



THE OHIO STATE UNIVERSITY

(un)Hidden Figures:

join a conversation, start a conversation



Using this guide

The purpose of this guide is to facilitate dialogue around the topics and themes found in the book and film *Hidden Figures*. Specifically, it addresses subjects related to the advancement of women in STEM fields, paying special attention to the roles and expectations that are often attributed to women of color in these fields. It is not meant to be prescriptive or exhaustive but a guiding document for hosting meaningful conversations with classmates, friends, family and colleagues.

Uncovering today's hidden figures

The story of *Hidden Figures* recovers the history of the groundbreaking women who helped the US realize its space ambitions following World War II and ultimately launch John Glenn into orbit. It takes place during the intersection of multiple pivotal moments of the 20th century: the Cold War, the Space Race, the Civil Rights movement and the pursuit of gender equality. Its central characters – Dorothy Vaughn, Katherine Johnson and Mary Jackson – all played a central role in progressing NASA's goals while facing challenges and discrimination within the workplace.



What do you take the book's title *Hidden Figures* to mean?

What makes someone a hidden figure?

When you look around you—your community, neighborhood, workplace, school, who do you see? Who is missing—hidden?

In *Hidden Figures*, we find historical examples of the struggles women, and particularly women of color, faced when entering spaces traditionally reserved for men. Conversely, we find stories of women who withstood double standards and overcame prejudicial expectations to ultimately triumph in their occupations.



What does that say about conditions that drive success? Can adversity sometimes be a good motivator? Is the need to prove oneself competent and equal an incentive or driver for success? Do such challenges end up excluding people who would otherwise be valuable contributors?

What role did other women play in the success and advancement of the characters in *Hidden Figures*?

What role could you play to ensure the contributions of women in your circle(s) of influence are encouraged and enabled to deliver to their full potential? For example, through mentorship, sponsorship, or bridging an introduction to open up networking.

Challenging prevailing perceptions

In the film, there is a scene in which Katherine Johnson reports to her new assignment in the Space Task Group. Upon entering the room, she is handed a trashcan and told by one of her white male colleagues, “this wasn’t emptied last night.” Clearly, the man doesn’t realize she is there as a peer, not a custodian.



How have perceptions of a STEM professional changed since that time, and how have they stayed the same?

What attributes do we expect professionals in STEM to have? What are the possible effects of these assumptions on diversity in the field?

What are the implications of having a narrow view of who is capable of being a STEM professional? How do our implicit biases impact our work environments?

Compare the two following statements:

“My dad was a NASA lifer, a career Langley Research Center scientist who became an internationally respected climate expert. Five of my father’s seven siblings were engineers or technologists...As a child, I knew so many African-Americans working in science, math and engineering that I thought that’s just what black folks did.”

US News and World Report indicate that African-American and Latino workers “now represent 29 percent of the general workforce population (up from 24 percent in 2001), but just 16 percent of the advanced manufacturing workforce, 15 percent of the computing workforce and 12 percent of the engineering workforce – all rates that have been essentially flat.”



How does representation affect a person’s perceptions of whether or not they are qualified for a particular career?

What would changing perceptions of STEM professionals lead to?

How did each statement influence your immediate reactions?

The power of story-telling

Mary Jackson collaborated on and often led research reports but was repeatedly denied authorship credit, being told that “computers don’t author reports.” However, as an African-American women, she had no career avenues that would allow her to be promoted to a higher station within NASA.

Rather than being deterred, Mary petitioned the City of Hampton to allow her to take night classes from the University of Virginia at the local high school which, at the time, was a segregated school, in order to receive the certification necessary for advancement. She was successful, and, by the end of her career, Mary held the most senior engineering title possible at NASA.



Mary Jackson worked through the channels of city government to lift barriers to her advancement. What are the venues that can lead to equity in STEM workplaces today?

In the film, Mary successfully petitioned the judge by finding common ground in the fact that they were both “firsts” to do something - he as the first in his family to serve in the armed forces and attend college; she as the first woman at NASA to become an engineer. What are some ways in which you can find common ground with people who appear to be unlike you?

Mary’s story is one of determination, grit and success. It is also a story of how women and minorities have been denied access to opportunities that would allow them to succeed.

In telling these stories, we fill out the historical picture, one that is often incomplete or told from a narrow perspective. The story of *Hidden Figures* is not a story only about African-American history, or only about women’s history. For better and for worse, it is a story of American history.



Do stories like the ones told in the book and movie of *Hidden Figures* lead to changes in attitudes? Can they effectively change minds, or behavior?

How can storytelling remove barriers for women and people of color in STEM? Where can we tell these stories? To whom?

What story do you tell yourself? What story do you tell to others? Whose story can you help advance?

Realizing change

“You are no better than anyone else, and no one is better than you.”

Katherine Johnson cites this maxim from her father as the source of her confidence and conviction that she was just as worthy of a seat at the table as any man in the room was. That self-assurance allowed her not only to succeed in her own work but also in the work she did with others to accomplish incredible advancements in aerospace technology.



What tactics of self-help and self-care can help underrepresented individuals succeed in the face of bias? How can members of majority groups be allies?

In the beginning of the film, Katherine’s parents met with her teacher who explained how unusual gifted Katherine was in mathematics. This support and nurturing from an educator at an early age set the stage for great success throughout her life.



How can educational institutions attract and support people of color and women in STEM fields?

Dorothy Vaughn spent her career matching the right person with the right assignment, potentially at the expense of her own career ambitions, because she saw that a victory for one African-American woman was a victory for all African-American women.



Beyond advocating for underrepresented groups, what role does mentorship play in ensuring the success of women and people of color in STEM? What forms can mentorship take?

Who have your mentors been? How have they helped you?”



Aside from films and books, what are other venues where we can promote examples of people of color and women succeeding in the STEM fields?

What will your next steps be to shine a light on a hidden figure?