



# Illinois State Board of Education

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State Superintendent of Education

**TO:** Eligible Applicants

**FROM:** Christopher A. Koch, Ed.D. *C. Koch*  
State Superintendent of Education

**DATE:** September 16, 2014

**SUBJECT: REQUEST FOR PROPOSALS (RFP):** Illinois Mathematics and Science Partnerships (IMSP): Illinois Science, Technology, Engineering, and Mathematics Network (I-STEM Network) Lead Partnership

## General Information

**Eligible Applicants:** An eligible applicant is a partnership that includes: (1) an engineering, mathematics, or science department of an institution of higher education (IHE); (2) a high-need local education agency (LEA); (3) a Regional Office of Education (ROE)/Intermediate Service Center (ISC); and (4) a business/industry/nonprofit (BIN) or for-profit organization with demonstrated effectiveness in improving the quality of mathematics and science teachers. This is a minimum requirement. The proposed Lead Partnership may include multiple IHEs including schools of education, additional LEAs, and additional BIN or for-profit organizations.

Federal legislation allows the state to designate which entity will serve as the fiscal agent. For the I-STEM Network Lead Partnership, the ROE/ISC from the funded eligible partnership will be named the fiscal agent. A complete description of the composition of the Lead Partnership and responsibilities of each entity is in the "Program Specifications" section of this RFP.

Priority points will be awarded to partnerships comprised of entities with demonstrated success in leadership of current or previous IMSP Projects or management of a statewide network or grant. (See Appendix H for scoring rubric.)

**Grant Award:** The anticipated grant to be awarded to the Lead Partnership in each year of the grant period may not exceed \$1.0 million (\$3.0 million total over a three-year period).

**Grant Period:** The initial grant period will begin no earlier than November 3, 2014, and will extend from the execution date of the grant agreement until September 30, 2015. Funding will be available via continuing application for two additional fiscal years (i.e., FY 2016 {October 1, 2015 through September 30, 2016} and FY 2017 {October 1, 2016 through September 30, 2017}) contingent upon a sufficient appropriation for the program and satisfactory progress of the grantee in the preceding grant period.

**Letter of Intent:** Eligible applicants are required to submit a non-binding letter of intent in order to be eligible to participate in this grant competition. A template for the letter of intent is provided as Attachment 11 and should be submitted electronically to Tara Bell at [tbell@isbe.net](mailto:tbell@isbe.net) no later than **Monday, October 13, 2014 at 5:00 PM CDT.**

**Application Deadline:** Mail the original application and two (2) copies and provide an electronic copy on a compact disc (CD) or flash drive to the *Illinois State Board of Education, 100 North First Street, C-215, Springfield, Illinois 62777-0001, Attn: Tara Bell, Illinois Mathematics and Science Partnerships*, to ensure receipt no later than **Monday, November 3, 2014 at 5:00 PM CDT.** The original, two (2) copies, and an electronic copy on a compact disc (CD) or flash drive must be received by the due date in order for the proposal to be considered. No late proposals, facsimile proposals, or electronic proposals will be accepted. Substantially incomplete proposals will not be considered for funding.

**I-STEM Network Lead Partnership Webinar and Online Bidder's Forum:** An I-STEM Network Lead Partnership Program webinar will take place on **Wednesday, September 24, 2014 at 1:00 PM CDT.** Reserve your Webinar seat now at <https://www1.gotomeeting.com/register/343377200>

An online bidder's forum about this RFP is available at <http://www.isbe.net/career/html/msp.htm>. All questions and answers will remain on the electronic forum until **Monday, November 3, 2014**. Applicants are encouraged to review the information posted on the forum before submitting their proposals.

Should the conditions of this RFP change prior to the deadline for submission of proposals; the Illinois State Board of Education (ISBE) will post the changes at <http://www.isbe.net/career/html/msp.htm>.

**Contact Person:** For more information about this RFP, contact Tara Bell at 217/524-4832 or by email at [tbell@isbe.net](mailto:tbell@isbe.net).

## Background

The state of Illinois has new learning standards for science and mathematics. In 2010, Illinois joined more than 40 states in a collaborative effort to raise learning standards and improve college and career readiness for all students with adoption of the Common Core State Standards (CCSS) in Mathematics and English Language Arts. Referred to as the New Illinois Learning Standards (New ILS), they establish clear expectations regarding what students should learn in K-12 mathematics.

In February 2014, ISBE adopted the Next Generation Science Standards (NGSS), referred to as the New Illinois Learning Standards (New ILS). The timeline of full implementation occurs during the 2016-2017 school year. The New ILS presents a new vision for K-12 science education that includes disciplinary core ideas, cross-cutting concepts, and scientific and engineering practices.

Title II, Part B, Sections 2201-2203, of the Elementary and Secondary Education Act (ESEA) authorizes the Mathematics and Science Partnerships (MSP) program as a means to improve teacher quality in these respective curricular areas. The purpose of the program is to increase the academic achievement of students in mathematics and science by enhancing the content knowledge and teaching skills of classroom teachers. The U.S. Department of Education (ED) provides relevant information about this program at <http://www.ed.gov/programs/mathsci/index.html>.

The federal legislation identifies five (5) criteria to support the purpose of the MSP program. The purpose of the program is to improve the academic achievement of students in the areas of mathematics and science by encouraging state education agencies (SEAs), IHEs, LEAs, elementary schools, and secondary schools to participate in programs that:

1. improve and upgrade the status and stature of mathematics and science teaching by encouraging IHEs to assume greater responsibility for improving mathematics and science teacher education through the establishment of a comprehensive, integrated system of recruiting, training, and advising mathematics and science teachers;
2. focus on the education of mathematics and science teachers as a career-long process that continuously stimulates teachers' intellectual growth and upgrades teachers' knowledge and skills;
3. bring mathematics and science teachers in elementary schools and secondary schools together with scientists, mathematicians, and engineers to increase the subject matter knowledge of mathematics and science teachers and improve these teachers' teaching skills through the use of sophisticated laboratory equipment and work space, computing facilities, libraries, and other resources that IHEs are better able to provide than the elementary schools and secondary schools;
4. develop more rigorous mathematics and science curricula that are aligned with challenging state and local academic content standards and with the standards expected for postsecondary study in engineering, mathematics, and science; and
5. improve and expand training of mathematics and science teachers, including training teachers in the effective integration of technology into curricula and instruction.

The IMSP Program has provided innovative, high-quality professional development opportunities for K-12 math and science teachers since 2005. IMSP has utilized two models for delivery of services to teachers: a graduate school model in which cohorts of teachers earned a master's degree in teaching mathematics or science and a Workshop Institute Program (WIP), which consists of an 80-hour summer workshop followed by institutes taking place during the school year with focused professional development on a specified topic. To date, there have been five rounds of WIP. The fourth round (WIP4)

which began in January 2012, focused on developing an understanding of the New ILS for mathematics for grades 6-12. The most recent grant (WIP5), which began January 1, 2013, provided professional development activities for teachers in grades 6-12 to assist with implementation of the New ILS.

Federal MSP legislation requires an engineering, mathematics, or science department of an IHE and a high-need LEA as the core entities comprising a partnership. However, multiple LEAs comprising the entire K-12 spectrum are also allowed. Additional entities are allowed and described at <http://www2.ed.gov/policy/elsec/leg/esea02/pg26.html>. Beginning in 2012, IMSP projects were required to include a business/industry/nonprofit (BIN) or for-profit entity as a partner. The purpose of this enhanced partnership was to engage stakeholders in supporting math and science teachers by providing access to greater field-based resources, as well as access to professionals engaged in industry. Teachers collaborating with BIN or for-profit partners can lead to opportunities for students to learn more about the skills necessary to be college- and career-ready. In addition, BIN and for-profit entities must also benefit from the partnership. Though the value of participation in the partnership may not be immediate, BIN and for-profit organizations should experience economic and workforce development from the research and talent pool that ensues. While each partnership may be unique in context and stakeholder groups, resources are available to provide examples of the characteristics or hallmarks of successful partnerships.

Some hallmarks of successful partnerships include the following (adapted from Chicago STEM Education Consortium's (C-STEMEC) "Implementing the Next Generation Science Standards: Hallmarks of a Fully Realized School System", which can be found at <http://c-stemec.org/wp-content/uploads/2013/10/hallmarks.pdf>):

- A partnership with colleges and universities that helps provide a high-quality education aligned with new learning standards is characterized by pre-service teacher preparation programs that are linked tightly with the actual expectations in the classroom with regard to curriculum and instruction;
- A partnership with colleges and universities that helps provide a high-quality education aligned with new learning standards is characterized by in-service professional development programs that are linked tightly with the actual experience of teachers in their classroom as they implement the standards;
- A partnership with informal institutions that helps provide a high-quality education aligned with new learning standards provides both classroom and extra-curricular opportunities to facilitate teachers' implementation of the standards;
- A partnership with families and communities that helps provide a high-quality education aligned with new learning standards is characterized by parents and others developing an appreciation of the level of rigor of their students' science education, and helps parents develop an appreciation of the beauty, wonder, and utility of science themselves; and
- A partnership with businesses that helps provide a high-quality education aligned with new learning standards provides resources and opportunities for the study of science, math, and engineering that are not available in a school setting alone.

Also addressed in the federal MSP legislation is the opportunity to provide professional development to K-12 math and science teachers. Providing math and science content-rich and research-based professional development is the central focus of the I-STEM Network Partnerships Program. An important measure of student achievement in the Network will be utilizing what students experience in mathematics and science as evidence of academic growth.

The central purpose of the MSP program is to provide professional development to teachers in order to increase their mathematics and/or science content knowledge and their pedagogical skills. The guiding

principle is that with deeper knowledge of the subject matter and understanding of effective instructional strategies, teachers will be able to impact their students' achievement in mathematics and science. To accomplish this goal, MSP projects work with a variety of teachers, across grades K through 12. Additionally, the program aims to increase the support structures in place for participating teachers by training teacher leaders and by promoting the instructional leadership of administrators ([http://ed-msp.net/images/public\\_documents/document/annual/MSP%20PP11%20Annual%20Final%20Report.pdf](http://ed-msp.net/images/public_documents/document/annual/MSP%20PP11%20Annual%20Final%20Report.pdf))

## **Purpose**

The purpose of this RFP is to identify a Lead Partnership for the IMSP I-STEM Network Program. The Network will function to provide equitable access to high-quality professional development and resources for Illinois K-12 math and science teachers. The I-STEM Network Program will be implemented in two (2) stages. In stage one (1), ISBE is releasing this RFP for the purpose of funding a single eligible partnership to be the IMSP I-STEM Network Lead Partnership. In stage two (2), an RFP will be released to fund multiple I-STEM Regional Partnerships to join the I-STEM Network. These Regional Partnerships will provide professional development through a Regional Workshop Institute Program (R-WIP) model utilizing math and science resources coordinated by the Lead Partnership. The RFP for the R-WIPs will be released subsequent to this RFP. Only partnerships with the capacity to lead and manage a statewide network and required deliverables described in this RFP should apply for the IMSP I-STEM Lead Partnership Program. Other interested partnerships will have an opportunity to play an important role in the I-STEM Network through the subsequent Regional Partnerships RFP.

