The Metropolitan Waterworks Museum located along the Chestnut Hill Reservoir once functioned as the High-Service Pumping Station providing residents in and around Boston with clean drinking water. After closing its doors in the mid-1970s, the Metropolitan Waterworks Museum reopened in 2011, offering visitors a unique opportunity to learn about public health, architecture, engineering, and social history. In particular, the Waterworks Museum provides a hands-on learning experience about local water sanitation history, the science associated with water sanitation, and the importance of water sanitation. It’s value as an educational resource has been increasingly utilized by 6th-grade classes in Brighton and Brookline Public Schools, creating a need for more age-appropriate displays at the museum. Our work with the Museum has been focused on creating a movable, interactive exhibit for middle-school students that engages them to think about the importance of the evolution of water sanitation and regulation.

RESEARCH METHODS
Throughout the semester, our group worked closely with our mentor, Lauren Kaufmann, and Museum staff, Joseph Duggan and Matt O’Rourke, to develop an exhibit that would effectively reach our target audience. The two main decisions we had to make were: 1) Which kind of exhibit format would best draw the attention of young visitors? 2) Which topics would best cater to their overall educational experience? To answer these questions we first examined the existing displays and information at the Waterworks Museum. We then took the time to learn about the various historical, scientific, and regulatory framework involved in the water treatment process. To break down our research we decided to individually focus on four topics, which were most in keeping with the academic curriculum of a 6th-grade class (see Fig. 2). From here, we continued engaging in a brainstorming process concerning the diverse possibilities for an effective exhibit display, weighing the pros and cons of each (see Fig. 1).

RESULTS
We found that the most effective display would be an interactive, rotating wooden block similar to one found at Boston’s Museum of Science. Such an exhibit could display the information of the four different topics related to water treatment. Its manageable size and weight would make it easy to manufacture and move around the museum, while its few moving parts would eliminate the need for adult supervision. These characteristics combined with access to a volunteer willing to create the display for free made this idea particularly appealing and feasible, outweighing the benefits of our other options. The four areas of our research allowed us to focus science and history from a national to a local level, maximizing the educational use this exhibit for school-aged museum visitors. With our target audience in mind, we concluded that the actual information in our display would be presented in a 250-word summary written at a 6th grade reading level. To guarantee accomplishment of this goal, we partook in a revision process whereby we worked together with museum staff to create a comprehensible final product (see Fig. 3).

DISCUSSION
Our final product was limited by a variety of factors including a lack of funding, limited resources, and museum restrictions on the scale and scope of the exhibit. Despite these limitations, we hope that the topics we chose would provide an understanding of water sanitation from past to present and how it affects the local community. Through our display, we hope that visitors will be able to appreciate how water sanitation techniques have evolved since the time of George Whipple to address the ever-evolving range of contaminants that threaten the public water supplies.

RECOMMENDATION
Although our exhibit is yet to be produced, we have given the Museum a digital copy of all of our research. Going forward, this team should consult with a carpenter to create the physical exhibit before the school year starts and school tours commence. Our hope is that the exhibit is displayed for each school tour to best act as an educational resource and further promote the museum’s mission.