

### **Museums for America**

Sample Application MA-10-15-0039-15 Project Category: Learning Experiences Funding Level: \$25,001-\$150,000

#### **Harvard Museums of Science and Culture**

Amount awarded by IMLS: \$148,220 Amount of cost share: \$148,979

Attached are the following components excerpted from the original application.

- Abstract
- Narrative
- Schedule of Completion

Please note that the instructions for preparing narratives for FY2016 applications differ from those that guided the preparation of FY2014 and FY2015 applications. Most obviously, the names of the three narrative sections and the order in which they appear have changed. Be sure to use the narrative instructions in the FY2016 Notice of Funding Opportunity for the grant program and project category to which you are applying.

#### Evolving Curricula: Collaborating with Middle School Teachers on the Next Generation Science Standards Abstract

The Harvard Museums of Science and Culture (HMSC), a consortium that includes the Harvard Museum of Natural History (HMNH), seeks funding for a professional development opportunity for middle school educators, in partnership with three local school districts. "Evolving Curricula: Collaborating with Middle School Teachers on the Next Generation Science Standards" is focused on preparing for Massachusetts' upcoming adoption of the Next Generation Science Standards (NGSS), specifically those associated with biological evolution, a 'Core Disciplinary Idea" in the NGSS Life Science standards. Massachusetts has asked districts to do planning and curriculum work prior to formal adoption and implementation of the standards in the 2015 – 16 academic year and this project addresses the need for state-specific professional development for teachers as. A working group of 8 - 10 teachers from the partner districts will collaborate with museum staff to assess existing district curricula, identify gaps as compared with new NGSS standards, and select focus areas for teacher professional development based on teacher needs. Over a two-year period the Museum will run: (1) four 3-day "Boot Camps" on the interconnectedness of earth process with biological evolution; (2) two 3day specialized "Field Schools" at the HMNH and Arnold Arboretum on the multiple lines of evidence for evolution in both plants and animals; (3) customized field trips for participating teachers at HMNH; (4) production of lesson plans and other curricula materials; and (5) ongoing academic activities for participants. The project's primary audience is 80 middle school teachers and their students, together with their school districts.

The goals of the project are to support re-alignment of district instruction and curricula around NGSS standards as adopted by Massachusetts; enrich teachers' content knowledge and pedagogical skills in biological evolution and related earth science concepts; and provide middle school students with a strong understanding of biological evolution. We hope to engage teachers more fully during museum visits, and in other museum programming throughout the year, and to positively impact their attitude towards using museum-based resources. Performance indicators will include measures such as teacher knowledge gains, implementation of the project curricula and activities in the classroom, take-up of field trips and attendance at other academic year activities, tracking requests for information and assistance, and changes in students' content gains e.g., clarification on common misconceptions surrounding evolution. The project team will work closely with the evaluators, and school districts, on targets and how results compare to expected outcomes. External evaluators will assess the project's effectiveness at meeting these goals, and the final evaluation report will be made available to other informal science learning institutions. Biological Evolution is a Core Disciplinary Idea in NGSS and, as such, is critical to implementing these new standards effectively. HMNH's longstanding relationships and reputation with public school districts across the state, together with the university's world-class collections and faculty, mean the Museum is ideally positioned to work with school districts on this topic.

# Evolving Curricula: Collaborating with Middle School Teachers on the Next Generation Science Standards Narrative

#### 1. Project Justification

#### • What do you propose to do?

The Harvard Museums of Science and Culture (HMSC), a consortium that includes the Harvard Museum of Natural History (HMNH), seeks funding for a professional development opportunity for middle school educators, in collaboration with three local school districts (Boston Public Schools, Somerville Public Schools, Quincy Public Schools). "Evolving Curricula: Collaborating with Middle School Teachers on the Next Generation Science Standards (NGSS)" is focused on preparing for Massachusetts' upcoming adoption of the NGSS, specifically those associated with biological evolution. A working group of 8 – 10 teachers from these districts will work with museum staff to assess existing district curricula, identify gaps as compared with new NGSS standards, and select focus areas for teacher professional development based on teacher needs. The project will serve 80 middle school teachers and their students by: (1) enriching teachers' content knowledge to develop their understanding of biological evolution and related earth science concepts; (2) collaborating with local districts to assist teachers with improving and adapting their existing curricula to meet the specific NGSS standards; (3) providing classroom materials and experience in implementing NGSS-aligned lessons in school and the museum.