Finally, it is expected that the IMSP I-STEM Network Program will include high-quality support and resources for teachers beyond the life of this grant. As a result, demonstrating sustainability of the I-STEM Network is a key component of the Lead Partnership.

## **Program Specifications**

### **Overview**

As noted in the "Background" section above, the successful applicant for this RFP will be an eligible Lead Partnership comprised of entities with a deep understanding of, and knowledge about, the New ILS, as well as demonstrated effectiveness in improving the quality of math and science teachers. The funded Lead Partnership will have the responsibility of ensuring that the goals of the I-STEM Network Program are met and that the deliverables of the program are implemented statewide.

### **I-STEM Network Program Goals:**

1. improve student performance in math and science through professional development and resource development for K-12 teachers;
2. develop classroom culture with learning opportunities for students and teachers by including high-quality research-based instructional materials such as ISBE Model Curriculum for Math and Science as well as others and providing support for the New ILS and *Framework for K-12 Science Education*;
3. manage the I-STEM Network comprised of several R-WIPs consisting of at least 1 (one) math and one (1) science partnership per area except Area I and Chicago Public Schools (CPS) which can have 2 (two) math and 2 (two) science partnerships per area due to size of population (see Appendix G for an Area map). The R-WIPs must support teacher's understanding of high-quality math and science instruction incorporating the New ILS; give teachers access to mathematicians, scientists, and engineers (along with their technologies and resources) in order to help them

- develop their individual knowledge, skills, and resources; and help high-need LEAs prepare their students to be positioned to be college- and career-ready in an innovative and globally competitive society;
4. promote strong teaching skills by increasing instructors' understanding and application of scientifically-based educational research appropriate to math and science teaching and learning; and
  5. build the capacity of math and science teacher leaders within a regional statewide context; assist IHE teacher education faculty and pre-service teaching candidates in understanding the vision and instructional shifts outlined in the New ILS and *Framework for K-12 Science Education*.

These goals form the basis for the following deliverables of the IMSP I-STEM Network Lead Partnership Program that the successful applicant will be expected to implement. Each of these required deliverables is more fully explained in the "Program Deliverables" section below.

As stated in the "General Information" section on page 1 of this RFP, the eligible applicant for the I-STEM Network Lead Partnership must include the following: an engineering, mathematics, or science department of an IHE; a high-need LEA; a ROE/ISC; and a BIN or for-profit organization. This is a minimum requirement. The proposed partnership may include multiple IHEs including schools of education, additional LEAs, and additional BIN or for-profit organizations. However, eligible entities are reminded that several regional partnerships will be distributed geographically across the state in phase two of the I-STEM Network and their expertise could be better-leveraged through such local partnerships. (See Appendix A for additional information about each entity in an eligible partnership.)

## **Program Deliverables**

### **Deliverable 1: Provide leadership and management for the statewide I-STEM Network and establish one (1) I-STEM Network Partnership**

In support of the I-STEM Network Program goals, the successful applicant will be required to provide leadership and oversight of the statewide I-STEM Network. In cooperation with ISBE IMSP staff, the funded partnership and ISBE will identify a qualified person to undertake the role of I-STEM Network Administrator. (See Appendix A for additional information about leadership and oversight of the I-STEM Network and the required qualifications and process of naming the statewide I-STEM Network Administrator.)

The IMSP I-STEM Network Lead Partnership provides leadership and management responsibilities that includes, but is not limited to, the following:

- **I-STEM Network Lead Partnership:** Development of a highly-effective, balanced partnership capable of leading the important statewide work described in this RFP. A detailed description of composition, requirements, and responsibilities of the partnership entities is included in Appendix A.
- **I-STEM Network Experts:** Mathematics and science capacity-building activities will be facilitated by national and state experts selected in collaboration between the funded Lead Partnership and ISBE IMSP staff.
- **I-STEM Network Steering Committee:** This committee will be appointed in collaboration between the funded Lead Partnership and ISBE IMSP staff. It will consist of representatives from a variety of stakeholder groups including entities such as partners, teachers, the external evaluator, the I-STEM Network Administrator, and ISBE IMSP staff. The committee will meet monthly to

plan, monitor, and recommend adjustments to the statewide I-STEM Network for the duration of the grant. (See Appendix A for additional information.)

- **I-STEM Network Capacity-Building:** Organize and support the production and/or identification of the I-STEM Network capacity-building resources described in Deliverables 2, 3, and 4 below.
- **I-STEM Network Fiscal Agent:** Management of federal funds for the Lead Partnership, as well as fiscal guidance and budgetary oversight for the R-WIPs according to ISBE policies and procedures. [http://www.isbe.net/funding/pdf/fiscal\\_procedure\\_handbk.pdf](http://www.isbe.net/funding/pdf/fiscal_procedure_handbk.pdf).
- **Collaboration with ISBE IMSP Staff:** The I-STEM Network Lead Partnership will fully collaborate with and provide necessary documentation to ISBE IMSP staff in order to maintain strong coherence within the statewide I-STEM Network, provide regular updates on progress, and align activities with related ISBE (and other state and national) initiatives coinciding to the overall goals of the grant program.
- **I-STEM Network Website:** An I-STEM Network website with social media components will be established and maintained throughout the duration of grant funding. This website must meet the standards outlined in Section 508 of the Rehabilitation Act as amended by the Workforce Investment Act of 1998, titled "Electronic and Information Technology." This website should allow for sharing of information about partnership activities in order to provide open access to information and resources provided by the I-STEM Network.
- **Promote Publishing and Presentation:** The Lead Partnership will promote sharing of research and resources by both publications and presentations through professional organizations, state collaborations, and research associations. This will highlight the innovative work undertaken by I-STEM Network leaders and participants.

### **Deliverable 2: Area Teacher Leaders (ATL)**

This RFP requires the Lead Partnership to recruit and establish a cohort of geographically equitable K-12 Area Teacher Leaders (ATL). The ATL will be a group of at least 18 experienced math and science educators from across the state that will be trained to co-facilitate professional development and supportive services in the R-WIPs in their Area. One (1) ATL for math and one (1) ATL for science are required for each Area. However, in Area I and Chicago Public Schools (CPS), two (2) ATL for math and (2) ATL for science can be recruited due to size of population.

The ATL will undergo specialized training during the 2014-2015 academic year (Spring Semester) which will consist of professional development in science and math content, ISBE Model Math Curriculum, and ISBE Model Science Curriculum, as well as facilitation skills. Moreover, the I-STEM Network Lead Partnership will work collaboratively with ISBE to design and deliver professional development for the ATL in the Area Teacher Leaders Academy and Cohort I in the R-WIPs as described in Appendix B. Utilizing mathematics and science experts identified by ISBE and the I-STEM Network Steering Committee, the funded Lead Partnership will guide the identification and development of professional development resources to provide support to the K-12 mathematics teachers in the IMSP I-STEM Network. Finally, beginning in summer 2015, the ATL will co-facilitate the R-WIPs attended by the first groups of K-12 teacher participants in the Regional Partnerships, known as Cohort I. (See Appendix G for additional information on the composition of the ATL).

### **Deliverable 3: Development of IMSP I-STEM Network Resources**

High-quality resources are an important key to providing support to K-12 math and science teachers as they work toward preparing their students for college and career readiness. In support of I-STEM Network Lead Partnership Program Goals 1 and 2, the I-STEM Network Lead Partnership will deliver high-quality, capacity-building resources and research-based professional development activities to

support math and science teachers as they implement the New ILS. These activities will be based on *Learning Forward Standards*: <http://learningforward.org/standards/#.U-KcgGAo6Uk> ).

An important component of the I-STEM Network will be utilizing state and national resources for math and science. These resources include, but are not limited to, the ISBE Model Curricula described below.

### **ISBE K-8 Mathematics/High School Integrated Mathematics 1, 2 and 3 Model Curriculum**

ISBE has led the process for development of K-8 and high school Integrated Model Math Curriculum to aid school districts and teachers in implementing the New ILS. Currently, this model is being piloted by several teachers across the state in order to design and refine the model units and lessons. The following link provides additional information about the development of the ISBE Curriculum Models. See [http://www.isbe.net/common\\_core/htmls/math-models.htm](http://www.isbe.net/common_core/htmls/math-models.htm).

### **ISBE K-12 Model Science Curriculum**

ISBE has led the process for development of a Model Science Curriculum Project for grades 6-12 to aid school districts and teachers in implementing the New ILS. Currently, the grade 6-12 science team is working on curriculum development led by national experts Dr. Joe Krajcik, Dr. Brian Reiser, and Michael Novak. The I-STEM Network Lead Partnership will work collaboratively with ISBE and these experts in utilizing these resources.

### **Deliverable 4: Planning, Development, and Delivery of High-quality Professional Development**

The I-STEM Network Lead Partnership will design and deliver high-quality capacity-building professional development activities designed to improve student achievement for K-12 math and science students enabling them to be better prepared for college and careers.

This will be accomplished by “promoting strong teaching skills for mathematics and science teachers and teacher educators, including integrating reliable scientifically based research teaching methods and technology-based teaching methods into the curriculum”. Further, “establishing and operating programs to bring mathematics and science teachers into contact with working scientists, mathematicians, and engineers, to expand such teachers’ subject matter knowledge of and research in science and mathematics”.

*Mathematics and Science Partnerships, SEC. 2202, Part C*

Deliverable 4 describes required activities designed to deliver high-quality professional development to educators participating in the I-STEM Network Program.

### **I-STEM Network Math and Science Area Teacher Leader Academy**

The I-STEM Network Lead Partnership will work with ISBE IMSP staff, in addition to science and mathematics experts to design and deliver capacity-building activities to the K-12 math and science ATL during the 2014-2015 academic year (Spring Semester). These ATL will then co-facilitate the R-WIPs starting in the summer of 2015. The ATL are expected to make a long-term commitment to the I-STEM Network as they will be utilized throughout the entire three-year grant period. (See Appendix G for more information on the ATL.)

### **IMSP I-STEM Regional Workshop Institute Program (R-WIP)**

The IMSP I-STEM Lead Partnership, in collaboration with the Regional Partnerships, will design and implement effective professional development that will occur during summer workshops and academic year institutes in the R-WIPs. This will ensure coherence and consistency in both messages and resources delivered throughout the I-STEM Network.



### *Summer Workshops*

By definition, summer workshop requirements include professional development activities that are conducted for a period of not less than two weeks and consist of a minimum of 80 hours; and include, as a component, a program that provides direct interaction between classroom teachers and university faculty. K-12 teachers in the I-STEM R-WIPs will participate in capacity-building professional development activities through a synchronous system. This system will feature consistent, high-quality content coordinated by the I-STEM Network Lead Partnership, as well as other stakeholders.

