

GRADES 3-5 LESSON PLAN

THE VAST WONDER OF THE WORLD

Title: *The Vast Wonder of the World*

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Grade Level: 3-5

Standards*:

- **Common Core:** *CCSS.ELA-Literacy.RL.3.1, 3.2, & 3.3; CCSS.ELA-Literacy.RL.4.1, 4.2, & 4.3; CCSS.ELA-Literacy.RL.5.1, 5.2, & 5.3*
- **Virginia Standards of Learning:** 3.6; 4.6; 5.6

Overarching Theme(s): Segregation, Fairness, Point of View, Empathy, Inferencing

Timeframe: (60-90 minutes)

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The Vast Wonder of the World

Summary: This is the story of biologist Dr. Ernest Everett Just. Before he became a preeminent research scientist, he was born into the segregated southern United States in 1883. His mother, a schoolteacher, taught him to read, and he spent much of his youth observing the world around him. Although faced with many life-altering hardships, including severe illness, his parent's sudden death, and racial discrimination, a chance encounter with microscopes in a biology class changed the course of his college career. Everett continued his education to the highest level, becoming a biology professor. His research pushed the limitations of scientific thought, and Dr. Just led the way to a better understanding of egg fertilization. In the United States, Dr. Just still faced unfair treatment, fewer opportunities for expansion, limited funding, and outright racial discrimination. Exhausted with such limitations, Dr. Ernest Everett Just intentionally decided to leave the United States. This decision would expand his scientific endeavors and expose him to a better understanding of the world without discrimination.

Lesson Goals:

1. Engage students in understanding how racial discrimination affects life and career opportunities.
2. Probe students to think about how leaving one's birth country for better opportunities abroad can impact their quality of life.

Key Terms:

- **Desegregation:** the process of ending the separation of people because of their race; it took years for some of the states in the United States to agree (e.g. some states and cities refused to let White children go to school with Black students); laws were later passed to integrate schools, restaurants, businesses, and allow interracial marriage
- **Equal Opportunity:** a policy of treating others without discrimination, especially on the bases of their race, ethnicity, gender, sexuality, age, religion, etc.

- **Jim Crow Laws:** laws and rules that discriminated against or enforced the segregation of Black people in the United States (i.e. Black people had to use separate drinking fountains, restrooms, medical facilities, theaters, restaurants, railroad cars, buses, and separate schools with old/used textbooks and equipment, etc.); the laws purposely created disadvantages for Black people; Jim Crow was not an actual person but was the name of a song and dance done by a white entertainer who wore Blackface
- **Racial Segregation:** separating people because of their race; it was legal to do this because of laws created by people who thought White people in America were the superior race; this led to “separate but equal” policies which implied people of different races had separate but equally good options for things like schools, restaurants, and hospitals; the reality was People of Color had poorer options compared to White people; legal from 1896 (Plessy v. Ferguson) to 1954 (Brown v. Board)
- **Racism:** the unfair treatment of people based on the opinion that one race is better than another race or races; a system of advantage based on race; racial prejudice plus social power; individual racism: actions and/or language toward a person that intentionally expresses prejudice, hate, or bias based on race; institutional racism: discriminatory treatment, unfair policies, and inequitable opportunities and impacts, based on race, that are produced and perpetuated by institutions (schools, workplace, mass media, etc.); structural or systemic racism: normalization and legitimization of historical, cultural, institutional, and interpersonal dynamics that routinely advantage White people, while producing cumulative and long-lasting disadvantages for People of Color

Procedure:

*Important! Before the start of the lesson, students **must** engage in transactive discussion practice for the discussion to be meaningful. This does not have to take place before every lesson, but students need to be familiar with this type of discussion for the lesson to be effective.*

Before Read Aloud:

Teacher should ask students what they know about *African American scientists*. Introduce students to Dr. Ernest Everett Just, and African American biologist who innovated ideas about egg fertilization. Dr. Just faced racial discrimination in America, and decided to move to Europe for more opportunities.

The teacher should read the story aloud to the whole group. During the read aloud process, teacher should stop and ask teacher-generated comprehension questions to assess/support student understanding, address misconceptions, and answer questions.

Following Read Aloud: *

Students, in groups of 3-5 people, should work together to respond to discussion questions.

- Teachers should remind students that they are working as a team to figure out the best answer/position for each question.
- Teacher should circulate among groups during the discussion process, probing students to practice communicative discussion practices, as outlined in transactive discussion guidelines. Teacher should not provide right or wrong statements to students regarding answer but rather probing questions.
- After small group discussions, students share out the conclusions of their small group with the whole class. Answers should reflect what the whole group determined, rather than individual responses of each group member.
- Immediately following small group and whole class discussions, teacher should have students *independently* respond to writing prompts or assign for homework.

*Note: For questions occurring after specific page numbers, teacher can stop and have students discuss in small groups. If there are multiple copies of the book, students can also address the questions after reading.

Discussion Questions

(pg. 1-8):

1. As a child, what people influenced Ernest's early education about the world around him?
2. How do you think Ernest felt when he lost his reading ability?
3. How do you think Everett was able to keep persisting to learn despite challenges due to his racial and ethnic identity?

