

# Ohio's Race to the Top Innovative Programs Grant Application Application Period- March 11-May 20, 2011

Please ensure that ALL questions are answered completely in each of the four sections as incomplete applications will not be returned for modifications or completion.

### **Section A**

#### 1. General School Information

a) Name of Applicant (LEA): Dublin City Schools	b) Name of School(s): This grant would support a district program open to all three high schools. (Dublin Coffman, Dublin Jerome and Dublin Scioto High Schools)		
c) Superintendent of Schools:    (or equivalent)    Name: Dr. David Axner  Address:    7030 Coffman Road, Dublin, Oh 43017	d) <b>LEA RttT Contact</b> :  Name: Eydie Schilling  Address: 7030 Coffman Road, Dublin, Oh 43017		
Telephone: 614-760-4326	Telephone: 614-760-4379		
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Email: axner_david@dublinschools.net	Email: schilling_eydie@dublinschools.net		
e) School Vision:  We believe that all students can and must learn at high levels of achievement. It is our job to create an environment in our classrooms that results in this high level of performance. We are confident that with our support and help, students can master challenging academic material and we expect them to do so. We are prepared to work collaboratively with colleagues, student and parents to achieve this shared educational purpose.	f) <b>School Mission</b> : To prepare all students for a successful future.		

- g) **Primary Goals of School:**Pursuing Excellence and Equity for all.
- h) **Teacher/Student Ratio:** Grades 9-12 1:22

PLEASE NOTE: If you enter into a collaboration with another LEA, please mark with an \* which LEA will serve as the FISCAL AGENT if selected for one of the competitive grants.

Names and titles of individuals who participated in the March 10th Innovation Symposium:

Eydie Schilling, Executive Director of Learning & Teaching, Dublin City Schools

#### 2. SCHOOL PROFILE

STUDENT INFORMATION									
Grades served: 9-12 combined from 3 District High Schools									
Enrollment (total number of students served in school applying for Innovative Program):									
Grade Level	Enrollment								
Pre K-5		NA							
6	NA								
7		NA							
8	NA								
9	1097								
10	1125								
11	1009								
12		1024							
Ethnicity and gender da	ta (% of enrollment): Gro	ades 9-12							
Black: 4.5%	White: 75%								
Asian/Pacific Islander: 13.2%	American Indian/Alaska Native: 0.1%	Male: 52.2%							
Hispanic: 2.8%	Multi-Racial:4.4%	Female: 47.8%							
Percent of students eligib	ole for free/reduced lun	<b>ch:</b> Grades 9-12= 13%							
Percent of students ident	tified as special educati	<b>on:</b> Grades 9-12= 10.3%							
Names of current compe	etitive grants LEA has be	en awarded (2010-2011):							
METRO Management Group STEM Grant									
Please attach 2009-2010 school Report Card: (Attached)									
Dublin District Report Card, Coffman High School Report Card, Jerome High School Report Card and Scioto High School Report Card									

## **Section B**

1. Please check circle(s) next to the specific Innovative Program(s) for which you are applying. Prioritize your preference order to the right of the program, with "1" being

# your first priority. A separate application must be submitted for each Innovative <a href="Program">Program</a>.

$^{\square}$ Asia Society (International Studies Schools Network)	
AVID *	
√ Early College High School	2
□ New Tech Network	
✓ STEM*	1
$^{\square}$ Other Proven Model (please list)	
*Priority may be given to the lowest-achieving	schools

#### **Section C**

<u>Questions Addressing Innovation Selected-</u> Please answer these questions in the text boxes provided. Provide as many details as possible so that the reviewers can gain a good picture of your school.

1. Identify your selected Innovative Program and the reasons for selection. (Note: If "Other", please include research evidence that justifies how the "other" innovation will accelerate student achievement and progress.

Dublin City Schools has selected STEM as its Innovative Program. Partnerships with Dublin City Workforce Development and local businesses support the desire to bring more STEM based companies and jobs to the Dublin area. Growth in STEM career sectors has been identified as a component of the city's plan for long-term economic well-being. The school district can contribute to this plan by developing potential qualified employees. Data from college readiness assessments indicate that Dublin students have a high degree of interest in STEM career areas. The STEM grant would provide the funds to connect student interest with city planning.

The district identified STEM as an area needing support and has begun to implement a small scale STEM program. This summer, a core group of teachers are being trained on problem-based learning and transdisciplinary lesson planning. These teachers will then serve in a professional development capacity within the district to train other teachers. The District has also gained funds and community support for a STEM Engineering Academy for high school students. Partnerships with OSU, METRO High School and local companies employing engineers have been established. The Engineering Academy teachers will be the first to participate in Project Lead the Way training.