#### • What need, problem, or challenge will your project address and how was it identified?

The development of NGSS was spurred by the need to transform science education and prepare students to be scientifically literate citizens. These standards enable a vision of science teaching that emphasizes students' active engagement in genuine scientific problems and a commitment to "less is more" by narrowing the number of core disciplinary ideas (see <a href="http://www.nextgenscience.org">http://www.nextgenscience.org</a>). Museums, and other informal science institutions, play a vitally important role in supporting and improving formal K-12 education (see, for example, NGA, 2012; Kisiel, 2013, Evans, 2014). In regard to the adoption of NGSS, these institutions can make significant contributions in regard to teacher professional development and field trips (Falk et al. 2014). *Evolving Curricula* addresses these two challenges:

#### Need for professional development that supports the teaching of NGSS

Massachusetts was a "lead state" in developing NGSS and also delayed its regular standards review process to align with the timeline for NGSS. While the adoption of NGSS has been controversial, and consequently delayed in some states (e.g. Bidwell, 2014), Massachusetts has released draft revised standards and asked districts to start planning and curriculum work prior to formal adoption and implementation in the 2015 – 16 school year (see http://www.doe.mass.edu/stem/review.html.) In common with other states Massachusetts is adapting the NGSS for state use, which means NGSS related professional development must be tailored to these specific state standards. (For example Massachusetts is presenting middle school standards grade-by-grade instead of the grade span in NGSS, see http://www.doe.mass.edu/stem/standards/NGSS-MAAComparison.html). While there is enthusiasm for the adoption of the standards, teachers throughout the state feel unprepared (pers.comm) as they significantly change how science is learned and taught, a situation mirrored across the U.S. (e.g., see Wilson, 2013; Evans 2014). School districts in Massachusetts are in multiple stages of alignment with respect to the new standards. HMNH has begun work with a few school districts that are on the leading edge of adoption and has been contacted by other districts, including those participating in Evolving Curricula who are just beginning to plan alignment. These districts have asked the Museum for assistance in developing programs to meet the new standards. Evaluation of prior Museum programs has demonstrated there is an unmet need for programs on evolution (see Supporting Documents), now a Core Disciplinary Idea in the NGSS. HMNH's longstanding relationships and reputation with public school districts across the state, together with the university's world-class collections and research that are relevant to evolution, mean the Museum is ideally positioned to work with school districts on this need.

Need to help educators fully explore the role of the museum in supporting classroom learning. Museums provide rich learning environments for students but the educational benefit of a museum field trip depends significantly on the agenda, experience and expertise of the teacher leading it (e.g., Anderson et al. 2006). Research-based recommendations for improving field trip learning experiences (summarized by CAISE, 2014) include: helping teachers become familiar with the setting before the trip; orienting students to the setting, agenda and learning objectives for the trip; allowing time for students to explore; linking activities to classroom learning; and carrying out post-visit activities. Helping teachers with the science content and using the site as a teaching environment, providing materials that support the field trip, and recognizing the often overwhelming logistical details teachers have to deal with (e.g., safety, security, lunches etc.) are all important considerations (Anderson et al. 2006). *Evolving Curricula* addresses each of these issues through strategies that adopt a teacher perspective to collaboratively develop structured visits, thereby enhancing their impact.

#### • Who or what will benefit from your project?

<u>Teachers</u> 80 teachers will directly benefit from the project by having NGSS-ready curricula, adapted for their specific needs; classroom materials to implement activities; ongoing access to HMNH educators; special academic-year activities; and customized field trips.

<u>Students</u> Approximately 6,400 students will be taught directly by teachers in the program and will benefit through curricula and activities that are designed to be student-centered and encourage their active engagement in science.

School Districts The joint development of this project means that participating districts will have curricula materials that can be implemented to meet Massachusetts NGSS standards in the life and earth sciences, both for teachers who are in the program and for others as well. The materials will also be of use to schools and districts not involved in its development, particularly elsewhere in the state. More information on the collaborating school districts can be found in the Supporting Documents.

Museum Evolving Curricula will foster closer relationships with school districts and individual teachers that will provide a foundation for collaborative development of other K-12 programs, as well as ground-truthing proposed initiatives to the realities of today's classroom. It will also encourage repeat visitation and strengthen the community of teachers associated with the museum. Experience has shown that teachers are the best ambassadors in encouraging colleagues to bring students on field trips and to participate in professional development opportunities.

