

Education Technology and Design Thinking
PSAM 5030A-CRN 7458

CO-FACULTY:

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Collaborating Learning Community Charter School (LCCS) <http://lccs.org>

Learning Community Charter School Faculty: Michael Diamond and Stephanie McNiel
Community Partner(s): Bay Keeper, Jersey City New Jersey. We will be collaborating with groups that have an interest in water pollution in the bay area between New Jersey and New York City.

*NOTE: This Syllabus may be amended as we work with community partners
ALL COMMUNICATION for the course is through Canvas.*

Our Course Blog is: <https://edtechdesignthinking.wordpress.com>. We require teams to create a process blog and to send us a link by the second week of the semester.

Course Location: Room D 1208, 6 East 16th Street

We will travel to LCCS at critical points in the semester depending on the need and availability of our community partners and the LCCS students. Travel to and from Jersey City is compensated by submission of receipts. There is a \$2 bus from the Jersey City Station to LCCS or you can also walk (1 mile) when the weather permits. Throughout the semester, we will test environments and technology for effective collaboration with community partners. We do not guarantee that the syllabus will be exactly as stated because community partners and our school partner, LCCS, may require changes in the exact timing of the lesson plan.

Course Description:

This course is an interdisciplinary educational partnership between Parsons and a middle school population to teach design-thinking skills to produce interactive and generative experiences with emerging visual, audio technologies such as Augmented, Virtual, and Extended Reality on the web and in interactive experiences.

The students will focus on how learning works by designing and testing educational technologies ranging from service design to emerging computer-based technologies. We will create experiences, environments, and characters for making socially and culturally important projects as they apply to citizen science and community activism. The choice of technologies will depend on the ability for the middle school students to be effective creators and collaborators with the students at The New School.

Throughout the semester, we will unpack what Peter Miller, Dean of Graduate Studies at Bard said:

“What is Design Thinking? It’s an approach to problem solving based on a few easy-to-grasp principles that sound obvious: "Show Don’t Tell," "Focus on Human Values," "Craft Clarity," "Embrace Experimentation," "Mindful of Process," "Bias Toward Action," and "Radical Collaboration." These seven points reduce to five modes — empathize, define, ideate, prototype, test — and three headings: hear, create, deliver. That may sound corporate and even simplistic, but design thinking has been used to tackle issues like improving access to economic resources in Mongolia, water storage and transportation in India, and elementary and secondary education and community building in low-income neighborhoods in the United States.”¹

See Appendix at the end of this document for the D.School Steps in Design Thinking.

Using design thinking, we will also collaborate with middle school students and community groups to sharpen our communication skills and our generative thinking abilities about the ill-structured or “wicked” problems of citizen science and community activism. Our topic of study this semester is storm effluent and pollution clean-up efforts of The Hudson River in New York State and New Jersey. We will follow the journey of one piece of trash into the river and, eventually, the Atlantic Ocean where it becomes part of five ocean gyres of plastic and trash that affect all living beings on our planet.

<https://www.theoceancleanup.com/>

Learning Objectives:

1. Create 21st Century design-thinking projects and curriculum. Based on the Stanford Design (D) School model of Design Thinking, the students will make projects in a

¹ Miller, Peter N. “Is ‘Design Thinking’ the New Liberal Arts?” The Chronicle Review. March 26, 2015.

variety of expressions. We do not prioritize technology. Instead, technology needs emerge from the first step of the design process: empathic understanding of the design problem. Students from several different New School disciplines are coming together with the Learning Community Charter School students to solve or speculate about solving real-world problems. This particular semester, we will be collaborating with The Baykeeper in Jersey City on the problem of plastics in waterways.

3. Use and teach new and unfamiliar technology collaboratively, auto-didactically, and intuitively. Learning how to “tinker” and discover by researching, understanding, experimenting, and making. (Seymour Papert coined this term)

4. Understand how the graduate students can collaborate fully with the level of design that the middle school students can offer. Using and designing teaching/learning moments as opportunities for exchanging levels of ability to appropriate new ways of understanding and solving a stated design problem.

5. Develop systems-thinking and apply the most effective and tested new media that may include stories, characters, photography, videography, mobile applications, AR/VR/MR media, web VR, and any other technology that may contribute to the efficacy of the problem we are solving.

6. Use of effective documentation technologies, photography, process notes, audio/video recording and editing. Documentation is required for regular posting on team blogs.

7. Apply project-based concepts and experiences that culminate in exhibits at Parsons Play Tech, and Earth Day 2018 in Liberty State Park, New Jersey.