The district also partners with parents in the community to support STEM initiatives. The FIRST Robotics Club/ Lego League program in grades 3-12 serves over 250 students. The mentoring model of older students and adults to younger students would be expanded in other STEM areas to increase and sustain interest in STEM throughout their schooling years.

2. In what other school transformation strategies has your school been engaged and its/their status.

Dublin City Schools has been engaged in several school transformation strategies. It is our belief that post-secondary experiences are a key component for the personal and financial success of our students and community.

At the high school level, we have worked to build programs that encourage all students to experience a college-level class before they graduate from high school. We have expanded our AP coursework and offer the International Baccalaureate certificate and diploma programs at all three high schools. The numbers of students participating in AP and IB courses has increased dramatically. We also offer PSEO, however in this area the numbers of students and course hours earned has been decreasing.

Dublin City Schools has also focused on the transitions our students make between grade levels and through support systems. To help with the transition from middle to high school the district adopted a small school within a school approach through the creation of 'houses' for 9th graders. A credit recovery school (West Bridge Academy) has been created which provides a hybrid online learning approach along with social /emotional supports and service learning. Many of our most at-risk students have been able to earn a high school diploma by attending West Bridge. The district has also developed Power Plus, a community based postsecondary job training program for young adult students with disabilities. Power Plus works on student's employability and life skills to customize a program of transition and growth through job training and related experiences.

Over the past year, we have worked to build a pathway to college and career readiness for students. Students take the EXPLORE, PLAN, and PSAT during school and the results are used by teachers and school counselors in collaboration with students to help them take ownership of their dreams and create a plan to reach them. We also offer ACT and SAT testing on site and have instituted free test preparation programs and courses. We have seen our ACT scores rise in each area.

To provide more career readiness support at the high school level, we have developed three interest-based academies: Dublin Teacher Academy, Young Professionals Academy and a STEM/Engineering Academy. The academies are held at one of the three high schools, but are open to students from any of the high schools. The Teacher Academy provides students with career development in the educational field. Students are given the opportunity to be teaching assistants at the elementary, middle and high school levels. The Young Professionals Academy provides students with two internships and work place skill development. The STEM/Engineering Academy provides students with the opportunity to take high school and college level coursework along with an engineering mentorship. Part of the District's strategic thinking is to expand the STEM Academies into other areas of interest. This grant will help grow the STEM opportunities for students and the ability to train teachers in the transformational practices associated with STEM schools.

3. Describe the capacity your LEA/school has to ensure a successful implementation.

Dublin City Schools is uniquely positioned for successful implementation of a STEM model. The district has a strong record of support for new innovations from district leadership and staff. Community support for the school district is strong and there is an academic expectation of preparing students for college and careers.

The transdisciplinary work necessary for a successful STEM implementation is already in the initial stages. A team of teachers will be trained in Problem Based Learning this summer and will have opportunities to plan transdisciplinary units in the fall through their Professional Learning Communities.

Dublin City Schools has an established positive partnership with METRO High School. The past two years have been spent in planning the STEM Engineering Academy. Teachers and administrators have visited METRO and helped design the framework. Dublin City Schools also received a grant from METRO Management Group to seed the implementation of the Engineering Academy with matching district funds. As a district, we have already established partnerships with OSU and local STEM businesses in order to bring in more expertise and support. Our teachers are HQT and have an expectation for continued professional growth and supporting students. The Advanced Placement and International Baccalaureate programs are now well established and will require a lower financial commitment by the district. Line item funding set aside to grow those programs can be refocused toward STEM.

**4.** How will you integrate the specific Innovative Program into your school culture and current transformation plan/Scope of Work?

To integrate STEM into our current school culture, we would like to capitalize on the Academy model that has been highly successful in the district. The career interest data indicates the top three career areas Dublin student's are interested in pursuing are science/engineering, biomedical and business. Our proposal would be to fund two new academies and provide additional support for the Engineering Academy. The new academies would be a Biomedical Academy and a Business/Logistics Academy. We have already begun partnering with METRO High School and OSU to develop the programs and provide professional opportunities for the staff involved. Our high schools already have Professional Learning Communities to collaborate on effective practices and data based instructional decision making. The PLCs will be able to use this time to develop transdisciplinary, problem based lessons.

The Biomedical Academy would give students the opportunity to take OSU Biology 113 and 114 along with Project Lead the Way Medical Interventions, Principles of Biomedical Science and Human Body Systems. Students would also take Biomedical Innovations that would require an internship and final project. As a result of participating in the Biomedical Academy, students would receive 10 quarter hours through the College of Biological Sciences and four high school credits. Dublin City Schools has already garnered support from Dublin Methodist Hospital to help with the internship program.

