students in these home schools who may be interested in our program.

**2) Describe your school’s professional development priorities for 2013-14. Be specific as to activities that support your special magnet theme.**

Professional development for staff at the Capitol Region Education Council (CREC) is designed to enhance the knowledge, skills, and attitudes of its educators so that they can improve student learning. The year’s sessions focused on providing teachers with the tools needed to implement new national and state standards into all curricula, grades PreK-12.

**Teachers’ Academy**

CREC identifies and delivers essential professional development for its new teachers at the start of each school year through its Teachers’ Academy. This three-day event provides participants with the unique knowledge and skills that are essential for success as an instructor in our theme-based interdistrict magnet schools. While all certified educators who are in their first three years of employment with CREC are required to participate, returning teachers are also encouraged to register for sessions of interest. Over eighty workshops were offered in August of 2013. Topics included “Effective Strategies for Close Reading,” “Flipped Learning,” “Including Primary Sources into the Social Studies Classroom,” “How to Use Manipulatives in the Mathematics Classroom,” and “Strategies to Support Young Learners.” Over 350 staff members attended CREC’s Teachers’ Academy this year.

**Teachers’ College Reading & Writing Workshop Project**

CREC's schools continued to work with Columbia University’s Teachers’ College Reading and Writing Project (TCRWP) in an effort to build our capacity to meet the expectations of the Common Core State Standards. Staff developers from Teachers' College divide their time during professional development days by demonstrating strategies related to writing, reading and content-area literacy by coaching teachers, providing them with feedback and next-step goals, helping them to use and learn performance assessments, and preparing them for upcoming units of study.

**Common Core State Standards**

CREC Schools continued to implement Common Core Standards across all schools. Ongoing professional development was offered throughout the year to ensure fidelity of implementation.

**Shared Inquiry Training**

CREC Schools continued its work with the Great Books Foundation to support the teachers' use of the shared inquiry approach within its classrooms. The "shared inquiry" approach for reading and discussing literature engages students in higher-order thinking and collaborative problem-solving by emphasizing questioning, text-based support and student discourse. While new teachers to CREC received the initial training, returning educators used the continued work with Great Books to receive feedback on how to maximize the quality of student discourse that takes place in their classroom.

**Academic Rigor and Instruction**

CREC Schools continued to use tools for rigor, relevance and relationships developed by the International Center on Leadership in Education for grades K-12. We began adapting and using rubrics from Ed Leader21, specifically to assess communication, critical thinking,

creativity and collaboration. In addition, modules on Academic Rigor and Shared Inquiry were offered through the Blended Solutions grant.

### **Monthly Book Study Groups**

The district's curriculum leaders facilitated monthly book study groups throughout the school year for all teachers. Book study groups promote conversations among teachers and school staff that lead to the application of new ideas and strategies in classrooms. Teachers had the opportunity to share insights, ask questions of the text and each other, and learn from the perspectives of other teachers across the district. Facilitated discussions on strategies that can be applied directly in the classroom, the potential obstacles to implementation, and what can be done to overcome these obstacles take place each month. *Maximizing Professional Capital* was one of the books discussed in the monthly study groups.

### **Next Generation Science Standards**

While Connecticut has not yet adopted the Next Generation Science Standards, CREC's teachers began conversations about how the *Framework* and NGSS standards may be implemented. Following the recommendations from the Connecticut State Department of Education, CREC's staff examined the eight Science and Engineering Practices described in the Framework for K-12 Science Education, learned about the knowledge components inherent in each of the eight Practices, explored how students' abilities to use the Practices with specific content increases in complexity across the grades, and learned to design instructional outcomes that integrate all 3 Dimensions by combining one of the Practices with a science concept and a crosscutting theme.

### **Positive Behavior Support System (PBIS)**

All CREC schools have implemented a PBIS system in their schools. District wide training of teams and coaches took place throughout the year.

### **Magnet Development**

Theme professional development occurs through coaching, content specific workshops and collaborative lesson planning. The Magnet Theme Coach meets regularly with teachers to facilitate Magnet Unit development and to review and make changes as necessary given the school's goals and faculty needs. This past year there has been much work on revising the American History curriculum to add theme units. Curriculum has been written for our new discrete classes in Aerospace Engineering and Maritime Engineering and for the Project Lead the Way course in Principals of Engineering. Moreover, teachers participate in numerous other onsite and off-site professional development opportunities related to our theme. Some staff travel to conferences and workshops as a department and others attend on their own and share their learning with their colleagues.