Studio Process

We start the semester with several weeks of preparatory research about educational technology, readings, investigations (interviews, phone/Skype calls, visits to the school, brainstorming, sharing creative assets via the web). This will be followed by a period of ideation and brainstorming. We will then iteratively creating prototype(s) of increasingly higher fidelity and usability that culminate in the April 7th Play Tech user-tests and the Earth Day April 21st in Liberty State Park. The studio will be production-based while we will emphasize pedagogical opportunities for the graduate students. Students work together in a variety of roles: teacher, student, producer, game designer, actor, virtual set designer, production artist, writer, video and audio production. The teams will also create web and video documentation that will be part of the permanent archive for the project.

Assessment

We base our evaluation of each student on effective writing, documentation, participation in the creation of video/web documentation, production of polished and audience tested projects as follows:

Attendance and active participation: 20%

The start times for the class will be negotiated at the beginning of the semester. Some students will be able to start late and end late to accommodate the schedule of the LCCS class and After School Sessions.

Studio Process Grade: 30% A grade of A will be given to those participating fully in design studio processes (research, interviewing, collaboration, team, leadership, participation in drawings, coding, videos, photos) and web blog iteration documentation. Each student will be graded by Tammy and Anezka on their assigned studio role and their collaboration, team, and leadership skills. Special attention should be paid to final web archive creation (for examples see: (Spring 2017 studio <http://immersive.parsons.edu/vrstorytelling/> and Spring 2016 video: <http://immersive.parsons.edu/makingpi/>)

Roles:

Documentary Camera and Editor will need to pay special attention to gathering clean sound recordings. We consider this role critical to the success of the studio. It is most important to our future work.

Roles you might take on as the semester projects unfold—you may find that you take on more than one role.

Web Designer of the final archive (see previous semester for format)

Web Coding for interactive virtual reality (A-frame) projects

Graphic Designer

Character and Production Designer - Storyboarding

VR Designer (Unity and A-Frame)

AR Designer

Etc. etc. (to be determined when we decide on projects)

Team Grade: 25% Each team will get a collective grade by Tammy and Anezka on their efficacy of work and communication to solve problems and their contribution to generative thinking about teaching in a collaborative setting between two generations of students.

Peer evaluation grade: 25% (please see evaluation form at the end of this document): During the peer review process each student evaluates three other students. The instructor collects the forms and then averages the evaluations for each student.

2. Documentation and Studio Deliverables

Results and process must be archived meticulously, as results may be exhibited or published to the web. Student are required to record and document all work produced in the course. **A class**

wordpress blog will collect all work. Final work must be delivered to an archive hard disk provided by the instructor.

Required Reading:

Miller, Peter N. *Is "Design Thinking" the New Liberal Arts?* Chronicle Review. March 26, 2015.

Papert, Seymour. *Mindstorms: Children, Computers, and Powerful Ideas*. New York. Basic Books. 1993. Print. Originally published in 1980, this is the "bible for teachers" who teach technology and computers. Chapters 1, 2, and 6.

<https://www.edutopia.org/article/design-thinking-prioritizing-process-skills>

Hokanson, Brad and Gibbons, Andrew, ed. *Design in Educational Technology, Design Thinking, Design Process, and the Design Studio*. New York. Springer. 2014 (partial)

Meadows, Donella. *Thinking in Systems*. <https://ebookcentral-proquest-com.libproxy.newschool.edu/lib/newschool/detail.action?docID=430143> (partial)

Important Community Information Links:

http://www.nj.com/hudson/index.ssf/2017/12/new_details_about_liberty_state_park_marina_emerge.html

HUDSON RIVERKEEPER

<https://www.riverkeeper.org/blogs/docket/found-2017-sweep-hudson-river-trash-data/>

<https://www.riverkeeper.org/news-events/events/rvk-events/save-date-2018-riverkeeper-sweep/>

BAYKEEPER-

<http://nynjbaykeeper.org/>

JERSEY CITY:

<http://jcmakeityours.com/>

Recommended Readings:

Ambrose, Susan A. *How Learning Works: Seven Research-based Principles for Smart Teaching*. San Francisco, CA: Jossey-Bass, 2010. Print. Seven Principles of "smart teaching" mostly for college students. The techniques originate from Carnegie-Mellon's Center for Teaching Excellence and are based on the latest neuroscience research.

Dewey, John. *How we Think*. Keene, NH: D.C. Heath & Sons. Kindle Edition 1910.

