

Counting on Katherine- 1st grade lesson plan

Katherine Johnson was an extremely bright and curious girl who was born in 1918. She loved counting and numbers. She skipped three grades, and was ready for high school at age 10. Her town didn't allow black students to attend high school, so her father worked hard and moved his family to a town with a black high school. She graduated from high school at 14 and from college at 18. She taught school and dreamed of becoming a research mathematician. She applied at NACA to be a "computer" but their positions were all filled. She waited a whole year to apply again and was accepted. She eventually became a part of NASA and was crucial to the success of the American space program. Not only was she great at computing math problems, but her creativity helped solve other problems related to space flight. She did calculations for the first moon landing and many other space flights. She died in February 2020 at the age 101.

Read the book "Counting on Katherine" by Helaine Becker, with the class.

Preview the book and/or share it with your class with the video below.

<https://www.youtube.com/watch?v=r4aQr2HxggY>

Lesson Plan:

What kind of qualities helped Katherine become successful?

- She was known for being curious and always asking lots and lots of questions
- She was patient when she encountered problems
- She was a hard worker who was trusted to do her job well
- She knew she was part of a team and worked to make everyone successful

What things in the story did you notice that are different from today?

- Schools were segregated by race
- Jobs were more limited for women
- Computers were originally people not machines
- When electronic computers were new, people didn't fully trust their numbers
- Space flight was brand new and required new solutions

What things can you relate to from this story?

- We may have a love of counting, or school, or imagining
- We can be curious and ask lots of questions about subjects we enjoy
- We can work hard and take steps toward our dreams
- We can be patient, sometimes we have to be persistent to get what we want
- We can do a good job so others know they can count on us

"Despite her many achievements, Katherine never liked to take any credit. Her reason? 'Because we always worked as a team,' she said. 'It was never just one person.'"

Optional idea: Use a ball to demonstrate trajectory. Where the ball lands depends on what angle it was thrown and how high and how fast it flew.