This report analyzes the results and surveys of the Hudson River Stewards Program, which was conducted in the spring of 2015 by the Hudson River Maritime Museum and the Hudson River Sloop Clearwater with the entire fourth grade in the Kingston City School District.

Hudson River Stewards

2015 Program Report

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Introduction

Every Child a Steward

In 2014 the staff of the Hudson River Maritime Museum and the Hudson River Sloop Clearwater asked themselves one question – How could they create an immersive experience designed to inspire environmental and historical stewardship in students while also giving every fourth grader in the Kingston City School District a unified, shared experience that was both fun and academically rigorous?

The answer became the Hudson River Stewards Program. Working with Kingston school district officials and staff to ensure that the program met curriculum needs and spearheaded by HRMM Education Director Sarah Wassberg, the program quickly came together. The program would balance academicallyrigorous in-class activities led by HRMM education staff with dynamic and fast-paced on-site activities with a field trip led by both Clearwater and HRMM staff and volunteers.

The goal was to reach every 4th grader in the Kingston School District at all elementary schools, including:

- 1. Chambers Elementary School
- 2. Edward R. Crosby School
- 3. Harry L. Edson School
- 4. Robert R. Graves School
- 5. George Washington Elementary School
- 6. John F. Kennedy Elementary School
- 7. Ernest C. Myer Elementary School

All schools participated in the full program with the minor exception of George Washington Elementary School, which had previously arranged a separate sail program with Clearwater funded by a grant. George Washington Elementary did visit the museum as part of that program and also received the inclass program instruction.

Close to 500 students in 19 classes participated in the program in 2015.

A Community Partnership

The Hudson River Stewards Program was the direct result of a desire by the Boice family to celebrate the 100th anniversary of Boice Bros. Dairy by giving back to the community. They led a fundraising effort which garnered donations from a wide variety of local and regional businesses totaling \$16,000 which allowed the Hudson River Maritime Museum and Hudson River Sloop Clearwater to provide the pilot program to Kingston City Schools free of charge.

In addition, HRMM and Clearwater staff worked closely with Kingston school district officials to ensure that the program met the curriculum needs of the fourth grade.

Common Core Alignment

HRMM and Clearwater staff worked closely together to outline a program that would be fast-paced and engaging to students while also aligning with **common core shifts**, including **writing from sources**, **answering text-based evidence questions**, **close reading**, **building knowledge through texts**, **and building academic vocabulary**.

The program integrated history, environmental science, the mechanics of sailing, creative writing, reading comprehension, and document analysis into a comprehensive look at humanity's relationship with the Hudson River. This was divided into two primary programs: an in-class program led by HRMM staff and an on-site field trip of eight rotating activity stations led by HRMM and Clearwater staff and volunteers.



Photo 1 – Clearwater Onboard Educator Caitlin Zinsley gives an introduction to ecology and pollution on the Hudson River. *Photo by Lana Chassman*.

Programs

The entire program was divided into two sections: an in-class document analysis activity with the Hudson River Maritime Museum and an on-site field trip coordinated with the Hudson River Maritime Museum and the Hudson River Sloop Clearwater.



Photo 2 - Students from Edson School analyze historic maps of New York as part of the in-class program. *Photo by Kathryn Heidecker*.

In-Class Program

The Hudson River Maritime Museum developed an in-class **document analysis** program specifically for Hudson River Stewards. Based on the writings of John Lambert, a young Englishman traveling through the newly formed United States in the very early 1800s, this in-class program encouraged students to work as a team, develop **reading comprehension** and **critical thinking skills** as they analyzed the documents, and **public speaking skills** as they presented their findings to the rest of the class. Led by Hudson River Maritime Museum Education Director Sarah Wassberg, who visited each class, the document analysis program also helped students define what a **primary source** was as well as the importance of historical documents in understanding the past, **building knowledge** about the world and improving **academic vocabulary** through **close reading** of the text.

