

# hidden figures viewing guide

**hidden figures viewing guide** offers a comprehensive approach to understanding and appreciating the acclaimed film "Hidden Figures." This guide is designed for viewers who want to gain deeper insights into the movie's historical context, its key themes, and the impact it has had on popular culture and education. By exploring the film's background, main characters, and narrative significance, readers will be equipped to engage more thoughtfully with the story of the African-American women mathematicians who played a crucial role at NASA during the Space Race. Additionally, this viewing guide provides practical tips for watching the film, discussion questions, and recommendations for related resources. Whether for individual viewing, academic purposes, or group discussions, this guide ensures a rich and meaningful experience. Below is a table of contents to navigate the main sections covered in this article.

- Historical Context of Hidden Figures
- Main Characters and Their Contributions
- Key Themes and Messages
- Viewing Tips and Recommendations
- Discussion Questions and Activities
- Additional Resources and Related Media

## Historical Context of Hidden Figures

Understanding the historical background is essential for fully appreciating the film "Hidden Figures." The movie is set during the 1960s, a pivotal era marked by the Space Race between the United States and the Soviet Union. This period was also characterized by significant social and racial tensions, especially in the American South. The film highlights the overlooked contributions of African-American female mathematicians who worked at NASA's Langley Research Center. These women, often referred to as "human computers," performed complex calculations that were critical to the success of the early space missions. The historical context includes the civil rights movement, segregation laws, and the struggle for equality, which shaped the personal and professional lives of the protagonists.

## The Space Race and NASA's Role

The Space Race was a competition for technological and scientific supremacy between the USA and USSR, commencing in the late 1950s. NASA, established in 1958, led American efforts to explore space. The film showcases NASA's initiatives such as the Mercury and Apollo programs, where precise mathematical calculations were vital for mission outcomes. The involvement of African-American women mathematicians at NASA was a critical but often unrecognized part of these achievements.

## **Social and Racial Climate of the 1960s**

The 1960s in America were marked by systemic racial segregation and discrimination, especially in southern states like Virginia where Langley is located. The film portrays the challenges faced by the protagonists due to Jim Crow laws, including segregated facilities and limited professional opportunities. The historical context also involves the civil rights movement, which sought to dismantle racial barriers and promote equal rights.

## **Main Characters and Their Contributions**

The strength of "Hidden Figures" lies in its portrayal of three remarkable women whose intelligence and perseverance shaped NASA's success. The main characters are based on real historical figures: Katherine Johnson, Dorothy Vaughan, and Mary Jackson. Each contributed uniquely to the space program and to breaking racial and gender barriers.

### **Katherine Johnson: The Mathematical Genius**

Katherine Johnson was a mathematician whose calculations of orbital mechanics were critical for John Glenn's historic Friendship 7 mission. Renowned for her precision and problem-solving skills, Johnson's work ensured safe trajectories for astronauts. The film highlights her struggles against workplace discrimination and her eventual recognition as one of NASA's leading scientists.

### **Dorothy Vaughan: The First African-American Supervisor**

Dorothy Vaughan was a skilled mathematician and computer programmer who became NASA's first African-American female supervisor. She proactively learned programming languages, such as FORTRAN, to adapt to technological changes, ensuring her team's continued relevance. Her leadership and foresight are depicted as pivotal in transitioning NASA's workforce toward digital computing.

### **Mary Jackson: Aerospace Engineer and Advocate**

Mary Jackson broke barriers by becoming NASA's first African-American female engineer. Her determination led her to petition the court to attend classes at an all-white high school, enabling her career advancement. The film illustrates her dual role as an engineer and advocate for equal opportunities within NASA and beyond.

## **Key Themes and Messages**

"Hidden Figures" conveys powerful themes that resonate beyond the historical narrative. The film emphasizes the importance of perseverance, equality, and the recognition of unsung heroes. It challenges stereotypes and highlights the intersectionality of race and gender in professional environments.

## **Perseverance in the Face of Adversity**

The characters' relentless pursuit of excellence despite systemic obstacles underscores a key message of resilience. Their stories inspire viewers to confront challenges with determination and courage.