#### • What are the performance goals and intended results of your project?

The goals of *Evolving Curricula* are:

Goal 1. Support re-alignment of district instruction and curricula around NGSS standards as adopted by Massachusetts.

#### Outcomes:

- Districts will fill gaps in their curriculum and identify activities that can support student learning that are not already covered by their existing materials.
- Teachers will learn how to use these materials and integrate them into their classroom teaching. Goal 2: Increase teacher understanding of, and effective instruction in, biological evolution and related earth science concepts.

#### Outcomes. Teachers will:

- Have the resources and skills to effectively teach biological evolution in the framework of the NGSS and their district standards.
- Gain confidence in working with researchers and new curricula materials and synthesize and transform their knowledge to be used in the classroom.
- Improve their skills in enhancing mandated curricula by integrating additional resources and content. Goal 3. Provide middle school students with a strong understanding of biological evolution

#### Outcomes. Students will:

- Know that the process of evolution requires variation, inheritance, selection, and time.
- Understand the similarities and differences between the processes of natural selection and artificial selection.
- See how and why current research uses evidence from genetic studies, fossils and modern specimens to understand evolution.

#### How will your project advance your institution's strategic plan?

This project supports HMSC's (www.hmsc.org) mission in many ways, particularly a fundamental goal to create programs that address critical needs of our audiences and that leverage the unparalleled collections and scholarship at Harvard. Our school programming supports and enriches the learning environment for K-16 students and teachers across the region. In particular Evolving Curricula supports a special emphasis of the Education and Public Programs section of the plan to: "Strive to make programs part of the academic experience of every student... through collaboration with school districts, and the development of programs that become essential for particular grades through their focus, rigor and alignment with standards" (Strategy #1), "build a ambitious and comprehensive teacher professional development program that focuses on content knowledge, developing pedagogical skills, is 'classroom ready' and relevant to today's educational environment" (Strategy #2) as well as "Expand opportunities for K-16 students and teachers to connect with Harvard faculty, researchers and students" (Strategy #3). HMNH makes a systematic effort to support educators in enriching their science curriculum through its exhibits and Harvard's vast biological and geological collections and Evolving Curricula provides an exciting new direction by extending successful programs (e.g., post-lecture teacher discussions, ongoing teacher professional development opportunities) to an intentional partnership to meet a state-wide challenge with a project tailored to local needs. Evolving Curricula also supports two of the cross-cutting issues identified in the plan: (1) "Build Strategic Partnerships" including those with regional K-12 community, and (2) "Understand Our Constituencies" which will be enhanced through direct collaboration with school districts and via the ongoing independent evaluation to encourage reflective practice.

#### 2. Project Work Plan

#### • What specific activities will you carry out?

Evolving Curricula has been designed to follow best practice in implementing effective professional development in the sciences. It is intensive, ongoing, and connected to practice; addresses science standards and encourages inquiry-oriented teaching techniques; demonstrates applications of new knowledge to teachers' planning and instruction; incorporates support over time for teachers to integrate new skills into their teaching; and develops partnerships to sustain follow-up for teachers (see e.g., Darling-Hammond et al. 2009).

#### Project activities include:

Collaborative program planning Representatives from each school district, 8 – 10 teachers, will meet with project staff to: (1) Review current school curricula and NGSS to identify areas in need of change to help create new classroom curriculum aligned with NGSS (e.g., new content topics for teachers and students, new pedagogical approaches required of teachers, activities to support new learning, new skills expected from students, new supplies needed); (2) identify areas of weakness in content knowledge among teachers around concepts of evolution and earth science processes. These findings will be used to inform the creation and design of Boot Camps and Field Schools. After this initial consultative period, the project team will continue to meet periodically with this group of representatives throughout the project.

NGSS biological evolution 'Boot Camps': We will run four 18-hour 'Boot Camps' at the Museum that will serve approximately 20 teachers each. They will be held during the 2016 February and April vacation weeks, as well as in the summer of 2016. While exact details will be worked out with our partners, a

likely theme will be the interconnectedness of earth processes and biological evolution. For example, a method to explore the concept of plate tectonics (MS-ESS1-4; MS-ESS2-3) could be a series of activities, including a hands-on exploration of the mechanics of plate movement and examination of geologic specimens and geologic maps, in which teachers will map the locations of rocks and fossils on a modern map and then use that evidence to create a paleo-map that shows the positions of tectonic plates at different times in the geologic history. (For more details on NGSS standards & Boot Camp please see Supporting Documents.)