In the section in which he discussed New York, Lambert documents different modes of travel, differences in road conditions between Canada, the US, and Britain, as well as mentions of Robert

Fulton's brand new *Steamboat*, the sloop *Experiment* (which was the second American ship to sail to Canton, China), and arriving in New York City.

Using this section of the book, students worked in groups of 3-4 to study one transcribed section through **close reading**, **answer questions based on the text**, and then present their findings (with prompting and in chronological order) to the rest of the class. These findings were then put in context by Wassberg and other HRMM educators so students were able to comprehend a rich and detailed picture of early 19th century New York.

The transcriptions included bolded vocabulary words with a glossary of definitions on the same page, so students could better understand and interpret the text as well as **build vocabulary**. Each section of the text also had a slightly different difficulty level, with one option of a map-based analysis activity, so teachers were able to **distribute the texts based on student ability**. Wassberg and other museum educators assisted whenever necessary to help students read closely, understand the text, and answer the text-based questions, while striving to teach students one-on-one and in small groups how to analyze the texts and come to their own conclusions, rather than giving away answers.

This program was completed in nearly every classroom (one self-contained classroom with approximately six students was unable to participate due to scheduling conflicts) in March, with George Washington School completing the in-class program at the end of May, after their mid-April field trip to HRMM and sail on the Clearwater.



Photo 3 - Fourth graders arrive at the Hudson River Maritime Museum and are gathered together for introductions by HRMM volunteer educator Greg Rafferty. *Photo by Lana Chassman.*

Field Trip Program

Over three days in May of 2015, nearly 400 fourth graders (i.e. everyone but George Washington School, who did a separate program in April) visited the Hudson River Maritime Museum, where the sloop *Clearwater* was also docked. HRMM educators and Clearwater educators worked together to develop a wide-ranging and interesting program for the students upon their visit.

The students were divided into groups of 12-15 and each group rotated through 8 stations, spending 20 minutes at each station with 5 minutes of travel time. In addition, Clearwater staff provided a short introductory sketch on pollution and the Hudson River before the large group divided up for their rotating activities. Although the number of students each day (about 130) was quite large, thanks to excellent scheduling and organization efforts by coordinated HRMM, Clearwater, and Kingston school district staff, each day's schedule went off without a hitch and every student was able to do every activity without being rushed.

The museum portion was comprised of an in-depth guided tour of the museum, divided into three sections:

- 1. Henry Hudson and early exploration,
- 2. tugboats and lighthouses, our special exhibitions for 2015, and
- 3. the East Gallery, covering topics such as the *Mary Powell* and Hudson River Day Line steamboats, ice yachts, brick making, Hudson River ferries, ice harvesting, etc.

The Henry Hudson, tugboat, and lighthouse portions all had accompanying **hands-on activity** aspect, while the East Gallery areas had a number of short historic films to augment museum educator interpretation and the plethora of historic artifacts, images, and documents on display.



Photo 4 - A group of students head aboard the Clearwater for one of the onboard activities. Photo by Lana Chassman.

Clearwater organized five dockside activities including:

- 1. mechanical advantage/simple machines on board the sloop, including using pulleys to raise and lower the sail, levers with the rudder, etc.,
- 2. found poetry, in which students created poetry from found texts by blacking out words and using the remaining words to make a poem
- 3. the history of Hudson River sloops, including a below decks tour,
- 4. river ecology, including examining specimens caught from Rondout Creek, and
- 5. navigation, tools, and maps.

Surveys and Results

In order to gain a better understanding of program results the Hudson River Maritime Museum staff, with input from Clearwater, created pre- and post-visit surveys to be implemented with every class. The surveys were designed to collect baseline historical knowledge as well as open-ended short answer opinion questions, to get the fullest range of response from the students.

