

Norman B. Leventhal Map & Education Center

Organizational Profile

The Norman B. Leventhal Map & Education Center at the Boston Public Library is ranked among the top map centers in the United States for the size of its collection, the significance of its historical (pre-1900) material, and its advanced digitization program. Unique among the major collections, it combines these features with exceptional educational and teacher training programs to advance geographic literacy among students in grades K-12 and enhance the teaching of subjects from history to mathematics to language arts. The collection is the second largest in the country located in a public library, ensuring access to these invaluable resources for scholars, educators, and the general public.

The Leventhal Center was established by philanthropist Norman Leventhal in a long-term strategic partnership with the Boston Public Library. Its mission, approved by the Executive Committee of the Board of Directors on May 9, 2018, is “To develop programs which inspire curiosity and learning among people of all ages by using cartographic materials to illuminate history, geography, world cultures, science, and contemporary issues.” The Map & Education Center teaches students of all levels, develops and disseminates K-12 lesson plans, and trains teachers to use maps effectively and creatively in the classroom. It stewards the Boston Public Library’s permanent collection of 200,000 maps and 5,000 atlases and a select group of rare maps collected by Mr. Leventhal. The collections are available for academic and public research. Two exhibitions per year feature maps from the collection and explore themes such as immigration, climate mapping, and Boston’s green spaces. Public programming includes lectures, workshops, classes, and family programs.

The Leventhal Center attracts over 120,000 visitors per year from all over Greater Boston, tourists from across the country, and international visitors. It serves a diverse group of 4,000 schoolchildren; half from Boston Public Schools. In addition, 400 teachers attend professional development programs each year. Public programs attract over 600 people per year. On average, LMEC’s website is visited 15,600 times per month.

A new website housing the Map Center’s digital map collections — freely available to all — was launched in June, 2017. The collections include over 10,000 high resolution, zoomable images with the latest technology for viewing and manipulating maps. Georeferencing tools allow visitors to overlay historical maps over modern maps to compare the past's geographic knowledge with today's data. The “Tools for Teachers” section of the website offers over 100 freely available digital lesson plans and maps sets for use in the classroom.

The Map Center’s K-12 education programs are designed to spark curiosity and provide new perspectives to widen young people’s world views. Teacher workshops and fellowship opportunities focus on subjects from mathematics to language arts, and expand educators’ use of maps as teaching tools. Map Center education staff use community assets to add breadth and depth to education program offerings, including partnerships with faculty from area universities, joining with organizations such as the Massachusetts Historical Society, and informing and exciting high school students about municipal resources through site visits to such places as City Hall.

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Strategic Plan Summary

Over the past two years, the Norman B. Leventhal Map & Education Center has been involved in an in-depth strategic planning process. This process began with a ten-year review of the organization as mandated in its founding agreement, signed in 2007.

The ten-year review was completed in 2017, conducted and written by the Map Center's Board of Review, along with a committee of map curators and education experts from leading peer institutions. The Map Center's Board of Review is comprised of recognized experts in the history of cartography, cartographic collections and their curatorial functions, educational programs using geographic and cartographic material, and related fields. A thorough evaluation was completed, with the reviewers concluding that the Map Center had met or exceeded its founding goals.

The organization then embarked on a year of strategic planning in order to chart a course for the Map Center's next phase of growth and development. The planning process was directed by the strategic planning committee of the Board of Directors and President Connie Chin, and, when finalized, will be presented to the full board for approval. The plan incorporates information and recommendations from a benchmarking interview study, conducted by consulting firm TDC, to understand the Map Center's competitive context, a facilities space study conducted by architecture firm NBBJ, and the ten-year review done by the Board of Review. The finalized three-year strategic plan (2018-2020) is scheduled to be presented to the Board of Directors for approval at its June 20, 2018 meeting.

Throughout the planning process, the committee focused on a guiding question: How can the Leventhal Map and Education Center best leverage the unique power of maps to engage the public's curiosity about the world and increase its understanding of history, geography, world cultures, current events, and citizenship?

