

Hidden Figures

Film Discussion Guide – Some Answers

Film Description

From the 1930s to the advent of the digital computer in the early 1960s, several hundred female "human computers" were hired by the federal government. Their task was to calculate numbers and to solve the equations necessary for new generations of airplanes, the first American rockets, and the first U.S. manned space flights. They worked with



pen, paper, and analog calculating machines. The need for these workers was so great that even in those days of rampant racial discrimination, black women were hired as well as whites. The human computers reported to the Langley Research Center in Hampton, Virginia, operated by the National Advisory Committee on Aeronautics (NACA) and its successor, the National Aeronautics and Space Administration (NASA).

Hidden Figures is the story of three black women who made important contributions to the U.S. Space program both before and after the "human computers" were replaced by digital computers. The three real-life heroines of the film are:

- Dorothy Vaughan, who supervises the "colored computers." She sees that digital computers are the wave of the future and learns the prototype programming language FORTRAN, orients herself to a room-sized IBM computer, and encourages the women in her section to do the same.
- Katherine Goble Johnson, a gifted mathematician, performs essential calculations and makes important theoretical contributions for determining the trajectories and orbits of America's first satellites and manned space missions. Backing up a digital computer's early efforts, she confirms final calculations for John Glenn's history-making orbit of the Earth.
- Mary Jackson takes on Virginia's stridently segregationist education system to attain the graduate qualifications that allow her to become NASA's first female African-American engineer.



Dorothy Vaughan



Katherine Johnson



Mary Jackson

The women face entrenched racist and sexist attitudes. However, their persistence and outstanding work boost the U.S. presence in space and blaze a path forward for achievement based on merit. The film closely follows Margot Shetterly's meticulously researched, award-winning, 2016 historical work of the same name. The validity of the film is confirmed by Katherine Johnson's posthumously published memoir, *My Remarkable Journey*, at page 7, in which she states, that, "75% of what was shown in the movie is accurate."

Discussion Questions

Q1: What or who are the "Hidden Figures" referred to in the title to this film?

Two possibilities:

- The women, and especially the black women, whose contributions to America's space effort went largely unrecognized until the film was released.
- The "Hidden Figures" are the mathematical figures that had to be uncovered in calculating trajectories and orbits for the astronauts.

Q2. Do you think this film paints an accurate picture of racism in the Southern United States under Jim Crow?

It's not that the film is inaccurate, it's simply that the story of the three black ladies who found jobs at NASA doesn't lend itself to showing most of the terrible things that racists in the Southern U.S. did to black people: the daily humiliation, the beatings, the lynchings, etc. The film doesn't tell the story of the millions of people denied education and jobs because of the color of their skin.

Q3. What role does the scene with the policeman and the three women play in the story? What does this tell you about the position of the black women in Virginia society in 1961?

This scene foreshadows what happens in the film in terms of the attitude of many whites at NASA toward the black women with whom they work. It also serves as a reminder of the ever-present threat of force against black Americans inherent in Jim Crow, which continues to a lesser extent to this day.

Q4. Three characters in the film exhibit racist tendencies. Identify them, describe how their racism is shown, and what happens to their attitudes through the course of the film.

- The police officer shown at the beginning of the film
- Mrs. Mitchell, the Female Computers' white supervisor
- Paul Stafford, the condescending white engineer in the Space Task Group

By the end of the film, each changes their attitudes: the policeman escorts the three protagonists to work; Mrs. Mitchell indicates her growing respect for Dorothy by addressing her as "Mrs. Vaughan," and Paul Stafford reverses his resistance to Katherine's presence and status, bringing her a cup of coffee.

Q5. Al Harrison, Katherine's boss, saw Katherine's genius. Yet he didn't see discrimination against her in the Space Task Group – his own department – until she confronted him with it. Why not?

Q6. Coffee serves as a symbol in this film. What does it symbolize?

Professional respect and acceptance as a member of the NASA team.

Q7. Do you think NASA was a socially progressive organization in 1961? Why or why not?

Q8. Why did racism break down at NASA?

Q9. Describe three acts of courage by the heroines in the film. Why are these actions particularly courageous?

Possibilities:

- Dorothy Vaughan: repeatedly asking to be promoted to the position of supervisor and walking into the computer room to work with the new machine
- Katherine Johnson: entering the Space Task Group

- Mary Jackson: bringing her case to court and speaking up to the judge

These actions were particularly courageous because they required challenging the color bar, something that had been enforced in the South for four centuries through intimidation and violence.

Q10. Who are the hidden figures in our community today? Why do we not see them?

Q11. What would you do if you were told you could not pursue a career or job because of how you look or who you are?

Q12. Is there anything you would like to discuss about the film that has not been discussed already?



Katherine Johnson is awarded a Presidential Medal of Freedom by former President Barack Obama in 2015. In 2016, he cited her in his State of the Union Address as an example of America's spirit of discovery.

Lots of additional info here:

[HIDDEN FIGURES – Teach with Movies](#)