Survey Anomalies

Although this program was originally intended for all 502 fourth graders in Kingston Public Schools, George Washington Elementary's fourth graders had already scheduled a spring program for a sail on the *Clearwater*. HRMM did a tour of the museum with those students, who visited on April 13th. HRMM staff also did an in-class program after the field trip (rather than before). For that reason, George Washington students did not do a pre-visit survey.

Pre-visit surveys were given at the beginning of each in-class program and collected by HRMM staff. Post-visit surveys were sent to teachers shortly after the field trip completion in early May and were returned by the end of the year, again to HRMM staff. **However, although 337 students took the pre-visit survey, only 122 completed the post-visit survey, a difference of almost two thirds.** This means that many of the comparisons between pre- and post-visit surveys, valuable to determining what students learned, will be significantly skewed. In addition, George Washington students, though they did not do the pre-visit survey, DID do the post-visit survey. This means that comparisons will be less accurate than if all students had done both surveys.

Questions #1 through #5 were included on both surveys, to track changes. Questions #6 and #7 were included on the post-visit survey for the students to evaluate their own experiences.

Question #1 - In which state is the Hudson River Located?

a) New Jersey

b) Pennsylvania

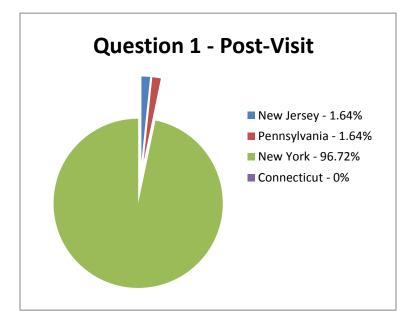
c) New York

d) Connecticut

This question was designed as a baseline one to test students' existing knowledge of the Hudson River.

The results were actually quite surprising in a very positive way – previsit responses indicated that 99.7% of students chose the correct answer: New York (one student chose New Jersey).

Question 1 - In which state is the Hudson River located?



Post-visit results were actually less effective, with only 96.7% of students choosing New York (2 students chose New Jersey, 2 students chose Pennsylvania). This is likely due to the disparity of which students responded to the post-visit survey.

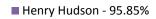
Question #2 - Who was the first European to travel up the Hudson River?

- a) Vasco de Gama
- b) Samuel de Champlain
- c) Ponce de Leon
- d) Henry Hudson

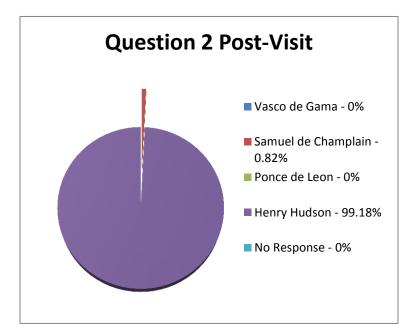
This was another base line question to establish pre- and post-visit knowledge levels and here the response is a little more marked in the difference.

Question 2 - Who was the first European to travel up the Hudson River?







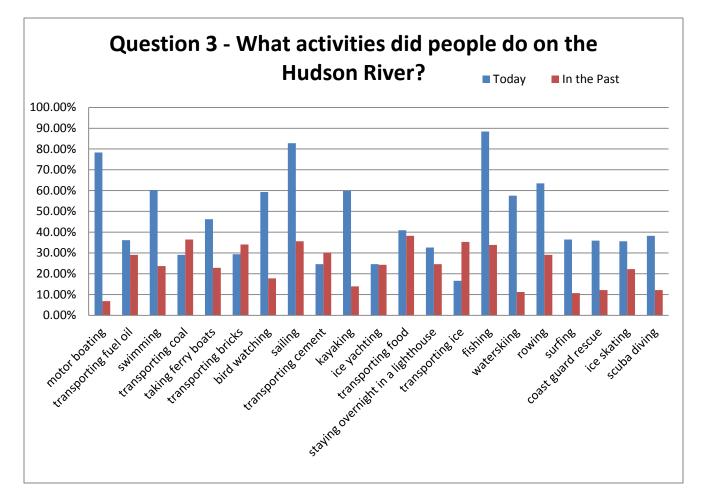


Henry Hudson and early exploration of the Hudson River was discussed indepth on the field trip to the museum, and is likely the direct source of the improved results, although it should be noted again that not every student took the post-visit survey. Had they, the responses may have been different.