Upon consideration of trends and opportunities in the education and library fields, advances in geospatial technology, the core strengths of the Leventhal Map Center in relation to peer institutions, organizational constraints, and target constituents, the planning committee concluded that the Map Center could have the greatest impact by:

- Enriching all schoolchildren's learning experiences and empowering educators to teach with maps;
- Inspiring the public to explore issues of historical and contemporary relevance; and
- Collecting, preserving, and giving the public broad access to our cartographic cultural heritage.

As a result of the planning process, the organization re-affirmed its core commitment to education by rewriting its mission statement and making a name change from "Norman B. Leventhal Map Center" to "Norman B. Leventhal Map & Education Center." This gives the

organization a strong framework for collaborating with educators in support of local, state, and national curriculum frameworks, and for connecting with communities that can use historic and current maps as a basis for improving their neighborhoods.

The objectives of the strategic plan are:

1. Continue to use maps in creative ways to engage students and the public to help them better understand geography, history, world cultures and citizenship.
2. Achieve national and local leadership in the creative use of maps in K-12 education.
3. Continue to present relevant and compelling exhibitions that engage the public in civic discourse and present diverse points of view.
4. Reach a national audience through innovative digital initiatives on the Map Center's website that take advantage of advances in geospatial technology.
5. Continue the Map Center's high standards of care and development of the collection.
6. Broaden the organization's base of financial support.

In pursuit of these objectives, the Leventhal Map & Education Center will:

- Increase education program staff by one half position from its 2017 level;
- Increase focus on high school level programs and develop strategic partnerships with schools;
- Expand teacher training programs in order to reach greater numbers of students;
- Strengthen alignment of education and exhibition programs;
- Increase relevancy of exhibitions by using the Center's maps and historic artifacts to highlight contemporary issues such as immigration and climate change.
- Focus exhibitions on the exploration of a theme by telling stories through maps.
- Build on the significant progress made during the past ten years in physically gathering, organizing, and cataloging the collection of 200,000 maps and 5,000 atlases, facilitating the use of the collections in exhibitions and education programs.
- Use the retirement of the Curator of Maps as an opportunity to restructure curatorial staffing to best support the new educational mission of the organization.
- Focus on digital initiatives, capitalizing on the burgeoning field of geographic information systems (GIS).
- Continue to digitize maps in the collections and make them freely available online.
- Utilize geospatial software to allow website users to conduct spatial searches of map databases and overlay contemporary maps on top of historic maps.
- Negotiate long-term facilities needs with the Boston Public Library, to ensure proper care of collections, growth of education programs, and the smooth operation of the organization.
- Broaden base of support for long-term sustainability by developing the Board of Directors, focusing on major gifts, and developing a strategy to increase endowment.

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Empowering Maptivists

“A city is not an accident but the result of coherent visions and aims.”

-- Leon Krier, *The Architect of Community*

The Norman B. Leventhal Map and Education Center (LMEC) seeks an Activating Community Opportunities Grant to deepen its work with the Boston Public Schools (BPS), in partnership with the Boston Public Library. This project will expand students’ access to maps and spatial data as powerful tools for advocacy and change. Students will gain a better understanding of where they live and will learn to think more broadly about effecting change in their communities. Building on LMEC’s work over the past year with two BPS high schools, *Empowering Maptivists* will use historic and modern maps of Boston to deepen students’ understanding of issues connected to immigration, gentrification, and community resources in their city, giving them the tools to propose solutions for change.

I. Statement of Need

In the Boston Public Schools, more than 75% of students are designated as “high needs.” These students are from low-income families, English language learners, students with disabilities, or a combination of all three. In *Empowering Maptivists*, LMEC will partner with two BPS high schools: Snowden International School and Margarita Muñiz Academy. Snowden’s students are 75% high needs and 94% non-white. The Muñiz Academy is the first dual-language high school in Boston and serves a student body that is 96% Hispanic and 88% high needs.

