

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 Woerner Elementary School teachers Amy McLean and Ashley Merritt

show students Rheanna Hill, Skylarr Jones, Alayah Heilig and Julia Cain how to use the newspaper's STEM page for story ideas. 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

Mathematics Educator Grace Alele Williams



Grace Alele Williams was born in Warri, Nigeria, in 1932. She attended the local schools that the government offered and pursued a math education degree at Queens College, Lagos, and the University College of Ibaden. Williams wanted to take her education further and she received government assistance to attend the University of Vermont. While there, she had

many issues due to segregation. She transferred to the University of Chicago. In 1963, she graduated with a PhD in mathematics education. She was the first Nigerian woman to receive a doctorate degree.

She returned to Nigeria where she worked for the Department of Education at the University of Ibaden. Williams became the first female math professor at the University of Lagos, where she worked from 1965-1974. She participated in the African Mathematics Program to help make changes to mathematics education in Africa. In 1985, she became the first female Vice-Chancellor of an African university when she worked at the University of Benin.



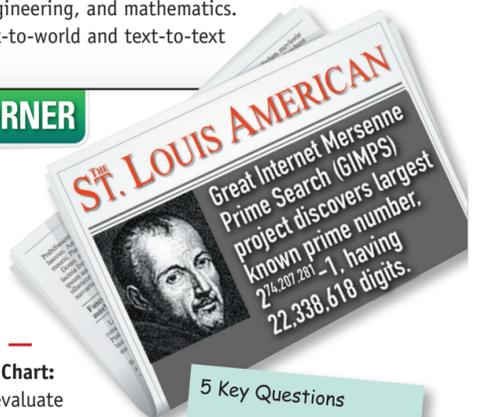
Map of Nigeria

Williams served as a member of the African Mathematical Union Commission on Women in Mathematics in Africa, and as Vice-President of the Third World Organization for Women in Science. She has received many honors, such as the Order of the Niger and the Nigerian Academy of Education's Merit Award Winner. In 1994, she gave the Distinguished Annual Lecture at the National Institute for Policy and Strategic Studies. She was elected as a Fellow of the Mathematical Association of Nigeria and the Nigerian Academy of Education. She is also the Chairwoman of AMUCWMA, the African Mathematical Union Commission for Women in Mathematics.

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 and text-to-text connections.

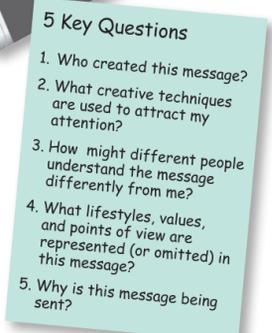
MAP CORNER

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



Activity One — Key Questions Chart:

Whenever you evaluate any type of media (including the newspaper), there are 5 key questions to ask yourself. Who created this message? What creative techniques are used to attract my attention? How might different people understand the message differently from me? What lifestyles, values, and points of view are represented (or omitted) in this message?



Why is this message being sent? Choose an article from the newspaper and answer these 5 key questions.

Activity Two — Identify the Landform:

Find a national and international city dateline in today's newspaper. After locating the datelines on a map, decide on which of the main landforms (plains, plateaus, mountains, hills) each city is built.



Learning Standards: I can use the newspaper to locate information. I can evaluate and analyze information. I can use the map and identify landforms.

SCIENCE CORNER

Real Life Equations

Have you ever realized how often you use math in your daily activities? If you are shopping, you use math to calculate the total amount spent, the discounted price after a sale, the sales tax, etc. If you are cooking, you use math to adjust the recipe for the appropriate number of servings. If you are making plans with a friend, you need to look carefully at the time and plan a schedule. How long will it take to get to your meeting



place? What time will you need to leave?

You can write an equation to solve these types of problems. For example, if 5 friends are splitting the cost of a pizza equally, and the pizza is \$14,

the equation would read: $5C=14$ (C represents the cost for each person). Solve the equation and you have your answer. Many people create equations to determine how much material they will need for a project, or to alter a recipe, or to plan a budget. Can you think of a way that you use equations?

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

SCIENCE INVESTIGATION

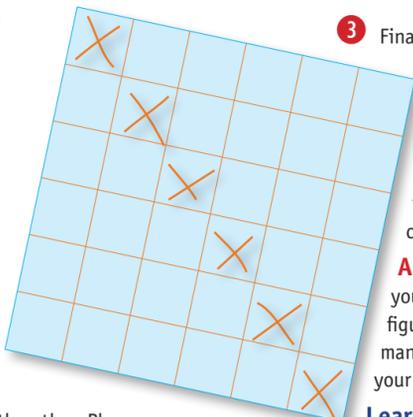
SQUARE WALK

In this experiment, you will use a partner to solve patterns.

- Materials Needed:**
- 2 or More Players
 - One Big Piece of Paper for Each Player
 - Markers

Procedure:

- 1 Each player will draw two grids that have 6 squares across the top and 6 squares down the side for a total of 36 squares.
- 2 Next, each player will think of a repeating pattern that goes from one end of the grid to the other. Players draw their patterns on one of the grids (do not show your pattern to other players).



- 3 Finally, using the blank grid, the other players have to try to figure out each other's patterns. They can do this by marking an X in the squares that they think are part of the pattern. The player who thought of the pattern then tells them if they are right or wrong. Taking turns, who can guess their opponent's pattern first?

Analyze: What kinds of patterns did you come up with? How did you go about figuring out other peoples' patterns? How many different patterns were created during your game?

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

MATH CONNECTION

EQUATIONS

Directions: For each problem, write an equation that represents the word problem and solve it.

- 1 8 students were collecting food for the canned food drive. There were 96 cans collected total, with each student collecting the same amount. How many cans did each student collect? _____



- 2 Aaliyah has a total of 275 books on two bookshelves. If she has 168 books on her first bookshelf, how many books does she have on her second bookshelf? _____



grades was 146. Find the two scores. _____

- 4 Kenneth works for \$8 an hour. A total of 25% of his salary is deducted for taxes and insurance. He is trying to save \$450 for a new laptop. How many hours must he work to take home \$450 if he saves all of his (after tax) earnings? _____

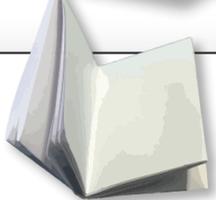
Learning Standards: I can add, subtract, multiply, and divide to solve a problem. I can write an algebraic expression to solve a problem.



DID YOU KNOW?



- ▶ A "jiffy" is an actual unit of time for 1/100th of a second.
- ▶ Did you know Mayans used to worship the number 13?
- ▶ The word "fraction" derives from the Latin "fractio," which means to break.
- ▶ What comes after a million, billion and trillion?
- ▶ Did you know that you cannot fold a piece of paper in half more than 7 times? Try it!



Quadrillion • Quintillion • Sextillion • Septillion • Octillion • Nonillion • Decillion •

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