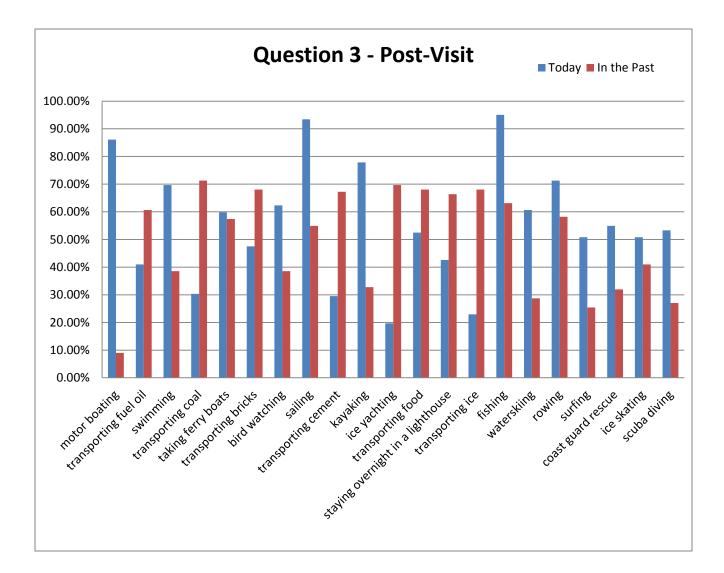
Question #3 - What kinds of things do people do on the Hudson River?

(Check the boxes of things that happen NOW, and underline the things that happened in the past. Somethings will need to be checked AND underlined.)

This question was designed to see what baseline knowledge students had about the Hudson River past and present, and what sorts of activities humans did on and in the Hudson River.



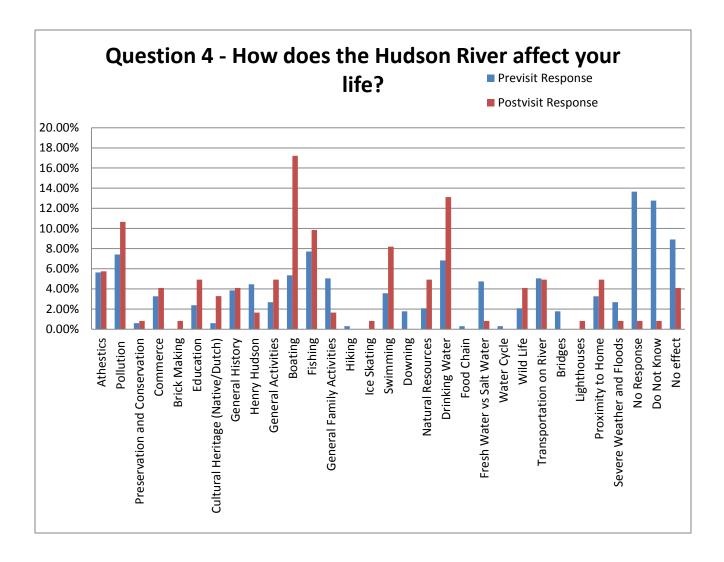
You can see that the pre-visit responses indicate that students had some idea of things that are not done today (transporting bricks, coal, cement, ice, ice yachting, etc.) and some things that were not done in the past (motor boating, kayaking, waterskiing, coast guard rescue, etc.). Surfing was included as an option which was done neither in the past nor currently, but was chosen by a number of students as an option for both past and present activities. In addition, options like sailing and fishing, which were done much more often in the past than the present, had opposite results.