### *Institute Dates*

Also by definition, institute dates are intended to be follow-up trainings during the academic year for a period of not less than four (4) consecutive or nonconsecutive days and a minimum of four (4) hours in duration. If the follow-up training is for teachers in rural school districts, the follow-up training may be conducted through distance learning. Institutes will be led by the R-WIPs, as well as the Core. One (1) or more of the institute days can be used to participate in the annual IMSP I-STEM Network Conference described below in Deliverable 5.

### **Building Capacity for Effective Science Instruction**

The IMSP I-STEM Network will use the Next Generation Science Exemplar System for Professional Development (NGSX), a high-quality, content-rich professional development experience. NGSX is a research project funded by the National Science Foundation and will be used as the featured component for professional development in science for the ATL and participants in the R-WIPs. This research-based online professional development system is designed to engage educators in implementing three dimensional learning as described in the *Framework for K-12 Science Education*. Educators will gain a deep understanding of the implications of the performance expectations from the New ILS. NGSX consists of eight professional development units that have been piloted in nine states including Illinois (Chicago) and is the featured professional development system for science in the current Connecticut MSP program. (See Appendix D and <http://www.ngsx.org/> for additional information.)

### **Building Capacity for Effective Math Instruction**

The IMSP I-STEM Network will use Intel® Math, a high-quality content-rich professional development course. The Intel® Math course is a widely-used, 80-hour professional development course focused on developing teachers' understanding of K–8 mathematics. The Intel® Math course is a scaled-up adaptation of the Vermont Mathematics Initiative (VMI), a content-intensive professional development program developed by Dr. Kenneth Gross, Professor of Mathematics and Education at the University of Vermont. Intel® Math provides 80 hours of professional development in mathematics for K-8 teachers (teacher participants), in the form of a course co-facilitated by a practicing mathematician and a mathematics educator. The course “is designed to close the gap between insufficient mathematics training of elementary school teachers and the demands of the contemporary mathematics classroom” and places emphasis on deepening the teacher participants' understanding of core K-8 mathematics concepts. (See Appendix E and [http://download.intel.com/education/math/intel\\_math.pdf](http://download.intel.com/education/math/intel_math.pdf) for additional information).

### **Deliverable 5: Evaluation and Accountability Plan, and Reporting Requirements**

The Lead Partnership must design a plan for the evaluation of the statewide I-STEM Network Program that measures the implementation and impact of the goals of the I-STEM Network Program. Program evaluation refers to the IMSP I-STEM Network Lead Partnership and I-STEM R-WIPs. The evaluation plan must include an experimental or quasi-experimental design conducted by an external evaluator under subcontract to the successful IMSP I-STEM Lead Partnership fiscal agent.

The external evaluator selected must be qualified to conduct a program evaluation that includes the following:

- is a rigorous evaluation as described in the Abt Associates' "A Guide for Reporting on Rigorous Evaluations for the U.S. Department of Education Mathematics and Science Partnerships (MSP)", which can be found at [http://www.edmsp.net/public\\_documents/document/resource/Guide%20for%20Reporting%20on%20MSP%20Evaluations.pdf](http://www.edmsp.net/public_documents/document/resource/Guide%20for%20Reporting%20on%20MSP%20Evaluations.pdf);
- meets deadlines for state and federal reporting; and
- provides technical support to the I-STEM Network and R-WIP participants for data collection and reporting.

The proposed evaluator must have experience with federally-funded grant evaluations that employ experimental or quasi-experimental designs. Further, the entity the Lead Partnership selects to provide evaluation services must have no direct or indirect affiliation to the Lead Partnership entities.

Evaluation Deliverables: The external evaluation will result in the completion of the I-STEM Network Program State Report, which includes, but is not limited to:

- changes in I-STEM teacher-participant content knowledge and pedagogical content knowledge;
- professional development quality, determined from site visit protocol, surveys, and other data collection strategies that include measures of satisfaction and changes in belief of members of the partnership (participating teachers and representatives of IHEs, ROEs/ISCs, and BIN or for-profit organizations) regarding high-quality math and science instruction;
- implementation of high-quality math and science instruction in the participant's classrooms, including, but not limited to, submission of lessons, observational data from classroom visits, and increased student content knowledge; and
- sustainability, as measured in terms of the establishment of an infrastructure that is likely to successfully provide support to teachers beyond the grant funding period.

Additionally, the external evaluator is required to create a profile report and provide a thorough analysis of each IMSP I-STEM Partnership in the network. The external evaluator will be expected to provide technical support (e.g., via webinars, conferences, individually) to the Lead Partnership and the Regional Partnerships pertaining to data collection as it relates to state and federal expectations. This includes assisting in the development of the Annual Performance Report (APR) required of all MSP grantees (see Appendix C).

#### **Deliverable 6: IMSP I-STEM Network Conference**

The IMSP I-STEM Network Lead Partnership will coordinate an annual statewide conference for math and science. The purpose of this conference is to share work from the R-WIPs, statewide I-STEM Network, as well as national, state, and local resources designed to assist with implementation of the New ILS. State and national leaders in math and science education, educational theory, and other experts should be part of the conference, as well as participants in the I-STEM Network and R-WIPs.

The funded Lead Partnership, in collaboration with ISBE, will identify one person to Chair the Committee to coordinate the I-STEM Network Annual Conference. The date and location for the conference will be collaboratively established by ISBE, the Lead Partnership, and R-WIPs. Identifying funding for continuing the I-STEM Network Conference beyond the life of the grant is a priority for the Lead Partnership, as well as the Conference Committee Chair.

## **General Requirements**

**Comprehensive Needs Assessment:** The federal MSP legislation requires the results of a comprehensive assessment of the teacher quality and professional development needs of any schools, LEAs, and SEAs that comprise the eligible partnership with respect to the teaching and learning of mathematics and science. This comprehensive needs assessment must be included in proposals submitted for the I-STEM Network Lead Partnership RFP.

Proposals must adequately document the needs of the Lead Partnership's LEA(s) to improve the provision of mathematics and science instruction within their respective LEA(s). The data collected, including student achievement data, must be thoroughly analyzed and used to propose a program that is aligned to the I-STEM Network Program goals, and addresses the gaps or weaknesses in the participating teachers' content and pedagogical knowledge in mathematics and science. Analysis of state-level needs as determined by achievement data and research should also be included. The state-level analysis may include findings that can be applied to the I-STEM Network.

**Use of Scientifically-based Research, Data, and Assessments:** As indicated above, the MSP federal legislation requires that the project activities be predicated on a review of scientifically-based research with the expectation of improving student academic achievement and strengthening the quality of the mathematics and science instruction. The review of literature must represent a scholarly work product, must include citations from at least eight (8) publications, and must be written in APA format. (See *Publication Manual of the American Psychological Association*, (6<sup>th</sup> ed.).

**Equitable Participation of Private Schools:** The equitable participation requirements in Subpart 1 of Part E of Title IX of the Elementary and Secondary Education Act (ESEA) apply to the IMSP programs authorized under Title II, Part B of that act. Private school participation requirements cannot be satisfied simply by inviting private schools to participate in programs and/or activities designed for public school students, teachers, or other educational personnel. Consultation must occur during the planning process, as well as during the implementation of the grant. Consultation must occur before the school district makes any decisions that affect the opportunities of eligible private school children, teachers, and other educational personnel. For more information pertaining to equitable participation, district personnel should read pages 5 through 9 of the guidance titled, "Equitable Services for Eligible Private School Students, Teachers, and Other Educational Personnel" found at <http://www.ed.gov/policy/elsec/guid/equitableservicesguidance.doc>. Applicants must have all private schools that are eligible to participate in the grant sign Attachment 12.

## **Fiscal Information**

The I-STEM Network Lead Partnership Program is a three-year grant program. One grant of up to \$3.0 million will be awarded for the three-year grant cycle, with up to \$1.0 million being awarded in each year of the grant through an application process.

Funding may be used for personnel expenses and other associated project costs, as described below. Applicants are advised to refer to the *State and Federal Grant Administration Policy, Fiscal Requirements and Procedures* handbook found at [http://www.isbe.net/funding/pdf/fiscal\\_procedure\\_handbk.pdf](http://www.isbe.net/funding/pdf/fiscal_procedure_handbk.pdf) when preparing their proposal.

**Allowable Expenditures:** (FY 2015 – Year 1) may include the following:

- five (5) percent (maximum) Administrative Costs;
- ten (10) percent (maximum) External Evaluation Costs;
- Reasonable and customary costs for the salary, benefits, and/or stipends and travel to be paid for the 1.0 Full-time Equivalent (FTE) statewide I-STEM Network Administrator;
- Reasonable and customary costs for the salary, benefits, and travel for a statewide I-STEM Assistant who will also serve as the I-STEM Network Conference coordinator and assist with webpage maintenance;
- Technology support costs, including creating and maintaining the webpage;
- Reasonable and customary costs for the salary, benefits, and/or stipends and travel to be paid for the ATL;
- Math resources including Intel® Math expenses, various experts, and approved materials for the ATL;
- Science resources including NGSX expenses, various experts, and approved materials for the ATL; and
- Other purchased services (allowable expenditures, i.e., conference, travel, etc.) as needed.

### **General Requirements**

When formulating their budgets, applicants should limit proposed costs as follows:

- IMSP funds must be used to supplement, not supplant, local funds that would otherwise be used for activities that are authorized by MSP; and
- Travel expenses will be reimbursed subject to travel cost guidelines published by the Governor’s Travel Control Board in the Reimbursement Schedule of the Travel Guide for State Employees, and any annual changes therein, found at <http://www2.illinois.gov/cms/Employees/travel/Pages/default.aspx>.

For purposes of compliance with Section 511 of P.L. 101-166 (the “Stevens Amendment”), applicants are advised that one hundred (100) percent of the funds for this program are derived from federal sources. The total amount of federal funding involved for the three-year grant will not exceed \$3.0 million.

### **Proposal Format**

Each proposal must be submitted in the format outlined below. Please use the following as a checklist in assembling your completed proposal. **Incomplete proposals will not be reviewed.** Applicants will not be allowed to correct deficiencies and resubmit their applications for consideration.

Please ensure that all pages requiring a signature(s) are signed by the appropriate individual(s). Assemble the proposal in the order each section is presented below, and number pages (starting with the cover page) sequentially. When completed, staple the proposal in the upper left corner (no covers or bindings). Official ISBE forms are **required** and are available as PDF files found at <http://www.isbe.net/career/html/msp.htm>.

1. **Cover Page** (Attachment 1): To be completed by the applicants and signed by the officials authorized to submit the proposal and bind the applicants to its content.
2. **Partnership Member Commitment Form** (Attachments 2A, 2B, 2C, and 2D): To be completed by each entity (LEA, IHE, ROE/ISC, and BIN or for-profit organization, as applicable) in the

proposed partnership and signed by the officials authorized to submit the proposal and bind the applicant to its content. Duplicate as needed.