## **Breaking Racial and Gender Barriers**

The film illustrates the struggles and triumphs of African-American women in a predominantly white, male workplace. It serves as a reminder of the ongoing fight for equality in education, employment, and society at large.

## **The Value of Teamwork and Collaboration**

"Hidden Figures" showcases how success in complex endeavors like space exploration depends on diverse talents working together. The collaboration between mathematicians, engineers, and astronauts exemplifies this theme.

## **Viewing Tips and Recommendations**

To maximize engagement and understanding while watching "Hidden Figures," certain viewing strategies can be applied. These include paying attention to historical details, noting character development, and reflecting on the broader social implications presented in the film.

### **Setting the Viewing Environment**

Choose a quiet, distraction-free setting that allows focused viewing. Watching with subtitles can aid comprehension of technical terms and dialogue nuances.

### **Taking Notes on Key Moments**

Jotting down significant scenes, quotes, and character actions helps retain important information for later discussion or analysis. This practice is especially useful in academic or group settings.

### **Watching with a Group or Class**

Viewing the film with others provides opportunities for immediate discussion and exchange of perspectives. It enhances understanding of the historical and cultural issues depicted.

- Prepare by researching the era beforehand to contextualize the story.
- Pause at critical moments to reflect or discuss.
- Use the viewing guide's discussion questions for deeper analysis.

# Discussion Questions and Activities

Engaging with "Hidden Figures" through guided questions and activities promotes critical thinking and deeper appreciation of the film's themes. These tools are valuable for educators, students, and discussion groups.

## Sample Discussion Questions

- How did the social and racial climate of the 1960s impact the lives and careers of the main characters?
- In what ways did Katherine Johnson, Dorothy Vaughan, and Mary Jackson challenge stereotypes?
- What role did teamwork play in the success of NASA's missions?
- How does the film address the concept of recognition and visibility for marginalized groups?
- What lessons from the film are applicable to today's workplace diversity and inclusion efforts?

## Suggested Activities

Activities could include research projects on the real-life figures, presentations on NASA's history, or creative writing assignments imagining the perspectives of lesser-known contributors. Group debates on the social issues depicted can also deepen understanding.

## Additional Resources and Related Media

For viewers interested in expanding their knowledge beyond the film, various resources and related media are available. These materials provide historical documents, biographies, and educational content about the individuals and events portrayed.

### Books and Biographies

Books such as "Hidden Figures" by Margot Lee Shetterly offer detailed accounts of the women's lives and achievements. Biographies and memoirs provide personal insights and broader historical context.

### Documentaries and Educational Videos

Documentaries on NASA's history and the civil rights movement complement the film's narrative. Educational videos can offer visual explanations of the scientific principles and technologies involved in space exploration.

## **Online Archives and Museums**

Several museums, including the Smithsonian National Air and Space Museum, feature exhibits related to the film's subjects. Online archives provide access to original documents, photographs, and interviews.

## **Frequently Asked Questions**

### **What is the 'Hidden Figures' viewing guide?**

The 'Hidden Figures' viewing guide is a resource designed to help viewers understand and engage with the 2016 film 'Hidden Figures,' which highlights the contributions of African-American women mathematicians at NASA during the Space Race.

### **Where can I find a 'Hidden Figures' viewing guide?**

You can find 'Hidden Figures' viewing guides on educational websites, film study resources, and sometimes included with DVD or streaming service extras. Websites like PBS LearningMedia and Scholastic often provide free guides.

### **What topics does the 'Hidden Figures' viewing guide cover?**

The guide typically covers historical context, key themes such as race and gender equality, character analysis, scientific concepts related to NASA's space missions, and discussion questions to facilitate deeper understanding.

### **Who is the target audience for the 'Hidden Figures' viewing guide?**

The viewing guide is mainly aimed at educators, students, and discussion groups, but can also be useful for anyone interested in learning more about the film's historical and social significance.

### **How can the 'Hidden Figures' viewing guide enhance my movie watching experience?**

The guide provides background information, prompts critical thinking, and encourages discussions that help viewers appreciate the historical impact and social issues portrayed in the film.