Here we see that the overall number of responses about past activities has increased significantly and also that a number of options reflect what students learned from the program. For instance, in the previsit survey, students indicated that ice yachting was done about equally in the past and present. But in the post-visit survey, likely thanks to the museum exhibit on ice yachting, students came to understand that ice yachting was more popular in the past than today.

Question #4 - How does the Hudson River affect your life?

This question was designed to be open-ended to solicit raw input from students about the Hudson River. This is the first question that asks the students to provide unprompted opinion answers, and their responses reflect that.

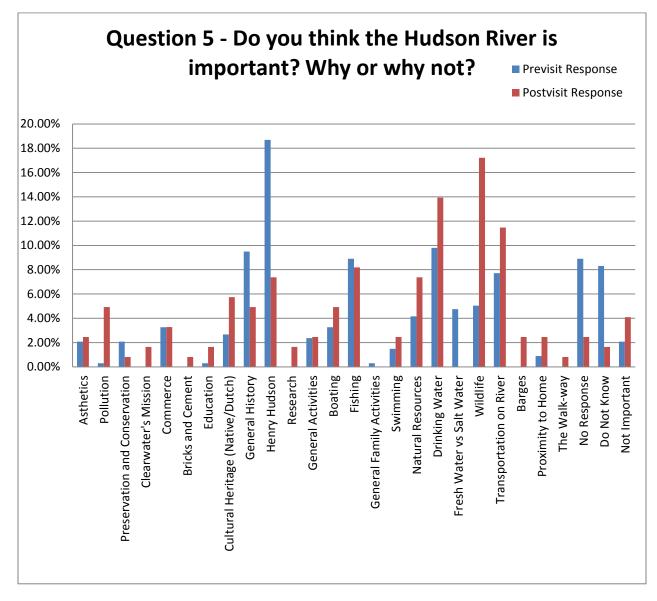


Here we can see that the most significant change is in the number of students who did not respond, did not know, or who said that the Hudson River had no effect on their lives. The "no response" and "do not know" categories declined from over 12% in each to less than 1%. The "no effect" response dropped by about 50%. In addition, we can see that the environmental science component strongly affected students as their responses on pollution, swimming, natural resources, and drinking water all increase. Boating (likely due to visiting the *Clearwater* and the museum) also loomed large after the program.

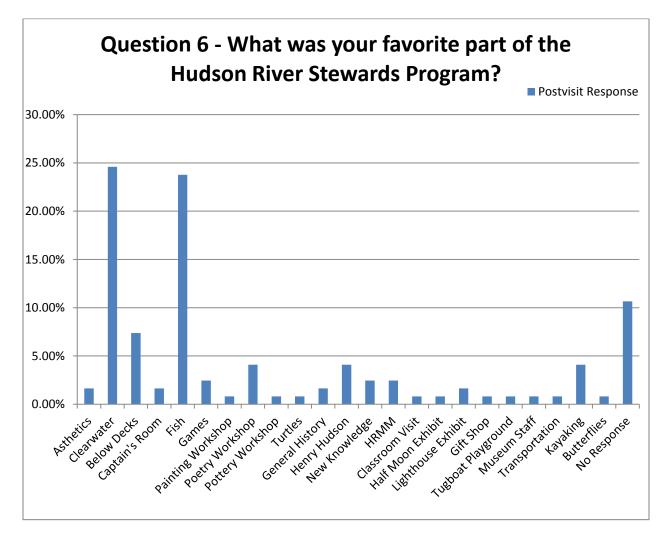
Question #5 – Do you think the Hudson River is important?

Why or why not? Use details.

This question was intended to gauge baseline knowledge of the Hudson River and also to see whether or not students thought the Hudson was relevant to their modern, everyday lives.