3. **Lead Partnership Member Information Form** (Attachment 3): To be completed by the project coordinator and include information for each entity in the proposed partnership. Duplicate as needed.
4. **Abstract:** Provide a summary of the proposal narrative highlighting the partnership, I-STEM Network deliverables, goals, and scope of work. (250 word maximum).
5. **I-STEM Network Program Narrative:** To be completed in accordance with the “Narrative Requirements” section of this RFP. The proposal narrative may not exceed forty (40) pages, as specified in the “Narrative Requirements” section below.
6. **FY 2015 Budget Summary** (Attachment 4): Must be submitted on the form provided and signed by the official authorized to submit the proposal. For planning purposes, the proposal may include FY 2015 and FY 2016 Budget Summary and Budget Summary Breakdown information. The budgets submitted for planning purposes should be clearly identified with the appropriate FY and may be submitted in Word or Excel format. Duplicate as needed.
7. **FY 2015 Budget Summary Breakdown** (Attachment 5): Must include descriptions of the anticipated expenditures, correlated to the line items set forth on the Budget Summary. If available for the proposal, include the names of the individuals to be assigned to the positions described in the narrative. Must include subcontract information, if applicable (see item 7 of the document titled Program-Specific Terms of the Grant (Attachment 6)).
8. **Certifications and Assurances:** Each applicant, *including each entity that is participating in the partnership*, is required to submit the certifications and assurances forms listed below and attached to this RFP. For LEA partners, the certifications and assurances must be signed by the district superintendent, and for all other partners, they must be signed by the official legally authorized to submit the proposal and to bind the applicant to its contents. As part of the proposal, the Lead Partnership must submit signed certifications and assurances for each entity participating in the Regional Partnerships that receives any IMSP I-STEM Network funds. Duplicate as needed.
  - a. Program-Specific Terms of the Grant (Attachment 6)
  - b. Certifications and Assurances, and Standard Terms of the Grant (Attachment 7)
  - c. Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion – Lower Tier Covered Transactions (Attachment 8)
  - d. Certifications Regarding Lobbying and Lobbying Activities (Attachment 9, 9A, 9B, and 9C)
  - e. Federal Funding Accountability and Transparency Act (FFATA) (Attachment 10)
  - f. General Education Provisions Act (GEPA) (Attachment 13)
9. **I-STEM Network Program Equitable Participation of Private Schools** (Attachment 12): This form must be completed and signed by each private school within the school district boundaries of partnership member school districts. Duplicate as needed.

**10. Appendices:** Include with the proposal the following appendices:

- a. Roles/Timeline: Provide a chart describing the roles of the proposed participants, their duties and responsibilities, and a timeline of events and activities;
- b. Résumés/Curriculum Vitae: Include brief résumés/curriculum vitae of each member of the partnership team; and
- c. Meeting Documents (Optional): Include documents, such as meeting agendas and sign-in sheets, to provide evidence of collaborative planning.

### **Narrative Requirements for the I-STEM Network Program**

Applicants must provide the following information in the order presented below. Please refer to the "Program Specifications" section of this RFP and any relevant appendices when completing the proposal narrative and provide evidence of meeting each of the requirements specified in the relevant section below. Total must not exceed 40 pages, at least 1.5 line spaced, 12 point font, with 1 inch margins except in tables/charts.

**I. Literature Review/Needs Assessment** (maximum of ten (10) pages)

**A. Review of Scientifically-based Research**

Discuss and cite the current body of scientifically-based research relevant to the goals of the proposed I-STEM Network Program. This literature review should explain how the proposed activities are expected to improve student academic achievement and strengthen the quality of math and science instruction utilizing the ISBE Model Mathematics and Science Curriculum, the vision of the Framework and NGSS-aligned curriculum. The review of literature must represent a scholarly work product, must include citations from at least eight (8) publications representing research in math and science education, and must be written in a format outlined in the American Psychological Association (APA) Manual, 6<sup>th</sup> Edition.

**B. Comprehensive Needs Assessment** (including local and state/national needs analysis)

Describe the process used to conduct the comprehensive assessment of teacher quality and professional development needs of the high-need LEA(s) proposed in the I-STEM Network Lead Partnership. Indicate the data analyzed to determine need. Summarize the results of the needs assessment and how that information was used to develop the proposed project. This section must include at least the following information.

- Specific gaps or weaknesses in teacher math and science content and pedagogical knowledge, as related to the I-STEM Network Lead Partnership Program goals.
- Evidence that the schools and LEA(s) have populations of students that are under-represented and under-served.
- Relevant student achievement and performance data.
- Analysis of state and national level needs, as determined by achievement data and research, should be included. The state and national level analysis may include findings that can be applied to the strategies to strengthen a statewide support system such as the I-STEM Network.

**II. I-STEM Network Lead Partnership Statewide Structure, Qualifications, and Capacity** (maximum of ten (10) pages)

- A.** Describe the proposed Lead Partnership entities and the qualifications of the personnel who will be responsible for the development and implementation of the I-STEM Network. (See Appendix A for partnership responsibilities.)

- B. Describe the qualifications of proposed Lead Partnership entities that exemplify the capacity to lead the development of the components of this program.
- C. Describe the qualifications of proposed Lead Partnership entities with the capacity and outreach to deliver high-quality professional development statewide and including eligibility for any priority points.
- D. Describe the process that will be employed to develop and grow a highly-effective partnership that includes active engagement by all of the members.
- E. Describe the statewide recruiting process used to find and train math and science teachers for the various roles such as the Network Administrator, Network Assistant, ATL, Steering Committee Members, etc.
- F. Describe the principles that will be employed to ensure the steering committee will be effective in guiding, monitoring, and suggesting course adjustments necessary for successful statewide implementation and execution of the I-STEM Network.

**III. I-STEM Network Program Deliverables** (maximum of fifteen (15) pages)

A. I-STEM Network ATL Academy

Describe proposed activities that will support the 18 ATL in the ATL Academy including proposed logistics, resources, and strategies. This will also include coordinating the implementation of NGSX and Intel® Math with their respective representatives. Extensive time should also be spent on the Illinois Model Math Curriculum and the Illinois Model Science Curriculum. Include specific activities which will also develop the facilitation and presenting skills of the ATL.

B. Regional Workshop Institute Program (R-WIP)

Eligible applicants will propose the activities and logistics to be included in the 2015-2017 R-WIPs. This will include proposing professional development resources such as NGSX and Intel® Math, along with the ISBE Model Math Curriculum and the ISBE Model Science Curriculum. Also describe how the ATL will work with the R-WIPs to co-facilitate the summer workshops and school year institutes throughout the state.

C. Statewide Conference and Website with other Electronic Resources

Propose activities to deliver an annual statewide I-STEM Network conference, along with development of an I-STEM Network website and other electronic resources available for all Illinois teachers.

**IV. I-STEM Network Program Evaluation and Accountability Plan, and Reporting Requirements**

(Maximum of five (5) pages)

A. Identify the entity that will serve as the external evaluator and detail the qualifications of that entity, and any staff assigned to the evaluation, including any work the entity has done with statewide educational and federally-funded programs. Describe the proposed evaluation framework and plan.

B. Provide the proposed strategies for the ongoing assessment of the LEA(s) and for determining the needs of the other partners, to include the data to be collected.

**V. Sustainability Plan** (maximum of five (5) pages)

Clearly outline how the partnership program will be sustained and supported during and after the grant expires. Discuss how the R-WIPs will continue to impact student achievement in K-12 mathematics and science. If needed, clearly describe the collaborative plan to maintain program participants, objectives and activities through the ROE/ISC consolidation July 1, 2015. More information about ROE/ISC consolidation is found here:

<http://www.isbe.net/regionaloffices/html/consolidation.htm>

## Criteria for Review and Approval of Proposals

Each proposal submitted will be evaluated in accordance to the criteria listed below by an expert panel of external reviewers. The panelists will carefully consider the extent to which each applicant has provided evidence that the proposed project is of sufficient quality and scope to carry out the purposes of the I-STEM Network Lead Partnership effectively.

Refer to Rubrics for scoring of I-STEM Network Proposals in Appendix H. Total possible points are 100 with the possibility of five (5) additional priority points. Listed below is the allocation of points (See Appendix H for the complete scoring rubric):

- I. Literature Review and Needs Assessment (15 points)
  - a. The review cites scientifically-based research that aligns effective professional development to mathematics and science teaching and learning as previously described in this RFP. The relevance of the reports cited and conclusions drawn to the proposed program must be made clear in the review. The review must also include citations from at least eight (8) publications and must be written in APA format.
  - b. The applicant has adequately documented the needs of the participating LEA(s) to improve the provision of mathematics and science instruction based on the New ILS for its students in kindergarten through grade 12. The data collected, including student achievement data, have been thoroughly analyzed and used to propose a program that is aligned to the I-STEM Network Program goals, and addresses the gaps or weaknesses in the participating teachers' content and pedagogical knowledge in mathematics and science.
  - c. The applicant has adequately described the documented needs of math and science teachers across the state and/or nationwide to improve math and science instruction based on the New ILS and this information has been used to propose the I-STEM Network project.
- II. The I-STEM Network Lead Partnership Structure, Qualifications, and Capacity (20 points)
  - a. The eligible partnership entities have demonstrated sufficient qualifications necessary for successful implementation of all components of this RFP especially for successful delivery of a multi-year statewide federal project
  - b. The eligible partnership entities have demonstrated the experience necessary for successful implementation of all components of this RFP.
  - c. The eligible partnership has demonstrated the overall capacity necessary for successful implementation of all components of this RFP, especially considering the statewide responsibilities.
  - d. The proposal describes the composition and role that will be established for an effective steering committee.
- III. I-STEM Network Program Deliverables (30 points)
  - a. The proposal provides strong evidence of a plan to implement effective research-based, capacity-building activities that will likely lead to teachers developing a deeper understanding of math and science content and pedagogy, aligned to the New ILS.
  - b. The proposal provides strong evidence of a plan to implement effective research-based, capacity-building activities that will likely result in measurable improvements in student achievement.
  - c. The proposal shows the partnership's capacity to successfully execute logistics and support the work of the math and science model curriculum projects along with delivering NGSX and Intel® Math.