### **3) What does your school do uniquely well (related to your magnet theme) that you think other regular public schools may replicate on the local level or in other public schools.**

What the Greater Hartford Academy of Mathematics and Science does uniquely well is to build student skills and interest in Science, Technology, Engineering and Math (STEM) areas. Student skills and interests are built by providing a sound foundation in math and

science in the ninth and tenth grade, with students enrolled in one math course and two science courses per year, physics and earth science in the freshman year and biology and chemistry in the sophomore year. In the eleventh and twelfth grade, students elect to take advanced science, engineering and math courses that build interest and prepare them for success in higher education. A sampling of our advanced courses include: AP Calculus BC, Linear Algebra, Multivariable Calculus, Differential Equations, AP Statistics, AP Computer Science, Classical Mechanics AP physics C, Nuclear Chemistry and Physics, Thermodynamics and Fluid Flow, Material Science, Robotics, Electronics, Photonics, Astronomy, Geology of National Parks, River Ecology Field Study, AP Chemistry, Environmental Science, AP Biology, Molecular Biology, Biodiversity and Forensic Science.

The Greater Hartford Academy of Mathematics and Science also values experimentation and inquiry based learning. The academy utilizes state of the art technology to teach students how to do science in an authentic manner. Students are issued laptop computers and are expected to use a wide variety of programs to collect data, analyze data, prepare reports and design presentations. Our science labs rival many university undergraduate science labs in terms of experimental equipment. The physics department and chemistry department have fully integrated computer technology to facilitate data collection for experiments. The biology and chemistry department utilize UV and Visible spectrophotometers, cell growth chambers, gas chromatograph, gel electrophoresis and other advance equipment throughout the curriculum.

In addition, we have programs that provide pathways to careers in the STEM areas, including a mentorship program with Hamilton-Sundstrand, an MIT ninth grade class trip, a distinguished speaker series, an annual career symposium, and an internship program. Speakers for the speaker series have included medical doctors, astronauts, actuaries, engineers, and CEOs. The career symposium offers students a wide variety of information about careers in the stem related fields from current professionals in those areas. In addition, the internship program provides real world job skills and experience for our students transitioning to college and universities. In addition, many staff members have advanced degrees in their fields or extensive experience outside of education, which facilitates a broader and more career focused curriculum.

**4) Describe the manner in which you promote replication of your school's best practices with regular public schools.**

CREC has developed the Blended Solutions website to share best practices with their colleagues in the Hartford Public Schools. Blended Solutions offers a continuum of professional development for Hartford and CREC teachers through a mixture of online and face-to-face sessions that are aligned to Connecticut Common Core Standards, the Common Core Teaching Domains and the State Board of Education's Position Statement on Culturally Responsive Education. The site includes a library of resources, as well as videos that demonstrate CREC teachers providing high quality, research- based instruction within highly effective magnet school classrooms. Currently there are eight modules for professional learning available and over forty videos.

In addition, this spring, AAE/GHAMAS served as a host school for the Magnet Schools of America Conference, where teachers from all over the country came to tour the school and attend workshops developed and conducted by our teachers, staff, and students. Also, school

counselors from all of our students' home schools were invited to attend an informational session, luncheon, and to take a tour of our school.

- 5) Describe your school's two greatest challenges/obstacles to meeting or exceeding the school-wide student learning goals in 2014-15. Please include ways in which the CSDE may support our school in meeting these challenges through enhanced professional development opportunities or specific technical assistance on matters needing close attention.**

The two greatest challenges facing the Greater Hartford Academy of Mathematics and Science are supporting the needs of a diverse group of learners to meet the standards measured by our state assessments and gathering background data on students to provide appropriate placement and interventions upon their arrival.