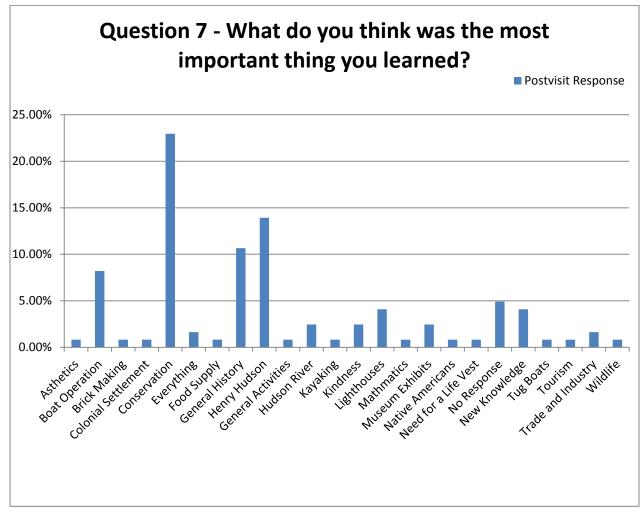
So here again we see a marked difference in a few select topics between the pre- and post-visit responses. For instance, Henry Hudson, which was likely one of the few reference points students had to the Hudson prior to this program, was mentioned by nearly 20% of students on the pre-visit survey, but dropped dramatically post-visit, as students emphasized more environmental and transportation concerns. The number of students who did not respond, or said they did not know also dropped significantly.



Question #6 – What was your favorite part of the Hudson River Stewards program?

This question was included on the post-visit survey only as a self-evaluation and to get feedback from students on what they enjoyed most. Clearwater and fish (though it is unclear which fish they were referring to – those caught by Clearwater staff, or those in the museum fish tanks) of course got the largest response, because who could resist a boat and live creatures? But for an open-ended question there were also a surprising number of mentions of history, the more academic workshops, and the museum.

The pottery and painting workshops and kayaking were likely done by the George Washington School as part of their separate program, or "pottery" may simply be a corruption of "poetry."



Question #7 - What do you think was the most important thing you learned?

Here again we see a fascinating mix of responses, with environmental conservation, Henry Hudson, history in general, and boat operation topping the lists, though lighthouses, kindness, the general acquisition of new knowledge, and the Hudson River itself also get honorable mentions. Only 5% of students did not respond at all, which is in and of itself encouraging.

2015 Recap

Lessons Learned

As a pilot program, the 2015 Hudson River Stewards program was an excellent one, but there is always room for improvement. In the future, post-visit surveying will be better coordinated with the school district so that surveys may be completed by students the same day as completing the on-site program. In addition, HRMM staff will arrange a post-visit activity, perhaps a short historical film with reflective writing assignment, to help drive home the new knowledge and skills acquired by students.

The in-class program will be revamped slightly to include more non-text options for students who struggle to read at grade level and for self-contained classes.

Future programs will also schedule fewer students per day of the on-site program. HRMM and Clearwater staff handled the large groups ably, but smaller groups of students for each activity would allow museum and sloop educators to give more individual attention and better reach individual students as well as reduce the scheduling strain. Many students had lunch as late as 1 pm, which was cause for complaint from both students and chaperones.

Finally, as part of the coordination with the school district the fourth grade students, who were entering middle school as fifth graders, were mixed outside of their class into small groups with students with whom they would share classes the following year at the new school. Although this was an excellent opportunity for students to meet new classmates, it was a source of frustration for some chaperones, who found it difficult to control children with whom they were unfamiliar. A short activity after the bus arrival but prior to the start of the on-site programs to introduce students to each other and to their chaperone is suggested to help cope with this issue.

2015 Budget

A total of \$16,000 was donated to fund this pilot program. It was divided equally between the Hudson River Maritime Museum and the Hudson River Sloop Clearwater.

