

LESSONS TO BE USED ACROSS THE “HIDDEN FIGURES” VIDEO SERIES

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These materials and the accompanying videos were prepared as part of a project to increase the visibility of leading developmental scientists of color who have made critical research contributions and paved the way, through mentoring and advocacy, for younger scholars of color. We are grateful to the Doris Duke Charitable Foundation for financial support of the project and to Dr. Marisha Humphries at the University of Illinois at Chicago’s College of Education and the rest of the SRCD Teaching Committee for developing these materials. Please visit www.srcd.org to learn more about “Hidden Figures” in Developmental Science.

THINK-PAIR-SHARE-COMPARE:

Comparing Student and Faculty of Color Experts’ Perspectives on Diversity in Developmental Science

TARGET “HIDDEN FIGURES” VIDEOS

- Video 1: *Increasing Awareness of Developmental Science* (Length: 2.38 minutes)
- Video 2: *Why Developmental Science?* (Length: 3.58 minutes)
- Video 3: *How Diversity Enhances the Contributions of Developmental Science* (Length: 2.44 minutes)

TIME REQUIRED

In-Class Activity: All three (3) videos & 60 minutes for discussion. Instructors can modify the activity by using a smaller number of clip(s) to complete the activity in a shorter amount of time.

GENERAL OVERVIEW

The students will work in a sequential fashion where they will first consider the questions posed in the titles of the videos (without viewing the videos) in small group discussion and identify shared responses to the questions. Afterwards, students will watch the videos of the posed question and reflect upon their discussions based on the views expressed by the experts.

LEARNING GOALS

- Students will be able to construct persuasive arguments on the importance of diversity in developmental science.
- Students will be able to integrate multiple perspectives into a more complex perspective on the importance of diversity in developmental science.
- Students will be able to critically evaluate their own perspectives on diversity.

REQUIRED MATERIALS

- Videos
- Activity Worksheet

TOPICAL AREAS/CLASSES

- Introductory developmental course - either at beginning of the semester or at the end as a comprehensive understanding of the course material.

INSTRUCTIONS/DESCRIPTION

The students will first engage with the topics represented in the clips by utilizing the classic think, pair, share technique. In think, pair, share, students follow a sequential process of integration of ideas by first writing down their own ideas about the main theme (i.e., video title) of the three videos. This will be done prior to watching the video so that the students are not initially influenced by the perspectives of the experts. Following their consideration of the questions posed (i.e., How does diversity enhance the contributions of developmental science?), they will then discuss their individual answers to the question with a partner or in a small group. The partners or groups will combine their responses and share their ideas out loud to the class.

As a final and unique step (i.e., “compare”), the students will then watch the relevant video that addresses the posed question. After watching the video, the students and their partner/small group will reflect on their responses compared to what was discussed by the experts in the video. The students will consider the potential reasons for the similarities and differences in their responses to the experts’ responses and consider how their ideas were modified after viewing the experts’ views. They will share these results with the class as a whole.

The instructor will summarize the process and provide their own perspective on the importance of diversity in the developmental sciences.

ACTIVITY WORKSHEET

1. Based on their titles, what do you think are the main ideas of the following videos? How would you answer the questions posed in each video title?

- *Increasing Awareness of Developmental Science*

- *Why Developmental Science?*

- *How Diversity Enhances the Contributions of Developmental Science*

2. After watching the videos, identify the similarities and differences between your group’s responses and the experts’ responses from the videos.

SIMILARITIES	DIFFERENCES

POSITIONALITY AND POWER IN RESEARCH

TARGET “HIDDEN FIGURES” VIDEOS

- Video 1: *Increasing Awareness of Developmental Science* (Length: 2.39 minutes)
- Video 3: *How Diversity Enhances the Contributions of Developmental Science* (Length: 2.45 minutes)
- Video 4: *How Did I Get Here: My Journey to Developmental Science* (Length: 4.33 minutes)

TIME REQUIRED

Out-of-Class Activity: 45 - 90 minutes (15 - 30 minutes writing assignment & 30 - 60 minutes reading assignment)

In-Class Activity: 25 - 30 minutes

GENERAL OVERVIEW

In this activity, students will reflect on the issues in developmental science that they personally care about, identify their positionality on that topic, and why it is important to have diversity in representation of researchers.

LEARNING GOALS

- Students will be able to describe positionality and identity in research.
- Students will be able to connect their identities and social locations to developmental research implications.
- Students will be able to identify the importance of having diverse range of representation in developmental research.

REQUIRED MATERIALS

- **Required reading:**
Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*, 15(2), 219-234. doi: [10.1177/1468794112468475](https://doi.org/10.1177/1468794112468475)
- **Optional reading example:**
Johnson, A., Brown, J., Carlone, H. and Cuevas, A. K. (2011). Authoring identity amidst the treacherous terrain of science: A multiracial feminist examination of the journeys of three women of color in science. *Journal of Research in Science Teaching*, 48(4), 339-366. doi: [10.1002/tea.20411](https://doi.org/10.1002/tea.20411)

TOPICAL AREAS/CLASSES

- Qualitative Research Methods
- Research Methods
- Developmental Psychology
- Child Development
- Adolescent Development

INSTRUCTIONS/DESCRIPTION

Out-of-Class Activity:

Students should complete this writing activity before the in-class activity. Students should reflect on the following questions in their writing:

- Relating to human development: What is one issue you care about that you think people do not really understand? What do you think people are not understanding about this topic? Why do you think they do not understand?
- Do you think you would be a good person to do research on this topic? Please explain. What would make you a good fit for this area of study, or not?
- Would someone else be able to study this topic well? How would the research be affected by having someone else do this research?