Summer 2017 Field Schools We will offer two field school opportunities for Boot Camp graduates that will allow them to explore content more deeply, try out more activities they can use in classrooms, practice pedagogical skills needed for NGSS and engage with other teachers during the preimplementation stage of NGSS. Hands-on activities and close observation of museum objects and live specimens will be emphasized, as well as the demonstration of the multiple lines of evidence for evolution (molecular changes, comparison of fossils and modern organisms etc.). Each Field School will accommodate up to 20 teachers and will run for 18 hours over 3 days. Field School #1 will take place at HMNH and will focus on animals and fossil animals, and what they can tell us about biological evolution and earth history. An example activity on the evolution of frogs (addressing MS-LS1-5; MS-LS4-1, 2, 4, 5) would involve participants examining a series of fossils that illustrate the evolution of frogs from earlier amphibians over the last 300 million years. Teachers will compare the fossil specimens to modern skeletons in order to identify structures that show evolution from a common ancestor. They will then observe and compare a wide variety of frogs from the collections and posit where and how these frogs live, based on observable adaptations such as reduced eyes, flattened forms and unusual coloration. Finally, teachers will consider how both large evolutionary changes seen in fossils and the diversity seen across modern specimens can be explained by evolution through natural selection. Field School #2 will take place at Harvard's Arnold Arboretum, in the city of Boston, and will focus on live and fossil plants and what they can tell us about biological evolution, especially natural selection and artificial selection. Academic year activities Developing a sense of community among participating teachers greatly enhances the effect of the program and its impact on teachers' activities. After teachers have attended the Boot Camp the Museum will provide ongoing assistance throughout the school year. Participants and students will return for customized, free field trips including museum classroom programs that focus on NGSS related topics. Teachers will be invited to attend teacher events, Saturday classes and public lectures focusing on topics relevant to NGSS, and, where appropriate, project staff will develop add-ons to these activities for the group (e.g., a special post-lecture discussions with the speaker). Participants will also receive a free family membership to the Museum. We expect an individual teacher will have at least 3 or 4 substantive contacts with project staff over the academic year, in addition to the Boot Camps and Field Schools, for an estimated 25 - 30 contact hours each year.

<u>Program Recruitment</u> Teachers from partner schools/districts will be given priority for registration and we expect most places will be filled this way. However any open spots will be offered to teachers from other Massachusetts schools. In addition to the Museum's own extensive mailing list, the program will be promoted through HMNH's 'teacher enews' (1,500 subscribers) and the MAST (Massachusetts Association of Science Teachers), MEES (Massachusetts Environmental Education Society) and MABT (Massachusetts Association of Biology Teachers) listservs. Professional Development Points (PDPs) will also be offered to help teachers fulfill their certification requirements. The Museum always over-recruits to compensate for any participants who drop out of the program and other Museum professional development programs on evolution have been oversubscribed.

#### • Who will plan, implement, and manage your project?

The project team comprises six individuals who together have significant expertise in formal and informal K-12 education, project content, teacher professional development, and program evaluation. HMNH is

located in the same building as more than 100 university faculty and other scientists who are involved in research on evolution, many of who have worked with the museum for years on program content and delivery. Key project staff include: Jane Pickering, Executive Director of HMSC, has over 25 years of hands-on experience in developing exhibits and programs, including being the PI on six federally-funded teacher professional development initiatives in the biological and geological sciences. She will be responsible for overall project direction and supervision, convene meetings of the project team, facilitate connections with Harvard faculty, and help with dissemination efforts. Wendy Derjue-Holzer, Head of Education for HMNH, has been a science educator in formal and informal settings for over 15 years, including teaching high school in New York City. She will oversee all phases of the program, review the project deliverables, manage the partnerships with school districts, and help with dissemination activities. Jennifer Peterson, Senior Educator, HMNH has extensive experience in planning and implementing teacher professional development programs. She will oversee the oversee the recruitment and orientation of teachers; design, organize and lead the Boot Camps and Field Schools including participation of Harvard researchers; work with teachers to develop curricular activities and associated classroom resource materials; respond to individual teacher's needs for technical assistance; oversee the field trips; and assist in the evaluation and organization of resource materials. Arielle Ascrizzi, Educator, HMNH, has been a museum educator for nearly 10 years and has an undergraduate degree in Earth Science and a Master of Arts in Teaching. She will assist Ms. Peterson on all project activities, particularly the Boot Camps, Field Schools, and field trip components. Lynn Baum & Christina Smiraglia, TurtlePeak Consulting have more than 25 years of experience in the development and implementation of research and evaluation projects predominately focused in science museum settings. Their experience also includes the development and implementation of educational programs in such environments. TurtlePeak Consulting will manage and implement the project's evaluation activities and be advisors to the team throughout the project.

