

ST. LOUIS AMERICAN
NEWSPAPER IN
EDUCATION

The St. Louis American's award winning NIE program provides newspapers and resources to more than 8,000 teachers and students each week throughout the school year, at no charge.

STEM
science, technology, engineering, and math

Questions or comments? Contact Cathy Sewell
csewell@stlamerican.com or 314-289-5422

CLASSROOM SPOTLIGHT

At Gateway Elementary School, SLPS STEM Educator of the Year, Rhonda Stovall,

shows students Arondo Irving, Danisha Knox, Christian Sims-Carter, Alana Blanchard and D'Liyah Holmes a science experiment the students found using the NIE page in the newspaper. Photo: Wiley Price / St. Louis American

Teachers, if you are using the St. Louis American's NIE program and would like to nominate your class for a Classroom Spotlight, please email: nie@stlamerican.com.



SCIENCE STARS

AFRICAN AMERICAN BOEING SOFTWARE ENGINEER: Quiméka Saunders



Quiméka Saunders was born in Buffalo, New York. She graduated from Niagara Falls High School and earned a bachelor of science in computer science from Spelman College. She is currently pursuing a master of science degree in engineering management from Washington University in St. Louis.

Saunders' mother is a chief electrician and handywoman, which inspired her to follow in her footsteps as she would watch her mother as she completed different projects around their home. She enjoyed hands-on activities, video and computer games and technology at a young age. It wasn't until she went off to college and was exposed to computer science via programming, that she learned about robotics and participated in career discussions. That helped her determine which trade or STEM field really interested her.

At Boeing, Saunders is a software engineer. She supports a team that is responsible for creating and maintaining software that's used to build models and simulate the behavior of an F-15 fighter jet, its systems, and its environment. Saunders compares it to real-life video games for pilots. Also in this role she supports pilots and customer (domestic and international) demonstrations.

Saunders serves as the president of the Boeing Black Employees Association (BBEA) – St. Louis, vice president of the National Society of Black Engineers (NSBE) – St. Louis Aerospace Alumni Chapter and an active member of the Society of Women Engineers. She has been honored with many awards including the 2018 F-15 Eagle Excellence Award and the 2018 St. Louis Diversity and Inclusion Group Influencing Award. She also participated in research and mentoring programs designed to encourage African-American girls to pursue studies in computational algorithm and STEM career paths.

Learning Standards: I can read a biography about a person who has made contributions in science, math, and technology.



SCIENCE CORNER

Have you ever wished you could be in two places at once? Thanks to engineering, doctors can do just that with a process called remote presence (RP), which uses video and sound transmitting capabilities so patients can have access to doctors 24/7. This type of technology allows doctors to collaborate with other doctors that are far away. It allows for instant feedback, which is important in medical emergencies, such as a stroke.

RP allows hospital staff and remote physicians to collaborate even if they are far away from each other. The physician uses video to diagnose the patient and make suggestions for a course of treatment. It was developed by engineers at InTouch Health, Inc.

There are a couple of downsides to the technology. First, the devices are very



Engineering Remote Presence!

This is the Double from Double Robotics in Australia. It can be used for remotely controlled, mobile teleconferencing.



expensive to purchase and maintain. Second, it can be difficult to keep the Wi-Fi connection at all times. The machines that are more reliable are more expensive.

Even with these concerns, allowing doctors to treat patients quickly and from any distance is invaluable.

To See an RP in Action, Check Out the Following Video: <https://www.businesswire.com/news/home/20130506005495/en/InTouch-Health-iRobot-Announce-Customers-Install-RP-VITATM>

Discuss: What are the benefits and drawbacks of RP? What other uses can you think of for the device?

Learning Standards: I can read a nonfiction article to find main idea and supporting details. I can identify pros and cons.

SCIENCE INVESTIGATION

BUILD A STEADY TRAY!

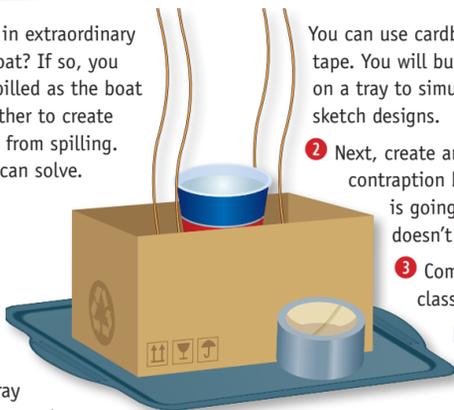
Engineers solve everyday problems in extraordinary ways. Have you ever ridden on a boat? If so, you probably noticed that your drink spilled as the boat moved along the waves. Work together to create a steady tray that keeps your drink from spilling. Then, think of other problems you can solve.

Materials Needed:

- Small Cardboard Boxes
- Wooden Measuring Sticks
- String
- Duct Tape
- Scissors
- Cup of Water
- Large Tray

Process:

- With your partners, design a tray that will keep the cup of water steady.



You can use cardboard, measuring sticks, string, and tape. You will build your steady drink contraption on a tray to simulate a boat. First, brainstorm and sketch designs.

- Next, create and test your design. Test your contraption by tipping the tray as if your "boat" is going over a big wave. If your drink doesn't spill, your design is a success.
- Compare your design to that of your classmates.

Learning Standards: I can use trial and error to create a device to solve a problem. I can evaluate my results.

MATH CONNECTION

BE A PROBLEM SOLVER!

Engineers are problem solvers. You can be a problem solver, too, as you work through the following word problems.

- Gina saved \$27. She received \$10 for allowance. She spent \$8 on a frisbee, and \$5 on a baseball. How much money does she have left?



- Glen has a bowl of raspberries and blackberries. There are 8 more raspberries than blackberries, and there are 14 berries in all. How many blackberries does he have?



- A group of students went on a science field trip. They took 3 vans and 7 buses. There were 11 people in each van, and 55 people on each bus. How many people were on the field trip?

- Jon baked 20 apple pies and 3 peach pies. Each apple pie has 8 slices, each peach pie has 6 slices. It takes 4 peaches to make one pie. How many slices of pie did Jon bake in all? How many total peaches did he use?

Learning Standards:

I can add, subtract, multiply, and divide to solve a problem.



DID YOU KNOW?

- The Super Soaker was invented by an engineer.



- Engineers design running shoes with protection, performance, and comfort in mind.

- A civil engineer designed a pumping system to create the slippery part of a water slide.

- Computer engineers create special effects in movies and video games.



- Engineer George W. Ferris designed the Ferris wheel.



MAP CORNER

Use the newspaper to complete the following activities to sharpen your skills for the MAP test.

Activity One — Common Factors:

Find two different numbers in the newspaper with two digits. List all common factors of those two numbers.

For a challenge, try to find those common factors somewhere in the newspaper.

Activity Two —

Differences: Review the difference between similes and metaphors. Locate similes and metaphors in newspaper articles. Pay close attention to quotes. Explain what the similes and metaphors mean. Create three similes and metaphors of your own.

Simile:

A figure of speech in which things different in kind or quality are compared by the use of the word like or as.

Learning Standards:

I can use the newspaper to locate information. I can calculate common factors. I can identify similes and metaphors and identify their meanings.

Metaphor:

A figure of speech in which a word or phrase meaning one kind of object or idea is used in place of another to suggest a similarity between them.



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