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

Glasgow Elementary school fifth grade teacher Michale Ward shows students KyRee Fowler, SaMya Walker, LaRiyha Pratt and Deandrew Capelton how to use the newspaper's STEM page to find new lessons in science. *Photo by 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 CORNER

Problem Solving

What do all great scientists have in common? They are skilled critical thinkers and problem solvers. Just like you can train your body and your muscles to work more effectively, you can also train your mind to think more critically.

Give your brain a work-out with mazes, brain teaser riddles, Sudoku puzzles, math equations, etc. Read mystery books and learn to look for clues and make predictions. Look for patterns. Patterns are everywhere—colors, numbers, letters, etc. When you identify patterns, your brain can make connections quickly and easily. Think of different uses for common everyday items, such as a paperclip. How many different uses can you discover?

Ask yourself questions, such as how many different ways can you stack a set of blocks? Which way would give you the tallest structure? Which way would give you the strongest structure? Keep an open mind and be flexible as you consider your options. Practice this process often. Brainstorm a list. Set a timer and see how many ideas you can generate. Then, select your best three choices and develop a hypothesis that you can test.

Learning Standards:
I can read nonfiction text for main idea and supporting details. I can make text-to-self connections.

SCIENCE INVESTIGATION

Build Balloon Columns!

Background Information:
In this experiment, you will see if you can walk on air. What is your hypothesis? Do you think it is possible to walk on air? Support your answer with specific reasons and details.

Materials Needed:
• Garbage Bag Filled with Air • Balloons Filled with Air • Balloons Filled with Water • Tape • 4 24" by 24" Cardboard Squares

Procedure:

1. Make two strong platforms by gluing two pieces of cardboard together so that the grooves (lines) in the cardboard are going in the opposite directions.
2. Try standing on one of your platforms supported by a garbage bag filled with air. (Take caution and make sure to have a partner help you balance or stand near a wall.) Does it hold your weight?
3. Now try balloons filled with air. Predict which will hold your weight better.
4. Start out standing on one of your platforms supported by a bunch of balloons. The balloons stay in place best if you sandwich them between two platforms. Try taping the balloons to the bottom platform and then putting the second platform on top.
5. Have a friend pop one balloon at a time. What happens when the balloons pop? How few balloons still support your weight?

Extension: Try the same thing with balloons filled with water. Be sure you do this testing somewhere that can get really wet. Analyze: Which holds your weight better, balloons filled with water or balloons filled with air? Which substance can hold your weight with the fewest balloons? Why do you think one works better than the other?

Learning Standards: I can follow sequential directions to complete an experiment. I can create a hypothesis and analyze results. I can draw conclusions.

MATH CONNECTION

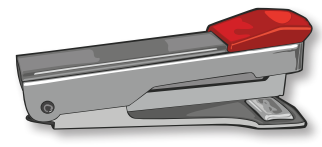
Equation Challenges!

Give your problem solving ability a challenge with these equations.

1. b – 7.2 = 1.8
   b = _____
2. w ÷ 8 = 0.6
   w = _____
3. k = 50 ÷ 5
   k = _____
4. Write the sentence as an equation.
   b decreased by 150 is 221
   _____
5. Write the sentence as an equation.
   z multiplied by 280 is 179
   _____
6. Write the sentence as an equation.
   72 is equal to z divided by 369
   _____

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

DID YOU KNOW?



- Did you know the first person to use a stapler was King Louis XV of France?
- A ballpoint pen can write approximately 45,000 words.
- Richard Drew originally made scotch tape to seal cellophane wrappers in a butcher's office to keep food safe from spoiling.
- Paper clip designs have their own names. The very first one was called "The Philadelphia." Other designs were named "The Clipper," "The Daisy," "The Niagara," "The Eureka," "Banjo Paper Clip," and "Octo Clip."

SCIENCE STARS

African-American Inventor & Entrepreneur Ruth J. Miro

Ruth J. Miro was born on February 4, 1960, in New York City and grew up in the Bronx. She attended New York's Monroe Business College to study business and e-commerce. Miro received patent #6,113,298 on September 5, 2000, for her improved paper ring design. A press release to promote her new product stated, "These new and improved paper rings are ideal for business professionals, especially authors, students, and schools. There is an increased excitement over the range of functions it serves. They can be used for sorting, filing [loose leaf] papers, index cards, recipe cards, photo pages, memos and much more… RJ Miro paper rings come in an array of colors such as Red, Black, Green, White, Blue and Gold." She also received patent #6,764,100 for a stationery organizer and is the founder of RJMiro, which designs and sells supplies for the school, office, and home.

Miro is a member of the International Association of Black Millionaires and the National Association for Female Executives. She has received recognition and many awards, including Empire Who's Who, Manchester Who's Who, and Cambridge Who's Who. The Wall of Tolerance gave her an award for her public stance against hate and intolerance. (The Wall of Tolerance is located in the Civil Rights Memorial Center in Montgomery, Alabama.)

In addition to her business accomplishments, Miro supports literacy by donating money to various educational charities and authors. She features authors on her business website to promote their work. She states, "I would like to see more African American stores buying and selling African American products."

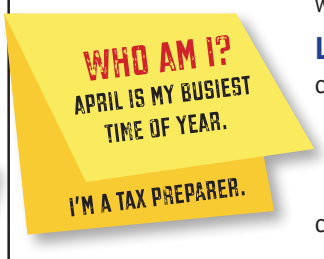
Learning Standards: I can read a biography about a person who has made contributions in the fields of science, technology, engineering, and mathematics. I can make text-to-world connections.

MAP CORNER

Enjoy these activities that help you get to know your St. Louis American newspaper.

Activity One —
Creative Predictions for Jobs: Review the Help Wanted section in the Classified ads. What characteristics do the employers seek—experience, dependability, etc.? Which characteristics seem to be the most important to employers? What job do you think you are best suited for? Why? Write a paragraph explaining what skills and characteristics you have that will make you a good employee.

Activity Two —
Who Am I? Riddles: Fold a piece of paper in half. On the outside flap, write a riddle about a character of a newspaper story. Paste the newspaper article on the inside, highlighting the character's name and characteristics used to create the riddle. Share the riddle with your classmates.



Learning Standards: I can use the newspaper to locate information. I can draw conclusions. I can use character traits and think critically.

Content---Jennifer Wirthwein • Design---Beth Sharpe • Updated by---Jonathan Irving

This special Newspaper In Education initiative is made possible, and delivered to classrooms, through The St. Louis American Foundation and its NIE Corporate Partners:

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