The St. Louis American NEWSPAPER IN EDUCATION

The St. Louis American's award winning NIE program provides newspapers and resources to more than 7,000 teachers and students each week throughout the school year, at no charge.

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

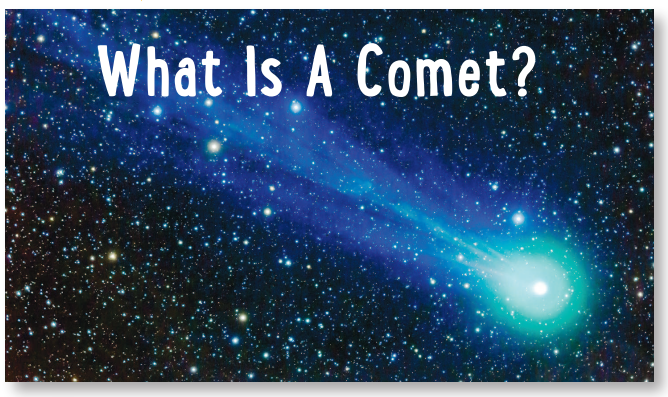
STEM
science, technology, engineering, and math

CLASSROOM SPOTLIGHT

Our Lady of Guadalupe School 6th grade teacher, Mrs. Linda Saunchegraw, uses The St. Louis American with students Irving Pinacho Torres, Aleah Fields and Ka'Mya Carothers. 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



A comet is made out of dust and ice. Many scientists compare them to a dirty snowball. Comets are created in two places- Kuiper Belt and the Oort Cloud. Comets can live there for billions of years. However, once they bump into each other, they can change direction. This is what sends them to the Inner Solar System. The Sun's heat and radiation creates a Solar Wind, which causes an increase in temperature, and the comet begins to melt away. As they melt, the dust and gas debris forms a tail. At this point, the only solid part of the comet is the nucleus, which is the center of the comet. As the comet gets closer to the sun, the nucleus boils off a cloud of dust and gas, called a coma.

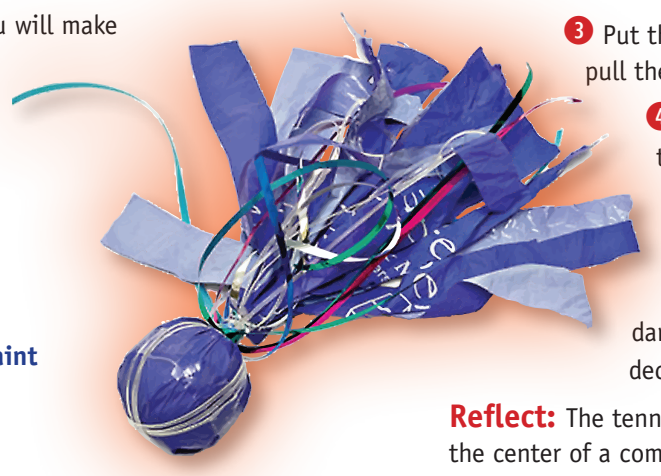
For more information, visit:
https://spaceplace.nasa.gov/search/comet/.

Learning Standards: I can read nonfiction text for main idea and supporting details.

SCIENCE EXPERIMENT

Catch a Comet

In this experiment, you will make a colorful comet that you can use to play catch.



Materials Needed:
- Plastic Grocery Bag
- Scissors
- Tennis Ball
- String or Ribbon
- Glow-in-the-dark Paint
- Paintbrush

Process:

1. Cut the handles off of the plastic bag.
2. Carefully cut down each side of the bag, to make a flat piece of plastic.
3. Put the ball in the middle of the plastic, and pull the corners together.
4. Tie the string around the plastic, close to the ball, so the plastic won't slip off.
5. Carefully cut slits in the plastic, making 1 or 2-inch strips.
6. Paint the comet with glow-in-the-dark paint. When the paint dries, you can decorate it with stickers, ribbons, etc.

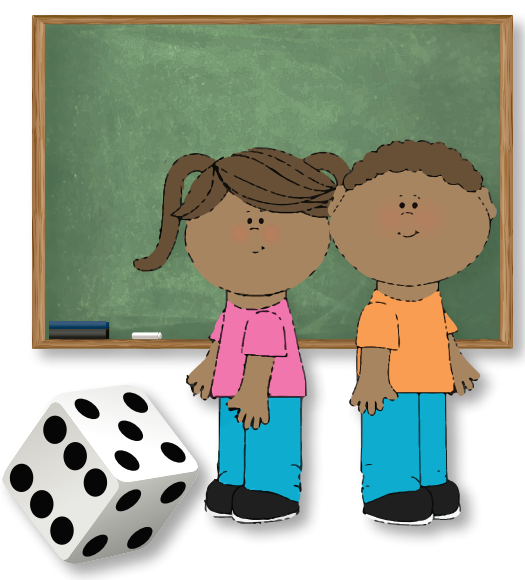
Reflect: The tennis ball is like the ice and rock chunk in the center of a comet, and the plastic bag makes the coma and tail.