- When and in what sequence will your activities occur?
- **A: Project planning**: November 1, 2015 January 2016. Representatives from each school district will meet with project staff to review current school curricula and NGSS to identify areas in need of change in order to help create new classroom curricula, as described earlier. Staff will also work with the districts to identify participants for the Boot Camps that will take place during 2016, and actively recruit teachers from other Massachusetts school districts for any open slots.
- **B**: **NGSS biological evolution Boot Camps** February 2016 August 2016. We will run four 18-hour Boot camps at the Museum, one each in the February and April vacations, and two during the summer. Each will serve approximately 20 teachers. As described above, these will cover concepts of biological evolution and earth science as outlined in NGSS. Curricular materials from these sessions will be made available on the Museum's web site.
- C: Academic Year Activities February 2016 October 31 2017. Teachers and their students will participate in free field trips, including museum classroom programs, focusing on NGSS related topics. Teachers will be invited to attend teacher events, Saturday classes, and public lectures focusing on topics relevant to NGSS, including some specifically developed for the group. Museum staff will be available for consultation throughout the year. The project team will continue to meet with the group of representatives from the partner school districts.
- **D:** Summer Field Schools June 2017 August 2017. We will offer two Field School opportunities for Boot Camp graduates that will allow them to explore content more deeply, try out more activities for use in classrooms, and practice pedagogical skills needed for NGSS. Hands-on activities and close observation of museum objects and live specimens will be emphasized. Each will accommodate up to 20 teachers and will run for 18 hours over 3 days. From previous experience we expect about half of the Boot Camp graduates to be interested in this opportunity and an individual teacher will only attend one Field

School. Field School #1 will take place at HMNH and will focus on animals and fossil animals, and Field School #2 will take place at the Arnold Arboretum and will focus on live and fossil plants.

- **E. Evaluation** Ongoing. A detailed evaluation plan is presented below. Our evaluators will advise on all aspects of the program and be involved in activities throughout the period of the grant.
- **F. Dissemination Activities** From Spring 2017. More details are presented below.
- What financial, personnel and other resources will you need to carry out the activities? HMSC is requesting funds to support Ms. Peterson to do the majority of project implementation, expenses for the Boot Camps & Field Schools, funds to purchase classroom supplies for participating teachers, teacher stipends, bus funds for high-needs schools to participate in field trips, and evaluation. Please see Budget Justification for more details. Other resources for the project are being contributed as part of the cost share.

#### • What resources will your institution contribute to the project?

HMSC will use its own, and Harvard's resources to ensure the success of the project, and will meet its cost share through in-kind contributions of staff time; provision of complimentary staff-led education programs for participating teachers; and free family memberships and family passes for participating teachers. The Museum works closely with scientific staff and faculty of the Department of Organismic and Evolutionary Biology, and particularly the nineteen faculty curators of Harvard's Museum of Comparative Zoology (MCZ), the Harvard University Herbaria (HUH) and the Arnold Arboretum, as well as other scientists associated with these institutions. These scholars provide expertise in all areas of biodiversity and evolution that will be available to the project. Our long-term partnership with academic departments means we have relationships with specific Harvard faculty and scientists who are very effective and experienced in working with teachers. The HMNH has access to the 25 million specimens in these museums in addition to its own education collection of 6,500 specimens.

#### • How will you evaluate your project?

Lynn Baum and Christina Smiraglia of Turtle Peak Consulting (TPC) will design and implement the evaluation plan for *Evolving Curricula*. They will use a combination of qualitative and quantitative methods to assess the effectiveness and overall impact of the three major goals. Additionally, a mixed methods approach will be used to examine the specific strategies of the Boot Camps and Field Schools as well as the secondary impact on the students in the classrooms and at the Museum. Surveys, including pre- and post- experience assessments for the teachers, as well as interviews and observations will be the primary tools for data collection. TurtlePeak will have regular meetings with the HMNH team to provide guidance for any refinements of the project. A summative report will be delivered at the conclusion of the grant. More details of the evaluation plan can be found in the Supporting Documents.