- d. The proposal fully describes a high-quality plan to recruit K-12 math and science teacher leaders for the ATL role and then deliver an ATL Academy each spring that includes training in math and science content ISBE resources and facilitation and presentation skills.
  - e. The proposal includes a clear description of the plan to deliver high-quality professional development and math and science resources based on the New ILS to the Regional Partnerships for the R-WIPs each summer and during the school year institutes.
  - f. The proposal includes a description of the capacity to execute a statewide conference along with the development of website and other electronic resources in support of the goals of the I-STEM Network.
- IV. The I-STEM Network Program Evaluation and Accountability Plan (15 points)
- a. The design of the evaluation sufficiently demonstrates rigorous evaluation (defined by federal MSP) which will clearly measure the quality of the partnership, participants change in content knowledge and pedagogy, along with measuring any changes in student achievement.
  - b. The proposed external evaluator has a high-quality plan and the staff, experience, and other resources that will be necessary to conduct site visits and provide appropriate technical support to the R-WIPs.
  - c. The proposed external evaluator describes sufficient successful experience in preparing and submitting state and federal reports for statewide K-12 professional development projects in a timely manner and with fidelity.
- V. I-STEM Network Program Sustainability Plan (10 points)
- a. The partnership provides convincing evidence to ensure that the resources of the I-STEM Network continue to have a positive impact on math and science teaching and learning statewide after the three-year grant period.
  - b. A clearly articulated plan is described for maintaining the partnership entities throughout the full three year grant period. The plan includes evidence that all entities were involved. If needed, the plan specifically describes how the partnership will maintain program participants, objectives and activities of the partnership through the ROE/ISC consolidation July 1, 2015
- VI. Overall I-STEM Network Budget (5 points)
- a. The partnership budget shows the allocation of partnership resources as customary and reasonable in terms of distribution, scope, and accuracy, in addition to being in alignment with the partnership's goals and the participants' needs.
- VII. Overall High-Quality I-STEM Network Plan for Statewide Delivery (5 points)
- a. The proposal describes a clear, well-thought-out plan by committed partners to deliver a successful statewide systemic, multi-year federal professional development project focusing on high-quality math and science content, aligned to the New ILS, in which hundreds of teachers will participate and their students will benefit.
- VIII. Possible Priority Points (5 points)
- See Appendix H for description of how Priority Points will be awarded.

## IMSP I-STEM Network Lead Partnership

### Partnership Composition

An eligible partnership includes: (1) an engineering, mathematics, or science department of an institution of higher education (IHE); (2) a high-need local education agency (LEA); (3) a Regional Office of Education (ROE)/Intermediate Service Center (ISC) and (4) a business/industry/nonprofit or for-profit organization with demonstrated effectiveness in improving the quality of mathematics and science teachers. The eligible partnership may include multiple IHEs including schools of education, additional LEAs, and additional BIN or for-profit organizations.

Federal MSP legislation allows the state to designate which entity will serve as the fiscal agent. For the I-STEM Network Lead Partnership, the ROE/ISC from the funded eligible partnership will be named as the fiscal agent.

### High-need Local Education Agency(s) (LEA) encompassing K-12 grade students

For purposes of this RFP, an eligible high-need LEA is one or more K-12 district(s) identified as meeting each of the following three (3) criteria:

- Annual or trend data from the Illinois Standards Achievement Test (ISAT), norm-referenced tests, and/or criterion-referenced tests that show achievement in mathematics and/or science is falling below fifty (50) percent of students meeting or exceeding the Illinois Learning Standards (ILS), as disaggregated by factors such as socio-economic, gender, ethnicity, etc.
- Minimum of fifteen (15) percent of the children served by the LEA are from low-income families, or 6,500 children served by the LEA are from low-income families.
- The LEA struggles with teacher quality, such as not all teachers of mathematics and science hold full or appropriate endorsements, or they are placed in teaching assignments that are beyond their expertise and experience levels.

The I-STEM Network Lead Partnership must have designated at least one high-need LEA that covers K-12 grade. The partnership may identify additional high-need LEAs to be members of the partnership and each must commit to the required activities for participation described in this RFP and in the partnership member commitment forms (Attachments 2 A-D).

One (1) requirement of the named high-need LEA is to meet equitable participation requirements in Subpart 1 of Part E of Title IX of the Elementary and Secondary Education Act (ESEA) that apply to the IMSP programs authorized under Title II, Part B of that act. Private school participation requirements cannot be satisfied simply by inviting private schools to participate in programs and/or activities designed for public school students, teachers, or other educational personnel. Consultation must occur during the planning process as well as during the implementation of the grant. Consultation must occur before the school district makes any decisions that affect the opportunities of eligible private school children, teachers, and other educational personnel. For more information pertaining to equitable participation, district personnel should read pages 5 through 9 of the guidance titled, "Equitable Services for Eligible Private School Students, Teachers, and Other Educational Personnel" found at <http://www.ed.gov/policy/elsec/guid/equitableservicesguidance.doc>. Applicants must have all private schools that are eligible to participate in the grant sign Attachment 12.

### **K-12 Area Teacher Leaders (ATL)**

Described in Deliverable 2, this RFP requires the Lead Partnership to recruit and establish a cohort of 18 K-12 Area Teacher Leaders (ATL). This group of teachers are the required teacher participants for the Lead Partnership and will be the focus of teacher growth measures in the federally-required Annual Performance Report (APR), an important component of overall program evaluation (See Appendix G for more information about ATL.).

As described in the U.S. Department of Education (ED) Mathematics and Science Partnerships Laws & Guidance, grant activities may include:

Establish and operate mathematics and science institutes, including follow-up training, for elementary school and secondary school mathematics and science teachers that shall;

- relate directly to the curriculum and academic areas in which the teacher provides instruction, and focus only secondarily on pedagogy;
- enhance the ability of the teacher to understand and use the challenging State academic content standards for mathematics and science, and to select appropriate curricula; and
- train teachers to use curricula that are: (1) based on scientific research; (2) aligned with challenging State academic content standards; and (3) object-centered, experiment-oriented, and concept and content based. *ESEA MSP Title IIB FAQs*

<http://www2.ed.gov/programs/mathsci/faq.html>

### **Institution of Higher Education (IHE)**

MSP federal legislation requires membership in the partnership of faculty from an engineering, mathematics, or science department of an IHE. The I-STEM Network Program may also include multiple IHEs, including schools of education, but potential IHE partners could also be more involved with the R-WIPs that will be formed across the state.

The IHE partner(s) is expected to bring a high level of disciplinary and pedagogical content expertise, research, and knowledge of best practice to the partnership. In order to meet the IHE partnership federal requirement, faculty from an engineering, mathematics, or science department must be included. Additionally, faculty from schools of education should also play a prominent role in the planning and delivery of I-STEM resources and support. Science, technology, engineering, and mathematics (STEM) faculty from community colleges can be included in the partnership as well. Along with the BIN and for-profit partner(s), IHEs will play an important role in providing access to scientists, mathematicians, STEM faculty, and their sophisticated facilities and equipment (I-STEM Network Program Goal 3).

Previous IMSP programs have required cross-campus collaboration in order to provide high-quality professional development for K-12 math and science teachers. It is expected that the I-STEM Network Program can enhance previous levels of cooperation by also including community colleges as well as multiple IHEs by being a partner in the statewide I-STEM Network or in the local R-WIPs.

### **Regional Office of Education (ROE)/Intermediate Service Center (ISC) Fiscal Agent**

As previously stated, federal legislation allows the state to designate which entity will serve as the fiscal agent. For the I-STEM Network Lead Partnership, the ROE/ISC from the funded eligible partnership will be named as the fiscal agent. The ROE/ISC will provide leadership and support to the partnership in many capacities. The selection of an ROE/ISC with demonstrated experience in successful management of an IMSP grant program is essential to the realization of the I-STEM Network Program. Further experience in statewide systemic delivery of professional development to K-12 educators is also preferred. Further, ROEs/ISCs have direct lines to all LEAs and have a clear understanding of the needs

of teachers in their respective areas. This positive relationship will be very important in recruiting and nurturing teachers in the I-STEM Network R-WIPs.

Managing the I-STEM Network Lead Partnership and Regional Partnerships' budgets and expenditure reports will be a critical task assigned to the ROE/ISC. Thorough knowledge of federal grant rules and procedures is imperative along with demonstrating statewide capacity, accuracy, and long-term stability in fiscal management.

### **Business/Industry/Nonprofit (BIN) and For-profit Organizations**

As described in the "Background" section of this RFP, the inclusion of a BIN or for-profit partner began with the IMSP WIP 4 Program. This requirement improved the partnerships and the entire program by bringing a level of expertise and understanding of the needs of students and teachers in providing "real world" experiences that did not previously exist. As a result of including BINs and for-profit organizations in the I-STEM Network and local R-WIPs with demonstrated experience in supporting teachers and their students, greater access to scientists, mathematicians, engineers, and their facilities and equipment occurred. BIN and for-profit partners have also provided important insight into developing or revising curriculum, lessons, and classroom practices for teachers in previous IMSP programs. The suggested BIN or for-profit entity for the I-STEM Network should have a statewide presence.

It is expected in partnering with interested STEM BIN and for-profit organizations in the statewide I-STEM Network, a new level of cooperation and collaboration will emerge. In addition, this partnership will provide a more clear understanding of college and career readiness for all students.

### **Commitments for Each Required Partnership Entity**

See Attachments 2 A-D "Partnership Member Commitment Forms" for specific commitments.

### **Steering Committee**

The Steering Committee described in the "Program Components" section of this RFP will consist of stakeholders as identified below. The Steering Committee will meet regularly to plan, monitor, and make adjustments to the development of all components of the I-STEM Network and professional development of its teacher participants.

#### Steering Committee Membership (13 members):

- ISBE IMSP Staff, Tara Bell & April Fogarty-Underwood (co-chairs)
- I-STEM Network Administrator (co-chair)
- Dr. Brian Reiser, NGSX Director
- Aubrey Neihaus, Intel Math Director
- Two (2) IHE representatives (1 math and 1 science)
- One (1) High-need LEA
- One (1) ROE/ISC
- One (1) BIN or for-profit organization
- Two (2) ATL Members (1 representing math and 1 representing science)
- One (1) Evaluator

### **I-STEM Network Administrator**

After a partnership has been funded, ISBE and the funded Lead Partnership will select an I-STEM Network Administrator. The I-STEM Network Administrator position is a 1.0 FTE that will be compensated commensurate with qualifications and experience of the candidate. The I-STEM Network Administrator will provide leadership and oversight of the statewide I-STEM Network. In collaboration

with ISBE IMSP staff, and in collaboration with the Lead Partnership and Steering Committee, the I-STEM Network Administrator will ensure the project meets all state and federal requirements, and effective operation and delivery of the network resources. The I-STEM Network Administrator will communicate regularly with ISBE IMSP staff and the external evaluator to monitor the evaluation process and activities.

#### **Selection Process for I-STEM Network Administrator**

For the success of the program, qualified candidates shall be identified through a process led by ISBE IMSP staff and the ROE/ISC Fiscal Agent following awarding of the successful partnership. The selection of the Network Administrator will be a joint decision made by ISBE IMSP staff and the ROE/ISC.

Qualities of I-STEM Network Administrator: Candidates for this position should have demonstrated ability in the following areas:

- Illinois' Professional Educator License which includes endorsements in math or science. Preferred Master's Degree; Preferred Administrative Licensure; Several years of experience in teaching K-12 math and/or science;
- Capacity to fulfill requirements needed to direct the I-STEM Network including experiences in projects which span multiple regions within Illinois or other large-scale projects;
- Demonstrated knowledge and commitment to mathematics and/or science teaching and learning;
- Demonstrated understanding of the New ILS for Mathematics and Science;
- Excellent communication skills;
- Excellent organizational skills with demonstrated ability to plan, create, and deliver high-quality, research-based educator professional development;
- Ability to travel extensively across the state as needed for supporting and facilitating the R-WIPs; and
- Ability to meet deadlines for program and evaluation components of the statewide I-STEM Network Program.

