**SUBJECT: ENGLISH. TEACHER: CLAUDIA ALVARADO O.**

**GRADE: 2° MEDIO STUDENT: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Meet one of the ‘Hidden Figures’, the female mathematicians who helped send Americans into space**

Amina Khan, Reporter

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*“I counted everything. I counted the steps to the road, the steps up to church, the number of dishes and silverware I washed … anything that could be counted, I did.”*

So said Katherine Johnson, recipient of the 2015 National Medal of Freedom. Before they were machines based on silicon, “computers” were actually women — though their colleagues would often refer to them as “girls”.

One of them was Katherine G. Johnson, a NASA mathematician from NASA’s Langley Research Center in Virginia. The center had taken the unusual step of hiring women for the tedious and precise work of measuring and calculating the results of wind tunnel tests in 1935. By 1953, there were openings for African-American computers at Langley Research Center’s Guidance and Navigation Department – and Katherine Johnson found the perfect place to put her extraordinary mathematical skills to work. Johnson played key roles in the flights of astronauts Alan Shepard, the first American in space, and John Glenn, the first American to orbit the Earth.

**Q: Was it difficult to work alongside white colleagues while living in a segregated community?**

Sometimes, but they had called us. We always did what we had to do.

**Q: When you first started as a computer, did you ever think you would help get the first American, John Glenn, into orbit?**

No, I was just excited to have challenging work to do and smart people to work with.

**Q: At the time, did you think about the fact that you and the other West Computing women were pushing the boundaries of what it meant to be a mathematician, a scientist or an engineer?**

I don’t think so. We only did the best of our ability.

**Q: What was it that drew you to mathematics?**

Numbers. I had always enjoyed solving the most difficult problems, so I decided to study maths.

**Q: You created “new” maths to go from an elliptical to a parabolic orbit. Did you think of it as cutting-edge maths at the time?**

Well, they had called mathematicians because the solution to the problem was pure maths.

**Q: Did you ever have to fight to have authorship of a report?**

Women did not have their names included as authors on technical paper in the early days.

**Q: Did you know that John Glenn asked for “the girl” to check the numbers before he took his landmark flight into space?**

They asked me to check the numbers as they knew my record for accuracy. I had always had confidence in my maths, so I did it. I always did my best.

**Q: Relatively few people knew about the remarkable work that you did for the space program until recently. Why?**

The work was “secret” and the public knew only what was reported from NASA.

**Q: Do you have any advice for young women and people of color today who want to pursue a STEM career?**

Just do it. Take all the courses in your curriculum. Do the research. Ask questions. Find someone doing what you are interested in! Be curious!

**ACTIVITIES:**

**1.** What do you think the title refers to? Answer in English:

**2.** Find the following information in the text and write it here in English:

a. The hidden figures:

b. Nickname the girls were given:

c. Main contribution:

d. Place of work:

e. Famous people related to it:

f. Katherine Johnson’s award:

g. Katherine Johnson’s main contribution:

**3.** What other things would you like to ask to this remarkable woman? Write the questions in English here (at least 2):

**4.** Focus on the underlined parts in the text. Then answer in English:

a. How difficult do you think it was?

b. Considering the time, how would you define these women’s work?

c. Why are these women known as "the hidden figures"?

d. If Katherine Johnson were a man, do you think her work would have remained “secret”? Yes? No? Why?

**5.** Answer in English:

a. Do you think it’s difficult to be a woman scientist in Chile? Why? Explain.b. Do you agree with Katherine’s final advice?

c. Do you think it can be applied to all women?