

Hi, I'm
Harriet.



TALKING HISTORY

with

Harriet and Roxanne™

Essential Black Scientists

And I'm
Roxanne.
Join us for...



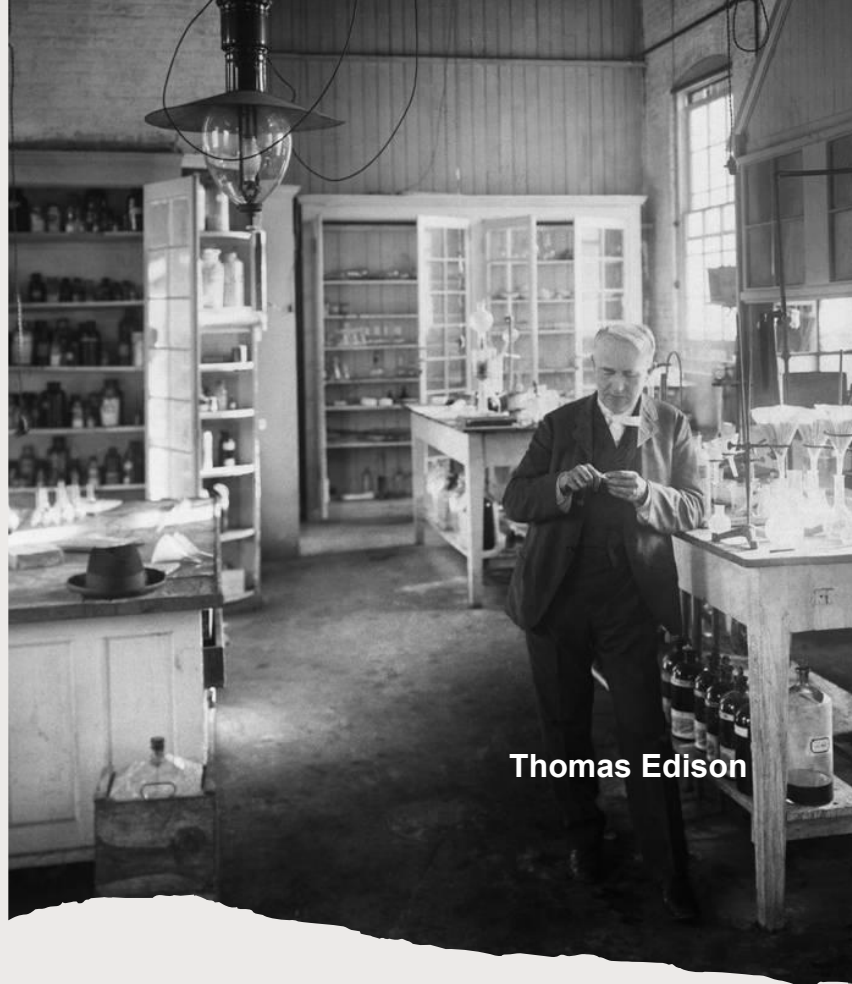


Today, we will talk about six historic black scientists that changed America!