**Collaboration with ISBE IMSP Staff:** The I-STEM Network Lead Partnership will fully collaborate with, and provide necessary documentation to, ISBE IMSP staff. This will be important in order to maintain consistency and strong coherence within the I-STEM Network. This collaboration will align grant activities with related ISBE (and other state and national) initiatives related to the goals of the I-STEM Network Program.

## IMSP I-STEM Network Deliverables

The establishment of the I-STEM Network will happen in **two (2)** stages. Stage one (1) begins with the funded Lead Partnership working collaboratively with ISBE IMSP staff to recruit and appoint the I-STEM Network Steering Committee, recruit and appoint the I-STEM Network Administrator, recruit and select Area Teacher Leaders (ATL), as well as coordinate and/or develop the math and science professional development that will be used to train the ATL in the ATL Academy during the 2014-2015 academic year. Stage two (2) begins with the awarding of the I-STEM Network Regional Workshop Institute Programs (R-WIPs) that will be identified through a subsequent RFP. The R-WIPs will utilize the science and math resources coordinated/developed by the Lead Partnership in order to provide high-quality, capacity-building activities to cohorts of regional K-12 math and science teachers in summer workshops and academic year institutes. Further information about the structure of the deliverables can be found in Appendix F.

The purpose of this network structure is to provide consistent, coherent information, resources, and support to math and science teachers as they deepen their content knowledge and implement the New Illinois Learning Standards (New ILS). Teachers in the R-WIPs, as well as the ATL involved in the Lead Partnership, will develop a greater level of expertise in math and science teaching and learning. Moreover, it is expected that the I-STEM Network through both the Lead Partnership and the R-WIPs will reach several hundred Illinois math and science teachers throughout the course of the grant in order to develop deeper understanding of the instructional shifts, practices, and concepts that will lead the intended changes in math and science classrooms across Illinois.

### I-STEM Network ATL Academy

Led by math and science experts identified in collaboration between ISBE IMSP staff, the Lead Partnership, and the NGSX and Intel Math representatives, the ATL will engage in professional learning to develop a deeper understanding of the content and instructional shifts of the New ILS for Mathematics and Science. It is expected that there will be 18 ATL representing K-12 mathematics and science (See Appendix G for specifics). The ATL will participate in the Academy during the spring semester of the 2014-2015 academic year. The ATL will also participate in facilitator and presenter training during the Academy in order to better prepare them to co-facilitate the I-STEM Network R-WIPs in their respective regions during the summer of 2015.

The Academy content for professional development for the science ATL will be a combination of the Next Generation Science Exemplar System for Professional Development (NGSX), other high-quality content on the New ILS for science, Illinois Model Science Curriculum, as well as facilitation and presenting support. NGSX is a new kind of research-based professional development environment. It is a web-based system designed to engage educators in the three (3) major dimensions of the National Research Council's *Framework for K-12 Science Education*, core ideas of science, scientific and engineering practices, and cross-cutting concepts. NGSX has been piloted in nine states including Illinois (Chicago), is currently utilized in Connecticut's MSP program, and was developed by leading researchers in science education. Further information about NGSX can be found in Appendix D.

The Academy content for professional development for the math ATL will be a combination of Intel® Math, other high-quality content on the New ILS for math, Illinois Model Math Curriculum, as well as facilitation and presenting support. Intel® Math is a widely used, 80-hour professional development course focused on developing teachers' understanding of K–8 mathematics. Further information about Intel® Math can be found in Appendix E.

### **I-STEM Network Regional Workshop Institute Programs (R-WIPs)**

#### ***Summer Workshops***

The I-STEM Network R-WIPs requirements include professional development activities that are conducted for a period of not less than two (2) weeks and consist of a minimum of eighty (80) hours; and include, as a component, a program that provides direct interaction between classroom teachers, university faculty, and BIN or for-profit partners. These R-WIPs will be conducted synchronously throughout the I-STEM Network, co-facilitated by the ATL, and feature state and national experts presenting current research and best practice simultaneously to all participants in the program, regardless of geography. There will also be an opportunity for the development of local contextualized resources and lessons as teachers work with IHE faculty and BINs that are a part of their particular R-WIP.

#### ***Institute Dates***

Institute dates will include follow-up trainings during the academic year, sharing classroom results of the new strategies, and collaboration on refining the work from the summer workshops. By definition, institute dates are intended to be follow-up trainings during the academic year that are best conducted in the classroom for a period of not less than four (4) consecutive or nonconsecutive days and a minimum of four (4) hours in duration, except that if the follow-up training is for teachers in rural school districts, the follow-up training may be conducted through distance learning. Institutes will be co-facilitated by the ATL.

One of the R-WIP Institute dates can include attendance and participation in the I-STEM Network Conference.

## **Evaluation and Accountability Plan, and Reporting Requirements**

Excellent evaluation has been a prominent part of the IMSP Program. I-STEM Network Program evaluation has two (2) elements: evaluation of state-level goals and federally required Annual Performance Reports (APR).

### **Evaluation of State-level Goals**

The successful applicant must ensure that the external evaluator designs an evaluation framework that includes a process for establishing measurable goals for the implementation of research-based instructional activities by teachers who participated in professional development activities. The evaluation design must include classroom-level data from teachers and students, in addition to state, district, and school survey data that address policies, practices, and the impact of grant-funded activities on student achievement outcomes aligned to IMSP I-STEM Network goals.

The external evaluation must include a process for determining the effectiveness of the I-STEM Network Lead Partnership in achieving program goals. The external evaluation will also include one (1) site visit to each R-WIP each year. The evaluation entity may create an interview protocol or utilize an existing protocol (e.g., site visit protocol from previous IMSP Evaluation Framework).

The evaluation must include a comprehensive analysis of the composition, organizational structure, qualities, and sustainability of the partnerships.

The evaluator must develop and distribute surveys to all members of the partnership and each participating teacher to determine levels of satisfaction in areas such as vision, leadership, communication, and project progress along with any changes in participant beliefs around high-quality math and science teaching and learning.

Any staff assigned to work on the evaluation by the external evaluator must have professional expertise and experience in designing and conducting rigorous large-scale evaluations of educational programs and federally-funded projects.

### **Annual Performance Reports (APR)**

Federal legislation requires each funded program to submit an annual report to the U.S. Department of Education (ED), documenting the partnership's progress in meeting its MSP goals and objectives. ED provides an online APR System to accommodate the electronic submission of evaluation data. Information about the Federal APR can be located at the following link: <http://www.ed-msp.net/>.

The external evaluator will work with project directors (or their designee) in order to accurately complete the APR. Additionally, the external evaluator will review APRs submitted by the funded program and provide feedback to project directors concerning necessary edits to their respective reports.

### **General Requirements**

Attend and participate in MSP Conference: The external evaluator is required to attend a Mathematics and Science Partnerships (MSP) Program conference. This two-day annual conference provides an opportunity for interaction with state and federal MSP staff, as well as national presenters. Information about MSP conferences can be found at the following link: <http://www.ed-msp.net/>.



Government Performance and Results Act (GPRA): The IMSP Program is subject to the Government Performance and Results Act (GPRA), which requires participants to set targets for performance, measure progress toward those targets, and report on whether or not the targets have been met, and describe future strategies to continue to make progress toward meeting those targets.

More information about reporting and the GPRA can be found at the following two (2) sites:

[http://www.ed-msp.net/public\\_documents/document/resource/PP12%20APR%20form.pdf](http://www.ed-msp.net/public_documents/document/resource/PP12%20APR%20form.pdf)

[http://www.ed-msp.net/public\\_documents/document/annual/GPRA%20Final%20PP10%20Report.pdf](http://www.ed-msp.net/public_documents/document/annual/GPRA%20Final%20PP10%20Report.pdf)

#### Overview of Projects that Meet the MSP Criteria for Rigorous Evaluation

ABT Associates conducts an annual review of the evaluations of MSP projects that are in their final year of funding. The purpose of the review is to identify projects using rigorous research methods that yield scientifically-valid results. In the past five (5) years, fifty-five (55) projects met the MSP standards for reporting on rigorous evaluations. The number of projects with rigorous evaluations has increased over time, as follows: four (4) projects in Performance Period 2007 (PP07), three (3) projects in PP08, sixteen (16) projects in PP09, fifteen (15) projects in PP10, and seventeen (17) projects in PP11. For more information on the MSP standards used to determine rigor and for practical advice on how to report on rigorous evaluations that are conducted, please visit the MSP website to download a user-friendly guide.

The MSP site includes summaries of the professional development offered in these projects and the findings from their project evaluations. Also provided are links to these projects' evaluation reports. The projects' summaries provided include valuable information to the potential Lead Partnership bidders about practices that MSP projects in other states have found to be successful, and the evaluation reports provide useful examples of the methods projects have used to conduct evaluations that meet the MSP Program's standards for rigor.

**Next Generation Science Exemplar (NGSX) FAQs**

Excerpted from <http://www.ngsx.org/about/faq/>

**What is the NGSX professional development system?**

The Next Generation Science Exemplar System for Professional Development, or NGSX, is a new kind of professional development environment. It is a web-based system designed to engage educators in the three (3) major dimensions of the National Research Council's (NRC) *Framework for K-12 Science Education*, core ideas of science, scientific and engineering practices, and cross-cutting concepts. At the same time, NGSX participants are engaged with student performance expectations found in the New ILS. NGSX has been used by teachers across the country. As part of the original field-testing funded by the National Science Foundation, more than 350 teachers and administrators have worked with the NGSX professional development system, completing units of professional development. The NGSX system was field-tested in Arkansas, California, Illinois, Michigan, Minnesota, Oregon, Vermont, Washington, and Wisconsin. Since the initial NSF-funded field trials, several districts have funded teacher study groups to work with NGSX using MSP or other state funding, including Denver, Connecticut, and Vermont.

**Who is on the NGSX team for the I-STEM Network?**

The NGSX project co-investigators are Sarah Michaels (Clark University), Jean Moon (Tidemark Institute), and Brian Reiser, Ph.D. (Northwestern University).

**Why is NGSX an important professional development resource for the I-STEM Network?**

States and districts are asking how professional development and pre-service teacher education must change to support this new roadmap for science teaching and learning. How do we get started? What does this roadmap look like? In response to these and questions like them, the NGSX team has designed a professional development system to make this new vision of science teaching and learning visible and coherent. Drawing from highly-respected research-based principles on learning, NGSX has assembled a library of usable tools, tasks, and resources to help teachers grow in their knowledge, confidence, and facility with the major ideas in the *Framework for K-12 Science Education* and the New ILS – core ideas in science, scientific and engineering practices, and cross-cutting concepts.