Design Thinking Videos from Edutopia online: <https://www.edutopia.org/blogs/tag/design-thinking>

Meadows, Donella. *Thinking in Systems*. <https://ebookcentral-proquest-com.libproxy.newschool.edu/lib/newschool/detail.action?docID=430143>

Oakley, Barbara A. *A Mind for Numbers: How to Excel at Math and Science (even If You Flunked Algebra)*. Kindle edition. 2014. A personal guide to your brain and how it absorbs and remembers new information.

Parrish, Patrick: *Designing for the Half-Known World: Lessons for Instructional Designers from the Craft of Narrative Fiction*. (in Hokanson et. al).

Stroh, David Peter. *Systems Thinking for Social Change*. Chelsea Publishing. 2015

Stroh, David Peter. *Systems Thinking for Social Change: Making an Explicit Choice*. Applied Systems Thinking. Society for Organizational Learning North America. 14:3. 2015

WEEK BY WEEK SCHEDULE FOR SPRING 2018 PARSONS, LCCS, COMMUNITY PARTNERS

CLASS 1 (FIRST DAY OF CLASS)-January 23, 2018

CLASS TOPIC: Look at Design Thinking

Design thinking, Community Partner Introduction, LCCS projects-UNDERSTAND THE SYLLABUS

Introduction to the Baykeeper ideas about storm water pollution collaboration
READING: Papert, Seymour. *Mindstorms: Children, Computers, and Powerful Ideas*. New York. Basic Books. 1993. Print. Originally published in 1980, this is the “bible for teachers” who teach technology and computers. Chapters 1, 2, and 6.
IN SYLLABUS APPENDIX: Familiarize yourself with Plastics Pollution problem.

Lesson Plan:

12:10 – 12:45 Introduction to the course and syllabus

12:45 – 2:00 - Design Thinking Workshop (D-SCHOOL STYLE)

Break

2:15 - 2:30 Zoom or 360 stream to LCCS to meet students. 2:30 - 2:50

Assign After School Team

CLASS 2 (Visit LCCS)-January 30, 2018

CLASS TOPIC: Design Thinking STEP 1: EMPATHY -- LET'S TALK ABOUT OUR WATER MISSION, HOW MUCH DO WE KNOW? Where should we focus? HOW MIGHT WE...?

What have we researched and discovered about the Hudson River water pollution mission?

For next week RECOMMENDED READING: Parrish, Patrick: *Designing for the Half-Known World: Lessons for Instructional Designers from the Craft of Narrative Fiction*.

Lesson Plan:

12:10 to 1 PM meet at Parsons and talk about our teaching collaboration with the LCCS students-how to teach through a design project

1-2 PM travel to Jersey City 2:30 - 3:10 LCCS class meeting

Students committed to the After School program will stay to meet the LCCS collaborators.

Introduction to the After School Session for a few students

CLASS 3 – February 6, 2018

CLASS TOPIC: Design Thinking Step 2:DEFINE “HOW MIGHT WE-BRAINSTORM”
TEAM FORMATION AND TEAM ASSIGNMENTS-Accountability and roles.

Design Thinking Online Google Hangout conversation with the Baykeeper’s Sandra Meola

Design Thinking and Education—*Thinking in Systems* Donella Meadows Chapter 1– MAP
THE PROBLEM— PROJECT(s) we want to make? Decide on iteration for next week

After agreement with the teams (TNS and LCCS students), assign roles and division of labor. After School team arrives to our class late and leaves to go to LCCS.

CLASS 4-February 13, 2018

CLASS TOPIC: Step 2 DEFINE PT 2 (Dig Deeper) and IDEATE through making STEP 3

Lesson Plan:

Create Storyboard and low-resolution prototypes with the knowledge we gained last week.

BRAINSTORM IN TEAMS WITH LCCS STUDENTS (In person teams, Skype, Zoom)

We will figure out the logistics of having representatives of each team “on the ground” in Jersey City

DECIDE GAME PLAN FOR NEXT FEW WEEKS-EVALUATE FIRST PROTOTYPES IN STUDIO

CLASS 5-February 20, 2018

CLASS TOPIC: Step 3: IDEATE – DIG DEEPER AND ROUGH PROTOTYPE

Lesson Plan: rough prototypes IN CLASS – line up with ideation technology and making questions.