CSDE may best support our attainment of 2014-15 school goals by supporting and extending opportunities for professional learning around state assessments and the transition into the new Common Core curriculum. In particular, providing training on the scoring of the Smarter Balance test enabling more teachers to understand the standards upon which these assessments are built, the scoring of the assessments, and the sharing of anchor sets and best practices for teaching and learning. Secondly, CSDE can work to further develop the feeder reports, particularly attached to incoming middle and high school students, in a timely manner so that data on new magnet students will be readily available early in the admissions process to support the earliest intervention and most appropriate placement possible.

- 6) Provide the number of applications received by grade and town of residence; as of date of lottery.**

**\*NOTE:** The above information is managed by the SDE and can be obtained through the Department of Education and the Regional School Choice Office (RSCO).

- 7) Provide the number of students on wait list/pool by grade, race and residence; as of October 1, 2013, (see note)**

**\*NOTE:** The above information is managed by the SDE and can be obtained through the Department of Education and the Regional School Choice Office (RSCO).

Note: Wait list/pool refers to those students not enrolled in your school or another interdistrict magnet school who applied for admission to your school for the 2013-14 year. Example: any student who entered a lottery for admission to your school as a first choice that ultimately not placed in any interdistrict magnet school.



***Financial Information***

DIRECTIONS: Provide, as attachments, Schedules 1 and 2 from the attached expenditures and revenues document. These should reflect *actual expenditures and revenues* by the close of 2013-14, and not merely the budgeted amounts from the onset of the school year submitted in your grant application.



**Basic Checklist for Title IX and 504/ADA Compliance**

Both Title IX (34 CFR § 106.9) and Section 504 (34 CFR § 104.8) require that educational entities that receive federal funds must have a policy on nondiscrimination and a published statement. The publication of this statement notifies applicants, students, employees and parents that it does not discriminate on the basis of race, color, national origin, sex, or disability. Schools and educational agencies that receive federal funds must list the Coordinators of Section 504 and Title IX with their name/title, address and phone number in the notice of nondiscrimination.

The following checklist was prepared to assist you in meeting some minimum requirements of Title IX of the Education Amendments of 1972, Section 504 and the Americans with Disabilities Act. It is not an exhaustive checklist and therefore should not be used as a substitute for careful reading of the regulations themselves.

**§ 106.8 Designation of responsible employee and adoption of grievance procedures.**

- 1.  At least one Title IX coordinator has been designated at the district or school level to coordinate efforts to comply with Title IX, including investigations of any complaints.
- 2.  At least one Section 504/ADA coordinator has been designated at the district or school level to coordinate efforts to comply with Section 504/ADA requirements, including investigations of any complaints.
- 3.  All students and employees have been notified of the name(s), office address(es), and telephone number(s) of the coordinator(s).
- 4.  Grievance procedures for students have been adopted and published.
- 5.  Grievance procedures for employees have been adopted and published.

(Authority: Secs. 901, 902, Education Amendments of 1972, 86 Stat. 373, 374; 20 U.S.C. 1681, 1682)

**§ 106.9 Dissemination of policy.**

- 6. The following been notified of a policy of nondiscrimination.
  - applicants for admission and employment
  - students and parents of students
  - employees
  - sources of referral of applicants
  - unions, professional organizations
- 7. Notification of a policy of nondiscrimination has been placed in one or more of the following:
  - local newspapers
  - school newspapers and magazines
  - memoranda's or other written communications distributed annually to each student and employee
  - announcements, bulletins, catalogs, student and faculty handbooks
  - application forms
- 8.  The above-listed school publications are free of text and illustrations suggesting differential treatment on the basis of sex or disability.
- 9.  Admission and recruitment representatives (including counselors or student advisors and personnel officers) have been advised of the nondiscrimination policy and requirements for adherence to the policy.

