



**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
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CLASSROOM SPOTLIGHT

Barrington Elementary School 5th grade teacher Dr. Bouchard shows students Laurn Becton, Ethan Shim, Raymond Like and Delaney Bell how to use Legos in a science experiment inspired by the newspaper's STEM page. *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 Biochemist, MD, and Diabetes Expert
James R. Gavin, III**



James R. Gavin, III, was born in Mobile, Alabama, in 1945. Growing up, Gavin was very close to his grandmother whom he called "Mama Rennie," and he looked forward to visiting her for fun adventures and story time. One particular visit, Gavin was surprised to find his energetic grandma in bed. Mama Rennie explained to Gavin that she had diabetes and had to have her leg amputated (removed) due to complications from the disease. The following summer, Mama Rennie lost her other leg and became very ill and died. Gavin was very determined to learn more about diabetes and work to find solutions.

In 1966, Gavin earned a Bachelor of Science degree in Chemistry from Livingstone College. He graduated magna cum laude. Magna cum laude is a Latin phrase meaning with high honors. College students who maintain very high grades will earn this honor. In 1970, Gavin earned a PhD in biochemistry from Emory University. Next, he focused on his diabetes studies with the National Institutes of Health and earned a medical degree from Duke University in 1975.

Gavin has worked as Senior Scientific Officer at the Howard Hughes Medical Institute in Maryland and Director of the National Institutes of Health Research Scholars Program. He has served as president and professor at Morehouse School of Medicine. He has also been a Professor and Chief of the Diabetes Section, Acting Chief of the Section on Endocrinology, Metabolism and Hypertension, and the William K. Warren Professor for Diabetes Studies at the University of Oklahoma Health Sciences Center.

Dr. Gavin was a medical expert in the court case Kapche vs. Holder. Jeff Kapche applied to work as a special agent for the FBI, but was denied due to the fact that he treated his diabetes with an insulin injection, instead of a pump. Gavin stated that Kapche's diabetes was considered a disability under federal law. Therefore, the FBI could not use his medical condition as a reason not to hire him. Dr. Gavin is considered a national authority on diabetes.

Gavin has written more than 180 manuscripts, book chapters and scientific abstracts and has received the following awards and honors: Banting Medal for Distinguished Service, Association's Clinician of the Year award, Association's Public Policy Leadership Award.

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

Learning Standards: I can follow directions to complete a prompt. I can make predictions and analyze results.

MAP CORNER

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

Activity One — Exercise Graph:

Look through the newspaper ads for sports and fitness equipment or classes. Judging from the ads, what are the most popular forms of exercise? Create a bar graph to display the results. What are the benefits of each type of exercise? Create a newspaper advertisement for the form of exercise you enjoy most. Include the benefits of that exercise in your ad (muscle tone, flexibility, cardiovascular endurance, etc.)

Activity Two — Sports Expressions: Locate final scores of various games in the newspaper. Write an expression representing the difference of two final scores. Have a friend find the difference to form a number sentence. Check your friend's answer.

Learning Standards: I can use the newspaper to locate information. I can create a bar graph to display information. I can write to persuade. I can write for a specific person and audience. I can make text-to-self connections.

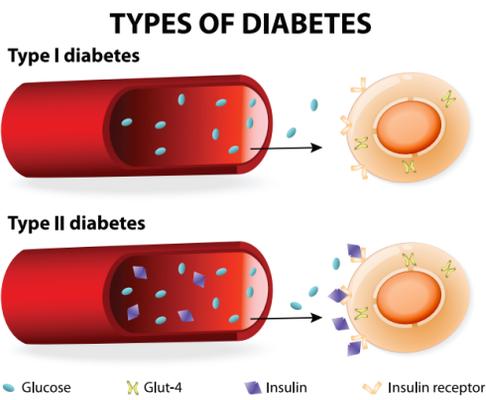


SCIENCE CORNER

What is Diabetes?

Diabetes is a condition where a person's body does not use glucose (also known as sugar) properly. There are two main types of diabetes, type 1 and type 2. Type 1 diabetes is caused by genetic factors. It is not caused by eating too much sugar. Type 2 diabetes is usually linked to being overweight, along with poor diet choices (sugar, fats, fast foods, etc.)

When a person has diabetes, their pancreas is affected. A diabetic has to maintain a very careful and balanced diet to keep their body working effectively. They are in danger of high or low blood sugar effects. Diabetics are more likely to develop heart disease



and kidney disease. They are more likely to have high blood pressure and strokes. Diabetes also effects a person's skin and the ability for wounds to heal.

Diabetes is not contagious. In order to prevent type 2 diabetes, eat a balanced diet, drink plenty of water, and lead an active lifestyle.

For more information, visit: http://kidshealth.org/kid/centers/diabetes_center.html#cat20491.

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

SCIENCE INVESTIGATION

HOW TO SINK A MARSHMALLOW!

Background Information:

Will a marshmallow sink or float? What do you think? Do you believe it is possible to sink a marshmallow? In this activity, you will use trial and error to choose your course of action when you attempt to sink a marshmallow.

Materials Needed:

- Marshmallow
- Container of Water (glass, bottle, pitcher)

Process:

- Place the marshmallow in the container of water. Does it sink or float?



- What can you do to make it sink? Work with a partner to create a list of 5 ideas.
- Try your five ideas from step 2. Which idea was most effective? Why?
- Compare your results with your classmates. Was anybody successful?

Learning Standards: I can follow directions to complete a prompt. I can make predictions and analyze results.

MATH CONNECTION

COUNTING CARBS!

Diabetics need to watch their carbohydrate intake. In this activity, you will focus on carbs. The American Diabetes Association suggests eating 45-60 grams of carbohydrate per meal, for a total range of approximately 150 grams of carbohydrates per day.

- If your meal consists of the following, how many grams of carbohydrates did you eat?

- Baked chicken: 4 oz serving, 0 carb grams
 - Mashed potatoes: 4 oz serving, 25 carb grams
 - Caesar salad with dressing: 3 oz serving, 5 carb grams
 - Mixed vegetables: 3 oz serving, 8 carb grams
 - A medium-sized roll: 2 oz serving, 22 carb grams
- Total grams of carbohydrates _____

- If 1/3 cups of rice has 15 grams of carbohydrates, how many carbohydrates are in a 1 cup serving? _____



- If you eat 1/2 bagel with 30 grams of carbohydrates and 1 tablespoon of jelly with 15 grams of carbohydrates, how many grams of carbohydrates did you eat? _____ How many grams of carbohydrates do you have left for the day? _____

- A 16 ounce bottle of soda has an average of 48 grams of carbohydrates. If you drink two bottles of soda per day, how many grams of carbohydrates did you consume? _____ If you drink one bottle of soda per day, how many carbohydrates do you consume in a week? _____

Learning Standards: I can use addition, subtraction, multiplication, and division to solve problems. I can make text to world and text-to-self connections.

DID YOU KNOW?

According to the American Diabetes Association:

Diabetes kills more Americans every year than AIDS and breast cancer combined.

1 in 10 healthcare dollars is spent treating diabetes and its complications, and 1 in 5 healthcare dollars is spent caring for people with diabetes.

Almost 30 million children and adults in the United States have diabetes. As many as 1 in 3 American adults will have diabetes by 2050, if present trends continue.

For more information, visit: www.diabetes.org.

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