How will you track your progress toward achieving your performance goals and intended results? The project team will meet regularly (at least once a month) in person to compare progress with the project timeline. The team will also meet with the representatives from the partner school districts at least once a semester for discussion on how the project is going. Budget management will be the responsibility of Ms. Pickering, working with HMSC's financial management staff. All program expenses and income are entered and tracked in the University's financial systems, and are monitored and reported on a monthly, quarterly, and annual basis. Ongoing evaluation activities will monitor the efficacy of the products, and progress towards the final learning outcomes

#### How and with whom will you share your project's results?

We expect that school systems and teachers around the state will be interested in the results of this project as all districts will need to transition to the new NGSS based standards after state adoption in 2015-2016. The HMNH Education team will promote the materials through their extensive connections with New England public school districts, through our 'teacher enews' (1500 subscribers) and the MAST (Massachusetts Association of Science Teachers), MEES (Massachusetts Environmental Education Society) and MABT (Massachusetts Association of Biology Teachers) listservs. In addition, staff

anticipate offering workshops at the Spring 2017 MAST and MABT conferences. For the informal science education audience, we will produce reports that can be shared with colleagues nationally, for example through ASTC's Community of Practice on 'Science Centers and NGSS'.

#### 3. Project Results

## • How will the knowledge, skills, behavior, and/or attitudes of the intended audience change as result of your project?

In relation to the goals and outcomes outlined earlier we aim to improve teachers' comfort and confidence in implementing NGSS-aligned curricula, as well as increasing their content knowledge and pedagogical skills in relation to the 'Core Disciplinary Idea' of biological evolution. We hope to engage teachers more fully during museum visits, and in other museum programming throughout the year, and to positively impact their attitude towards using museum-based resources. We aim to improve students' knowledge of biological evolution, particularly the challenging topic of an accurate understanding of natural selection.

- What performance indicators will you use to measure this change?
- What are the proposed targets for these performance indicators?
- How will you compare the proposed targets to actual outcomes?

Performance indicators will include measures such as implementation of aspects of the project curricula and activities in the classroom, take-up of field trips and attendance at other academic year activities, tracking requests for information and assistance, and changes in students' content gains e.g., clarification on common misconceptions surrounding evolution. The project team will work closely with the evaluators, and school districts, on targets and how results compare to expected outcomes. An example target would be that we would expect 90% of teachers to attend an academic year activity, and that 95% will bring students on field trips. The targets for indicators focused on teacher knowledge gains and classroom implementation, will be developed in partnership with the school districts.

#### • What tangible products will result from your project?

- Curriculum maps aligning to NGSS for participating districts.
- Lesson plans and other curricular materials that are aligned to state NGSS standards.
- Classroom resources (e.g., specimens, supplies for hands-on activities) that teachers will keep.
- Web resources, through posting of materials on the HMNH web site.
- Summative evaluation report.

#### How will you sustain the benefit(s) of your project?

- Participating districts will retain a curriculum with specific lessons well aligned to the Massachusetts NGSS standards that they will use for years to come with both teachers that have participated in the PD as well as additional middle school faculty.
- The well-developed outline of the professional development curriculum will become part of the Museum's portfolio of opportunities that can be provided at relatively low cost (materials, etc.) as a whole 18 hour program, or pieces can be delivered in different formats such as a stand-alone Saturday workshop or a presentation at district development days.
- Aspects of *Evolving Curricula* will be used to develop new programs for the Museum's regular feebased offerings for visiting school groups. For example, materials from a past professional development program on evolution were used to develop "Exploring Evolution," an introductory classroom program for grades 6-8.
- Physical materials and lesson plans from the program will remain with participating teachers after the grant finishes. Often we find that one teacher in a school will share with colleagues in their building. Information about the program and its content will be available on the Museum's web site.

In addition, our experience with other programs shows that most teachers stay in contact with Museum staff after the formal program ends, often for many years, through other Museum networking opportunities and field trips.

# **Evolving Curricula Harvard Museums of Science and Culture**

### **Schedule of Completion**

	Nov 2015 -	Feb - April	May - July	Aug - Oct	Nov 2016 -	Feb - April	May - July	Aug - Oct
Activity	Jan 2016	2016	2016	2016	Jan 2017	2017	2017	2017
Project Meetings (including check-in meetings with school districts)								
Project Planning with partner school districts								
Boot Camps								
Field trips, teacher events and other academic year activities								
Field Schools								
Dissemination Activities								
Evaluation								