

Technology, Science, Media and Libraries

David Minard, Director
Bayonne Board of Education
669 Avenue A
Bayonne, New Jersey, 07002

201.858.5593

Summer Science 2010

The Bayonne Bridge Project

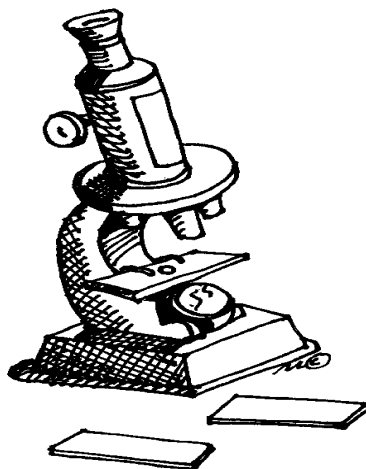
For Science students graduating

Grade 4

Grade 5

N.J. CCCS: 5.1.4.B.1 / 5.1.4.C.1 / 5.1.4.D.1

Learning never ends.





BAYONNE PUBLIC SCHOOLS

Administration Building
669 AVENUE A
BAYONNE, NEW JERSEY 07002

PATRICIA L. MCGEEHAN, Ed.D.
SUPERINTENDENT

Tel: (201) 858-5817
Fax: (201) 858-6289

Dear Parent/Guardian,

June 1, 2010

The Bayonne Board of Education believes learning is a life long endeavor and so, for our students, education does not end in the summer. Many studies support the proposition that valuable gains can be lost over a two month recess and so we provide our students with learning opportunities during July and August.

Our **Summer Science** program is one such opportunity, students in grades 4 through 9 will be asked to complete challenging fun projects related to their science studies. The program is designed to encourage family participation and support while not creating a burden for families planning summer activities.

The mission of the Science Department is to create future scientists and most importantly scientifically literate citizens, I believe these projects address that mission.

Students graduating grades 4 and 5 will create solutions to the replacement of the Bayonne Bridge. Their work will be shared with decision makers.

Students graduating grade 6 will create a summer scrapbook chronicling the Gulf oil spill and its effects on the people, plants, animals and the oceans. In September grade 7 science teachers will continue the discussion.

Students graduating grade 8 and high school students going from general science to biology will review a "Scientific American Magazine" article titled "12 Events That Will Change Everything" to ponder their future in the year 2050.

Students in our Science Honors program have separate assignments and are exempt from the above.

David Minard

Director of Technology, Science,

Media and Libraries

Ellen M. O'Connor, Ed.D.
Assistant Superintendent

Patricia L. McGeehan, Ed.D.
Superintendent of Schools

Problem:

1. Shipbuilders around the world are building bigger and bigger, taller and taller cargo ships to carry the world's products around the globe.
2. By the year 2015 these ships will be able to pass through an expanded Panama Canal and proceed to ports along the east coast including the Port of Newark.
3. In order for these larger, taller ships to dock and unload at the Port of Newark they must pass under the Verrazano Bridge and then enter the Kill Van Kull and pass under the Bayonne Bridge.
4. The Bayonne Bridge is now 151 feet above the Kill Van Kull and must be at least 230 feet above the Kill.
5. Engineers studying the problem see raising the present bridge, building a new bridge or building a tunnel under the Kill Van Kull as ways to solve the problem.
6. The current Bayonne Bridge has been a symbol of Bayonne since it opened in 1931, but we need an answer to the coming problem or many newer ships will not be able to get to Port Newark and many people could lose their jobs.
7. The Port of Authority of New York & New Jersey operates the bridge and will work with our elected representatives to solve this problem.

Solution:

After much study and meetings it is decided that a new bridge is the only answer. your job is to draw a picture of the NEW BAYONNE BRIDGE. In September we will review all pictures and present copies of them to our Mayor, Congressman and the Port of Authority.