After completing the writing assignment, students should read the Required Reading research article on positionality and reflexivity in research, prior to the in-class activity.

In-Class Activity:

Optional: Some students can volunteer to share their topic and reflections with the class.

1. Provide a brief overview of positionality and reflexivity.
2. Class Reflection: Are there gaps in the way these example topics have been studied? How does that relate to power, historical representation in researchers, positionality as researcher?
3. Play one of the identified videos (Video 1, 3, or 4) from above.
4. Discuss:
 - How do some of the points made in the video relate to our reflections?
 - Why is it important to have a wide array of representation of researchers?
 - How is our research impacted when all or a majority of the researchers are White, from middle-SES backgrounds (and other historical positions of privilege)?
 - How are our communities further impacted by that research?

SCIENTIFIC BIOGRAPHY OF FACULTY OF COLOR EXPERTS

TARGET “HIDDEN FIGURES” VIDEOS

- Video 1: *Increasing Awareness of Developmental Science* (Length: 2.39 minutes)
- Video 2: *Why Developmental Science?* (Length: 3.59 minutes)
- Video 3: *How Diversity Enhances the Contributions of Developmental Science* (Length: 2.45 minutes)
- Video 4: *How Did I Get Here: My Journey to Developmental Science* (Length: 4.33 minutes)

TIME REQUIRED

Out-of-Class Activity: 5 hours

In-Class Activity: 15 minutes per student

GENERAL OVERVIEW

This is a culminating activity after all four (4) videos have been viewed over the semester. The students will research the scientific contributions of the developmental scientists highlighted in one of the videos. They will select three (3) main articles that the scientists have written and obtain the PDFs from scientific databases. The students will then summarize, reflect upon, and present those scientists’ work to the rest of the class via an in-class presentation.

LEARNING GOALS

- Students will be able to summarize and integrate multiple pieces of related research on a research topic.
- Students will be able to describe how CVs are used to organize and present research profiles.
- Students will be able to describe the approaches and contributions of prominent developmental scientists of color.
- Students will be able to explain how research programs reflect a theme and the perspectives of the scientists completing the research.

REQUIRED MATERIALS

- Access to a scientific database through university library (i.e., PsychInfo, ERIC, etc.)
- Activity Worksheet

TOPICAL AREAS/CLASSES

- Research methods class
- Upper-level seminar with a strong research component in developmental science

INSTRUCTIONS/DESCRIPTION

For this activity, students will select one of the scientists that appear in the videos. Ideally, the videos will have been shown and discussed in class in order to frame the perspectives of the scientists. In particular, it would be helpful to present and discuss Video 4, *How Did I Get Here: My Journey to Developmental Science*. Alternatively, the students could watch the videos individually outside of class.

After the students have viewed all the videos over the course of the semester, they will independently examine the scientific contributions of their selected developmental scientist from the video. The students will survey the scientist’s body of research, represented on their CV (show students how to locate the scientists’ CVs on their faculty web page), then select three (3) representative publications from the CV. Students will read, integrate, and summarize the research in order to understand the important implications of the scientist’s work. Students will present their work to the class so all the students can gain a more in-depth sense of the work of the featured developmental scientists.

ACTIVITY WORKSHEET

SCIENTIFIC BIOGRAPHY PROJECT

It is important to understand how leaders in the field of developmental science construct their programs of research. The videos that you have watched from the “Hidden Figures” series are some of the most prominent developmental scientists working today. Their research has been exceptionally important in influencing how we think about developmental processes. I want you to understand the specific research that has made them so influential.

For this project, I want you to delve more deeply into the work of one of the scientists featured in the video and present their research to the class. As a first step, you will go on to the websites of your chosen scientist and select **three (3) peer-reviewed articles** from their CV that are organized around a similar theme. A CV is a resume of an academic psychologist that has a full listing of all of their academic work. You will then find those full-text articles from the library website and read them.

After reading the articles, you will put together a formal 15-minute presentation to the class that summarizes and integrates the work of the scientist.

Your presentation should answer the following questions:

1. What is the primary argument being put forth by the developmental scientist in this work and how does their work help to support that argument?
2. What are the primary approaches (methods) that the scientist uses to study the topic?
3. What are the similarities and differences in the articles that you have selected?
4. Are any of the themes discussed by the scientist in the various “Hidden Figures” clips reflected in their research?

On the day of the presentation, you should have a one-page written summary of your presentation, along with the three articles printed out for my review.

Your presentation will be graded on the clarity of your description of their research program, the depth of the information presented, the ability to address the questions described above, and overall presentation style.