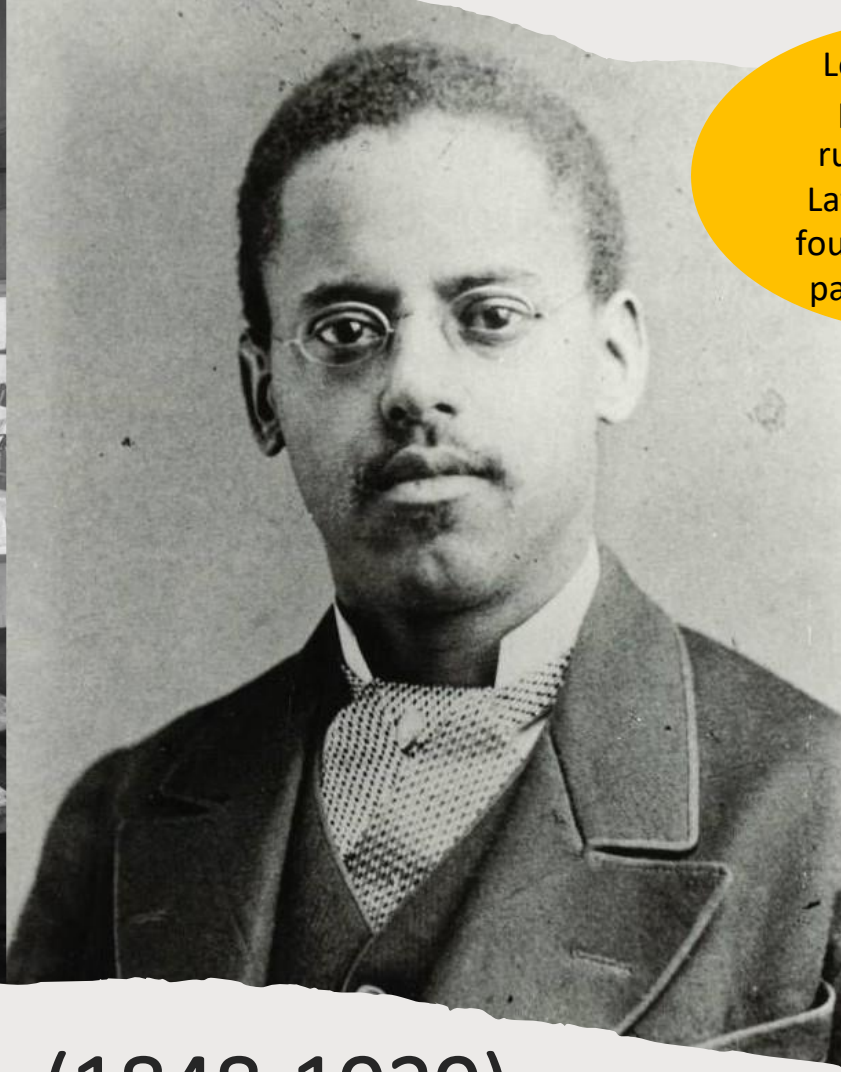


Awesome!





Thomas Edison



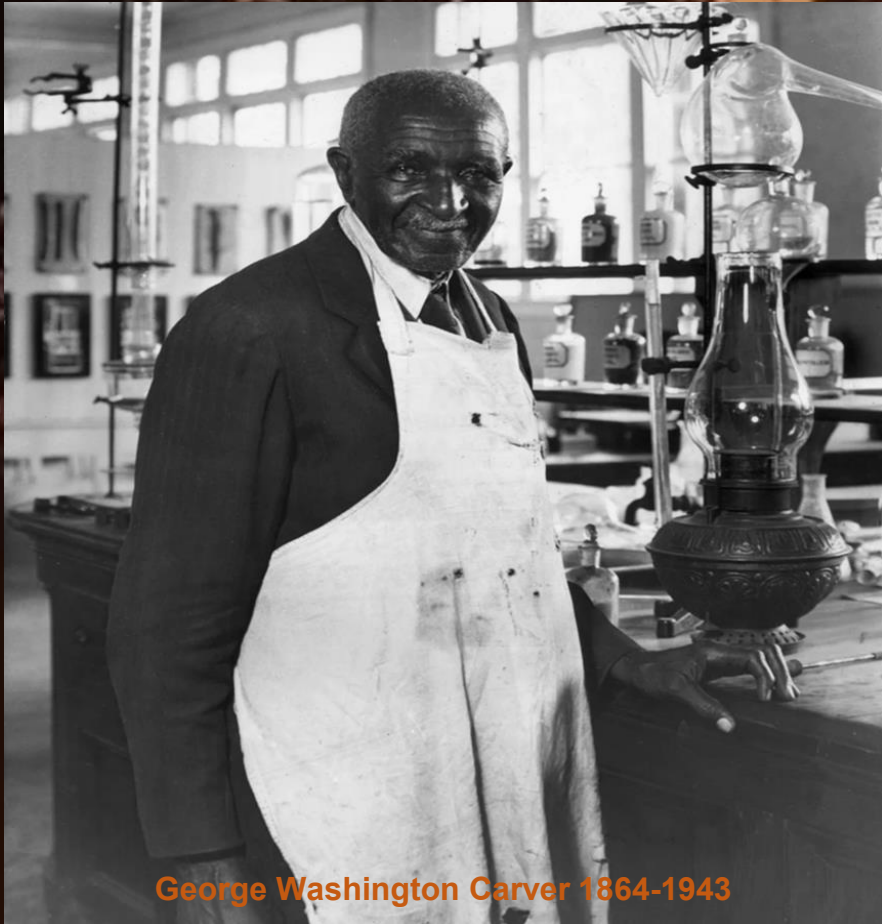
Lewis Latimer's parents were runaway slaves. Latimer was born four years after his parents escaped.