**What results have been achieved?**

NGSX supports teachers using the science practices of argumentation, explanation, and modeling to learn disciplinary core ideas so they can develop both the understanding of the science and the pedagogy needed to teach with NGSS. It uses in-depth investigation of one area of science (e.g., nature of matter) followed by analyses of student learning and classroom video cases across K-12. Assessment of teacher growth in field studies used items drawn from nationally-used instruments that examine science knowledge and pedagogy (e.g., Horizon). Teachers improve dramatically in their understanding of the target science content, improving on modeling and explanation items about the nature of matter from pre-test to post-test with an effect size of 0.74 standard deviations (a strong effect size). The post-tests included more correct multiple choice responses and more explanatory and mechanistic answers for constructed response questions about the physical science of matter.

Teachers also increased in their reported confidence in teaching science in the ways called for in NGSS, increasing more than 0.56 standard deviations (see figure below). Teachers also increased from pre to post in their assessment of their preparedness to teach with the science and engineering practices in NGSS, with a strong effect size of 0.44 standard deviations. Particular questions assessing teachers' preparedness to use instructional approaches central to NGSS including "anticipating difficulties students may have with science ideas" and "supporting classroom discussion" also showed an increase from pre-

test to post-test. Teachers also shifted in their understanding about a range of questions examining student learning and pedagogical practices that support the three-dimensional learning in NGSS, for example agreeing less with “explaining an idea to students before having them consider evidence that relates to the idea,” and agreeing more with statements articulating how students should use evidence to support their ideas. Teachers’ understanding (pedagogical content knowledge) of how to support the science practices were examined by having them describe and analyze scenarios of how students could be engaged in scientific modeling, argumentation, and classroom discussion. Initial results suggest teachers develop more sophisticated knowledge from pre-test to post-test about specific elements of how students engage in practices, how this affects their learning, and how teachers can support these practices. (Analyses of a more complete dataset are now underway.)

### **Why is NGSX web-based?**

Advances in digital, media, and network technologies have boasted professional learning capabilities in many professions. This presents an opportunity for professional development in science in response to the shifts outlined in the *Framework for K-12 Science education* and New ILS. The internet is a very versatile platform where high-quality, image-rich resources can be made widely accessible while providing greater flexibility for learners to come together. NGSX participants have the benefits of accessing videos, texts, and tools twenty-four (24) hours per day and seven (7) days per week. As a result, learning is more flexible and not subject to traditional constraints of professional development such as start and end times.

### **What can teachers expect as a participant in NGSX?**

NGSX will contain eight units by October 2014. They are intended to be flexible, allowing teachers and their colleagues to move through units at their own pace. Each unit is based on a particular set of learning goals involving the three dimensions of the NRC Framework and student performance expectations found in the New ILS. For example, in the Matter Pathway of NGSX, the focus is on physical science, more specifically, the structures and properties of matter. Teacher learning will be guided by the question, “How do particles combine to form the variety of matter one observes?” (NGSS, PS1.A, Structures and Properties of Matter). Intentionally integrated into learning about matter are two of the scientific and engineering practices, modeling and argumentation from evidence. Here is a sample of learning goals built into this pathway:

- What is different about the new NRC and Next Generation Science Standards (NGSS) vision for science teaching?
- What is model-based reasoning and how is it fundamental to science, as well as science teaching and learning? How do I build a culture of reasoning with evidence in my classroom?
- How do I create a classroom culture where students will go public with their ideas and build on the ideas of their classmates?

Guided by the research-based expertise of the NGSX team and their belief that learning builds progressively over time, this pathway has activities for teachers to accomplish between units. These activities serve as bridge building, further exploring the ideas, videos, and activities contained in the current unit while preparing for the next. Part of the bridge building experience will be opportunities for teachers to try activities in their classrooms and bring those experiences back to their cohort for discussion with colleagues.

### **Which states have participated in NGSX pilots?**

NGSX has been piloted in nine (9) states including Arkansas, California, Illinois (Chicago), Michigan, Minnesota, Oregon, Vermont, Washington, and Wisconsin. It is currently featured in the Connecticut MSP program.

## Intel® Math Program for Education Professionals-FAQs

Excerpted from <http://www.intel.com/content/www/us/en/corporate-responsibility/intel-math-program-article.html>

### What is Intel Math?

The Intel® Math course is a scaled-up adaptation of the Vermont Mathematics Initiative (VMI), a content-intensive professional development program developed by Dr. Kenneth Gross, Professor of Mathematics and Education at the University of Vermont. Intel® Math provides 80 hours of professional development in mathematics for K-8 teachers (teacher participants), in the form of a course co-facilitated by a practicing mathematician and a mathematics educator (instructors). The course “is designed to close the gap between insufficient mathematics training of elementary school teachers and the demands of the contemporary mathematics classroom” (Kenneth Gross, on VMI) and places emphasis on deepening the teacher participants’ understanding of core K-8 mathematics concepts. It is grounded in a problem-solving approach to topics such as integer arithmetic, the decimal number system, place value, rational number arithmetic, rates, linear equations, and functions. About 90 percent of the course is focused on mathematics content knowledge and the remaining 10 percent on pedagogy.

### What are some benefits?

*“Deepening teachers’ content knowledge is a priority for districts since research suggests that students are disadvantaged, and actually learn less, when their teachers do not understand the content (Goldhaber & Brewer, 2000; Monk, 1994). Progress in rectifying this situation stands to be a major contribution of IntelMathematics.” (WestEd evaluation report, 6/30/2009).*

Evaluation results (WestEd evaluation report, 6/30/2009) indicate the Intel® Math course “provides teachers with opportunities to deepen their content understanding and to consider pedagogical issues related to their roles as mathematics teachers”. In particular, teachers who completed the course have demonstrated growth in mathematics, in both their computational skills and their conceptual understanding. They have commented on varied ways of applying knowledge gained from the course to their classrooms, have indicated an increased focus on communication and reasoning, and reported multiple benefits to their students. Lasting benefits mentioned by teachers include “mathematics knowledge and strategies, access to resources, increased confidence in mathematics learning, changes in approach to teaching mathematics, an appreciation for the importance of making connections across mathematics topics, and understanding student thinking and learning styles”.

### What is the Course Curriculum?

The course is organized into eight units, each of which is comprised of four to seven sessions. Intel® Math teacher participants receive the two-volume *Teacher Manual*, in which each session focuses on mathematics content through a series of problems. Additionally, teacher participants receive an *Answer Manual*, which gives multiple solutions to each problem, and a *Reference Manual*, which expands on the philosophy and themes of Intel® Math and offers supplemental readings. Instructors receive all the materials that the teacher participants receive, and an additional *Instructor Manual*, which is essentially a session-by-session companion to the *Teacher Manual*. The *Instructor Manual* also includes a 30+ page course introduction that details aspects essential for a successful implementation of Intel® Math, true to its philosophy and goals. A section on manipulatives, for example, discusses how the latter may be useful tools for representing and generating ideas, yet also highlights that manipulation of didactic physical objects may not, in and of itself, elicit or unpack conceptual thinking. Specific guidelines on how to select teachers to present their solution strategies and how to organize the order in which solutions are shared are also included as part of the discussion on “Facilitating Presentation of Answers.” Additionally, the program allows for differentiation of the materials and homework assignments to meet teachers at various levels of math content knowledge.

## General Overview of I-STEM Network Deliverables

Federal Fiscal Year	Fall--May Milestones	June-September Milestones
FY 2015 Fall 2014 — September 30, 2015	<ul style="list-style-type: none"> <li>• Develop Network Infrastructure               <ul style="list-style-type: none"> <li>➢ Establish a Steering Committee</li> <li>➢ Select I-STEM Network Administrator</li> </ul> </li> <li>• Recruit and train ATL               <ul style="list-style-type: none"> <li>➢ Science: NGSX</li> <li>➢ Math: Intel® Math</li> <li>➢ All: Facilitator and Presenter Training</li> </ul> </li> <li>• Plan Summer I Institute with R-WIPs</li> <li>• Assist in recruitment of Cohort I (Teacher Participants) in R-WIPs</li> <li>• Plan the R-WIP Institutes</li> <li>• Plan &amp; Deliver Statewide STEM Conference</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver Summer I Workshops for R-WIPs including at least 80 hours of Professional Development               <ul style="list-style-type: none"> <li>➢ Cohort I Teachers are participants</li> <li>➢ ATL are co-facilitators</li> <li>➢ Science content: NGSX and Model Science Curriculum</li> <li>➢ Math content: Intel® Math and Model Math Curriculum</li> </ul> </li> </ul>
Y 2016 October 1, 2015 – September 30, 2016	<ul style="list-style-type: none"> <li>• Deliver Network Institutes (R-WIPs)               <ul style="list-style-type: none"> <li>➢ Four (4) follow-up workshops</li> <li>➢ Implement: ISBE Model Curriculum for Math &amp; Science</li> <li>➢ Include additional content training for math and science, as needed.</li> <li>➢ Cohort I Teachers are participants/piloting curriculum</li> <li>➢ ATL: Co-facilitators</li> </ul> </li> <li>• Plan Summer II Workshops for R-WIPs</li> <li>• Plan &amp; Deliver Statewide Conference</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver Summer II Workshops for R-WIPs including at least 80 hours of Professional Development               <ul style="list-style-type: none"> <li>➢ Cohort I Teachers are participants</li> <li>➢ ATL are co-facilitators</li> <li>➢ Science content: NGSX and Model Science Curriculum</li> <li>➢ Math content: Intel® Math and Model Math Curriculum</li> </ul> </li> </ul>
FY 2017 October 1, 2016 – September 30, 2017	<ul style="list-style-type: none"> <li>• Deliver R-WIP Institutes               <ul style="list-style-type: none"> <li>➢ Four (4) follow-up institutes</li> <li>➢ Implement ISBE Model Curriculum for Math &amp; Science</li> <li>➢ Cohort Teachers are participants/piloting curriculum</li> <li>➢ ATL: Co-facilitators</li> </ul> </li> <li>• Plan Summer III R-WIP Workshops</li> <li>• Plan &amp; Deliver Statewide Conference</li> </ul>	<ul style="list-style-type: none"> <li>• Deliver Summer III Workshops for R-WIPs, including at least 80 hours of Professional Development</li> </ul>

**Composition of I-STEM Network Participants**

This RFP requires the Lead Partnership to recruit and establish a cohort of K-12 Area Teacher Leaders (ATL). The ATL will undergo training in the Next Generation Science Exemplar System for Professional Development (NGSX), Model Math Curriculum, the Model Science Curriculum and Intel® Math, along with other high quality math and science materials. The ATL will also have facilitator and presenter training during the 2014-2015 academic year. In summer 2015, the ATL will co-facilitate the R-WIP workshops for regional cohorts of K-12 math and science teacher participants known as “Cohort I.” This appendix provides an overview of the required composition of the ATL. Please refer to the map below to determine I-STEM Network Areas.



Listed below is the required composition of the ATL. The Lead Partnership must recruit and identify at least two (2) ATL to serve in the I-STEM Network per region, except Region I and (CPS) which will require four (4). These ATL need not be identified by name in proposals in response to this RFP; however, a plan to recruit and evaluate potential ATL must be included. Furthermore, there is the expectation that once the ATL have been identified, they will participate in the I-STEM Network for the duration of the funding cycle outlined in this RFP (up to three years). If an ATL leaves the program, it is the responsibility of the Lead Partnership to recruit, identify, and train a replacement.

