



WHERE NEW YORK BEGINS.



Lessons Learned

Learning about the Estuary with Students who are Visually Impaired or Blind

When South Street Seaport Museum resumed its program for students who are visually impaired or blind, we revised our teaching practice to better reach students for whom sight is not their strongest sense. Thanks to a generous grant from the New York State Department of Environmental Conservation, we developed and implemented a program about the Hudson River Estuary. We consciously devised a multi-sensory program using teaching materials that students could touch, smell, hear, and in some cases, taste. Creative movement was an additional strategy employed to engage students with the content in multiple ways.

The program we created is divided into three distinct areas of study: animals, boats, and the impact humans have on the estuary. Our goal was to inform students about the estuary and increase stewardship. Because many kids are interested in animals, studying creatures seemed like a natural starting point to instill curiosity about the estuary. South Street Seaport Museum engages visitors in the maritime history of New York City, and provides on-the-water education aboard its historic schooners. Thus, we chose boats as our second unit. During this





unit students designed, built and tested boats, and learned about the variety of boats that visit the estuary. Our third section focused on the results of human impact on the estuary. Students learned about environmental issues facing the animals of the estuary, including habitat loss, introduction of invasive species, pollution, and climate change. Student discussion of potential solutions to problems was an important component of this unit.

After these three units were completed, students were given the opportunity to explore areas in the estuary, using nets, strainers, and their bare hands. Maisha surprised us all when she squatted down and grabbed a shrimp! In addition to the field studies, students sailed on the Museum's schooner *Pioneer*, getting the opportunity to raise sails, coil lines, and pull in a trawl net.

The culminating event of the program at each school was an Estuary Celebration which gave students the chance to share their feelings and knowledge of the estuary with teachers, classmates, and family members. The students presented conservation posters they had made, performed skits, and read stories and poems they had written. These celebrations were a great opportunity for Museum educators to get a sense of what the students had learned and what was most enjoyable.

Lessons Learned

- **Differentiated, multi-faceted instruction can be beneficial for many audiences.** Lots of kids like touching replicas of skulls! Moving like a great blue heron helps students understand its anatomy. Who wouldn't want to smell a dead fish as they are making a print of its body?
- **When providing opportunities for students to express themselves, we found it helpful to offer multiple avenues for doing so.** During the program the students had the chance to write poems and stories, create posters and sculptures, build models, and move as both animals and plants.
- **Movement and mental breaks are good, as they can help refocus and extend attention, especially after periods of more in-depth dissemination of information.**
- **When working with new students who are visually impaired or blind, the use of name tags becomes especially important.** Teachers often point to a student who is raising a hand to indicate the desire to speak. This practice is ineffective with students who may not be able to see.
- **With students who are visually impaired or blind gauging student engagement takes on different forms.** When working with students who have sight, we often look for eye contact to assure ourselves the students are paying attention. Students who are visually impaired or blind may have their faces turned away from you. This behavior does not necessarily imply disinterest on the student's part.

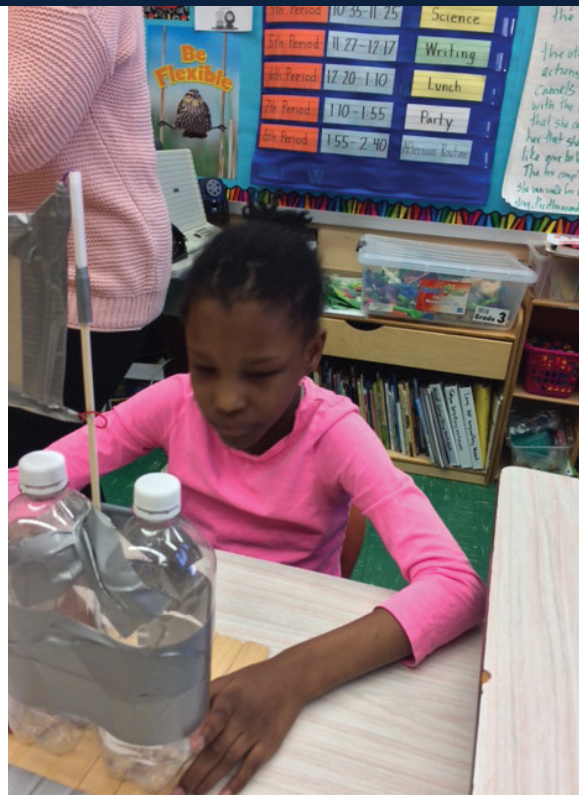




- **Be flexible.** Flexibility is a must. The classes we worked with were small, but the range of both age and cognitive level was great. In many schools, the student-per-grade ratio is such that multiple grade levels are combined into one classroom. Think of it as a one-room schoolhouse. This range meant that both pacing and content needed to be adjusted.
- **Repetition is good.** Going back over material is always a good practice, but it made even more sense during a program in which the scheduling was sometimes sporadic. Weeks were missed or cancelled due to weather, testing, or other scheduling conflicts. Reviewing previously learned content throughout the program helped students make connections to new topics as the instruction progressed. The review was sometimes done in the beginning of the class, but more often was woven throughout the lesson.
- **Communication is key.** Post surveys give good information about programmatic changes that need to be made in the future, but consistent communication with teachers throughout the program helps Museum educators make beneficial adjustments on an ongoing basis.



- **Ask for help.** Our best source of information was the teachers who work with the students throughout the year. They provided general tips, as well as information about how best to work with specific children.
- **Get outside!** Children with disabilities are often protected and may miss out on certain activities, especially outdoor ones. Our program emphasized giving the students new experiences in nature. There is nothing that can compare to getting your feet wet, hearing birds, and smelling the brackish water of the estuary.
- **Relax; don't be overly cautious about using sight-related words.** Most of the kids used the words "see" and "look". Often "see" was used when they wanted to touch something, just as it is with children who have sight. "Can I see that?" meant pass me the object being discussed. When it comes to words, it's good to be mindful, but you don't have to be overly cautious.
- **Everything takes longer than you think it will, and that's OK.** Exploring items using senses other than sight takes more time. Items needed to be touched, not just displayed at the front of the class.
- **Provide enough time for students to explore all materials before creative projects begin.** The kids loved creating, but didn't always have enough time to thoroughly explore the items they would be using to create. Our students required more time to explore the materials before they started constructing with them. Don't begin the project until this exploration is completed.
- **Verbal description of all activities is essential when working with students who are visually impaired or blind.** Always be conscious that the students may not be able to pick up on visual cues, and therefore, actions must be described in the moment. For example, when putting items on a table for students to explore, you should let the students know the items are there. After a student has had the opportunity to explore a new model, have a verbal discussion with them to be sure they get a sense of each part, and its relationship to the whole.
- **Have fun!**



Reservations and advance payment required.
 To book a program or for more information, contact us at
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