Lewis Latimer (1848-1929)

Lewis lied about his age and joined the Union Navy at 15 to help with the family finances in 1864. He was honorably discharged in 1865. Lewis taught himself mechanical drawing and became an expert draftsman. He joined Thomas Edison's lab in 1884 and was the only black of 24 "Edison Principles," the engineering division of the Edison System, to work with Edison. Lewis developed a longer-lasting filament for the lightbulb that helped Edison secure his patent for the lightbulb; without these improvements, the lightbulb would only last a few days. Latimer also helped draw up the patent for Alexander Bell's telephone. He also secured patents for his inventions, such as the Locking Rack for Hats, Coats, & Umbrellas in 1896 for hotels.





George Washington Carver 1864-1943

George Washington Carver (1864-1943) was born a slave in Missouri one year before the end of the Civil War. He was raised by Moses and Susan Carver. As George pursued his education, he faced discrimination, but his self-determination to get an education would not be denied.



George was one of the most prominent scientists from the 20th century. Carver loved nature and God and wanted to help former slaves be self-sufficient and in a practical way. After receiving his master degree in 1896, George was offered a teaching position by Booker T. Washington at Tuskegee Institute. Carver loved teaching and research. He developed the Jesup Agricultural Wagon to be a mobile laboratory to help farmers. Carver developed 300 uses for peanuts and 100 uses for sweet potatoes making them very profitable crops.



Wow, 300 products from peanuts, and my favorite one, peanut butter!




No, Roxanne, George **did not** invent peanut butter! Several historians get that wrong. Carter did find that peanuts could produce dyes, paints, medicines, beverages, and other industrial products.





Carter's Jesup Agricultural Wagon was successful in developing lessons to teach farmers and sharecroppers how to grow and rotate crops, such as sweet potatoes, peanuts, soybeans, and pecans. This successful outreach program was later copied by the United States Department of Agriculture. Carver was a folk hero and role model of the black community. He said, "nothing is so damaging as ignorance."





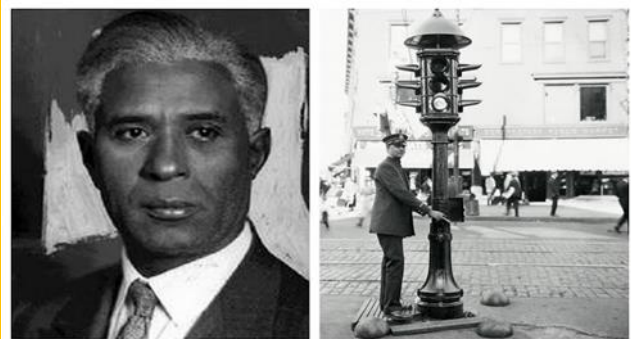
Roxanne, our next scientist is Garrett Morgan (1877-1963). He created something that would help me right on this street.

Do you know what it was?


I don't know what it could be!

Garrett Morgan invented the traffic light, after witnessing a traffic accident in downtown Cleveland.

He received a patent for his invention in 1923.




Garrett saved lives with his traffic light.



He also invented a Safety Hood that protected an individual from smoke, gases, and pollutants. Workers were drilling a new tunnel under Lake Erie and hit a natural pocket of gas causing an explosion. Garrett and his brother were able to use the safety hood and save two people.

Garrett's Safety Hood was the precursor to the WWI gas mask. Unfortunately, he didn't receive much credit for the product.

Is there anything more you can share about Garrett?



Yes! Sometimes a scientist or inventor discovers some things by accident. Garrett was trying to reduce the friction created by the needle of a sewing machine on material and experimented with a chemical solution. He discovered that the solution straightened the fibers in the fabric. This accidental product became the successful hair straightening product of his business, G.A. Morgan Hair Refining Cream.

This is biologist Dr. Ernest
Everett Just (1883-1941).
He was one of the first
scientists to receive
worldwide recognition.



Roxanne, Ernest grew up in very difficult times, after he turned six, Reconstruction ended, and blacks were disenfranchised. The passing of *Plessy v. Ferguson* in 1896 would make getting a good education as a black man more difficult in the South.