In working with Boston students, LMEC looks to use its collections to connect students to their day-to-day experiences, but it also encourages them to think outside of their neighborhoods alone. The new national C3 social studies standards (college, career, and civic life) state that the marginalization of social studies has a direct impact on students, especially students of color and students living in poverty. Engaging students in thinking about their own communities, according to the authors of the C3 standards, results in “Active and responsible citizens [who] are able to identify and analyze public problems, deliberate with other people about how to define and address issues, take constructive action together, reflect on their actions, create and sustain groups, and influence institutions both large and small.”¹ 21st century skills (collaboration and teamwork, creativity and imagination, critical thinking, and problem solving) have also been cited as critical to student engagement, from personal and social responsibility to visualizing and decision making.

Project-based learning is recognized as a way to address these skills and give students the flexibility to dig deeply into a topic and create their own solutions. The Norman B. Leventhal Map & Education Center has always placed critical thinking and visualization at the center of its work with young people.

¹ “College, Career, and Civic Life (C3) Framework for Social Studies State Standards.” *National Council for the Social Studies*, 12 June 2017, www.socialstudies.org/c3.

Finding oneself on a map is exciting for both young people and adults as they orient themselves and discover their place in the world. LMEC's collection is particularly strong in maps of Boston and this has been vital to the strength of the Center's educational offerings.

The key components of this project are:

- 1) Continue and expand already existing partnerships between LMEC, BPS, and the Boston Public Library to enable students to access and use maps and data to deepen their knowledge of their city.
- 2) Create a formal program and curriculum in partnership with Boston Public Schools that engages high school students with maps, data visualizations, and other digital resources connected to their communities to enhance their mastery of 21st century skills.
- 3) Teach students to collect their own simple data about a topic of study in their community, help them create a visual source (map, graphic, etc.) that they can use to make their research studies more powerful, and help them consider how to advocate for change.
- 4) Empower students to take their research, data, maps, and ideas for change to their communities through the community hub of their local Boston Public Library branches. The project will culminate with students giving community presentations, leading discussions, and proposing action steps. Students will see that their voices are heard both in school and in the community.

Empowering Maptivists fits with this IMLS special initiative in that LMEC is working with its long-time partners Boston Public Schools and the Boston Public Library to further leverage the power of its map collection and educational mission to connect the city's students with city resources. LMEC's approach to making its collections and outreach relevant to the community at large is innovative, integrating both physical and digital maps to engage and create dialogue and action. In addition to the LMEC resources, students will also access the Boston Public Library's Teen Central resources and data and maps from the City of Boston's Planning and Development Agency. The project will have an impact outside of the school day, leveraging community resources and showing students that their opinions are valued.

For the Boston Public Schools, fostering deep connections with city organizations is vital. As the principal of Snowden International School stated about this collaboration: "Students get to learn about the history of their communities and to understand how policy has impacted their lives and the lives of their parents and neighbors over the years in Boston. Students are able to connect important concepts from their history and humanities courses to specific evidence of these trends in their communities." Likewise, teachers at the Muñiz Academy initially approached LMEC to partner, as they felt their students lacked an awareness of how to access information about where they live. These educators wanted to help create a new narrative for their students: one where they are able to locate, collect, and analyze information about where they live, and communicate with the larger community about the steps that they see as critical to creating positive change.

LMEC is particularly well-positioned to lead this project, as it is the only organization in the city devoted to using maps as learning tools. LMEC brings its expertise in GIS (Geographic Information Systems) to this project, building students' skills in this growing STEM field, and supporting project-based learning experiences. Student "maptivists" will connect their classroom studies with real-world experiences in their neighborhoods and learn to create visual representations of specific trends or issues in their city and beyond.

The City of Boston recently launched Analyze Boston, an online data hub giving open and easy access to maps and data about the city, to which the Boston Public Library (BPL) was a key contributor. This project will make use of Analyze Boston, which will enable students and teachers to access, analyze, and propose new ideas using information from this open data platform and represent it geospatially.