Learning Standards: I can follow sequential directions to make a model of a product.

MATH CONNECTION

Rainy Day Math Games

Rainy days mean spending more time in the classrooms, so it's a perfect time to play games to sharpen your math skills!



101 AND OUT:
Materials Needed: A Sheet of Paper • Pencil • One Dice

Object of the Game: To score as close to 101 without going over or "out."

Players: Can play as individuals, in small teams, boys vs. girls, etc.

Directions: Take turns rolling the dice. Players can take the number as a one or a ten. For example, if a student rolls a 5, they could take it as a 5 or a 50. Students keep a running record of their total as they play. The player (or group) that first scores as close to 101 as possible without going over wins.

BACK TO BACK:
Materials Needed: A Writing Surface • Writing Utensils • Someone who is quick with their math facts for a "caller."

Object of the Game: Guess the other player's number before they guess yours.

Players: 2 players and 1 caller for each round. To give everyone a chance to play, keep playing until you are "out," and cycle in a new player each round.

Directions: Two students come up to the board and stand back to back. This allows for the students to write on the board, but blocks their view of the other person's number. The players will write a number between 2 and 9. The caller states "numbers up" as the signal for the players to write their number on the board. The caller then states the sum or product of the two numbers. The students use their understanding of math facts to figure out what the other person's number is when added or multiplied by their number. The player to say the other person's number first wins the round. The "loser" gets to choose the next person to come to the board.

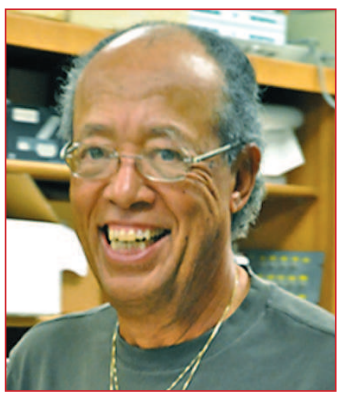
Learning Standards: I can add, subtract, multiply, and divide to solve a problem.

DID YOU KNOW?

- Halley's Comet is estimated to be 4.5 billion years old.
- Around 500 B.C., Greek philosophers used the word "komotes," which means "long haired," to refer to the comets they observed in the sky.
- If a comet comes close enough to Earth, it is bright enough to see during the day.
- Many people believe the comet's tail is traveling behind it. The tail can actually be in back or in front of the comet, depending on the Sun's solar wind.

SCIENCE STARS

African American Astrochemist
William M. Jackson



William M. Jackson was born on September 24, 1936, in Birmingham, Alabama. He grew up in Birmingham and Mobile, Alabama, and attended Immaculata High School and Central High School. Jackson earned his bachelor's degree in chemistry in 1956 from Morehouse College, and his doctorate degree in 1961 in chemistry from Catholic University of America. He studied photochemistry, lasers chemistry, and astrochemistry.

Jackson used chemical research to understand comets and led the first research team to use the International Ultraviolet Explorer telescope in a satellite to observe comets. Jackson's work included many organizations such as the National Bureau of Standards (now the National Institute of Standards and Technology), Martin-Marietta Company, NASA's Goddard Space Flight Center, the University of Pittsburgh, Howard University, and University of California, Davis (UCD). Jackson has taught at UCD since 1985.

Comet 67P/C-G from March 2016, about 200 miles away. Credit European Space Agency/Rosetta

The National Science Foundation awarded Jackson a 1.2 million dollar grant to establish the Mentorship for Undergraduate Research Participants in Physical and Mathematical Sciences. Jackson made it a point to recruit and mentor African Americans for the PhD. program in Chemistry. He has published over 165 academic papers, and has one patent in his name. He was also a founder of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers.

Jackson has received a number of awards, including the 1997 Lifetime Mentor Award from the American Association for the Advancement of Science, a Guggenheim Foundation Fellowship, a Distinguished Research and Emeritus Professor, Bennie Trailblazer Award, and an Alexander von Humboldt Research Award. Jackson is a member of the Phi Beta Kappa National Honor Society and was named a Fellow of the American Physical Society. The Planetary Society also named an asteroid 1081 EE37 as *Billjackson,* as a tribute to him.

Learning Standards: I can read a biography about an African American who has made contributions in the fields of science, technology, engineering, and math.

MAP CORNER

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

Activities —

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

Polygon Perimeters: Locate and circle 4 verbs in a news story. Use a ruler to connect the verbs like a dot-to-dot puzzle to form a polygon. Measure and label each side of your polygon with a ruler. Add the lengths of your sides to find the perimeter. Write the perimeter in the center of your polygon. Try it again with nouns or adjectives.

Learning Standards: I can use the newspaper to locate information. I can identify main idea. I can identify parts of speech.

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