Your work plan:

***Before you begin you should ask your parents to help you find out about the **Bold underlined** words.

Panama Canal

Port of Newark

Verrazano Bridge

Kill Van Kull

Symbol

The Port of Authority of New York & New Jersey

***Ask your parents to take you to First Street Park and look over the Bayonne Bridge and the Kill Van Kull, you might get lucky a see a ship passing under the bridge.

***Ask your parents to take you to the walkway behind Stop and Shop to see the Verrazano Bridge and New York Harbor.

***Ask your parents to take you to Gregg(Hudson County Park) and look at the Turnpike Bridge, observe Port Newark container ship operation on the other side of Newark Bay.

***Complete your bridge picture on the pages provided at the end or if you wish to make a poster board size new bridge picture you can do that.

Have fun while solving a very important problem that will affect us here in our hometown.

Your project will count as a quiz/project Science grade and due on September 13,

2010

The Star-Journal

STATE EDITION

TUESDAY, JUNE 1, 2010

Rough currents for Bayonne Bridge replacement

Credit crunch forces Port Authority to seek new funding sources

By Steve Strunsky
STAR-LEDGER STAFF

In the 2005 sci-fi film, "War of the Worlds," Tom Cruise's character weaves through traffic in the family minivan to escape an alien attack, as the Bayonne Bridge is obliterated in the background.

If only it were that easy.

The Bayonne Bridge crisis is fairly well-known by now: The structure's 157-foot clearance above the surface

of the Kill Van Kull will be too low to accommodate the colossal new container ships from Asia, expected to begin putting in at East Coast ports when an expansion of the Panama Canal is completed in 2015.

Now, while the bridge owner, the Port Authority, grapples with solutions such as jacking up the bridge 65 feet or replacing it with a new span at a cost of \$1.3 billion, new problems are arising — and time is a-wasting.

Paying for a solution, it seems, could be as complicated as the engineering that has to be done. In the latest curve

in a long saga, recession-related declines in Port Authority revenues have curbed the bistate agency's ability to finance big projects on its own, raising doubts as to where the Bayonne Bridge money might come from, and when the project will be able to move forward. For example, bridge and tunnel traffic, which generates

crucial toll revenues for the agency, is now anticipated to be 6.1 percent below previously projected levels for 2010.

Declining revenue forecasts mean a corresponding drop in the total value of bonds the agency can have outstanding at one time. The situation has forced the agency to slash its current 10-year capital plan by 17 percent, or \$5 billion.

Remember that the cost of not fixing the 77-year-old bridge could be thousands of jobs and billions of

dollars in commerce lost to competing ports like Norfolk, Va., or Halifax, Nova Scotia.

The Bayonne money problem is similar to one the agency faces in its long-running effort to replace another Staten Island crossing, the 82-year-old Goethals Bridge, a \$755 million project intended to address current and future congestion. For the Goethals project, the port agency has solicited financing proposals from private investors. Ernesto Butcher, SEE BRIDGE, PAGE 2

Bridge

CONTINUED FROM PAGE 1

the Port Authority's chief operating officer, said private financing is also a possibility for the Bayonne Bridge.

The credit crunch puts Port Authority officials in the unfamiliar position of having to rely on outside financing for the kind of large infrastructure projects it has long been able to finance on its own, through bond issues.