(pg. 9-12)

4. Ernest is very observant about the world around him. How is he affected by what he observes?
5. Observe the image on page 12. What do you notice about the college preparatory school that Ernest attends in New Hampshire?
 - a. Why do you think he felt attending this type of school?

(pg. 13-14):

6. How do you think the death of Ernest's mother impacted his college experience?

(pg. 15-20):

7. Ernest took a single biology class and later became a biology professor himself. What caused his lifelong fascination with science? Why do you think he became a biology professor at Howard University.
 - a. Is it the responsibility of one person to help others who want to pursue the same educational achievements?

(pg. 21- 26):

8. Ernest observed a groundbreaking scientific discovery in egg fertilization, but scientists at the time thought differently about egg fertilization. Why do you think Everett continued to discuss his ideas despite them being different from what others thought?
 - a. Why is it important to share ideas even if others initially disagree?
9. Because of his innovative ideas, the Kaiser Wilhelm Institute invited Ernest to conduct research at their facilities in Berlin, Germany. This made Ernest the first American research scientist, Black or white, to receive the honor.
 - a. What did Ernest observe about his European experience while working at the institute?
10. How did Ernest experience unfair treatment while working as an African American scientist in the United States?

11. Ernest refused to tolerate segregation in America and moved to Europe. Do you think he made the right or wrong decision?
 - a. Why or why not?

Writing Prompts

1. Although biologist Ernest Everett Just made groundbreaking scientific contributions to science, he did not receive many opportunities in America. He left the segregated United States and relocated to France. There, he was able to conduct research more freely without discrimination. Do you think leaving your birth country for better opportunities is the answer to combating discrimination? Why or why not? Defend your answer using evidence from the book and/or class discussions.

Writing Prompts

1. Although biologist Ernest Everett Just made groundbreaking scientific contributions to science, he did not receive many opportunities in America. He left the segregated United States and relocated to France. There, he was able to conduct research more freely without discrimination. Do you think leaving your birth country for better opportunities is the answer to combating discrimination? Why or why not? Defend your answer using evidence from the book and/or class discussions.

I do/don't (circle one) think leaving your birth country for better opportunities is the answer to combating forms of discrimination

because_____

The reason I believe this is because _____

Standards*

Common Core Standards[CCSS.ELA-LITERACY.RL.3.1](#)

Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

[CCSS.ELA-LITERACY.RL.3.2](#)

Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.

[CCSS.ELA-LITERACY.RL.3.3](#)

Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

[CCSS.ELA-LITERACY.RL.4.1](#)

Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

[CCSS.ELA-LITERACY.RL.4.2](#)

Determine a theme of a story, drama, or poem from details in the text; summarize the text.

[CCSS.ELA-LITERACY.RL.4.3](#)

Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

[CCSS.ELA-LITERACY.RL.5.1](#)

Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

[CCSS.ELA-LITERACY.RL.5.2](#)

Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

[CCSS.ELA-LITERACY.RL.5.3](#)

Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

Virginia Standards of Learning (SOL)

Reading: Demonstrate comprehension of fictional texts and use word analysis strategies

- **3.6** The student will continue to read and demonstrate comprehension of nonfiction texts. a) Identify the author's purpose. b) Use prior and background knowledge as context for new learning. c) Preview and use text features. d) Ask and answer questions about what is read. e) Draw conclusions based on text. f) Summarize major points found in nonfiction texts. g) Identify the main idea. h) Identify supporting details. i) Compare and contrast the characteristics of biographies and autobiographies. j) Use reading strategies to monitor comprehension throughout the reading process. k) Identify new information gained from reading. l) Read with fluency and accuracy.
- **4.6** The student will read and demonstrate comprehension of nonfiction texts. a) Use text structures, such as type, headings, and graphics, to predict and categorize information in both print and digital texts. b) Formulate questions that might be answered in the selection. c) Explain the author's purpose. d) Identify the main idea. e) Summarize supporting details. f) Draw conclusions and make simple inferences using textual information as support. g) Distinguish between cause and effect. h) Distinguish between fact and opinion. i) Use prior knowledge and build additional background knowledge as context for new learning. j) Identify

- new information gained from reading. k) Use reading strategies throughout the reading process to monitor comprehension. l) Read with fluency and accuracy.
- **5.6** The student will read and demonstrate comprehension of nonfiction texts. a) Use text organizers, such as type, headings, and graphics, to predict and categorize information in both print and digital texts. b) Use prior knowledge and build additional background knowledge as context for new learning. c) Skim materials to develop a general overview of content and to locate specific information. d) Identify the main idea of nonfiction texts. e) Summarize supporting details in nonfiction texts. f) Identify structural patterns found in nonfiction. g) Locate information to support opinions, predictions, and conclusions. h) Identify cause and effect relationships following transition words signaling the pattern. i) Differentiate between fact and opinion. j) Identify, compare, and contrast relationships. k) Identify new information gained from reading. l) Use reading strategies throughout the reading process to monitor comprehension. m) Read with fluency and accuracy.