This project also fulfills the strategic vision of the BPL and its core Compass Principles. These include: the BPL as a user-centered institution that changes with the demographics of its neighborhoods, a place for community gathering, the use of special collections to engage multiple audiences, working with children and teens, and access and innovation. This project fits squarely within the BPL's push for equal access to data, and its goal of bringing both visual and digital literacy to all citizens.

Project History: In December 2017 and early 2018, LMEC piloted multi-part programs with the Margarita Muñiz Academy, a dual language high school, and the Snowden International School, both Boston Public Schools.

At the Muñiz Academy, LMEC educators worked with 70 seniors on research projects focused on current issues affecting Boston residents. Students researched an issue of importance to them, then proposed a policy to affect positive change. The students were asked to use maps and visuals to enhance their research and gain a better understanding of the city using the resources of LMEC. Students studied demographic maps of Boston and discussed the kinds of information these maps can tell us about the city (and also what they cannot). For example, students analyzed maps showing data such as income diversity, top languages spoken other than English in Boston neighborhoods, and racial diversity. They grappled with what the data showed them, and what other information they needed to know in order to get a fuller picture. Students considered how seeing the information geospatially makes a stronger impact than just seeing a simple chart of statistics.

Students were also introduced to some basic GIS tools in an initial lesson and were asked to take photos and notes in their own neighborhoods to create "happiness" and "change" maps using StoryMap, a web app that allows users to combine maps, narrative, images, and multimedia. The "data" created by these maps helped refine their topics of study and their policy proposals.

A subsequent lesson included a visit to the Boston Planning and Development Agency at Boston City Hall to view a physical model of the city and meet with GIS researchers. After students completed their

individual research projects, they created a final group map, in both Spanish and English, with summarizing images and outlines of all their proposals, showing the various issues they addressed. They added key visual elements connected to places in Boston and to their topics. The students proposed a range of new ideas, from expanding affordable housing in an increasingly expensive city, to increasing services for refugees and new immigrants, to improving services for children of parents with drug addictions. The students' work can be viewed at: <https://arcg.is/1r5f8j>.

The goal of this process was not to train students to be GIS pros, but rather to guide them in accessing maps and data to help answer questions and solve problems. As the classroom teacher and LMEC further refined the lessons, the goals were always to give students an understanding of how to access information about where they live and to be critical readers of data.

There was a mutual understanding between LMEC and the Muñiz Academy that exposing this population of students to tools like GIS, careers pathways in data and research, and the innumerable resources of the Boston Public Library, was as much a critical part of the program as writing and making maps. The partnering teacher stated: "This extensive 'Mapping Boston' work helped root my students in their research of their city. It also provided them with perspective on the relationship between their individual contributions to improving Boston and the collective impact of their work."

At Snowden International School, LMEC is working with 75 ninth graders and 80 tenth graders. The focus is on using geo-referenced maps (digital images of historical maps that have been "rectified" to correspond to a modern map) to look at the city over time, specifically the process of "redlining" in Boston neighborhoods during the 1930's and 1940's. Students examine maps from LMEC's urban atlas collection as well as maps from the Home Owners Loan Corporation to examine how federal housing loan policies during the New Deal still have repercussions today. High school students across the city study the history and impact of the Boston busing crisis from the 1970's and look at how neighborhood segregation continues to be an issue in 2018. Students at the Snowden School created ThingLink maps where they imbedded points of data connected to what they learned about the New Deal in Boston. They will return to the maps and issues again when they begin their study of Boston busing later this spring.

Alignment With Institutional Priorities: *Empowering Maptivists* aligns with LMEC's strategic plan and institutional priorities, specifically in the belief in maps as powerful teaching tools. The work of LMEC from Day 1 has been to engage young people's curiosity about their world. Through exhibitions, public programs, and educational programs, LMEC seeks to create relevancy with the issues of today by connecting the stories told by historical maps with those of modern maps, helping us understand our communities and the world around us. A goal of the LMEC strategic plan is to build deeper school and community-based partnerships that go beyond the one-time classroom visit or family day. With this project, LMEC will work to build a program and curriculum that can be replicated and used by additional teachers and librarians alike that inspires students to ask: what do I want to improve in my

community? How can I better understand where I live by looking at maps and data from the past and the present?

