



## 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.



science, technology, engineering, and math

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

### CLASSROOM SPOTLIGHT

#### At Annette Officer Elementary School in East St. Louis, IL., Ms. May's

3rd grade math students work on a STEAM assignment found using the NIE page in the newspaper. 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 STARS

#### African-American Inventor and Engineer Jocelyn Harrison



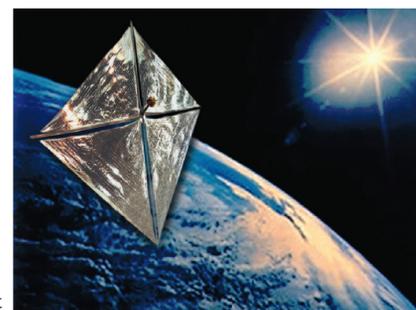
Jocelyn Harrison was born in 1964 in Chattanooga, Tennessee. She followed her passion for science and exploration to earn a bachelor's degree in Chemistry from Spelman College in 1987. Later that same year, she earned her bachelor's degree in Chemical Engineering from Georgia Institute of Technology. Harrison

stayed at Georgia Tech to earn her master's degree and doctoral degree in Chemical Engineering. She finished her education in 1993.

After earning her doctoral degree, Harrison worked at NASA's Langley Research Center in Virginia. Concerning her research Harrison has stated, "We're working on shaping reflectors, solar sails and satellites. Sometimes you need to be able to change a satellite's position or get a wrinkle off of its surface to produce a better image." Harrison's research has also helped to produce parts for robotics, heart pumps and audio speakers. In 2009, she became the manager of the Low Density Materials program at the Air Force Office of Scientific Research in Arlington, Virginia. While there, she worked to reduce the weight of aerospace systems and improve their effectiveness.

Harrison has received patents for her inventions, and numerous awards, including the 1996 R&D 100 Award presented by R&D magazine, NASA's Outstanding Leadership Medal, NASA's Exceptional Achievement Medal, and the Technology All-Star Award from the National Women of Color Technology Awards.

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



### SCIENCE CORNER

## Satellites!

A satellite is an object that orbits around a planet. Some satellites, such as moons, occur naturally in our solar system. Other satellites are man-made. Since 1957, there have been thousands of satellites launched.

Satellites are built to be as strong and light as possible. They come in many different shapes and sizes, but each satellite has a platform, an antennae, and a power source. Sometimes the power source is battery generated, sometimes it is solar powered from the sun. Most satellites are sensitive to extreme heat and cold, so their design has to protect from the heat of the sun, and add heat when it is cold. Layered blankets that resemble aluminum foil keep heat in, while radiators release heat.

They are used for many purposes, such as collecting data. Satellites measure gases, monitor wildfires and volcanoes,

and provide information about clouds, oceans, land and ice. According to NASA, "All this information helps scientists predict weather and climate. The information also helps public health officials track disease and famine; it helps farmers know what crops to plant; and it helps emergency workers respond to natural disasters."

#### To Learn More About the Different Types and Uses of Satellites, Visit:

<http://satellites.spacesim.org/english/function/index.html>

#### Learning

**Standards:** I can read nonfiction text for main idea and supporting details. I can make text to world connections.



### SCIENCE INVESTIGATION

## COLLECT METEORITES FROM SPACE!

#### Background Information:

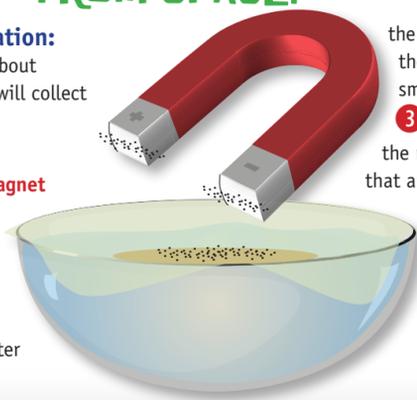
Have you ever wondered about meteorites? In this experiment, you will collect meteorites and examine them.

#### Materials Needed:

• Bowl • Fine Fabric • Water • Magnet

#### Process:

- 1 Fill the bowl with water and leave it outside for several days.
- 2 Remove particles such as leaves and insects. Use the fabric to filter



the remaining contents in the bowl. Let the contents air dry. There should be small black particles.

- 3 When the particles are dry, hold the magnet above them. The particles that are attracted to the magnet are small meteorites.

**Learning Standards:** I can follow sequential directions to complete an experiment.

### MATH CONNECTION

## THE NEED FOR SPEED!

Did you know that satellites travel at 18,000 miles per hour? In the following questions, you will apply the formula to answer questions about speed. Speed = distance divided by time.

- 1 If you live  $\frac{1}{2}$  mile from school and it takes you 10 minutes to walk to school, what speed are you walking? \_\_\_\_\_ mile per minute, \_\_\_\_\_ miles per hour
- 2 Your family is traveling by car to visit relatives who live 360 miles away. It takes your

family 6 hours to arrive. How fast were you traveling?

\_\_\_\_\_ miles per hour. If you continued at the same rate of speed, how many more miles could you expect to travel if you drove another 2 hours? \_\_\_\_\_ miles

3 The length of a marathon is 26.2 miles. If a runner finishes the race in 5 hours, at what speed did they run? \_\_\_\_\_ miles per hour.

#### Learning Standards:

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



### MAP CORNER

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

#### Activity One —

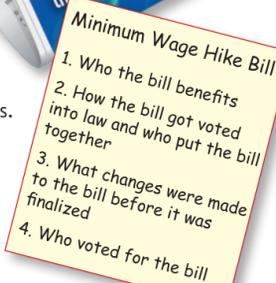
##### Relevant Information:

Find an interesting news story to evaluate. Read the story and identify the main ideas. Number the main ideas in order of importance. Explain why you chose that order.

##### Activity Two — Future

**Artifacts:** Artifacts help us learn about our history. Locate a picture of something in the newspaper that could someday be used as an artifact. Paste the picture on a piece of paper and write about what future scientists could learn from the artifact.

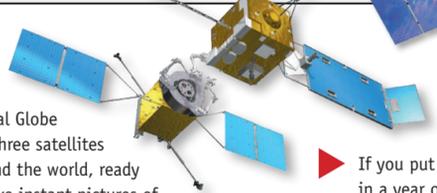
**Learning Standards:** I can use text features to locate information in a newspaper. I can evaluate main idea and supporting details. I can make text to world connections.



### DID YOU KNOW?

Satellites can travel the entire circumference of the Earth about 14 times in a day.

Digital Globe has three satellites around the world, ready to take instant pictures of world events.



There are over 2,500 satellites in orbit around the Earth.

If you put all of the data that our satellites collect in a year on DVDs, it would form a stack about 4 times the height of the Empire State Building.



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