Organization	Project	Cost
Hudson River Maritime Museum	Program planning	700.00
Clearwater	Program planning	500.00
HRMM	Survey Prep	200.00
HRMM	In-School Visit (19 classes)	2,850.00
HRMM	Field Trip (3 days)	3,500.00
Clearwater	Field Trip (3 days)	7,500.00
HRMM	Survey Analysis	750.00
Total Cost		16,000.00

Pilot Program Donors

The 2015 pilot program of the Hudson River Stewards would not have been possible if not for the coordination efforts of the Boice family and the following donors:

Platinum Sponsors

- Adirondack Creamery
- Ashley Mechanical, Inc.
- City of Kingston
- Deitz Car-Truck and Bike Sales
- Gillette Creamery
- Hill Markes
- Hudson Valley Fresh
- Mid-Hudson Valley Federal Credit Union
- Noble Gas Solutions
- The Reis Group
- Sav-on Party Centre
- Stanpac
- Tom Sutton Electrical Plumbing & Heating
- Tetra Pak
- Universal Metal Fabricators
- Van Kleeck's Tire
- Viking Industries, Inc.
- VW of Kingston

Gold Sponsors

- Breaking the Cycle
- Ethan Allen Transportation
- Excelsior Wood Products
- Ulster Savings Bank
- West Kingston Recycling

A Sustainable Vision

The Hudson River Maritime Museum and Hudson River Sloop Clearwater would like to make this an annual program for fourth graders throughout the Hudson Valley. By giving students an educational experience shared with peers across social, socio-economic, racial, gender, age group, and geographic lines, the Hudson River Stewards program can help inspire students not only to preserve, protect, and celebrate the Hudson River, but also better understand their region and peers as well as fostering a sense of place.

Moving Forward

The Kingston City School District has expressed interest in continuing this program and the Hudson River Maritime Museum is in the process of coordinating funding for the 2016 calendar year.

Working again with the Hudson River Sloop Clearwater and also with the *Onrust* replica Dutch yacht which is docked at the museum for the winter, HRMM has put together a program at \$30/student.

The program includes:

- In-class, common core-aligned primary source document analysis workshop led by HRMM museum educators
- Field trip to HRMM including:
 - \circ in-depth tour of the museum
 - tour of the brand new Riverport Wooden Boat School (opening in 2016)
 - found poetry workshop
 - o invasive species station
 - woodworking and boat restoration station
 - o deck tour of the *Onrust* (as the *Clearwater* is undergoing major restoration)
 - live music program
- Post-visit activity including video and writing activity to be completed after field trip
- Graduation ceremony presenting each student with:
 - o a certificate of completion
 - o a "I am a Hudson River Steward" button
 - o a free family pass to the Hudson River Maritime Museum, redeemable at any time

Expanding the Program

The Hudson River Stewards program is an exciting one that could be expanded to integrate into the classroom year-round and to give students a better opportunity to more fully understand the role of the Hudson River in New York State's past, present, and future.

Ideally, this program expansion would include fall and winter activities, in addition to the existing early spring in-class program and the spring on-site field trip. The Hudson River Maritime Museum is in discussion with the Kingston City School District about the possibility of a fall program about Henry Hudson and early exploration. By extending the program to cover the whole school year, Hudson River Stewards could better integrate into classroom curriculum and make a more lasting impression on the

students participating. HRMM would also like to offer each participating student a free family pass, so the learning process could continue into the summer months as students bring their families and friends back to the waterfront to learn about the Hudson River and its history.

Finally, a graduation ceremony for all participating students, including certificate of completion, should be implemented to bring the students and their families together on the waterfront to celebrate their academic achievement.

Other Opportunities

Hudson River Stewards is a program that can be replicated with other school districts throughout the Hudson Valley. Imagine not only that all the students in a single grade in an entire school district experienced the same, unifying and academically rigorous program, but that students in the same grade up and down the Hudson Valley had that unifying experience as well.

By striving for and maintaining a high standard of excellence while also engaging students interests and attention, Hudson River Stewards is a program that could stand the test of time and excite the long-term interests of whole generations of children, allowing them to better understand the historical context of the Hudson Valley, the importance of its environment and natural resources, and provide a lasting sense of place.