We will figure out the logistics of having representatives of each team “on the ground” in Jersey City

PREP FOR ROUGH PROTOTYPE/STORYBOARD/SYSTEM MAP DISCUSSION

CLASS 6-February 27, 2018

CLASS TOPIC: Step 4: PRESENTATION OF PROTOTYPE: DISCUSSION LCCS AND COMMUNITY

PARTNER
Lesson Plan:
Evaluate PAPER/LOW RES prototypes – a TEACHABLE AND LEARNING MOMENT Decide idea in form.
CLASS 7-March 6, 2018
CLASS TOPIC: Step 4- Prototypes at higher resolution
Discuss and deploy technology-working in parallel with TNS and LCCS
Lesson Plan:
Prototyping and plan for testing. What do we need to test? What do we know about the prototypes we have created? What are the technologies we need to learn/deploy?
CLASS 8 (Visit LCCS) MIDTERM GRADES
CLASS TOPIC: TEST PROTOTYPE 4 WITH THE COMMUNITY PARTNER
Lesson Plan:
What is working? Do we need to change course? Evaluate where we are. What can we do before Play Tech to make the projects robust enough to test?
PARSONS SPRING BREAK-March 19 – March 25, 2018
CLASS 9 – March 27, 2018
CLASS TOPIC: PROJECT BUILD IN FINAL TECHNOLOGY
Lesson Plan:
Use Studio Time to build out final tech with LCCS students
CLASS 10 – April 3, 2018
CLASS TOPIC: PREP FOR PLAYTECH – Posters, user-journey maps. What can the LCCS students do to display their projects?
Lesson Plan:
PLAYTECH
CLASS 11 – April 10, 2018
CLASS TOPIC: REFLECT AND IDEATE FOR FINAL PROTOTYPES
Lesson Plan:
Production IN CLASS
CLASS 12 – April 17, 2018
CLASS TOPIC: EARTH DAY PREP IN CLASS
Lesson Plan:

EARTH DAY- Saturday, April 21st
CLASS 13 – April 24, 2018
CLASS TOPIC: OPEN LAB DAY
Lesson Plan: Polish and finish projects
CLASS 14 (Parsons Visits LCCS) – May 1, 2018
CLASS TOPIC: PRESENT TO COMMUNITY AT LCCS
CLASS 15 (PARSONS LAST DAY OF CLASS)- May 8th
REFLECT AND ASSESS – PARTY

Resources

The university provides many resources to help students achieve academic and artistic excellence. These resources include:

- The University (and associated) Libraries: <http://library.newschool.edu>
- The University Learning Center: <http://www.newschool.edu/learning-center>
- University Disabilities Service: www.newschool.edu/student-disability-services/

In keeping with the university’s policy of providing equal access for students with disabilities, any student with a disability who needs academic accommodations is welcome to meet with me privately. All conversations will be kept confidential. Students requesting any accommodations will also need to contact Student Disability Service (SDS). SDS will conduct an intake and, if appropriate, the Director will provide an academic accommodation notification letter for you to bring to me. At that point, I will review the letter with you and discuss these accommodations in relation to this course.

Making Center

The Making Center is a constellation of shops, labs, and open workspaces that are situated across the New School to help students express their ideas in a variety of materials and methods. We have resources to help support woodworking, metalworking, ceramics and pottery work, photography and film, textiles, printmaking, 3D printing, manual and CNC machining, and more. A staff of technicians and student workers provide expertise and maintain the different shops and labs. Safety is a primary concern, so each area has policies for access, training, and etiquette that students and faculty should be familiar with. Many areas require specific orientations or trainings before access is granted. Detailed information about the resources available, as well as schedules, trainings, and policies can be found at resources.parsons.edu. Faculty who are planning curriculum that makes use of specific resources should contact the Making Center in advance to coordinate.

Grading Standards

[What follows is Parsons' grading standards. You should articulate your own policy for work taking other forms (e.g. presentations, critiques, visuals.) Use clear criteria, specifying how both you and your students will know whether they have achieved the learning outcomes].

Undergraduate

A student's final grades and GPA are calculated using a 4.0 scale. Please note that while both are listed here, the 4.0 scale does not align mathematically with the numeric scale based on percentages of 100 points.

A [4.0; 95 – 100%]

Work of exceptional quality, which often goes beyond the stated goals of the course

A- [3.7; 90 – <95%]

Work of very high quality

B+ [3.3; 87 – <90%]

Work of high quality that indicates higher than average abilities

B [3.0; 83 – <87%]

Very good work that satisfies the goals of the course

B- [2.7; 80 – <83%]

Good work

C+ [2.3; 77 – <80%]

Above-average work

C [2.0; 73 – <77%]

Average work that indicates an understanding of the course material; passable

Satisfactory completion of a course is considered to be a grade of C or higher.