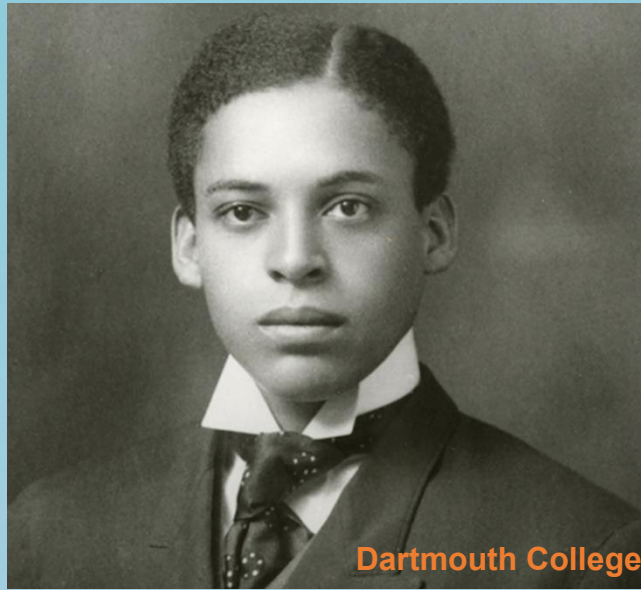
So, Ernest found opportunities at Kimball Union Academy and graduated in 1903; he graduated from Dartmouth College in 1907. By 1915, he received his doctorate from the University of Chicago.

It is amazing that he continued against the odds to make science his career.





Howard University 1907-1940



Dartmouth College - Graduated in 1907



Editorial Board of the Kimball Union Academy newspaper, 1903

This is the Marine Biological Laboratory (MBL) at Woods Hole, Massachusetts where Ernest's interest in science flowered. He spent the summers from 1909 to 1941 as researching along with Dr. Frank R. Lillie., the head of the Zoology Department at the University of Chicago.





Harriet, what is this plant?



I'm glad you asked. This is a soybean plant, and it has to do with our next scientist, Percy Lavon Julian (1899-1975).