(Authority: Secs. 901, 902, Education Amendments of 1972, 86 Stat. 373, 374; 20 U.S.C. 1681, 1682); [45 FR 30955, May 9, 1980, as amended at 65 FR 68056, Nov. 13, 2000]



*Financial Attachments*

# BUDGET FORM

Created On: 5/28/2014

## ED 114

**Fiscal Year:** 2014  
**Grantee Name:** CREC  
**Grantee:** 241-000  
**Funding Status:** Final  
**Vendor ID:** 00241  
**Grant Title:** MAGNET SCHOOL OPERATING  
**Project Title:** GRTR. HARTFORD ACAD. OF MATH & SCI.  
**Fund:** 11000  
**SPID:** 17057  
**Year:** 2014  
**PROG:** 82062  
**CF1:** 170031  
**CF2:** SDE00087  
**Grant Period:** 7/1/2013 - 6/30/2014  
**Authorized Amount:** \$1,337,226  
**Project Code:** SDE000000000002

### AUTHORIZED AMOUNT BY SOURCE:

**LOCAL BALANCE:**

**CARRYOVER DUE:**

**CURRENT DUE:** \$1,337,226

<b>CODES</b>	<b>DESCRIPTIONS</b>	<b>BUDGET</b>
111A	NON-INSTRUCTIONAL	82,820
111B	INSTRUCTIONAL	943,010
112A	EDUCATION AIDES	
112B	CLERICAL	114,507
119	OTHER	100,000
200	PERSONAL SERVICES-EMPLOYEE BENEFITS	36,691
321	TUTORS	
322	IN SERVICE	
323	PUPIL SERVICES	
324	FIELD TRIPS	
325	PARENT ACTIVITIES	
330	EMPLOYEE TRAINING AND DEVELOPMENT SERVICES	
510	STUDENT TRANSPORTATION SERVICES	
530	COMMUNICATIONS	
560	TUITION	
580	TRAVEL	
590	OTHER PURCHASED SERVICES	
611	INSTRUCTIONAL SUPPLIES	
7	ADMINISTRATIVE SUPPLIES	
090	OTHER SUPPLIES	
700	PROPERTY	
890	OTHER OBJECTS	
940	INDIRECT COSTS (Prior FY2015)	60,198
	<b>TOTAL</b>	<b>\$1,337,226</b>

**Original Request Date:** 10/4/2013

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**This budget was approved by Regina Hopkins on 5/14/2014.**

Magnet School Name: Greater Hartford Academy of Math & Science School Code: 2419800

SCHEDULE 1: Total Current Expenditures from All Sources by Function and Object

Report All Cash Expenditures and Encumbrances from All Sources Regular and Special Education. \*

LINE	CODE	FUNCTION (Program Area)	OBJECT					Other (Col. 7)	
			Total (Col. 1)	Salaries (Col. 2)	Employee Benefits (Col. 3)	Purchased Services (Col. 4)	Supplies (Col. 5)		Property (Col. 6)
1202	1000	Program Expenditures	1,871,201	1,409,377	228,142	25,102	103,075	105,506	
1203	2100	Support Services-Students	149,550	115,971	33,312	-	267	-	
1204	2200	Improvement of Instructional Services	11,733			11,733		-	
1205	2300	Support Services - General Admin.	134,186			134,186			
1206	2400	School Based Administration	163,207	130,477	32,730				
1207	2600	Operation and Maintenance of Plant Svc.	129,356			126,709	2,647		
1208	2700	Student Transportation Services	413			413			
1209	2500	Support Services	36,343			22,958	10,390		2,995
	2900		71,327			71,327			
1210	3100	Net Expenditures for Food Services	-			-			
1211	3200	Net Expenditures for Enterprise Operations	-						
1212		Indirect Overhead	115,834						
1213		<b>TOTAL</b>	2,683,150	1,655,825	294,183	392,428	116,379	105,506	2,995

\* Do not include transportation costs associated with home to school and back home or the excess cost of special education services.

2013-2014

**SCHEDULE 2: Revenues by Source**

Include all projected revenues for the school

<b>LINE</b>	<b>CODE DESCRIPTION</b>	<b>Total Revenue (Col. 1)</b>
220	<b>xxxx State Grants**</b>	
	<b>197 students @ \$6,787.95</b>	<b>\$1,337,226</b>
221	<b>xxxx Federal Grants**</b>	
	<b>Title I</b>	<b>35,647</b>
222	<b>1920 Contributions</b>	<b>9,895</b>
226	<b>xxxx Other Sources of Revenue**</b>	
	<b>Special Ed Services</b>	<b>6,336</b>
	<b>Local Tuition 197 students @ \$4,800</b>	<b>955,586</b>
	<b>Fund Balance</b>	<b>310,628</b>
299	<b>Total</b>	<b>\$2,655,317</b>