I-STEM Area	# of K-12 Science Area Teacher Leaders	# of K-12 Math Area Teacher Leaders
I	2	2
II	1	1
III	1	1
IV	1	1
V	1	1
VI	1	1
CPS	2	2
<b>Total</b>	<b>9</b>	<b>9</b>

### Scoring Rubric for the Statewide I-STEM Network

#### I. Literature Review/Needs Assessment (15 points)

Criteria	5 points	3 points	1 point
Content and Conclusions of the Literature Review	The review cites scientifically-based research that aligns effective professional development to mathematics and science teaching and learning as previously described in this RFP. The relevance of the reports cited and conclusions drawn to the proposed program must be made clear in the review. There are eight (8) publications cited in the review and it is written in APA format.	The review cites scientifically-based research that aligns effective professional development to math and science teaching and learning but the relevance of the reports cited or the conclusions drawn to the proposed program are limited. The review is not written in APA format and there are less than eight (8) publications cited.	The review cites limited scientifically-based research that aligns to effective professional development to math and science teaching and learning. The review is not written in APA format and there are less than eight (8) publications cited.
Local Needs Assessment	The applicant has adequately documented the needs of the participating LEA(s) to improve their math and science instruction based on the New ILS for its students in kindergarten through grade 12. The data collected, including student achievement data, have	The applicant has adequately documented the needs of the participating LEA(s) to improve their math and science instruction based on the New ILS for its students. The data collected is limited and/or not thoroughly analyzed or of sufficient quantity to make	The applicant has not adequately documented the needs of the participating LEA(s) to improve their math and science instruction based on the New ILS.

	been thoroughly analyzed and used to propose a program that is aligned to the I-STEM Network Program goals, and addresses the gaps or weaknesses in the participating teachers' content and pedagogical knowledge in mathematics and science.	a proposal for the I-STEM Network.	
State and/or National Needs Assessment	The applicant has adequately described the documented needs of math and science teachers across the state and/or nationwide to improve their math and science instruction based on the New ILS and this information has been used to propose the I-STEM Network project.	The applicant has adequately described the documented needs of math and science teachers across the state and/or nationwide to improve the math and science instruction based on the New ILS but the information has not been used to propose the I-STEM Network project.	The applicant has not described the documented needs of math and science teachers across the state and/or nationwide to improve the math and science instruction based on the New ILS and the information has not been used to propose the I-STEM Network project.

II. The I-STEM Network Lead Partnership Structure, Qualifications, and Capacity (20 points)

Criteria	5 points	3 points	1 point
Partnership Qualifications	The eligible partnership entities have demonstrated sufficient qualifications necessary for successful implementation of all components of this RFP especially for successful delivery of a multi-year statewide federal project.	The eligible partnership entities have demonstrated sufficient qualifications in some of the members.	The partnership does not have members with sufficient qualifications.



Partnership Experience	The eligible partnership entities have demonstrated experience necessary for successful implementation of all components of this RFP.	The eligible partnership entities have demonstrated sufficient experience in some of the members.	The partnership does not have members with sufficient experience.
Partnership Capacity	The eligible partnership has demonstrated overall capacity necessary for successful implementation of all components of this RFP, especially considering the statewide responsibilities.	The eligible partnership has demonstrated sufficient capacity in some of the members.	The partnership does not have members with sufficient capacity.
Steering Committee	The proposal describes the composition and role that will be established for an effective steering committee.	The proposal describes a limited role/membership of the steering committee.	The partnership does not describe a role for the steering committee.

III. I-STEM Network Program Deliverables (30 points)

Criteria	5 points	3 points	1 point
Demonstrated expertise in science and math professional development	The proposal provides strong evidence of a plan to implement effective research-based, capacity-building activities that will likely lead to teachers developing a deeper understanding of math and science content and pedagogy, aligned to the New ILS.	The proposal provides some evidence of a plan to implement effective research-based, capacity-building activities that may or may not lead to teachers developing a deeper understanding of math and/or science content and pedagogy aligned to the New ILS.	The proposal does not sufficiently describe the partnership's plan to implement effective research-based, capacity-building activities for math and science teachers.

Increased student achievement	The proposal provides strong evidence of a plan to implement effective research-based, capacity-building activities that will likely result in measurable improvements in student achievement.	The proposal provides some evidence of a plan to implement effective research-based, capacity-building activities which may or may not result in measurable improvements in student achievement.	The proposal does not sufficiently describe a plan to implement effective research-based, capacity-building activities.
Delivery of high-quality math and science curriculum supports	The proposal shows the partnership's capacity to successfully execute logistics and support the work of the math and science model curriculum projects along with delivering NGSX and professional development for math.	The proposal shows the partnership's limited capacity to execute logistics and support the work of the math and science model curriculum projects along with delivering NGSX and/or professional development for math.	The proposal shows very little capacity in the partnership to execute logistics and support the work of the math and science model curriculum projects along with delivering NGSX and/or creating professional development for math.
Design and delivery of Area Core Teacher Leader (ACTLs) Academy	The proposal fully describes a high-quality plan to recruit K-12 math and science experts for the ATL and then deliver an ATL Academy each spring that includes training in math and science content, ISBE resources and facilitation and presentation skills.	The proposal fully describes a plan to recruit K-12 math and science experts for the ATL and then deliver an ATL Academy each spring that includes some training in math and science content, ISBE resources and facilitation and presentation skills.	The proposal describes a limited plan to recruit math and science experts for the ATL and may or may not deliver an ATL Academy each spring that includes training in math and science content, ISBE resources and facilitation and presentation skills.
Design and delivery of R-WIPs	The proposal includes a clear description of the plan to deliver high-quality professional development and math and science resources based on the New ILS to the Regional Partnerships for the R-WIPs	The proposal includes a limited description of the plan to deliver professional development and/or math and science resources based on the New ILS to the Regional Partnerships for the R-WIPs each summer	The proposal includes an unclear description of the plan to deliver high-quality professional development and/or math and science resources based on the New ILS to the Regional Partnerships for the R-

	each summer and during the school year institutes.	and during the school year institutes.	WIPs each summer and during the school year institutes.
Delivery of Statewide Conference and Website	The proposal includes a description of the capacity to execute a statewide conference along with the development of website and other electronic resources in support of the goals of the I-STEM Network.	The proposal includes a limited description of the capacity to execute a statewide conference and/or the development of website and/or electronic resources in support of the goals of the I-STEM Network.	The proposal includes a description which shows the lack of capacity to execute a statewide conference along with the development of website or any electronic resources in support of the goals of the I-STEM Network.

IV. The I-STEM Network Program Evaluation and Accountability Plan (15 points)

Criteria	5 points	3 points	1 point
Quality of external evaluation plan	The design of the evaluation sufficiently demonstrates rigorous evaluation (defined by federal MSP) which will clearly measure the quality of the partnership, participants change in content knowledge and pedagogy, along with measuring any changes in student achievement.	The design of the evaluation sufficiently demonstrates rigorous evaluation (defined by federal MSP) which will most probably measure the quality of the partnership, participant change in content or pedagogy with or without measuring student achievement.	The design of the evaluation insufficiently demonstrates a rigorous evaluation (defined by federal MSP).
Support of R-WIPs in evaluation requirements	The proposed external evaluator has a high-quality plan, the staff, experience, and other resources that will be necessary to conduct site visits and provide appropriate	The proposed external evaluator has a plan with some staff or experience or other resources that will provide appropriate technical support to the R-WIPs.	The proposed external evaluator has a limited plan without the staff, experience, or other resources to support the R-WIPs.

	technical support to the R-WIPs.		
Experience in statewide federal educational projects	The proposed external evaluator describes sufficient successful experience in preparing and submitting state and federal reports for statewide K-12 professional development projects in a timely manner and with fidelity.	The proposed external evaluator describes some experience in preparing and submitting state and federal reports for statewide K-12 professional development projects in a timely manner and with fidelity.	The proposed external evaluator describes limited experience/success in preparing and submitting state and federal reports for statewide projects in a timely manner and with fidelity.

V. I-STEM Network Program Sustainability Plan (10 points)

Criteria	5 points	3 points	1 point
Sustainability plan	The partnership provides convincing evidence to ensure that the resources of the I-STEM Network continue to have a positive impact on math and science teaching and learning statewide after the three-year grant period.	The partnership provides limited evidence to ensure that the resources of the I-STEM Network continue to have a positive impact on math and science teaching and learning statewide after the three-year grant period.	There is very little evidence that the resources of the I-STEM Network will continue to have a positive impact on math and science teaching and learning statewide after the three-year grant period.
Continuity of partners	A clearly articulated plan for maintaining the partnership entities is described. The plan includes evidence that all entities were involved. If needed, the plan specifically describes how the partnership will maintain program participants, objectives and	A plan for maintaining the partnership entities is described. The plan includes some evidence that some of the entities were involved. If needed, the plan generally describes how the partnership might maintain most of the program participants, objectives and activities of	A plan, without evidence of participation of all partnership entities is described. Though needed, the plan does not include information about the ROE/ISC consolidation July 1, 2015.

	activities of the partnership through the ROE/ISC consolidation July 1, 2015	the partnership through the ROE/ISC consolidation July 1, 2015	
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VI. Overall I-STEM Network Budget (5 points)

Criteria	5 points	3 points	1 point
Overall partnership budget	The partnership budget shows the allocation of partnership resources as customary and reasonable in terms of distribution, scope, accuracy, and in alignment with the partnership's goals and participants' needs.	There are concerns or questions about the partnership's proposed budget with regard to customary and reasonable, distribution, scope, accuracy, or alignment with the partnership's goals and participant's needs.	Very limited evidence that the partnership's proposed budget will support their goals and needs of the participants.

VII. Overall High-quality I-STEM Network Plan for Statewide Delivery (5 points)

Criteria	5 points	3 points	1 point
Overall partnership plan	The proposal describes a clear, well-thought-out plan by committed partners to deliver a successful statewide systemic, multi-year federal professional development project focusing on high-quality math and science content, aligned to the New ILS, in which hundreds of teachers will participate and their students will benefit.	The proposal shows a fairly well-organized plan by partners to deliver a successful statewide systemic, multi-year federal professional development project for math and science teachers.	The proposal is unclear or shows limited involvement with partners in delivery of statewide professional development.

VIII. Possible Priority Points (5 points)

Criteria	5 points	3 points	1 points
Priority Points for successful ROE/ISC Fiscal Agent and partner experience	The fiscal agent has experience as the fiscal agent for several past successful, multi-year IMSP projects and most other partners have been involved in former successful IMSP projects.	The fiscal agent has been a former fiscal agent for past successful, multi-year projects but most other partners are not very experienced in IMSP.	The fiscal agent has been a former fiscal agent for past IMSP projects but with limited success or limited scope.