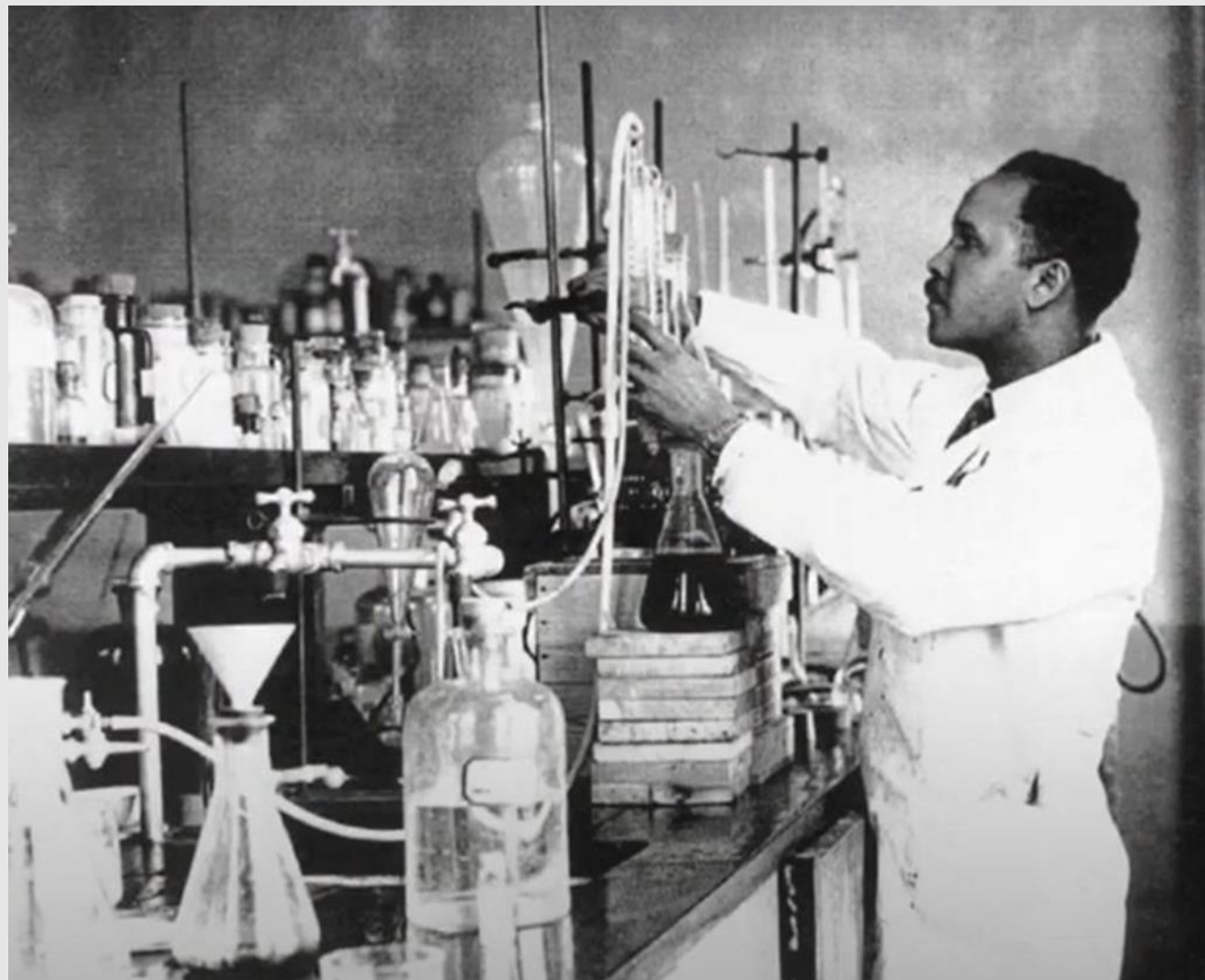




Dr. Julian was a pioneer research chemist. He was born in Alabama and had a tenth-grade education when he was accepted to DePauw University as a probationary student. He took high school classes while taking his first year and second year classes at DePauw. By the time he graduated in 1920, he was the class valedictorian. Two years later, he received a master's from Harvard University. In 1931 he went to Vienna to receive his Ph.D. in organic chemistry and began his experiments with the soybean plant, which was the cornerstone of his many scientific achievements. Julian would acquire more than 100 patents for his work.



Harriet, this is wonderful information. Please tell me more.

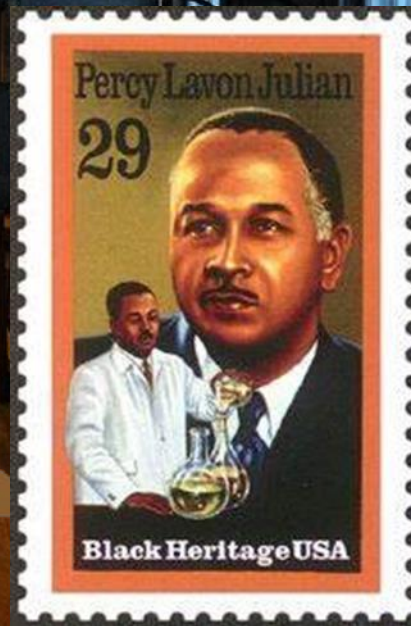
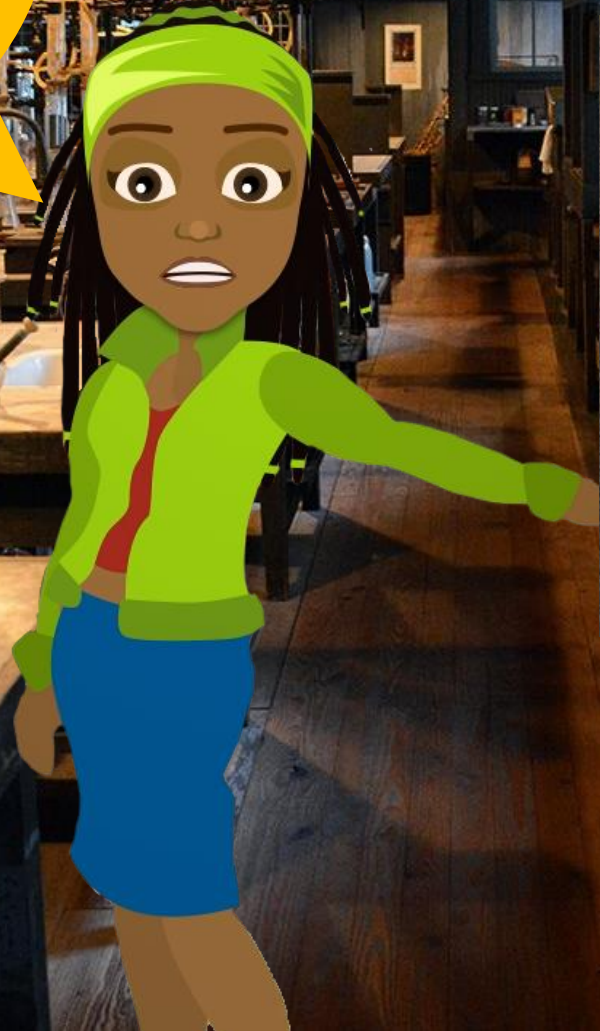