The Business/Logistics Academy would give students the opportunity to take OSU Economics 200 and 201 along with Logistics Management 780 and Research 299. This would provide students with 16 quarter hours from the Fisher College of Business. Students would also receive two high school credits for AP Statistics and Systems Analysis. Dublin has already begun working with METRO to build the partnership with the Fisher College of Business.

The Engineering Academy would give students the opportunity to take OSU Calculus 151 and 152 along with Engineering 181. This would provide students with 15 quarter hours through the College of Engineering. Students would also take Project Lead the Way courses Principles of Engineering, Digital Electronics and Engineering Design & Development. Dublin has established a partnership with METRO to offer this academy for the first time in 2011-12 school year. Dublin also received a grant for \$63,000 from METRO Management Group. This will be matched with district general funds.

These academies fit into our RttT Transformation plan in that they help meet both the goals of the state and the district. In our RttT plan, the STEM program will serve as the high school reform vehicle. It will support all of our populations. The focus on career areas that our students are interested in should draw more students into the program because of the relevant connection to the work world and advanced credit from OSU that is transferable. The opportunity to experience a more personalized learning environment and have a blended high school and college course sequence should help reduce gaps in student performance and support the student's identity as a college goer.

To complete the integration, an advisory board would be established to help foster the STEM initiative and build additional partnerships with local businesses and other school districts.

**5.** How will implementation of this Innovative Program increase student achievement and progress in your LEA/school for ALL students?

The STEM initiative will increase the rigor and relevance of mathematics and science courses within the district by shifting the focus of learning to applications of science and math and providing a platform for the utilization of advanced technological skills.

The STEM initiative will lead to more students' being college and career ready. Evidence of this would include increasing ACT and SAT scores. The trend analysis from the past 5 years shows that for ACT math (2005-2009) the scores went from 23.8 to 24.1 and for science 23.2 to 23.8. This means that 66% of Dublin students who took the ACT were identified as college ready in algebra and 52% college ready in biology. The 5 year trend analysis for SAT math (2005-2009) scores increased from 567-582. In each case, Dublin City Schools would like to see a higher percentage of students ready for a future beyond high school.

The STEM initiative will also lead to a stronger elementary and middle school math and science program. District OAA data for 2009 for mathematics in grades 3-8 and 10 range from a low of 76% proficient to high of 90.5%. In science, grades 5,8 and 10 the proficient scores are in the low 70-80%. With AYP percentages advancing, Dublin City Schools is in danger of not meeting the National expectations. The STEM initiative would help students understand the relevance of math and science to their lives.

6. How will you sustain this Innovative Program post RttT?

Dublin City Schools has developed many partnerships with business and industries in the area. Specific partnerships are being developed to help support each STEM academy area. Relationships to support engineering are being made with Battelle. Ohio Health/Dublin Methodist Hospital has verbally agreed to participate in an advisory capacity and provide mentoring/internship opportunities for Dublin students. OSU through the partnership with METRO has indicated support for the program through the Colleges of Engineering, Biological Sciences and the Fisher College of Business.

Maintaining enrollment in the Academy programs will initially be through a combination of METRO and Dublin students. However, long term sustainability will include making agreements with local school districts to accept enrollment of non-Dublin students.

Financial commitment beyond RttT will be possible through reallocation of funds due to shifting priorities. Dublin City Schools has as part of it's strategic vision determined that it will be reducing hard copy text materials and resources in favor of digital/electronic learning objects. Funds that were to be allocated for textbooks, will be reallocated to support the STEM / Academy programs. This would also be the case for the funds used to develop the AP and IB programs. The funds necessary to maintain the programs are less than the start-up costs. The transportation costs will be reduced as efficiencies can be realized by moving higher volumes of students between high schools or to OSU. The Dublin area is filled with human capital resources and a community focus on workforce development. The data from the students participating in the STEMs / Academy programs will help to garner additional community support. This can be used to build additional partnerships and develop local funding streams.

7. Describe any potential challenges or barriers with the mandatory professional development and Innovative Program requirements for the framework that you have selected. What strategies will your LEA/school implement to overcome these potential obstacles?

Professional Development: A challenge will be the volume of staff that will need training. The Academy model means that we will be training at all three high schools. The strategy we will use to address this issue is PLC model we already have in place. We will need assistance with designing PD that can be infused with the PLC structure.

Common Planning Time: With the economic set backs, Dublin City Schools is not hiring as many teachers. Instead we are paying teachers to take on additional classes. Depending on the building or content area, there will be great difficulty during the day to bring teachers together. The strategy we will use to begin addressing this issue is to designate the time prior to school starting as collaboration time. Dublin has changed its school start time for high school to begin later. This will provide more time for teachers to meet in their PLC's or other team configuration. We will need support with the development of a protocol for maximizing this collaboration time.