Reaching Non-Traditional Audiences: LMEC presents its maps as stories about the world. For BPS students, 86% of whom are racial/ethnic minorities, their stories are often not heard. Seeing themselves on a map and creating maps of their own making will not only introduce them to 21st century technology skills through the use of GIS, but will also empower them to think more broadly about the city of Boston and their place in it. This is especially important work to undertake with high school students who are taking their place in the adult world. As they become eligible to vote and participate in civic life, these students will be informed and engaged.

This project will give students several platforms for giving voice to their concerns. The Boston Public Library is already a mighty force in the city in that it provides safe spaces for teens and connects them with resources. Building upon their engagement with the library system, the students will have the opportunity to take their work from the classroom and present it to the broader community at their neighborhood library branches. In addition, LMEC has an active social media presence on Facebook, Twitter, and Instagram and those platforms will be used to further share student work and engage the community around their chosen issues and questions.

Community Buy-In and Asset Mapping: Through these pilot projects, LMEC has formed strong partnerships with the Snowden and Muñiz schools, as well as with the Director of History and Social Studies for the school district (see letter of support). Our ongoing partnership with the Boston Public Library (LMEC is located within the main branch) will facilitate collaborations with BPL's Teen Central and with the neighborhood branch libraries. An advisory group comprised of current teachers involved in the project, key administrative staff from BPS, a part-time project consultant, youth services librarians at the Boston Public Library, and professional evaluator Sun Associates will guide curriculum development and ensure broad community representation.

In the case of this grant, asset mapping will take place as LMEC looks at how to expand the project beyond the initial two pilot schools. Working with Boston Public Schools, LMEC will identify individual schools in a variety of neighborhoods who want to integrate maps and data into their study of Boston. LMEC will also work with the branches of the Boston Public Library to identify opportunities for students to present their findings to the community.

Other potential partners have been identified for future program expansion. These groups include the Boston Debate League and the Hyde Square Task Force, groups that work with Boston students, but are outside of the school structure.

II. Impact

Empowering Maptivists will empower BPS students to identify ways in which they can work to better their communities and construct their own visions of Boston. At the center of this project are the students themselves who will decide which issues are important to them. They notice inequities in their neighborhoods, how their schools look, and what services they need to help them succeed. Students will lead this project by selecting their areas of interest to research. Their teachers and LMEC staff will act as facilitators, helping students put their thoughts into writing, create persuasive maps and visuals, and then motivate others to care about their issue by sharing their research and suggesting actions to affect positive change.

For example, Muñiz students' observations of the positive and negative aspects of their neighborhood through the creation of a StoryMap would perhaps be wildly different from that of an adult professional living two blocks away. Day-to-day experiences can very often be limited to what we see and know. Despite the close proximity of neighborhoods in Boston, many students are unfamiliar with parts of the city outside of their own neighborhoods. This project will give students a better understanding of how their neighborhood fits into the rest of the city, broadening their sense of community.

Community is defined in multiple levels in this project, from the students and teachers in the schools, to the larger community of BPS peers, to adults in the schools' neighborhoods who will view and respond to the students' maps and research. At the heart of this project is empowering the students to engage both their own communities and the community at-large with topics they care about. LMEC will share student-created maps and written projects through its website and social media. The end result will be student-led community presentations of their work in which they solicit feedback and ideas from peers and create action steps towards thinking about addressing an issue. Students will be involved in deciding how they want their maps to be shared on social media and possible ways to ask for feedback and ideas from participating community members. They will also help design the dialogue sessions at the BPL branches.

The first year of the project will be focused around the students and what they see as their collective vision for impact. The long-term impact of this project will be to create a deeper and more meaningful connection between Boston Public School students and the resources of LMEC and the Boston Public Library. Libraries are critical hubs of learning outside of school and foster deep cross-community connections by providing a variety of services and resources.