Dr. Julian developed many products from the soybean. He created a flame retardant that saved the navy countless lives during WWII. Julian developed medicines to help fight cancer, glaucoma, and synthetic cortisone that was less costly to relieve arthritis symptoms. Dr. Julian was elected to the National Academy of Sciences and the National Inventors Hall of Fame. He was the head of the Chemistry Department at Howard University.



Harriet, as we close this study of Dr. Julian, it is essential to understand that he experienced racism throughout his career. However, he would not be deterred in his quest for knowledge and success. He continued to work with civil rights groups to help blacks achieve success. He was honored with a U.S. Postal Stamp in 1993.



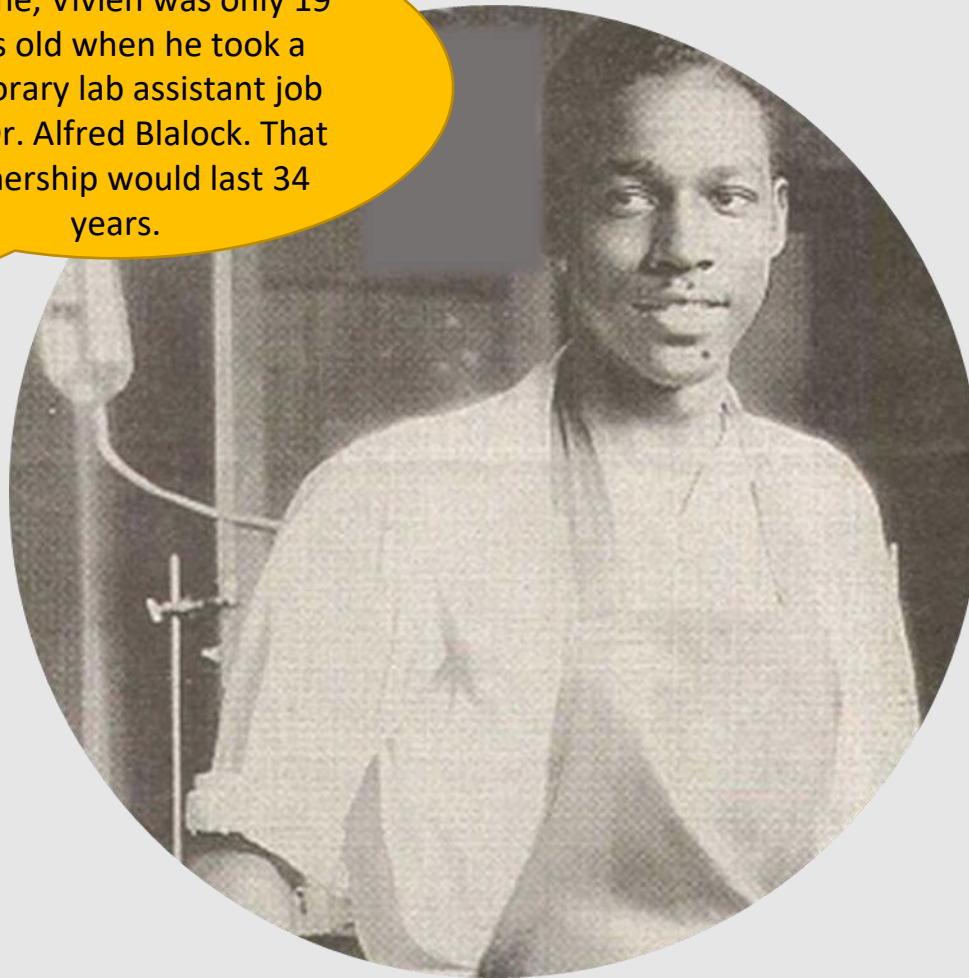
Our last scientist is Vivien Thomas (1910-1985). Vivien became a skilled surgical teacher at Johns Hopkins University but never went to college or medical school. Thomas intended to attend medical school but lost his savings in the 1929 stock market crash. Nevertheless, his scientific research was crucial to finding a cure for blue baby syndrome. I can't wait to tell you this remarkable story!