Integrated Lessons: It has not been an expectation for subject areas to develop integrated lessons or use inquiry based instructional practices (in areas other than science). Aligning lessons to real world experiences has been a 'work in progress' as we have implemented IB. To address these instructional issues we will need support in developing templates or protocols for teachers to use as they work together to change lesson designs.

Master Schedule and School Calendar: The Master Schedule will have been developed by the time the grant is awarded. It does not provide the common planning time necessary for collaboration or the caliber needed for Early College. Our school calendar does not match start/end dates with OSU, but we do match spring break and a portion of winter break. To address this issue, we will need to utilize more than one year to develop the partnerships with OSU and the school district community to build the approval for schedule and calendar changes.

Data Driven Practices: Using data has been a focus of the district for the past several years. However, we do not have efficient data collection/compilation system. To address this issue, we would need support on integrating the data points into our Master Manager system or identifying other data support systems.

Class size: Due to the nature of starting the different Academy's, there will be fewer Dublin students participating in the initial years. Although there will be METRO students, other Dublin teachers could view the student to teacher ratio as unfair. To address this issue, clear communication about the training, extra responsibilities and development workload that teachers in the academy take on will need to be shared.

**8.** How will the implementation of this Innovative Program increase college and career readiness of all students?

The STEM initiative will increase college and career readiness for all students grades K-12 through the increased rigor of the mathematics and science curriculum. The emphasis on the applied nature of these disciplines will increase the depth of understanding and vertical alignment of knowledge throughout the K-12 experience.

For participating students, the STEM initiative will provide a college level course experience for students while still in high school. The alignment to specific career interest areas and the ability to have a mentor/internship in that career field before graduating high school will help students understand what it means to be a professional in that career area. Students will also have the opportunity to build professional networks that can support them as they attain the required credentials and potentially once they are ready for employment.

9. Identify a timeline to achieve a successful implementation.

2011-12

Implement the Engineering Academy for Dublin and METRO students

Provide PD for leadership and grade 11/12 staff

Build community support for STEM begin work on master schedule

Build relationship with OSU

Collaborate with METRO School to develop the Biomedical Academy and Business Academy

Collect Data on Engineering Academy students

Develop Advisory Councils that include business partners

2012-13

Implement Biomedical and Business Academy for Dublin and METRO students

Continue Professional Development expand to more staff members

Continue building support with OSU

Build additional partnerships with area Engineering, Health/Medical and Businesses

2012-13 Continued

Collect data on all Academy students

Continue Advisory Councils that include business partners

2013-14

Implement all 3 Academies and open enrollment to other area districts

Continue Professional Development expand to more staff members

Continue building support with OSU

Build additional partnerships with area Engineering, Health/Medical and Businesses

Collect data on all Academy students

Continue Advisory Councils that include business partners

Develop understandings with other school districts to encourage non-Dublin students enrollment in the academies

2014-15

Implement all 3 Academies and open enrollment to other area school districts

Continue Professional Development expand to more staff members

Build additional partnerships with area Engineering, Health/Medical and Businesses

Collect data on all Academy students

Continue Advisory Councils that include business partners

Enroll students from other school districts into the academies

10. Why should your LEA/school be awarded an Innovative Programs grant?

Dublin City Schools should be awarded the STEM Innovative Program grant because the district is poised to build programs that can be supported by the community and open to other area school districts. The assets of the Dublin community can be shared in order to develop a diverse population of college and career ready graduates. The partnerships already developed can serve as a spring -board for encouraging the economic

growth and pipeline for future qualified employees that will be needed to sustain the economy of the state.

#### SECTION D

Please include LEA Name, IRN#, and proposed Innovation Program information at the top of this table. Include a breakdown of the annual expenditures anticipated in each budget category during each grant-year that equals the total dollar amount of the innovation program selected.

		0			
<b>Budget Categories</b>	FY2011	FY2012	FY2013	FY2014	Total
Salaries (100)		12,000	36,000	12,000	\$ 60,000
Retirement/ Fringe Benefits (200)		1,854	5,562	1,854	\$ 9,270
Purchase Services (400) *PSEO credit		5,146	50,000	55,000	\$ 110,146
Supplies (500)		4,000	6,438	5,146	\$ 15,584
Capital Outlay (600)		50,000	2,000	3,000	\$ 55,000
Other (800)	0	0	0	0	\$ 0
9. Total Costs	\$ - 0	\$ 73,000	\$ 100,000	\$ 77,000	\$ 250,000

RttT Innovative Programs grant applications may be found on the Ohio Department of Education website under Race to the Top at:

http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=694

Interested LEA/Schools are required to submit the requested grant information electronically to jay.keefer@ode.state.oh.us no later than Friday, May 20, 2011.

Questions may be directed to
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