### **Does the 'Hidden Figures' viewing guide include activities?**

Yes, many viewing guides include interactive activities such as quizzes, research projects, and group discussions to deepen engagement with the film's content.

### **Is the 'Hidden Figures' viewing guide suitable for all age**

## groups?

Most guides are designed for middle school and high school students but can be adapted for younger or older audiences depending on the complexity of the material.

## Can the 'Hidden Figures' viewing guide be used for online or virtual learning?

Absolutely, the guide can be used in virtual classrooms or online discussion groups to facilitate remote learning experiences related to the film.

## Are there any free 'Hidden Figures' viewing guides available?

Yes, several educational organizations offer free downloadable 'Hidden Figures' viewing guides online for educators and students.

## What are some key discussion questions included in the 'Hidden Figures' viewing guide?

Key questions often include: How did racial and gender discrimination affect the characters? What contributions did the women make to NASA? How does the film relate to current social issues?

## Additional Resources

### 1. *Hidden Figures: The American Dream and the Untold Story of the Black Women Mathematicians Who Helped Win the Space Race*

This book by Margot Lee Shetterly is the original source material for the film "Hidden Figures." It delves into the lives of African-American female mathematicians at NASA whose calculations were crucial to the success of early space missions. The narrative highlights their struggles against racial and gender discrimination during the 1940s to 1960s. It's an inspiring account of perseverance and scientific achievement.

### 2. *Rise of the Rocket Girls: The Women Who Propelled Us, from Missiles to the Moon to Mars*

By Nathalia Holt, this book explores the stories of women mathematicians and engineers who worked at NASA's Jet Propulsion Laboratory. It sheds light on their contributions to space exploration, from missile development to Mars missions. The book emphasizes the impact of women in STEM fields and their often-overlooked roles in scientific history.

### 3. *Women in Science: 50 Fearless Pioneers Who Changed the World*

Rachel Ignotofsky's illustrated book celebrates women scientists throughout history, including mathematicians, physicists, and engineers. It provides short biographies and fun facts, making it accessible for younger readers and inspiring for all ages. The book promotes recognition of women's contributions to science and technology.

### 4. *Hidden Figures Young Readers' Edition*

This adaptation of Margot Lee Shetterly's original book is tailored for middle-grade readers. It simplifies complex scientific concepts and historical contexts without losing the inspiring essence of the story. The edition encourages young readers to explore STEM fields and understand the

significance of diversity in science.

5. *Hidden Human Computers: The Untold Story of African American Women Who Helped NASA Soar*

This book highlights the crucial role of African American women known as "human computers" who performed complex calculations before digital computers became common. It provides historical context about segregation and the civil rights movement intersecting with their scientific work. The narrative honors their legacy and contributions to space exploration.

6. *The Glass Universe: How the Ladies of the Harvard Observatory Took the Measure of the Stars*

By Dava Sobel, this book tells the story of women who worked as astronomers at Harvard Observatory in the late 19th and early 20th centuries. These women made groundbreaking discoveries while battling gender bias in science. The book is a compelling look at women's early roles in scientific research and data analysis.

7. *Women Who Launched the Computer Age*

This title explores the pioneering women who were instrumental in the development of early computers and programming. It connects well with the themes in "Hidden Figures," focusing on women breaking barriers in technology and mathematics. The book inspires readers with stories of innovation and resilience.

8. *Beyond the Boundary: African Americans and the Space Race*

This book examines the broader context of African American contributions to NASA and space exploration beyond just the mathematicians. It discusses the social and political challenges faced by Black scientists and engineers during the space race. The narrative enriches understanding of the era's civil rights struggles intertwined with scientific progress.

9. *STEM Stars: Inspiring Stories of Women in Science, Technology, Engineering, and Math*

A collection of biographies showcasing contemporary women making strides in STEM fields, this book motivates readers to pursue their interests regardless of societal barriers. It draws parallels to the trailblazers featured in "Hidden Figures" and encourages a new generation of innovators. The stories are diverse and highlight perseverance, creativity, and impact.

## **Hidden Figures Viewing Guide**

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