Vivien Thomas



Roxanne, Vivien was only 19 years old when he took a temporary lab assistant job with Dr. Alfred Blalock. That partnership would last 34 years.



Why was this such a successful partnership?



Dr. Blalock needed a full-time lab assistant and wanted someone who could duplicate what he could do and what he could not do. Vivien was gifted, intelligent, and skilled, and could operate. So, Dr. Blalock left Vanderbilt and took Vivien to Johns Hopkins University in 1940. Thomas was now in charge of the laboratory. The only other blacks employed at Johns Hopkins were black janitors, so seeing him running down the hall in a white lab coat opened spectators' eyes.

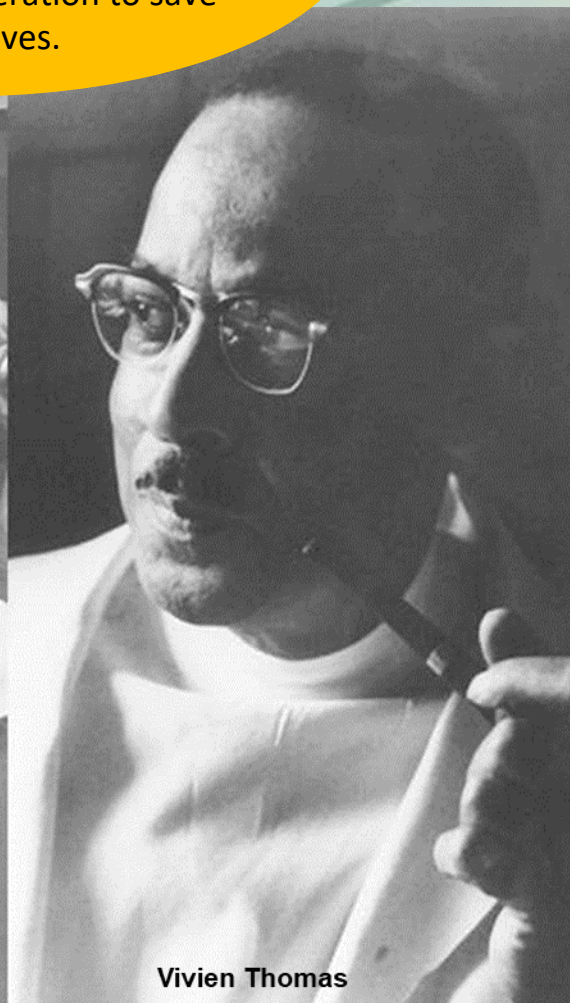


Drs. Blalock, Taussig, along with Vivien Thomas are responsible for solving the blue-baby syndrome.

Thomas was instrumental in discovering the operation to save babies' lives.