Empowering Maptivists will work with an external evaluator, Sun Associates, to help insure that the project is making steady and demonstrable progress toward achieving its objectives with regard to supporting students and improving their skills in engaging with their communities. Sun Associates is experienced in working with informal educational institutions as well as diverse, high-need, school districts. Evaluation work will focus on two activities: 1) Assisting the project staff in developing performance indicators that connect the project's activities with evidence of student community

involvement and 2) formatively and summatively tracking progress in meeting the project’s performance indicators. These activities will help **define** *Empowering Maptivists*’ success and will **document** the degree to which the project is successful in achieving its impact.

In the first year of the project, the evaluator will take charge of assembling an array of research information on indicators of effective project-based learning, teacher professional development, and student community engagement. This information will be provided to project staff and stakeholders who will then reflect upon this research and will refine a set of project-specific performance indicators (see below) and create a set of rubrics for assessing teacher training and student work. Taken together, this work will guide and inform the assessment of *Empowering Maptivists*’ work product for the remainder of the project. This indicator and rubric development work will occur early in the project so that the project staff are clear on the assessment criteria for their (and the project’s) work, and can use this intelligence to formatively guide project activities. The evaluator will meet regularly with the project’s advisory board during this first year to discuss the metrics associated with these indicators and to insure that indicators are fine-tuned and kept on track with the evolving nature of Year 1 project work. The evaluator will prepare a report at the end of Year 1 that qualitatively and quantitatively summarizes project progress for the year.

While it is essential that project staff and stakeholders have a central role in the finalization of project indicators, it is clear that these indicators will relate in large part to the evaluation questions shown in the table below:

Evaluation Question	Possible/Draft Indicator	Associated Metrics
To what extent has the project supported BPS, Muñiz, and Snowden teachers in the implementation of a curriculum that engages students in authentic project-based learning activities that utilize maps as a way of visualizing community data?	<i>Empowering Maptivists</i> teacher professional development provides project teachers with concrete curriculum resources and on-going support for developing and implementing project-based learning activities that focus on data visualization and community engagement.	Number of lesson plans produced Number of teachers attending project PD Qualitative review of lessons against a project-produced rubric Teacher feedback on project PD and project supports
To what extent has the project encouraged and supported students in engaging with their communities through projects that inspire and support community conversations?	Students, utilizing <i>Empowering Maptivists</i> resources from LMEC and BPL, engage in projects that are of high relevance to the students and their	Number of students served Number of student projects/presentations created Qualitative assessment of

	communities.	<p>student projects against teacher-created rubric</p> <p>Documentation of student project outcomes (e.g., community conversations)</p> <p>Survey of students around elements of community engagement (e.g., have their skills and abilities around community engagement benefitted from their project participation?)</p>
To what extent do student projects involve and reflect the use of maps to visualize data and show community change over time?	Students of teacher participants in <i>Empowering Maptivists</i> produce learning products that clearly contain relevant map data that connects to the history and current realities of their communities.	<p>Number of maps created</p> <p>Assessment of map products via a project-created rubric.</p>

In the second year of the project, the evaluator will continue to apply the project indicators to assess project progress and outcomes. Once again, the evaluator will meet with the project’s advisory board and staff throughout the project year to formatively review progress. A final, summative evaluation report will be produced at the end of Year 2.

In keeping with IMLS’s request that funded projects set aside time for meeting with a possible third-party evaluator, the *Empowering Maptivists* external evaluator will be the project’s main liaison with this potential third-party evaluator. Sun Associates will also be responsible for monitoring IMLS information requests and coordinating with project staff to insure that adequate project and participant data is being collected to successfully meet IMLS’s information needs for the final project report and/or throughout the two project years.

Performance goals for this project are:

- Continue and expand existing partnerships between LMEC, the Boston Public Library, and the Boston Public Schools to enable students to access and use maps and data to create understanding about their city.
- Create a formal program and curriculum in partnership with Boston Public Schools that engages high school students with maps, data visualizations, and other digital resources connected to their communities to enhance their exposure to 21st century skills.