C- [1.7; 70 – <73%]

Passing work but below good academic standing

D [1.0; 60 – <70%]

Below-average work that indicates a student does not fully understand the assignments;

Probation level though passing for credit

F [0.0; 0 – <60%]

Failure, no credit

Graduate

- A *Work of exceptional quality*
 - A- *Work of high quality*
 - B+ *Very good work*
 - B *Good work; satisfies course requirements*
- Satisfactory completion of a course is considered to be a grade of B or higher.*
- B- *Below-average work*
 - C+ *Less than adequate work*
 - C *Well below average work*
 - C- *Poor work; lowest possible passing grade*
 - F *Failure*
 - GM *Grade missing for an individual*

Grades of D are not used in graduate level courses.

Grade of W

The grade of W may be issued by the Office of the Registrar to a student who officially withdraws from a course within the applicable deadline. There is no academic penalty, but the grade will appear on the student transcript. A grade of W may also be issued by an instructor to a graduate student (except at Parsons and Mannes) who has not completed course requirements nor arranged for an Incomplete.

Grade of Z

The grade of Z is issued by an instructor to a student who has not attended or not completed all required work in a course but did not officially withdraw before the withdrawal deadline. It differs from an "F," which would indicate that the student technically completed requirements but that the level of work did not qualify for a passing grade.

Grades of Incomplete

The grade of I, or temporary incomplete, may be granted to a student under unusual and extenuating circumstances, such as when the student's academic life is interrupted by a medical or personal emergency. This mark is not given automatically but only upon the student's request and at the discretion of the instructor. A Request for Incomplete form must be completed and signed by student and instructor. The time allowed for completion of the work and removal of the "I" mark will be set by the instructor with the following limitations: [You should include one the following standards, depending on the level of your course].

Undergraduate students: *Work must be completed no later than the seventh week of the following fall semester for spring or summer term incompletes and no later than the seventh week of the following spring semester for fall term incompletes. Grades of "I" not revised in the prescribed time will be recorded as a final grade of "F" by the Registrar's Office.*

Graduate students: Work must be completed no later than one year following the end of the class. Grades of "I" not revised in the prescribed time will be recorded as a final grade of "N" by the Registrar's Office.

Divisional, Program and Class Policies [You should include the following headings with the recommended text. In addition, you should include any other policies you may have.]

- Responsibility

Students are responsible for all assignments, even if they are absent. Late assignments, failure to complete the assignments for class discussion and/or critique, and lack of preparedness for in-class discussions, presentations and/or critiques will jeopardize your successful completion of this course.

- Participation

Class participation is an essential part of class and includes: keeping up with reading, assignments, projects, contributing meaningfully to class discussions, active participation in group work, and coming to class regularly and on time.

- Attendance

Parsons' attendance guidelines were developed to encourage students' success in all aspects of their academic programs. Full participation is essential to the successful completion of coursework and enhances the quality of the educational experience for all, particularly in courses where group work is integral; thus, Parsons promotes high levels of attendance. Students are expected to attend classes regularly and promptly and in compliance with the standards stated in this course syllabus.

While attendance is just one aspect of active participation, absence from a significant portion of class time may prevent the successful attainment of course objectives. A significant portion of class time is generally defined as the equivalent of three weeks, or 20%, of class time. Lateness or early departure from class may be recorded as one full absence. Students may be asked to withdraw from a course if habitual absenteeism or tardiness has a negative impact on the class environment.

Whether the course is a lecture, seminar or studio, faculty will assess each student's performance against all of the assessment criteria in determining the student's final grade.

- Canvas

Use of Canvas may be an important resource for this class. Students should check it for announcements before coming to class each week.

- Delays

In rare instances, I may be delayed arriving to class. If I have not arrived by the time class is scheduled to start, you must wait a minimum of thirty minutes for my arrival. In the event that I will miss class entirely, a sign will be posted at the classroom indicating your assignment for the next class meeting.

- Electronic Devices

The use of electronic devices (phones, tablets, laptops, cameras, etc.) is permitted when the device is being used in relation to the course's work. All other uses are prohibited in the classroom and devices should be turned off before class starts.

- Academic Honesty and Integrity

Compromising your academic integrity may lead to serious consequences, including (but not limited to) one or more of the following: failure of the assignment, failure of the course, academic warning, disciplinary probation, suspension from the university, or dismissal from the university.