Dr. Alfred Blalock

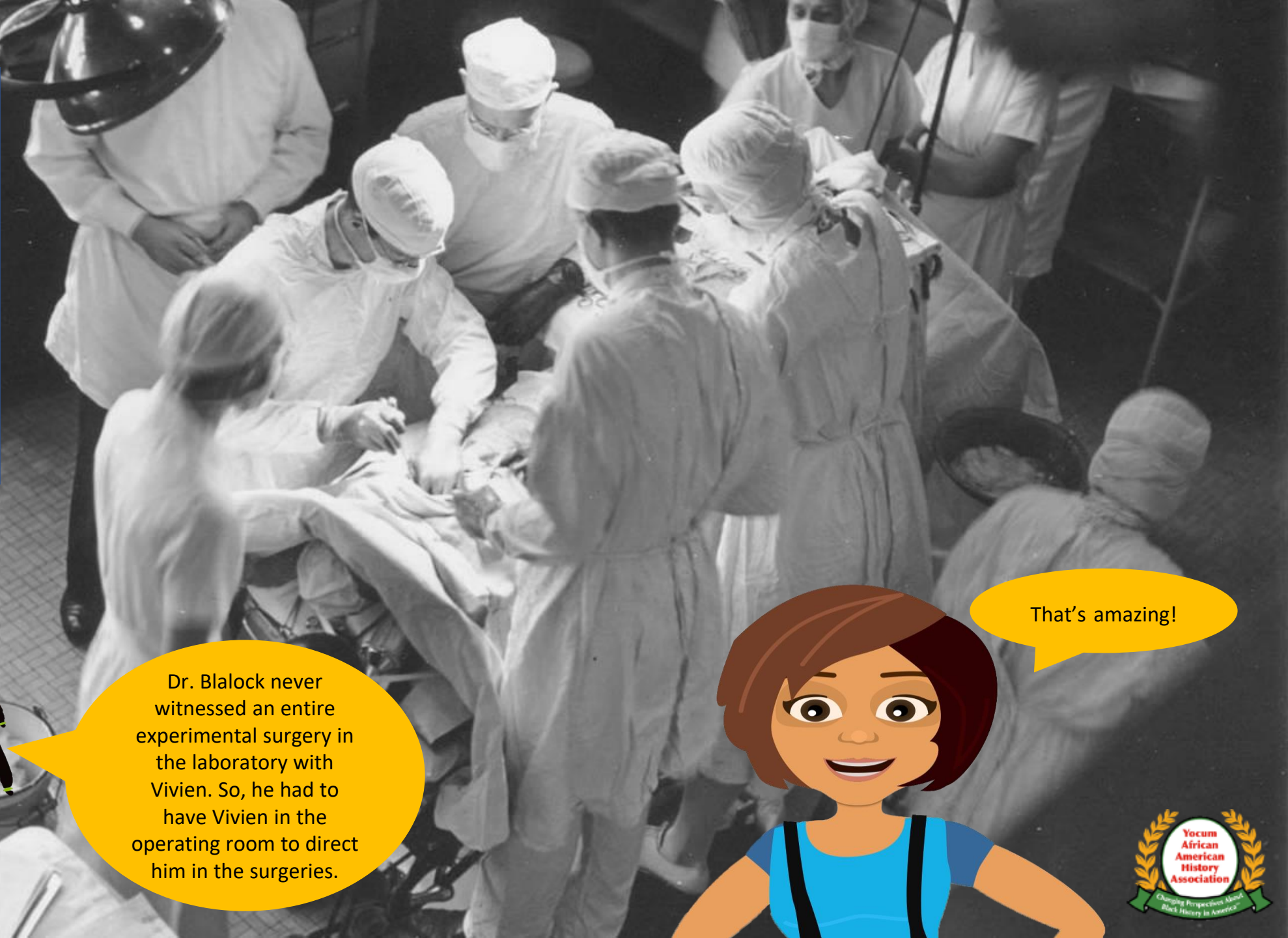
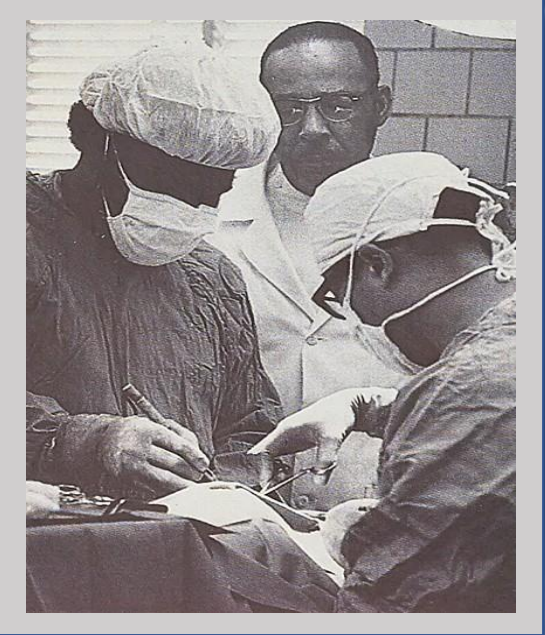


Vivien Thomas



Dr. Helen Taussig






Dr. Blalock never witnessed an entire experimental surgery in the laboratory with Vivien. So, he had to have Vivien in the operating room to direct him in the surgeries.



That's amazing!



An illustration of two women standing in a field of yellow flowers. The woman on the left is Black with long braids, wearing a green jacket and blue skirt. The woman on the right is white with short brown hair, wearing a blue top and black overalls. A yellow speech bubble is positioned above the Black woman, and another yellow speech bubble is positioned above the white woman. The background shows a landscape with green trees, a blue sky with white clouds, and distant hills.

Roxanne, these six scientists had to endure prejudice and racism as they achieved monumental accomplishments in their fields.

I am proud that we bring these stories to our students. Come back soon for more **Talking History with Harriet & Roxanne.**





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