- Teach students to collect their own simple data about a topic of study in their community and help them create a visual source (map, graphic, etc.) that they can use to make their research studies more powerful and help them to consider how to advocate for change.
- Empower students to take their research, data, maps and ideas for change to their communities through their local Boston Public Library branches. Community presentations, discussions, and action steps will be the culmination of the student work as they see that their voices are heard.

Metrics:

- Students and their teachers in key partnership schools can demonstrate an understanding and facility with using data and GIS as part of their research and teaching.
- Students who participate in the program have an enhanced understanding of their topic of study or research through studying data, visualizations, and maps.
- Students who participate in the program are able to share their visuals and maps and articulate their research and study of community topics through a community dialogue meeting at a neighborhood library branch. For students who may be unable to present in public due to any learning disabilities, LMEC will work with educators to find alternative ways for them to virtually present and solicit feedback for their projects.

III. Project Design

Year 1: Building on current work with the Muñiz Academy and the Snowden School, LMEC education staff will spend the early months of the project reflecting on the current pilot project, assessing successes and weaknesses of the project, and clarifying how to scale up the work with students.

Working with an advisory group of three current teachers involved in the project, key administrative staff from BPS, a part-time project coordinator, youth services librarians at the Boston Public Library, and professional evaluator Sun Associates, LMEC will create a plan via this advisory group to work with students in Year 1. A key component of this work will be meeting with branch librarians in communities connected to the Muñiz Academy to assess and strategize for final presentations and dialogues by students at the end of Year 1.

GIS training for LMEC staff and partner educators will also take place in Year 1. Consulting with Lyn Malone at WorldViews, LMEC will consider the most effective strategies to use GIS with the partnering schools, how to introduce students to collecting and managing data sets that they can then map, and how to scaffold the curriculum. LMEC and WorldViews will meet regularly in person and virtually to assess how the project activities with students are progressing and will pilot various tools and strategies to get students comfortable with the process and tools.

At the end of the 2018-2019 school year, students at the Muñiz and Snowden high schools will present their projects in a community forum at both the central branch of the BPL and the Jamaica Plain branch

(near the Muñiz). This will also be an opportunity to determine the most effective ways for students to present their findings. One possibility could be collecting data from participating community members connected to student research topics, and further adding to a student-created map. Student projects and community dialogues will be shared via social media, on LMEC's website, and ideally displayed in the Leventhal Map Center itself.

In summer 2019, the advisory group will convene to look at all aspects of the project and consider how to replicate it for other schools or community groups. The first step will be writing up a full curriculum that will give a step-by-step outline for using demographic and neighborhood maps to teach and learn. Creation of a guide to finding and using data and geospatial tools will aid LMEC educators as they share the curriculum with BPS teachers and work to expand the reach of the project to other high schools that want to engage in project-based learning.

Year 2: In Year 2, LMEC, BPS, and the Boston Public Library will finalize the written curriculum and disseminate it through the BPS social studies network. Through outreach to schools and community centers, LMEC will seek new partnerships to expand upon its work with the initial pilot schools. LMEC will continue to work with Muñiz and Snowden, implementing the fuller program model with culminating community events and social media engagement.

Community events will also be held where young people and adults can take part in mapping workshops held at neighborhood branches and the central library's Teen Central. GIS trainings will be offered for new partner teachers who want to learn to use tools such as ESRI's mapping and spatial analytics software and how to conduct much of the lessons and community outreach in their own schools separate from LMEC.

Sun Associates will evaluate program activities, along with a possible third-party evaluator from IMLS. By the second year of this grant, *Empowering Maptivists* will be a formal program partnership between LMEC, the Boston Public Library, and the Boston Public Schools. The formalizing of this partnership will ensure that a model program and curriculum will be available to other partner schools and community groups who are interested in engaging in this work. LMEC will continue to use social media to promote the work of schools who participate. Funding from IMLS will make it possible to extend the reach of *Empowering Maptivists*, providing an effective model program for partnerships with libraries, museums, schools, and youth-serving organizations.