Students are responsible for understanding the University's policy on academic honesty and integrity and must make use of proper citations of sources for writing papers, creating, presenting, and performing their work, taking examinations, and doing research. It is the responsibility of students to learn the procedures specific to their discipline for correctly and appropriately differentiating their own work from that of others. The full text of the policy, including adjudication procedures, is found at <http://www.newschool.edu/policies/#> Resources regarding what plagiarism is and how to avoid it can be found on the Learning Center's website: <http://www.newschool.edu/university-learning-center/student-resources/>

The New School views "academic honesty and integrity" as the duty of every member of an academic community to claim authorship for his or her own work and only for that work, and to recognize the contributions of others accurately and completely. This obligation is fundamental to the integrity of intellectual debate, and creative and academic pursuits. Academic honesty and integrity includes accurate use of quotations, as well as appropriate and explicit citation of sources in instances of paraphrasing and describing ideas, or reporting on research findings or any aspect of the work of others (including that of faculty members and other students). Academic dishonesty results from infractions of this "accurate use". The standards of academic honesty and integrity, and citation of sources, apply to all forms of academic work, including submissions of drafts of final papers or projects. All members of the University community are expected to conduct themselves in accord with the standards of academic honesty and integrity. Please see the complete policy in the Parsons Catalog.

- Intellectual Property Rights: <http://www.newschool.edu/policies/#>

Peer Evaluation Form

Parsons School of Design, The New School University Year/semester: SPRING 2018

Studio title: Educational Technology and Design Thinking

Project: Collaboration between LCCS and Parsons for Community Outreach:

Clean Sweep Hudson Riverkeeper, Earth Day at Liberty State Park, April 21, 2018

Peer Evaluators are Anonymous

NAME OF STUDENT: _____

1. How effective was your peer in initiating actions, volunteering to take on tasks, and helping to set the team in pursuit of project goals?

5	4	3	2	1
<i>exceptional</i>		<i>ineffective</i>		

Comments:

2. What was the quality of the work this person typically contributed to the development of the project?

5	4	3	2	1
<i>exceptional</i>		<i>ineffective</i>		

Comments:

3. How well was this person prepared for each meeting, did s/he meet deadlines and/or commit enough time to complete the project?

5	4	3	2	1
<i>exceptional</i>		<i>ineffective</i>		

Comments:

4. How well did this person recognize the skills and abilities of other team members and support them in the completion of tasks?

5	4	3	2	1
<i>exceptional</i>		<i>ineffective</i>		

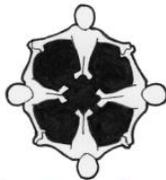
Comments:

5. How well did this person participate in the overall production process of this project?

5	4	3	2	1
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bias toward action



collaborate across boundaries



focus on human values



be mindful of process



prototype toward a solution



show don't tell

Stanford Design Thinking Workshop Hand-out

<https://dschool.stanford.edu/resources-collections/a-virtual-crash-course-in-design-thinking>

Baykeeper Sample Projects:

Parsons, Learning Community School, and NY/NJ Baykeeper Partnership

Project Ideas for Students

- App that allows users to take a photo of plastic bags in trees, clogged stormdrains, etc and post the location as well. This can be linked to legislative districts to let elected officials know. NYC has a similar app that can be viewed [here](#).
- Interactive online map of NY-NJ Harbor of plastic sampling sites. When you click on a site, you can see the data and breakdown of plastic types at the location.
- Creation of life size marine animals made from single-use plastics. This would involve plastic bottle, straw, and bottle cap collection at school.
- Storytelling: An animated short 2-3 minute video about the lifecycle and dangers of plastic pollution and how students and the public can help.

Past/Current Projects and Resources:

- Interactive webpage: <https://www.baykeeperplasticstory.org/>
- Berkeley Heights Middle School Marine Mammal Plastic Art Video: <https://www.youtube.com/watch?v=NDqHvwCzam8&t=1s>
- NY/NJ Baykeeper NY-NJ Harbor Plastics Report, 2016: <http://nynjbaykeeper.org/wp-content/uploads/2016/02/NYNJBaykeeper-Plastics-Report-February-2016-2.pdf>

- YouTube videos created by East Side High School in Newark, NJ:
<https://www.youtube.com/watch?v=Xspf8DGyVAY&index=1&list=PLe1CNI4bVLXDWtqZAQm4PaoGJ78PUQT3x>