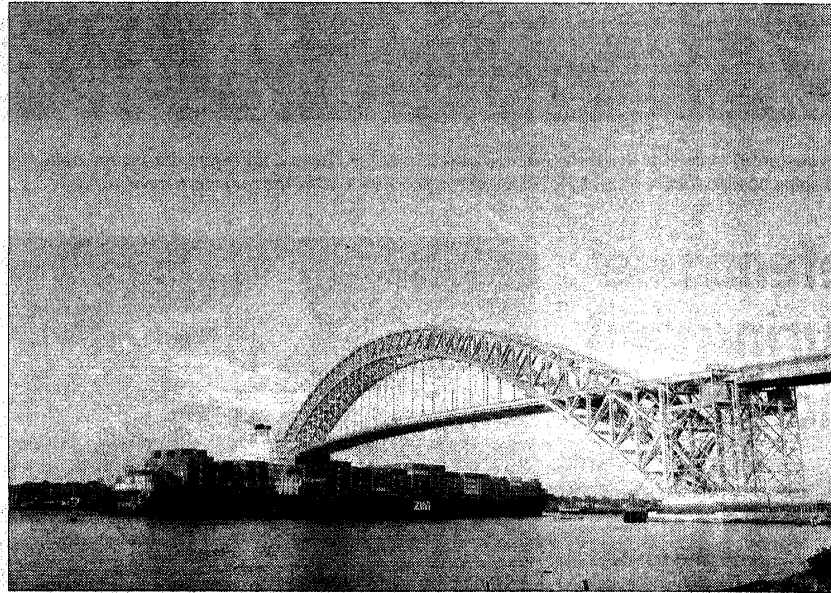
"Frustration is not part of our vocabulary," said Butcher, referring to the financing constraints. "We work with the circumstances that we face, and heretofore we've been able to carry out our priorities."

The Bayonne Bridge is a top priority for Gov. Chris Christie, who asked his top appointee to the Port Authority, Deputy Executive Director Bill Baroni, to focus on a solution. Michael Drewniak, a spokesman for the governor, declined to discuss funding issues. But he called the bridge "a priority that we intend to address."

"We understand why it is important, and why it needs attention," Drewniak said.

Rep. Albio Sires, a Democrat from Hudson County on the House Transportation and Infrastructure Committee, has met with Port Authority officials on potential federal funding for the project, said his spokeswoman, Erica Daughtrey.

Daughtrey said there are a number of potential federal



JOHN O'BOYLE/THE STAR-LEDGER

A container ship travels under the Bayonne Bridge. The colossal new container vessels from Asia will require a higher structure, but the bigger problem is finding the money.

"Frustration is not part of our vocabulary. We work with the circumstances that we face, and heretofore we've been able to carry out our priorities."

Ernesto Butcher, Port Authority's chief operating officer

funding sources for the project, including the standard appropriations process, though funding could hinge on the selection of a specific proposal.

The least expensive alternative involves jacking up the entire bridge, at a cost of \$1.32 billion. It would also be the fastest option, taking nine years to complete, including

planning and construction phases. Two tunnel options were also included in the Army Corps report: a \$2.2 billion bored version, and a \$3 billion immersed tunnel.

The most visually striking alternative is a \$2.15 billion cable-stayed bridge that, in a nod to local and architectural history, would leave the old arch standing right next to it, but with the deck removed. At a total length of 8,640 feet, the Bayonne Bridge was the longest steel arch bridge in the world when it opened in 1931, an elegant latticework designed by engineer Othmar Ammann and architect Cass Gilbert. It's also a symbol of home for local residents.

"It's part of Bayonne's history," said Anthony George Rankin, 46, a regular at Foley's Tavern on Kennedy

Boulevard, near the bridge approach.

Rankin winced when recalling the scene in "War of the Worlds" when the bridge was blown up.

"Oh, my God, it was devastating," he said.

Meanwhile, pressure on the agency has mounted. On May 20, the state Senate adopted a resolution urging the Port Authority to come up with a plan of action.

"We stand to lose as much as \$17 billion in economic activity annually if we don't act soon," state Sen. Sandra Cunningham (D-Hudson), a co-sponsor of the resolution, said in a statement.

New York state lawmakers adopted a similar resolution.

Butcher, the Port Authority chief, said a \$10 million follow-up study by his agency would be completed in early to mid 2011, with a recommendation for one of the alternatives laid out by the Army Corps.

Steve Strunsky may be reached at sstrunsky@starledger.com or (973) 392-1544.

Use the following pages for your drawing(s). Sign your drawing like a real artist

